This project has received funding from the European Union's Seventh Framework Programme
for research, technological development and demonstration under grant agreement no 266800

FESSUD

FINANCIALISATION, ECONOMY, SOCIETY AND SUSTAINABLE DEVELOPMENT

Working Paper Series

No 39

Finance and Crisis: Marxian, Institutionalist and Circuitist approaches

Georgios Argitis, Trevor Evans, Jo Michell

& Jan Toporowski

ISSN 2052-8035

This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 266800

Finance and Crisis: Marxian, Institutionalist and Circuitist approaches

Georgios Argitis (University of Athens)

Trevor Evans (Berlin School of Economics and Law)

Jo Michell (University of the West of England)

Jan Toporowski (School of Oriental and African Studies, London University)

Abstract:

Most mainstream neoclassical economists completely failed to anticipate the crisis which broke in 2007 and 2008. There is however a long tradition of economic analysis which emphasises how growth in a capitalist economy leads to an accumulation of tensions and results in periodic crises. This paper first reviews the work of Karl Marx who was one of the first writers to incorporate an analysis of periodic crisis in his analysis of capitalist accumulation. The paper then considers the approach of various subsequent Marxian writers, most of whom locate periodic cyclical crises within the framework of longer-term phases of capitalist development, the most recent of which is generally seen as having begun in the 1980s. The paper also looks at the analyses of Thorstein Veblen and Wesley Claire Mitchell, two US institutionalist economists who stressed the role of finance and its contribution to generating periodic crises, and the Italian Circuitist writers who stress the problematic challenge of ensuring that bank advances to productive enterprises can successfully be repaid.

Key words: Capitalism, finance, crisis

This project has received funding from the European Union's Seventh Framework Programme
for research, technological development and demonstration under grant agreement no 266800

Date of publication as FESSUD Working Paper: June 2014

Journal of Economic Literature classification B14, B15, B24, B25, E11, E32

Contact details: Trevor Evans, evans@hwr-berlin.de

Acknowledgments:

The research leading to these results has received funding from the European Union Seventh Framework Programme (FP7/2007-2013) for research, technological development and demonstration under grant agreement n° 266800.

Website: www.fessud.eu

This project has received funding from the European Union's Seventh Framework Programme
for research, technological development and demonstration under grant agreement no 266800

Contents

This project has received funding from the European Union's Seventh Framework Programme
for research, technological development and demonstration under grant agreement no 266800

1. Introduction

Mainstream neoclassical economists – with a few honourable exceptions, such as Raghuram Rajan – completely failed to anticipate the financial crisis which broke out in 2007 and 2008. Perhaps more scandalously, standard textbooks continue to portray the economy without addressing any of the key issues which the crisis has thrown up about the stability and sustainability of growth in a capitalist economy. There is, however, a long tradition of economic literature which has always insisted on the need to incorporate into the centre of economic analysis the cyclical nature of economic growth under capitalism and its propensity to generate periodic financial crises. This paper will attempt to outline how selected Marxist, Institutionalist and so-called Circuitist writers have approached these issues.[1]

Karl Marx was one of the earliest writers to observe that capitalist economies grow in spurts that lead to an accumulation of tensions which, due to the over-expansion of the financial system, resulted in major crises approximately every ten years from 1825. He considered that such crises were integral to capitalist growth but that they also played an important role in laying the basis for a new period of expansion. After the crisis in 1873, when Marx was in his final years, there are indications he thought that, in addition to the ten year cycle, the economy had entered a longer, more protracted period of slower growth.

Rudolf Hilferding, building on Marx' analysis in the early twentieth century, argued that a new phase of capitalism had developed since the late nineteenth century, most notably in Germany, in which large banks had come to fuse with and dominate large industrial groups. These large groups of finance capital, he argued, were able to insulate themselves to some extent from the vicissitudes of the business cycle by shifting much of the burden of periodic crises onto smaller units of capital.

[1] Responsibility for drafting the different sections was as follows. Georgios Argeitis: the 'old' institutionalists; Trevor Evans: Marx, Hilferding, Luxemburg, the Regulation School, and Duménil & Levy; Jo Michell: the Italian circuitists, Bellofiore, and Itoh & Lapavitsas; Jan Toporowski: Kalecki & Steindl and Sweezy & the Monthly Review. Thanks to Natalia Budyldina for revising the references and preparing the bibliography. Jo Michell would like to thank Annina Kaltenbrunner, Tony Norfield, Giuseppe Fontana and Duncan Lindo for helpful comments on his drafts.

Rosa Luxemburg, writing around the same time, was less concerned with cyclical crises than with the long term problems for a capitalist economy of finding a market for the ever expanding output of commodities. Famously, she argued that it was this pressure to find new markets that explained the rapacious colonial expansion of the major capitalist states in the late nineteenth century.

In the United States writers associated with the so-called institutionalist tradition also highlighted the destabilising role of finance in a capitalist economy. In the early twentieth century Thorstein Veblen examined the role of financial markets for corporations, and argued that successful firms that have access to credit will become over-leveraged and that this ultimately leads to financial instability and crises. Shortly after, Wesley Claire Mitchell drew on Veblen to develop a sophisticated analysis of the stages of the business cycle in a profit-driven economy which combined an interaction of production and financial developments, and identified periodic financial crises as one important stage in the cycle.

Michael Kalecki developed his ideas in the 1930s and 40s based on a model drawn from Marx' reproduction schemes with two sectors, one producing investment goods and the other consumer goods. He showed that capitalists realised their profit not only through their own expenditure on consumption but also, and more significantly, through their expenditure on investment. His mathematical models, however, allowed little space for an analysis of the financial sector or of financial crises. Josef Steindl took up this approach in the 1950s, and drew attention to the way that household savings, because they remained unspent, lead to a decline in profits. If household savings exceeds firms' investment this could oblige firms to borrow and lead to a build-up of what he termed 'enforced indebtedness' which can act as a brake on growth.

Paul Sweezy, co-founder and leading theorist of the *Monthly Review,* also focussed on the difficulty of realising the increasing volume of surplus value generated in production. He initially identified the fact that workers are paid less than the value they produce as the source of what he termed 'under-consumption', but later shifted to place more emphasis on inadequate investment. While Sweezy's main theoretical works gave scant attention to finance, in the 1970s he published a series of important articles which drew attention to the expansion of the financial sector and the increasing dependence of economic growth on an expansion of bank lending.

The monetary circuit theorists have roots in Quesney's circular flow of income, Marx' circuit of capital, and Keynes' monetary theory of production. Augusto Graziani, the leading Italian circuit theorist, draws most directly on Keynes. In his analysis firms borrow newly-created money from banks to hire workers and purchase other intermediate goods and, following the process of production, the key issue is the extent to which households will buy consumption goods, rather than save, and so allow firms to cancel their debts to banks.

Michel Aglietta was the founder of the Marxian approach to Regulation theory. Drawing on the experience of the United States, he developed a sophisticated analysis of the intensive regime of accumulation which, after the Second World War, succeeded in achieving a rough dynamic balance between a strong rise in the productivity and intensity of work based on Fordist mass production techniques, with an unprecedented growth of mass consumption. From the mid-1960s this dynamic proved difficult to sustain in the face of slowing productivity growth and rising labour militancy and led to the major crisis which brought the period to an end in 1974-75. The Marxian Regulation approach was subsequently developed by Alain Lipietz, who showed how modern forms of credit money made it possible to sustain growth in the Fordist model but at the expense of rising inflation, and how Monetarist attempts to combat sharply higher inflation threatened to provoke a catastrophic economic breakdown at the start of the 1980s and had to be abandoned.

Ricardo Bellofiore draws on Marxian and circuitist literature to develop an analysis of the era since the 1980s. Two of its key features, the reestablishment of labour discipline and the major growth of financial capital, are combined in what he calls 'the real subsumption of labour to finance', but the idea that post-Fordism and globalisation mark a strong discontinuity with the previous US regime is played down. Instead Bellofiore emphasises the importance of a 'paradoxical and perverted' form of Keynesianism, driven by war expenditures and asset bubbles. The central dynamic of the new era revolved around a triad involving traumatised workers, manic savers and indebted consumers.

Makoto Itoh and Costas Lapavitsas joint work in the late 1990s presented a carefully structured account of the Marxian theory of money and finance. In the course of a business expansion an over-accumulation of capital leads to a fall in the rate of profit and this, in conjunction rising interest rates, leads to periodic crises. More recently Lapavitsas has emphasised the financial system's growing lending to private households, and argued that this has enabled banks to generate interest by appropriating a part of personal income, a controversial view which he terms 'financial exploitation' and which he links closely with the outbreak of the 2007 – 2009 crisis.

Gérard Duménil and Dominique Lévy argue that capitalist development in the US since the late nineteenth century has experienced three main periods or social orders, the most recent of which is the neo-liberal order which emerged in the 1980s. Drawing on a broadly Marxian vocabulary and extensive empirical data, they claim that, as a class strategy, neoliberalism was highly successful prior to the onset of the crisis, but that it was characterised by a major contradiction between the unbounded quest for higher incomes of the upper class and the unsustainable macroeconomic trajectory of the US economy.

2. Karl Marx

Karl Marx (1818-1883) was born and grew up in Trier on the western border of Germany. The city had once been a seat of the Roman Emperor and, for a short period just before Marx was born, had been annexed by revolutionary France. Marx studied law and philosophy, first in Bonn and then in Berlin, where Hegel had died five years before Marx arrived, and he subsequently completed a doctorate on Greek philosophy. Marx became a member of a group of radical young philosophers known as the Young Hegelians, but his political leanings meant that he was unable to obtain a university position and he turned to journalism. Marx' journalistic work led him to take an interest in economic conditions, including a famous article on the condition of poverty stricken Silesian weavers who had gone on strike. Censorship and the threat of arrest forced him to leave Germany and he spent time in Paris and Brussels in the 1840s, where he began to read political economy, and to meet members of small working-class organisations. At the time of the 1848 revolutions Marx returned to Germany and became editor of one of the most important pro-democratic newspapers of the time. After the defeat of the revolution, however, Marx was again forced to leave Germany and he settled in London, where he devoted himself principally to the study of political economy, publishing the first volume of *Capital* in 1867.

Marx was one of the earliest writers to observe that economic and financial crises were a regular feature of capitalist economies, having occurred roughly once a decade from 1825. He noted that the crisis in 1847 had been followed by revolutionary uprisings across Europe in 1848, and for a time he thought there was a close relation between economic crises and revolutionary uprisings. However, when a renewed crisis broke out in 1857 and this did not lead to a new revolutionary upsurge he revised his position, and shifted towards a view of crises as one phase in a cyclical pattern of growth.[2] According to this view, periods of profitable growth and accumulation tend to undermine the conditions of their own success and to lead to a decline in profitability. This does not lead simply to a slowdown in growth because of the role of the financial system which tends to over-expand credit during an economic upturn, especially in the final stages when speculation in raw materials and financial assets is often rife, and the expansion is brought to an end by a financial crisis and a sharp economic downturn. By raising unemployment and bankrupting the

[2] Heinrich (2012), p. 175.

weakest firms the downturn then creates the conditions in which a new period of profitable economic expansion can be established.

Reflecting his philosophical background, Marx' presentation involves an acute methodological self-consciousness. The first volume of *Capital* starts by presenting what Marx called the elementary form of wealth under capitalism, the commodity, a good (or service) which is produced for exchange. He then unfolds his analysis step by step, following what he believes is a logical path reflecting the inner structure of a capitalist economy. The exchange of commodities leads to one commodity emerging as the universal equivalent, money; undertaking exchange to obtain more money than one started out with then becomes the object of exchange; money which is advanced with the aim of making more money is capital. The key to obtaining more money than one started out with ('surplus value') is identified as production, and, more specifically, hiring waged workers, who create more new value when they are set to work than they are paid in wages. The pressure of competition then obliges firms to invest so as to cheapen their commodities by employing new, more productive technology, and to benefit from economies of scale. Volumes two and three of *Capital* were only published posthumously from partly fragmentary manuscripts, and Marx never completed more than a small part of the massive research programme that he sketched out, which included a proposed volume on the world market and crises.[3]

Production for profit

Marx introduces money at the start of the first volume of *Capital* and he states that, in what follows, he will assume gold is the money commodity. He indicates that, in reality, gold is only strictly necessary for money's function as a measure of value and for international payments and he acknowledges that, within countries, something other than gold – paper money issued by the state – could function as means of circulation, or even as store of value. But as the state and the world market involve much later steps in the structure of his analysis, state money cannot be introduced at this point. Marx subsequently also analyses at some length how bills of exchange and bank deposits can function as money, but this presupposes an analysis of financial capital and interest, which again belongs to a later stage in the structure of his analysis. Marx' form of presentation therefore required him to present much of his initial analysis using commodity money.

[3] Marx' plans and how they evolved are discussed in Mandel (1976), pp. 25-32 and Heinrich (2013).

Marx famously characterised the general formulae of capital as *M – C – M':* money is advanced to buy commodities which can be sold for a larger sum of money, the original sum plus surplus value. Surplus value is the source of profit, the driving motive of capitalist investment. There are three main points in the structure of his analysis which concern why periods of profitable growth tend to undermine themselves.[4]

The first point at which the issue of profitability over the economic cycle is addressed focuses on the development of wages.[5] Marx argues that periods of profitable growth lead to an increase in the number of workers employed and that, as unemployment declines, the bargaining position of workers is strengthened, enabling them to raise their wages, and leading to a decline in the share of value added remaining for profit. A corollary of this is that a crisis, by leading to higher unemployment, weakens the bargaining position of workers, reduces wages, and strengthens the share of value added going to profits. Marx describes the economic cycle by making an analogy with the planets, circulating the sun in an elliptical orbit. However, he insists that, over the course of the economic cycle, it is accumulation which drives the movement of wages, and not wages which drive the cycle.

The second point at which Marx' analysis is related to the issue of profitability arises in his draft for the second volume of *Capital,* which is concerned with the circulation of money and commodities. Marx sets up a simple economic model with two sectors, the first producing consumer goods, and the second means of production (raw materials and fixed capital).[6] Marx' explicit concern here is to demonstrate that, given appropriate proportions between the two sectors, economic reproduction on an increasing scale is at all possible. However, at other points in his analysis, Marx makes it clear that, in reality, selling all the commodities that have been produced can be a major challenge. At one point he refers to the limited consuming power of the workers as 'the ultimate cause of all real crises';[7] and in his frequent historical asides and examples he repeatedly points out how crises are associated with a mass of unsold goods. In the 1870s, Marx returned to his initial draft of the reproduction schema (written in the early 1860s, before the first volume of *Capital* was published) and explicitly introduced money into the circulation process. In particular,

[4] For surveys of Marx' views see, amongst others, Shaikh (1978), Fine and Harris (1979), Evans (2004) and Heinrich (2012).
[5] Marx (1867), chapter 25.
[6] Marx (1885), chapter 21.
[7] Marx (1894), p. 615.

he was concerned with the question of where the money comes from to realise that part of the value added which corresponds to surplus value. But, bound by his assumption that money was itself a commodity that had to be produced, this proved difficult to resolve.

The third important point at which Marx addresses the issue of profitability is in his draft for the third volume of *Capital* (often little more than preliminary sketches painstakingly edited by Frederick Engels after his death). This is concerned with combining the analysis of production and circulation. Marx first examines the process by which the mobility of capital between different branches of production tends to lead to the formation of an average rate of profit, and he follows this by outlining the controversial 'tendency for the rate of profit to fall'.[8] The essence of this is that, as capitalist accumulation proceeds, an increasingly large share of capital is invested in fixed capital, and a smaller share in hiring the waged workers who generate value added, including the part that corresponds to surplus value or profit. As the scale of production increases, a given amount of capital will therefore tend to result in the production of a declining amount of profit. Immediately after outlining this tendency, however, Marx sets out a number of what he calls counter-tendencies. Amongst the most important is the argument that, as investment in fixed capital makes it possible to cheapen commodities, this will also apply to the production of machinery itself. Consequently, while the mass of fixed capital might increase in relation to the number of workers, it will not necessarily be reflected in value relations. This, together with several other 'counter-tendencies', implies that the rate of profit might not fall, or at least it might not fall as significantly as suggested by the initial tendency – the importance of which was somewhat over-emphasised by Engels' editing, which placed the tendency and the counter-tendencies in separate chapters.

Marx himself did not draw these three different arguments about profitability together in a systematic form, and subsequent writers have disagreed, often in a vitriolic way, over which is the more significant, or the ways in which they might be combined.[9]

[8] Marx (1894), chapter 13.
[9] Some authors, including Rudolf Hilferding (1910), identify a fourth argument in Marx' writing, namely the difficulty of sustaining the appropriate proportions between the different branches of production (notably between consumer goods and producer goods), but since this view is usually combined with one of the three views outlined above it is not dealt with separately here.

This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 266800

Capitalist finance

Marx' analysis first focuses on capitalist production, and the role of productive capital. It is in this sector that commodities are produced and where, according to Marx, surplus value is generated. As his analysis unfolds, he introduces two other forms of capital. The first is commercial capital, which is invested in enterprises which are involved in the process of selling commodities. He argued that this sector does not generate surplus value; rather its profits are derived from the surplus value generated in the productive sector. The third form of capital which Marx introduces is what today would be called financial capital. This is involved in the relatively mundane task of managing the circulation of money; far more significantly, it plays a major role in a capitalist economy through its organisation of the credit system.

Marx' analysis of the credit system begins by considering a financial capitalist who extends a loan to a productive capitalist to finance a productive activity.[10] When the productive capitalist has successfully produced and sold an appropriate quantity of commodities, the loan must be repaid with interest. For Marx, the interest is derived from the surplus value generated by the productive capitalist. While the overall magnitude of the surplus value is determined in the productive sector, how the surplus value is divided between interest and the net profit remaining to the productive capitalist is, according to Marx, a purely market relation and it varies over the course of the economic cycle according to the relative balance between the supply and demand for loanable capital. In the early stages of an economic expansion, a large amount of loanable capital is available and the rate of interest is relatively low; in the later stages of an expansion, as fixed investment accelerates – and credit is also desired to finance speculation – the demand for credit rises and with it the rate of interest; when the crisis breaks, and productive capitalists' sales slump, they are desperate for money to meet payment commitments (including interest payments) and the interest rate reaches a peak.

The key institutions which are involved in the extension of credit are, of course, banks, and for Marx these not only lend their own capital, but also collect together the currently unused money capital of productive capitalists together with the savings of others sectors of the economy. However, banks do not merely intermediate loans based on existing capital; they are also central to the process of creating credit.

[10] See Marx (1894), especially chapter 21

Marx' analysis of credit creation is based on first considering a bill of exchange.[11] In the nineteenth century, much trade between capitalists was conducted using a bill of exchange, a promise to pay a sum of money after a given period of time (typically three or even six months). In the meantime the recipient of the bill could endorse the bill with a signature on the reverse side and use it to make further payments, and the person who held the bill when it became due would present it to the original issuer for redemption. The circulation of such bills was, however, limited by the trust which a recipient had in the signatories who had endorsed the bill over the course of its life. An important part of the business of banks in the nineteenth century involved advancing loans against such bills: the face value of the bill would be advanced, with a discount which corresponded to the bank's interest. In the early nineteenth century, banks could advance such loans by issuing their own standardised bank notes, which enjoyed a wider acceptance than a bill of exchange. After the 1844 Bank Act restricted note issue to the Bank of England such loans would be advanced using Bank of England notes or by crediting a deposit to a person's bank account. At all events, bank credit is for Marx an extension of the principles of a bill of exchange: it enabled the banking system to provide an extremely flexible supply of credit in the course of an economic expansion but it was also subject to a rapid collapse in the event of a crisis, when there was an acute demand for 'real money' i.e. gold, or state-backed central bank notes.[12]

The other important feature of the financial system analysed by Marx concerned bonds and shares.[13] In the event that a company (or the state) raised money by issuing a bond, the money would be used to finance a fixed investment or some state project, and the financial investor would hold a bond, which would pay interest and could be redeemed in full at maturity. The holder of a bond could sell the bond in the secondary market before it matured, and the price would be determined by the fixed interest payment ('coupon'), capitalised at the current rate of interest. For Marx, however, the important point was that the capital did not exist twice, once in the factory or infrastructure that had been financed, and again in the bond. Bonds are merely a claim on a share of future profits or taxes, and he therefore used the term 'fictitious capital' to characterise them.

[11] See Marx (1894), especially chapter 25. Marx drew extensively on the work of Tooke and Fullerton, two economists who he held in high esteem, and whose early analysis of credit money might be seen as a precursor of more recent Post-Keynesian theories of endogenous money.
[12] Marx' analysis of bank credit focused predominantly on short-term trade credit, reflecting the practice of banks in 19th century Britain. He did, however, write several journalistic articles about the *Crédit Mobilier,* a French bank which had a short-lived success in the mid-1850s providing long-term loans to finance industrial investment (and which subsequently proved an important model for big German universal banks).
[13] See Marx (1894), especially chapter 29.

The same logic applies to shares. If a company issues shares to finance an investment project, the money is spent on fixed capital and the share holder has a right to a share of the future profits. Unlike a bond which pays a fixed interest, the dividend paid to share holders is uncertain, depending crucially on the future profitability of the company, and the share price will be based on the expected future dividend capitalised at the current rate of interest. Once again, however, the capital is not duplicated, once in a factory and once in a share, and for this reason Marx also characterises shares as 'fictitious capital'.

Finance and crisis

Marx' notes on the relation between finance and crisis draw extensively on excerpts from official reports and parliamentary enquiries into the crises in Britain in 1847, 1857 and 1866.[14] His account of the industrial cycle begins in the period following a crisis when there is a major downturn in industrial production. The demand for credit is low but there is considerable idle money capital and, as a result, the rate of interest is low. This contributes to the beginnings of a new period of expansion because, with lower interest rates, the net profit remaining to the industrial capitalist will be larger. During the period of prosperity investment rises and output and sales increase. The demand for money capital rises to finance investment, but with rising profits the supply of money capital also increases; furthermore, much trade is conducted using bills of exchange and the rate of interest therefore remains moderately low.

In the later stages of an expansion, there is a strong increase in the demand for credit and the rate of interest begins to rise. Firms have significantly increased their productive capacity, and output has increased strongly, much of it in Britain's case destined for foreign markets. Wages have tended to increase as the demand for labour has led to lower unemployment; and the increased demand for raw materials has led to their prices rising. Borrowing also increases to finance speculation, in particular in financial assets.

Marx identifies two possible factors which could trigger a crisis and bring the expansion to an end. One involves a semi-autonomous monetary-financial crisis: banks suddenly curtail the expansion of credit as a result of fears about their own liquidity following a period of excessive credit expansion. As firms scramble to obtain access to means of payment, this can lead to a notable rise

[14] See in particular Marx (1894), chapters 30-32. See also Crotty (1985) and Evans (2004), especially pp. 73-76, on which the following paragraphs are based.

in the rate of interest. As interest payments rise this leads to a sharp squeeze on the net profits remaining to industrial firms. Marx also mentions how the rate of interest could be suddenly raised by the Bank of England in the final stages of an expansion in response to an international payments deficit. The second way in which Marx conceives of a crisis being triggered is where rising costs for labour and raw materials on one side, and rising interest payments on the other, lead to a decline in the net profits remaining to industrial capitalist. If they are then unable to meet payment commitments, and the credit system is already overstretched, this could set off a collapse.

