Introduction: the deepest financial crisis since the Great Depression

Hyman Minsky’s (1982) Keynesian explorations on the mechanisms of financial markets revolved around the question: can the 1930s collapse happen again? Minsky argued that it does not need to happen again. True, by the early 1980s a number of institutional changes and financial innovations had reversed the legacy of the reforms in the 1930s and 1940s and war finance. Yet, many qualitative differences remained and still do today in 2009. Governments are much bigger, implying a much greater deficit once a downturn occurs. In times of deficits, large government debt increases rapidly. Central banks are primed to intervene quickly as the lender-of-last-resort. Markets are not allowed to fall free; although they may nonetheless do so.

Are these automatic stabilizers and policy instruments sufficient for countering the effects of the 2008-9 global financial crisis? Of the 200 or so financial crises since the late 1970s the most far-reaching ones have occurred in the past fifteen years. Following the Mexican (1994-5) crisis and its repercussions, the world has been further alarmed by the Asian crisis (1997)—which spread to Russia and Brazil (1998)—and the dot.com bust (2001). The current crisis is more central and serious than any of the previous ones. Beginning with the subprime mortgage crises in 2007 and subsequent failure of large financial institutions in the United States and elsewhere, the 2008-9 crisis has rapidly developed into a global credit crisis, deflation and decline in international trade. By early February 2009, the crisis had involved more than thirty bank collapses, major investment fund failures, sharp declines in stock indexes, and large reductions in the market value of commodities and housing worldwide. To give a few examples of the declines in stock indexes: the Nikkei 225 stock market index dropped from 18,000 in July 2007 to about 8,000 in late 2008 and early 2009; the Dow Jones Industrial Average from 14,000 in October 2007 to about 8,000; and the Paris CAC 40 from over 6,000 in June 2007 to about 3,000.
According to the IMF estimates from April 2009, total global output in 2009 is expected to decline by 1.3 per cent when measured in terms of purchasing power parity’ while per capita output is expected to decline drastically by 2.50 per cent in PPP-terms and 3.68 per cent in market rates terms. Moreover, these developments are unequal. Overall, the advanced economies are expected to contract significantly and negative growth also characterizes central and Eastern European countries, while ‘emerging’ and developing countries may grow by a modest rate of 1.6 per cent (the bulk of population growth concentrates in these areas). In some of the poorest regions the population grows much faster than the economy, resulting in sharply negative per capita growth. Unemployment rates are soaring everywhere, leading to further demultiplier effects.

Despite a few signs of gradual recovery in the third quarter of 2009, it remains possible that the worst is still ahead. The Great Depression began with the stock market crash in October 1929, but the deepest low came in the aftermath of the winter 1932-33 financial collapse in the US and elsewhere. If automatic stabilizers and available policy instruments are not sufficient for avoiding deepening of the crisis the ongoing pattern may turn out to be similar.

In the last section of this essay I will develop two scenarios in regard to what may lie ahead. As history does not repeat itself, however, only limited aspects of historical processes may prove sufficiently similar to provide insights into future possibilities. The point is not to look for exactly corresponding episodes or sequences but for comparable structural liabilities and tendencies that may yield some analogous outcomes. Hence, in order to grasp the structural liabilities and tendencies of global financial markets we do not need mere historical analogies to past crises and collapses; we need an explanation of the characteristic mechanisms of financial markets. This search for causal exlanations is my main purpose in this essay.

I will begin by summarizing the standard neoclassical theory of financial markets and their characteristic effects. This understanding has given \textit{ex post} legitimisation to the re-emergence of global finance in the early 1970s and then, subsequently, justified and encouraged its rise to predominance in the world economy. Further, I provide reasons to suspect that the neoclassical account is largely wrong—not only since it has been unable to anticipate the 2008-9 crisis (or any other major crisis) but, more fundamentally, because it is built on false assumptions and therefore lacks insight into the basic operations of financial markets. Secondly, I sketch a general explanation of the ongoing financial crisis. This explanation provides, then, the basis for proposing two short-term scenarios of future developments.

\textbf{The standard neoclassical theory of finance}

It is generally agreed that a long-term trend in global financial markets has been toward deregulation and liberalization of entry.\textsuperscript{1} An index of openness
shows that already by the late 1990s, restrictions on financial transactions had almost completely disappeared in industrialized countries and decreased in the global south. Alan Greenspan, who served as the Chairman of the US Federal Reserve from 1987 to 2006, came to symbolize the market libertarian approach. As the Chair of Morgan Stanley Asia explains at the height of 2008-9 the crisis, ‘market libertarians simply looked the other way as the U.S. lurched recklessly from bubble to bubble’. Deregulation, liberalization and optimism about the ‘outgrowths of the thriving free enterprise system’ are not arbitrary policy choices but rather stem from the orthodox neoclassical economic theory.

Many articles in economics journals are technical and do not provide explicit or relevant policy implications. The neoclassical theory of finance is developed—or rather its methodological and theoretical underpinnings are explicitly presupposed—only by some theoretical modellers. A large part of the economics of finance concerns econometric studies on, often, rather specific and technical aspects of finance. While econometric studies can, at times, shed critical light on assumptions such as perfect rationality or foresight, and while they may even focus on determinants of financial crises, for the most part they are reasonably compatible with the standard neoclassical theory of finance.

