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Implications of different understandings of financial crises for divergent conclusions on the connections between finance and sustainability

Alessandro Vercelli

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Alessandro Vercelli

Affiliations of author: DEPS (University of Siena), SOAS (University of London)

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Contact details: Department of Economics and Statistics, University of Siena, Piazza San Francesco, 7/8 53100 Siena, **email** alessandro.vercelli@unisi.it

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1. Introduction

The reasons and implications of different understandings of the ongoing financial crisis may be thoroughly assessed by starting the investigation from a taxonomy of the competing visions of the capitalist system and of the approach required to understand it. This paper focuses in particular on the nexus between money/credit/finance (from now on “money”) on one side and the real economy on the other side and is articulated in a sequence of sections grouped in three parts.

The first part sketches the historical and conceptual path that leads from the early reflections on money to the recent insights on financialisation, stressing only the basic conceptual options and their implications. The analysis starts from the quantitative aspects of money that have been since long a crucial object of political economy, then economics and finally macroeconomics. Section 2 I sketches a bird’s eye view of the mainstream approach from Hume to Woodford; then section 3 outlines the parallel evolution of the heterodox point of view from Marx to Minsky. Section 4 discusses the main views of orthodox and heterodox economists on money as structure. Section 5 investigates why the different paradigms mentioned above lead to different understandings of the meaning and role of financialisation.

The second part sketches the conceptual path that leads from the early reflections on economic crises to different understandings of the great crises and to contrasting views on the sustainability of the economic system. Section 6 I discusses the foundations and implications of different views on business-cycle crises while section 7 I considers the main approaches to the understanding and control of great crises. Finally section 8 examines the concepts of sustainability associated to the paradigms analysed above.

The third part investigates the interaction between financialisation and sustainability from the synchronic point of view (section 9), and then from the diachronic point of view (section 10), focusing on their broad policy implications. Section 11 concludes.

PART ONE: From money to financialisation

This part of the paper presents the recent process of financialisation as the latest stage of an evolutionary process that has progressively shaped the structure and functioning of the economic system. At the same time this part reconstructs the parallel evolution of the theory worked out to understand and control it. To this end a sharp distinction has to be introduced between two aspects of money that are often confused: money as quantity that is created, multiplied, hoarded and utilized to transact and invest, and money as technological and institutional structure that determines the forms of exchange, circulation and accumulation of goods, services, and value, deeply affecting the way in which capitalism functions in a certain period or country. Technology refers here to technology of exchange (of goods, services and assets) and to technology of creation and circulation of money, while the relevant institutions are those that impinge directly on the dynamics of money. Almost never mainstream economics, in its different varieties, took into account the role of money as technological and institutional structure, or at least it did not embed it in the core of economic theory and policy. On the other hand even within the heterodox paradigms, notwithstanding the higher conceptual complexity, the absence of a clear distinction between the two basic aspects of money has been often a source of serious confusions and misunderstandings (for example on the meaning and scope of the theories of Keynes and Marx: see section 3 and 4).

2. Money and the real economy in mainstream economics: a bird's eye view

The quantity theory of money (henceforth QTM) may be considered as the first mainstream view on the relationship between the quantity of money and the economic activity in a certain country. The reconstruction of its origin and early development is very controversial also because of the persistent confusion between “Equation of Exchange” (henceforth EQE) and Quantity Theory of Money. As was clearly clarified by Fisher (1911) the EQE is an identity equating the aggregate quantity of money M in circulation in a certain country and in a certain period multiplied by its velocity of circulation V to the total of goods and

services transacted in the same country and period T multiplied by the general index P of their prices:

$$MV = PT$$

As for the QTM we may define it as a particular causal interpretation of the EQE based on the assumption of exogeneity of money and the invariance, or at least slow and autonomous variability, of its velocity of circulation (Fisher, 1911). Under these assumptions we see immediately that a change in the quantity of money in circulation changes proportionally the prices but does not affect the real economy.

The most influential early version of the QTM is that of Hume (1752). According to his view, an unexpected increase in the quantity of money may have a corroborating effect for the real economy but only in the short run; in the longer run this expansionary effect translates in proportionally higher prices while the real economy gradually recedes to the previous level that is determined exclusively by real forces. This analysis implies many of the key concepts that will characterize mainstream macroeconomics. First, money is believed to be neutral in the long run although not necessarily in the short run.¹ In this view, the expansionary effects of an increase in the quantity of money in circulation is a transitory phenomenon that fades away in consequence of the progressive adaptation of economic agents to the new circumstances. If we compare long-term positions, the effects of variations in the quantity of money are fully absorbed by nominal prices so that we observe a dichotomy between the real system and the monetary system (henceforth “classical dichotomy”).

Adam Smith, credited by most economists to be the founding father of economics as autonomous scientific discipline, is not specifically remembered for his contributions to monetary economics (apart from his sketch of a monetary theory of balance of payments). However he enters as a fundamental link in our story mainly because he is the first to

¹ The term money “neutrality” has been introduced by Hayek (1931) but the underlying concept pre-existed since long before.

clarify the nature of the long-run positions described by the QTM as equilibria in a sense similar to that of Newtonian physics (gravitation centres). In the modern paradigm introduced by Smith the long period is a stable equilibrium, or a gravitation centre, while the transition period characterized by non-neutrality is a transitory disequilibrium process. This new perspective has two important implications that will be drawn by the followers. First, if we limit ourselves to compare long-term equilibria according to what would have been called later “comparative statics” we can ignore money. This convenient property justifying a powerful simplification of the analysis, typical of the classical tradition (including the neoclassical and new classical paradigms) leads to what has been called, as mentioned above, ‘classical dichotomy’. The second fundamental implication is from the policy point of view. Smith’s most famous contribution is his argument showing that the gravitation centre of a competitive market coordinates the activity of economic agents in the best possible way as if it were performed by a providential “invisible hand”. The alleged optimality of long-run stable competitive equilibria and their independence of money provided the two main building blocks of classical monetary theory in contraposition to the mercantilist vision that had dominated the national states policies in the 17th and 18th century.

Further insights were added by Marshall. First he reformulated the QTM putting it in a different, less mechanical, perspective as a demand function of cash balances on the part of economic agents. Second he combined the distinction between short and long period with the distinction between aggregate demand and supply, arguing that demand is particularly important in the short period while the long period ultimately depends on supply forces.