For Marx the crisis is characterised by a widespread inability to sell commodities, a breakdown in commercial credit, and an acute demand for money to meet contractual payments. The desperate need to obtain money drives interest rates to their highest level and interest payments can exceed the entire gross profits for some branches. As a result, workers are thrown out of work, investment projects are abandoned and there is a wave of bankruptcies. In financial markets, the sharp rise in interest rates is accompanied by a fall in security prices, something which is especially serious for dealers who used borrowed money to buy shares at peak prices which can no longer be recuperated. At all events, the inability of industrial and financial capitalists to repay loans is associated with a crisis in the banking system and, before the emergence of the role of the Bank of England as lender of last resort, there is an abrupt collapse of credit, a sharp economic downturn and, as wages and prices fall, this is accompanied by deflation.

Final comments

Marx' approach to financial crises is based on an analysis of the business cycle which involves an interaction of productive capital and financial capital. As Schumpeter acknowledged, Marx was one of the first writers to recognise that the business cycle is an essential feature of the way that growth and accumulation occur in a capitalist economy.[15] For Marx, periodic crises were an intrinsic feature of capitalism and, while it was possible for the state to ameliorate their impact, he did not consider that crises could be eliminated. But, within the perverse logic of capitalism, he also considered that crises and the associated downturns in economic activity played an important role in preparing the basis for a new period of capitalist expansion through weakening the

[15] Schumpeter (1963), p. 40

bargaining position of workers, the writing off of old forms of productive technology, and the closure of the least efficient units.

Marx based his analysis of money on a logical-historical analysis in which the process of commodity circulation results in one commodity emerging as the universal equivalent – the commodity in which all others express their exchange value. His approach to money gives analytical priority to money's function as a measure of value, first in the exchange of equivalents and, subsequently, and more importantly, in the production of surplus value.[16] For Marx, the advance of money to make more money is the central driving feature of capitalism. Marx conducted his analysis of the production and circulation of commodities on the assumption that gold is the money commodity, and at the start of *Capital* he argues that state issued fiduciary money should be analysed as a substitute for gold.[17] While Marx does state that he will *assume* that gold is the money commodity, at times he gives the impression that it is something that is necessarily so, and this has clearly not been valid since the ending of the domestic convertibility of bank notes for gold in the early 1930s, and the end of the last formal link between money and gold when the convertibility of the US dollar was ended in 1971.[18]

When Marx came to analyse the credit system in the third volume of *Capital,* he outlined a financial system in which credit instruments serve as money, notably in the form of bills of exchange and of bank notes and deposits issued by private commercial banks. Here he drew extensively on the work of Tooke and Fullerton, who anticipate the so-called endogenous theory of money developed more recently in particular by Post-Keynesian writers. For Marx the credit system helped promote an economic expansion by centralising and making available the idle monetary reserves of both capitalists and other social classes; more crucially, it created credit instruments that accelerated the process of growth and accumulation, leading to an expansion of output that eventually

[16] This contrasts with neoclassical writers who give analytical priority to money's function as a means of exchange, and for whom the introduction of money into a pre-given set of exchange relations does not alter anything fundamental. While Keynes also gives priority to money's function as a measure of value in the first chapter of the *Treatise on Money,* his historical notes identify money's original function as an instrument of credit, prior to the emergence of coins and their role in circulating commodities. The argument that money originally emerged in credit relations is also a central argument of Graeber (2011).

[17] This corresponded to the monetary arrangements in Britain at the time he was writing, when notes issued by the Bank of England were convertible on demand into gold, although he also argued that the same principles applied during the Napoleonic wars when convertibility was suspended.

[18] Marx actually states that while it possible to substitute state issued fiduciary money for gold within a national economy, gold remains necessary to fulfill the function of 'world currency', i.e. in international transactions (Marx, 1867, p. 243).

outstretched available markets, while feeding a process of speculation in financial assets that culminated in a crash.

The pivotal role of financial capital in the organisation and regulation of a capitalist economy led Marx at one point to describe the financial system as 'socialising capital within the framework of capitalism'. In the *Communist Manifesto,* written 20 years before *Capital* was published, Marx and Engels did not call for the nationalisation of capitalist industry; but their relatively short list of concrete demands did include the nationalisation of the banks. While it is possible to find passages in Marx' writings which are a paean to the historically progressive role of capitalist production, his choice of language when dealing with bankers never exhibits anything but a deep loathing for their parasitic role.

FESSUD
This project has received funding from the European Union's Seventh Framework Programme
for research, technological development and demonstration under grant agreement no 266800

3. Rudolf Hilferding

Rudolf Hilferding (1877-1941) was born to a prosperous Jewish family in Vienna and, after studying medicine, practiced as a doctor until 1906.[19] As a student he became active in the socialist movement and read widely in economics and history. He subsequently joined the Austrian Social Democratic Party, and wrote on economic issues for the leading Marxist journal of the time, Karl Kautsky's *Neue Zeit.* In 1906 he was invited to Berlin to become a lecturer on economics and economic history at the training centre of the German Social Democratic Party (SPD), but, because the law forbade the employment of foreign teachers, he had to give this up (to Rosa Luxemburg) and he became foreign editor of the SPD's party newspaper, *Vorwärts.* During this time he wrote his most important work, *Finance Capital,* hailed by some as the fourth volume of capital on its publication in 1910. At the outset of the First World War, Hilferding opposed granting war credits, but was mobilised by Austria as a doctor, serving initially in Vienna and then on the Italian front. After the war he was invited back to Berlin by the leaders of the Independent Social Democratic Party of Germany, which stood politically between the SPD and the newly formed Communist Party. Hilferding opposed affiliation to the Third (Communist) International but supported the movement for creating workers' councils during the November Revolution in 1919. In 1922 he rejoined the SPD and, after acquiring German citizenship, served briefly as minister of finance from August to October 1923 and again from June 1928 to December 1929. He was elected to the Reichstag in 1926 and became the leading financial spokesperson for the SPD until the Nazi seizure of power in 1933, when he fled abroad. Hilferding lived in Paris until the German occupation, then moved to Vichy, but the authorities handed him over to the Gestapo, and he died in their hands in Paris.

Money and credit

The first part of *Finance Capital* is one of the fullest Marxist treatments of the theory of money. Hilferding's starting point is that, in a commodity producing economy, money is necessary to express the value of commodities. As there is no conscious organisation of production, social association is brought about through the exchange of commodities, and it is through money that this is achieved. Following Marx, he takes money to be gold but argues that its use must be

[19] This paragraph is largely based on Bottomore (1981).

sanctioned by the state; furthermore gold can be substituted, within certain limits, by paper money issued by the state.[20]

In addition to gold and state paper money, Hilferding goes on to argue that private credit instruments can also serve as money provided they are convertible into 'real' money, and that the greater part of purchases or sales actually occur through promises, such as bills of exchange, which cancel each other out.[21] Whether such promises can be honoured depends on whether the commodities paid for in this way, or other commodities with a similar value, can be sold. If the commodities do not correspond to social conditions, or social conditions have changed, the promise becomes worthless and must be replaced by 'real' money. This, according to Hilferding, is what happens in a crisis. The inability to sell commodities is accompanied by a decline in prices and a contraction in the volume of credit.

Following the initial analysis of money in relation to the circulation of commodities, Hilferding then introduces industrial production, in which capitalists hire workers with the aim of producing commodities that can be sold at a profit. On the basis of this, he goes on to distinguish between two forms of credit, commercial credit and capital credit. Commercial credit involves promises to pay (bills of exchange, or private bank notes), which are used extensively during periods of economic expansion, and which economise very considerably on the use of real money but which collapse during a crisis. Capital or investment credit, by contrast, involves making money that is unused by its owner available to someone who can use it as capital, either to finance fixed capital (machinery and buildings) or circulating capital (raw materials etc.). In the case of fixed capital, which is the more significant as capitalist accumulation proceeds, the return only occurs piecemeal, as the fixed capital is depreciated. According to Hilferding, once the credit system has developed to the point where it can provide capital credit, then industrial capitalists are forced by competition to use credit to expand their operations, so as to gain the benefits of economies of

[20] Hilferding criticises Marx for arguing that paper money must be analysed by way of gold, rather than directly in relation to the value of a given quantity of commodities. For Hilferding the limit for the quantity of paper money which the state can issue is set by the amount required to circulate commodities when the volume of circulation is at its lowest.

[21] The introduction of credit money at this stage of the analysis has been criticised by Susanne de Brunhoff on the grounds that credit presupposes an analysis of the capitalist credit system which, in turn, presupposes a prior analysis of capitalist production. This follows Marx who, when analysing money's function of money as a means of circulation in the context of simple commodity circulation, states: 'Credit money ... implies relations which are as yet totally unknown from the standpoint of the simple circulation of commodities.' (Marx, 1867, p. 224)

scale.[22] In this way, he says, the need to employ credit to finance fixed capital results in industrial companies becoming tied to banks.

Finance capital

The next stage in Hilferding's analysis is to introduce the joint stock company or corporation, where the industrial capitalist is transformed into a manager who administers other people's money. Following Marx, Hilferding characterises shares as fictitious capital. He argues that shareholders are primarily money capitalists, and that the turnover of shares in the secondary market involves nothing more than the sale and purchase of titles to future income. He notes, furthermore, that the commerce in shares – as with all forms of fictitious capital – gives rise to a requirement for additional money, whether cash or credit money. For Hilferding, the development of the corporation endows capital with the form of social capital, and it makes possible an expansion of production that was not be achieved by an individual industrial capitalist.

At this point, Hilferding begins to develop his analysis beyond that of Marx, drawing strongly on the development of German capitalism in the late 19th century. According to Hilferding, corporations initially raise capital by direct appeals to individual capitalists, but this changes once corporations have been established. Further appeals to the financial markets, he argues, are mediated by the banks which extend credit to the corporation and invest in shares. As a result banks acquire a permanent interest in corporations, and this gives rise to a desire to establish permanent supervision, which they achieve by obtaining seats on the board of directors.

Hilferding observes that the process of capitalist development is characterised by a concentration of industrial capital, as productive enterprises become larger and larger, and he argues that this is accompanied by a similar process of concentration amongst banks. The banks, he goes on to argue, have an interest in eliminating competition between the industrial corporations which they are involved in financing, and they therefore strive to establish monopolies, a process which leads to the formation of combinations between the industrial enterprises. This has a significant impact on the pattern of commerce and culminates in the formation of cartels which are able to impose terms on commercial enterprises.

[22] Hilferding, who based much of his analysis on developments in Germany, and to a lesser extent the US, notes that in Britain banks did not provide capital credit.

For Hilferding, the development of capitalist industry produces a concentration in banking and the concentration in banking promotes a concentration in cartels and trusts. The effect of cartelisation, in turn, is to encourage banks to amalgamate in order to avoid becoming dependent on the cartel or trust. The cartel presupposes a large bank, but brings about a closer relation between banking and industry. Cartelisation ensures greater financial security and, by eliminating the downward pressure on prices in a recession, brings about a greater uniformity of earnings. Nevertheless, an ever increasing part of industrial capital does not belong to the industrialists who use it; they are merely managing capital which is owned by the banks. As a result, banks become to a greater and greater extent industrial capitalists, a process which gives rise to what Hilferding characterises as finance capital. Finance capital, according to Hilferding, arises with the development of the joint stock company and reaches its peak with the monopolisation of industry. In this way, finance capital increasingly concentrates its control over the whole national capital.

Finance and crisis

Hilferding sees crisis as ultimately due to the narrow basis of consumption under capitalism. However, his specific explanation is based on what he calls 'disproportions' which arise between different sectors of the economy, and he believes that these have their origin in the rising organic composition of capital. He also argues that the emergence of finance capitalism has given rise to a change in the form of the business cycle.

Hilferding's account of the business cycle is based on a sophisticated interplay of various levels of analysis, including deviations of prices from values, and changes in the turnover time of capital. The industrial cycle (as he calls it) begins with an expansion of production involving new markets, new branches of production, and new technology. As demand increases, prices and profits rise and investment in fixed capital increases. However this process begins to undermine itself. The investment in fixed capital leads to a rise in the organic composition of capital, which – following one of Marx' arguments – tends to lead to a decline in the rate of profit. Furthermore, turnover time tends to rise due to a shortage of labour, especially skilled labour, and rising labour disputes, together with the more frequent breakdown of machinery due to over-intensive use. At the same time profits begin to be squeezed due to rising wages as unemployment falls, and to a rise in interest payments as a rising demand for credit, including for speculation, pushes up the rate of interest.

For Hilferding the crisis begins when the tendencies towards a falling rate of profit prevail over the tendency for prices and profits to rise. The immediate cause of this is that differential price rises lead to the emergence of disproportions between different branches of the economy, a complex process which he describes in some detail.

These developments are accompanied by changing credit conditions. At the beginning of a period of prosperity, loan capital is plentiful, the circulation of commodities is facilitated by credit instruments, and the demand for credit to finance production can be met without a rise in interest rates. At the same time, the reduction in the turnover time of capital releases additional funds. As the expansion continues, the interest rate begins to rise gradually: the turnover time of capital begins to lengthen; due to the emergence of disproportions, sales are more sluggish and, as the turnover of commercial credit slows, there is an increased demand for bank credit; a slackening of sales also means that bills of exchange cannot be redeemed and there is a demand for bank credit to redeem them. The incipient disproportionality shows itself in unsold commodities, but this is initially masked by the expansion of bank credit, and production continues and even expands where prices are high.

The change in the interest rate, in turn, affects securities markets. At the start of an expansion the low interest rate tends to push up the price of fictitious capital; in the case of shares, higher profits lead to rising dividends, which also pushes up prices. As prices rise, speculation increases and banks become more active in promoting new share issues, all of which contributes to a higher turnover in securities markets. Rising prices and higher turnover require an increased amount of money to settle transactions, and there is an increased demand for bank credit, which also has a direct impact on the interest rate. A further factor which pushes up the interest rate is an increased demand for bank credit to finance speculation in commodities, once their price begins to rise in the during an expansion.

During the boom in the cycle, prices and profits are at their highest, and there is a marked growth of speculation. However, the rise in the interest rate now tends to depress security prices, and there is a danger that banks will be unable to dispose of new share issues. As banks meet the demand for loans from industry, there is less credit available for speculators and, as speculation contracts, stock market prices fall. And, since shares were used as collateral for bank loans, this generates forced sale of shares to raise money, and securities prices fall rapidly. The fall in prices

This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 266800

leads to further sales, and the decline becomes a crash accompanied by widespread financial panic. For Hilferding, such a financial crash can precede an industrial downturn: 'The immediate cause of a stock exchange crisis, therefore, is the changes which occur in the money market and in the credit situation, and since the advent of such a crisis depends directly on the level of interest rates, it can well precede the onset of a general commercial and industrial crisis' (p. 271).

A key role in the onset of the general crisis is played by the banks. According to Hilferding, banks' profits initially rise during the period of economic expansion as interest rates increase. However, the demand for bank credit rises to finance fixed investment and, when circulation can no longer be sustained by commercial credit, there is a further rise in the demand for cash, reinforced by the demand for loans to finance speculation: '[B]ank credit is gradually strained to the point where the banks are no longer able to expand credit without an excessive reduction in their reserves' (p. 272). At this point, according to Hilferding, banks begin to restrict the supply of credit. Now, industry can no longer correct the dislocation arising from disproportions between the different branches; there is an urgent need to sell off commodities and prices begin to fall. As prices fall, bills of exchange drawn against commodities cannot be met; circulation credit declines and banks, which are in any case stretched, will not advance bank loans because it is doubtful whether producers will be able to repay them.

At this point in the cycle interest rates are at their maximum. It is impossible to obtain credit from the banks; everyone wants to sell; no one wants to buy. Prices fall precipitously and there is a frantic demand for cash. This in turn gives rise to a bank run and, as deposits are wiped out, it sets off a banking crisis. Whether this then generates a full-blown monetary crisis depends on the reaction of the monetary authorities. If the central bank makes credit money available – as when the Bank Act was suspended in Britain in 1847 and 1857 – a monetary crisis can be averted. But, in the US where the law restricted the circulation of credit money a major monetary crisis erupted in 1907.

The final dimension of Hilferding's analysis of financial crises involves the international transmission process. A boom, he argues, leads to imports rising faster than exports and a deterioration in the trade balance; at the same time, however, higher interest rates and security prices might attract capital inflows. If the deterioration in the trade balance leads to a gold flight, and this occurs at a time when credit conditions are tight, this can contribute to a further increase

This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 266800

in the interest rate and, in this way, could be the impetus for a stock exchange crisis. He also argues that, while the boom phase in the industrial cycle is an international phenomenon, the exact timing varies from country to country. If the boom begins in the US slightly before Britain, the higher interest rates initially draw capital to the US from Britain. But if the boom then develops in Britain, higher interest rates there could draw capital back from the US, just as the US trade balance has deteriorated. The outflow of gold from the US then leads to a contraction of credit and the outbreak of a stock exchange crisis, something which is intensified by an outflow of capital as speculative foreign investments are withdrawn. Here again, Hilferding draws attention to the highly deleterious effect of mistaken banking legislation which, by restricting the issue of bank notes, exacerbated the impact of a gold outflow.

Hilferding concludes his analysis of crises by identifying changes which had occurred in the character of crises. He notes that the impact of a crisis is less severe in branches which serve consumption, since a certain level of consumption will continue even during the downturn in the cycle. The smaller a firm, however, the more likely it is to be bankrupt by a crisis. The situation is different, he argues, for the large modern firms which had emerged in the most recent phase of capitalism. Here a part of the output would continue to be produced even in a crisis, and the disruption of credit might not have as great an impact as in the earlier period of capitalism. The development of credit had reduced the need for cash, even in a crisis, and the use of cheques made it possible for the clearing of transactions to continue. Internationally too, more transactions were being conducted using credit, so that gold was being used increasingly merely to settle the balance on international payments. The emergence of joint stock companies, and the dominant position of banks, he argues, do not prevent industrial crisis occurring but they limit the likelihood of a major banking crisis. And while cartels cannot prevent crises, nor escape their effects, the greater ability of cartels to influence prices and determine the level of output enables them to divert the main impact of crises onto non-cartelised industrial sectors.

Final comments

Hilferding's analysis is striking for its impressive sweep, moving from a sophisticated – if not always uncontroversial – Marxian account of the foundations of monetary theory to a characterisation of what he called the latest stage of capitalism. Here Hilferding provided a path-breaking account of a stage of capitalism characterised by large-scale joint-stock industrial companies and large joint-stock banks. However, his notion of finance capital, where large-scale units of banking capital had come to merge with and dominate large-scale units of industrial capital, has been challenged on a number of grounds.

Hilferding's analysis was based above all on developments in Germany, and to a lesser extent the US, in the late 19th century.[23] However, as Paul Sweezy (1942, p. 267) amongst others has pointed out, Hilferding mistook a transitional phase of capitalism for a lasting trend. Even in Germany, the very close relation between big banks and big industrial concerns was a temporary phase and, while other writers concede that Hilferding's picture might have had some validity in the final years of the nineteenth century, they argue that by the time he was writing the very close relation had already begun to break down (Deeg, 1991, pp. 77-79). In fact, as Sweezy also notes (p. 268), a key feature of large-scale corporations from the inter-war period onwards has been the importance of internal funds as the principal source of finance for fixed investment. Furthermore, as the post-war model of accumulation began to break down in the 1970s, the re-emergence of a strong financial sector can be seen as an attempt by capital to *distance* itself from the direct organisation of production and the management of an insubordinate working class. By holding capital in the money form, and through the development of a whole range of increasingly complex financial instruments, wealth owners sought the freedom to flit from one investment to another on an increasingly global scale, so that they could cream off a rising share of the economic surplus, while ensuring they were not too closely bound to any particular line of economic activity.

Hilferding's account of the industrial cycle and the onset of crises involves a complex dynamic involving many different levels of analysis, but at root his explanation for crises is based on the impossibility of sustaining the necessary proportions between the different branches of production in an unplanned economy. Hilferding is careful to point out that the formation of cartels under finance capitalism cannot eliminate crises, only change their form. However, at the end of his work he wrote about what he appeared to see as the positive side of developments. He wrote: 'The socialising function of finance capital has facilitated enormously the task of overcoming capitalism', and went on to argue that 'taking possession of six large Berlin banks would mean taking possession of the most important spheres of large-scale industry' (p. 368).

[23] Britain – which was already falling behind its new rivals – is derided by Hilferding for sustaining an outmoded banking system based on a division between commercial and merchant (i.e. investment) banks.

4. Rosa Luxemburg

Rosa Luxemburg (1870 – 1919) was born in Russian Poland to a family of Jewish merchants and she became involved in revolutionary politics while still at school.[24] She studied law and economics in Zurich – partly in part to avoid arrest – where she completed a doctorate on the subject of industrial development in Poland. Luxemburg moved to Berlin in 1896 attracted by the strength of the working-class movement and the German Social Democratic Party (SPD) and established a leading position on the left of the party with her pamphlet *Reform or Revolution*, published in 1900. The outbreak of the 1905 Revolution in Russia led her to return to Warsaw to participate in the revolutionary activities but, after the defeat of the revolution and six months in prison, she returned to Berlin. Here she took over the position vacated by Hilferding teaching economics at the SPD's training academy, and her major theoretical work, *The Accumulation of Capital,* was published in 1913. Luxemburg strongly opposed the SPD's support for war credits in 1914 and, because of her opposition to the war, she spent much of the First World War in prison. Although she had worked with Lenin to oppose militarism before the war, her strong commitment to democracy led her to criticise the Bolsheviks for suspending parliamentary elections shortly after the Russian Revolution. On release from prison in 1918 Luxemburg became a leading member of the newly formed Spartacus League and, despite her own misgivings, she accepted the majority decision to stage an armed uprising in Berlin in early 1919. Following the defeat of the uprising, Luxemburg was arrested and subsequently severely beaten by right-wing soldiers, from which she did not recover, and her body was later found in the city's Landwehr canal.