The neoclassical theory of finance has less practical impact through ongoing technical research than through economics textbooks. When asked for policy advice, mainstream economists tend to resort to the core beliefs of the neoclassical theory of finance. The habitus of economists—a system of dispositions, cognitive and motivational structures, and practical skills of making normative judgments—is acquired in the course of their long training, and anchored deeply in their daily professional practices in the field of economics. The characteristic habitus of a neoclassical economist includes a predisposition towards favouring free markets, deregulation and liberalization.

Standard neoclassical theory is based on a set of relatively simple assumptions presented as axioms, on which theorems, corollaries and their mathematical proofs are based. This gives the appearance of a well-established knowledge of laws that are comparable to the standard laws of physics, verified in countless carefully measured empirical tests (notwithstanding a few disagreements among economists, which are generally portrayed as being minor because unorthodox thinking is discouraged). The key, it is assumed, lies in grasping the way the price mechanism functions in an economy with many consumers, producers and commodities. Hence, all economic developments can be analysed in terms of supply and demand in markets. Among the questions posed are: how does the price mechanism guarantee an optimal allocation of given resources? and under what conditions does the system have a unique and stable equilibrium?
The price mechanism is studied by using formal methods derived from mechanics, field equations and differential calculus. The basic formal models imply that prices, as freely determined in open markets, can and often do ensure the optimal reconciliation of supply and demand. The technical term to describe this reconciliation is ‘equilibrium’. The basic claim is that equilibrium is achievable in open free markets. While various sophisticated models have qualified the basic claim in various nuanced ways, without usually renouncing the basic free-market conviction, it is further assumed that equilibrium maximizes efficiency and thus also the overall welfare of society. In other words, the sum of atomistic individuals maximizing their utility and consumption and firms maximizing their profits can be optimal for everyone, provided that no redistribution of wealth is allowed. Welfare is conceived in terms of ‘Pareto-optimality’; that is, no arrangement can improve the position of anyone without making worse the position of somebody else. The implicit background assumption of Pareto-optimality is that markets distribute wealth in a just way: those who contribute the most are equally rewarded the most.

It is commonly presumed that the first theorem applies equally well to all situations involving the price mechanism. Thus financial markets would be no different from the traditional markets of fruit, vegetables and meat in a town’s central square. If money is merely a good among other goods—as it is in standard economic microtheory, which starts with an analysis of a barter economy and then introduces money as a neutral numéraire good—Adam Smith’s ‘invisible hand’ must also guide the free trade of money. The real economy thus determines the prices of money and financial assets. Therefore, standard neoclassical theory assumes, or at least encourages one to think, that financial and other markets tend to cohere. Money may, for instance, be represented simply as a monotonic transformation of an underlying utility function in terms of a bundle of goods. In the general equilibrium theory, financial and other markets are either in a simultaneous Pareto-optimal equilibrium or moving towards such an equilibrium if there have been disturbances or movements of correction. These kinds of assumptions have the effect of making it ‘natural’ to think that deregulated and liberalized financial markets lead to an overall efficient allocation of resources and are thus desirable in the sense of the first theorem of welfare economics. Economists are taught to confine their advice to this and similar claims derived from their formal mathematical models and avoid any other kind of normative discourse.

In some contrast to Milton Friedman’s (1953) categorical case for freely floating exchange rates and free markets more generally, sophisticated neoclassical accounts may explicate trade-offs between floating rates and other possible objectives, and recognise that financial markets tend to ‘overshoot’. The notion of overshooting presupposes that there is a known, unique equilibrium. From this point of view, the problem is that markets tend to create incentives for traders to push the price further from
the equilibrium when the price is already below or above the price justified by economic fundamentals. Liquidity trading is rational and will enhance the efficiency of the markets, whereas some trading can be characterized as destabilising or ‘noise’ (the part of the price data distorting the picture of the true underlying trend that would otherwise be clear to all) in otherwise efficient markets. Again, the distinction presupposes the notion of Pareto-efficient equilibrium, against which it can be determined if trading is rational or destabilizing. The idea is that although financial markets are in general efficient and ensure a tendency towards equilibrium somehow there are times when there is a need for regulatory mechanisms to ‘correct’ destabilizing behaviour.

The problem is that the notion of efficient equilibrium is a purely theoretical notion in the speculative sense of the term. Equilibrium theorists do not know what an ‘efficient equilibrium’ would designate in the real world (that is, outside their abstract mathematical models). Take for example a scenario in which the US dollar/British pound exchange rate justified by the economic fundamentals is 1.5. Once the rate is at 1.6 in this example, it is possible to show in terms of the overshoot model how traders would have the incentive to push it even higher. In the real world, however, the rate justified by ‘economic fundamentals’ cannot be determined in any objective sense. What cannot be known must thus be assumed. The apparent clarity and precision brought about by mathematical tools cannot be a substitute for understanding reality. As Lawson\textsuperscript{16} has argued:

\begin{quote}
\ldots the essential point here is that if clarity and precision are not the preserve of formal modellers nor are they anything like sufficient for understanding social phenomena. A farmer may, with as much clarity as any ‘theorist’, assume that his or her pigs can fly in a definite direction with a determinate velocity. But his exercise is unlikely to help the farmer in understanding the nature, speed or cost etc., of any process whereby pigs can actually be brought to market, unless flying pigs are a real possibility.
\end{quote}

Analysis is then built on that fictional basis. This is typical of the neoclassical method in general\textsuperscript{17} as we can see in the following example from Dornbusch:

[T]he long-run exchange rate is assumed known \ldots We note further that, while expectations formation may appear ad hoc, it will actually be consistent with perfect foresight.

