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Financialisation of the environment:

A literature review

Deliverable 7.01

Eric Clark and Kenneth Hermele

Lund University

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Financialisation of the environment: A literature review

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Abstract

This paper provides a review of research into financialisation of the environment, focusing on the role of financialisation in the interface between social and natural dimensions of sustainability, the geographical penetration of finance into environmental sectors, and its increasing control over the production of nature and environmental governance through regulating flows of capital and consequently material flows. Financialisation is conceptualised as a profoundly spatial process, forging financial ecologies with consequences crucial to conditions for sustainability of social-ecological systems. The paper introduces the theme by framing financialisation in historical contexts. Financialisation of the environment is then related to processes of commodification, privatisation, neoliberalisation and accumulation by dispossession within the broader context of intersections between political economy and political ecology, highlighting the distinction between use-value/object-oriented investments and exchange-value/'investor'-oriented investments, the right to inhabit place, and the shift from control and command to economic incentives, drawing out implications for sustainability. Research on financialisation of agriculture and land resources, and on financialisation in relation to economic and social dimensions, is reviewed, and current moves towards re-regulation are considered from the perspective of a Polanyian countermovement. Conclusions reconsider the nature of the relationship between financialisation and sustainability and the challenges of bringing financial systems into the service of achieving social and natural sustainability.

Key words: financialisation, sustainability, commodification, political ecology, land

Journal of Economic Literature classifications: Q14, Q15, Q24, Q57, R11, R51, Z10

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1 Introduction

This paper presents a review of literature drawing connections between processes of financialisation and environmental change. Financialisation is conceptualised as a profoundly spatial process, forging financial ecologies conducive to the geographical penetration of finance into environmental sectors, while enhancing financial control over the production of nature and environmental governance, primarily through regulating flows of liquid capital and, consequently, material flows constitutive of uneven development. The consequences for sustainability in the full meaning of the term run deep, shaping conditions for future generations seeking sustainable pathways. In this way, financialisation is understood as a crucial link between social and natural dimensions of sustainability.

We start by framing financialisation in historical contexts. We then address how financialization has been conceptualized in the tradition of political economy, from Marx to the present, as a qualitatively new phase of capital accumulation or as a recurrent process of waxing and waning, before identifying currently salient features of financialisation. In section five we relate financialisation of the environment to processes of commodification, privatisation, neoliberalisation and accumulation by dispossession, within the broader context of intersections between political economy and political ecology. Some key literature on the now ubiquitous concept of sustainability is reviewed, with some emphasis on both critical literature and on the still emerging field of sustainability science. Critical research into the social, political and environmental implications of the rise of financial instruments such as offset derivatives is also briefly summarized. We find the distinction between use-value/object-oriented investments and exchange-value/'investor'-oriented investments to be particularly helpful to understand problematic impacts of financialisation. Issues of democracy and the right to place – the right to habitation – are highlighted, as well as the shift in environmental governance from control and command to economic incentives.

Section six reviews research into financialisation of agriculture and land resources, including relations to climate politics and land grabbing. We then turn to the literature on financialisation and economic and social dimensions of sustainability.

The penultimate section returns to theoretical perspectives on the history of financialisation and asks if the calls for and signs of re-regulation can be seen as a Polanyian countermovement. Conclusions reconsider the nature of the relationship between financialisation and sustainability and the challenges of bringing financial systems into the service of achieving social and natural sustainability.

2 The framing of financialisation

In 2003, five years before the financial crisis hit the world, the IMF published a devastating critique of its own policies regarding deregulation and liberalization of the financial sector, especially in poor countries. Although deregulation had been the official policy of the IMF since the 1980s, the report – which was co-authored by the then chief economist of the IMF, Kenneth Rogoff – unequivocally concluded that the policy precepts of the IMF had contributed to increasing volatility of financial flows, incoming as well as outgoing, and to reinforcing the "contagion" effect of disequilibria by fostering an ever greater integration of financial markets (Prasad et al. 2003). Furthermore, the IMF report concluded that countries differed in their capacity to endure volatility and crisis, and that poor countries, generally with a lower level of absorption capacity and with weaker governance structures, were well advised to remain less open to the vagaries of the global market than stronger and better endowed economies.

The insights were not new, and they would not have surprised John Maynard Keynes, who participated as head of the British delegation in the designing and launching of the IMF at the Bretton Woods Conference in 1944. Finding a balance between the monetary and the productive spheres of the economy was crucial, Keynes thought. Already in 1936 he had attempted to draw a line between enterprise and speculation, between the real economy and the financial sector:

> Speculators may do no harm as bubbles on a steady stream of enterprise. But the position is serious when enterprise becomes the bubble on a whirlpool of speculation.

> When the capital development of a country becomes a by-product of the activities of a casino, the job is likely to be ill-done. (Keynes 2007/1936, 142-143)

For Keynes it was crucial to distinguishing and protect the real, productive economy from the speculative casino economy, and he consequently suggested taming Wall Street – i.e. the casino – by introducing ”a substantial Government transfer tax on all transactions […] with a view to mitigating the predominance of speculation over enterprise in the United States” (Keynes 2007/1936, 143). Today, such transaction taxes bear the name of the Keynesian economist James Tobin, who proposed them in 1978 in order to curtail speculation after the breakdown in the early 1970s of the fixed exchange rates that were part of the Bretton Woods agreements of 1944 (Tobin 1978).

Keynes’ admonitions against letting money and finance play a dominating role was formulated against the dismal experience of the interwar years, leading him to suggest that the post-war order under negotiation at Bretton Woods should embrace the distinction between production and speculation. The outcome of the negotiations only partly reflected his concerns, but did to a significant extent reflect his position regarding financialisation. To this very day, the IMF charter upholds the distinction, though not without contradictions. The first article of the IMF charter calls for “the elimination of foreign exchange restrictions which hamper the growth of world trade” (IMF 2013: Article I: iv), leaving the door wide open to the casino economy. A subsequent article on capital transfers, however, allows exceptions from this general orientation, under the heading “Controls of capital transfers”:

> Members may exercise such controls as are necessary to regulate international capital movements, but no member may exercise these controls in a manner which will restrict payments for current transactions or which will unduly delay transfers of funds in settlement of commitments [...]. (IMF 2013: Article VI: Section 3)

Hence, the outcome of the Bretton Woods conference was a compromise, allowing countries to adopt regulatory policies while upholding the main objective of removing restrictions that might impede growth of trade and the economy as a whole. The neoliberal turn in development politics – manifested in the deregulation imposed by the IMF and the

World Bank following the debt crisis of 1982 – occurred in spite of IMF statutes responsive to the regulatory needs of indebted countries.

Not until April 1996 did the IMF board suggest reforming the articles of agreement to unequivocally promote liberalization of capital mobility (Peet 2003, 80). The idea was to change the statutes at the IMF annual meeting in the fall of 1997 to be held in Hong Kong, but the Asian financial crisis hit in the intervening months and the proposed alterations were shelved. This was not a felicitous moment for the IMF in the difficult art of timing. The aborted attempt to change the articles of agreement substantiates the claim that the statutes of the IMF in this regard, unchanged from the original formulation allowing controls of capital movements, are less than what the promoters of financialisation demanded.

The IMF statutes have nevertheless not deterred global financial capital from achieving a wholesale shift in the balance of power between labour and capital, and between state and capital. Financialisation, defined as “a pattern of accumulation in which profits accrue primarily through financial channels rather than through trade and commodity production” (Krippner 2005, 174), has escalated in the last thirty years, ascending in tandem with the neoliberal “counter-revolution” (Toye 1987) in development thinking associated with the election victories of Ronald Reagan and Margaret Thatcher. That financial profits must be the primary source of capital accumulation in order to conclude that we live in a period of financialisation is however problematic. The opening up of a new mode of accumulation does not mean that other modes of accumulation in the real economy have suddenly become unimportant or marginal. Indeed, Greta Krippner abandoned this limiting definition, subsequently describing financialisation instead as “the growing importance of financial activities as a source of profits in the economy” (Krippner 2011, 27).

Here Krippner is in the company of other equally vague definitions of financialisation. For instance, in one of the early collections of research, “financialisation means the increasing role of financial motives, financial markets, financial actors and financial institutions in the operation of the domestic and international economies” (Epstein 2005, 3). More recently, financialisation is summed up as “the growing power of money and finance in contemporary processes of economic, political and social change” (French et al 2011, 814).

In the academic literature, financialization has been framed following three logics (Krippner 2011, Goldstein 2009): the importance of the financial sector in the economy as measured by its share of the GDP; or as its share of employment, as part and parcel of an assumed transition to a "service" economy or a "post-industrial" society, often drawing on the work of sociologist Daniel Bell; or, thirdly, the role of finance in the process of capital accumulation. Focusing on process, from commodification, privatisation and marketisation – driven by neoliberal ideology – through securitisation and financial innovation generating shifts in investment flows and capital accumulation, to geographical, ecological, social and political consequences, we believe, is more illuminating than simple measures of the share of the financial sector in national economies (e.g. share of GDP or employment, measurement of which has changed, "making finance productive"; Christophers 2011).

In the following we therefore focus on the third approach, but should first note that the other two approaches do indicate clear shifts. For instance, the financial sector's share of GDP in the US grew from 12 per cent in 1950 to 24 per cent in 2001 (Krippner 2011, Figure 2). By 2007, the bonus pool to top ranking employees of the five major US investment banks alone was 36 billion USD, 71 per cent more than the total US budget for Overseas Development Assistance (which only amounted to 21 billion USD; Reinhart and Rogoff 2009, 210, and OECD 2013). Meanwhile, the share of GDP in manufacturing declined from 27 per cent in 1957 to 12 per cent in 2008 (Bellamy Foster and McChesney 2013, 50-51). As share of employment the financial sector in the US grew from 4 per cent in 1950 to 7 per cent in 2001 (Krippner 2011, Figure 1).

The problem with the first two approaches is not only that the measurements change, but that they fail to grasp the deeper significance of financialisation: that finance has become not only a more important activity for non-financial corporations, but has also extended its influence over flows of investments in productive activities, over regulatory regimes (environmental regulation being of special interest here) and redistributive activity, in short, over social policies and the social production of nature (Harvey 2006, Smith 2008). Markets for 'ecological' financial instruments have come to assume a major role in the formation of sustainability policy discourse and action. Markets are being created and harnessed as

responsible policy instruments to guide us into what is said to be a sustainable future. A crucial issue in this context is whether financialisation is a new or a recurrent phase, and what (if anything) more specifically distinguishes the current phase of financialisation from earlier periods.

3 Financialisation: New or recurrent

The question whether financialization is a new or recurrent phenomenon has important political implications. If it is a novel phase of capitalist development, we are on new terrain without historical experience in which to seek guidance. If it is recurrent, however, we can learn from historic attempts to tame the process by channelling financial activities through more socially responsible and societally beneficial configurations. Here we approach this question against the background of how the issue was framed in the early history of political economy, beginning with Karl Marx.

3.1 A new stage of capitalist development?

Karl Marx, writing in the mid-19th century, did not forget to include finance in his wide-ranging study of the capitalist system, but he considered it, in the only volume of Capital which he saw published, as an appendix to the industrial bourgeoisie, a “bank aristocracy” which holds a secondary role compared to the industrialists. Banks were thus not unimportant, but they had a subservient role, for instance in that they contributed to develop the domain of the limited corporation which facilitated the spread of capitalist relations of production (Marx 1867/Chapter 24.6). In the third volume of Capital (1894), which was prepared for the printers by Friedrich Engels (who may or may not have distorted Marx’s view on finance, see Toporowski 2005, 55), more attention is dedicated to finance, but primarily as a mechanism for financing industrial capital.

Marx wrote concerning the banking system that “It places at the disposal of industrial and commercial capitalists all the available or even potential capital of society” (Marx Capital III,

712-3, quoted in Hilferding 1910/1981, 407). Thus, in Marx's view, "finance and credit are led by developments in the productive industry" (Toporowski 2005, 55). Likewise, Engels maintained that "the stock exchange simply adjusts the *distribution* of the surplus value *already stolen* from the workers …" In another letter a few years later, Engels called events on the money markets "generally only symptoms", although he also recognized that "the money market can also have its own crises, in which direct disturbances of industry only play a subordinate part or no part at all" (Letters to Eduard Bernstein in 1883 and to Conrad Schmidt in 1890, respectively, quoted by Toporowski 2005, 55, 58, italics in original). Thus, Engels clung to the Marxian view that finance was subordinated to production, granted that he also seemed to have begun to question whether this hierarchy always reigned.[1]

The time was not quite ready to see finance as a dominant feature of capitalism, but already by the turn of the century things had changed. John Hobson's *Imperialism* (1902) puts finance centre-stage: the profits earned abroad by the financial sector – "insurance companies, investment trusts, and land mortgage companies" (Hobson 1902:58) – constituted the answer to the conundrum why imperialism, a seemingly unprofitable undertaking – at least if we are to believe Hobson – nevertheless prevails:

> Aggressive Imperialism, which costs the tax-payer so dear, which is of so little value to the manufacturer and trader, which is fraught with such grave incalculable peril to the citizen, is a source of great gain to the [financial] investor who cannot find at home the profitable use he seeks for his capital. (Hobson 1902:62)

Three hundred pages later, Hobson concluded that

> The chief *economic* source of Imperialism has been found in the inequality of industrial opportunities by which a favoured class accumulates *superfluous elements*

[1] As an aside, Marx saw finance as a tool for socialisation, as a "powerful lever during the transition from the capitalist mode of production to production by means of associated labour". The reason, Marx maintained, was that finance and the limited corporation "does away with the private character of capital", in effect preparing it for socialisation (Marx Capital III: 712-3, quoted in Hilferding 1910/1981:407). This view appears in the works of other scholars in this tradition.

> *of income* which, in their search for profitable investments, press ever farther afield. (Hobson 1902:382-3, italics added)

Hobson even attributes "The new Imperialism" – the old being when there were no rival imperial powers, a somewhat ahistorical assumption – to "the dominance of financial or investing over mercantile interests"(Hobson 1902, 324).