Marx's 'fatal flaw'

Luxemburg's analysis in *The Accumulation of Capital* is concerned with the so-called reproduction schema which Marx presented in the second volume of *Capital*. Here Marx set up a model with just two departments, one producing means of production and one producing means of consumption, and he examined the relations that were necessary between the two departments in terms of both money and commodities in order to ensure that reproduction could proceed. Following Marx, she first examines simple reproduction, where the scale of economic activity does not expand. In his analysis, Marx had assumed that gold functions as money, and Luxemburg follows this. However, she criticises Marx for including the production of monetary gold in the department producing

[24] This draws on W. Stark's brief note at the start of Luxemburg (1913).

means of production. According to Luxemburg this is theoretically invalid – it is a means of exchange, not a means of production – and should therefore be included in a third department.[25]

Luxemburg then turns to a detailed examination of the numerical examples which Marx employed to analyse expanded reproduction, where part of the surplus value is accumulated to expand the scale of production. She points out that, in the logic of Marx's approach, it is department one, producing means of production, which drives the process of expansion, and that department two, producing means of consumption, is forced to adjust, absorbing a certain part of the new means of production in order to replace and expand the existing capacity, and providing consumption goods for workers employed in department one. The crux of Luxemburg's approach is to question where the demand comes from to realise the surplus value that has been produced: 'Part of the surplus value is consumed by the capitalist class itself in form of consumer goods, the money exchange for these being retained in the capitalists' pockets. But who can buy the products incorporating the other, the capitalised part of the surplus value?'[26]

As already noted, Marx himself had revised his notes on expanded reproduction, introducing money into the reproduction schema, some years after he had sketched the original drafts. But here he was principally concerned with where the money came from to realise surplus value (a problem which arose principally because the analysis of loan capital and the credit system corresponded to a later stage in the structure of his analysis). According to Luxemburg, the key flaw in Marx's analysis is that the problem is not one of the source of the money, but rather of the source of the effective demand to realise the goods – and hence the surplus value – in question.[27]

For Luxemburg, there is also a broader problem with Marx's approach: Marx's theoretical analysis is based on an exclusively capitalist economy. But, she notes, this is a theoretical contrivance: 'real life has never know a self-sufficient capitalist economy under the exclusive domination to the capitalist mode of production.'[28] In reality capitalism only constitutes a small part of total world production, and capitalism depends on non-capitalist strata and non-capitalist regions of the world, an external market which acts as a source of raw materials and labour, and as a market for its products. According to Luxemburg, it is this external, non-capitalist sector of the world

[25] Luxemburg (1913), pp. 71-74.
[26] Luxemburg (1913), p. 105.
[27] Luxemburg (1913), pp. 128 & 138.
[28] Luxemburg (1913), p. 328.

economy which provides the demand that is necessary to realise the surplus value produced in the capitalist sector: 'the immediate and vital conditions for capital and its accumulation is the existence of non-capitalist buyers of the surplus value'.[29]

Luxemburg's theoretical conclusion is then followed by a brief but vivid account of how the development of capitalism had been associated with a violent process of creating markets through colonial expansion, drawing on the bitter examples of land seizures by the British in India and the French in Algeria; the forcible imposition of a commodity economy on China by the British and the French through the creation of a market in opium; and the dispossession of the original indigenous inhabitants in the United States and South Africa by independent small farmers who were, in turn, effectively displaced by large-scale capitalist agricultural and mining companies.[30]

For Luxemburg, capitalist accumulation requires that 'natural economies' (i.e. non-commodity economies) are transformed into simple commodity economies so as to provide markets for the realisation of surplus value. But in so far as the creation of simple commodity economies is part of a process of striving to establish universal capitalist production, it threatens the future of accumulation. Without non-capitalist markets, accumulation would come to a standstill: 'Only the continuous and progressive disintegration of non-capitalist organisations makes the accumulation of capital possible.'[31]

Final comments

Rosa Luxemburg is widely respected for her principled political positions and her intellectual integrity. However, not withstanding her vivid opposition to exploitation and colonialism, her specific analysis has been subject to considerable criticism. Paul Sweezy, who is otherwise very sympathetic to Luxemburg, argues that the most important error in her analysis is that, in discussing expanded reproduction, she implicitly retains the assumptions of simple reproduction.[32] Contrary to her assumption that the total consumption of workers remains fixed, he argues that under expanded reproduction part of the surplus value is used to employ additional workers, and that their consumption expenditure therefore increases, thereby contributing to realising part of

[29] Luxemburg (1913), p. 346.
[30] Luxemburg (1913), chapters 27 – 29.
[31] Luxemburg (1913), p. 397.
[32] Sweezy (1942), pp. 204-06.

This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 266800

the surplus value that is not consumed by capitalists. He also points out that, even if Luxemburg's argument about the impossibility of accumulation within a closed capitalist system were correct, her solution would not solve the situation since it would not be possible to sell to the non-capitalist sector without also buying from it. Sweezy also notes that, while Luxemburg's book was greeted with great hostility by the SPD leadership, this might be explained by their hostility to any theory which questioned capitalism's longevity.

Luxemburg's analysis has also been criticised by Roman Rosdolsky. He argues that Luxemburg mistook the position of the reproduction schema in Marx's analysis. Rosdolsky stresses that the reproduction schema are concerned with analysing the capitalist mode of production in a pure form and that this should not be confused with historical reality, which also includes many non-capitalist features.[33] Like Sweezy and others, he argues that Luxemburg falls back into the assumptions of simple reproduction when analysing expanded reproduction. Rosdolsky also emphasises that Marx's aim was to show the conditions that would need to be fulfilled for expanded reproduction to be possible – something that, in practice, would be met only temporarily and which, in Marx's words, 'spring as a continual process of disproportionality'.

[33] Rosdolksy (1968), p. 490-96.

5. The (old) Institutionalist Analysis

The purpose of this section is to provide an exposition of the (old) institutionalist analysis developed in the writings of Thorstein Veblen and Wesley Claire Mitchell about the role and importance of financial markets in generating conditions for financial and economic crisis. According to the (old) institutionalist approach financial markets are naturally and endogenously unstable, non-neutral and influence 'real' economic performance. Veblen and Mitchell bring forward the importance of leverage, as well as of liquidity and solvency in generating debt-deflation processes. Emphasis is focused on the way Veblen links commodity and financial assets price manipulation with unsustainable leverage structures that cause financial instability, deficient demand and economic crisis and on Mitchell's business cycle approach to financial crisis.

Thorstein Veblen

An analysis of the role of financial markets and of financial crisis was developed in 1904 by Thorstein Veblen, the founder of the institutionalist - evolutionarist approach within economics. In the *Theory of Business Enterprise,* Veblen (1904) envisages financial markets to have a significant role within the business enterprise system, because they form the institutional basis of corporation finance, which is the key adaptation mechanism of the culture of the business enterprise system (Argitis, 2013). Veblen's analysis of the financial markets is derived from the conflict between the cultural incidence of the machine process and the cultural incidence of business enterprise (Mitchell, 1969). In Veblen's system, financial markets have a pecuniary existence, because they are ingredients of the business culture and function according to business principles. This is the major reason that Veblen perceives the evolution of the business culture as the ultimate reason that endogenously causes financial instability and crisis.

To understand Veblen's endogenous nature of financial crisis, it is crucial to mark out the role of leverage, as a process of credit creation, in the cultural conflict within the business enterprise system. Leverage stimulates new investments in the machine process, which, as Kelso and Duman (1992) and Wray (2007) notify, pushes down production costs and commodity prices, due to the advanced technology used in production. But the capitalised earning capacity of the corporation is the factor that influences expectations about the corporation's good-will and the potential to increase its financial leverage. Veblen's insight about the link between leverage, the capitalised

This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 266800

putative earning capacity and the good-will is fundamental to understand the complexity of the financial markets, linkages and relationships.

If liquidity is provided according to the capitalised good-will of a corporation or a bank, then the manipulation of the future stream of nominal profits comes naturally about within the business system. The reason is that a firm with a highly capitalised goodwill will be a successful and financially solvent firm, and hence will have easy access to liquidity. Nonetheless, the evaluations of the leverage and financial structure of firms and banks are quite likely to be mistaken, because of the manipulated measures of earning capacity and good-will. Consequently, corporations and banks might be valued as highly as possible by the financial markets, in spite of a considerable discrepancy that might exist between corporation's putative earnings and actual earnings.

In Veblen's institutional logic leverage causes two conflicting effects. Leverage gives to the businessmen the means to overinvest, especially during a business upturn. The expanded firm is in better position to negotiate a higher leverage that further increases output, and which extends prosperity and investment opportunities. As a result, leverage stimulates a process of cumulative acceleration that increases prices of goods, nominal profits, the market (and the collateral) value of existing plants and equipment, as well as the expected returns on new capital and the availability of liquidity (Veblen, 1905). An extensive use of leverage might ultimately cause a fall in prices, as a result of the use of more efficient machine processes that reduces the value of the existing assets of business firms and the expected earnings. The extensive use of leverage causes solvency and liquidity problems because businessmen are overcapitalised and fail to earn sufficient revenues to fulfil their debt obligations.

In Veblen's system, the extensive use of leverage results from businessmen's intention to success at emulation by growing their business at the expense of competitors. Successful emulation means to have property the merit of which is to be higher than others in the social and economic hierarchy. Businessmen's property is measured by the money value rather than the productive value of the machine process. Consequently, emulation makes businessmen to battle for distinction and reputation and not to use labour and the production process to increase society's supply of material goods. Cornehls (2004) argues that this battle makes businessmen to use predatory business practices in order to manipulate profit expectations so to have access to the financial markets. New credit accommodates businessmen command to expand their machine process, triggering the concentration in industry as well as their authority and social prestige. Consequently, emulation affects businessmen's decision to over-leveraging, which increases the discrepancy between putative and actual profits and gives rise to solvency and liquidity problems that ultimately cause deleverage and the financial crisis stage of the business cycle.

In Veblen' system, the origin of the natural instability of the financial markets is the culture of the business enterprise system. The discrepancy between putative and actual earning capacity, and therefore between putative and eventual capitalization of collateral is the factor that stimulates an endogenous process of financial fragility and instability. Over-leverage is the driving force that causes the above-mentioned discrepancy. An extensive use of credit and particularly speculative credit is a process that in due course causes insolvency that deleverages the capital accumulation process. Deleverage might due to decreases in aggregate demand or increases in the production cost that reduces expected profits, inducing changes in expectations and liquidity constraints.

Veblen pays considerable attention to the sterility of credit, which, he argues, makes the financial crisis certain. Veblen (1904, p. 58) notes that 'such use of credit does not add to the aggregate of industrially productive equipment nor increase its material output of product, and therefore it does not add materially to the aggregate gross earnings obtained by the body of business men engaged in industry'. Veblen marks out the unproductive use of credit and highlights the point that it is considerably associated with the culture of the business enterprise system. It is the unproductive credit that increases the discrepancy between the putative and the actual earning capacity of the company and makes manipulation necessary for businessmen to succeed in emulation. The higher is the manipulation, the higher is the leverage structure and hence the possibility businessmen to be unable to meet their debt commitments. The sterility of credit increases the insolvency of the business sector as well as that of the financial sector and the likelihood for a speculative crisis to happen. Deleverage increases pressures to businessmen to liquidate existing real and financial assets triggering a debt-deflation process. Veblen viewed leverage and deleverage as financial processes that accommodate the institutional adaptation of the business enterprise system, which evolves through processes of booms, financial crises and depressions.

Raines and Leathers (1992, p. 433) argue that in Veblen's system financial markets incorporate 'both a tendency toward collusive stability and resurgent periods of financial instability'. Financial stability results from decisions made by the captains of industry and finance to promote collusive structures. Veblen conceptualised that businessmen would naturally seek to deal with the cut-throat competition due to the expansion of financial markets and financial innovations. Output and price control could be accomplished by financial arrangements that improve the financial structure of corporations and the capability of managers to effectively manipulate good and stock prices. However, financial innovations and unsustainable leverage structures cause new waves of competition that destabilise the financial markets and increase the possibility of financial crisis.

Veblen thought that the achievement of financial stability also required processes that promote comprehensive controls of credit. These processes are the collusions of greater credit institutions, which increase their control of the creation and the allocation of credit and governmental agencies like the Federal Reserve System that can implement regulatory structures (Raines and Leathers, 1992). However, financial innovations restructure financial balance sheets, practices and linkages through a process of imitation and routinisation destabilising the financial markets.

Wesley Clair Mitchell

Mitchell (1941) expanded Veblen's analysis developing the foundations of a macroeconomic and financial analysis of the business cycle. A financial crisis is a fundamental phase of his understanding of the business cycles in the business enterprise system. Mitchell analyzed the statistical behaviour of major economic, monetary and financial variables and suggested that 'aggregate, macroeconomic phenomena have an ontological and empirical legitimacy' (Hodgson, 2004, p. 310). In addition, Mitchell paid considerable attention to the evolutionary process of economic change of a monetary economy, which is dominated by the quest of profits. In Mitchell's system, a revival of activity develops into full prosperity, which in turn gradually breeds a crisis that merges into depression. Depression becomes deeper for a period of time, but eventually engenders a new revival of the economic activity. Mitchell's (1941, p. ix) main purpose was to provide a 'descriptive analysis of the cumulative changes by which one set of business conditions transforms itself into another set'.

To understand Mitchell's approach to financial crisis is important to begin by pointing out that his discussion of the business cycle in a money economy centre about the prospects of profits. In Mitchell's analysis the credit that an enterprise can command depends upon all the property owned by it, both tangible and intangible, which is valued upon the basis of the money that can be made by its use. In addition, goodwill is valued according to its estimated contribution toward profits. Profits, present and prospective, are by far the most important single element for creditors to decide how much a business enterprise is worth and how large a line of credit can safely be granted it. Mitchell's significant contribution to our understanding about the unstable nature of the financial markets is that the latter rate the business enterprises by capitalizing these profits at the current rate of interest.

Furthermore, Mitchell focused his analysis on what he notified as crucial for businesses, which is the avoidance of bankruptcy. Profits, credit, solvency and bankruptcy share Mitchell's analytical interest and presents the importance of finance and of financial markets in his business cycle theory. Mitchell investigated meso, micro and financial factors (e.g. sales, prices, liquidity, credit) and examined their effect on the prospects of profits and the solvency of the business enterprises.

The starting point of Mitchell's analysis is that stage of the business cycle in which economic activity begins to speed up after o period of depression. Wolfson (1986, p. 15) notes that the typical conditions of the depressions that occurred in Mitchell's time 'include a reduction in business costs, inventories, interest rates, and accumulated debt, and a greater willingness on the part of banks and other creditors to lend to business. These conditions restore the basis for profitable expansion'. However, following Veblen, Mitchell conceptualized the use of credit to have a crucial role in the business expansion. Credit availability depends upon the expectations of the capitalized value of entrepreneurs' future profits that determine the solvency, as well as the liability of the leverage structure of business enterprises. A solvency crisis causes detrimental consequences on the business expansion to the extent that it increases the interest rates on long-term bonds and creates obstacles to access in external finance. Nevertheless, the most important effect is the liquidation of debt in order for the debtors to have cash to meet their financial commitments. The process of economic prosperity triggers the forces that result to a solvency and liquidation crisis. At the centre of this crisis are unsustainable leverage structures of enterprises.

Mitchell (1941, p. 65) argues that 'as prosperity grows more intense, a pyramiding of credits begins'. Credit advances swell commodity prices and profits, present and prospective, and give to enterprises a motive and a justification for demanding larger credits. The price of securities and bonds, which are used as collateral for loans, also increase. However, this process is not without endogenous obstacles. An increase in the interest rates, due to higher credit demand reduces the capitalized value of future profits, which increases the fragility of some of firms' leverage structure undermining their solvency. At the same time the fall of bond prices reduces the borrowing power of businessmen having this class of collateral, while stock prices are subject to frequent relapses. Due to these effects, liquidity and the business rating of enterprises in the financial markets have its ups and downs. In addition, panic is natural as the prospective profits of different enterprises vary endlessly and bankruptcies occur that introduce caution among lenders. Mitchell (1941, p. 66) observes that during the process of prosperity 'the typical business enterprise has outstanding heavy financial obligations to creditors, but relies confidently on the still larger sums that will fall due to from its debtors, plus the sums represented by its unsold goods and unfilled contracts, to bring in the necessary funds in good season'.

In Mitchell's system, in the case that creditors' outlook the fall in profits as a factor that reduces entrepreneurs ability to fulfil their debt commitments a solvency crisis occurs, which in turn it causes a liquidation crisis and in the course of this financial crisis prosperity turns to crisis. This happens because during the process of prosperity, a structure of interlocking credits and the negative impact that cost factors have upon profits combine with the tension in the money and investment markets impose an ever-increasing strain in the financial markets that is likely to cause panic. The fall in security and bond prices undermine the credit of borrowers who depended upon this type of collateral. The process of liquidation begins and spreads rapidly when the creditors of those businessmen that have suffered from decreasing profits refuse to renew maturing loans. The efforts of entrepreneurs to raise liquidity increase the fears and the caution of other creditors and create new difficulties for the enterprises whose prospects of profits are negative. When the process of deleverage becomes general the cycle passes from the phase of prosperity into the phase of crisis.

For Mitchell deleverage and restrictions of loans might be prudent from the viewpoint of a single bank, however they aggravate the stress, because they increase the probability that some of the enterprises will fail to have access to liquidity and the general fear and caution that make the pressure for liquidation more intense. The outbreak of a financial crisis depends on the lending banks and the liquidity provided to enterprises. The liquidation crisis may degenerate into a panic and an economic crisis, or its severity might be effectively mitigated by measures of relief.

Michal Kalecki and Josef Steindl

Financial crisis in the analysis of Michal Kalecki and Josef Steindl is fundamentally a macroeconomic and business cycle phenomenon. It needs to be distinguished from their analysis of financial 'risk', the Principle of Increasing Risk, according to which the financial 'riskiness' of a firm is determined by the ratio of its borrowing to its own funds, or equity (Kalecki, 1937; Steindl 1941 and 1945). Whereas 'financial risk' is now almost universally seen as precipitating financial crises (for example, in the Bernanke/Gertler Financial Accelerator model, or most interpretations of Minsky), for Kalecki and Steindl, such financial risk is a subjective category that the owners and managers of firms use to determine the preferred size of their firm. In the case of Steindl this is contrasted with the Marshallian 'optimum scale of production' that is supposed to determine firm size.

Saving in Kalecki

Kalecki and Steindl derived their macroeconomic analysis of crisis from the reproduction (or as we would nowadays call them, circular flow of income) schemes put forward by Marx in Volume II of *Capital*. In his analysis, Marx argued that surplus value is turned into money by the expenditure of capitalists: 'the capitalist class itself casts into circulation the money that serves towards the realization of the surplus value contained in the commodities.' (Marx, 1885, p. 409) Whereas Marx emphasised capitalists' consumption as the way in which capitalists 'realise' their surplus value, Kalecki was able to show that the realisation of profit was chiefly done through capitalists' expenditure on investment, as well as their expenditure on their own consumption. (Marx's analysis, and its link with that of Kalecki is most clearly discussed in Trigg, 2006, pp. 22-28). This can be easily shown as follows.

According to the standard national income identity, in any given period, total national income (Y) is equal to consumption (C) plus gross fixed capital expenditure, or investment (I), plus the fiscal deficit, plus the trade surplus.

Saving (S) is then equal to Y – C, which is then equal to investment, plus the fiscal deficit plus the trade surplus. Abstracting away from the fiscal surplus and the trade surplus, and in an economy in which there are only capitalists and workers, saving and consumption can be divided up into the saving and consumption respectively of capitalists and workers:

$C = C_c + C_w$; and $S = S_c + S_w$

So that:

$$Y - C = S = S_c + S_w = I \qquad (1)$$

The surplus or profits of capitalists (P) is also, by definition, equal to their expenditure on their own consumption (C_c) plus their saving (S_c):

$$P = C_c + S_c$$

Since, by (1) above, capitalist saving is equal to their investment expenditure minus the saving of workers, it follows that $P = C_c + I - S_w$, which can be rearranged to give the familiar Kalecki profits equation:

$$P = I + C_c - S_w \qquad (2)$$

In other words, capitalists' realised profits are equal to their expenditure on fixed capital, plus their expenditure on consumption, minus workers' saving. Since this is derived from national income identities, the equation itself cannot yield any causal mechanism. This has to be obtained by a consideration of its economic significance:

'What is the proper meaning of this equation? Does it mean that profits in a certain period determine capitalists' consumption and investment, or the other way around? The answer to this question depends on which of these items is directly subject to the decisions of capitalists. Now, it is clear that they may decide to consume and invest more in a certain short period than in the preceding period, but they cannot decide to earn more. It is therefore their investment and consumption decisions which determine profits, and not vice versa.' (Kalecki, 1943, pp. 48-49)

In this analysis, workers' saving clearly has a negative effect on profits. It acts as a 'leakage' whereby money spent by capitalists on wages does not return to capitalists in the form of sales of wage goods. With capitalists' saving, the situation is more complex. Kalecki divides such saving up into 'entrepreneurs' saving' or the undistributed profits of companies, and the saving of 'rentiers', or those who own companies and financial assets. Because of their relatively high and stable incomes (except at times of hyperinflation), rentiers have a high propensity to save, and this saving stays relatively constant. Unlike entrepreneurs' saving, which is used to finance investment and is therefore matched by expenditure, rentiers' saving is a steady 'leakage' of income from the circular flow of money that capitalists put into circulation by their expenditure.

In this analysis, rentiers' and workers' saving is the result of what Marx described as 'a stagnation of circulation', whereas entrepreneurs' saving is '...merely the creation of money capital existing temporarily in latent form and intended to function as productive capital.' (Marx, 1974, p. 353) With his analysis clearly focussed on an investment-driven business cycle, Kalecki incorporated the rentiers' saving as a factor in what he called the 'trend', i.e., the direction of economic growth disregarding 'the pure business cycle' (Kalecki, 1943, chapter 5; Kalecki, 1954, p. 159). He argued that such saving tends to give a negative trend. In his last discussion of rentiers' saving, Kalecki merely assumes it is small in relation to entrepreneurial saving, or retained profits, and that the two types of saving are proportionate to each other (Kalecki, 1968). This would tend to make rentiers' saving fluctuate with the profits cycle.

Kalecki's classification of rentiers' saving as a trend factor makes such saving a weak foundation for any theory of financial fragility or crisis. A theory of financial fragility or crisis is by definition an explanation of economic breakdown caused or rooted in the financial system. While financial fragility may take time to build up, its adverse consequences should be apparent in the fluctuation of economic variables, rather than their averages or any trend. Josef Steindl turned Kalecki's theory of saving into a theory of financial fragility.

Steindl's theory of financial fragility

Steindl's analysis is more advanced and perhaps more general than that of Kalecki because Steindl looked more broadly at the impact of middle class saving behaviour on the dynamics of the capitalist economy (Steindl, 1952, pp. 113-121). The version that is presented here is the one Steindl later put forward (Steindl, 1982; Steindl, 1989).

Consider the Keynesian saving identity, in which saving (S) is the sum of firms' gross fixed capital formation (I), the fiscal deficit (G – T), and the foreign trade surplus (X – M). If we divide up total saving into Household Saving (S_H) and Firms' Saving (S_F), we get the following identity:

$$S \equiv S_H + S_F \equiv I + (G - T) + (X - M) \qquad (3)$$

These are all flow variables over a given period of time. Household saving is broadly related to income. Both Kalecki and Steindl confirmed Hobson's observation that the middle classes and those on higher incomes account for the vast bulk of household saving, for the obvious reason that they have higher incomes than people on lower incomes, and it is easier to save out of higher income.

In the theory of saving, household saving is the residual income of households that is not consumed. In the case of firms, their saving is the residual profit that they have, after their expenditure on the costs of producing their goods and services, and after payment of income commitments to holders of their financial liabilities (i.e., creditors, and holders of equity). In other words, firms' saving is the retained profits of all firms in the economy, or what Kalecki called 'entrepreneurs' saving'.