Wicksell is important in our short account for a few reasons. First, Wicksell (1898) focused on the indirect effects of monetary policy. In elaborating this effect, Wicksell distinguished between the real rate of return on new capital (Wicksell called it the “natural rate of interest”) and the actual market rate of interest. He argued that if the banks reduced the rate of interest below the real rate of return on capital, the amount of loan capital demanded would increase and the amount of saving supplied would fall. Investment which

equalled saving before the interest rate fell, would exceed saving at the lower rate. The increase in investment would increase overall spending, thus driving up prices. This “cumulative process” would stop only when banks’ reserves had fallen to their legal or desired limit, whichever was higher.

Second, Wicksell (1898) emphasized the importance of money as technological and institutional structure showing that a credit economy works differently from a simple monetary economy producing in particular a strong short-term non-neutrality.

As mentioned before, Fisher (1911) was the first who worked out a rigorous version of the QTM as a particular causal interpretation of the EQE. In his view the growing importance of credit does not change the picture as its quantity is seen as depending on exogenous money (later called “monetary base” or “high-powered money”) via the credit multiplier seen as substantially stable and exogenous. Fisher (1933) is also important for the distinction between usual crises and big crises (great depressions).

As is well known, the young Keynes was a contributor to the QTM in the Cambridge version worked out by Marshall and Pigou focusing on the demand for money within a less mechanical approach (see in particular Keynes, 1924). He accepted the neutrality of money in the very long run (when “we are all dead”) but focused on the non-neutralities characterizing the short run in the belief that “this long run is a misleading guide to current affairs” (ibidem, p.65). In particular he stressed that the velocity of circulation and the demand for money are significantly endogenous.

The Great Depression seriously questioned the validity of the classical point of view inducing a growing number of economists, led by Keynes and his followers, to reject the QTM also in the long run (see next section). The mainstream Keynesianism ruling in the Bretton Woods period (often called “neoclassical synthesis”) restored long-term neutrality although it mainly focused on the short-run theory characterized by non-neutrality. This is explained as the consequence of institutional features of contemporary capitalism that cannot be mended through monetary policy. The foundations of this point of view is provided by Samuelson (1947), Patinkin (1958) and Modigliani (1944) who conceded that the long-period competitive equilibrium is stable although the convergence process to it is

considered to be too slow unless an apt policy strategy intervenes. This particular variety of Keynesianism became mainstream in the 1950s and 1960s retaining a strong, though fading, influence in the 1970s. This “neoclassical synthesis” was undermined by a few crucial shortcomings: in particular the introduction in the macroeconomic model of a stable Phillips curve utilized as a menu of policy choices was in blatant contradiction not only with the short-run but also with the long-run neutrality of money.

In the meantime the critique to mainstream Keynesianism was kept alive mainly by the Monetarist school led by Milton Friedman who updated the QTM as expressed by Hume, Marshall and Fisher (see in particular Friedman, 1960; Friedman and Schwarz, 1963). Since the late 1960s the main battle between (mainstream) Keynesians and the Monetarists was fought mainly on the camp of the Phillips curve (Phillips, 1958). Friedman (1968) pointed out that the Phillips curve, interpreted by the Keynesians as a stable long-run relation between wage inflation (a crucial money variable) and unemployment rate (a crucial real variable) violates the classical dichotomy between monetary and real systems and the principle of long-run neutrality of money. At the same time he argued that the empirical evidence about the relationship between money wages (or nominal prices) and unemployment seemed to be inconsistent with the Keynesian interpretation of the Phillips curve and consistent with the long-run neutrality of money. Friedman in particular emphasized that the long-run relationship between inflation and unemployment must be represented in the Phillips Cartesian space as a vertical line (expressing the long-run neutrality of money and the classical dichotomy) crossing the abscissas axis in correspondence to the value of the “natural rate of unemployment” (Friedman, 1968). The empirical evidence in the 1960s and 1970s was interpreted by a growing number of economists to be consistent rather with Friedman’s hypothesis than with the Keynesian interpretation of the Phillips curve. A few Keynesians tried to rescue the Phillips curve by interpreting it as a short-term relation that may be shifted by extra-economic factors such as the contemporaneous struggles in the market of labour. They did not succeed, however, to convince the majority of economists and policy makers that this different use of the Phillips curve was not ad hoc.

In the 1970s a group of economists of the younger generations led by Lucas (1972, 1976, and 1981) accepted the criticism advanced by Friedman and its policy implications but tried to provide more solid and updated foundations to his classical paradigm rooting it in the stochastic general equilibrium theory of Arrow and Debreu (see in particular Arrow and Debreu, 1954; Debreu, 1959). The new version of the classical paradigm made the contrast with the Keynesian paradigm much more radical than before. The economy is assumed to be always in a state of full unemployment equilibrium. This does not exclude small fluctuations triggered by exogenous factors: mainly disturbances induced by Keynesian interventionist policies. In particular the new paradigm implied money neutrality also in the short run undermining the rationale for countercyclical policies.

This new stream of the classical paradigm, called by Lucas and his followers 'New Classical Economics', became rapidly (by the end of the 1970s) the new mainstream school in macroeconomics (Vercelli, 1991). The new classical paradigm underwent updating and refinements but did not change its basic methodology and policy implications. The main change of interest for our purposes happened quite early. The monetarist explanation of business cycles accepted by Lucas, the so-called 'monetary equilibrium business cycle' was suddenly ousted by the 'real business cycle' that accepts Lucas' methodology but reverses the causal links between the real and the monetary economy and explains business cycles as a consequence of random technological shocks (Kydland and Prescott, 1982).

The Keynesians reacted by showing that even accepting Lucas' methodology the acknowledgment of the existence of market imperfections is sufficient to justify policy interventions of Keynesian ascendance. In particular money non-neutrality is restored in the short period although not in the long period. This new school was referred to as 'New Keynesian Economics' and managed to become fairly influential in the 1990s (significant early contributions were collected in two volumes edited by Mankiw and Romer, 1991). The first generation of New Keynesian Economists tried to respond to the influential challenge of New Classical economists by showing that circumscribed modifications to the New Classical foundations are sufficient to produce Keynesian results and policy implications.