Hobson articulates a clear hierarchy of capital agents, in which finance is placed on the highest rung. Rudolf Hilferding, writing in 1910, rather emphasised the fusion of the two. He saw the rise of finance as a distinctly "new phase of capitalist development" where "bank and industrial capital [is brought] into an ever more intimate relationship", as "capital assumes the form of finance capital, its supreme and most abstract expression" (Hilferding 1910/1981:1). Summing up this new phase of capitalism, he concludes on the final page:

> Finance capital, in its maturity, is the highest stage of the concentration of economic and political power in the hands of the capitalist oligarchy. It is the climax of the dictatorship of the magnates of capital. (Hilferding 1910/1981:370)

That it had become impossible to distinguish industrial from financial capital, that in fact the two had merged, was also an idea embraced by Lenin, although he retained the idea of a hierarchy. In 1916 he wrote "a popular outline" – which he called "Imperialism, the highest stage of Capitalism" – building on Hobson, and stressed that banks had grown from "modest middlemen into powerful monopolies", a "transformation" he saw as "one of the fundamental processes in the growth of capitalism into capitalist imperialism" (Lenin 1916, Chapter II:1).

But monopoly aside, Lenin considered the finance capitalist to be more important than the industrial capitalist who had become "more completely dependent upon the bank" (Lenin 1916, Chapter II:9). He went on to concur with Hobson that the financier has "predominance" over the merchant (Lenin 1916, Chapter VII:4), once a complete

> personal link-up, so to speak, is established between the banks and the biggest industrial and commercial enterprises, the merging of one with another through the acquisition of shares, through the appointment of bank directors to the Supervisory Boards (or Boards of Directors) of industrial and commercial enterprises, and vice versa. (Lenin 1916:Chapter II:9)

With some differences, Hobson and Lenin concurred that, in the words of Jan Toporowski, "the development of the capitalist system went not towards the 'subordination' of finance to industrial capital [as Marx had maintained], but in fact in the opposite direction, towards the subordination of industrial capital to finance" (Toporowski 2005, 55).

Also Rosa Luxemburg, writing in 1913, between Hilferding and Lenin, considered finance to be key for the expansion of capitalism as a system, suggesting a new role for finance in the "Imperialist Era", albeit a contradictory one. In a chapter on international loans, towards the end of *The Accumulation of Capital*, she summarizes:

> In the Imperialist Era, the foreign loan played an outstanding part as a means for young capitalist countries to acquire independence. […] Though foreign loans are indispensable for the emancipation of the rising capitalist states, they are yet the surest ties by which the old capitalist states maintain their influence, exercise financial control and exert pressure on the customs, foreign and commercial policy of the young capitalist states. Pre-eminently channels for the investment in new spheres of capital accumulated in the old countries, such loans widen the scope for the accumulation of capital; but at the same time they restrict it by creating new competition for the investing countries. (Luxemburg 1913/2003, 401)

David Harvey (2005, 137-41) finds Luxemburg's take on the role of finance for the expansion of the capitalist system "interesting" as she underlined the need of capitalism for something "outside of itself" to secure its continued expansion, a thought which is similar to Harvey's concept of "spatio-temporal fixes" and the drive for geographic expansion. Luxemburg saw finance not so much as merging with industrial or commercial capital, as a midwife that contributed to expanding capital relations globally, and thus as contributing to

the survival of the system. Also Jan Toporowski assesses Luxemburg's take on finance in a positive light as being among the first to have included in her analysis "a financial system that visits repeated catastrophes on the traditional economy, in the course of incorporating it in the modern international capitalist economy" (Toporowski 2005, 60).

More recently there has emerged an understanding of financialization which builds on the theory of *Monopoly Capitalism* by Paul Baran and Paul Sweezy (1966), though remarkably, Baran and Sweezy failed to assign any central function to finance in their model (Bellamy Foster and Magdoff 2009, Bellamy Foster and McChesney 2012). Baran and Sweezy (1966) identified a new trend in late capitalist societies, in the difficulty to absorb and profitably employ ever growing flows of surplus generated by monopoly – as opposed to competitive – capitalism. In order to maintain profitable employment of surplus profits, monopoly capital needed a series of stimuli. Or, rather, the existence of such a barrier was postulated, and then the reasons for its non-appearance were problematized, as capital accumulation continued through the 1960s, the break in the rate of capital accumulation in the centres of the global system appearing first after 1970.

To explain continued economic expansion, Baran and Sweezy identified a number of drivers which could account for this absence of structural crisis, most famously military spending and the "sales effort", drivers which kept demand up and helped realize ever increasing surplus. Military expenditure was seen as the perfect "absorber" for this stage of capitalism, since military spending generated profits to "the military-industrial complex" – in the famous words of President Eisenhower's farewell address 1961 – without glutting consumer markets.

Baran and Sweezy did not consider financialization a major trait of monopoly capitalism, but rather ascribed to finance a minor role in realizing the (potential) profits originating from the production of goods and services. Thus, they fit their brief treatment of the financial sector under the heading the "Sales effort", thereby indicating that finance had the same function as other artificial stimuli of demand:

> The stimulation of demand – the creation and expansion markets – thus becomes to an ever greater degree the leitmotif of business and government policies under monopoly capitalism. (Baran and Sweezy 1966, 110)

They went on to argue that the financial sector – already accounting for 10 per cent of the US GDP by 1960 – was more a "diversion of a vast volume of resources" (Baran and Sweezy 1966, 139-140) than a creator of profits. The role Baran and Sweezy attributed to the financial sector was quite distinct from that which colours present-day discussions of the turn to finance as heralding a new phase of capitalist development. Today, some observers maintain, it has become less meaningful to distinguish a financial sector from the real economy: they are increasingly entangled one with the other. In fact, financial profits have become an important share of all major corporations, thus blurring the line between the real and the financial sectors, a position which, as we have seen, had precursors in the early 1900s.

This perspective on a new stage of capitalism has been most consistently expounded by John Bellamy Foster and colleagues. Although Paul Sweezy himself, when he re-visited *Monopoly Capital* after 25 years, regretted that he and Baran had not grasped the importance of finance to monopoly capitalism, his followers defend him against himself.[2] While Sweezy confessed that he and Baran had not paid due attention to financialization as a distinct mechanism for giving capitalism a new lease of life (Bellamy Foster and Magdoff 2009, 66-68), Bellamy Foster and co-authors underline that behind the survival of monopoly capitalism we find the financial sector in the lead role:

> Rather than being a modest helper to the capital accumulation process, [the financial sector] gradually turned into a driving force. (Bellamy Foster and Magdoff 2009:18)

With finance as "a kind of secondary engine for growth given the weakness in the primary engine, productive investment" (ibid.), we can better understand the significance of the rise

[2] Bellamy Foster and Magdoff are of the opinion that Sweezy "was too harsh a critic of his and Baran's book" since it originally contained a section on "the role of the finance sector as an outlet for surplus absorption" (Bellamy Foster & Magdoff 2009:68). However, they do not reflect on the problematic issue that in *Monopoly Capital* finance is seen as a marginal or at best complementary tendency in order to realize the potential surplus created by monopoly corporations.

of global finance in integrating finance and the real economy into a new whole, dubbed "monopoly-finance capitalism". Although this fusion has led to unprecedented concentrations of wealth and income through the dominance of corporate capital, we may nevertheless distinguish activities in the real economy from the financial sector, however much the later controls flows of capital in the former. We will return to this distinction below.

3.2 Recurrent stages of financialisation?

As we have seen, astute observers of capitalism in the early 1900s held that financial, industrial and commercial capital had merged. But all researchers of capitalist development did not accept this understanding. In an influential book, published during World War II, Paul Sweezy – twenty plus years before he wrote *Monopoly Capital* – argued forcefully that "there can be little doubt" that Hilferding's view of the centrality of finance "is fundamentally misleading". Although Hilferding was correct to point out that when industrial corporations merged, banks had "a strategic position", he nevertheless erred in his general understanding of finance capital:

> Hilferding mistakes a transitional phase of capitalist development for a lasting trend. […] The large monopolistic corporations [after the mergers] find themselves in direct proportion to their success (i.e. profitability), in possession of internal sources of funds […] which are to an ever increasing extent turned to the purposes of accumulation. With these internal sources of additional capital at their disposal, corporate managements are to a greater or less degree freed from dependence on the market for new securities as a source of capital, and by the same token they are freed from the dependence on bankers. […] Bank capital, having had its day of glory, falls back again to a position subsidiary to industrial capital, thus re-establishing the relation which existed prior to the combination [i.e. merger and concentration] movement. […] The dominance of bank capital is a passing phase of capitalist development which

> roughly coincides with the transition from competitive to monopoly capitalism. (Sweezy 1942:267-8)[3]

Sweezy's criticism of Hilferding – and by default of Hobson, Lenin and all their followers as well – may be construed as an argument that the rise of finance capital is a recurrent phenomenon, not a new/higher/final stage of capitalist development. (Sweezy himself, as we have seen, later adopted the position he originally had criticized – finance as a special stage of capitalism). In other words, it is possible to take odds with Hilferding, Hobson and Lenin without denying that financialization plays a crucial role during certain periods.

In *The General Theory of Employment, Interest and Money* (1936), John Maynard Keynes emphasised, as mentioned above, that controlling finance was essential. To protect productive capital in the real economy Though compromised, the regulation of finance during the Bretton Woods era (1945 – ca. 1970) broke with the regime that had ruled prior to the financial breakdown of the 1930s, making the post WWII period exceptional. As Eric Helleiner remarks, perhaps overstating his point:

> Although international financial markets flourished in the late nineteenth and early twentieth centuries, they were almost completely absent [!] from the international economy during the three decades that followed the financial crisis of 1931 (Helleiner 1994:1).

This state of affairs was not to last, however, and Helleiner emphasizes that the re-emergence of global finance was caused by state policies of the 1980s, a point also made by Saskia Sassen (Helleiner 1994, Sassen 2006).

In other words, politics, and the distribution of power which underlies politics, are more important than technological change in generating the re-emergence of finance on the global scale. We emphasise this point since it is not unusual in the finance literature to explain the resurgence of deregulated finance as an outcome of technological progress.

[3] To further strengthen his point, Sweezy invites the reader to look at an article of his, "The Decline of the Investment Banker", a telling heading.

The historic facts are that states have either promoted financialization, or refrained from regulating the financial sector, which amounts to the same thing, and in this way promoted the integration of real and financial economic activities (Strange 1997). In other words, financialization has been tamed during certain periods, for instance during the first decades after Bretton Woods, while more recently, post-1980, it has again been allowed to dominate the economy.

While Helleiner may be correct in dismissing exaggerated claims that technological advancement explains the recurrent emergence of financial capital, Carlota Perez links technological "revolutions" to the repeated periods of financial expansion during the last two centuries, in a penetrating analysis of the recurrence of finance. Perez studies five technological revolutions, from the industrial in the late 18th century, via the introduction of steam energy and railways, steel and heavy engineering, and the age of oil, to the most recent information and communications revolution (Perez 2012). Perez finds that finance plays a key role in technological revolutions by facilitating investments in the introduction of new technologies and related products, necessary to break through the reigning paradigm. In these phases, finance serves to realize the potential of the productive sphere which otherwise would not have materialized. But once a new paradigm has been established, Perez argues, finance is left to expand without limit and becomes the master of the economy until financial speculation triggers a crash. In other words, the recurrent phases of financial dominance are intimately related to the emergence of new dominating systems of industrial production.

Perez (2012:6) maintains that the distinction upon which she builds her argument – productive vs financial capital – is no longer a tenable proposition as the two have now merged. She argues that one solution to the present crisis "would be to re-establish a clear division of functions between the two" spheres of finance and the real economy.

Yet another systematic perspective of recurrent phases of financialization throughout the history of capitalism is forwarded by Giovanni Arrighi in *The Long Twentieth Century*. For Arrighi, financialization is a temporary mode of capital accumulation that surfaces towards the end of each regime of (more or less) stable capital accumulation on a global scale,

signalling while ushering the decline of the incumbent hegemonic power. Financialization as recurrent phase of capital accumulation is related to the demise of successive hegemons: when a regime hegemon – in turn, Genua, the Netherlands, Great Britain, and the United States – enters a phase of decline, financialization provides a temporary solution to the slow-down in accumulation through trade and manufacture. Financialization characterizes the present as well as previous periods of transition from one hegemonic power to the next. What these turns to financialization have in common, Arrighi argued, is that profits generated via production and trade are surpassed by profits captured in the financial domain.

Arrighi found recurrent periods of financialization during the long cycles of rise and decline of hegemonic powers. The initial phase of financialization "signals" the difficulty to accumulate encountered by the declining hegemon. In his postscript to *The Long Twentieth Century*, Arrighi argued that:

> [T]he signal crisis – that is, the switch from trade and production to financial intermediation and speculation – is a sign that the possibility of continuing to profit from the reinvestment of capital in the material expansion of the world economy has reached its limits. (Arrighi 2010/1994:371)

But financialization also heralds the "terminal crisis" of the hegemon, and by the same token, the rise of a new hegemon (Arrighi 2010/1994:372).

In this light, the present phase of financialization may be understood as the response to the deceleration of accumulation beginning in the 1970s as the post-WWII golden era came to an end (Hobsbawm 1994) and US hegemonic power began to gradually decline. A key conceptualisation of financialisation in political economic thought emphasises that this is a recurring episode, seen today as "the *resurgence* of influence that finance capitalists and financial markets have over economic outcomes and policies in the neoliberal era" (Goldstein 2009:453, emphasis added). Similarly, Saskia Sassen observes that there is a "recurrent dynamic" of "imperial realignments" (Sassen 2010:30): as new powers emerge and old subside, there is a reshuffling of arenas and geographies where capital

accumulation takes place, and by whom. Today, Sassen remarks, with at least nominally independent states the general rule, imperial grabs no longer take the form of outright occupation, but instead use the vehicle of foreign direct investments (Sassen 2010:30). And, we might add, in this global reach, global finance plays a crucial role.