Firms' saving plays a crucial part in the dynamics of the capitalist economy. The vast bulk of capital accumulation by firms is financed out of retained profits. This was first noted by Kalecki, and was confirmed in studies by Locke Anderson, Victoria Chick and by recent research by Toporowski and Marilyn Polena (Anderson, 1964; Chick, 1993). Through its influence on capital expenditure, firm saving is a crucial factor in capitalist dynamics, i.e., inflation, employment and business fluctuations. This is apparent if equation (1) to re-arranged to give:

$$S_F \equiv I - S_H + (G - T) + (X - M) \qquad (4)$$

Once again, for the sake of simplicity, the sum of the fiscal deficit and the trade surplus is disregarded. This yields an identity in which Firms' retained profits (S_F) are equal to their gross capital expenditure minus household saving.

An implication of this is the Keynesian formulation that Investment determines Saving. The Steindl formulation given above retains Kalecki's insight that investment determines the retained profits of firms. However, household saving is a financial barrier to retained profits: Firms will only end up with retained profits amounting to the difference between firms' investment and household saving. If household saving exceeds the level of investment, then firms' saving becomes a net financial deficit. In this way, saving at all times equals investment. But the factor which equalises them in practice is not the rate of interest, as most text-books teach, but the net retained profits or financial deficit of the business sector.

In Steindl, this relationship between household saving and the financial surpluses or deficits of firms plays a key part in the business cycle. If investment falls below the level of household saving, firms find themselves paying out more in costs, and payments to holders of their financial obligations, than they receive in income. Firms will then borrow to make up the deficit, and the rise in their indebtedness will tend to reduce investment further. Kalecki had argued that this is caused by the 'inelasticity of saving' with respect to investment (Kalecki, 1943, p. 86). In other words, when investment falls, this does not immediately affect the incomes of recipients of higher incomes who account for the bulk of saving. Their continued saving prevents the money that firms throw into circulation, in the process of production, from returning to firms as sales revenue equal or greater than their costs of production and financing. In order to cope with this unexpected financial deficit firms continue to reduce their investment, driving the economy into recession, until household saving falls below the level of investment.

In his pioneering study *Maturity and Stagnation in American Capitalism* Josef Steindl gave a more detailed account of household saving, and showed that it was largely accounted for by rentier incomes, and the incomes of the middle classes (Steindl, 1952, pp. 113-121). Rentier incomes are largely received through the intermediation of banks and financial institutions, which stabilise those incomes through diversification. The saving of rentiers is therefore largely unaffected by a rise in the financial deficit of firms. Some humbler, investors whose wealth does not allow them to diversify their portfolios, may find their incomes affected by the financial difficulties of firms. But such investors are marginal in economic and saving terms.

The remainder of household saving is accounted for by the saving of the middle classes, i.e., those employed in public administration, education, the liberal professions and, increasingly today, the managerial bureaucracy engaged in the administration of financial, industrial and commercial corporations. This social group is largely disconnected from the industrial business cycle, which does not affect those working in public administration, education and the liberal professions. Even the management of financial, industrial and commercial corporations may, if those corporations are large enough, insulate their incomes from industrial fluctuations by diversifying the business of those corporations.

Steindl's theory of 'enforced indebtedness'

This high and stable level of middle class saving forms a threshold that forces firms into unanticipated debt, when their gross capital expenditure approaches that threshold, and then falls below it. In Steindl's analysis, firms respond to deficient cash flow (negative firm saving) by borrowing to cover their financial deficit. This is in contrast to the mainstream (and basic Marxist) view of firm financing according to which if a firm makes a loss in a particular line of business then it withdraws its capital from that business and transfers it to a profitable line of business. According to Steindl firms respond to such 'enforced indebtedness' by postponing investment (it is much more difficult to reduce the costs of current production) and using the money saved to repay debts. This merely prolongs the industrial crisis, because it reduces investment even more below the household saving threshold. Investment is then further reduced. The crisis continues until public sector projects or replacement investment (depreciation) induces a rise in investment (Steindl, 1952, pp. 115-115; Steindl, 1989).

However, enforced indebtedness is not equally spread among capitalist firms. Large capitalist firms are able to use their control of markets to maintain their profit margins. They are also thereby able to get preferential access to equity capital (Steindl, 1952, chapter XI). As a result, enforced indebtedness is concentrated among small and medium-sized firms, firms in competitive markets, and poorer households. This undesired indebtedness acts as a brake on economic recovery because those firms and households prefer to devote income to the repayment of these debts, rather than spending on production and consumption (Steindl, 1952, pp. 124-127).

In one respect Steindl's analysis of 'enforced indebtedness' is reminiscent of Minsky's 'financial instability hypothesis'. Minsky, like Steindl and Kalecki, held the view that debt structures in an economy require a certain minimum level of business investment (or a fiscal deficit, or a trade surplus) to generate the cash flows to service debts ('Investment or its equivalent in government deficits is necessary to sustain profits, so that the inherited debt structure and historical capital-asset prices are validated.' (Minsky, 1986, pp. 169-170). In this respect Minsky also rejected the notion that financial crisis is precipitated by 'risk'). 'Enforced indebtedness' is the equivalent in Steindl's analysis of Minsky's 'Ponzi finance', that is indebtedness incurred in order to service existing debt commitments (Minsky, 1986, pp. 340-341). Both 'enforced indebtedness' and 'Ponzi finance' are characterised by the build-up of debt without any increase in asset value. It is this absence of any asset counterpart that distinguishes these kinds of debt from the debt that appears in mainstream economic analysis, in which borrowing is voluntary and has an asset counterpart. The absence of counterpart asset value then precipitates financial crisis in the cases of both 'Ponzi finance' and 'enforced indebtedness'.

6. Paul Sweezy and the *Monthly Review*

The New York *Monthly Review* established by Paul Sweezy and Leo Huberman in 1949 represents a unique venture in disseminating Marxist ideas in a way that has been informed by serious economic analysis. In particular it has benefited from the close relationship that Paul Sweezy had with his PhD supervisor at Harvard, Joseph Schumpeter; Sweezy's own personal knowledge of finance through his father, who was one of five vice-presidents of the New York-based First National Bank (which eventually became Citibank); and the exposure to practical business of Harry Magdoff, who in pre-McCarthy days had served as head of the current business analysis section of the US Department of Commerce. This background, allied with a Marxist conviction that a critical evaluation of the evolution of capitalism and its political economy, rather than the mentalities and calculations of individuals, is the key to understanding finance and business and its political significance.

The key theorist among the Monthly Review team was Sweezy. Graduating in Economics at Harvard in 1932, where the only challenge to neo-classical ideas was provided by institutionalists and their associates, such as John A. Hobson, who were not considered academically respectable, Sweezy spent a year in London at the London School of Economics and returned 'a convinced but very ignorant Marxist' (Sweezy, 1981, pp. 12-13). He appears to have followed an intellectual trajectory from Austrian and German ideas, in which business cycles are produced by misalignments of interest rates with real capital productivity (drawn ultimately from Wicksell) through Keynes's critique, in the *General Theory*, of a capitalism whose equilibrium is subverted by finance, to a Marxist conviction that it was in the nature of capitalism to operate at less than full employment in a way that wastes economic resources, rather than, as he had been taught, making the best use of all available resources. Inevitably, in the depression that followed the 1929 Crash, finance was to play an important part in Sweezy's analysis. But, in the end, it was subordinated to capitalist enterprise in the real economy and the logic of capitalism that, in Sweezy's view, produced underconsumptionism.

Sweezy discussed the role of finance in twentieth-century capitalism in a little-remarked essay in 1941, 'The Decline of the Investment Banker' (Sweezy, 1941). Here he argued that the investment banks that, in the American capital market system of business finance, manage issue of equity and bond securities, constitute the way in which finance dominates and centralises control over American capitalism, i.e., an American equivalent of Hilferding's finance capital. However, investment banking had been greatly diminished, and largely discredited, by the 1929 Crash. Capitalist firms were reduced to financing their activities through internal finance (out of current income or reserves). The function of investment banking as an organiser and coordinator of capitalist corporations, had been taken over by Roosevelt's New Deal administration which was facilitating business cartels to try to prevent deflationary competition but was also, as Sweezy noted, organising stock issues for corporations. Sweezy, like many other leftist critics of the New Deal, viewed this as a kind of socialisation of capitalist enterprise, but by and favouring capitalists, rather than as a genuine step towards socialism.

In the following year, his fundamental book *The Theory of Capitalist Development* was published. This gave an essentially underconsumptionist interpretation of Marx's critique of capitalism. Capitalism was prone to economic stagnation, unemployment and depression because workers are paid less than the value of their actual production, and this gives rise to deficient aggregate demand. This could be overcome by Keynesian means of government expenditure, imperialism, or raising wages. However, Keynesians were deluded by notions of a neutral, social welfare-orientated state, and capitalism does not exist to raise wages. On the eve of the establishment of *Monthly Review* Sweezy was convinced that capitalism could not effectively overcome tendencies to stagnation without imperialism or fascism. His analysis gave no role for finance in all this: capitalism was presented as an industrial machine in which capitalists and workers co-operated in production.

At this point, in the early 1950s, Sweezy came across the work of Michal Kalecki and perhaps the latter's most profound and financially-aware collaborator, Joseph Steindl. Kalecki was working at the UN in New York at the time and he and Sweezy met regularly. Kalecki had already pointed out that, in his *Essays in the Theory of Economic Fluctuations* in 1939 that capitalist stagnation was usually overcome by investment, rather than consumption. In 1952 Steindl published his book *Maturity and Stagnation in American Capitalism*. This explained capitalist stagnation not only in terms of monopoly (a monopolist can afford to keep equipment in under-utilised operation, whose excess capacity simultaneously discourages new investment), but also analysed key issues of banking and finance in American capitalism, such as the role of the holding company, and Steindl's key original concept of 'forced indebtedness': the indebtedness arising from firms' cash flow deficiency.

The effect of this was a shift in the Monthly Review's essential macroeconomic analysis away from underconsumptionism as the key factor in economic stagnation and towards the notion that inadequate investment would prevent the surplus produced in capitalist production from being realised as money. This is essentially Kalecki's theory of profits (Toporowski, 2013; Lebowitz, 1990). This view was put forward in Sweezy's new analysis, co-authored with Paul Baran, *Monopoly Capital: An Essay in the American Economic and Social Order* (Baran and Sweezy, 1966). However, this, like Sweezy's earlier book, was almost completely devoid of financial analysis: interest appears as a category of income from surplus, rather than as an element in the financial conditions of capitalist accumulation.

Finance finally entered the core *Monthly Review* analysis with the failure of Keynesianism, in the 1970s, and the publication of Hyman Minsky's *John Maynard Keynes* in 1975, which gave a financial interpretation not only of Keynes, but also of big business in the United States. Harry Magdoff and Paul Sweezy had noted, at around the same time, the growing indebtedness of American business, in sharp contrast to its condition during the 1950s, when Wall Street was still depressed following the 1929 Crash. This aroused concerns that capitalist firms would be unable to generate the surplus required to pay interest and debt repayments, as well as generate dividends and salaries for industrial capitalists (Sweezy and Magdoff, 1975). Two years later, Magdoff and Sweezy hailed Minsky as highlighting a fundamental flaw in Keynesianism, namely the tendency of debt-financed public and capitalist expenditure to produce a debt crisis (Sweezy and Magdoff, 1977).

Thus while *Monthly Review* authors were able use their insights into capitalist finance to understand particular crises in American capitalism, they were unable to provide a systematic account of the role of finance in modern capitalism. Four years after his appreciation of Minsky, Sweezy produced his *Four Lectures on Marxism*, giving a summary account of his views on Marxism and the critique of capitalism. While not quite returning to the underconsumptionism of the 1940s, Sweezy argued that the underlying condition of capitalism is determined in industry, with under-investment caused by monopoly (Sweezy, 1981). A further set of essays by Magdoff and Sweezy, under the title *Stagnation and Financial Explosion* and published in 1987, argued that capitalist finance and money were now out of control. Hence monetary policy aimed at control of the money supply was stabilising the economy at low levels of output and employment, but was unable to stem inflation. Non-financial firms were now much more fully engaged with the financial markets. But this engagement consisted of widespread financial speculation, rather than finance for fixed capital investment. The greater financial activity by corporations was therefore unable to reverse the underlying condition of industrial stagnation (Magdoff and Sweezy, 1987).

In the last decade of the twentieth century and the years running up to the financial crisis that broke out in 2008, *Monthly Review* continued its critique of the political economy of American capitalism highlighting the growing engagement of American business with the financial markets. Following the death of Paul Sweezy in 2004, the editorship of the journal was taken over by John Bellamy Foster, who had written his doctoral thesis on the Monthly Review approach to monopoly capitalism (Foster 1986). Following the outbreak of the crisis, Foster co-authored with Fred Magdoff, the environmentalist son of Harry Magdoff, a notable book on the crisis, *The Great Financial Crisis Causes and Consequences* (Magdoff and Foster, 2009). This re-emphasised the essential *Monthly Review* argument about stagnation in monopoly capital, with stagnant or falling wages reinforcing underconsumption. But monopoly capital was now firmly allied with the system of investment banking and the capital markets. Attempts to overcome this stagnation were now by means of speculative bubbles, whose bursting had caused the crisis.

Foster subsequently wrote with Robert McChesney a more substantial analysis of what Foster now calls 'monopoly-finance capital' (Foster and McChesney, 2012). This returned to an old theme first advanced by Hobson in his analysis of imperialism, namely the excess of saving over investment in a capitalist economy in which the personal distribution of income is becoming more unequal. This excess of saving appears as an excess of capital in the financial markets, where it feeds speculation and bubbles. Giant corporations become more dependent on the financial markets to realise profits (the increasing preponderance of income from financial operations in corporate profits). But in the absence of profitable investment opportunities these profits are not fully invested in production, so that real economic activity remains depressed, despite the apparently buoyant picture presented by corporate results before the crisis. Foster and McChesney revive another historic theme in the absence of innovations that would stimulate investment. This is familiar from the work of Joseph Schumpeter.

This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 266800

In the final analysis, over three quarters of a century, *Monthly Review* has documented and commented upon the weakness of American corporate capitalism. Small and medium-sized capitalists do not feature in their analysis; nor does the middle class, whose lifestyle is such an influence on the inadequate consumption that lies at the root of their macroeconomics and the motivation for the growth in household indebtedness apparent in the United States in recent decades. The growth of income from financial operations, itself the result of the shift of corporations into financial intermediation rather than any excess of saving over investment, is not analysed in greater detail as, for example, in Keynes's analysis of 'liquidity preference', or Minsky's balance sheet 'hedging'. Nor are those financial operations integrated with shifts in upper and middle class wealth holding towards financial assets. In other words, the mechanisms within the bloc named 'monopoly-finance capital' are not disentangled and analysed to show how the financial operations of modern capitalism differ from those of Marx's 'functioning capitalist' or Schumpeter's 'entrepreneur', and what has made those financial operations different. However, it should be noted that *Monthly Review* is fundamentally a political project, albeit one that, among outlets for political commentary, has been uniquely informed by a Marxist critique of twentieth-century political economy that, with the work of its editors, Leo Huberman, Paul Baran, Harry Magdoff, John Bellamy Foster and, above all, Paul Sweezy, has been research-based to an unusual degree. The gaps in its analysis of finance are therefore secondary to the political and class analysis that it has consistently put forward.

This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 266800

7. The Italian Circuitists

The Italian Circuitists are one strand in a broader school of Monetary Circuit theory. The origins of the Circuit approach can be traced back to the eighteenth century Physiocrats, and the circular flow analysis of Quesnay (Gnos, 2006). More directly, Monetary Circuit Theory draws on Marx's well known circuit of money capital and Wicksell's theory of the 'pure credit' economy. Marx and Wicksell represent the start of a lineage of theorists for whom monetary influences play a central role in determining output, employment and distribution. This lineage includes, on the one hand, Austrians such as Mises and Hayek, and on the other leads through Schumpeter and Dennis Robertson to Keynes, who in the early 1930s made an appeal for a 'Monetary Theory of Production' (Fontana and Realfonzo, 2005). While this Keynesian vision of a Monetary Theory of Production was an important influence on subsequent developments of circuit theory, it was partially obscured by the exposition in Keynes's *General Theory*, in which the money supply is held constant. The key text for Circuit theorists is thus the *Treatise on Money*.

Following the interregnum in which 'Keynesian' theory revolved around the IS-LM system, analysis of the monetary circuit was revived in France in the 1960s by Jacques Le Bourva and was subsequently developed by Bernard Schmitt. Increasing interest and activity around monetary circuit theory has led to the emergence of a number of different approaches. These include a school headed by Schmitt, another French grouping associated with Parguez, as well as Canadians such as Seccareccia and Lavoie.[34] The focus here is on the Italian school, based on the writings of Augusto Graziani. Of the various circuitist strands, it is this school that draws most directly on Keynes' analysis.[35]

The key elements of the circuitist approach are the following: (1) an assertion that money is non-neutral and strictly endogenous, (2) an insistence on a sequential approach to the analysis of production and distribution and, as a result, (3) a rejection of the marginalist theory of distribution. Instead, the production and distribution of income are assumed to take place under conditions

[34] The so-called 'Dijon school' of Schmitt has subsequently distanced itself from the 'circuit theory' label, and differentiates itself as 'monetary emissions theorists'.
[35] As such, this school shares some common ground with post-Keynesian thinking. See Deleplace and Nell (1996).

imposed by an asymmetric distribution of power arising from unequal initial access to money for different classes of economic agents.

A monetary theory of production

In opposition to the Mengerian (and orthodox Marxist) view in which money originates in commodity exchange, proponents of the circuitist approach perceive money as representing a private credit relationship. Since money is created when commercial banks issue new loans, money is considered to arise out of a triangular credit relationship between the holder of bank loans, the issuing bank, and those agents that accept newly created deposits as final payment for goods or productive factors (of which labour power is preeminent). Circuit theory thus emphasises the function of money as means of finance, and the power of purchase that this function bestows upon the holder.

It is assumed that firms start from a position in which the sector as a whole holds no source of liquid purchasing power. Lending by banks to firms is the first stage of the monetary circuit. Using newly created bank money, firms purchase labour power and intermediate goods to initiate the circuit of production. This command over purchasing power at the start of the productive process bestows upon firms the autonomy to determine both the scale of production (and thus employment) and the division between capital and consumer goods. During this phase of the circuit, money wages are set through a bargaining process between firms and workers. However, at this stage, the final level of goods prices—and thus the real wage—are not yet known, so that money wage bargains are conducted on the basis of expected final prices.

Firms decide upon the amount of output they wish to produce based on the money profits they expect to realise. Assuming constant marginal productivity of labour, this decision then also determines the volume of employment required. Purchases of labour power are effected in advance of the production of goods, by the transfer of ownership of bank deposits from firms to workers. Money is thus viewed as an intrinsically worthless pure symbol or token which sets up a private credit relationship between workers as sellers of labour-power, firms as purchasers, and banks.[36]

[36] Graziani refers to money as a 'pure token' while Parguez and Seccareccia (2000) argue that 'one may more correctly argue that it is an abstract or virtual token, since it is merely a debt which banks have issued on

This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 266800

Once production is complete, workers decide on the proportion of their money income they wish to spend on consumption goods, and the amount which they will save. But since the quantity of consumption goods available for purchase is already fixed by the production decision of the firm, this saving decision cannot affect total real consumption or investment, but will instead determine the price of goods and thus the real wage and the profits of firms. The saving decision then entails a further final stage in which workers make a choice between holding liquid bank deposits and exchanging them for equity or debt instruments issued by firms.

Both household spending on consumption goods and the use of saved money balances to purchase securities result in the transfer of ownership of deposits back to firms. Firms are thus able to recapture a proportion of the initial sum borrowed from banks, allowing them to repay debts, extinguishing firms' liabilities and destroying money previously created at the opening of the sequence. The repayment of loans by firms—monetary 'reflux'—closes the circuit.

Saving, investment and income distribution

This conception of the economic process leads to a number of significant results. In opposition to the orthodox view (and in common with post-Keynesian theory) the causality of the saving-investment relationship is reversed, because the volume and composition of output is determined by firms (in conjunction with banks) in advance of the household saving decision. The significance of the saving decision thus lies with the influence it holds over the consequent relative financial positions of firms and workers. In deciding the proportion of their money income to save, workers determine the money revenues of firms, and thus their borrowing (or additional equity finance) requirements and the consequent distribution of financial wealth.[37]

themselves' (p. 105). In line with the neo-chartalist view, Parguez and Seccareccia emphasise the role of the state in ensuring universal acceptance of deposits by endorsing bank liabilities.

[37] There are differences of position regarding the mechanism which connects the household spending decision to prices and profits. In some instances, it is assumed that firms fix a mark-up price through the use of monopoly power: 'Once production has occurred, firms, which operate in non-perfectly competitive markets, will use the mark-up principle to set the price of the single good produced ...' (Realfonzo, 2006, p. 115). In contrast, the formulation given by Graziani instead assumes that firms determine the quantity of consumer goods available on the market, and total nominal demand from consumers sets the price level. Graziani argues that the two approaches are essentially equivalent: 'If entrepreneurs offer for sale given amounts of consumer goods and capital goods, leaving the determination of prices to market forces, the result is substantially equivalent to the case in which entrepreneurs set the price of consumer goods at a level that makes the quantity demanded equal to the amount that entrepreneurs have decided to sell'

In the case that workers choose to spend their entire money income on consumption, firms obtain revenues equal to the total amount initially borrowed. Then, interest payments aside, firms will be in a position to pay off loans in their entirety, such that all increases in net wealth due to capital accumulation thus accrue as increased net worth of the firms sector. If workers instead choose to save some proportion of their money income, either by holding bank deposits or by purchasing the debt of firms directly in the capital markets, the indebtedness of the firms sector as a whole will have risen.

However, the *total* indebtedness of firms is downplayed by circuit theorists. Of greater significance is the total final amount of *bank debt* held by firms. This is determined by the form in which workers choose to save money income which is not consumed. In the case that workers purchase debt securities from firms, deposits are returned to firms and debt to banks can be cancelled. The same is true of the case in which workers purchase equity, which is treated as equivalent to the direct purchase of capital goods—'Purchases of capital goods can be undertaken by workers in the financial market (where stocks are sold to savers) …' (Bellofiore and Seccareccia, 1999, p. 755). Insofar as workers decide not to purchase financial assets, but instead prefer to hold deposits, firms will fail to recapture money balances previously borrowed from banks. Liquidity preference on the part of workers thus results in persistence of the triangular bank-firm-household lending relationship. In contrast, when workers purchase debt securities directly in the financial markets, bank debt and money are extinguished and replaced by a bilateral debt relationship between firms and workers.

A distinction is thus drawn between 'initial finance' and 'final finance' (Graziani, 1990). Initial finance refers to bank lending to firms to initiate production, whereas final finance refers instead to the liquidity which flows back from workers to firms after the production and sale of output and purchases of assets on the financial markets.[38] There is thus a hierarchical and sequential distinction between the 'money market', which lies at the interface between banks and firms and provides initial finance, and the 'financial market', which lies at the interface between workers and

(Graziani, 2003, p. 98). The possibility of inventory accumulation due to unsold stock is thus excluded from consideration.