Therefore they accepted rational expectations and intertemporal maximization but introduced market imperfections (such as monopolistic competition, coordination failures, price rigidities and asymmetric information) implying the short-run non-neutrality of money and claiming the superiority of Keynesian policies under given conditions (Goodfriend and King, 1997). The second generation of this school strived to build on these micro foundations full-fledged dynamic stochastic general equilibrium (DSGE) econometric models capable to assist policy makers and supervising authorities. No doubt new Keynesian economics (NKE) has significantly contributed to reduce the methodological and policy gap between the Classical and the Keynesian paradigms. This led a few influential economists to identify the new mainstream economics in the late 1990s and early 2000s as a “New Consensus”, that is a combination of elements drawn from the Classical and Keynesian tradition with a significant Wicksellian flavour (see in particular Woodford, 2003). From the purposes of this paper we have to emphasize that the synthesis is based on the agreement that money is neutral in the long period but not in the short period.

However, as had happened before, during the great crisis of the 1930s and that of the 1970s, the great crisis started in 2007 produced a polarization between different schools of thought breaking the fragile macroeconomic consensus existing in more tranquil times.

3. Money as quantity and the real economy in heterodox economics: a bird's eye's view

Marx was the first to develop a radical critique of the QTM. The main argument was that it ignores the essence of circulation of goods in a monetary economy, i.e. the exchange of goods having an intrinsic value to be measured in terms of labour time. He maintained that “The illusion that it is [...] prices which are determined by the quantity of circulating medium [...] has its roots in the absurd hypothesis...that commodities enter into the process of circulation without a price, and that money enters without a value...” (Marx, 1967, pp.217-8).

This criticism against the QTM also clarifies why, according to a long tradition, many interpreters and followers of Marx claimed that money, and perhaps more in general monetary theory, is not important in Marxian economics. However this conclusion does not

take into account another crucial aspect of Marx's monetary theory. We have to distinguish in Marx between the role of money as quantity and its role as technological and institutional structure. This complex and forward-looking approach was misunderstood by many of his followers who saw only one of the two aspects: the quantitative aspect (most of them) or the structural aspect (on the latter see section 5).

Notwithstanding the radical critique of Marx, the QTM continued to play the role of ruling monetary theory until the Great Depression. The blatant contradiction between this theory and the empirical evidence convinced the late Keynes to reject it refusing the neutrality of money both in the short and long period. Keynes argued that the long period is a sequence of short periods that is path-dependent (Keynes, 1936). In his view a real economy is "an economy in which money plays a part of its own and affects motives and decisions and the course of events cannot be predicted in the long period or in the short without a knowledge of the behaviour of money between the first state and the last" (Keynes, 1929, pp.408-409). In the GT he considered the QTM a special theory working only in conditions of full employment but failing in all the other cases. While the mainstream Keynesians supporters of the Neoclassical Synthesis reverted to the position of the young Keynes accepting in principle the long-run neutrality of money, though de-emphasizing its relevance for current decisions, the Post Keynesians made a more radical rejection of the QTM by clarifying that in modern capitalism money is endogenous since most money is credit money created by banks in response to demand for it from the private sector. In particular, "post Keynesians show that the existence of a credit multiplier, as a result of some exogenous control by the monetary authorities, does not necessarily imply a causality running from high-powered money (monetary base or central bank money) to the money stock. On the contrary, causality runs from higher credit needs, to higher bank deposits, to higher required reserves" (Lavoie, 1984, pp. 776-777).

The recent empirical findings are not favorable to the QTM. De Grawe and Polan summarize in the following way the results of one of the most thorough recent studies:

"First, when analyzing the full sample of countries, we find a strong positive relation between the long-run growth rate of money and inflation. However, this relation is not

proportional. Our second finding is that this strong link between inflation and money growth is almost wholly due to the presence of high-inflation or hyperinflation countries in the sample. The relation between inflation and money growth for low-inflation countries (on average less than 10% per year over 30 years) is weak, if not absent” (De Grauwe and Polan 2005: 256).

The unreliability of monetarism has been dramatically confirmed during the recent great crisis. For example Koo (1911) shows that, during the ongoing Great Recession, Central Banks increased the monetary base at an unprecedented rate by massive quantitative easing (QE) interventions, but money supply remained stagnant in consequence of the breakdown of the money multiplier, while also credit did not increase notwithstanding near-zero interest rates.

4. Money as evolving technological and institutional structure

The structural dimension of analysis is not altogether absent in classical theory. However the distinction between different monetary regimes usually does not go much beyond the basic distinction between a barter economy and a monetary economy. A monetary economy is believed to be much more efficient than a barter economy as it relaxes the strictures of “double coincidence of wants”; at the same time, however, the systematic diffusion of monetary exchange introduces the germs of economic instability.

According to the traditional mainstream point of view, the trade-off between efficiency and stability is solved by forcing a monetary economy to behave as a barter economy anchoring it to the gold standard or to an orthodox budget policy or to strict monetary policy rules.

The process of financialisation that spread and intensified in the second half of the 19th century until WWI progressively changed the functioning of capitalism giving a growing importance to credit and the role of credit creation by banks. The increasingly endogenous process of money creation on the part of the banking system became more and more inconsistent with the QTM but this passed unnoticed with most classical economists. We find significant exceptions only with a few forward-looking classical economists in the most heterodox part of their contributions: Wicksell (cumulative process, 1898), Fisher (debt-

deflation, 1933), Schumpeter (theory of economic development 1911 [1934]). In all these cases the compromise with classical theory was sought through an institutional dichotomy between an hypothesis consistent with classical theory and one inconsistent with it. Their dichotomies are different though not necessarily inconsistent: monetary economy-pure credit economy (Wicksell), circular flow-development (Schumpeter), ordinary crises-great depressions (Fisher).

Each of these dichotomies captures how the crucial economic role assumed by credit since the late 19th century has altered the functioning of capitalism in a way increasingly inconsistent with traditional monetarism. According to Wicksell (1898) in a credit economy circulating money is endogenous and crucially depends on the interest rate rather than on the general price index. Schumpeter (1911 [1934]) emphasizes the crucial role of credit to innovative entrepreneurs in promoting the process of capitalist development escaping the stationary routine of the circular flow. Fisher (1933) shows that the development of a credit economy may lead to over-indebtedness of the economic units and this to deflation triggering a vicious circle that may degenerate into a great depression.

The role of money in capital circulation plays a crucial role in identifying different forms and phases of capitalism. In Marx the simplest steps in the evolution of mercantile forms are:

- Barter: C-C
- Simple mercantile society: C-M-C'
- Commercial capital: M-C-M'
- Industrial capital: M-C-....P....C'-M'
- Financial capital: M-M'

where C stands for commodity, M for money, P for productive process and the dash for a surplus value (see for a more detailed analysis Vercelli. 1972).