4 Financialisation in today's economy: Some salient features

We have argued that financialisation has been grasped following one (or a combination) of three logics: the importance of the financial sector in the economy as measured by its share of the GDP; its share of employment, or, the role of finance in the process of capital accumulation. While we focus on the third, the growth of the financial sector in terms of employment and share of GDP bear witness to a qualitative shift in the logic of accumulation (see above, page 13). More striking is the financial sector's dramatic increase in share of US corporate profit, from 10 per cent in 1950 to 45 per cent in 2001, surpassing that of manufacture (Krippner 2011, Figures 3 and 4). This shift holds also for US *non-financial* corporations: portfolio income – that is the share of income obtained from the financial activities of otherwise *non-financial* corporations – grew from less than 10 per cent in 1950 to 40 per cent by 2001. The pattern is the same for the OECD as a whole, with some variation. For most OECD countries, the shift does not start until the 1980s – and for most countries the move to financialisation is of a lesser magnitude than in the extreme cases, the US and the UK:

> [B]etween the 1960s and 1970s, on the one hand and the 1980s and the 1990s on the other hand, [the share of finance capital] of national income made a significant increase in most of OECD countries, while nonfinancial profit shares generally either made a modest increase or declined. (Epstein and Jayadev 2005, 50-54)

Three facts of financialisation thus stand out: first, the increase in the share of finance capital is impressive, amounting to a three- to five-fold increase in its relative importance, depending on the measure. Second, the shift begins in the 1970s, but only takes off in the

1980s with the advent of neoliberal political hegemony. And, thirdly, it embraces the whole economy, the concept “non-financial corporations” becoming next to meaningless.

Summing up the evidence, we have indeed entered a phase of financialisation and the fact that finance now assumes towering dimensions is well documented:

- Speculation has become a core aspect of both stock and exchange markets. The average time period for keeping a currency testifies to the growing importance of short-term speculation. Today, approximately 20-30 per cent of foreign exchange transactions occur as “high frequency trading”, HFT. At most, HFT deals are held for a few minutes, but a more common holding period is as little as five seconds, and a considerable share of transactions are exchanged again after a mere second or less. Turnover time is now measured in milliseconds, 5-15 transactions in a blink (a human blink takes 150 milliseconds; BIS 2011, 4, 11). In the words of a Bank of England executive director responsible for Financial Stability, the best time to make a deal is “whenever” (Haldane 2010, 17).

- The surge in automated trading – released by algorithms – appears to be the key factor explaining the surprisingly rapid return of foreign exchange trading after the financial breakdown of 2008: already by 2010 the volume superseded the 2007 pre-crisis top level by as much as 20 per cent and reached the historic 4 trillion USD per trading day mark (King and Rime 2010). Today, HFT is believed to account for 70 per cent of all trade in US equities, 40 per cent of US futures, and 20 per cent of US options. In Europe, the share is on average held to be 30-40 per cent (Haldane 2010, 17).

- The average holding period of shares on the NY and London stock exchanges has also steadily fallen, from approximately seven years in the first phase of post-WWII recuperation until approximately 1960, to seven months by 2005, a decline of 92 per cent. Most of the fall occurred in tandem with deregulation and is noticeable in major stock exchanges world-wide, beginning in the 1980s, for instance Singapore (Clements-Hunt 2012, Figure 2, and Haldane 2010).

4.1 How did we get here?

The turn towards finance in global capital accumulation is surprising in its display of amnesia. After the financial turmoil of the interwar years, lessons were embedded in the institutions created to usher the world into a state of growth and stability, achieved in the golden era 1945-1970. It then appears as if a period of active de-learning, or mere forgetfulness, set in. Following upon the Wall Street crash of 1929, the US regulatory system was reworked in order to hedge against a reprise: the Banking Act of 1933 created "a highly compartmentalized system in which distinct institutions serving distinct functions were protected from direct competition with one another" (Krippner 2011, 61), separating investment banks (corporate equity), commercial banks (corporate lending), savings and loan associations (housing mortgages) from finance companies and credit unions engaged in consumer lending. This regulatory set-up (the Glass-Steagall Act) secured a separation of commercial and investment banking, reducing the risk for contagion. For instance, the financial giant JP Morgan was split into two separate corporations (the investment bank Morgan Stanley, and the commercial bank Morgan Guaranty), clearly manifesting the new understanding of how finance could be made subservient to more ambitious social projects than generating yields for shareholders (Krippner 2011, Arrighi 2010).

Three distinct approaches co-exist in the financialisation literature to explain why these lessons of the interwar years were abandoned, focusing in turn on decisive structural shifts in employment and tax generation, in accumulation logic, or in the distribution of political power (Arrighi 2010/1994, Krippner 2011, Goldstein 2009, McMichael 2012, Bellamy Foster 2010, Helleiner 1994). Following this literature, financialisation is understood 1) as originating in the USA as a solution to the post-industrial economy, with its concomitant fiscal crunch which made financing even limited welfare institutions increasingly difficult; or 2) as a means to resuscitate the generation of profits in an ailing economy which had few other future markets apart from various niches of the service economy; or 3) as an outcome of the political ascendancy of neoliberal ideology, rolling out deregulation of markets and empowerment of financial institutions such as the revamped IMF, acting in clear breach of its statutes and of the intention of both the US and UK at the Bretton Woods conference. Consequently, the Glass-Steagal Act of 1933 was repealed in 1999 under President

Clinton, the result of 20 years of active lobbying by Wall Street, and especially by Citigroup, rumoured to have spent 300 million USD in the effort. The Glass-Steagal act, widely welcomed in the 1930s, was considered by both Republicans and Democrats, including the chairman of the Fed, Paul Volker, to be old-fashioned, out-dated, and out of synch with the financial needs of a modern economy. This entailed an extraordinary shift in the balance of power between labour and capital, and hence in the imbalance of wages and profits.

It is hardly surprising that the balance of power between labour and capital systematically relates to degree of financialisation: the weaker the labour movement (degree of unionization), the stronger the financialisation (increasing rentier income). Of nine studied countries, the share of rentier income was twice as high in less unionized countries as compared to the most unionized countries, indicating that strong trade unions protect against the impact of unleashed financialisation. Deregulation of financial sectors in eleven countries resulted in increasing shares of rentier incomes: for all countries studied, the share of rentier income was larger four years after deregulation than it had been four years before (Epstein and Jayadev 2005, 65-67; countries included in this survey, listed in order of rentier share from lowest to highest: Sweden, Finland, Australia, Norway, UK, Netherlands, Belgium, Japan, South Korea, Italy, and the USA).

Financialisation goes hand in hand with widening social polarisation (Epstein 2012). The most important shift is not from the non-financial sector to the financial sector of the economy but from labour to capital:

> So, if the 1980s and 1990s were the decades of the rentier, in most countries [studied] the nonfinancial corporations did not have to foot the bill. In most cases, it was labor, most likely, that experienced declines in its income share. (Epstein and Jayadev 2005, 54)

At the same time, the concentration of economic power advanced by leaps and bounds. The share of total financial assets held by the ten largest US financial corporations grew six-fold in just eighteen years (1990-2008), from 10 to 60 per cent. Similarly, the concentration of income increased, the one per cent wealthiest US households accounting

for as much as 24 per cent of the total income by 2007, up from 9 per cent in 1976 (Bellamy Foster 2010).

5 Financialisation of the environment: implications for sustainability

The rent-seeking behaviour of finance capital and landed developer interests drive the commodification and privatization of space/nature (including the 'second nature' of built environments), and the formation of market relations, extending the process wherever social relations retain characteristics of commons, hindering the free flow of capital investment (investment type 2; see below). Once commodified, environments are increasingly securitized, treated as pure financial assets, and, turned liquid, enter the orbit of rent-seeking finance capital: as potential sites for investment, or disinvestment, depending on their valuation in the calculations of finance capital (potential yield to shareholders). The penetration of financialisation into the fabric of socio-ecological systems works through – i.e. generates and subsequently builds upon – processes of commodification, privatization and securitisation of environments. The financial sector, "ever in search of new fields to securitize" (Mirowski 2013, 215), actively engages in the creation of conditions allowing nature "to circulate as financial capital" (Prudham 2007, 259), entailing enclosures of resource commons and displacement of people, their livelihoods, knowledge and practices.

Profound institutional changes have taken place since the 1970s with the global ascent of neoliberal politics, entailing extraordinary growth of income inequalities and the opening of new frontiers for accumulation by dispossession (Harvey 2005, 2006a, 2006b). Processes of uneven development, variously brought under the regulatory control of welfare-state institutions during the middle decades of the twentieth century, have consequently intensified in the wake of institutional reforms entrenching commodification, privatization and market relations (Brenner and Theodore 2002, Harvey 2010). As Gareth Dale notes:

> the widening and deepening of markets have unleashed pernicious tendencies: the yawning gap between rich and poor, financial crises galore, growing pressure on the

> natural environment, the commodification of increasing areas of life, the ideological naturalization of commodity relations, and the subordination of society to the casino rhythms of finance and the world market. (Dale 2010, 241; cf. Martin 2002, Mirowski 2013)[4]

Sustainability has concurrently ascended on local and global agendas, not uncommonly, though not necessarily, enmeshed with neoliberal institutional reforms designed to save nature by commodifying it (McAfee 1999, Robertson 2006, McAfee and Shapiro 2010, Walker and Cooper 2011, Dempsey and Robertson 2012, Hornborg 2013). One agent engaged in "selling nature to save it" (McAfee 1999) presents itself as:

> "a specialized investment firm focused on discovering and monetizing unrealized or unrecognized environmental assets … a 'merchant bank' for the world environmental markets", aligning "smart capital with people, projects, and companies that are poised to profit from emerging markets for ecosystem services", channelling investments towards "land with undeveloped or unrecognised environmental assets with a view to developing these assets and profiting from their sale in emerging environmental markets." (EKO Asset Management Partners, quoted in Sullivan 2013, 203)

Another agent boasts of being:

> "the world's first multi-strategy asset management boutique offering exclusively sustainability-enhanced investment products across a broad range of asset classes", identifying the "recent market meltdown as a multi-trillion dollar 'advertorial' for sustainability-enhanced approaches." (Point Capital Management, quoted in Sullivan 2013, 203)

[4] The literature on commodification, privatisation, securitisation and financialisation of the environment, and the expansion of these processes in relation to neoliberalism and accumulation by dispossession, is large and rapidly growing. For useful analyses, see Castree 2008, 2010b, 2010c, 2011; Dempsey and Robertson 2012; Kosoy and Corbera 2010; Liverman and Vilas 2006; Mansfield 2008; Mirowski 2013; Prudham 2009, 2013; Robertson 2006, 2007, 2012. Valuable empirical analyses are presented in, e.g.: Liverman 2009; Mansfield 2004a, 2004b, 2007; McAfee and Shapiro 2010; McCarthy 2004, 2006; Prudham 2007; Robertson 2004; Veuthey and Gerber 2012. Castree 2010a provides an especially useful overview of empirical analyses. Sullivan 2013 provides a perceptive analysis linking environmental financialisation with environmental governance and accumulation by dispossession.

The extension of carbon-index-linked corporate bonds to be issued by governments, with degree of fulfilment of emission targets impacting interest rates on government loans, and derivatives hedging against risk of government failure to meet targets, "effectively shift responsibility for global environment outcomes into the incentivising control on investment finance" (Sullivan 2013, 204), a process through which "we learn to outsource our biggest social problems to entrepreneurs, who are the only people capable of using the market to discover really big solutions" (Mirowski 2013, 355). There are proposals whereby:

> ecosystem services are to be used as collateral for loans so that people of the 'South' can, through indebtedness, be incorporated further into the global monetary economy. Questions arise of who then possesses or has governing powers over the collateral (particularly in the case of default), and of how the pricing of local ecologies intersects with other socially embedded environmental values. (Sullivan 2013, 206)

Sullivan concludes that the innovative "alignment of nature change with derivative finance products acts to materially enhance the fortunes of investors … whilst shifting control of environmental governance to the speculative expectations governing financial futures markets", displacements ranging from 'green' land grabs, ocean grabs, and atmosphere grabs (Liverman 2009), "to the more subtle erasure of knowledges and values that are outside the logic of this financialising impetus" (Sullivan 2013, 209, 212).

Human-environment relations have long been researched in the synthetic disciplines of environmental geography, cultural and human ecology, environmental anthropology, and more recently in political ecology and ecological economics. The new field of sustainability science (de Vries 2013) emerges in part from these antecedents (Castree et al. 2009), but also from the rise of theory on complex adaptive systems (Janssen 1998) and coevolution of coupled social-ecological systems (Rammel et al. 2007, Ostrom 2009, Kallis and Norgaard 2010, Weisz and Clark 2011), and more broadly from social movements, policy agendas and political debates on environmental problems, pushing sustainability issues to front stage. Sustainability is about keeping the future navigable for coming generations (Hägerstrand 2009). Human-induced environmental problems such as degradation of land,

air, water and biodiversity threaten to reduce the scope of navigable pathways toward a sustainable future (Schellnhuber 1999).

Sustainability science aims not only to understand the dynamics of social-ecological systems and to bridge natural, social and cultural sciences (Lang et al. 2012), but also to forge bridges between science and society, and between knowledge and action (Kasperson and Berberian 2011, O'Brien 2012). Problem-driven, practice-oriented and contextually sensitive, sustainability science involves linking critical research approaches with problem-solving approaches, ideally appreciative of various perspectives including local/traditional knowledge for framing problems, and for design, implementation and evaluation of solutions (Jerneck et al. 2011). The widely echoed calls in sustainability science for moving beyond multi-disciplinary and inter-disciplinary research to transdisciplinary research, and for developing and practicing critical, deliberative, participatory and problem-solving methodologies, indicate major challenges and signposts for sustainability science, revealing its key characteristic as 'post-normal science' (Ravetz 2006, O'Brien 2012, Miller et al. 2013).

Paralleling extraordinary growth in research on sustainability is the growth of national and international regimes for environmental governance, often geared for "control over the resources of others, in the name of planetary health, sustainability or preventing environmental degradation" (Harvey 1996, 182). A vital area of environmental governance research deals with commons and forms of resource management that do not easily fit into regimes based on private property rights or on state authority. Research by among others Elinor Ostrom (1990) reveals great diversity in the ways communities self-organize to manage common-pool resources, often devising long-term sustainable institutions for governing their use. Dietz, Ostrom and Stern (2003) outline requirements for devising institutional arrangements that can establish conditions favourable to self-organized community-based governance, and suggest strategies for meeting the requirements of adaptive governance of commons. Environmental governance seldom consists of pure market, state or community regimes, but involve emerging hybrid modes of governance that cross state-market-community divisions, e.g. co-management (state-community), public-

private partnership (state-market) and private-social (community-market) forms of environmental governance (Lemos and Agrawal 2006).