[38] The question of how investment is financed remains a point of contention in the circuitist literature. Some writers argue that subsequent to the production process, firms enter the market and purchase capital goods using bank credit to. Other writers argue instead that finance for investment cannot come from bank finance, but must come from 'final finance'. See Rochon (1999, pp. 23–31), Seccareccia (1996), Seccareccia (2003) and Parguez (2001).

This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 266800

firms and provides the final finance required to close the monetary circuit. Since the money required for the purchase of financial assets by workers can only originate from bank lending, firms cannot finance investment directly in the capital markets in the manner claimed by neoclassical theory, but must first finance their spending using bank credit in the hope that this liquidity will be returned to them via the financial markets.

Circuitist writers emphasise that it is not possible for the quantity of money created as initial finance to cover both principal repayment *and* interest payments on bank debt. Alternatively, this may be stated as the impossibility that firms realise money profits in full while simultaneously paying interest on their loans. This can be illustrated by considering the simple case in which workers spend their entire income on consumption. In this case firms will regain as 'final finance' exactly the quantity of 'initial finance' which was borrowed from banks. Firms are then in a position to repay the principal on their bank loans but will not be able to pay, *in money*, the interest charges covering the period of production. If, instead of choosing to pay off the entire principal, firms use part of their 'final finance' to pay the interest charges on loans, the result will be an increase in the net worth of the banking system at the expense of the firms sector: deposits will be cancelled—and money thus destroyed—while loans will remain on the balance sheet of banks and firms. Over time, banks will therefore accumulate 'financial capital' by appropriating a share of the surplus (Graziani, 1990, p. 27; see also Bossone, 2001). It is therefore in the interest of banks to prevent the substitution of bank credit with direct funding in the capital markets. Banks and firms thus compete for household savings through adjustments to the rates offered on securities and bank deposits.

It is for this reason that bank debt is viewed as being of greater significance than bond finance. Bank lending leads to a real wealth transfer from firms to banks, while bond finance, because it requires only that firms make money payments to workers, imposes no *direct* costs on firms: '...monetary payments to wage earners are never a real cost to firms' (Graziani, 2003, p. 116). However, insofar as interest payments made to workers are not spent on consumption or securities purchases—thus flowing back to firms—but are saved *as bank deposits*, the result will a greater degree of firm indebtedness to banks, leading to real interest costs.

The wealth transfer arising from interest payments to banks may be avoided if macroeconomic sectors other than the firms sector operate with a net financial deficit, i.e. in the case of government deficit spending, or a surplus on current account. In this case, firms as a whole will receive as final finance deposits in excess of their initial borrowing, allowing interest payments to be made directly out of money revenues.[39]

Equilibrium and crisis

Despite some common ground with post-Keynesians, the concept of equilibrium in the circuit approach differs substantially from that used in post-Keynesian theory. While not denying the principle of effective aggregate demand, adjustment of *ex post* saving to investment through changes in output is not usually a feature of circuitist models. In the circuitist model, the Keynesian equality between saving and investment is thus a strict identity rather than an equilibrium condition, since the level of activity is 'determined by the entrepreneurs alone, and is only constrained by their ability to get initial finance from the banks' (Deleplace and Nell, 1996, p. 12) Instead, the equilibrium concept emphasised by circuitist writers is that which occurs when final finance is equal to initial finance and all bank debts are extinguished at the end of the sequence, so that the monetary circuit is fully closed (Realfonzo, 2006).

Crisis and depression may thus arise in two primary instances. Firstly, in the case that final finance falls short of initial finance, so that firms cannot pay off loans in the their entirety and are thus reliant on the willingness of banks to roll over loans into the subsequent period. Secondly, crisis may arise instead from a fall in output either due to a failure of firms to obtain initial finance, because of unwillingness of banks to lend, or simply because firms autonomously decide to reduce their level of productive activity. The first case corresponds to an increase in liquidity preference—it is not higher saving *per se* which causes the problem, but an increased desire on the part of workers to hold liquid balances, resulting in an increase in the indebtedness of firms to the banking sector.[40] If banks are unwilling to roll over this debt or, equivalently, reduce the amount of subsequent initial finance they are willing to provide, production will be curtailed, leading to depression and crisis. Thus, while circuit theorists emphasise the role of money as a means of

[39] An alternative way in which this increase in the net worth of banks can be avoided is if banks lend the amount required for interest payments to firms. Then, upon receipt of interest payments the banks spend the entire proceeds on the wages of bank workers and in purchasing commodities sold by firms, so that the deposits accrue once more to firms, allowing them to repay the additional lending.

[40] There is an affinity between this analysis and the 'enforced indebtedness' of firms in the analysis of Steindl (1952), although Steindl does not distinguish clearly between bank lending and open-market debt relationships. See the entry on Kalecki and Steindl in this Deliverable.

This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 266800

transaction—a flow variable—in the case of workers' liquidity preference, the role of money as a store of value—as a stock concept—also enters the picture.[41] In such cases, the most important factor in overcoming crises lies in ensuring that banks counter the increased desire to hold money balances by increasing their lending: 'It should be remembered also that as typical an anti-Keynesian scholar as F.A. Hayek agreed that the banks should grant higher loans whenever liquidity preference increases (Hayek, 1978)' (Graziani, 2003, p. 155).

Another condition for the stability of the system is highlighted by Parguez and Seccareccia (2000, pp. 109–110). The credit-worthiness of both firms and banks depend, in the long run, on their ability to earn profits. Thus a fall in profitability of firms may lead to reduced willingness of banks to lend and thus to a contraction in output. Likewise, since interest on bank loans leads to a real wealth transfer from firms to banks, in a growing economic system it is important that the relative growth rates of the net worth of banks and firms remain in step. In other words, banks' equity depends on bank profits, so that those profits need to be high enough to generate equity sufficient to support the lending of banks. If bank profits are too low, equity ratios will fall and leverage ratios increase, introducing fragility into the system.

The monetary circuit approach also has implications for the analysis of financialisation, and in particular in relation to the observed increase in the financial activity (and holdings of liquid financial assets) of non-financial firms. In the canonical circuitist model, for such financial activity to take place firms must have first realised money profits, requiring that a corresponding liability exists elsewhere in the economic system. Thus, the firms sector as a whole cannot increase their net holdings of financial assets, unless another sector, such as the government, runs a deficit. Graziani argues further that, in order for there to be a turn towards financial operations at the expense of productive activity, a concurrent willingness must have arisen for agents who were previously in debt to banks to switch to open market finance. This will most likely take place in the event of a credit squeeze by banks. For Graziani, the conclusion is that '…according to the circulation approach, the so-called phenomenon of an increasing weight of the financial sector is explained not so much by a decline in entrepreneurship, but rather by a high government deficit

[41] Circuitists downplay the importance of uncertainty and argue that money would be required as a means of transaction even the in the absence of uncertainty. This view has been challenged by some post-Keynesian authors. See, for example, Fontana (2000); Fontana (2009).

coupled to a credit squeeze' (Graziani, 2003, p. 158).[42] More recently, updated versions of the circuitist schema have been presented in which lending to workers initiates the monetary circuit, while firms become 'rentiers' (eg. Seccareccia, 2012; see also the entry on Bellofiore).

Concluding remarks

In the Italian circuitist approach, neoclassical propositions regarding the neutrality of money are rejected. Instead, capitalism is characterised by the existence of an uneven distribution of power originating with the fact that only entrepreneurs have access to bank finance. This allows for the construction of a coherent and logical macroeconomic analysis of output determination and income distribution which, while drawing on Keynesian and Kaleckian traditions, nonetheless reaches distinctive theoretical conclusions.

A potential weakness of the approach is a tendency towards an insistence on inflexible adherence to macroeconomic categories and to a strict sequential analysis. For example, by insisting that the monetary circuit be fully closed in every productive period, the result is that 'the whole quantity of money, whether hoarded or not, is necessarily destroyed at the end of the circulation period' (Deleplace and Nell, 1996, p. 13).[43] Moreover, the recent shift in banking system behaviour towards lending to individuals, while firms increasingly operate using open-market finance, is at odds with the fundamental class relationship posited by circuitist theory. The strong enforcement of macroeconomic categories as the basis for analysis precludes the incorporation of micro-level distribution effects within sectors, which may be significant in generating the instability associated with financialisation (Michell and Toporowski, 2011; see also Passarella, 2012).

Despite these issues, the insistence on rigorous accounting in a hierarchical class system provides important insights into the functioning of a monetary production economy. The emphasis on the sovereignty of the firm in determining the volume of output differentiates the approach from other related theoretical systems, such as the stock-flow consistent approach of Godley and Lavoie (2007). Updated versions of the circuitist model can shed light on the relationship between

[42] It should be noted that Graziani's comments refer to the situation of the 1980s, rather than the more recent phase of financialisation.

[43] This tendency is associated more directly with the Dijon-Freiburg school of Schmitt than the Italian circuitists who more explicitly acknowledge that in reality production and financing take place over a continuous sequence of overlapping periods, so that this final 'closure' of the circuit is never enforced.

household indebtedness, the rising liquidity of non-financial firms balance sheets, and the rising profitability of the banking sector.

This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 266800

8. The Regulation school

The *Regulation* school originated in France in the early 1970s. One of the first major texts was Michel Aglietta's *A Theory of Capitalist Regulation,* which was originally written as a doctoral thesis, and published in a revised form in French in 1976. It developed an innovative Marxian attempt to understand post-war capitalism in the US, drawing together a variety of radical approaches to capitalist accumulation. These included an innovative procedure for mapping value categories onto observable monetary magnitudes, the importance of conflicts around the organisation of the labour process (something which had become increasingly intense in the US and Western Europe in the late 1960s) and the importance of new forms of money. Aglietta, who became a professor of economics at the university of Paris-Nanterre, is a prolific author who has subsequently published numerous works on macroeconomic and especially monetary issues, but who has shifted away from his earlier Marxian approach. The task of developing a Marxian approach to Regulation theory was subsequently taken up by Alain Lipietz in several books and articles. Lipietz worked for many years at CEPREMAP, an economics research institute in Paris, and later became a leading activist in the French Greens, for whom he was elected to the European Parliament in 1999. There is also a separate strand of Regulation theory which is more Keynesian oriented, of which Robert Bowyer is perhaps the best known representative. Here, the focus will be on Aglietta and Lipietz's more Marxian approaches to Regulation theory.

Michel Aglietta

The term Regulation is taken directly from the French *Regulación,* and refers to the institutional arrangements which, for a time, make it possible to ensure that a highly conflictual economic and social system like capitalism can be reproduced or 'regulated'.[44] Aglietta distinguishes two main periods, or what he calls 'regimes of accumulation' – an intermediary concept between the highly abstract categories of value, surplus value etc. and concrete historical developments.[45] The first period is the predominantly extensive regime which began in the last third of the 19th century when the US built up the most powerful heavy industry in the world. During this period massive investment transformed production processes in what Marx described as department one (the production of means of production), but workers' consumption remained confined largely to basics

[44] Aglietta (1979), pp. 12-13.
[45] Aglietta (1979), pp. 68-87.

This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 266800

and department two (producing means of consumption) was essentially untransformed. However, as management became more complex, and the employment of salaried staff increased, the demand for consumer goods previously considered as luxuries began to grow.

The years between the end of World War I and 1945 are characterised as a period of transition. In the 1920s the introduction of Fordist techniques of mass production led to an expansion of the production of cars and other consumer durables. As these became cheaper demand increased but, as workers could not yet afford these items, demand was still relatively restricted and had reached a limit by 1926. This began to change in the 1930s following the introduction of the New Deal and, after mass strikes in 1936 led to the formation of the Congress of Industrial Unions, the establishment of collective bargaining between management and unions.

The second main period is what Aglietta calls a predominantly intensive regime of accumulation and dates from 1945.[46] Following a taming of the unions in the late 1940s, workers were willing to substitute regular wage increases for a more fundamental challenge to the capitalist labour process. At the same time part of the costs of reproducing the workforce were socialised through social insurance funds. For some twenty years, he argues, it proved possible to sustain a more or less dynamic balance as rising labour productivity and a marked intensification of work through the generalisation of Fordist and Taylorist techniques led to a major increase in production, while a steady rise in nominal wages permitted an unprecedented expansion of mass consumption, facilitated in part by forms of finance which enabled the working class to purchase cars and even houses. 'The "consumer society", he writes, 'appeared to have definitively resolved the contradictions of capitalism and abolished crises'.[47] This, however, began to falter in the mid-1960s. The possibilities for increasing productivity in assembly line production were becoming exhausted and, as capitalist management sought to reduce labour costs, there was a major intensification of class struggle at the point of production, with the outbreak of conflicts and confrontations that challenged the work discipline imposed by Fordism. The situation was compounded by an increase in the indirect social costs which arose as a result of providing for the unemployed, the sick and the retired.

[46] Aglietta (1979), pp. 154-166.
[47] Aglietta (1979), p. 161.

According to Aglietta, the form in which fixed capital is written off, or devalorised, registered a significant transformation between the two regimes.[48] Under the extensive regime, accumulation occurred in department one in successive spurts, leading to a major increase in productive capacity and the need for a corresponding expansion of markets in order to realise profits and depreciation allowances. The insufficiency of markets led periodically to a mass of unsold commodities, which resulted in a violent contraction in fixed capital formation, and a partial destruction of the fixed capital in operation. In this way, capital was devalorised in a deep depression as a result of generalised obsolescence. Under the intensive regime, by contrast, the devalorisation of fixed capital takes place, not through a brutal contraction, but rather through a permanent process of obsolescence financed through the growth of depreciation allowances. This, says Aglietta, was at the root of the creeping inflation which characterised capitalism after the Second World War and which, by incorporating insurance against obsolescence into company cash flows, shifted social losses onto wage earners through inflation. The shift in the way that fixed capital is devalorised is linked by Aglietta to changes in the form of corporate organisation, and the emergence of giant corporations which employ extensive internal planning and which finance their fixed investment primarily from their cash flow, and to a lesser extent from borrowing, rather than by raising capital on the stock market as in earlier times.[49]

Aglietta also identifies important changes in the nature of the monetary system between the two regimes. Under the extensive regime, the monetary system had been based on commodity money; under the intensive regime, inconvertible central bank money replaces commodity money within a national economy. Aglietta draws on the ideas of the monetary circuit theorists to describe how, in the intensive regime, money created by commercial banks is 'integrated' in the process of capitalist circulation when it is advanced to pay wages.[50] Providing the commodities which are subsequently produced can be sold, or realised, this money is said to be 'disintegrated', whereupon it can be repaid to the banks, or 'destroyed'. For Aglietta, what he calls the monetary constraint is shifted in the regime of intensive accumulation from the point at which a commodity is sold for money to the point where privately-created bank money is exchanged for central bank

[48] Aglietta (1979), pp. 106-10 and 205-08.
[49] Aglietta (1979), pp. 228-30; for shifts in the modes of corporate organization and the growth of centralized financial control see pp. 251-66; on the ability of giant corporations to plan obsolescence and manipulate the laws of amortisation, see pp. 313-14.
[50] Aglietta (1979), pp. 345-47. Aglietta draws on Schmitt (1966), but is critical of Schmitt's failure to recognise that successful disintegration depends on the generation and realization of surplus value.

This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 266800

money. In a regime where the central bank acts as lender of last resort, all bank money is convertible into central bank money, and in this way when credits have not been successfully disintegrated, the money can still be converted into central bank money and the central bank effects what Aglietta calls a 'pseudo-validation' of the labour that was expended. This pseudo-social validation of one part of the commodity output leads to an erosion in the value of money, and is the basis for the creeping inflation that characterised the intensive regime.

Aglietta's analysis of the intensive regime of accumulation which emerged after 1945 involves three so-called structural forms.[51] The first is the establishment of collective wage bargaining and the negotiation of centralised agreements which lasted several years and which provided for a stable framework for the growth of nominal wages and the development of consumption spending, together with a system of social security which provided for continued consumption even when workers were unemployed. The second structural form is the emergence of giant corporations and financial groups which are able to plan fixed capital expenditure and, through planned obsolescence, transfer the costs of depreciation to society as a whole. The third structural form is the system of national inconvertible money in which money created by commercial banks is integrated by the central bank, and which can be expanded to ensure the social validation of the produced commodities, without sharp downturns, but at the cost of inflation. While these structural forms are separate from each other, Aglietta argues that they were all affected by the contradictions which developed in the course of the Fordist regime, and which from the mid-1960s faced the regime with an organic crisis.

The key to understanding a financial crisis, according to Aglietta, is the concept of over-accumulation.[52] The dynamic balance between the two departments of production can no longer be sustained and – in Aglietta's interpretation of the law of tendency of the rate of profit to fall – there is no self-correcting mechanism that ensures that a phase of apparently regular accumulation can be sustained. 'In a financial crisis', he writes, 'the articulation of the structural forms that gives the regime of accumulation its cohesion is dislocated.'[53] The first signs of crisis showed themselves with the faltering in productivity growth in the mid-1960s and led to a decline in the share of profits

[51] For a concise summary see Aglietta (1979), pp. 382-83.
[52] Aglietta (1979), pp. 352-56.
[53] Aglietta (1979), p. 356.

in income in the second half of the 1960s.[54] It was no longer possible to generate a sufficient return on the massive quantities of capital which had been accumulated. Companies began to build up rising debt and as monetary resources shifted from investment in production to financial speculation, the debt structure of non-financial firms became unstable, reaching a critical point in mid-1973. At the start of 1974 the ratio of stocks of unsold commodities to GDP was at its highest since the war; fixed capital formation declined while short-term interest rates were at a historical high. As speculators withdrew funds from the banking system to take advantage of higher returns elsewhere, banks were obliged to borrow back funds at very high rates, leading to major losses and a contraction in the creation of money. In this situation, only central bank intervention prevented a major destabilisation of the financial system and a massive destruction of capital.

Alain Lipietz

Aglietta's somewhat schematic monetary analysis was taken up and developed by Alain Lipietz in a short book which appeared just as the unfolding crisis of the Fordist regime reached its most acute phase. Lipietz presents a sophisticated analysis which examines the interplay between the internal, or as he calls it 'esoteric' relations which determine the underlying dynamics of capitalism – essentially the field of value relations – and the ways in which these appear 'on the surface' in 'exoteric' relations – the enchanted world of prices.

In the esoteric world, Lipietz begins by distinguishing value and value-in process.[55] Value concerns the social relation between the products of different forms of private labour at a given ('synchronic') moment in time. Value-in-process, by contrast, concerns the ('diachronic') movement of a single value through time as it seeks to expand and generate the value added which corresponds to the value of labour power together with surplus value. While value-in-process is always subordinate to instantaneous value, capitalist reproduction depends on sustaining the relation between the two, something which Lipietz likens to the way in which one strand of thread is woven in and out of a parallel set of threads to form a scarf. The whole secret of crisis, he says, consists in the impossibility of maintaining this relation.

In the enchanted, exoteric world, capitalists seek to invest their capital so as to obtain the highest possible rate of profit. Here the price of commodities appears as the sum of the cost of the means

[54] Aglietta (1979), p. 370-79.
[55] Lipietz (1985), pp. 28-32.

of production plus the cost of wages with a mark up for profits. Lipietz emphasises that these are not simple reflections of the underlying values, but are the means by which the underlying relations are reproduced: 'the system of surface connections takes on a degree of autonomy and cohesion not solely because it is the form in which internal relations appear to individual agents but also because these internal relations are reproduced only *by means of* this behaviour (i.e. calculating prices) on the part of private entrepreneurs.'[56]

The sale of a commodity ensures that the labour that has been expended in producing it is socially validated, and the revenues can be used to pay wages and profits. However, deploying similar terms to Aglietta, Lipietz argues that if a productive capitalist sells his output to a commercial capitalist who in turn will market the product, since this is not a final sale it does not socially validate the product. Rather it anticipates a final sale or *antevalidates* the product, while the money that is paid to the industrial capitalist is said to *prevalidate* the income which accrues to wages and profit.

Along the same lines, if an industrial capitalist has operated, at least in part, with borrowed capital, then part of the surplus value must be paid in interest to the lender. The interest, however, must be paid irrespective of whether the product is finally sold. The lender – typically a bank – lent the capital on the assumption that the industrial capitalist would produce commodities which could be sold. Lipietz therefore argues that this money also involves an antevalidation of the product, while the interest which accrues to the lender involves a prevalidation of an income that has yet to be realised.

The more that production tends to be prevalidated, the more the exoteric world of prices appears to take on a greater coherence and autonomy. But capitalism involves a permanent transformation in the conditions of production, and hence in the system of underlying values. Consequently, the greater the autonomy of the exoteric world of prices, the more likely it is that divergences will mount up between values and prices. Ultimately, he says, it is crises which eliminate such divergences.[57]

For Lipietz, commodity money corresponds to a regime where instantaneous values dominate over values-in-process: 'the exoteric is constantly adjusted to the esoteric ... the adjustment of

[56] Lipietz (1985), p. 57.
[57] Lipietz (1985), pp. 73-76.

This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 266800

divergences is temporarily deferred by a boom, and then eliminated by a crash'.[58] However, once the prevalidation of incomes has become widespread, and values-in-process acquire a certain regularity, as is the case in the post-war regime of intensive accumulation, then credit can represent a value-in-process and credit is able to play the role of money.[59] When a bank provides a credit to a firm to buy the products of another firm, it anticipates or *antevalidates* the realisation in money of the product. When a bank then clears a payment with a deposit at the central bank, this *antevalidation* gains an acceptance throughout the economic domain of the central bank, and Lipietz refers to this as *pseudovalidation.* 'The central bank … declares that this is a "good" anticipation of the validity of the value-in-process … central bank money represents pseudovalidated values.'[60]

In this system the monetary constraint becomes much more flexible. The final validation of a commodity occurs when all credits have been repaid, while non-validation is expressed not only by being unable to sell the commodity, but also by an inability to repay a credit. According to Lipietz, values-in-process achieved such independence that they could increase at a 'customary' rate as long as the prevalidated incomes were pseudo-validated by the central bank. However, the contradiction between the system of underlying values and the system of prices was no longer expressed in the ability to convert a commodity into money, but rather displaced onto the point where the money was used to purchase another commodity: 'the same sum of money now buys fewer commodities: the contradiction is smoothed by inflation'.[61]

Echoing Aglietta, Lipietz says that from the 1950s to the mid 1960s increases in wages and nominal profits more or less kept pace with gains in productivity. But from the mid-60s productivity gains proved inadequate and working class resistance prevented an adjustment in real wages. Profitability deteriorated but nominal incomes continued to rise. According to Lipietz, either value-in-process could be allowed to increase nominally, or genuinely compatible value relations could be brutally reimposed. With inflation rising, however, it proved increasingly difficult to convert money back into commodities and between 1974 and 1983 this led to a realisation crisis in which production levels stagnated or declined and unemployment rose. The adoption of monetarist

[58] Lipietz (1985), p. 78.
[59] Lipietz (1985), p. 89.
[60] Lipietz (1985), p. 93-94.
[61] Lipietz (1985), p. 99.