Perfect foresight, however, is something even the most celebrated economists seem to be lacking.\textsuperscript{18} If asked to pinpoint any concrete ‘equilibrium’ in any financial markets or, say, the long-run equilibrium exchange rate of actual currencies in the real historical world, economists either evade the question or resort to something like the notion of purchase power parity (PPP). However, in the context of foreign exchange markets, for instance, the problem with the PPP as an ‘equilibrium’ is that it
practically never corresponds to actual rates or prices. Purchase power may also, in the long run, deviate systematically and increasingly from the exchange rates. It is a well-known fact that the price level in less-well-off countries is lower than in better-off countries, and that the gap tends to widen over time. (Dollar- or euro-converted values make them look poorer than they actually are). The difference has been striking in cases such as India and China over the last two or three decades.

Of course, there are many relevant considerations in assessing the validity of different expectations of the true value of, say, exchange rates. The comparative purchase power of different currencies, external balance of countries, and the competitiveness of their firms can be used in forming various opinions about what, for instance, the exchange rate of country X should be or is likely to be. Sometimes these opinions converge within some timespan (perhaps a week, perhaps three months), but usually they diverge, at least in relation to some periods of time towards the future. And it is precisely the ambiguity and discrepancy between different estimations and expectations that makes it reasonable for one trader to sell and another to buy an instrument or liability at a particular rate, both expecting the transaction to be profitable. Most foreign exchange markets, speculation in markets, and derivative markets would not exist without ambiguity and uncertainty about developments. There has to be an abundance of contradictory assessments of future developments for these kinds of markets to exist in the first place.¹⁹

In their empirical studies on exchange rates and fundamentals, Richard Meese and Kenneth Rogoff²⁰ found that random walk forecasts typically outperform forecasts based on Dornbusch-type and other standard models at one to twelve month horizons for exchange rates of major currencies. This seems like a major anomaly in the standard neoclassical theory. But there is another one, sounding at least as serious: since the start of the floating exchange rates regime, the variability of the exchange rates has increased dramatically. There have been two kinds of responses to these anomalies. Models are being made more complicated, either by allowing for non-constant coefficients that vary as a result of the underlying stochastic disturbances and changing policy regimes or by introducing non-linearities into the model.²¹ In both cases, the idea is that the problem can be fixed simply by making models more complicated. Thus, there seems to be no reason for revisiting the conceptual underpinnings of the standard theory, especially the idea of a tendency towards equilibrium and overall coherence of finance and other markets.

The notion of ‘equilibrium’ is a piece of fiction that is technically derived from physics and mathematics to designate whether a system of force field equations can be solved or not. The problem is not simply that equilibrium refers to nothing clearly specifiable in the real economy. Even as a theoretical construction it seems to be flawed. Perhaps most fundamentally there is
a lack of consensus of what it means. Yet even if there were a unique Pareto-optimal equilibrium in some well-defined sense in a given market, neoclassical models have little if anything realistic to say about how to get there. If an acceptable specification of a market allows for one specification it will typically allow many. Even if the specification of the market was based on realistic assumptions, if any of these equilibria would be Pareto-optimal and if there was a clearly specified way of getting there, these models would still say nothing about whether the narrow efficiency in the financial markets would actually enhance the efficiency of the economy as a whole. Finance that is efficient in a narrow technical sense may thus, for all that we know, compromise efficiency, welfare or justice in the national and global political economy as a whole.

The predisposition toward favouring free markets, deregulation and liberalization

Despite admitting occasional ‘market imperfections’ and ‘overshooting’, and allowing for random or non-linear processes, neoclassical economists have usually opined that financial markets are in general not only efficient but also good for the overall performance of the economy (and thus, it is implied, good for society as a whole). The recurring financial crises arrive as a surprise to neoclassical economists, as demonstrated in the following frustration expressed by Chew:

“Our lack of foresight can be blamed on the suddenness with which the trouble in credit markets broke out, which was now a bit over a month ago.”

So far the lack of foresight has not, however, stopped economists from advocating further free market reforms. The closed circle of operation of the orthodoxy is sketched in Figure 1. Characteristically, financial and other measures of deregulation and liberalization have brought about unintended consequences. Responses have consisted of ad hoc explanations and the search for pre-crisis deviations from the free market rules and principles. Because the theory ‘shows’ that free markets can and do work, the problem must lie with the real world. For instance, the Asian crisis was quickly attributed to ‘crony capitalism’ in the region and presented as a crisis of the Asian developmental model: opacity of information, overinvestment and loan-funded investments in non-productive assets, real estate, et cetera. Indeed, the rationale of the speculative companies that boomed before the crises in Thailand and elsewhere was claimed to have been based on political connections.

Through these kinds of ad hoc explanations the standard theory has been vindicated time and again. In accordance with this logic, the political solution has been to impose the theoretical ideal even more vigorously. For example, the IMF wants its member countries to carry out ‘deeper and broader-based reforms’ to achieve ‘high-quality growth’.

No amount
of evidence of a systematic pattern of recurring crisis after each financial liberalization seems capable of undermining the belief that free markets tend towards Pareto-optimal equilibrium. The world is wrong, not the theory. The long-run vision seems to be to work towards the day when all traders and investors of the world operate in equally stable and well-defined circumstances and can enjoy reliable foresight and rational expectations. At that point there will be no more financial crises.

The 2008-9 crisis is unique in that it began at the very core of the world economy and was irreducibly global in scale. It is therefore more difficult to dismiss this crisis on a mere ad hoc basis. Economic commentators, such as Roach, admit the scale of the problem and yet remain optimistic about the solutions:

There has been a major systemic failure of the model that has held the world together since the 1930s. Governance, or the lack thereof—both within the private sector as well as by those charged with regulation and oversight—proved to be the weak link in the chain. Fix that, and capitalism will be just fine.