Linking knowledge to action is increasingly recognized as one of the greatest challenges for transitioning to sustainability, and yet we continue to cultivate an understanding of ourselves that diminishes our capacities for action: reductionist understandings of human history reflecting while anchoring social processes that limit participation in the politics of sustainability and our adaptability in reaching for sustainable living (Clark and Clark 2012). The accumulating evidence from sustainability research makes it increasingly clear that sustainability transitioning will require profound societal transformations. The mainstreaming of sustainability and sustainable development has however resulted in a situation in which sustainability discourse and politics are dominated by powerful actors (also within research and higher education) with interests in maintaining status quo. Indeed, some critical research argues that predominant sustainability discourse is more conducive to sustaining neoliberal ideology, neocolonial practices, accumulation by dispossession and the hegemony of finance capital than to sustaining metabolic support systems and livelihoods of the poor (Harvey 1996, Hornborg 2003, Luke 2005, Redclift 2005, Krueger and Gibbs 2007).

For good reasons, sustainability and sustainable development have attracted political and scientific awareness. At the same time, their popularity affords them being put to use as value-enhancing empty signifiers, not least in processes of financialisation, advertising, corporate and city branding (enhancing 'competitiveness' and property values), spicing applications and claiming moral high ground. Harvey is not alone in observing that "it is very hard to be in favour of 'unsustainable' practices so the term sticks as positive reinforcement of policies and politics by giving them an aura of being environmentally sensitive", reducing sustainability to "the preservation of a particular social order" (1996, 148). Consequently, also for good reasons, sustainability and sustainable development have become highly contested concepts (Worster 1993, Davison 2001), occasionally travestied as oxymoronic sustainababble (Engelman 2013), or more soberly observed in "the fusion of a growth and development agenda with an environmental conservation and management agenda" (Prudham 2013, 1570).

5.1 Improvement and investment

Financialisation thrives on common mystifications of improvement and investment. Assumed to be universally positive, critical examination of their etymologies and various connotations reveals how problematic implications of some kinds of improvements and investments become hidden behind the reasonably positive connotations of other very different improvements and investments. Karl Polanyi problematized improvement under the heading of "Habitation versus Improvement", attacking "a mystical readiness to accept the social consequences of economic improvement, whatever they might be", including "catastrophic dislocation of the lives of common people" and "literally robbing the poor of their share in the common" (2001 [1944], 35, 37). With reference to the industrial revolution in England, he claimed "it was improvement on the grandest scale which wrought unprecedented havoc with the habitation of the common people", and saw the need for "legislative acts designed to protect their habitation against the juggernaut, improvement" (Polanyi 2001, 41, 191). The displacement of one and a half million people to 'improve' Beijing for the Olympic games, involving "propaganda, harassment, repression, imprisonment and violence against those who questioned or protested against the involuntary displacement", is a more recent example of havoc wrought by grand scale improvement (COHRE 2009, 11, cf. COHRE 2008). Elsewhere Polanyi recognizes a more positive meaning of "improvements fixed in a particular place" (2001, 193). The key distinction is not in the physical design and technological characteristics of an improvement, but in the social relations underlying its production and, upon completion, regulating its use and income flows.

In his brief etymological essay on 'improve', Raymond Williams presents the word as "an interesting example of the development of a more general meaning from a more specific meaning", and explains that in "its earliest uses it referred to operations for monetary profit, where it was often equivalent to *invest*, and especially to operations on or connected with land, often the enclosing of common or waste land. … The wider meaning of 'making something better' developed from C17" (1985, 160-161). He goes on to note "the

sometimes contradictory senses of *improvement*, where economic operations for profit might not lead to, or might hinder, social and moral refinement" and emphasizes that "the complex underlying connection between 'making something better' and 'making a profit out of something' is significant when the social and economic history during which the word developed in these ways is remembered" (1985, 161).

Among the more noteworthy analyses of financialisation and rent-seeking behaviour proliferating in the aftermath of the global financial crisis, Andrew Sayer revives the distinction between earned and unearned income, perceptively contributing depth and clarity to the insights alluded to by Polanyi and Williams by distinguishing between two profoundly different forms of investment. Sayer sees a "fundamental slippage in the use of the word 'investment'" and identifies "two radically different uses:

> (1) *Use-value/object-oriented definitions* focus on what it is that is invested *in* (e.g. infrastructure, equipment, training)
> (2) *Exchange-value/'investor'-oriented definitions* focus on the financial gains from any kind of lending, saving, purchase of financial assets or speculation – regardless of whether they contribute to any objective investment (1), or benefit others.
> The standard move is to elide this distinction and pass off the second as based on the first. (Sayer 2012, 171)

Under the sway of investments (2), allocational efficiency – the legitimizing function of finance – is understood in terms of "where expected rates of financial return are highest", regardless of "neutral or negative effects on productive capacity – through, asset stripping, value-skimming, and rent-seeking" (Sayer 2012, 171).

Bringing this distinction to the forefront of analysis casts light on differences between landesque capital (commonly investment [1]), productive capital (mixed; increasingly investment [2] associated with financialisation; Froud et al. 2006) and finance capital (investment [2]). Sayer's distinction resonates with Bayliss-Smith's seminal work on land use change, in which he argues that "the key variable in explaining contrasts in … land use today is socio-political organization" (1997, 144; cf. Clark and Tsai 2012). Socio-political

organization characterized by financialisation opens up spaces of 'opportunity' for investments [2] – through commodification, privatisation, securitisation and marketisation of the environment – facilitating processes of accumulation by dispossession. Socio-political organization characterized by egalitarianism (Bowles and Gintis 1998), meaningfully participatory democracy (Purcell 2008, 2013), commons (Ostrom 1990, Bromley 1992, Poteete et al. 2010, Harvey 2012) and 'the right to the city' is more conducive to the propagation and integrity of investments [1].

The right to the city, originally formulated by Henri Lefebvre in 1968, has attracted much attention in recent years, largely in response to the ways neoliberalization has "greatly diminished the scope and effectiveness of participatory democracy", creating a democratic deficit that "has been growing by leaps and bounds" (Harvey 2009, 86). Lefebvre saw "the city as an *oeuvre* – a work in which all its citizens participate" (Mitchell 2003, 17). The right to the city is the right "to habitat and to inhabit. The right to the oeuvre, to participation and appropriation (clearly distinct from the right to property)" (Lefebvre 1996, 174).

> The right to the city is far more than the individual liberty to access urban resources: it is a right to change ourselves by changing the city. It is, moreover, a common right rather than an individual right since the transformation inevitably depends upon the exercise of a collective power to reshape the processes of urbanization. The freedom to make and remake our cities and ourselves is … one of the most precious yet most neglected of our human rights. (Harvey 2008, 23)

The right to the city is about spatial justice (Marcuse et al. 2009, Soja 2010), and therefore about the transformation of cities for people, not for profit (Brenner et al. 2012). Being a common, rather than a private right, exercising the right to the city involves :

> a social practice of commoning. This practice produces or establishes a social relation with a common whose uses are either exclusive to a social group or partially or fully open to all and sundry. At the heart of the practice of commoning lies the principle that the relation between the social group and that aspect of the environment being treated

> as a common shall be both collective and non-commodified – off-limits to the logic of market exchange and market valuations. (Harvey 2012,73)

Some will see this as utopian, but we have a long history of egalitarianism (Boehm 1999), practicing commoning, and exercising the right to inhabit place. And, this is no more utopian than the neoliberal utopia of free markets operating in entirely privatized space. There is nothing new about the right to the city, except the name attached to it. That the name arose in the struggles of 1968, and is revived more recently in struggles against the massive dispossessions of commons, does not mean this is new, something our ancestors were not concerned with. As a right to habitat and to inhabit, it involves collective creation of our niche, our built environments and modified landscapes. And for this it involves the deepening of democracy and the de-commodification of space/nature, making room for the common construction of place.

5.2 Financialisation of the environment: from command and control to economic incentives

The turn towards financialisation also impacts the way that environmental issues are framed, and thus how it is understood that they may be tackled. In relation to environmental policies, this shift takes the form of a shift from Command and Control policies (C&C) to Economic Incentives (EI). While the former was seen as costly, slow and inefficient (a polluter had no incentive to reduce emissions beyond the allotted quota, thus in effect freezing the level of emissions instead of gradually diminishing it), the latter was criticized for not being able to induce pollution reductions or affect absolute emissions (only relative emissions – without a ceiling, polluters could continue their dirty activities as long as they paid for them). The term Command and Control evokes the attempt to tame the vagaries of the market via a planned economy, or at least some form of state-oriented social-democratic tradition linked to politicians like Willy Brandt and Olof Palme, guided by the reports of the commissions they headed (North-South: A Programme for Survival, 1980, and Common Security: A Blueprint for Survival, 1982, respectively), and before that to economists such as John Kenneth Galbraith and Jan Tinbergen (Hajer 1995).

Initially, this shift from C&C to IE seemed to herald the victory of an economistic approach to integrating the environment into the logics of economics, stressing efficiency and relative improvements – and not the other way around, to see what use the environmental discourse could have of taking a few tools of mainstream economics aboard in order to achieve absolute improvements, which is the basic concern for ecological economics and environmentalists. The shift, it has been argued, signalled an attempt to link the environment to the economic process, thus resolving the old Pigouvian approach where the environmental impact of the economy is regarded as an externality. As of the 1980s, the two spheres, the economy and the environment, are increasingly seen as one, also by mainstream economists, and environmental policy options are increasingly seen in the light of efficiency. Here, the World Construction Strategy as well as the OECD report Environmental Policies for the 1980s, are seen as early precursors to this perspective, which gained universal pre-eminence in 1987 with the World Commission on Environment and Development, the so called Brundtland Report (Hajer 1995).

Today, a more nuanced stand sees the advantages of both approaches, and their respective drawbacks. For instance, policies in the realm of C&C are seen as more efficient in bringing about the desired change – for instance a reduction in emissions or pollution – quicker and with greater certainty than economic incentives. On the other hand, economic incentives provide a continual drive to reduce emissions, if they are aptly designed, while C&C may allow stakeholders to continue polluting as long as they remain below established allowable levels (Harrington and Morgensten 2004).

Empirical evaluation of EI in regard to climate policy is far from encouraging. EI mechanisms were introduced into the Kyoto Protocol (1997) of the Climate Convention (1992) in the form of Emissions Trading and the Clean Development Mechanism. Emissions Trading allowed polluters to trade emission permits, the idea being that cost-efficient producers would have a surplus of permits to sell, while laggards would need to acquire such permits in order to survive. However, the system was botched at the outset by the fact that the EU, the first group of nations to institute the system, decided to distribute emission permits free of charge, and furthermore established limits above current levels of

emissions, thus in effect achieving nothing in terms of reduced emissions. Subsequently, the EU realized its mistake – it was subsidising the polluters – and began auctioning permits, but by then the financial crisis and the subsequent euro crisis had brought emission levels down irrespective of the mechanism, which now is practically dormant with the collapse of emission permit prices.

The other Kyoto Protocol tool, the Clean Development Mechanism, is based on the idea that cost-efficient emissions reductions would be achieved if rich countries of the North paid for reductions in poor countries of the South. Both instruments, Emissions Trading and the Clean Development Mechanism, combined the two approaches, C&C with EI, in that they first established absolute emissions reductions (at least in principle), within which economic incentives would achieve them.

When it comes to valuing ecosystem services, however, the link to absolute reduction in levels of emissions has been broken, and the logic now only amounts to stimulating resource owners (be they private or public, individual or collective) to reduce environmental damage. We will return to this issue below regarding the climate policy tool Reduced Emissions from Deforestation and Forest Degradation, REDD. Suffice it here to underline that payment for ecosystem services are fraught with tensions and impurities (Dempsey and Robertson 2012), and may not be an adequate response to the issue of integrating the environment into the economic processes, as they tend to focus more on the role of ecosystems in human welfare than on natural dimensions of sustainability. For instance, the UN Environmental Programme, UNEP, has defined ecosystem services as services "maintaining and enhancing the well-being of the world's more than 6.7 billion people" (quoted in Conservation Biology 2009, 785). However, anthropogenic ecosystems may be more efficient in achieving this; e.g. tree plantations may sequester more carbon than natural forests. Similarly, some ecosystem processes are important to the environment although they contribute no direct benefit to humans, for instance fires, droughts, diseases and floods (ibid). Consequently, there is no simple fix. While payment for ecosystem services may be better than squandering environmental resources free of charge, integrating social, economic and natural dimensions of sustainability must involve attention to social objectives (e.g. in terms of environmental justice) as well as ecological objectives

(e.g. in terms of environmental impact), and economic objectives (be they in terms of efficiency or sufficiency).

6 Financialisation of agriculture and land resources

6.1 Financialisation and the agricultural price spike of 2008

The causes of rising prices for food and agricultural produce in the first years of this century are contentious and no consensus has been reached as to the relative importance of various drivers. The issues raised are complex, while the debate has predominantly focussed on the importance of agrofuels to the neglect of other equally (or perhaps more) important factors such as speculation. The objective here is not to determine the relative weights of various drivers – they all contributed: agrofuels, droughts, the oil price spike in 2008, unusually low levels of global cereal stocks, and more – but rather to highlight one of them, the commodification and financialisation of land and the produce of land.

Growing speculation in agricultural commodities can be traced back to the early 1990s when Goldman Sachs, first out among the major global bankers, started selling a new 'product', the Goldman Sachs Commodity Index Fund. By 2003, this 'business segment' had grown to 13 billion USD, but the real eruption of financialisation in this sector of the US economy was still to come. By early 2008, before the crisis hit, agricultural investments reached 300 billion USD, and another 100 billion USD globally, bringing the total to 400 billion USD (Murphy et al. 2012, 31). By then, Wall Street was said to control as much as 20-50 per cent of the market on future contracts for maize, wheat, pigs and cattle on the Chicago, Kansas and New York exchanges. No wonder *The New York Times* could exclaim: Food is Gold! (Kaufman 2010, McMichael 2012).