This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 266800

policies in the late 1970s and early 1980s marked a refusal to sustain the policy of pseudo-validation, and stagflation was turned into recession. Monetarism, he says, transformed a painful shift into an outright catastrophe and, faced with the spectre of 1930, in the summer of 1982 the Fed abandoned its attempt to control the money supply.

9. Ricardo Bellofiore

Riccardo Bellofiore is Professor of Monetary Economics and History of Economic Thought at the University of Bergamo. His theoretical analysis synthesises a broad range of heterodox thinking while remaining centred on an original critique of Marx in which reliance on a commodity money is rejected and the labour theory of value is re-cast within the terms of the monetary circuit. This synthesis is encapsulated in the concept of the 'real subsumption of labour to finance', which Bellofiore argues provides a better characterisation of contemporary capitalism than the more widely used, but less clearly defined, 'financialisation'.

Theoretical background

Bellofiore's theoretical framework can be broadly placed within the tradition of the monetary circuit. Bellofiore emphasises two routes from Marx's circuit of capital, starting from Rosa Luxemburg and Knut Wicksell respectively. From Luxemburg a line can be traced to Kalecki's famous profit equations. From Wicksell, Bellofiore traces two streams of monetary circuitism, which he characterises as 'left' and 'right' (Bellofiore, 2005).[62] The 'right' stream runs through Mises to Hayek. The 'left' stream starts with the work of Schumpeter, then leads to Keynes' *Treatise on Money* and the 1937 papers, and culminates in the Italian and French circuitist schools.[63]

Bellofiore also draws on the work of Minsky, arguing that Minsky can be located within the circuitist stream.[64] In Minsky's system, all agents (or macroeconomic sectors), operate as balance-sheet 'money-in, money-out' units, financing risky long-term speculative positions using short-term liabilities. This is compatible with circuitist analysis, since banks provide the short-term finance for production, wages finance consumption and the 'funding' of long-term capital assets is made possible through a combination of internal and external funds.[65]

[62] '[T]he labels should not be understood too strictly in a political sense' (Bellofiore, 2011b, p. 203).
[63] See Deliverable 2.07 and Bellofiore (1992); Bellofiore (1998). For Bellofiore's reading of Schumpeter, see Bellofiore (1991).
[64] Bellofiore argues that Minsky's analysis is 'complementary rather than opposed to the circuitist line of thought' (Bellofiore, 2013a, p. 154).
[65] There is a tension between the work of Minsky on the one hand, and the Luxemburg-Kalecki stream on the other, in that rising leverage at the macroeconomic level is not an inevitable outcome of increased debt-financed investment at the microeconomic level. Depending on the distribution of income and the saving

This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 266800

Minsky used the term Financial Keynesianism to describe his approach to macroeconomics, and in particular his view that his work provided an extension of Keynes' model, with the crucial addition of financial dynamics Bellofiore (2012a).[66] Bellofiore, in turn, uses the term both to characterise the 'left' stream of circuitist theory and to as a short-hand for the specific features of contemporary 'financialised' capitalism, defined by the 'real subsumption of labour to finance' as the central relationship.

The 'real subsumption of labour to finance' expresses a specific form of the Marxian class-power relationship, in which finance comes to dominate production and the extraction of surplus value. The view of the labour theory of value as an equilibrium price theory is rejected by Bellofiore who, instead, re-casts it as a macro-monetary class-conflict theory of competition and structural change embedded within the monetary circuit.[67] This updated version of the labour theory of value posits that the fundamental capitalist class relation is not that which exists between workers and capitalists as owners of the means of production, but between workers and those with access to money.

Bellofiore argues that the endogeneity of money in the circuitist view does not require a severance of the link between money and labour values (or require that the equality simply be postulated, as in the 'New Interpretation' of Duménil, Foley and others). This is because, in order to commence the circuit of production—and thus the cycle of reproduction and expansion—capital must first acquire labour-power, which is purchased using credit money created by bank lending. At the same time, capitalists autonomously decide upon the volume of wage goods to produce. Thus, even with money fully endogenous, a value relationship connecting the labour time required for the production of wage goods and the money wage is immediately imposed upon the system.[68] The total labour supplied by workers is then determined by social conflict. It is here that the rate of

behaviour of households, firms' investment expenditures may return to them as retained profits so that the net leverage of the sector as a whole does not rise.

[66] See the entry on Minsky in Deliverable 2.07; Bellofiore & Ferri (2001b); Bellofiore and Ferri (2001a); Bellofiore (2012a).

[67] See Bellofiore (1989); Bellofiore & Realfonzo (1997); Bellofiore et al. (2000); Bellofiore and Fineschi (2009); Bellofiore (2012b).

[68] Bellofiore draws upon Luxemburg's 'circuitist' interpretation of Marx and her focus on the problem of the realisation, in money, of both profits and interest—a central preoccupation of contemporary circuitist writers. Her solution to the realisation problem—continual expansion of exports—was criticised by Kalecki who argued that an alternative was to be found in the 'internal exports' generated by government deficit spending. See Bellofiore (2009); Bellofiore and Passarella (2009).

exploitation and surplus value—expressed in money terms and thus in direct relation to the value of purchased labour-power—is determined. Value is thus constituted neither purely in production nor in final exchange, but at the interface between the two.

Regarding Marxist theories of crisis, Bellofiore argues that the usual dichotomy between equilibrium and crisis is incorrect. While equilibrium 'balanced growth' is an unlikely outcome, this only demonstrates the possibility of crisis—not its necessity. Instead, Bellofiore takes a Schumpeterian perspective in which disequilibrium arising from competition between capitalists is a structural element of capitalist accumulation. Rather than competition resulting only in a tendency for the rate of profit to equalise across sectors, competition takes the more significant form of an attempt to achieve higher profitability *within* specific sectors. Thus disequilibrium does not imply crisis, but instead, 'crises begin from a fall in investments, and this derives from a crisis of profitability' (Bellofiore, 2011a, p. 84). The task is then to locate the reasons for which this fall in profitability has taken place.

Bellofiore argues that (among Marxists) explanations for the current crisis have largely fallen between two influential positions. The first views financialisation as a reaction to the tendential fall in the rate of profit while the second, held by those influenced by Keynesian thinking, sees the crisis as a realisation problem. Instead of relying exclusively on a mechanistic interpretation of either aspect, a more synthetic and flexible approach is required.[69]

Contemporary capitalism

Bellofiore builds on this theoretical foundation to develop his analysis of the characteristics and dynamics of contemporary capitalism and financial crisis. He is critical of the view that saw, in post-Fordism and globalisation, a strong discontinuity with previous regimes. This informs his analysis of neo-liberalism and financialisation, which likewise rejects the strong discontinuity view of the most recent phase of capitalism.[70]

[69] 'The task is one of reading the tendential fall of the rate of profit as a sort of meta-theory of crisis, which includes within it not only the so-called underconsumption and the so-called disproportionality lines about the realization crisis, but also the tendency to the capitalist crisis that originates directly in the social relations of production within the immediate process of valorization' (Bellofiore, 2011a, 92).
[70] See Bellofiore et al. (2010b); Bellofiore (2011a).

Post-Fordism, 'globalisation' and neo-liberalism

The first phase of the neo-liberal capitalism that emerged following the 1970s breakdown of the Fordist-Keynesian 'golden age' — as a result of a profit squeeze resulting from labour contestation—was the brief Monetarist experiment of the early 1980s. Bellofiore divides the subsequent period into two eras: the first is the period of Reagan's twin deficits, in which aggregate demand was maintained through military expenditures. The second period began following the failed attempt to rebalance the economy, which resulted in the stock market crash of 1987 (Bellofiore et al., 2010a). This ushered in the era of the 'Greenspan put' in which the Fed began to act as 'lender of first resort' so that private sector deficits supported a stock-market bubble that served to maintain consumption expenditures and thus aggregate demand. Following the collapse of this 'new' capitalism with the dot-com crisis in 2001, a new phase began in which wars in the Middle East and the Bush tax cuts gave rise to renewed public deficits and a once more enhanced role for government expenditures in offsetting stagnationist tendencies.

Bellofiore is thus critical of those that see in neo-liberalism a return to *laissez-faire*. Instead, the post-Fordist era should be seen as one in which a 'paradoxical and perverted' form of Keynesianism prevailed, driven by war expenditures and asset bubbles (Bellofiore, 2011a, p. 111).

The monetarist attack of the 1980s produced what Bellofiore refers to as the 'traumatised worker'.[71] Wage-induced inflation was largely eliminated and the Phillips curve flattened, allowing for a period of apparent near-full employment without inflationary pressures. Instead of price inflation, the activist use of monetary policy led to an expansion of debt-financed consumption fuelled in part by the wealth effects arising out of speculative bubbles.

As a result, the structure of financial balances at the macro-sectoral level shifted away from the traditional pattern in which the household sector finances firms' investment. Instead, firms increasingly found that they could finance their investment through retained earnings, while the household sector as a whole moved into a position of net financial deficit, largely matched by the deficit on current account.[72]

[71] According to anecdotal evidence, the term originates with Alan Greenspan.
[72] Michell (2014).

This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 266800

The crisis and the 'Lesser Depression'

A simplistic circuitist reading of the crisis thus sees household indebtedness as 'the means by which under-consumption was overcome after the Volcker shock', leading to an unsustainable rise in the leverage of households followed by a 'Minsky moment'. Instead, Bellofiore puts forward a more subtle analysis of the 'real subsumption of labour to finance'.[73] The neo-liberal attack on social provision and real wages was accompanied by an increasing degree of incorporation of wage-earners into the financial system: as a result of banking system and pension fund reforms, large volumes of household savings were channelled into the financial markets, inflating asset prices and leading to a 'commonality of interests between the managers of financial institutions and those of productive firms' (Bellofiore and Halevi, 2010, p. 8).[74] At the same time, a process of 'centralisation without concentration' took place, in which mergers and acquisitions activity gave rise to a global restructuring of corporate ownership and productive value chains. In contrast to earlier periods of such activity, this proceeded without the formation of new large vertically integrated corporations. Instead, a transnational stratified network firm structure emerged with an oligopolistic 'core' sitting at the top of the chain, controlling intellectual property and key capital goods. The other end of the value chain is composed of a competitive manufacturing sector made up of units of decreasing size and increasing geographical dispersion, leading to fragmentation of the workforce and further curtailing the bargaining power of labour.

What lies behind this restructuring is a process of 'capital market inflation' (Toporowski, 2000), in which flows of household savings into capital markets lead to rising securities prices. As a result, the paper wealth of those households that hold assets increases, providing collateral against which those households can borrow. At the same time, firms are provided with a cheap source of funding for mergers and acquisitions activity because part of the 'yield' on securities comes from capital gains.

This process of capital market inflation provided the environment in which to incubate the other key actors in the narrative: the manic saver and the indebted consumer. The trinity of traumatised worker–manic saver–indebted consumer provides the central dynamic in Bellofiore's account of Financial Keynesianism. The rising paper wealth of home-owners and those holding financial assets provided the collateral basis for expansion of lending to households, so that saving rates

[73] Bellofiore and Halevi (2011); Bellofiore (2011c); Bellofiore and Halevi (2012).

[74] Toporowski (2000) labelled this 'pension fund capitalism'. See Bellofiore (2011c).

This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 266800

fell and debt-financed consumption expanded. Capital market inflation is thus seen as the flip-side of the coin to wage compression: the manic saver and indebted consumer thus provide the mirror image to the traumatised worker.

European neo-mercantilism

The current account deficits arising out of the consumer-debt-driven Financial Keynesianism of the US have recently been matched by the surpluses of the dynamic Chinese economy. But over the longer period, 'U.S. debt-financed growth was tied to European and Japanese stagnation as much as with China's export-led growth' (Bellofiore and Halevi, 2010, p. 14). Bellofiore and Halevi (2010) provide a historical analysis of the neo-mercantilist tendencies of Europe which highlights the important structural differences between the big three export-oriented economies of Germany, Italy and France. Germany's export competitiveness was based not on exchange rate devaluation but technological advantage and capital goods production. The price aspect of German export competitiveness is connected with wage deflation—something which was subsequently exported across the Eurozone. In contrast, Italy's competitiveness was historically based on competitive currency devaluation—something which was ruled out by the introduction of the Eurozone. Finally, France—partly due to the importance of its financial system—occupies the paradoxical position of aiming for trade surpluses through wage repression and fiscal conservatism, yet usually fails to achieve them.

The origins of this contradictory European neo-mercantilism are traced to the early currency instability of the post-Bretton-Woods era, and the Italian strategy of competitive currency depreciation against the German Mark. This led to the construction of the European Monetary System (EMS) in 1979. Under such this system—and given that most trade is intra-European—not all countries could run surpluses simultaneously, with the result that the only possible adjustment mechanism is recession. This situation is reproduced and reinforced by the current institutional arrangements of the Eurozone under which countries can neither devalue or enact expansionary fiscal policies.

Bellofiore argues that the situation can thus be analysed in a Luxemburg-Kaleckian circuit framework. During the period before the crisis, German surpluses were matched by the accumulation of financial assets by German banks, both toxic US securities and the sovereign debt of peripheral Eurozone states. Thus, when the crisis struck, Europe was affected in two ways: both through the accumulation of non-performing financial assets and, dangerously for such a neo-mercantilist strategy, from reduced demand for exports. Already depressed 'animal spirits' meant that business investment demand was weak and sensitive to external shocks. Bellofiore argues that a complete breakdown was only averted due the action of 'automatic stabilisers, targeted pro-industry programmes and state policies openly shielding workers from unemployment' (2013b, p. 506). In such a situation 'bad' deficits arise not just as a result of post-crisis shock therapy (as in Greece and Ireland) but also in the pre-crisis situation of competitive disadvantage and wage repression.

The crisis thus arose not as a result of the public indebtedness of any individual country, but rather out of the refusal of the ECB to provide refinancing facilities for government deficit spending. However, while the bond-buying programme of the ECB has subsequently stabilised the markets, the deadlock of European neo-mercantilism cannot be overcome simply through financial means. Bellofiore argues that we have to return to Minsky's critique of Keynes and his recommendation of 'a socialisation of the towering heights', a 'communal' consumption, capital controls, the regulation of finance, banks as public utilities, etc. (2013b, p. 511) .

Concluding remarks

Bellofiore's analysis of modern capitalism has its roots in an original synthesis that, while centred on Marx, incorporates a broad range of critical theory. The thread which runs through this synthesis is the centrality of money in the economic system. Bellofiore provides a distinctive account of the structural characteristics and evolution of financial capitalism since the end of the 'golden age' of privatised Keynesianism. This provides the basis for his analysis of the factors leading to the financial crisis of 2007-2008 and the crisis of neo-mercantilism in Europe.

10. Makoto Itoh and Costas Lapavitsas

Makoto Itoh is a leading author of the Uno School of Japanese Marxism. He teaches at the Kokugakuin University in Tokyo. Costas Lapavitsas is Professor of Economics at SOAS, University of London. In 1999 they co-authored *Political Economy of Money and Finance*. The book is notable both for presenting a systematic discussion of money and finance from a Marxist perspective and because it made the work of the Uno School on this subject available to an English-speaking audience for the first time. Lapavitsas has subsequently published a number of influential articles and books on financialisation, the financial crisis of 2007-08 and the Eurozone crisis.

Marx's 'forms of value'

Itoh and Lapavitsas (1999) take the commodity, representing the crystallisation of abstract social labour, as the starting point for their conceptualisation of money and credit. They note two explanations for the emergence of money in a capitalist economy. The first derives from the inherent tension in commodity exchange between the heterogeneity of use-values and the homogeneity of value (abstract labour). Money is seen to emerge as the general representative of value, allowing this tension to be broken: commodities retain their existence as specific use-values, but represent values when exchanged against the money commodity. The problem identified with this analysis, however, is that 'it assumes as given precisely what is to be explained—i.e. the general acceptability of money ...' (Lapavitsas, 2003, p. 56).

A more convincing explanation derives from the theory of the 'forms of value' found in Chapter 1 of Capital. Here, Marx proposes that exchange value develops over a sequence of four stages. The progression starts from the 'simple, isolated or accidental' form of value, in which use-values exchange directly and anarchically. Once the owner of a single commodity—for example, linen—requests exchange against a number of other commodities, the 'total or expanded form of value' emerges in which linen is valued, still in relative terms, against those other commodities. Finally, the 'general' form of value emerges in which a single commodity—gold—comes to function as the universal equivalent form of value. Thus, 'Marx's theory of the form of value posits money as the spontaneously emerging nexus of the anarchical exchange process' (Itoh and Lapavitsas, 1999, p. 36).

The credit system

Building on this view of money, Itoh and Lapavitsas present a conceptual analysis in which the credit system takes the form of a pyramid. The lowest level of the credit pyramid is commercial credit, itself resting on the process of accumulation by industrial and commercial capitals. On top of this base are to be found, in turn, banking capital, the money market and, at the apex, the central bank. The authors derive this 'representative paradigm of a capitalist credit system', on the basis of three necessary conditions:

> ...first, commercial credit is regularly advanced among several competing capitalist firms; second, short-term loans for circulating capital are regularly advanced by competing banks; and third there is regular use, both domestically and internationally of commodity money (gold). (p. 86)

Commercial credit thus serves as the foundation for banking credit, out of which the categories of interest and interest-bearing capital emerge. The origins of banking credit are traced to the use of promissory notes and bills of exchange for the settlement of payment obligations in lieu of final payment in commodity money.

In order for commercial credit, in the form of such notes, to be granted, it is necessary that the lender be in possession of a sufficient quantity of idle money that they are able to continue production without (yet) receiving final payment for previously sold goods. However, instead of holding such promissory notes until redemption, the capitalist may add their own endorsement to notes and pass them on to other capitalists, again in lieu of final payment in money. Chains of commercial credit thus emerge 'spontaneously and continuously across the surface of capitalist exchange' (Itoh and Lapavitsas, 1999, p. 59).

It is argued that 'banking credit typically emerges upon a foundation of commercial credit' (ibid., p. 92). In particular, the 'representative bank' typically grants credit through the discounting of commercial credit notes. In order to grant this credit, banks issue their own liabilities: deposits and banknotes. These banknotes represent a broader and more generally acceptable form of credit money, thus allowing capitalists start new circuits of production in advance of final payment, thus increasing their turnover of production.

The business of discounting bills by issuing their own liabilities impels banks to maintain reserves of commodity money, in order that they will be able to honour these liabilities in the case of

This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 266800

demands for immediate payment. The tendency for banks that find themselves short of gold reserves to turn to other banks for loans is the basis for the next layer of the credit pyramid—the money market. Through the rediscounting of bills of exchange amongst banks, and the provision of a clearing mechanism for expired bills, credit attains a general and homogeneous character, in contrast to the specificity of the liabilities issued to the public by individual banks:

> In the money market, loanable money capital becomes a homogeneous commodity transacted at the same price, that is, the market rate of interest, according to the law of one price. A general rate of interest emerges clearly. (ibid., pp. 97–98)

At the top of this pyramid emerges a 'bank of banks'. The authors argue that to correctly consider the central bank in its 'fundamental role', it is necessary to examine its functions in isolation from the role of the state. This bankers' bank provides efficiency and flexibility by allowing banks to extend credit without issuing their own banknotes, and by allowing for the centralisation of reserves. This centralisation leads to concentration of gold reserves at the central bank:

> The main point of access to hoarded commodity money in advanced capitalist economies is provided by the liabilities of the central bank. Thus the gold hoard of the central bank ...can become the national hoard of a capitalist economy. (ibid., p. 155)

The role of the central bank as bank of the state is attributed to the fact that the bankers' bank is in a position to intermediate between credit in the money market and the needs of state financing. In return, the position of the central bank is strengthened when its liabilities are designated as legal tender by the state.[75]

Interest-bearing capital

Interest-bearing capital is the specific form which emerges from banking capital. Itoh and Lapavitsas identify two approaches to interest-bearing capital in Marx's work. The first simply distinguishes between the 'monied capitalist' and the 'functioning capitalist'. This definition is rejected by the authors in favour of their preferred approach. It is argued, instead, that idle concentrations of commodity money are systematically created during the process of capitalist accumulation. It is the function of the credit system to throw this idle money back into circulation:

[75] State-backed fiat money '...represents a form of money that arises due to the tension between the function of commodity money as measure of value and its function as means of exchange' (Lapavitsas, 2013, p. 83). The standardisation by the state of the unit of account—alongside the enforcement of legal tender—partially overcomes this tension.

This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 266800

> Put in the broadest possible terms, the credit system mobilises the stagnant money generated in the course of capitalist reproduction, transforms it into interest-bearing capital (loanable) and redirects it toward accumulation. (ibid., p. 61)

There is thus a degree of separation between interest-bearing capital and the circuit of capital, since temporarily idle money accumulates outside of the circuit, is transformed into interest-bearing capital by the banking system, and then returns to the lender outside of the circuit. This distinction allows for the separation of the categories of interest and profits, such that interest represents a redistribution of surplus value among capitals. The rate of profit tends to set an upper limit to the rate of interest, although this may be breached at points of crisis.

The Business Cycle

The credit system of the capitalist economy provides a potential source of cyclical dynamics and crisis. If payments fail to be made, chains of credit will break down, leading to generalised shortages of money. If failures occur in production or realisation, more serious crises will occur, since these failures will be transmitted via credit chains. And, as ever, the inner crisis tendencies of capital accumulation identified by Marx are unavoidable:

> The key point is that in a monetary economy founded on industrial capitalist accumulation, the inherent, but abstract, possibility of monetary crisis becomes an inevitability. (ibid., p. 124)

The authors refer to the two main strands of Marxist crisis theory—those of underconsumption and overaccumulation. Overaccumulation theories revolve around the tendency of the rate of profit to fall, either as a result of the rising organic composition of capital or because of a profit squeeze that occurs when wages rise because of labour shortages. While not rejecting the validity of the underconsumptionist theory, the authors adopt the profit squeeze mechanism for their exposition of the 'fundamental theory of the business cycle' (ibid., p. 127).[76] The theory is based the work of

[76] The authors argue against the approach of treating the different theories of crisis as 'a toolbox, from which concepts can selectively be employed to analyse historically specific instances of capitalistic economic crisis. ...The weakness of this approach ...is that it is essentially eclectic and cannot lead to a coherent theory of the business cycle that is fully articulated with an analysis of credit and finance' (p. 127).

This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 266800

the Japanese Uno school which the authors argue provides the most developed Marxist theory of the business cycle.[77]

The account of the cycle starts with the beginning of the upswing, at which point a substantial reserve army of unemployed labour exists and profit rates are comfortably above the rate of interest. As the scale of production increases, the volume of idle money generated by the accumulation process increases. These increasing hoards in the hands of capitalists increase their ability to extend commercial credit. Bank credit thus plays only a limited role in the early stage of the upswing.