Hilferding updated the Marx's insights on the financialisation of capitalism interpreting it as the transformation of competitive 'liberal capitalism' into a monopolistic 'finance capital' (Hilferding, 1910). In his opinion monopolistic finance capital has unified the industrial,

mercantile and banking interests under the leadership and co-ordination of big finance. This has also altered the relationship between market and state since finance capital sought a “centralized and privilege-dispensing state” intervening in the interest of wealth-owning classes reversing the earlier liberal capitalist pressure towards the reduction of the role acquired by the state in the mercantilist era. We may say with hindsight that this process led to the Great Depression. After this disaster a growing number of economists under the leadership of Keynes started to analyse the consequences of the process of financialisation.

Keynes resumed the traditional distinction between barter economy and monetary economy but argued that the second cannot be forced to work as a barter economy just through monetary means (Keynes, 1936). In particular Keynes (CW, 1979b, p.81) emphasized that the distinction between a barter economy and a monetary economy is radical from the institutional and technological points of view and quotes approvingly the distinction made by Marx (e.g. in 1867, pp.248-257) as capturing the crucial difference of a monetary economy as compared to previous stages of the economy:

C-M-C

M-C-M'

The trouble with classical economics is that it assumes axioms fit for what Keynes calls a “barter economy” (C-M-C) where money plays just the role of means of exchange while in a monetary economy (M-C-M') the accumulation of money value is the goal of the exchange. As Minsky clearly put it: “whereas classical economics and the neoclassical synthesis are based upon a barter paradigm...Keynesian theory rests upon a speculative-financial paradigm...the relevant paradigm is a City or a Wall Street where asset holdings as well as current transactions are financed by debt” (Minsky, 1975, pp.57-58). This crucial standpoint adopted by Keynes is the starting point of post-Keynesian economics. In particular Minsky builds on Keynes, Kalecki and Fisher (debt deflation theory) to show that we have to distinguish different stages of a monetary economy: his FIH refers not to a generic

monetary economy but to a 'sophisticated monetary economy' or, we may say, a 'financialized monetary economy' a mature stage of the evolution of capitalism where credit and finance play a crucial role. Even a "sophisticated monetary economy" undergoes a significant evolution: "recurrent financial instability has had consequences so devastating as to induce significant institutional changes that have, in turn, altered the dynamics of capitalist growth itself" (Minsky, 1975,1982, 1986). The last stage examined by Minsky is the "money market capitalism" characterized by a wider scope of finance and an increasing difficulty in regulating it and preserving the stability of the system (Minsky, 1996).

The second financialisation, like the first, increased the power of multinational corporations and, in many fields including finance, of extremely powerful oligopolies able to manipulate the market and to affect governmental policies in favour of finance and wealth-owner interests. However, differently from the first financialisation, the new policy strategy, often called neo-liberal or neoconservative, tried hard to weaken the role of the state through systematic privatization and deregulation advocating a more decentralized and competitive market.

5. The process of financialisation in the long run

The insights on the evolution of money as a structure rapidly recalled in the preceding section suggest that we may identify a secular tendency towards financialisation, in the broad sense of the increasing importance and sophistication of money and credit in shaping the modalities of the process of circulation and accumulation of capital. This process has always strictly interacted with the long-term development of trade and markets. The driving force of this evolutionary process is rooted in a continuous flow of financial innovations meant to remove the existing obstacles to the flexibility of exchanges. For example, as we have recalled in the preceding section, the adoption of money as medium of exchange has removed the strictures of double coincidence of wants, while the concession of credit relaxes the cash-in-advance constraint. As these examples suggest, financial innovations aim to extend the set of exchange options in time and space for the decision maker that introduces it. Their systemic effects, however, often turn out to have negative

implications such as financial instability, unemployment, underinvestment in the real sector, stagnation. When these consequences accumulate beyond a certain threshold and become clear, the remedy may be sought in self-regulation, regulation by law, or sheer financial repression.

The secular tendency towards a progressive financialisation of the economy has developed very slowly also because it has often been repressed for religious, ethical and political reasons. A case in point is the fight against the rate of interest in the ancient world and in the middle ages. Therefore, we observe periods of acceleration of the process when financial repression is relaxed and deceleration, even regression, of the process when financial repression is strengthened. The latter, however, never succeeded to interrupt the process for a long period of time.

Focusing on the period after the industrial revolution we observe two periods of acceleration of the process that have been defined as periods of financialisation in the strict sense, that is of a rapid structural change that has altered the functioning of capitalism. The 'first financialisation' occurred in the second half of the 19th century and the beginning of the Great Depression, while the 'second financialisation' started after the end of the Bretton Woods period (1971). Though their immediate causes, modalities and consequences are different being intertwined with the contemporaneous processes of their age, it is possible to find a few interesting analogies.

Let us first observe that the timing of the first and second financialisation broadly overlap with the timing of the first and second globalization (see Borghesi and Vercelli, 2008). This is not surprising since the process of financialisation may thrive only if the spatial constraints of exchange are removed while the process of globalization may be implemented to the extent that it is supported by internationalized finance.

Second, both the process of financialisation and globalization need a common permissive condition: the liberalization of cross-country flows of goods, services and capital. The first globalization and financialisation have been made possible by the systematic liberalization of the industrialized economies implemented since the fifth decade of the 19th century. The two processes have been interrupted and to some extent repressed in the Bretton Woods

period by the adoption of a policy strategy, influenced by Keynes, strengthening the public control on the economy and finance. The unilateral repeal by Nixon in 1971 of dollar convertibility started a new era soon characterized by the adoption of neoliberal policy strategies that greatly accelerated both the process of globalization and financialisation.

Third, both processes have been busted by the exigency of reacting to a tendential slowdown of growth and reduction of profits. In particular it has been observed that the financialisation of the economy is typical of the periods of decline of a long wave (Arrighi, 1994). This is confirmed by the two recent periods of financialisation. The first reacted to the long depression (1874-1896) that haunted the industrialized economies at the end of the 19th century, while the second reacted to the stagflation of the 1970s followed by the recession of the early 1980s and the subsequent slow growth of the period preceding the subprime crisis. The liberalization policies triggering the twin processes of globalization and financialisation aimed to increase profits and rates of growth that were jeopardized by a host of factors in the period considered.