As a consequence, many investors hedged their bets and invested in future and commodity funds, where banks and corporations, pension funds and sovereign wealth funds join hands to participate in the financialisation of agriculture and land (McMichael 2012). Major grain traders such as Archer Daniels Midlands, Bunge, Cargill and Dreyfus combine their own

interest in securing access to future supply of food with the profitability of providing futures to speculators and investors, thus turning themselves into a blend of traders and financial go-betweens (Murphy et al. 2012). Initially manifesting as legitimate business to provide security (hedging) against future price movements, the volumes are now many times larger than they need to be due to the unregulated nature of the markets fuelling global financialisation and speculation (World Development Movement 2012). These speculative activities create volatility and price fluctuations that are unrelated to so-called fundamentals (for instance bad weather conditions or growing demand). Prices rise higher than they would have without speculation, according to one assessment by as much as 50 per cent. Simultaneously, price volatility of maize and wheat increased by as much as 30 per cent and 50 per cent, respectively (comparing 2007/08 to 2002-2006; Jones 2010, 9, 17).

Nevertheless, financialisation of land and agriculture plays a minor role in the overall process. Agriculture future funds totalled 400 billion USD before the outbreak of the financial crisis of 2008, as compared to the 4 trillion plus USD when all raw material derivatives are included, the brunt consisting of investments in oil and other minerals, totalling ten times those of the agricultural sector alone (SOMO 2010, 5). European pension funds have so far invested less than one per cent of their portfolio in land grabs, though space for potential expansion is considered to be enormous (Cotula 2012, 667).

6.2 The role of finance in the financialisation of land

Expanding markets for land have caught the interest of national and international financiers, including the World Bank's International Finance Corporation (IFC). The IFC plays a particularly important role in this process, for two reasons. First, it is the global "benchmark"-setter for "acceptable" foreign direct investments, and the rules of the IFC apply to a group of international bankers, the so-called Equator Banks, and are included in their own safeguards. Recently the World Bank, together with the International Fund for Agricultural Development, IFAD, UNCTAD and the FAO, launched a set of investment rules under the ambitious heading "Principles for Responsible Agricultural Investments which Respect Rights, Livelihoods and Resources" (World Bank et al. 2010). However, according

to the UN special rapporteur on the right to food, Olivier de Schutter, these principles are a "checklist of how to destroy the global peasantry responsibly" (de Schutter 2011, 275), and a CSO coalition holds that the principles, far from being responsible, amount to green-washing, "a move to try to legitimize what is absolutely unacceptable: the long-term-corporate (foreign and domestic) takeover of rural people's farmlands" (FIAN et al. 2010).

The CSO coalition is distancing itself from the financialisation and commodification of land, a stand which brings to mind the vehemence with which the versatile Karl Polanyi has argued against the general tendency to commodify "essential elements" such as labour, land, and money, three "fictitious commodities" which were not to be left at the mercy of the market without proper regulation and institutions. Such objections to principles of investment in land echo the warnings pronounced by Karl Polanyi in 1944, the year of the Bretton Woods conference. Influenced by the catastrophes of the Second World War, Polanyi wrote:

> What we call land is an element of nature inextricably interwoven with man's institutions. To isolate it and form a market out of it was perhaps the weirdest of all undertakings of our ancestors. […] Undoubtedly, labor, land, and money markets are essential to a market economy. But no society could stand the effects of such a system of crude fictions [i.e. that labor, land and money are commodities] even for the shortest stretch of time unless its human and natural substance as well as its business organization was protected against the ravages of this satanic mill. (Polanyi 2002/1944, 187, 76-77)

Secondly, the IFC has designed a number of "products" in order to facilitate investments in land, especially in Africa south of the Sahara in order to do away with "unclear or unenforceable rights to land [as they] inhibit business growth and investment across the developing world" (Daniel 2011, 7). A consequence is that the IFC finances land registration in order to establish land markets. This titling prepares holdings for grabbing: the "responsibility" shown by the IFC and the World Bank amounts to the extension of commodification of land, facilitating accumulation by dispossession.

The reason for this outcome, says de Schutter, is “a mistake of historic proportions”: “treating land like any other commodity when it constitutes for many poor rural households in the developing world their only productive asset” (de Schutter 2011a, 559). Individual titling is frequently the first step towards ousting the present land users from their land, as titles are often “captured” by local elites, increasing concentration of land ownership, deepening social cleavages, and turning peasants, herders and fishermen into either property-less squatters on their own land or newly urbanized poor (de Schutter 2011a, 528).

The prospects of respecting the rights of the original land users are not strengthened by the fact that one of the drivers of the global land rush is bad governance in the host countries: contrary to other foreign investments – attracted to well-functioning societies rather than to corrupt and problematic environments – land grabbing is positively linked to bad governance of the agricultural sector and to weak tenure systems (Arezki et al. 2011). In fact, some of the African countries where the largest land deals have been reported – for instance Sudan, DR Congo, and Ethiopia – also have extremely weak systems to protect common lands and common land users (Alden Wily 2011). Thus, bad governance, low security of tenure (or none), and land deals are mutually supportive of each other.

The World Bank is not only facilitating and legitimating land grabbing by brokering and financing land deals, it has also entered the game of finding large tracts of land, the appropriation of which no-one would oppose since they are not being used by anyone, or so the World Bank wants us to believe by stressing the benefits of large-scale commercial investments on “marginal”, “abandoned”, or “sub-optimally” used lands. In a scoping exercise the World Bank found 446 million hectares available worldwide for investments in commercial agriculture (World Bank 2011, xxxiv). These are very large areas indeed, and the estimates are arrived at by using proxies for actual land use based on population densities (accuracy of which can be questioned) and satellite images of land cover. This conflation of satellite imagery with actual land use is highly contentious, “as people often have intentions behind land use that cannot be deciphered remotely” (Nalepa and Bauer 2012, 410). For instance, 50 million pastoralists live on African dry lands commonly described as underused.

The World Bank is occasionally frank about what financialisation of land is all about: transferring land use, and exchanging one category of land users for another. In the World Bank flagship publication *World Development Report 2008* which had agriculture as its theme, markets – not corporations, or governments, or finance capital – were made into the actors realizing this transfer: "Secure and unambiguous property rights also allow markets to transfer land to more productive uses and users" (World Bank 2007, 138).

'Secure property rights' are not meant to be secure for peasants or herders, but rather constitute the vehicle for transferring land to new users. The World Bank knows what it is suggesting: the usurpation of the rights of the people who today use these lands. And it acknowledges that "very little, if any of this [globally available land] will be free of existing claims that will have to be recognized by any potential investment" (World Bank 2011, 78-79).

The financialisation of land targets the best and most easily accessible areas, where roads and infrastructure (energy supply for instance) work well, and water is close at hand (Cotula 2012). This is to be expected: contrary to the idea that there are enormous areas of underused, marginal and degraded land which easily and without conflicts could be made available to commercial agriculture – a view the World Bank promulgates – land investors can be expected to behave like any other profit maximizing entity and go for the low hanging fruits first. While the initial phase of land grabbing commonly targeted easily accessible lands, close to roads, infrastructure and water, Liza Alden Wily (2012, 770-771) suggests that some lessors, that is "host" governments, have begun to prefer targeting less controversial lands, for instance failed state farms, degraded reserves and forests, in order to reduce domestic conflicts associated with the financialisation of land.

6.3 Financialisation of climate politics

The regime established to tackle Climate Change has added a new aspect to the financialisation of land by legitimating "green grabbing": the acquisition of land allegedly for

ecological purposes (Corson and MacDonald 2012). Recognizing that deforestation is one of the main drivers of climate change (12 to 17 per cent of global GHG emissions are related to logging, deforestation and unsustainable forestry[5]), forests were included in climate negotiations through a mechanism initially called Reduced Emissions from Deforestation and Forest Degradation, REDD. Subsequently, forest management and reforestation were included under the acronym REDD+.

The idea is that forests should be left standing or at least managed in ways that sequester carbon dioxide, and that countries that commit themselves to this will receive payment to make up for foregone income. The carbon saved will be turned into "credits" to be sold on a market to corporations or governments which need to show that they have "reduced" their emissions, turning forest carbon, in the words of Conservation International, into "an asset class" (Conservation International 2011, iv). This is an example of the "production and circulation of virtual commodities", something which increasingly characterises climate politics (Corson and MacDonald 2012).

REDD+ projects have serious difficulties to prove their value as sinks for greenhouse gases. First there is the issue of "additionality": REDD+ must establish rules to secure that projects and programmes actually result in less deforestation than otherwise would have occurred. Without guarantees that REDD+ finances *additional* carbon sequestration, the money will just go to pay for plantations or sequestration policies which would have occurred anyway, thus only constituting a transfer of money without any climate significance whatsoever. Moreover, "permanence" of REDD+ is doubtful. The payment for the non-use of forests must lead to a permanent improvement in the carbon cycle, but which government is able to credibly undertake such long-term commitments? Not without making protecting forests part of the constitution; and even so, the balance of powers may change to the benefit of forces seeking to turn forests into commodities just as any other land-based resource. Neither of these weaknesses will however deter governments or

[5] The lower figure from World Resources Institute, covering only the global South, http://www.wri.org/chart/world-greenhouse-gas-emissions-2005; the higher from IPCC, Fourth Assessment Report, http://www.ipcc.ch/publications_and_data/ar4/syr/en/figure-spm-3.html.

corporations from investing in REDD+ projects, since it is the ecological credential, not the climate impact, which constitutes return on investment.

A third issue in relation to REDD+ has to do with "leakage". As REDD+ projects block deforestation in one location, prices of forest products go up, encouraging the exploitation of forests elsewhere, also by recipients of REDD+ payments. An assessment of the few carbon sequestration projects to date shows leakage levels of up to 100 per cent or more: income from REDD+ is spent on acquiring new lands, causing indirect land use change of similar or even larger magnitudes (Wunder 2008).

In addition, there is also a clear issue regarding allocative equity in connection with REDD+ projects: who is to be compensated for the non-use of whose forest resources? State involvement is of course necessary, if only to set up the rules and regulations for projects such as these, but there exists at least one Brazilian example – a fund called Programa Bolsa Floresta, the Forest Fund – where community members living in the Amazon are directly paid 50 USD per month by the state for protecting and keeping the forest intact. Behind the fund we find, as so frequently, global corporations which through their financing of this programme may claim that they are "offsetting" their own emissions of GHG. The Marriot hotel chain is one of the backers of the Forest Fund, and it even uses its support as an argument for charging an extra dollar per night from its customers. In this way, the support costs Marriot less, while the credentials of goodwill used in green marketing (or, 'murketing'; Mirowski 2013, 140) provide additional income.[6]

6.4 The complex role of tenure in the financialisation of land

Tenure systems play an interesting role when it comes to the financialisation of land. Although governance may be poor, according to criteria established by the International financial institutions such as the IMF and the World Bank, existing tenure systems are surprisingly efficient in making land available for commercial purposes and investors, especially in Africa, where most of the land appropriated in fact is untitled government

[6] See Billion dollar jungle, www.climatemediapartnership.org/reporting/features/billion-dollar-jungle.

property, by law and constitution. This follows on land appropriations that occurred under colonial occupation, going from commercial settler agriculture, to plantation economies, to game reserves and nature conservation (Alden Wily 2012). It is in this state of affairs we find the precondition for many of the land grabs in Africa, which make "use of perfectly legal means of dispossession or relocation of lands". In fact, many peasants do not have more rights to their lands than that they can be considered to be tenants of the state, often becoming "squatters on their own land" should they opt to stay in place in the face of orders to the contrary (Alden Wily 2012).

Also tenants have rights, however, and these include, in the words of the Inter-American Court of Human Rights, the right to restitution, compensation or to "obtain land of equal extension and quality" even if bereaved of their lands "after a lawful transfer" (de Schutter 2011a, 535). Even today, after decades of World Bank promoted programmes of titling and privatization, only 10 per cent of Africa's land area has been titled, primarily in the previous settler states of Namibia, South Africa and Zimbabwe (Alden Wily 2012, 765). In most of Africa, state property remains the rule.

In addition to the weakness of titling noted above, another problem is that titling generally recognizes only individual property rights, not other forms of tenure such as communal land and commons. For instance, individual property rights frequently threaten: fishermen who need access to the sea, lakes and rivers; pastoralists who use grazing lands from which they may be excluded by enclosures legitimized by private tenure; families who need to gather firewood and access wells and other water resources for their daily sustenance; artisanal miners who complement household income through small-scale extraction. As a consequence, "The formalization of property rights and the establishment of land registries may lead to cutting [these users] off from the resources on which they depend" (de Schutter 2011a, 537).

Private titling may be adequate in contexts where individual use of land is the rule, but in many contexts, Western property conceptions of private property based on "abstract principles fashioned a priori are of but little assistance, and are as often as not misleading",

to quote an insightful conclusion expressed by the UK Privy Council as early as 1921 in relation to land struggles in southern Nigeria (quoted in de Schutter 2011a, footnote 132):

> [I]n interpreting the native title to land [in the British Empire], much caution is essential. There is a tendency, at times unconsciously, to render that title conceptually in terms which are appropriate only to systems which have grown up under English law.

de Schutter emphasises the right to protection of property, as prescribed in the Universal Declaration of Human Rights, which is not limited to individual property rights. Article 17 of the UDHR reads as follows:
(1) Everyone has the right to own property alone as well as in association with others.
(2) No one shall be arbitrarily deprived of his property.

Titling of individual property rights, conforming to former colonial procedures, commonly limits the individual right of tenure to the farmstead and the immediate plots utilised by the peasant family, and does not include larger “unfarmed” areas that are left at the discretion of the state or its representatives (Alden Wily 2012, 767). It is furthermore the case that there exist, in Africa as elsewhere, systems that to various degrees protect the rights of local communities (see Table 1).

Table 1. Provisions on natural resources in 14 national constitutions

All natural resources are property of the state	Angola, Ethiopia, Cambodia, Vietnam, Peru
All natural resources may be privately or communally owned except minerals, seas, and waterways	Liberia, Pakistan, Brazil
No clear position	Sudan, DR Congo, Madagascar, Tanzania, Mali, Laos

Source: Alden Wily 2011: Box 2.