In this spirit, the G-20 Leaders Summit on Financial Markets and the World Economy, which took place in Washington, DC on 14 and 15 November 2008, came up with an ‘explanation’. This explanation is in accordance with the basic tenets of the overshooting hypothesis and distinction between ‘liquidity’ and ‘noise’ trading, while it also addresses the underlying problems of risk and leverage:

... [M]arket participants sought higher yields without an adequate appreciation of the risks and failed to exercise proper due diligence. At the same time, weak underwriting standards, unsound risk management practices, increasingly complex and opaque financial products, and consequent excessive leverage combined to create vulnerabilities in the system. Policy-makers, regulators and supervisors, in some advanced countries, did not adequately appreciate and address the risks building up in financial markets, keep pace with financial innovation, or take into account the systemic ramifications of domestic regulatory actions.

This explanation is not ad hoc in the sense of blaming cultural or political particularities in a limited context but it does follow the notion that particular regulatory deficiencies and biases—rather than the characteristic mechanisms of capitalist finance—constitute the root causes of the 2008-09 crisis. Once they have been corrected, and the economic situation otherwise normalized, the world can return to neoliberal business as usual.
A Keynesian-Minskyan explanation of the 2008-9 financial crisis

It is not true, however, that no-one anticipated the possibility of a major global financial crisis. In addition to the long-range forecasts of Minsky (1982) and Charles Kindleberger (1996), several post-Keynesian analysts and critics of the standard neoclassical theory had raised concern over the expanding bubble and accumulating levels of debt well before the first signs of trouble emerging in late 2007 and early 2008.²⁹

What unites those who foresaw a major financial crisis is the refusal to rely only, or at all, on neoclassical models. Rather than relying on the concept of equilibrium, the critics of the orthodoxy have made extensive use of the combination of Keynesian and Minskyan theories built on realist assumptions; historical analogies; comparisons of developments across the world economy; and whatever evidence can reasonably be mustered about ongoing developments, including official statistics, newspaper reports and interviews. Thereby, a systematic picture and explanatory story—an iconic model—of the ongoing process was formed; and judgements made about the likelihood of different scenarios. For these scholars, it was clear that ‘the speculative bubbles, starting with the US housing price bubble, were made possible by an active policy of deregulating financial markets on a global scale’.³⁰ Their expectation was that a bust and crisis was much more probable than the continuity of the then current upward trends, although many of them expected that the crisis would come sooner than it did.

So how do we understand the operation of capitalist financial markets from a Keynesian-Minskyan viewpoint? In trying to explain business cycles,
Keynes stressed the role of expectations about an uncertain future. For instance, the liquidity preference of the public—that is, people’s wish to hold cash instead of consuming or investing their money—is caused not only by the use of cash as a means of exchange but also by the uncertainty of the future. When there is confidence in the future, people feel secure about consuming, investing and often also accumulating debt, particularly if cheap money is easily available. However, income distributions and variations in consumption and future expectation only explain business cycles in part. For Keynes, the determination of productive investments is at least equally important. Investments depend on interest rates (particularly long-term rates) and the horizon of expectations of those who make investment decisions.

Unpredictability and uncertainty of the future is a key to understanding many developments in a market economy, especially investments. Following economist Frank Knight’s earlier distinction between risk that is calculable and uncertainty that is not, Keynes argued that there can be no scientific basis for predictions of many historical episodes and their outcomes or large-scale developments. When assessing future prospects, he argued uncertainty is more fundamental than risk:

The game of roulette is not subject, in this sense, to uncertainty; nor is the prospect of a Victory bond being drawn. Or again, the expectation of life is only slightly uncertain. Even the weather is only moderately uncertain. The sense in which I am using the term is that in which the prospect of a European war is uncertain, or the price of copper and the rate of interest twenty years hence, or the obsolescence of a new invention, or the position of the private wealth system in the 1970s. About these matters there is no scientific basis on which to form any calculable probability whatsoever. We simply do not know.

The Keynesian frame admits, however, the existence of degrees of uncertainty. There may be some information that is relevant in determining the likelihood of future event E, but this likelihood becomes dependent also on the weight of the argument—that is, from the ratio of things that can be plausibly known to ignorance. Yet, uncertainty is not only epistemological; it is also ontological. Social systems are open and ‘nonergodic’, meaning that the relevant processes are non-repetitious and involve qualitative changes, and thus many events, episodes and decisions are unique. Therefore, the weight of evidence and degrees of uncertainty can only be determined in terms of qualitative judgements based on conceptual-theoretical and circumstantial evidence—historical analogies, comparisons between processes, prevailing understandings and opinions, et cetera. A capacity for making plausible—yet fallible—intersubjective judgements can be cultivated by acquiring comprehensive conceptual and historical knowledge, understanding social causation, and practical experience in building explanatory models and futures scenarios.
With the condition of uncertainty in mind, Keynes distinguished between two ways of making investments and profits in the capitalist market economy: enterprise and speculation. Enterprise is ‘the activity of forecasting the prospective yields of assets over their whole life’; whereas speculation is ‘the activity of forecasting the psychology of the market’. Keynes argued that ‘as the organisation of investment markets improves, the risk of the predominance of speculation does increase’. Furthermore, on the basis of his own experiences from the 1920s and 1930s, he claimed, for instance, that in ‘New York the influence of speculation is enormous’. This is because liquid investments—‘hoarding or lending money’—often pay better, at least in the short-run, than long-term productive investments. Keynes also maintained that this is ‘an inevitable result of an investment market organized’ in a manner making investments liquid.