It is argued that at this stage in the business cycle, the existing stock of capital limits the tendency towards introduction of new technology so that, as accumulation progresses, unemployment falls. The depletion of the reserve army leads to an increase in the real wage and a fall in the rate of profit. This causes a shift in the relative prices of goods: labour-intensive goods rise in price relative to capital-intensive goods. At the same time, rising real wages lead to increases in demand for consumer goods. Rises in the prices of these commodities leads to speculative trading and stockpiling with the effect that further relative price changes occur alongside disproportionality of production across industries and diverging rates of profit. At the same time, the general decline in the rate of profit limits accumulation.

This sets up an increasing demand for credit, to be used for both the payment of wages and for speculative trading activity. At the same time, stocks of idle money capital held by capitalists are shrinking. The commercial credit issued by individual capitals thus tends to be replaced by more generally accepted bank credit, leading to a shortening of the chains of commercial credit and an increasing demand for banks to discount bills. But banks also face the problem of decreasing gold reserves, with the inevitable result that the rate of interest rises. The combination of the rise in the wage rate, the fall in the rate of profit and rise in the rate of interest lead inevitably to crisis:

> The nature of these difficulties makes it clear that they cannot be overcome by the elastic expansion of credit, although the latter can sustain the growth of effective demand and the rise in prices. Similarly, credit cannot overcome the shortage of labour power, which forces a rise in real wages. (p. 133)

[77] Rather than a timeless and abstract theory of the cycle, it is argued that the account most closely corresponds to the 'typical decennial business cycle of liberal British capitalism from the 1820s to the 1860s' (p. 128).

The crisis is usually precipitated by a reversal of the speculative positions taken in commodity markets and, to an extent, the stock market. These price falls induce capitalists to expect further reductions in price and weak demand. It is at this point that the situation emphasised by underconsumptionists—an excess supply of commodities—may enter the picture.

At this stage, credit chains begin to break down across the capitalist system. Interest rates reach their highest point, exceeding the general rate of profit. Failure to sell at expected prices leads to generalised inability to meet credit obligations. Businesses may become insolvent as payment liabilities exceed profits. Problems of illiquidity and insolvency are transmitted across the networks of credit chains.

The reason that such crises do not lead to a complete breakdown of the capitalist system is to be found in the heterogeneity of individual capitals. As a result of the redistribution of the surplus arising from speculative buying and selling and the essentially anarchic nature of the market, not all businesses will have suffered, and some will have done well out of the crisis. In the case of banks, some will have accumulated large gold reserves.

During the depression, chains of credit thus gradually reconstitute themselves, originating from those commercial, industrial and banking capitals that have accumulated hoards. The competitive pressure of the depression leads capitals to introduce new technologies and scrap older machinery. This 'rationalisation' process and the consequent rising organic composition of capital exacerbate the problems of unemployment in the depths of the depression. But 'the replacement of fixed capital marks a decisive point: the end of the depression and the beginning of the upswing' (p. 138).

Financialisation and financial expropriation

Subsequent to the publication of *Political Economy of Money and Finance*, Lapavitsas' next work (2003; 2007) examined the social content of money and credit and the role of trust and information in credit relationships. With the advent of the financial crisis, his focus shifted towards the analysis of 'financialisation' as the underlying cause of the crisis. It was argued that the crisis of 2007–08 did not conform to the overaccumulation theory presented in Itoh and Lapavitsas (1999):

> ...the crisis did not emerge because of overaccumulation of capital, though it is already forcing capital-restructuring on a large scale. Rather, this is an unusual crisis related to

> workers' income, borrowing and consumption as well as to the transformation of finance in recent decades. (Lapavitsas, 2009, p. 124)

Lapavitsas focuses on the changing relationship between the banking system and the accumulation process, emphasising the shift to open market financing and the use of retained profits for investment by large corporations, depriving banks of the stable, low-risk assets on which they have historically relied.[78] Lapavitsas (2009) highlights two aspects of commercial banks' response to these developments: firstly the turn towards personal income, particularly wage income, as a source of banking profit and, secondly, the shift away from traditional commercial banking practices based on the issuance of money-like liabilities, in favour of market mediation activity similar to that performed by investment banks.

The extraction of financial profit directly out of the personal income of workers is labelled 'financial expropriation'.[79] It is argued that this extraction of workers' incomes is underpinned by the increasing involvement of financial mechanisms in the provision of basic services to workers, such as health, education and provision for old age. It is this 'financialisation' of individual workers' incomes that has enabled banks to extract above-normal profits out of personal incomes.[80]

Critics have argued that—in Marxist terms—the theoretical basis for financial expropriation is not clear (Fine, 2009; 2010). Lapavitsas notes that the concept bears a resemblance to usury, and argues that the ability of banks to extract such usury-like profits derives from asymmetries of power and information between banks and workers, and changes in technology, particularly the increasing use of computers by banks for automated credit-scoring and other related tasks.[81] But 'financial expropriation' refers to a much more general phenomenon than usury. As such, it is not

[78] This development was highlighted by Toporowski (2000): 'This shift from bank borrowing to securities issue by large companies and governments has had dire consequences for the banking systems in the UK and the US, the countries most affected by this shift. Borrowing by large, financially secure companies, together with government borrowing, constitutes the best part of bank asset (or loan) portfolios. Banks have been forced to engage in more risky business: lending to less financially secure borrowers among smaller and medium-sized companies and governments and companies in developing countries, and trading in financial derivatives' (p. 50–51).

[79] The term is intended to make explicit the distinction between this source of profits in the sphere of circulation and the exploitation of labour in production. Earlier contributions used the more ambiguous term 'direct exploitation'.

[80] See also dos Santos (2009).

[81] The 'usury'definition is problematic because it highlights the difficulties in differentiating 'financial expropriation' from earlier, pre-capitalist, forms of lending. Itoh and Lapavitsas (1999) reject Marx's 'monied capitalist' definition of interest-bearing capital precisely on the grounds that this type of lending is indistinguishable from 'antediluvian' pre-capitalist forms of credit (p. 60).

This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 266800

clear why the profit gained through lending to households can definitively be classed as a deduction from wage income. Instead, it may represent a lowering in the value of labour-power, with an increased share of the additional surplus value accruing to financial capital. Related to this, questions have also been raised on the correct definition of interest-bearing capital, and in particular the extent to which such lending must be directly connected with accumulation and generation of surplus value (Fine, 2014).

The themes discussed above are re-stated and expanded upon in Lapavitsas' latest book, *Profiting Without Producing* (2013). The earlier discussion of the emergence and role of money is updated to include fiat money and modern forms of electronic credit money, and to discuss the role of the dollar as 'quasi-world-money'.

In Chapter 6, 'The Conundrum of Financial Profit', Lapavitsas returns to the debate around financial expropriation. He highlights Marx's adaptation of Steuart's concept of 'profit upon alienation' to support his claim that financial profits represent 'a form of exploitation that is independent of surplus value' (p. 144) arising out of 'zero-sum transactions that relate to money revenue or existing stocks of money' (p. 145):

> It cannot be overstressed that exploitation occurring in financial transactions is qualitatively distinct from exploitation in production. To be specific, exploitation in financial transactions amounts to a direct transfer of value from the income of workers to the lenders ... (Lapavitsas, 2013, p. 143)

The book also makes a valuable contribution in providing charts of empirical data showing the changes in the financial activities of banks, firms and households in the US, UK, Germany and Japan. The shift in position of the non-financial firms sector in the UK and Japan, from net debtor to net creditor, is clearly shown. However, as noted by Norfield (2014), the data presented does not unequivocally support the financial expropriation argument. While mortgage lending increased significantly as a share of bank assets in both the US and Japan it did not in Germany. In Japan and Germany, non-mortgage lending to households fell as share of bank assets. In the UK, the share of total household credit fell substantially.[82] Likewise, the shift from bank loans to market funding does not emerge clearly from the data presented. Rather, what is demonstrated is the rising

[82] These trends are associated with the fact that bank balance sheets expanded greatly over the period under consideration. Thus, lending to households may have increased as a share of GDP or wage income, but not as a share of total assets.

dominance of retained profits as a source of financing, at the expense of both bank and market-raised finance.[83] Finally, the book includes material based on the three reports on the Eurozone crisis produced collaboratively by Research on Money and Finance.[84]

Concluding remarks

Itoh and Lapavitsas perform an important task in bringing the insights of the Uno School of Japanese Marxism to a wider audience. Lapavitsas' subsequent work has been at the forefront of the debate on the nature and implications of financialisation. Disagreements remain, however, on the validity of financial expropriation as a theoretical category and on the correct definitions of banking capital and interest-bearing capital.[85]

[83] In combining bond and equity finance into a net 'market finance' category, the use of open-market debt issuance by firms to finance share buy-backs and mergers and acquisitions is hidden from view. See, for example, Michell (2014).
[84] These reports were published in combined form in Lapavitsas et al. (2012).
[85] See Lapavitsas (2013), pp. 116, 127–128; and Fine (2014).

11. Gérard Duménil and Dominique Lévy

Gérard Duménil and Dominique Lévy are directors of research at the Centre National de la Recherche Scientifique in Paris. They have jointly published a series of articles and two books about the development and crisis of what they call the neoliberal phase of capitalism, and which are concerned primarily with the US economy: *Capital Resurgent. Roots of the Neoliberal Revolution* (originally published in French in 2000, English translation 2004) and *The Crisis of Neoliberalism* (2011). The focus here will be on the second of these, which extends and updates much of the analysis in the earlier volume. Duménil and Lévy's work combines an analysis of the historical background to the crisis which began in 2007, together with a detailed account of developments in the course of the crisis, for which they draw extensively on a wide range of empirical sources. Here the focus will be primarily on their broader analysis of the origins and causes of the crisis.

Modern capitalism

Like other writers, Duménil and Lévy draw attention to the changes which occurred in US capitalism in the later nineteenth century: the growth of large enterprises and their increasing technical sophistication, the development of national and international transport and communications systems, and a major expansion of the banking and financial system. They argue that the onset of a major economic depression in the 1890s, and the responses to the crisis, then led to the emergence of a new set of institutional relationships in the early 20th century. These involved what they characterise as three revolutions: the corporate revolution (new laws which facilitated incorporation), the financial revolution (large-scale banks financing of the corporations) and the managerial revolution (the delegation of management to salaried personnel). The three revolutions led to a capitalist class that was less connected to individual enterprises and which maintained its ownership of the means of production through holding securities. This gave the domination of the capitalist class a strongly financial character, and Duménil and Lévy employ the term *Finance* to refer to the upper fractions of the capitalist classes and financial institutions. In their words: 'a new institutional configuration was built at the turn of the twentieth century, with big capitalist families holding large portfolios of shares and bonds'.[86] Finally, these developments

---

[86] Duménil and Lévy (2011), p. 13.

coincided with the establishment of a new, more complex pattern of classes which superseded the older, simpler division between capitalists and workers. As a result of the expansion of managerial and clerical tasks there develops a new tripartite structure based on capitalist classes, managerial classes, and popular classes (which includes both production and clerical workers).[87]

Since the beginning of the 20th century, Duménil and Lévy identify three main periods or 'social orders' which make up modern capitalism. The first, in the initial decades of the 20th century up to the New Deal, they term 'financial hegemony', and involved a combination of a free market economy and the increasing organisation of business in large corporations. During this period, there emerged a bourgeoisie that was separated from individual enterprises, and new financial institutions that were closely connected to nonfinancial corporations. According to Duménil and Lévy this period involved a compromise between Finance and the upper fractions of the managerial classes.

The second period, referred to as the post-war compromise, lasted from the New Deal and the Second World War through to the 1970s. It was based on enhanced managerial authority; a rising standard of living, full employment and the welfare state; and the containment of Finance. According to Duménil and Lévy this period involved an alliance between the managerial and popular classes under the leadership of the former, with a marked limitation on the power of financial interests. At a later point in their analysis it is argued that underlying President Roosevelt's actions was a vision of 'tempered capitalism'.[88]

The third period is that of neoliberalism, a second period of financial hegemony, which emerged in the 1980s. It is characterised by deregulation in every field, in particular in financial mechanisms. This, it is argued, is based on an alliance between the capitalist and managerial classes.

The transition between each of the social orders was, according to Duménil and Lévy, associated with prolonged, wide-ranging structural crises in the 1890s, the 1930s, the 1970s and the current crisis of neoliberalism is another such wide-ranging structural crisis. While the crises of the 1890s and the 1970s were both outcomes of a declining profitability, they argue that the crises of the

[87] The use of the plural *classes* appears to be intended to highlight the heterogeneous nature of each of the groups which, it is pointed out, are characterised by significant internal hierarchies and differences.
[88] Duménil and Lévy (2011), p. 282.

1930s and the current crisis of neoliberalism are not associated with a downward trend in profitability, but rather mark the culmination of a period of financial hegemony.

Neoliberalism

For Duménil and Lévy, neoliberalism in the US is characterised by three contradictions.[89] First, it is in their words, 'a social order dedicated to the unbounded quest for high income by the upper income brackets, and not to investment in production'. This resulted in a fragile and unwieldy financial structure whose construction accelerated after 2000. Second, the unchecked process of financialisation and globalisation impaired the ability of the state to govern the economy, both in the US and in other countries. And third, the downward trend in domestic accumulation in the US and the rise of imports resulted in growing external deficits and was associated with a dramatic growth of household debt and risky financial innovations. As a class strategy, they argue, neoliberalism was an unquestionable success prior to the crisis. But there was a sharp contrast between the success of the upper classes and the macroeconomic trajectory of the US economy. This divergence was temporarily hidden during the boom in the second half of the 1990s but, in the following decade, the neoliberal endeavour went astray.

According to Duménil and Lévy, there is no 'synthetic technical explanation' for the crisis: it was not deficient profit rates or a lack of demand resulting from the insufficient purchasing power of wages.[90] It was, rather, a result of the contradictions arising between the unbound quest for high incomes and the unsustainable macroeconomic trajectory of the US economy – the low investment, the trade deficit and the dependence on financial inflows from the rest of the world and rising domestic indebtedness. While the US economy did suffer from a lack of investment, they argue: 'the rise in consumption, notably by the upper income brackets, is at the centre of the mechanisms that led to the crisis'.[91] The crisis was not the result of over-accumulation or underconsumption (as Marxists have argued in previous crises), but rather of overconsumption and under-accumulation.

At the centre of the crisis, they continue, was something which connected all the contradictions facing the US economy: the growth of debt, first by the government and then, increasingly, by

[89] Duménil and Lévy (2011), p. 22-25.
[90] Duménil and Lévy (2011), p. 33-34
[91] Duménil and Lévy (2011), p. 37.

households. This, they argue, was the result of three mechanisms whose impact combined. First, the expansion of demand, led by well-off households, resulted in a sharp rise in consumption which, in turn, led to rising imports and a trade deficit. Second, weak domestic demand was countered by a strongly expansionary credit policy – something which also benefited foreign producers. And third, as a result of the unconstrained trade balance, the ongoing process of financial innovation and low interest rates, the expansion of household debt was not constrained. Accordingly, the growth of mortgage loans was not an unfortunate side effect of financialisation, but part of the huge growth of the financial mechanisms which had become necessary to sustain growth in the US. The onset of the housing crisis destabilised an already highly fragile financial structure. 'It was', they conclude, 'the trigger not the cause of the crisis'.[92]

For Duménil and Lévy, the onset of the crisis is the culmination of thirty years of neoliberalism. The first phase from 1980 to 1991 was marked by recessions in the early 1980s and again in 1991 accompanied by a crisis of the savings and loan banks. A second phase began slowly following the end of the 1991 recession, but accelerated in the second half of the decade under the impetus of investment in information technology and a strong stock market boom, but, after the bursting of the stock market bubble, it ended with the onset of a new recession in 2001. The third phase began in 2002 with a new period of expansion but this was accompanied by an accumulation of financial tensions which led to the onset of the financial crisis in August 2007, its deepening in 2008 and the Great Contraction which began at the end of 2008.

Much of *The Crisis of Neoliberalism* is taken up with a detailed analysis of empirical data relating to the development of the neoliberal epoch in the US. As part of this, Duménil and Lévy stress the importance of the growth of high incomes, which increased even more than capital income, and argue that the boundary between high-ranking managers and the capitalist class became blurred.[93] To this end they generate estimates of what they call 'the surplus labour compensation' of the top 5 per cent of earners – the income in excess of the average salaries of the remaining 95 per cent of employees – and show that in 2007 this was 1.6 times as large as the total dividends paid out.[94] The situation, they argue, was even more marked in the financial sector. While the high

[92] Duménil and Lévy (2011), p. 38.
[93] Duménil and Lévy (2011), pp. 75-86.
[94] Duménil and Lévy (2011), pp. 92-93. For 2007, standard compensation was $5,307 billion while the 'surplus compensation' earned by the top 5 per cent was $1,060 billion. This compares with profits distributed as dividends of $642 billion and of retained profits of $333 billion.

salaries paid out at the top and the dividends that were paid out to shareholders were quite real, many of the surpluses which companies had registered proved to be fictitious and, when the crisis broke, it resulted in 'a meltdown' of corporations own funds.[95] Towards the end of their empirical investigation they conclude: 'Neoliberalism is not about principles or ideology but a social order aiming at the power and income of the upper classes'.[96]

Beyond Neoliberalism

The final chapters of *The Crisis of Neoliberalism* are concerned with policies which could avoid a repetition of the recent crisis. Since neoliberal developments, in particular the quest for high incomes, were at their most extreme in the financial sector Duménil and Lévy begin here.[97] They list four goals which, they note, are even accepted by some within the financial sector, although they emphasise that it is the extent to which they are pursued which will be decisive: increased transparency, diminished risk taking, the control of indebtedness, and the moderation of high salaries. There is then a fifth, more radical goal, which involves creating a financial system at the service of the real economy, and they question whether a profit maximising financial system is compatible with this task. Finally, they point to the international dimension of the crisis, and argue that international institutions should play a much stronger role in the control of capital movements and global regulation.

Duménil and Lévy then turn to a second set of policies, aimed at the restoration of economic growth in the US.[98] First, they argue, a 'deep transformation' of corporate governance is required. Profits should be conserved in corporations to promote productive investment, and not paid out in high salaries or dividends. Investment could also be financed by loans at low interest rates, or even by issuing shares (in contrast to the neoliberal practice of share buy-backs). Second, external deficits must be curbed. To this end they call for a combination of policies based on a re-territorialisation of production, a 'drastic enhancement' of competitiveness, the establishment of trade barriers, the limitation of consumption, and a lower rate of exchange of the dollar – all of which, they concede, pose important difficulties. Third, the growth of domestic indebtedness, by the government in the 1980s, then by households, and again since the crisis by the government,

[95] Duménil and Lévy (2011), pp. 223-24.
[96] Duménil and Lévy (2011), p. 228.
[97] Duménil and Lévy (2011), pp. 297-300.
[98] Duménil and Lévy (2011), pp. 300-303.

must be curtailed. Finally, the US authorities need to regain control of long-term interest rates and counter the impact of financial globalisation. Here Duménil and Lévy simply raise the question of whether direct quantitative controls on loans should be introduced, or whether it is time to strive for global macroeconomic management.

At the time of writing – 2009 – Duménil and Lévy note that only limited adjustments had been introduced in the US. But, they say, major corrections must be introduced in the longer term and they argue that these should take the form of strengthening the position of management.[99] Duménil and Lévy criticise the view that what is required is a strengthening of state intervention in the economy in place of self-regulating market mechanisms, which they characterise as a straightforward Keynesian response to neoliberalism. Rather, what is crucial, they argue, is the relation between the managerial classes and the capitalist classes. According to Duménil and Lévy, the current problems are the result of the practices of capitalist classes, financial managers and top managers but there is no intrinsic reason why nonfinancial managers should be tied to this course. 'Given the challenge of economic governance for the coming decades', they argue, 'an increased role must be conferred on managers in charge of technology and organization within nonfinancial corporations and government institutions, actually a leadership – a management freed, at least to a significant extent from the objectives and biases proper to neoliberalism.'

In terms of likely outcome, Duménil and Lévy examine a variety of possible alliances, and their conclusions are rather pessimistic.[100] The social compromise during the first post-war decades involved a centre-left compromise between the managerial classes and the popular classes under the leadership of the managerial classes. However, the social forces supporting the post-war compromise were not able to deal with the crisis of the 1970s; Keynesian policies failed in a situation of deficient profitability not deficient demand. From the 1980s, the labour movement was seriously weakened, and neoliberalism involved a right-wing compromise between the capitalist and the managerial classes, under the leadership of the capitalists. Following the most recent crisis, the alternatives are either a continuation of the right-wing neoliberal compromise with a few adjustments to ameliorate the possibility of a renewed crisis – more or less the situation in the US in 2009 – or a situation where the managerial classes establish leadership. This could be a centre-left variant with the popular classes or a centre-right variant with the capitalist classes.

[99] Duménil and Lévy (2011), pp. 326-334.
[100] Duménil and Lévy (2011), pp. 329-334.

This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 266800

Establishing the first of these would require strong pressure from popular movements on government officials and nonfinancial management. However, given the close interrelation between capitalists and top managers in the US, they conclude that it is the second of these, the centre right outcome, which is most likely.

Final comments

The principal strength of *The Crisis of Neoliberalism* is its detailed empirical analysis of a wide range of economic and financial variables before and during the onset of the 2007-2009 crisis. It is striking, however, that there are relatively few references to, or discussion of, the work of other writers who have addressed similar material, either from a Marxian or any other perspective. The broad phases of capitalist development since the 1890s which Duménil and Lévy sketch out are similar to those identified by other writers, although the feature which they stress most concerns the relations between the different classes in each phase. This, however, raises questions about their innovative tri-partite form of class analysis.

The key concept of 'Finance' is said to refer to the upper fractions of the capitalist classes and to the financial institutions which they control. In general, though, Duménil and Lévy tend to subsume the interests of the capitalist classes as a whole under those of Finance. It is, however, their concept of managerial classes which is the most problematic. While managers obviously do play a key role in modern capitalism, it is surely only the very upper echelons that are involved in the alliance with the capitalist classes. It is these top managers that have been the principal beneficiaries of extraordinarily high salaries and stock options, as Duménil and Lévy themselves stress. The great majority of managerial staff – and here one should perhaps include a wider range of highly-qualified professional and technical staff – have not benefited from, nor necessarily supported, such an alliance to anything like the same extent. The idea that clerical workers occupy a broadly similar position as production workers in the class structure is, by contrast, widely accepted.

There are two further developments which might have been given more attention. One is the growth of pension funds, and the way in which workers savings' have been appropriated as part of the neoliberal drive to expand financial returns. The other concerns the role of large nonfinancial corporations which today are also organised as highly centralised financial institutions. Not only do they pay out huge sums in what Duménil and Lévy call 'surplus salaries'; fixed investment has also been low because it appeared that they could earn higher returns by playing the financial markets. Duménil and Lévy argue that there is no intrinsic reason why the managers of productive enterprises should ally with Finance; but the activities of large-scale productive capital have to a great extent now become deeply intertwined with those of Finance.