6.5 Financialisation as land grabbing

Financialisation of land has been a precondition for the appropriation of land for commercial purposes, a rapidly growing business activity that has swept Africa, Asia and Latin America, with some incursions into Eastern Europe. The most recent surge in land grabbing began in the first decade of the twenty-first century in tandem with the global rise in food prices. The deals have grown from modest levels of approximately one million hectares per annum early in the decade, to more recent figures of over ten million hectares per annum.

The naming of such land deals is a controversial issue. Some prefer “investments” or “acquisitions” (e.g. the World Bank), while others would consider anything but “land grab” or even “land theft” a euphemism, for instance NGOs like GRAIN and peasant organizations such as Via Campesina. Irrespective of terminology, however, observers agree that there has been a novel rush into controlling land, and with the land, also the water resources necessary to ‘realize the full potential’ of the land. Agricultural land increasingly enters into calculations of long-term financial returns, especially by financial managers of pension funds and sovereign wealth funds.

Originally framed in relation to rising food prices, land grabs were defined by three traits:

- the deals were large, over 1,000 hectares;
- the grabbers, corporations as well as states, were based outside the territories where the grabs took place; and
- the purpose was to supply the international market, or the home market of the investor, with food.

The pattern is reminiscent of colonial times:

> Foreign private corporations getting new forms of control over farmland to produce food not for the local communities but for someone else. Did someone say colonialism was a thing of the past? (GRAIN 2008, 3)

It has however become clear that this definition of land grabbing fails to grasp the scale of the phenomenon, to identify the full range of actors involved, and to take into account that

financialisation is a driver. One weakness of the way to land grabbing is commonly framed is its focus on areas, with the limit arbitrarily set at 1,000 ha. Why should a 300 ha vineyard signify less of a grab than 100,000 ha of eucalyptus plantation, or 500,000 ha of grazing land? Different areas may have similar significance in terms of capital needed to secure them, and in terms of economic gains can be reaped from a given investment (Borras et al. 2012, 850).

Furthermore, emphasis on nationality, as well as focus on deals to secure food, run the risk of failing to see who the actual investors are, and why they acquire land: there is a *general* interest in land and land-based resources, for various purposes, from food to agrofuels, from fodder production to speculation. At the same time, the grabbers are to be found everywhere, in both private and public sectors, and they are based in poor as well as in rich countries.

6.6 Land grabbing 2000-2010

Assessments of total land areas acquired vary, with 227 million hectares the highest reported for the period 2001-2010 (Oxfam 2011). However, some deals are not finalized, some projects are not implemented, some investments are falsely reported, etcetera. Based upon verified cases, Table 2 shows that at least 71 million hectares were grabbed in 2000-2010 (including 2 million hectares in Eastern Europe, not shown in the Table). This corresponds to a land area roughly twice the size of Germany.

Investments in agrofuel feedstock dominate the overall picture, followed by food and forestry. These three commodities account for nearly 90 per cent of verified grabs. However, these are the stated objectives of the deals, not what actually happens on the ground, and there is reason to suspect that since one of the drivers is financial speculation in land, an unknown share of these investments are for purely speculative purposes. The geographical pattern, however, is clear: most grabs have taken place in Africa, which accounts for almost half of the total 71 million hectares.

Table 2. Verified land grabs 2000-2010, per cent and million hectares

Land acquired in	Origin of investors	Commodities	Total land area (Mha)
Africa	Asia 39 % Africa 20 % Europe 19 %	Agrofuels 66 % Food 15 % Forestry 7 % Tourism 9 %	34
Asia	Asia 89 % Middle East 6 % Europe 3 %	Agrofuels 56 % Food 15 % Forestry 20 % Industry 6 %	29
Latin America	Latin America 37 % North America 35 % Asia 13 %	Agrofuels 33 % Food 27 % Minerals, oil 24 % Forestry 10 %	6

Based on Anseeuw et al. 2012: Figures 3-6.

Verified grabs = reported and cross-referenced land deals.

There is great variety in the average size of land deals. According to a World Bank survey, average areas vary from 700 hectares in Ethiopia to 59,000 hectares in Liberia (World Bank 2011, 62). This makes some of the most noted land grabs (some never carried through; *Financial Times* 2009) exceptions, for instance the 2008 deal where the South Korean conglomerate Daewoo signed a contract with Madagascar for a 99 year lease on 1.3 Mha, the Chinese government's grab of 2.8 Mha in the Democratic Republic Congo for palm oil production, or the British bioenergy corporation Global Green Energy's acquisition of 900,000 hectares for agro-fuels in Mali, Guinea, and Senegal (Oakland Institute 2011). Even more exceptional, Pro Savana, a joint venture involving Brazilian and Japanese actors, has obtained 8 Mha in Mozambique on a 50-year lease to mix Brazilian agricultural know-how with Japanese funding. The reason is simple, explains the owner of Brazilian cotton plantations in the fertile state of Mato Grosso, otherwise known for its sugarcane:

> Mozambique is a Mato Grosso in the middle of Africa, with free land, without environmental impediments, and with much cheaper freight to China. Today, in

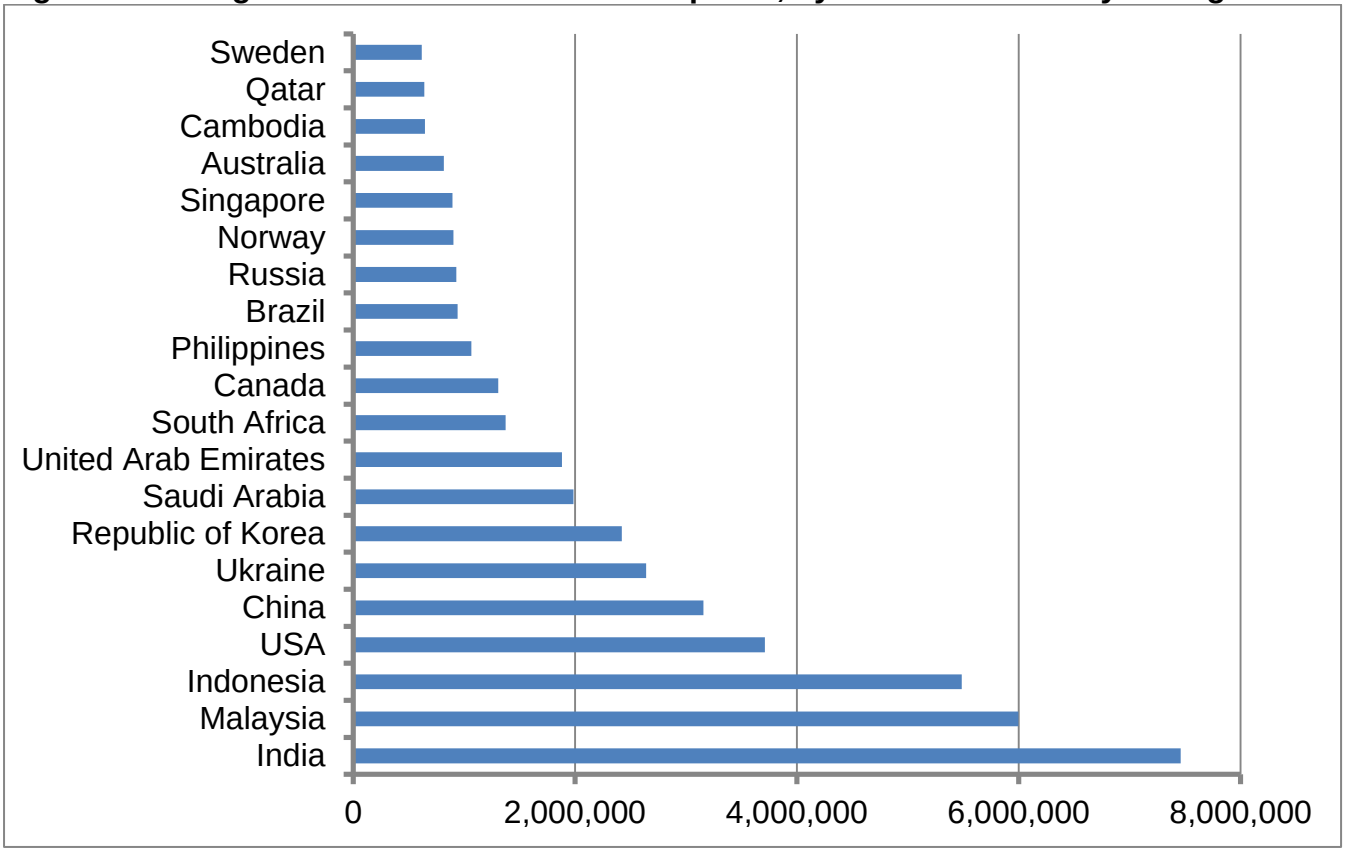
> addition to land being exceedingly expensive in Mato Grosso, it's impossible to get a license to deforest and clean an area. (Augustin 2012)

Some of the most important investors in terms of area come from Asia, both states and corporations. Large investors in this group include India, China, South Korea, Saudi Arabia and United Arab Emirates, but the global pattern is more complex. Figure 1 shows the mixture of grabbers, including the fast growing economies of the world, but also less recognized grabbers, from the largest of them all, India, to the smallest of the 20 included here, Sweden. Note that the USA exceeds China, a role that frequently goes amiss in other accounts. The hierarchy of grabbers would of course look quite different if the measure was land grabbing per capita, with Sweden surpassed only by Qatar and Singapore.

Attributing nationality to land grabbers runs the risk of obfuscating the complex character of land deals. Among others Sweden, USA, South Korea, Saudi Arabia, and Brazil mix private capital and state corporations with international agencies and finance institutions, including pension and development cooperation funds. Add to this transnational corporations, global food and agribusiness giants such as Cargill, Archer Daniels Midland, Du Pont, Deere, and Monsanto; and add private and publicly owned oil corporations, from Shell to Brazil's Petrobras, and it soon becomes easier to say who is not involved in land grabbing than who is (Dauvergne and Neville 2010, Holt-Giménez and Shattuck 2009, Borras et al. 2010).

Contrary to visionary assessments presented by the World Bank and other financial institutions, actually registered land deals indicate that the commercial logic behind the deals lead land grabbers to prefer – and local partners to make available – land located in proximity to urban areas (within 3 hours by foot), and with surprisingly high populations densities. 60 per cent of the deals are located in areas with population densities above 25 persons/km^2 – the cut-off point arbitrarily chosen in an influential World Bank study (World Bank 2011) – and as much as 20 per cent of the deals involved areas with population densities higher than 225 persons/km^2. Another study suggests that 53 per cent of the areas and 67 per cent of the deals occurred on croplands and forested areas. See Table 3.

Figure 1. Land grabs 2000-2010. Hectares acquired, by investors' country of origin.



Source: Olsson et al. 2012, Figure 6. Used with permission. Minimum area: 200 ha. Note that the data is uncertain.

This does not imply that the other deals did not involve conflicts over land. Grasslands may well be used for grazing, or in fact be fallow croplands lands, and peri-urban lands are frequently of high economic significance, contributing substantially to the survival strategies of poor families in informal settlements and urban slums.

Table 3. Where do the grabs take place?

	Land cover, %
Areas grabbed	22 % croplands, 31 % forests, 17 % shrubs and grasslands, 30 % deserts, wetlands or peri-urban
Number of deals	43 % croplands, 24 % forests, 28 % shrubs and grasslands, 5 % deserts, wetlands or peri-urban

Source: Anseeuw 2012a. Number of deals analysed 246.

7 Financialisation and socioeconomic sustainability

The deregulation and re-engineering associated with the emergence and entrenchment of neoliberal understanding of what promotes development (Toye 1987) has led to a "striking correlation between freer capital mobility and the incidence of banking crises" implying a "link between crises and financial liberalization" (Reinhart and Rogoff 2009, 155). In fact, "most liberalization episodes were associated with financial crises of varying severity", making the performance of neoliberal polices *without* crises an exception (Reinhart and Rogoff 2009, 155).[7] The severity of crises vary, but the average negative impact of banking crises has nevertheless been impressive, with an average fall in GDP per capita of 9 per cent, lasting on average two years (Reinhart and Rogoff 2009: Figure 14.4).

However, the methodology used (as recognized by the authors) under-reports the impact of crises since it only reports the actual downturns, not the deviations from the trend caused by the crises. A recent survey fills this lacuna by assessing the consequences of 147 banking crises 1970-2011. Here, the deviation from the trend growth of GDP – that is the output loss caused by the crises – is as much as 23 per cent (median value, Laeven and Valencia 2012, Table 2).[8] Surprisingly, high-income countries experienced the most severe output losses in relative terms, reaching 33 per cent, while low-income countries only suffered a reduction in output of 2 per cent (median values). The explanation is that richer countries have "deeper financial systems" which cause banking crises to be "more disruptive" (Laeven and Valencia 2012, 18).

These are median values, however, and it merits emphasis that the most severe financial crises since 1970 have mostly impacted poor countries with devastatingly high output losses (in per cent of GDP calculated over the duration of the respective crisis): Congo

7 The only case marshalled by the authors in support of the possibility of a smooth introduction of financial liberalisation is Canada.

8 The trend of GDP growth is calculated from the actual growth performance during 20 years preceding each crisis' eruption of the sample.

1991 130 per cent, Burundi 1994 121 per cent, Thailand 1997 109 per cent, Jordan 1989 106 per cent, Cameroon 1987 106 per cent, Lebanon 1990 102 per cent, and Ecuador 1982 98 per cent (Laeven and Valencia 2012, Figure 8).

7.1 Financialisation and economic sustainability

The significance of the re-emergence of finance is recognized by the World Economic Forum, which painted a "Global Risk Landscape" in 2013 in which "major systemic financial failure" scores the highest of all the risks confronting the world in terms of potential impact. In fact, financial failure supersedes such risks as failure of climate change adaptation, rising greenhouse gas emissions, diffusion of weapons of mass destruction as well as global governance failure (World Economic Forum 2013, Figure 2). Major systemic financial failure – defined by the WEF as "A financial institution or currency regime of systemic importance collapses with implications throughout the global financial system" (World Economic Forum 2013, 46) – is unfortunately not a hypothetical construct: it is reality, as evidenced by the crisis afflicting the euro-area for the last couple of years.