Keynes likened the behaviour of investors in financial markets to:

... newspaper competitions in which the competitors have to pick out the six prettiest faces from a hundred photographs, the prize being awarded to the competitor whose choice most nearly corresponds to the average preferences of the competitors as a whole.

However, in this strategic game everybody knows that everybody else is looking at the problem from the same point of view:

It is not the case of choosing those which, to the best of one’s judgement, are really the prettiest, nor even those which average opinion genuinely thinks the prettiest. We have reached the third degree where we devote our intelligences to anticipating what the average opinion expects the average opinion to be. And there are some, I believe, who practice the fourth, fifth and higher degrees.

Keynes’ account illuminates the tendency towards self-reinforcing processes in financial markets.

Keynes’ observations are a long leap into studying the real mechanisms that produce the characteristic outcomes in financial markets. Even in what Keynes calls ‘enterprise activities’ there must be a socially constructed mechanism that mediates between the material economy of goods and services and the decision to take or give loans. The necessity of a mediating mechanism entails the possibility of a relative detachment of monetary and financial developments from other economic developments, even without the prevalence of speculation. Moreover, financial valuations can themselves have effects on the factors that they are supposed to reflect, especially through equity or debt leveraging. This may give rise to a positive feedback loop engendering a boom that will last only as long as optimistic expectations—largely produced by the feedback loop itself—can be sustained.

Keynes’s analogy to the beauty contest, where each player tries to anticipate the preferences of the others (knowing that everybody is doing the same
thing) helps in part to understand and explain why financial activities are disconnected from the reality of production and exchange of goods and services. At the same time, it should be stressed that despite the partial disconnection, there are manifold social relations and causal feedback loops that connect finance to the rest of political economy. Financial developments are causally efficacious in historical, path-dependent and complex ways; and money is not a mere neutral *numéraire* good but is internally and externally related, as a causally active part, to the processes of agency/structure dynamics in capitalist market society. The available accounts of the global financial market practices indicate at least the following contemporary connections, mechanisms and feedback loops:

1. **All decisions are based on anticipation of the future in the context of a blurred line between calculable risk and fully Keynesian uncertainty.**

   Decision-makers have to acquire information from anywhere they can. For dealers and investors with short-term horizons, whatever happens to the largely fictitious prices of assets for whatever reasons is in fact quite real, and they have to act consequently. Fortunes may come and go with these fluctuations. The more prevalent the perception that these fluctuations have only little to do with non-financial activities and processes the less there is reason to care about the assessments of the non-financial developments. The public assessments of rating agencies are thus not always sufficient for decisions and sometimes not even considered relevant. For traders and investors, shared moods about the overall situation; partially shared, partially private analyses of uncertain political situations; rumours about economic and political developments and other investors’ decisions; as well as assessments about the possibility of speculative attacks and self-fulfilling prophecies; are all very real, with potentially far-reaching consequences. Therefore, anticipation of the moves of other players within the financial markets is a key consideration in financial decisions.

2. **The connection between the productive and financial economy is mediated through agency.**

   In the late twentieth century and early twenty-first century, there is an indirect link to the material economy of work, production, consumption, trade and state budgets through the assessments of the IMF or the rating agencies such as Standard & Poor and Moody’s Investors Services. Also, the reports and actions of the IMF and BIS (Bank for International Settlements) play a role in constituting actions. These private or public expert systems are highly dependent upon particular socially constructed mathematical models, available statistical data and computer systems. In addition, they rely on news and other qualitative information. With the exception of a broad outline of the development of a few variables under ‘normal’ circumstances, these expert systems have no more predictive power than any economic theory; characteristically, and perhaps
necessarily, these models have been built on unrealistic assumptions. As Keynes made clear, ‘human decisions affecting the future, whether personal or political or economic, cannot depend on strict mathematical expectation, since the basis for such expectation does not exist’.

3. **Everybody is trying to estimate and guess the trend at various time-spans because it is better to be a step ahead of others — although not too much; for then you will lose as well.**

   The strategic game is reflective, partly communicative and often also highly self-referential (reflexive). Yet the stories actors tell continue to make references to the non-financial world (to the economic prospects of X; changes in economic policies of X, and so on). Thus an external process, as perceived and interpreted by the leading actors, may trigger a downward process, especially after the critical point when expectations can no longer be self-evidently sustained. Macro hedge funds, for instance, may base their strategies on macroeconomic models, trying to anticipate, say, devaluations or changes in interest rates. If depreciation of a currency is expected, they may, for instance, sell that currency forward or buy a put option. Anticipation of changes — particularly if many others follow the market leaders’ actions — can also contribute to a bringing about those changes. This is the phenomenon of partially or fully self-fulfilling prophecies. Whatever happens at least partially of one’s own accord is, in many situations, potentially profitable; certainly more profitable than simply reacting, after others, to episodes and developments that have already taken place. For the latecomers, prices have already changed, occasionally with dramatic consequences.

4. **Equity or debt leveraging tends to affect the underlying financial valuations and thus enable further leveraging through the wealth-effect, increasing value of collateral and sustained optimism.**

   Significant savings in one part of the global system have a tendency to gravitate towards segments or regions of financial markets exhibiting profitable booms, thus fuelling those booms further. The financialization of things and practices (for instance, through private pensions funds or commodities futures markets) and securization of debt have a similar effect by increasing liquidity for leveraging and speculation. Central bank and government activities may contribute further to the process, creating something like a ‘political business cycle’ when leveraging and speculation in financial markets can compensate, temporarily, for the lack of purchasing power of lower strata in unequal societies; and this, in turn, can induce short-term growth.