The different views on money as technological and institutional structure rapidly sketched in the previous section are strictly related to different views on the process of financialisation. According to the classical mainstream point of view the process of financialisation is a physiological stage of evolution of capitalism spontaneously developed by the market to increase its efficiency. According to the Keynesian mainstream, financialisation is a stage of evolution of capitalism having both physiological and pathological aspects. According to the heterodox schools it is a pathological stage of evolution of capitalism that requires either its radical reform or its supersession. We have to analyze in some details the rationale and implications of these different understandings of the process of financialisation from the point of view of their sustainability. However, in order to analyze the nexus between financialisation and sustainability, we have to grasp in the first place the rationale and implications of different understandings of the crises the occurrence of which has been greatly affected by the process of financialisation itself.

PART TWO: From crisis to sustainability

The concept of crisis is strictly related to that of sustainability. A crisis is the interruption of a process or a radical change in its direction. Though the effects of a crisis may be temporary and reversible, their occurrence questions the sustainability of the process. This challenge may be more or less significant according to the nature of the crisis.

First of all we have to distinguish the typical crisis that characterizes one phase of business cycles and the “great crises” that are more rare but much more devastating and may be referred to as “long waves”. The time scale of the fluctuations to which the crisis is related is in the first case in the order of a few years (from about three to eight), in the second case of a few decades: as is well known the last ones happened in the 1930s (the Great Depression), in the 1970s (the Great Stagflation), and since 2007 (the Great Recession). Although from the point of view of the empirical evidence this distinction is accepted by most economists and economic historians, it plays very rarely an explicit role in economic theory. The main reason for this neglect is that mainstream theories do not have a general explanation for great crises that are seen as exceptions to be understood ex post case by case (black swans).

One of the few mainstream economists who made a clear distinction between the two categories of crisis and suggested two different theories to explain them is the late Fisher (1933). Also among heterodox economists it is difficult to find a full-fledged theory that explains both kinds of crises and why they occur. A remarkable exception is Minsky who explains why the business cycle tends to deteriorate in consequence of the growing temporal distance from the last great crisis and the progressive weakening of a new dramatic crisis fear (Minsky 1982).

6. Different visions and different understandings of the financial crises: business cycles crises

Let's first survey very briefly the main explanations of business cycle crises (henceforth “crises” tout court). They are part of business cycle theory. The crucial distinction is here

between exogenous causes and endogenous causes. The classical economists who believe in the self-regulating virtues of the market struggle to interpret the crises as the consequence of exogenous shocks perturbing the market equilibrium position. There are two versions of this point of view. According to the traditional point of view of 'classical' economists (in the sense of Keynes) the external shocks have the power of disturbing the stable equilibrium state or the equilibrium path of the economy. The usual business cycles are a balance between the disequilibrating effects of external shocks and the equilibrating effects of the market. According to the much more extreme new classical perspective foreshadowed by Frisch and then systematically adopted by Lucas and his followers the exogenous shocks do not have the power of displacing the economy from equilibrium but only to shift it.

Mainstream economics explains business cycles as the consequence of exogenous shocks perturbing a market that would be otherwise in equilibrium. The most extreme form of a purely exogenous business cycle is that first suggested by Frisch (1933) who claimed that exogenous shocks impinging on a stable system could produce persistent oscillations. He never gave a proof of this claim, however, and this eventually was shown to be wrong (see e.g. Chen, 2000).

This idea was revived by Lucas in the 1970s and provided the basic inspiration for his extremely influential "equilibrium business cycle" approach. However, in order to produce persistent wave-like oscillations he had to add in the model endogenous mechanisms, such as an acceleration principle and a mechanism of learning, that are inconsistent with his crucial assumption of persisting equilibrium (see Vercelli, 1991). Lucas and his followers claimed that the crucial explanation was provided by exogenous shocks: the endogenous propagation processes could play a role only if triggered by unexpected exogenous shocks. The Frisch-Lucas approach aims to show that a market economy always brings about optimal results that cannot be improved by exogenous interventions. On the contrary in this view counter-cyclical policies, as those implemented by Keynesian policymakers, cannot stabilize the economy but add further shocks that contribute to the observed instability.

The alternative view pursued by economists of Keynesian inspiration is that business cycles are endogenous processes occurring in disequilibrium. To the extent that this depends on systematic factors, this justifies countercyclical policies aimed to stabilize the economy.

An intermediate position was that of Friedman (1968). He analysed the propagation process in terms of correction of disequilibrium adaptive expectations, but in his view the process is triggered by the interference on the market of Keynesian policies. A predetermined, and thus predictable, monetary policy coupled with a laissez-faire policy strategy in all the other fields, would eliminate the impulses triggering the business cycle so that the economy would rapidly converge towards the equilibrium rate of growth corresponding to the natural rate of unemployment. The monetarist point of view was based on the classical principles (short-term non-neutrality and long term neutrality of money); since however these principles were shared also by mainstream Keynesians, the comparative assessment of the two theories in the end was discussed in terms of statistical or econometric parameters (relative stability of the monetary and real multipliers, and so on), a criticism strategy that proved to be weak and questionable. This is a crucial reason why Lucas struggled to provide in the 1970s different foundations, radically different from all the Keynesian schools including the “neoclassical synthesis”. Disequilibrium was declared meaningless and thus also the endogenous fluctuations and crises were defined as meaningless. The dominant approach in the last 30 years was unable to provide an explanation of great crises. That of the 1930s was ascribed to mistakes of the monetary policy that transformed a routine crisis in a great recession (Friedman and Schwarz, 1963) but its repetition was considered impossible since the policy authorities had learned from past mistakes.

After the successful New Classical Revolution, mainstream Keynesians (often called “new Keynesians”) tried to defend their policy conclusions showing that it was enough to introduce some plausible imperfections in the Lucas-style models to open the road to wealth improving policy interventions. As we have seen in section 2 this led to a new Consensus that became dominant in the decades or so before the Great Recession. However the New Consensus did not obtain the support of all the prominent New

Keynesians. Since the deep financial crisis in South East Asia that questioned the assumptions of the New Consensus, many of them took a point of view increasingly radical introducing in the analysis many structural and behavioural elements inconsistent with the Consensus approach (Stiglitz and Krugman are cases in point). Finally the consensus broke up completely during the Great Recession. As it was observed above, as has already happened in the 1930s and in the 1970s, great crises produce a radicalization of the different approaches.