The financial crisis of 2008 and its aftermath suggests that financialization poses severe threats to the economic sustainability of world society. Table 4 shows the extended time periods before output resumed its pre-crisis level in fourteen post-WWII crisis economies. The average time period elapsed was 4.4 years.

Table 4. Duration of financial crises post-WWII as measured by years elapsed before output reached the pre-crisis level

One year: Spain 1977
Two years: Japan 1992, Korea 1997
Three years: Norway 1987, Mexico 1994, Hong Kong 1997, Philippines 1997, Malaysia 1997
Five years: Sweden 1991
Six years: Indonesia 1997
Seven years: Thailand 1997

Eight years: Finland 1991, Colombia 1998, Argentina 2001

Source: Reinhart and Rogoff 2009, Figure 14.8. Note that neither the 2008 crisis, nor the euro crises are included.

Increasing inter-connectivity between commodities has been noted, implying that financialisation has pushed price levels, as well as price volatility, in directions unrelated to so called fundamentals (that is, to changes in demand or supply of any given commodity). According to the Bank for International Settlements, BIS, "financial investments resulted in significant deviations of prices away from those implied by fundamental demand and supply conditions" (although they soften this conclusion by limiting most of the impact to oil, BIS 2011a, 57). Elsewhere in the same report, however, the BIS stresses that "financial factors seem to have played a role in influencing commodity prices" (BIS 2011a:56) overall – and not only in relation to oil – a stance which is in tune with the widespread understanding of the impact of financialisation on commodity markets globally, also considering that most observers – including market operators (UNCTAD 2011) – see the price of oil (and other energy commodities) as one of the key drivers of price increases in food and other commodities in general.

It appears that as soon as a commodity is integrated into an index, and thus becomes part of speculation and investments unrelated to the final use of the commodities invested in, prices of commodities begin to co-vary. Thus, financialisation plays a significant role in shaping price movements, impacting on levels as well as volatility (Basak and Pavlova 2013, 1). It is here that we find the origin of the growing risk of contagion which financialisation has brought about, nationally, regionally and indeed globally (which mirrors the Global risk landscape of the WEF). Such inter-connectedness now affects markets which appear unrelated, but which in fact are linked through increasing financialisation.

Another contributing factor to this mounting inter-relatedness is that there exists a great deal of substitution effects among commodities which means that price movements of any one commodity may become further and further removed from the "fundamentals" of that particular commodity. This would explain why even commodities which are not included in

the primary financialisation of commodities, behave in similar fashion as commodities which are (UNCTAD 2009, 70-71).

There is concurrence in the literature regarding the serious impacts transmitted to the world's commodity markets by the financialisation of commodities, but assessments of the degree of influence from financialisation vary, with the assessed impact span set in the range of 10-20 per cent (Basak and Pavlova 2013 and UNCTAD 2011). This may appear to be a modest influence, but it nevertheless testifies to the impact of financialisation in terms of pushing prices in directions unrelated to fundamentals, and for those whose real incomes either decline or stagnate, the impact is considerable.

7.2 Excessive speculation and fundamentals

The concept "excessive speculation" may appear to be purely normative, but it is defined in descriptive terms by the US Commodity Exchange Act as activities "causing sudden or unreasonable fluctuations or unwarranted changes in the price of [a] commodity".[9] Excessive speculation is common as a result of the growing financialisation of commodity markets. The impact is felt through increased price volatility as well as by pushing prices of food and feedstocks higher, as fund managers primarily speculate on rising prices (so called long positions) and rarely contemplate speculating on future price falls (short positions), thus driving up the price that real hedgers – real in the sense that they actually want to acquire the commodities in question – have to pay.

The financialisation of commodity markets has become the dominant driver of price movements also for future contracts. For instance, just before the financial crash of 2008, commodity index funds – that is speculators without any interest in, nor need of, the actual commodity – held 42 per cent of wheat futures in the US (SOMO 2010, 7). In general, non-traditional speculators – pension funds, sovereign wealth funds, banks and insurance corporations, all of which invest in futures without any intention of actually accessing the products thus secured – have become more important on the derivative markets than real

[9] US Commodity Exchange Act, Chapter 1:6a, Excessive Speculation, see > http://www.law.cornell.edu/uscode/text/7/6a <.

hedgers (which do need the goods in the future). A case in point: pure speculative future trading on the Chicago wheat exchange has grown from constituting 30 per cent of the global value traded in 1998 to 80 per cent in 2008 (Food Watch 2011:7), clearly a case of excessive speculation. Similarly, the share of pure speculative contracts 2006-2008 reached 68 per cent for soybeans and 65 per cent for maize (World Development Movement 2010, 9).

The shift from hedging – which plays a legitimate role for many stakeholders as an insurance policy – to pure speculation is decisive. While on a well-functioning market speculation would be limited to, say, 30 per cent, it has now far surpassed this limit for many commodities (World Development Movement 2012, 7). It is sometimes claimed that market speculators cannot influence prices more than temporarily, while fundamentals – failed harvests, growing demand from end users, low or high stocks – eventually will make sure that a "correct" price is established on the market. However, the financial giant Merrill Lynch – which is branding itself "Global wealth manager" (www.ml.com) – has estimated that commodities trade at a 50 per cent mark-up caused by speculation, compared to what they would have been had they only been following "fundamentals" (World Development Movement 2010, 9), rendering meaning to 'excessive speculation'.

Hence, it should not surprise us that the first decade of the 21st century has been characterized as a period of "excessive volatility" of food prices based on historical volatility data going back to 1954 (Pratt 2013, 3-4). In the same vein, UNCTAD concludes that "the financialisation of commodity markets" is partly responsible for both price hikes and growing price volatility, especially in the agricultural sector (UNCTAD 2009, 72-3).

Speculation does not operate in a vacuum, and this becomes clear if we consider the factors driving food prices. An econometric study indicates that there are two forces at play. First, there is the general trend of the growing importance of agricultural produce for food, feed, fibres and fuels, which leads to steadily rising food prices. But this can only explain the general price trend upwards, not the price spikes of recent years, especially 2000-2008,

and again since 2010.[10] Rather, excessive speculation and financialisation of land and agricultural products are the key explanatory drivers behind price spikes (Lagi et al 2011a). These forces broke previous patterns of low and stable food prices that reigned since the exceptional price spike in the 1970s associated with the dramatic increase in oil price.

Price volatility is well received by speculators, since it enables them to make more money as trading volumes rise in tandem with increasing price movements: "commodity exchanges have a preference for high [trading volumes] rather than low levels", and hedge funds which carry long as well as short contracts (thus speculating as much on rising as on falling prices) also prefer volatile markets (Pratt 2013, 9). To peasants, consumers and corporations concerned with the production and consumption of real commodities, however, "high volatility is clearly a bad thing" (Pratt 2013, 9). The impact of volatility depends on where you are placed in the production-consumption-speculation-hedging spectrum and why you are on the market.

7.3 Financialisation and social sustainability

Financialisation poses challenges also in terms of social sustainability. First, financialisation of food markets has caused a mounting pressure on poor consumers in general, especially in low-income countries where they have become "shock absorbers" when prices rise precipitously (Murphy 2013, 9). As a consequence, price spikes are accompanied by food riots (see Table 5).

Table 5. Food riots during recent food price spikes

Food price spike ca 2008	Food price spike ca 2010
Somalia (twice), India (twice), Mauritania, Mozambique, Yemen, Cameroon, Sudan (twice), Côte d'Ivoire, Haiti, Egypt, Tunisia	Mozambique, Tunisia, Libya, Egypt, Mauritania, Algeria, Saudi Arabia, Sudan, Yemen, Oman, Morocco, Iraq, Bahrain, Syria, Uganda.

[10] See FAO Food Price Index > http://www.fao.org/worldfoodsituation/foodpricesindex/en/ <

Source: Lagi et al 2011, Figure 1. The “Arab Spring” uprisings appear to be registered as “food riots” during the latter period.

Equally problematic is the closure of food exports decided by governments, either in order to mollify protests caused by rising food prices, or to prevent such riots from occurring. Export restrictions were reported following the food price spike of 2008 in Argentina, Bangladesh, Bolivia, Burkina Faso, Cambodia, China, Egypt, Ethiopia, Guinea, Haiti, Honduras, India, Madagascar, Malawi, Russia, Uganda, Ukraine and Zambia (FAO 2009a, 54-57, IATP 2012, 33). Consequently, many countries have increased their reserves in order to hedge against future supply chocks, incurring huge storage costs and thus loosing freedom of use of available financial resources. These include Bangladesh, Egypt, Ethiopia, Jordan, Kenya, Nigeria, The Philippines, Qatar, Saudi Arabia, South Korea, Sudan, and The United Arab Emirates (IATP 2012, 33-5).

Similarly, recurrent crises accompanying financialisation are costly to states in terms of rescue packages designed to soften their social and economic impact. The median fiscal cost for the 147 banking crises studied 1970-2011 amounted to 7 per cent of GDP. Unsurprisingly, the cost for low-income countries was relatively high, 10 per cent, compared to 4 per cent for high-income countries, although, to reiterate, the median *output* loss was considerably higher in the latter group (Laeven and Valencia 2012, Figure 8). The consequences in terms of unemployment are staggering: on average unemployment rates rise for as much as five years following a financial crisis, resulting in an average increase in rate of unemployment of 7 percentage points (Reinhart and Rogoff 2009, 227). These averages, as so often, hide wide differences, from unemployment increases of over 10 percentage points in cases like Finland 1991, Colombia 1998, and Spain 1977, to the duration of unemployment extending for seven years in Spain 1977 and Norway 1987, and eleven years in Japan 1992 (Reinhart and Rogoff 2009, Figure 14.3; see Table 6).

Comparing Table 6 with Table 4, above, we find that there is only a partial overlap in the duration of the impact of financial crises since the Second World War, thereby testifying to the importance of keeping economic (Table 4) and social (Table 6) sustainability apart, at least as analytical categories.

Table 6. Duration of financial crises post-WWII as measured by years of rising unemployment rates

One year: Thailand 1997
Two years: Korea 1997
Three years: Argentina 2001, Malaysia 1997
Four years: Finland 1991, Philippines 1997
Five years: Hong Kong 1997, Indonesia 1997, Sweden 1991
Six years: Colombia 1998
Seven years: Norway 1987, Spain 1997
Eleven years: Japan 1992

Source: Reinhart and Rogoff 2009, Figure 14.3.

In the post-2008 crises, unemployment rates far exceed those just mentioned, in a number of especially severely hit countries, such as Greece (25 per cent in 2012), Spain (25 per cent) and Portugal (16 per cent). Equally worrying is the fact that unemployment data show that young people (aged 15-24) are even more affected than the high average figures: youth unemployment rates in 2012 went as high as 35 per cent in Italy, 55 per cent in Greece, 38 per cent in Portugal and 53 per cent in Spain. Overall, the present crisis has thrown 14 million people in the OECD area into unemployment, bringing the total number of unemployed in May 2013 to a stunning 49 million people.[11]

This brings us back to the Global Risks identified by the WEF. Financialisation has caused, as Saskia Sassen put it, a "disassembling" of what used to be national political, social, and economic space. What we witness is a disarticulation of national territories, "a deep disjuncture […] producing massive structural holes in the tissue of national sovereign territory" (Sassen 2013, 26). For Sassen, financialisation is only one of the mechanisms which tear asunder countries and territories – others being supranational political bodies such as the WTO and the Bretton Woods institutions – and she underlines that the main

[11] OECD Harmonised Unemployment Rates – Updated July 2013; and OECD labour market outcomes – Unemployment, http://www.oecd.org/els/emp/oecdlabourmarketoutcomes-unemployment.htm

trend is to replace “the prospect of democratic decision-making [by] an expansion of opaque transnational networks” (Sassen 2013, 26-7).

Still another aspect of the negative impact of financialisation on social sustainability is its contribution to growing imbalances in wealth, nationally as well as globally. The growth in numbers of High Net Worth Individuals, HNWI – to use financial sector parlance, signifying rich people who own at least one million USD in net wealth – testifies to the importance of this aspect of the relationship financialisation-sustainability.

First the numbers: overall, 29 million people worldwide had net assets superior to one million USD in 2012; the number grows by approximately 1-2 million people every year (Credit Suisse 2012). These HNWIs are to a surprisingly high degree concentrated in the old high-income countries – surprisingly because of the much talked about “explosion” in numbers of millionaires in China and Russia. But still, 39 per cent of the 29 million HNWIs lived in 2012 the US and 13 per cent in Japan, with only 3 per cent residing in China. Also the not-so-rich but still wealthy people – here the limit is set at 100 000 USD in net wealth – are concentrated in the same countries, of the world’s 344 million people in this wealth segment, 21 per cent lived in the USA, 16 per cent in Japan, while only 6 per cent were found in China (see Table 7).