5. **A bubble is eventually followed by a bust for reasons that are largely inherent to financial markets.**

   Under certain conditions, the financial multiplication process — or in standard terminology, the collective consequences of leverage building,
mutual indebtedness and rapidly inflating asset prices—can grow into a bubble in particular places and markets, and a bubble will burst sooner or later.

6. **Rising involvement in debt makes the system gradually more vulnerable to small disturbances, and thus increasingly chaotic.**

At a certain point the game may turn out to resemble a Prisoner’s Dilemma game; although never more than partially, because players ahead of developments can manipulate the situation and the fragility and weakness of other investors to provide profitable opportunities to gamble on a downward turn or trend. If confidence in the prospects of X is gone, the individually rational choice of ‘sell as quickly as you can’ amounts to a collectively catastrophic outcome in terms of a collapse of asset values; even though, overall, most investors would be better off not selling for the time being. For any individual actor the worst outcome is to co-operate (that is, stay in) while most others defect (that is, opt out). By not selling as quickly as they can an investor could easily be left with nothing. Hence the occasional bursts of panics and busts, with far-reaching causal consequences to production, employment and welfare.

These points describe the modes of operation and mechanisms in financial markets but they do not yet fully explain financial crises. For this we need further theorising about the characteristic mechanisms of financial capitalism. Minsky’s theory explains why developed financial markets themselves tend to produce crises, recessions and unemployment. According to him financial markets begin to develop into a more innovative, speculative and crisis-prone direction at times of growth and affluence. Past experiences are projected into the future and speculation becomes increasingly attractive. The capitalist market-economy generates innovations also in finance; not only in production and exchange. New financial instruments and other innovations often presuppose de- and re-regulation. Consequently, there is a relation between the development and rise of financial markets and the rise to prevalence of orthodoxy.

Banks create money when they give loans against future revenues and profits. Decisions about loans must be based on anticipation of the future under the conditions of Keynesian uncertainty. The monetary system is stable only as long as streams of revenue and profit enable firms to meet their financial liabilities. Financial actors tend to create new forms of profitable finance, typically increasing velocity of circulation and decreasing liquidity, and often merely just hiding risks. Many capital goods, as well as real estate and financial investments, have been bought, at least in part, on credit. This makes their value (and the value of collaterals) dependent also on developments in financial markets, which, in turn, are contingent on actors’ expectations about the future, commonness of speculative orientation and the general degree of involvement in debt.
Speculative activities sensitize actors to alterations in expectations about the future; yet no-one can predict the future. The development of asset values is always uncertain in open systems and determined in significant part by actors’ expectations and anticipations. The higher the liabilities in relation to revenues and liquidity the more unstable the financial system becomes. Relatively small changes in interest rates, revenues or incomes may make some actors insolvent, and they can in turn endanger the solvency of those actors who are expecting due payments from them. In the midst of mounting difficulties, many have to opt for ‘Ponzi finance’; that is, they have to take expensive short-term loans merely in order to meet their financial liabilities. A rapid rise in Ponzi finance indicates a crisis in the near future. Relatively small absolute changes in interest rates, streams of revenue and wealth can thus trigger a financial crisis. In other words, financial innovations and increasing involvement in debt make the financial system more chaotic, despite regulatory authorities trying to close some loopholes and warn about the hazards of speculation. The inherent tendencies of finance thus create a mechanism of making the system increasingly sensitive to the conditions of its weak or vulnerable parts, while their weakness is in part a result of involvement in debt.

Yet many actors are structurally inclined to reinforce the collective illusion of official optimism. Governments, central banks and other official bodies do not want to trigger a downturn (and the more chaotic the system, the more likely this is to happen), thus they continue with the official optimism, qualified only by occasional acts and words of caution. Those who keep their own money at stake must believe that the New Era will last permanently, while some use optimistic prognosis to manipulate share prices. Widespread consensus in the media is also reinforcing. The system thus self-sustains illusory expectations that eventually turn out to be detrimental; but when the truth starts to emerge it is already too late.

**International politics of global finance**

By 2008 global financial markets had become more tightly integrated than ever before. The way banks collapse and stock markets decline is now synchronized to a remarkable degree. Yet, like previous major financial crises, the 2008-9 crisis is essentially about international politics as well. The global economy consists of states themselves engaging in financial activities and giving or taking loans. Their immediate financial situation depends on the prevailing current and capital account (im)balances. Since the period 1971 to 1973, currencies have been floating and the foreign exchange market has grown to be an essential part of the global financial system. The re-emergence of global finance has in effect meant the return of some of the key features of the Gold Standard and *haute finance* era of 1870-1914.

From an international political point of view, global finance re-emerged as a response to the relative weakness of US competitiveness, while the British were also keen to restore the former eminence of the City of London. The
post-Bretton Woods system has given a lot of leverage to the US and British governments as well as to Anglo-American financial markets and operators, while other states have subsequently tried to reap the benefits of global finance by regulatory laxity and by establishing offshore centres and tax havens. However, the position of the US dollar in the world economy has especially favoured the US. For a long while after the 1971 to 1973 period (and this era may have ended now in 2009) the US government became more sovereign in its economic policy.