This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 266800

12. Conclusion

The writers surveyed in this paper share a vision of capitalism as an economic system whose reproduction is not characterized by a tendency towards a stable equilibrium. Marx developed an analysis of capitalism characterised by a pattern in which periods of successful accumulation were interrupted by financial crisis approximately every ten years. Towards the end of his life, in the 1870s, there are some indications that he thought that, in addition, capitalism might have shifted towards a new more stagnant phase of development.

Many subsequent Marxist writers have combined an analysis of cyclical crises with an analysis of longer phases of capitalist development which, for a time, succeed in establishing the basis for a relatively strong period of accumulation. For Hilferding an earlier competitive phase of capitalism was superceded in the late 19th century by finance capitalism in which big banks dominated large industrial concerns. Subsequent writers have identified a further transition in the inter-war years, leading to a new phase of capitalism after the Second World War which began to encounter certain limits towards the end of the 1960s. Aglietta and Lipietz denote this an intensive phase of accumulation characterised, amongst other factors, by Fordist production techniques and the growth of mass consumption, features also picked up on with varying degrees of emphasis by Bellofiore, Itoh and Lapavitsas, and Duménil and Lévy. This last group of writers has also identified the emergence of a further phase since the 1980s in which financial capital has again come to play a far more dominant role, a phase which – for most writers – signalled its limits with the crisis in 2007-09.

There are also several writers in the Marxist tradition who have focussed less on the specifics of finance and more on the longer term problems of effective demand in a capitalist economy. This includes the work of Luxemburg, of Kalecki and Steindl and of Sweezy and the *Monthly Review* writers. Nevertheless, Sweezy and the *Monthly Review* were amongst the earlier commentators to draw attention to the increasing important of debt and finance in the US economy from the 1970s.

The paper also suveyed two other critical approaches to finance in a capitalist economy. The institutional analysis advanced by Veblen and particularly Michell developed a sophisticated analysis of the interplay between production and finance in a profit-driven economy, and the way this leads to periodic economic downturns and financial crises. The monetary circuit analysis of

This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 266800

Graziani, on the other hand, stressed the problematic nature of a monetary production economy and the complex conditions which must be met if money that is initially advanced by banks is to be repaid – and with interest – so as to successfully close the monetary circuit.

References

Aglietta, M. (1979), *A theory of capitalist regulation. The US experience,* NLB, London

Anderson, W.H. Locke (1964), *Corporate Finance and Fixed Investment: An Econometric Study,* Harvard University Press, Cambridge Mass.

Argitis, G. (2013), 'Veblenian and Minskian Financial Markets', *European Journal of Economics and Economic Policies*, *Intervention*, vol. 10, no. 1, pp. 28-43

Baran, P.A., Sweezy, P.M. (1966), *Monopoly Capital An Essay on the American Economic and Social Order*, Penguin Books, Harmondsworth

Bellofiore, R. (1989), 'A monetary labour theory of value', *Review of Radical Political Economics*, vol. 21, no. 1–2, pp. 60–74

Bellofiore, R. (1991), 'Money and Development in Schumpeter', in J. C. Wood (ed.), *Joseph A. Schumpeter: Critical Assessments*, Routledge, London, vol. IV, pp. 371–394. Originally published in Review of Radical Political Economics, spring/summer 1985

Bellofiore, R. (1992), 'Monetary macroeconomics before the general theory. The circuit theory of money', in Wicksell, Schumpeter and Keynes. *Social Concept*, vol. 2, pp. 47–89

Bellofiore, R. (1998), 'Between Wicksell and Hayek: Mises Theory of Money and Credit Revisited', *American Journal of Economics & Sociology*, vol. 57, no. 4, pp. 531 – 578

Bellofiore, R. (2005), 'Monetary economics after Wicksell. Alternative perspectives within the theory of the monetary circuit', in G. Fontana, R. Realfonzo (eds.), *Monetary Theories of Production*, Palgrave Macmillan, Basingstoke, chapter 2, pp. 39–52

Bellofiore, R. (2009), *Rosa Luxemburg and the critique of political economy*, Taylor & Francis

Bellofiore, R. (2011a), 'Crisis theory and the Great Recession: A personal journey, from Marx to Minsky', *Revitalising Marxist Theory for Today's Capitalism [Research in Political Economy]*, vol. 27, pp. 81–120

Bellofiore, R. (2011b), 'From Marx to Minsky. The universal equivalent, finance to production and the deepening of the real subsumption of labour under capital in Money Manager Capitalism', in H. Ganssmann (ed.), *New approaches to monetary theory. Interdisciplinary perspectives*, Routledge, London, pp. 191–211

Bellofiore, R. (2011c), 'The ascent and crisis of Money-Manager Capitalism', *International Journal of Political Economy*, vol. 40, no. 3, pp. 5 – 17

Bellofiore, R. (2012a), 'Financial Keynesianism', in J. Toporowski, J. Michell (eds.), *The Handbook of Critical Issues in Finance*, Edward Elgar, Cheltenham, pp. 105–112

Bellofiore, R. (2012b), 'The "tiresome objector" and Old Moor: a renewal of the debate on Marx after Sraffa based on the unpublished material at the Wren Library', *Cambridge Journal of Economics*, vol. 36, no. 6, pp. 1385–1399

Bellofiore, R. (2013a), 'Endogenous money, financial Keynesianism and beyond', *Review of Keynesian Economics*, vol. 1, no. 2, pp. 153–70

Bellofiore, R. (2013b), 'Two or three things I know about her. Europe in the global crisis and heterodox economics', *Cambridge journal of economics*, vol. 37, no. 3, pp. 497–512

Bellofiore, R., Ferri, P. (eds.) (2001a), *Financial fragility and investment in the capitalist economy. The economic legacy of Hyman Minsky*, vol. II, Edward Elgar, Cheltenham

Bellofiore, R., Ferri, P. (eds.) (2001b), *Financial Keynesianism and market instability. The economic legacy of Hyman Minsky*, vol. I, Edward Elgar, Cheltenham

Bellofiore, R., Fineschi, R. (2009), *Re-reading Marx*, Palgrave Macmillan

Bellofiore, R., Halevi, J. (2010), 'Could be raining. The European crisis after the Great Recession', *International Journal of Political Economy*, vol. 39, no. 4, pp. 5 – 30

Bellofiore, R., Halevi, J. (2011), 'A Minsky moment? The subprime crisis and the "New Capitalism"', in C. Gnos, L.-P. Rochon (eds.), *Credit, money and macroeconomic policy. A post-Keynesian approach*, Edward Elgar, Cheltenham, chap. 1, pp. 175–200

Bellofiore, R., Halevi, J. (2012), 'Deconstructing labor. What is "new" in contemporary capitalism and economic policies: a Marxian-Kaleckian perspective', in C. Gnos, L.-P. Rochon, D. Tropeano (eds.), *Employment, Growth and Development*, Edward Elgar, Cheltenham, pp. 11–27

Bellofiore, R., Passarella, M. (2009), 'Finance and the realization problem in Rosa Luxemburg: a "circuitist" reappraisal', in J. Ponsot, S. Rossi (eds.), *The Political Economy of Monetary Circuits: Tradition and Change*, Palgrave MacMillan, Basingstoke, pp. 98–115

Bellofiore, R., Realfonzo, R. (1997), 'Finance and the labor theory of value: toward a macroeconomic theory of distribution from a monetary perspective', *International Journal of Political Economy*, pp. 97–118

Bellofiore, R., Seccareccia, M. (1999), 'Monetary circuit', in P. O'Hara (ed.), *Encyclopedia of Political Economy*, Routledge, London and New York, pp. 753–6

Bellofiore, R., Davanzati, G. F., Realfonzo, R. (2000), 'Marx inside the circuit: discipline device, wage bargaining and unemployment in a sequential monetary economy', *Review of Political Economy*, vol. 12, no. 4, pp. 403 – 417

Bellofiore, R., Halevi, J., Garibaldo, F. (2010a), *The Great Recession and the contradictions of European neomercantilism*, Socialist Register

Bellofiore, R., Halevi, J., Passarella, M. (2010b), 'Minsky in the "new" capitalism. The new clothes of the financial instability hypothesis', *The Elgar Companion to Hyman Minsky,* Edward Elgar, Northampton, pp. 84–99

Bossone, B. (2001), 'Circuit theory of banking and finance', *Journal of Banking and Finance*, vol. 25, pp. 857–890

Bottomore, T. (1981), Introduction to Hilferding, R. (1910), *Finance capitalism. A study in the latest phase of capitalist development,* London

Chick, V. (1993), 'Sources of Finance, Recent Changes in Bank Behaviour and the Theory of Investment and Interest', in P. Arestis (ed.), *Money and Banking: Issues for the 21st Century,* Macmillan, London

Cornehls, J. (2004), 'Veblen's Theory of Finance Capitalism and Contemporary Corporate America', *Journal of Economic Issues*, vol. 38, no. 1, pp. 29-58

David Graeber (2011), *Debt. The First 5,000 Years*

Deeg, R. (1999), *Finance capitalism unveiled. Banks and the German political economy,* Ann Arbor

Deleplace, G., Nell, E. J. (eds.) (1996), *Money in Motion: The Post Keynesian and Circulation Approaches*, Macmillan, Basingstoke

dos Santos, P. (2009), 'On the content of banking in contemporary capitalism', *Historical Materialism*, vol. 17, no. 2, pp. 180–213

Duménil, G., Lévy, D. (2011), *The crisis of neoliberalism*, The President and Fellows of Harvard College

Evans, T. (2004), Marxian and post-Keynesian theories of finance and the business cycle', *Capitalism & Class,* no. 83, Summer, pp. 47-100

Fine, B. (2009). Financialisation, the value of labour power, the degree of separation, and exploitation by banking. Research students' summer seminar series, SOAS.

Fine, B. (2010), 'Locating financialisation', *Historical Materialism*, vol. 18, pp. 97–116

Fine, B. (2014), 'Financialisation from a Marxist perspective', *International Journal of Political Economy*, Forthcoming

Fine, B., Harris, L., (1979), *Rereading Capital,* Macmillan, London

Fontana, G. (2000), 'Post Keynesians and Circuitists on money and uncertainty: an attempt at generality', *Journal of Post Keynesian Economics*, pp. 27–48

Fontana, G. (2009), *Money, Uncertainty and Time*, Routledge, London and New York

Fontana, G., Realfonzo, R. (2005), 'Introduction: The monetary theory of production', in G. Fontana, R. Realfonzo (eds.), *The Monetary Theory of Production: Tradition and Perspectives*, Palgrave MacMillan, Basingstoke, pp. 1–19

Foster, J.B. (1986), *The Theory of Monopoly Capitalism. An Elaboration of Marxian Political Economy,* Monthly Review Press, New York

Foster, J.B., McChesney, R.W. (2012), *The Endless Crisis How Monopoly-Finance Capital Produces Stagnation and Upheaval from the USA to China*, Monthly Review Press, New York

Gnos, C. (2006), 'French circuit theory', in P. Arestis, M. Sawyer (eds.), *A Handbook of Alternative Monetary Economics*, Edward Elgar, Cheltenham, chap. 6, pp. 87–104

Godley, W., Lavoie, M. (2007), *Monetary Economics: An Integrated Approach to Credit, Money, Income, Production and Wealth*, Palgrave Macmillan

Graeber, D. (2011), *Debt. The first 5,000 years,* Melville House, New York

Graziani, A. (1990), 'The theory of the monetary circuit', *Economies at Sociétés*, vol. 7, pp. 7–36. Also in Thames Papers in Political Economy (1989)

Graziani, A. (2003), *The Monetary Theory of Production*, Cambridge University Press

Hayek, F. A. (1978), *The Denationalization of Money*, Institute of Affairs, 2nd ed., London

Heinrich, M. (2012), *An introduction to the three volumes of Karl Marx's Capital*, Monthly Review Press, New York

Heinrich, M. (2013), 'Crisis theory, the law of the tendency of the profit rate to fall, and Marx's studies in the 1870s', *Monthly Review*, vol. 64, no. 11, April

Hilferding, R. (1910), *Finance capital. A study in the latest phase o f capitalist development,* Routledge, London, 1981

Hodgson, J. (2004), *The Evolution of Institutional Economics*, Routledge, London

Itoh, M., Lapavitsas, C. (1999), *Political Economy of Money and Finance*, Palgrave Macmillan, Basingstoke

Kalecki, M. (1937), 'The Principle of Increasing Risk', *Economica,* vol. IV, no. 16, pp. 440-446

Kalecki, M. (1943), *Studies in Economic Dynamics,* George Allen and Unwin, London

Kalecki, M., (1954), *Theory of Economic Dynamics: An Essay on Cyclical and Long-Run Changes in Capitalist Economy,* George Allen and Unwin, London

Kalecki M. (1968), 'Trend and the Business Cycle', in M. Kalecki, *Selected Essays on the Dynamics of the Capitalist Economy 1933-1970,* Cambridge University Press, Cambridge, 1971

Kelso, P., Duman, B. (1992), 'A Veblenian View of Minsky's Financial Crisis Theory', *International Journal of Social Economics*, vol. 19 (10/11/12), pp. 222-234

Lapavitsas, C. (2003), *Social Foundations of Markets, Money and Credit*, Routledge, London and New York

Lapavitsas, C. (2007), 'Information and trust as social aspects of credit', *Economy and Society*, vol. 36, no. 3, pp. 416–36

Lapavitsas, C. (2009), 'Financialised capitalism: Crisis and financial expropriation', *Historical Materialism*, vol. 17, no. 2, pp. 114–148

Lapavitsas, C. (2013), *Profiting Without Producing: How Finance Exploits Us All*, Verso, London and New York

Lapavitsas, C., Kaltenbrunner, A., Labrinidis, G., Lindo, D., Meadway, J., Michell, J., Painceira, J. P., Pires, E., Powell, J., Stenfors, A., Teles, N., & Vatikiotis, L. (2012). *Crisis in the Eurozone*. Verso, London and New York

Lebowitz, M. (1990), 'Paul M. Sweezy', in Maxine Berg (ed.), *Political Economy in the Twentieth Century*, Philip Allan, Oxford

Lipietz, A. (1985), *Enchanted World. Inflation, credit and the world crisis,* Verso, London

Luxemburg, R. (1913), *The Accumulation of Capital,* Routledge Classics edition, 2003

Magdoff, F., Foster, J.B. (2009), *The Great Financial Crisis Causes and Consequences*, Monthly Review Press, New York

Magdoff, H., Sweezy, P.M. (1987), *Stagnation and the Financial Explosion,* Monthly Review Press, New York

Mandel, E. (1976), Introduction to K. Marx, *Capital,* vol 1, Penguin/NLR Edition

Marx, K. (1867), *Capital*, vol. 1, NLR/Penguin Edition, 1976

Marx, K. (1885), *Capital,* vol. 2, NLR/Penguin Edition, 1978

Marx, K. (1974), *Capital A Critique of Political Economy, Volume II, The Process of Circulation of Capital*, Lawrence & Wishart, London

Marx, K. (1894), *Capital,* vol. 3, NLR/Penguin Edition, 1981

Michell, J. (2014), 'Speculation, financial fragility and stock-flow consistency', in R. Bellofiore, G. Vertova (eds.), *The Great Recession and the contradictions of contemporary capitalism*, Edward Elgar, Cheltenham, Forthcoming

Michell, J., Toporowski, J. (2011), 'The stock-flow consistent approach with active financial markets', in D. Papadimitriou, G. Zezza (eds.), *Contributions to Stock-Flow Modelling: Essays in Honor of Wynne Godley*, chap. 9, Palgrave Macmillan, pp. 173–196

Minsky, H.P. (1986), *Stabilizing an Unstable Economy,* New Haven, Yale University Press

Mitchell, W. (1969), *Types of Economic Theory. From Mercantilism to Institutionalism*, Vol. 2, Augustus M. Kelley Publishers, New York

Mitchell, W.C. (1941), *Business Cycles and their Causes,* University of California Press, Berkeley

Norfield, T. (2014), 'Capitalist production good, capitalist finance bad', Blog entry, http://economicsofimperialism.blogspot.co.uk/2014/01/capitalist-production-good-capitalist.html

Parguez, A. (2001), 'Money without scarcity: From the horizontalist revolution to the theory of the monetary circtuit', in L.-P. Rochon, M. Vernengo (eds.), *Credit, Interest and the Open Economy*, Edward Elgar, Cheltenham, chap. 3, pp. 69–103

Parguez, A., Seccareccia, M. (2000), 'Credit theory: monetary circuit approach', in J. Smithin (ed.), *What is Money?*, Routledge, London and New York, chap. 5, pp. 101–123

Passarella, M. (2012), *Financialisation and the monetary circuit: A macro-accounting heterodox approach*
http://www.boeckler.de/pdf/v_2012_10_25_passarella.pdf

Raines, P., Leathers, C. (1992), 'Financial Innovations and Veblen's Theory of Financial Markets', *Journal of Economic Issues,* vol. 26, no. 2, pp. 433-440

Realfonzo, R. (2006), 'The italian circuitist approach', in P. Arestis, M. Sawyer (eds.), *A Handbook of Alternative Monetary Economics*, Edward Elgar, Cheltenham, chap. 7, pp. 105–120

Rochon, L.-P. (1999), *Credit, Money, and Production: An Alternative Post-Keynesian Approach*, Edward Elgar, Cheltenham

Rosdolksy, R. (1968), *The Making of Marx's Capital,* Pluto Press, London, 1977

Schmitt, B. (1966), *Monnaie, salaries et profits,* Paris

Schumpeter, J. (1963), *Capitalism, socialism and democracy,* New York

Seccareccia, M. (1996), 'Post Keynesian fundism and monetary circulation', in G. Delepace, E. J. Nell (eds.), *Money in Motion: The Post Keynesian and Circulation Approaches*, Macmillan, Basingstoke, pp. 400–416

Seccareccia, M. (2003), 'Pricing, investment and the financing of production within the framework of the monetary circuit: some preliminary evidence', in L.-P. Rochon, S. Rossi (eds.), *Modern Theories of Money*, Edward Elgar, Cheltenham, chap. 9, pp. 173–197

Seccareccia, M. (2012), 'Financialization and the transformation of commercial banking: understanding the recent canadian experience before and during the international financial crisis', *Journal of Post Keynesian Economics*, vol. 35, no. 2, pp. 277 – 300

Shaikh, A. (1978), 'An introduction to the history of crisis theories', *US capitalism in crisis,* The Union for Radical Political Economics, New York, pp. 219-41

Steindl, J. (1941) 'On Risk', *Oxford Economic Papers,* no. 5, June, pp. 43-53

Steindl, J. (1945), 'Capitalist Enterprise and Risk', *Oxford Economic Papers,* no. 7, March, pp. 21-45

Steindl, J. (1952), 'Maturity and Stagnation in American Capitalism', *Oxford Institute of Statistics,* Monograph no. 4, Basil Blackwell, Oxford

Steindl, J. (1952), *Maturity and Stagnation in American Capitalism*, Basil Blackwell, Oxford

Steindl, J. (1982), 'The Role of Household Saving in the Modern Economy', *Banca Nazionale del Lavoro Quarterly Review,* no. 140, March

Steindl, J. (1989), 'Saving and Debt', in A. Barrère (ed.), *Money, Credit and Prices in Keynesian Perspective*, Macmillan, London

Sweezy, P.M. (1941), 'The Decline of the Investment Banker', *The Present as History Essays and Reviews on Capitalism and Socialism*, Monthly Review Press, New York, 1953

Sweezy, P.M. (1942), *The Theory of Capitalist Development Principles of Marxian Political Economy*, Oxford University Press, New York

Sweezy, P.M. (1981), *Four Lectures on Marxism*, Monthly Review Press, New York

Sweezy, P.M., Magdoff, H. (1975), 'Banks: Skating on Thin Ice', in Sweezy and Magdoff, *The End of Prosperity: The American Economy in the 1970s*, Monthly Review Press, New York, 1977

Sweezy, P.M., Magdoff, H. (1977), 'Keynesianism: Illusions and Delusions', in Sweezy and Magdoff, *The End of Prosperity: The American Economy in the 1970s*, Monthly review Press, New York, 1977

Toporowski (2000), *The End of Finance: The Theory of Capital Market Inflation, Financial Derivatives and Pension Fund Capitalism*, Routledge, London

Toporowski, J. (2013), 'Tadeusz Kowalik and the Accumulation of Capital', *Monthly Review January 2013,* vol. 64, pp. 33-44

Trigg, A.B. (2006), *Marxian Reproduction Schema: Money and aggregate demand in a capitalist economy,* Routledge, London

Veblen, T. (1904), *The Theory of Business Enterprise*, Scriber's Sons, New York

Veblen, T. (1905), 'Credit and Prices', *The Journal of Political Economy*, vol. 13, no. 5, pp. 460-472

Wolfson, M. (1986), *Financial Crises, Understanding the Postwar U.S. Experience*, M.E. Sharpe, New York

Wray, L. R. (2007), 'Veblen's Theory of Business Enterprise and Keynes's Monetary Theory of Production', *Journal of Economic Issues,* vol. 41, no. 2, pp. 617-624

Financialisation, Economy, Society and Sustainable Development (FESSUD) is a 10 million euro project largely funded by a near 8 million euro grant from the European Commission under Framework Programme 7 (contract number : 266800). The University of Leeds is the lead co-ordinator for the research project with a budget of over 2 million euros.

THE ABSTRACT OF THE PROJECT IS:

The research programme will integrate diverse levels, methods and disciplinary traditions with the aim of developing a comprehensive policy agenda for changing the role of the financial system to help achieve a future which is sustainable in environmental, social and economic terms. The programme involves an integrated and balanced consortium involving partners from 14 countries that has unsurpassed experience of deploying diverse perspectives both within economics and across disciplines inclusive of economics. The programme is distinctively pluralistic, and aims to forge alliances across the social sciences, so as to understand how finance can better serve economic, social and environmental needs. The central issues addressed are the ways in which the growth and performance of economies in the last 30 years have been dependent on the characteristics of the processes of financialisation; how has financialisation impacted on the achievement of specific economic, social, and environmental objectives?; the nature of the relationship between financialisation and the sustainability of the financial system, economic development and the environment?; the lessons to be drawn from the crisis about the nature and impacts of financialisation? ; what are the requisites of a financial system able to support a process of sustainable development, broadly conceived?'

This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 266800

THE PARTNERS IN THE CONSORTIUM ARE:

Participant Number	Participant organisation name	Country
1 (Coordinator)	University of Leeds	UK
2	University of Siena	Italy
3	School of Oriental and African Studies	UK
4	Fondation Nationale des Sciences Politiques	France
5	Pour la Solidarite, Brussels	Belgium
6	Poznan University of Economics	Poland
7	Tallin University of Technology	Estonia
8	Berlin School of Economics and Law	Germany
9	Centre for Social Studies, University of Coimbra	Portugal
10	University of Pannonia, Veszprem	Hungary
11	National and Kapodistrian University of Athens	Greece
12	Middle East Technical University, Ankara	Turkey
13	Lund University	Sweden
14	University of Witwatersrand	South Africa
15	University of the Basque Country, Bilbao	Spain

This project has received funding from the European Union's Seventh Framework Programme
for research, technological development and demonstration under grant agreement no 266800

Published in Leeds, U.K. on behalf of the FESSUD project.