7. Different understanding of the “great crises”

In order to explain the great crises we have to shift the focus from the synchronic point of view that characterizes the analyses of ordinary (business cycle) crises to the diachronic point of view. In most theories the second aspect is much less developed than the first one but is not altogether absent, at least from the normative point of view.

From the descriptive point of view a great crisis is typically seen by orthodox economists as a “black swan” that cannot be neither predicted nor controlled. In other words it is an exception to the sequence of white swans that characterize business cycles including their transient phase of mild crisis. However, the ultimate cause is seen in the gap between real markets and the ideal market of perfect competition since the latter is believed to be immune to crises, let alone great depressions. The normative implications rely on structural interventions meant to eliminate such a gap. Even mainstream economics cannot be simply identified with the maintenance of the status quo as it aims to establish a perfect competition economy through structural reforms. However this underlines the ultimate contradiction of such a theory: the application to the real markets of a theory that assumes perfect market competition.

The heterodox economists, being deeply aware of the deep chasm between real markets and the perfect-competition textbook model, tend to see the great crises as transition periods between two successive phases of capitalism. We may identify two variants that do not necessarily exclude each other. According to one point of view a great crisis is seen as a phase of long waves, fluctuations that have a much longer period than that of the business

cycle. This point of view may be christened as theory of the “grey swan” since is seen as a recurrent state typical of a long-run. The Kondratief cycle is the prototype of this view, adopted by Schumpeter and further developed by a few Schumpeterian scholars (see in particular Freeman, 2008; Perez, 2002, Goodwin, Di Matteo and Vercelli, 1989). In this view great crises are characterized by technological and institutional revolutions. A different point of view is that of Minsky who interprets the great crises as the consequence of financial fluctuations when the growing distance from the preceding great crisis induces their progressive degeneration bringing about the increasing financial fragility of the system.

Summing up, we may classify the different visions of great crises in three broad categories that span great part of the conceptual space of economic research. Each of them is an ideal-type that we believe useful to classify the main schools of thought with the proviso that none of them may be simply identified with the thought of single researchers with all their complexities and peculiarities.

According to the view that is typically entertained by mainstream economics, the recent great crisis, as the preceding ones, is seen as a black swan whose sight could not be predicted (Taleb, 2008). In their opinion events of this sort are extremely rare (“occur once in a century” as Greenspan asserted) but, in principle, there is nothing we can do to predict them and very little to prevent a new episode that however is likely to happen only in a distant future beyond our reach and responsibility. In this view, the problem is thus only that of getting out of the crisis as soon as possible resuming a sustained path of growth along the preceding lines.

According to the mainstream point of view economics is about regularities (white swans) while the great crises are black swans that are beyond the reach of economic theory. On the contrary, the critical point of view believes that the crisis is ubiquitous while the periods of steady growth and financial tranquillity are rare and short lived.

The second viewpoint sees this crisis as a typical phase of the fluctuating nature of capitalism and understands its peculiarities in terms of a theory of economic and financial fluctuations. We suggest to label this point of view as that of the grey swan to emphasize

that in this view the crisis is a recurrent phenomenon that characterizes a specific phase of the economic and financial cycle. (The metaphor is here based on the well-known fact that the colour grey characterizes a specific phase of the life cycle of each swan going from the birth to adulthood). The underlying laws have a limited degree of persistence that does not exclude recurrent, though not very regular. In this case the same underlying regularities may encompass both the periods of crisis and the periods of steady growth and financial tranquillity. Also the distinction between ordinary crises and great crises depends in this case on conditions largely endogenous to the above regularities.

According to the evolutionary point of view, this crisis is a particularly deep and persistent instance of an event that is ubiquitous in industrial and financial capitalism since its inception. Thus, in order to explain this crisis we have to understand the intrinsic features of capitalism and its evolution in the last two centuries. This point of view does not deny the specificities of the recent crisis but claims that even the latter may be understood - by difference and evolution - only on the basis of the common features (Reinhart and Rogoff, 2011; Gorton, 2008, 2009 and 2010).

Most heterodox economists combine the “grey swan” with the “evolutionary” points of view: great crises have something in common but their actual development depends on a host of structural and institutional circumstances that are different in different times and countries.

According to the black swan point of view the crisis is the consequence of exogenous factors, while according to the other two points of view the causes are essentially endogenous, what does not necessarily exclude a role for exogenous disturbances. The latter, however, are conceived not as random shocks having a small (in some version infinitesimal) size but as sizeable and historically determined shocks.

A finer classification should distinguish inside each of these three broad categories different variants but this goes beyond the scope of the present paper.

Obviously enough the different understandings of the great crises have radically different policy implications. We discuss them in section 8 exclusively in reference to the different concepts of sustainability surveyed in the next section.

8. Different concepts of sustainability associated to the paradigms analysed above

The great crises question the sustainability of the model of development that preceded it in a much more radical way than the shorter and milder crises associated to business cycles. In the history of Political Economy we find three basic concepts of sustainability: stability of a steady path, viable reproduction and resilience (or structural stability).

In neoclassical economics the only concept of sustainability is the very limited one of steady state. The classical economists had entertained a much broader concept of sustainability that took account also of the relationship between growth of food and population (in particular Malthus (1798), Ricardo (1817), Stuart Mill (1848) and Wickcell (1898)) and of the relationship between growth and the availability of energy sources (Jevons, 1865). This led them to believe that the only sustainable state is stationary. This point of view may be considered as the ancestor of the recent concept of sustainable development.

In the 19th century, however, the exponents of uncritical laissez faire maintained that unfettered markets would have spontaneously corrected whatever factors of unsustainability could emerge. This simplistic point of view became very influential with policy makers but was never shared by the most reputed economists of the century (with the possible exception of Say and Bastiat; see on this and related issues Robbins, 1952).

In the 19th century the broadest and most sophisticated analysis of sustainability of capitalistic growth may be found in Marx (1867, 1885). On this point there are many controversies and misunderstandings (see, e.g., Bellamy Foster, 2002). A widespread but ungrounded belief, probably inspired by the actual experience of 'real socialism', maintains that Marx's alleged narrow focus on economic conditions led him astray clouding the importance of sustainability conditions, in particular in their environmental dimension. The reproduction schemes are an analysis of the conditions under which the capitalist process may be seen as sustainable. Marx is however fully aware that the reductionist point of view of reproduction schemes is only the starting point of sustainability analysis. To study the latter one has to investigate also the conditions of reproduction of social relations as well as of the relations between the capitalist process and nature. The social relations are increasingly unsustainable in capitalism as they are increasingly submitted to mercantile

relations and therefore alienated from their sources. The relationship between individuals and society on one side and nature on the other side is also progressively submitted to the market logic as use value becomes increasingly subordinated to exchange value. In this view the unsustainability of capitalism is thus not so much related to the tendential fall of the rate of profit but also to a much more comprehensive analysis of the complex relationships between individuals, society and nature. For these reasons the Marxian insights on sustainability are still a source of inspiration.