The US could continue financing its deficit with dollars and IOUs, and, alone among governments, could also move the exchange rate of the dollar against other currencies without suffering the economic consequences that would face other states attempting to do the same. But there is a limit also to the level of US indebtedness. With the emergence of the euro and the rise of China, the systemic imbalances have been reflected in changing levels of confidence and exchange rates. As of the early 1990s, an increasing part of world surplus has been accumulated by China in its foreign reserves. Moreover, since its introduction in the 1990s, the euro has been the second most widely held international reserve currency after the US dollar, providing an alternative to the dollar (however weak and contradictory the politico-economic basis of the euro may be). The euro has already surpassed the US dollar in terms of the combined value of cash in circulation. (More than €610 billion was in circulation in December 2006, which is equivalent to US $802 billion at the exchange rates at the time).

From a global point of view the exchange rate system is closed. Fluctuations of any particular value are always in relation to the value of other currencies. Overall the system is zero-sum: changes in rates cancel each other out. In a situation when all states (including the EU) are simultaneously facing a banking crisis—triggered by a burst of the housing market bubble—and a collapse in stock values, the crisis may not involve any acute problems in foreign exchange (forex) markets. There has nonetheless been a lot of volatility in forex markets preceding and during the 2008-9 crisis. Most importantly, this volatility has concerned the position of the US dollar, which is dependent to a large extent on the political decisions of various central banks and governments, in addition to the private decisions of investors (especially in Asia). In August 2005, the euro/dollar exchange rate was at 1.22, standing at above 1.34 in May 2007, 1.41 on 31 December 2008, but back to 1.32 in April 2009, indicating that the US dollar still holds against the euro.

China and some other Asian countries have been exporting their capital surplus to the US, thus making it possible to keep interest rates down despite low and declining rates of saving. With financialization, securitization, and leverage building through financial innovations and non-bank financial institutions, this was an enabling condition in the housing market bubble, and it still enables low interest rates in the first half of 2009.48
From the point of view of many central banks, the decision to hold dollars in their reserves is based on balancing their dependence on the US consumer markets with hedging against the risk that any currency contains, including the US dollar and its main alternative and rival, the euro. China has not been willing to risk a trade conflict with the US (or the EU) or the possibility that it will suffer systemic problems associated with a collapse of the dollar and thus a collapse of the value of its holdings in foreign currency and bonds. However, with growing surplus capacity and internal economic problems looming, Chinese state leaders are tempted to export China’s economic problems, also aided by devaluing the yuan renminbi. This temptation—which accords with the neoliberal belief in relative competitiveness and emphasis on export markets and transnational investments—has been reinforced by the example of US unilateralism.

The point is that to a significant degree the 2008-9 global financial crisis has been caused by the unlearning of the lessons of the 1930s and 1940s; and by the short-sighted attempts by different state-actors to use the options provided by the global monetary system for their own narrowly defined, short-term benefit. As states have become entangled with free market global finance, and as there is a trade-off between states’ relative competitiveness and financial stability, regulators and law-makers have found it acutely difficult to control the system in concert. There is ‘a glaring lack of governance of international monetary and financial relations’ The minimum capital requirements of Basel I and II Accords, for instance, were easily offset by financial innovations allowed for, and even encouraged, by authorities.

**By way of conclusion: the shape of things to come**

By the second quarter of 2009, the crisis had hit hard on financial capital, corporations and some homeowners, but for most ordinary citizens the effects of the crisis are still to be felt (and in fact for those not losing their jobs, savings or home there are even some benefits from low or negative inflation and low interest rates). So far the impact on unemployment rates has been relatively small, although the rise of rates has begun to accelerate and will reach higher points in late 2009 and in 2010. Some people have lost their savings (mostly, thus far, the well-off) and others have lost their homes, particularly in the US. Much more misfortune and suffering will ensue in 2009-10. But given the general decline in activism, democratic participation and leftist orientation across the OECD world, and given the deeply entrenched relations of structural power in the global political economy, it remains to be seen if these negative experiences can generate a new momentum for major regulatory and institutional reforms.
It is likely that if the negative real per capita global growth rate remains on average at the annual level of not much more than one or two per cent, and if the crisis can be contained and a recovery starts in 2010 (or at the latest in 2011), we will see just another round of neoliberal and technical business-as-usual ‘reforms’. The illusory idea that financial markets can make wealth out of nothing has, of course, experienced a major setback, but people’s memory is short, and minds stay open to manipulation, especially through the global media. After a partial economic recovery, governments, central banks, media corporations and other authorized bodies are likely to return gradually to their official optimism, grounded in the standard neoclassical theory; and the bulk of regulators and law-makers can continue to pursue relative state-competitiveness at the expense of long-term stability and collective development, also because they do not see any alternative.

As Soros has argued, the periodic crises since the late 1970s have been part of a larger boom-bust process. If the ‘recovery followed by neoliberal business-as-usual’ scenario proves right, the underlying super-bubble that has already lasted for three decades will continue to grow, gradually creating conditions for an even bigger crash in the late 2010s or early 2020s. Figure 2 illustrates how credit creation and financial multiplication are developing and how the 2008-9 crisis can be seen in terms of this scenario as
another periodic crisis. The ongoing crisis may be deeper and more global than any of the previous crisis but retrospectively it will be seen as less serious than the next major crisis.

However, in the progressively more unlikely scenario that the crisis proves deeper and longer than indicated by Figure 2, as now in early 2009 seems possible, two things will probably happen:

1. The tendency towards beggar-thy-neighbour policies by the states will become stronger, reinforcing the already ongoing neoimperial competition over resources and markets and accelerating the already ongoing armament race.