Table 7. Geographical distribution of the world’s wealthy population in 2011, %

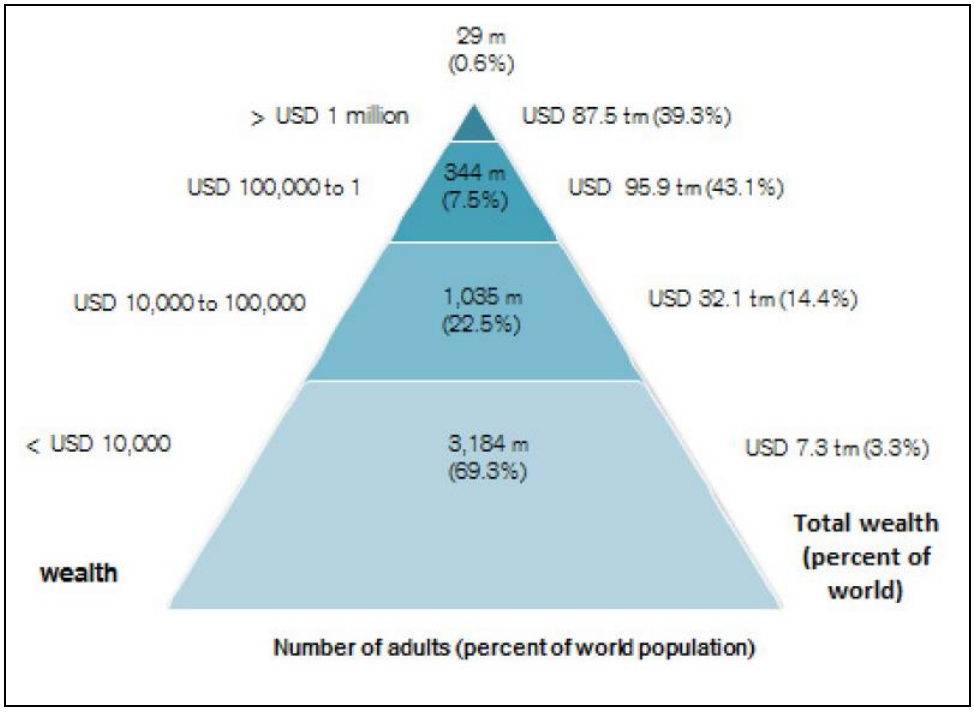
> 100 000 USD net wealth, %	**> 1 million USD net wealth, %**
USA 21	USA 39
Japan 18	Japan 13
Italy 8	France 8
Germany 7	United Kingdom 6
United Kingdom 7	Germany 5
China 6	Italy 4
France 6	China 3

Source: Credit Suisse 2012, 18-19.

Globally, wealth is extremely unevenly distributed among the world's adult population: in 2012, the richest 10 per cent of the world's population owned 86 per cent of the world's wealth; the wealthiest one per cent alone have almost half of the total wealth, 46 per cent. (Credit Suisse 2012, 13). With another measure of inequality: the world's gini-coefficient for net wealth was as high as 0.92 in 2012; of all the countries listed, only Russia and St Kitts and Nevis had higher reported wealth inequality (Credit Suisse 2012a, Table 3.1).

Figure 2 graphically describes this inequality well: less than one per cent of the global population – the world's 29 million HNWIs – owned 39 per cent of the global wealth; and at the other extreme, 69 per cent of the world's population at the bottom, only account for 3 per cent of the amassed wealth. The pattern appears clearly unsustainable in social terms (leaving other considerations, such as equity, aside).

Figure 2. The Global wealth pyramid 2012



Source: Credit Suisse 2012, Figure 1.

Growing inequality has been noted as one of the prime drivers behind the steep increase in private debt, especially in the USA prior to the financial crisis. As inequality rose, the US government tried to assuage its effects by making easy money available to sub-prime

borrowers, thus ushering people without financial means into unsustainable indebtedness (Rajan 2010).

And the figures appear to support this thesis: in 1984, household debt amounted to 75 per cent of US GDP, while it just before the outbreak of the financial breakdown almost had reached almost twice that level, 140 per cent. However, although the degree of indebtedness in the USA is unprecedented, the steep increase in debt prior to a crisis is not; it mirrors quite well what happened, also in the US, prior to the crisis of 1929 (when household debt surpassed 50 per cent, up from 30 per cent 1920, Kumhoff and Rancière 2010, 26). However, the major culprit for this unsustainable indebtedness was not, as often stated, the public lenders to the mortgage market, Fannie Mae and Freddie Mac (Rajan 2010); instead, it was private banks which pioneered and accounted for most of the credit expansion (Krugman and Wells 2010). In this way, the financial collapse that followed upon years of excessive lending, can be seen to be the result of various attempts, some of them premeditated, others probably in good faith, to ease the negative impact of financialization on social sustainability.

There is a lesson here: If we are interested in maintaining, and even strengthening, social sustainability, financialisation and indebtedness is no solution, on the contrary:

> In the long run, there is therefore simply no way around addressing the income inequality problem itself. Financial liberalization […] only buys time, but at the expense of an eventually much larger debt problem. (Kumhoff et al 2012, 27)

And yet the inequality reported above understates the real situation. Although the fortunes accumulated are impressive, and their unequal distribution alarming, the extent of the concentration of wealth as well as the total sums concerned, are seriously underreported as the vast sums which are stashed away in tax havens and offshore financial centres remain statistically invisible. According to one estimate, 21-31 trillion USD have been placed in such secrecy jurisdictions, thus escaping reporting, not to talk of taxes (Henry 2012, 5). The situation is especially problematic for poor countries that carry external debt obligations. In an assessment of wealth deposited by their citizens offshore, it was estimated that as much

as 7-9 trillion USD was secretly deposited in such locations, outdoing the total official public debt of these countries. In this optic, poor indebted countries are in fact net creditors to the tune of 3 trillion USD, not as it is officially claimed, net debtors of 4 trillion USD (Henry 2012, 6).

The existence of enormous offshore wealth, outside the reach of national tax authorities and thus unreported in national accounts, may explain the marked disconnect in the USA between the fast growth in income disparities – which is registered – and the surprisingly slow growth, almost stagnation, in wealth gaps. For instance, while the income share of the top 1 per cent in the US doubled from 1980 to 2010, from 10 to 20 per cent, their share of reported wealth only grew from 34 to 36 per cent. This is highly unlikely, as growing incomes will spill over into growing wealth, at least to a significant extent. There reason for the mismatch is that wealth has increasingly become hidden from sight as vast sums are deposited in “secrecy jurisdictions” beyond the reach of national authorities and statistical surveys. It should be noted that during the same period, the share of the bottom 90 per cent of income earners in the USA fell from 66 to 52 per cent, problematizing the social sustainability of financialization (Shaxson et al 2012, 7).

The US is not alone here, and the surge in capital flight globally has occurred concomitantly with growing inequity in the distribution of income, tailing the turn to financialisation since the 1970s. This is a historical shift, as the share of wage income had been growing during the first decades of the post-WWII era, up until the end of the 1970s. By 2007, the year before the financial crisis hit, the wage share of the OECD countries as a group had fallen by as much as 8.5 percentage points, from 73.4 per cent in 1980 to 64.9 in 2007. On the flip side of the coin: the profit share of national income grew (Stockhammer 2013, 1).

Behind this shift, we find that financialisation, while not the only factor, has been the most decisive driver pushing the share of labour down and that of capital up. Financialisation has opened a number of avenues which have strengthened the hand of capital in its bargaining with labour, including increased freedom of geographical location of production as well as freedom to take advantage of tax havens and off-shore financial centres (secrecy jurisdictions), and increased shareholder influence over how to dispose of corporate

surpluses. The ILO concludes that "financial globalization has led to a depression of the share of wages in GDP" (quoted in Stockhammer 2013, 8). The ILO is not alone in this conclusion. In quantifying the contribution of various factors which have weakened the bargaining position of labour vis-à-vis capital, financialisation alone is considered as important as the *combined* explanatory weight of globalization, technological change, and welfare state retrenchment (Stockhammer 2013, 41-42).

8 Re-regulation: a Polanyian countermovement?

We do not wish to conclude without having considered how the aftermath of the financial crisis that began in 2008 may be similar, in nature if not in degree, to the Great Depression of the 1930s. In the aftermath of the Great Depression, new relations were forged between finance and production, and between capital and labour, not only nationally but globally, one aspect of which was the outcome of the Bretton Woods conference. This illustrates one of the key points of Karl Polanyi's book *The Great Transformation*, published during WWII: social history is the outcome of a "double movement". When the fictitious commodity of money is given too much leeway, societies ought to, and often do, protect themselves against

> the pernicious effects of a market-controlled economy. Society protected itself against the perils inherent in a self-regulating market system. (Polanyi 1944:76)

Thus, it is after systemic crises that we have witnessed the finest moments of political insight and maturity, such as the Bretton Woods conference, according to Carlota Perez:

> At the turning point, after each of these major crashes [leading to depressions 1793-97, 1848-50, 1890-95, 1929-38, and now again 2008-] governments face three main tasks: The first is to rapidly perform 'intensive therapy' for the financial world. The second is to thoroughly examine and redesign financial regulation and architectures. The last – and very far from least – is the induction of a structural shift in the real

> economy that will reshape market conditions to fully exploit the installed innovation and growth potential to the benefit of all. (Perez 2012:12)

Following this logic, and these historical precursors, one would expect a Polanyian countermovement to occur after the 2008 financial meltdown, and we do indeed find some potentially important steps in the direction of reigning in the financial sector once again, just as after WWII. Four instances are worth underlining:

First, the present post-crisis period appears to witness the comeback of some of the central tenets of the interwar years, seen in calls for more regulation. Some potentially important steps in the direction of harnessing the financial sector have resurfaced. Four instances are worth underlining. First, the crisis spurred unprecedented support from states in order to cushion the impact of the crisis on the economy. In the immediate aftermath, the IMF estimated that rescue packages – part of which were guarantees which in the end were not drawn – could amount to as much as 50 per cent of the GDP of "advanced" economies, and 30 per cent the G20 GDP (IMF 2009, Table 2.1). This testifies to the seriousness of the financial crisis, and to the centrality of the financial sector to the global system. The importance of such state finance should also remind us that the turn to finance, or the deregulation of markets, or whichever short-hand for the neoliberal counter-revolution in development thinking one prefers, was brought about not by abandoning policies but on the contrary by the application of intentional government policies in this direction, backed by international institutions, most importantly the IMF and the World Bank (Sassen 2006).

Second, it is not only rescue packages that have been mobilized, there have also been some significant policy shifts. For instance, greater transparency and integration of offshore financial centres (more commonly called tax havens) has been achieved, enabling greater transparency and allowing for the possibility of reducing tax and capital flight (OECD 2012).

Third, eleven EU member countries – Austria, Belgium, Germany, Estonia, Greece, Spain, France, Italy, Portugal, Slovenia, and Slovakia - have decided to institute a tax on trading in equities, bonds and shares. In other words, the proposal made by Keynes already in 1936 may soon be a reality. The tax rate is low, set at only 0.1 per cent for all kinds of financial

instruments except derivatives where the rate will be even less, 0.01 per cent, but the important first step in instituting a tax on financial transactions has nevertheless been taken. Note, however, that the UK, the major trading centre globally, is not among the countries going in this direction (EU 2013).

Fourth, the aftermath of the financial crisis in the USA has led to some reversals in the previously seemingly unstoppable route to ever more financialisation. The recently installed Obama administration took steps that in effect meant a (partial) re-instatement of the Glass-Steagall Act of 1933, in the guise of the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 (US Congress 2010, Clapp and Helleiner 2012). The Dodd-Frank Act intends to force the financial sector to bring previously "over-the-counter" trade out into the open, thus increasing transparency. Also, some steps have been taken in order to separate more speculative activities and instruments from the daily operations of banks and credit institutes. Finally, mining and oil corporations are required to disclose country-by-country their operations, profits and investments.

It is noteworthy, that these steps were not advocated first by international financial institutions, such as the IMF, or by the OECD, both of which have the mandate of securing the stability of the global financial system. Rather, the impetus originated from within the USA, where an alliance was formed between the US government and various entities affected by the food and oil price spikes: farmers' organisations, grain elevator operators, and food processing corporations combined with the American Trucking and Air Transport Associations. The move in the direction of a re-regulation was facilitated by the fact that the Obama administration had promised such steps as several agricultural states were considered to be "swing states" in the presidential elections of 2008. By 2010 these groups were joined by Americans for Financial Reform, a wide-ranging group of NGOs and faith base organizations covering consumer, civil rights, investor, retiree, community, and business organizations (Clapp and Helleiner 2012), all in all an impressive array of allies.

Although these steps do not constitute any decisive break in processes of financialisation, they may still be interpreted as constituting instances of "Polanyi-style social 'counter-movements'" (Clapp and Helleiner 2012, 202), at least as "throw[ing] some sand in the

wheels" of the speculative machinery of global finance, as famously suggested by James Tobin in 1978. Counter to this optimistic story, Mirowski (2013) argues that the cognitive dissonance of neoliberal ideology has effectively blocked any adequately responsible actions to change the course of financialisation.

9 Conclusion

The lessons learned after the financial crisis of 1929 have, with the onset of the neoliberal revolution in development thinking, been replaced by a gullible attitude, hoping for a benevolent outcome of deregulation and financialisation, forgetting the worst historic experiences to date. Financialisation poses new challenges for achieving ecological, social and economic sustainability, regardless of whether we consider it a novel or a recurrent phase of capitalist development. With expanding commodification of nature – land, seas, atmosphere and urban areas – sustainability has increasingly become subordinated to the demands for financial returns on speculative capital 'investment'. Financialisation appears to be endangering the very social fabric of societies as social gaps continue to grow. Privileging returns on speculative 'investments' in futures markets over productivity gains and enhanced use-values, the logic of financialisation constitutes a major impediment to sustainability efforts. Use-value/object-oriented investments that can potentially contribute to social/economic/ecological sustainability are losing out to financialisation-driven exchange-value/investor-oriented investments determined by returns to shareholders regardless of social or ecological consequences. While ostentatiously geared to sustaining the economy, financialisation jeopardises economic sustainability, as financial resources are increasingly invested for short-term speculative purposes, to the detriment of investment in the production of infrastructure, human capital or productive resources in general.

Although these changes in the modalities of capital accumulation play themselves out on a global scale, we do well remember that it was national and international politics and policies that facilitated, indeed orchestrated, the rapid (and recurrent?) evolution of financialisation and accompanying process of commodification, privatisation and marketisation of nature.

Breaks with previous social contracts between state and citizens and between capital and labour were initiated and managed by financial and political elites, more often than not equipped with democratic credentials. There is nothing natural or pre-determined about this. Alternative politics and policies can feasibly re-tame the power of finance and bring finance back into the service of broader society and social-ecological sustainability, enhancing capacities for use-value/object-oriented investments while constraining exchange-value/investor-oriented investments. This will require new and very different social contracts across geographical scales, building upon the wealth of knowledge and experiences coalescing in participatory and action-oriented sustainability science and related disciplines (not least ecological and heterodox economics, political and human ecology, and environmental geography). These will however be insurmountable challenges without social transformations associated with an egalitarian political culture that recognises and respects the right to place, the right to participate in the material formation and transformation of our common environment. Among a number of crucial dimensions to attend to in sustainability politics, enhancing capacities for use-value/object-oriented investments while constraining speculative exchange-value/investor-oriented investments is imperative.

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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?'

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