At the turn of the century the updated liberalism of Marshall and his followers (in particular Pigou, 1920) clarified why the markets cannot in principle realize the optimal allocation of natural resources: the widespread existence of externalities, i.e. costs and benefits that are not registered by the market. Their existence is implied by the incompleteness of markets and brings about market failures which jeopardize the sustainability of development. Only their thorough internalization would allow the market to make its job. This basic insight still provides the foundations of environmental economics that developed since the late 1960s.

Keynes pointed out a different, macroscopic, market failure: the inability of unfettered markets to keep or quickly restore full employment. Within the subsequent Keynesian schools sustainability will assume the meaning of full employment steady growth that requires apt counter-cyclical measures. The opponents of Keynesianism maintained instead that unfettered markets are able to sustain a continuous process of full-employment steady growth. As for social and environmental sustainability the Keynesian paradigm struggled to integrate them within its models introducing the analysis of the environmental and social externalities. The new Classical paradigm maintained that unfettered markets didn't need social and environmental policies to improve the welfare of citizens.

The hegemony of the New Classical schools since the 1970s led to a widespread confusion between (sustainable) growth and (sustainable) development shared also by many (not all) Keynesian economists. This confusion is based on five crucial assumptions. First it is assumed that per capita income is a fairly reliable measure of individual welfare. Second, as for social sustainability, it is assumed that the inequality of income may be increased by

the process of modernization but in the long period recedes as a consequence of the process of growth according to the 'Kuznets Curve' introduced by Kuznets (1955). As for poverty it is believed that the distribution of income is substantially invariant so that poverty may be reduced only by increasing aggregate income. As for environmental sustainability it is claimed that the process of modernization may increase the negative impact on the environment in the short period but this trend will be eventually reversed by the process of growth (environmental Kuznets curve: see, e.g., the critical survey in Borghesi and Vercelli, 2008). It is possible to show that all these widespread beliefs are not supported by the available evidence (ibidem).

PART THREE

In this final part of the paper we connect the results obtained in the two preceding parts discussing the foundations and implications of the main understandings of the interaction between financialisation and sustainability and their policy implications. We consider first the main paradigms from the synchronic point of view (section 9) and then from the diachronic point of view (section 10). Section 11 concludes.

9. Different synchronic views on the interaction between financialisation and sustainability and their policy implications

We have to distinguish here, as we did before, two basic points of view; synchronic and diachronic, and three main “visions”: the orthodox “black swan” point of view, the heterodox “grey swan” point of view, and the evolutionary perspective that may be orthodox or heterodox. Within the “black swan” point of view we distinguish as main branches between mainstream (neo and new) classical economics, the (neo and new synthesis) Keynesian point of view and (neoclassical) environmental economics.

According to mainstream classical economics the process of financialisation does not jeopardize the sustainability of the system (in the narrow sense of steady growth) provided that financial innovation is introduced and developed by the market. The sustainability of steady growth is undermined by the unjustified interference of policy makers and market supervisors. We have to distinguish, however, two streams that have different policy implications. The fundamentalist point of view that sticks to the optimality of unfettered markets, and in particular the efficiency of financial markets, rejects any form of bailout even in favour of the biggest and most connected banks and argues in favour of budget orthodoxy under all circumstances including a great crisis. The pragmatist point of view maintains that great crises occur under extreme circumstances and require extreme remedies. In particular to bailout the banks too big, and/or too interconnected, to fail in order to abort the process of financial contagion, is believed to be justified. Analogously the adoption by the central bank of a policy of abundant provision of liquidity to the private

sector even through unorthodox measures (such as the quantitative easing techniques recently adopted) is also believed to be justified.

According to the Neoclassical Synthesis we have to distinguish the positive consequences of the financialisation process from its negative implications. In this view the process of financialisation has significantly increased assets liquidity and the efficiency of the investment process as underlined by the Tobin Q theory (first suggested by Brainard and Tobin, 1968) but, at the same time, has increased the instability of the system that may permanently oscillate around a position characterized by involuntary unemployment. This depends mainly on the increasing weight of speculation fed by continuous financial innovation. Sustainability conceived as full-employment steady growth is thus seriously impaired by market-led financialisation. The remedy is seen in a series of policy measures aiming to keep full employment, or restore it, through counter-cyclical policies and financial repression: stricter supervision and control, Tobin tax (see in particular Tobin, 1978).

According to (neoclassical) environmental economics the sustainability of development (often confused also in this case with steady growth) is jeopardized by externalities that depend on incompleteness of markets. The role of the process of financialisation seen from this point of view is ambiguous since it tends to complete markets reducing, in this view, the relevant externalities and relaxing the limits to growth. Financial innovation is seen as potentially beneficial as it may give a price to sources of external effects (e.g. carbon) that otherwise would not have one. At the same time the process of financialisation may be a source of new negative externalities distorting growth towards short-term objectives. The emphasis of environmental economics is on the internalization of environmental externalities and on the use of financial markets to improve this process. Internalization is sought through green taxation and/or tradable permits systems (such as the European carbon permit system).

Within the grey swan point of view the great crises are recurring, though rare, episodes marking the end of long historical phases or long cycles. In these cases development may

be sustained only through a comprehensive structural change able to sustain a new phase, or cycle, of development.

A case in point is Schumpeter who understands great crises as crucial turning points of long (or Kondratief) waves (Schumpeter, 1911; Goodwin et al., 1978; Perez, 2002). In these cases development may be resumed only through a technological and institutional revolution that establishes a new model of development. Finance plays a crucial role in facilitating this radical structural change, provided that credit goes to innovating entrepreneurs. The process of financialisation does not seem however to have improved this role of the financial system.

Also Minsky has a long-wave interpretation of great crises (Minsky, 1982 and 1986). Business cycles are typically characterized by financial crises at the end of the boom. They are mild after a great crisis since the fear of a new one is still alert, but the more the latest great crisis recedes in time and in the memory of decision makers, the more the germs of a new severe crisis become ripe for a new crisis.