2. Demands for global reforms will become stronger and more radical, and are likely to include major regulatory and institutional reforms.

This implies a dialectics between two opposing tendencies: 1) a general tendency towards a repetition of the mistakes of the eras 1871-1914 and the 1920s; and 2) a tendency towards a rise of global ethico-political imaginary and new globalist movements focusing on global sustainability, justice and democracy. The first tendency is also related to the role of the US dollar in the world economy. For private investors the decision to buy currencies is a matter of maximizing short-term profits or avoiding risks, and these anticipations and expectations play a role in central bank calculations. It is thus possible that a turning-point for the US dollar will be reached despite the intentions of central bankers to diversify reserves cautiously, and despite the attempts of the US to use its political-military leverage in defending the position of the dollar as the main currency of the world economy. The collapse of the US dollar would constitute a global currency crisis with far-reaching consequences for global security.

Meanwhile, should the worldwide depression following the 2008-9 crash prove especially deep or long (or both) calls for fundamental reforms will become stronger, global civil society movements will rise, and some of the existing political parties will rewrite their programmes. Moreover, several global movements will end up forming global political parties and in all probability start working for a democratic world state. In the absence of spectacular catastrophes, however, it is various reformist global-Keynesian proposals that will assume the centre stage of global politics. If the basic contours of this hopeful—but not most likely—scenario of a deep depression followed by transformative reforms are materialized, and if significant movements for reforms do indeed rise, we will see major global regulatory and institutional reforms in the course of 2010s and early 2020s. My own belief is that a lot is at stake: democratically accountable global-Keynesian institutions would set the twenty-first century onto a much healthier path than the current one.
Endnotes


4. ibid.


9. This is a falsifiable empirical claim about the economic and political opinions of mainstream economists. It is grounded in an evolutionary account of selection and learning in a social context dominated by deductivist-mathematical approaches and revolving around the notion of equilibrium. As Steve Keen
(Debunking Economics. The Naked Emperor of the Social Sciences, Zed Books London, 2001, p. 27) explains, the basic conclusions of the neoclassical theory are taught in the first year as established truths and students are in no position to believe otherwise. ‘This abbreviated induction is sufficiently boring to dissuade the majority of business students from pursuing further economics, and they graduate in some other discipline. However, a minority find the game intriguing and continue on to another year.’ So it continues, with further screening each year. The remaining few who ‘have embarked upon this road to ordination as an economist’ are ‘fully inculcated with the mainstream economic way of thinking’.


12. The neo-Keynesian end of the acceptable left-right continuum within the mainstream (that is, some state intervention versus free markets) acknowledges that markets can fail to achieve full efficiency. ‘Part of the problem is the lack of perfect competition, part is the existence of externalities, and part is the fact that markets may take a long time to adjust to any disequilibrium given the often considerable short-run immobility of factors’ (Sloman, Economics, p. 411). The long-term implications of this analysis are in line with neoliberalism: although public intervention may be necessary in the short run, in the long run competition can be made more ‘perfect’; externalities can be overcome by privatisation and setting a price to everything; and factors can be made more mobile and ‘flexible’. This kind of analysis is also in accordance with the closed circuit of the operation of the orthodoxy.


16. Lawson, Economics & Reality, p. 112.


18. Many world-renowned economists have lost their personal fortunes in financial crashes. In the autumn of 1929 one of the best-known American economists, Professor Irving Fisher of Yale, proclaimed that ‘stocks have reached what looks like a permanently high plateau’. Acting on this assumption, he soon lost between US$8 million and US$10 million in net worth (J. Galbraith, The Great Crash of 1929, Harmondsworth, Penguin, originally published in 1954, 1980, p. 95). Similarly, in 1998, Myron Scholes and Robert C. Merton, who shared the 1997 Nobel Prize in economics, were involved in the LTCM (Long-Term Capital Management) debacle. Relying on insights generated by sophisticated mathematical models, and by building complex investment strategies,
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LTCTM made bets on the changes in the relative prices of bonds in the US and abroad due to changes in the risk premiums. However, the announcement of devaluation and debt moratorium by the Russian government on 17 August 1998 triggered a massive flight to safer assets and caused the collapse of the hugely leveraged LTCM. This threatened the whole of the global financial system and led to a massive bailout by other major banks and investment houses. Once again, a number of neoclassical economists have been involved in the 2008-9 failures and collapses—and virtually no neoclassical economist anticipated the crisis.


35. ibid, p. 155.

36. ibid.

37. ibid.

38. ibid.

39. ibid, p. 156.

40. ibid.


43. ibid, p. 22.

44. Even disregarding attempts to hide and transfer hidden risks to others, there is a fallacy of composition involved in ‘innovative risk-spreading’: what is possible for one actor at a given time is not possible for all of them simultaneously. Risk-spreading does not make the underlying risks disappear but rather enables individual actors to take more risks collectively, thus gradually making the system as a whole—and thereby also its individual parts—more vulnerable to cumulative disturbances.


47. These benefits are, of course, individualistic and relational. From the viewpoint of the growth of the world economy as a whole, and from the perspective of adequately sustainable and just global political economy, the effects of financialization and dominance of global finance have been problematic. A worldwide framework of institutional arrangements has been created which, among other things, prevents a turn to a new genuinely upward phase in the world economy. With the rise of global finance, the average per capita economic growth has systematically declined and wealth has been redistributed in favour of the rich; and very little has been done to ensure ecological sustainability (see