10. Different diachronic views on the interaction between financialisation and sustainability and their policy implications

The deeper is a great crisis the more it is associated with the need of a radical reform of capitalism to assure its sustainability.

Heterodox economists interpret the ultimate cause of the crisis as the consequence of market failures aggravated by the orthodox policies of privatization, deregulation and austerity implemented by policy makers. The way out is seen in radical reforms that modify the working of the economy. The nature of these reforms depends on the complex intertwining between the scientific vision of each scholar (and decision maker) and his political vision. A satisfactory analysis of this nexus and a taxonomy of the main ensuing paradigms would require an extensive investigation going much beyond the limits of this paper. Therefore we will limit here the analysis to some hints to Marx and Keynes

Marx saw only the beginning of the first financialisation and still he grasped many of its implications for the sustainability of capitalism. The basic contradictions introduced by

money in a mercantile system, higher efficiency and flexibility of the exchanges network accompanied by a growing potential of disequilibrium, instability and crises, reaches unprecedented degrees of intensity that pave the way to the breakdown of capitalism. The process of financialisation may counteract in the short period the tendency to a fall in the rate of profit but only by strengthening the tendency to increasingly catastrophic financial crises. As is well known some followers of Keynes systematically developed insights contained in Marx's writings interpreting Finance Capital as the last stage of Capitalism (see in particular Hilferding, 1910, mentioned above). Marx also understood the strict link between financialisation and globalization as promoted by imperialist powers in the 19th century (see Lenin, 1917), a link that has been confirmed, though in a different form, by the recent 2nd financialisation process. The consequences of Marx's analysis are uncompromisingly radical. A sustainable process of flourishing of the human potential requires the abandonment of capitalism and the instauration of a different, socialist, mode of production.

According to Keynes himself and his more uncompromising followers, free-market capitalism cannot survive without radical reforms that mend the most macroscopic and intolerable market failure: the inability of the unregulated capitalist market to reach and maintain full employment. The unsustainability of steady full employment growth depends on the monetary nature of capitalism and is progressively aggravated by the unchecked process of financialisation. Sustainable full employment growth may be reached through a radical reform of the policy strategy aiming to tame financialisation through fiscal repression accompanied by better regulation and supervision. The control of the process of financialisation must be complemented, on the side of the real economy, by countercyclical policies, socialization of investment, redistribution of income in favour of the poor, the progressive build-up of an efficient welfare state. Of course Keynes did not see with his eyes the recent process of financialisation (that is also called as second financialisation) but his analysis of the consequences of financialisation, as developed in particular in chapter 12 and 17 of the *General Theory* (Keynes, 1936), was surprisingly forward looking

and fits the current world as shaped by the second financialisation even more than the pre-WW2 world as moulded by the first financialisation.

The scope of Keynes's and Marx's analysis was not restricted to the economic aspects of society as some followers or critics seemed to suggest. The social aspects are of course central in Marx but play a crucial role also in Keynes. Though the environmental aspects of their analysis have been almost completely neglected by most their followers, we find in their writings, particularly in Marx, important insights that the recent sustainability approach has rediscovered and further developed.

In particular ecological economics has clarified that the development of capitalism as we know it is inconsistent with the preservation of the fundamental equilibria of the biosphere. This point of view, differently from that of (neoclassical) environmental economics is sceptical on the contribution that economic and financial market instruments may provide to establish a new relation, sustainable even in the very long run, between the economic and financial system on one side and the biosphere on the other side.

Also mainstream economists emphasize the nexus between a great crisis and the structural features of capitalism and often advocate more or less radical structural reforms to reduce the risk of a new great crisis or to mitigate its effects. Most of them in this case emphasize that the real markets are quite different from perfect competition markets and require reforms that reduce this crucial gap. We have to distinguish, however, between fundamentalist and pragmatist mainstream economists. According to the fundamentalists the ultimate cause of the crisis is related to the persistent interference of the state on the markets that continues to distort their functioning. Therefore the ultimate remedy to escape from the crisis preventing new ones in the future is seen in a further, much more radical, liberalization and deregulation of markets. To the extent that public intervention is required (mainly in the fields of defence and justice) the discretionary power of policy authorities should be limited as far as possible by strict rules based upon monetary and budget orthodoxy. In particular the fundamentalists insist on the necessity of an effective market discipline that excludes any sort of bailout of virtually bankrupted units, even in the case of too big to fail banks. Pragmatist mainstream economists are more

focused on the immediate resumption of growth in the business-as-usual version and to obtain this result are prepared to compromise with their neo-liberal principles advocating the bailout of big financial firms, public support to the economy, unorthodox monetary measures. In both cases the structural reforms advocated by mainstream economists go thus in a direction that is opposite to that advocated by heterodox economists. However the existing markets are considered by pragmatist mainstream economists as a good approximation to competitive markets, good enough by any rate to justify the confidence in their ability to recover a satisfactory steady growth in the near future.

11. Concluding Remarks

The complex taxonomy of the main different meanings that have been attributed to money, financialisation, crisis, sustainability and their mutual correspondences has shown that the “vision” (general paradigm) of the capitalist process and its long-term evolution matters as it affects the socio-economic theories suggested to understand and control it. We emphasize that the vision matters not only in the pre-analytic stage of research, as maintained by Schumpeter, but also in the analytic stage that pretends to be independent of such broad pre-conceptions.

On the specific, though very broad, object of this research this approach may be illuminating but raises more questions than it is able to answer. In particular, what do we mean by crisis (in particular in the case of a great crisis)? What do we mean by financialisation? What do we mean by sustainability? The different meanings of these and other related key-words are chosen by researchers and decision makers according to their vision of the capitalist process and lead them to divergent conclusions on the connections between finance and sustainability.

The awareness of the complex set of cognitive and pragmatic options may be alerted by a taxonomic approach such as that pursued in this paper and is important for many reasons.

First of all it could foster communication and mutual understanding. Second it could promote scientific and political pluralism. And finally it may play the role of an antidote to the authoritarian and depressive belief that 'there is no alternative'.

In the light of the critical survey outlined in this paper we have no excuse to the pursuit of better alternatives in economics and finance that may guarantee economic, social and environmental sustainability.

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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?'

THE PARTNERS IN THE CONSORTIUM ARE:

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

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