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The sustainability of a creative-finance-led economy

A. Bianco and P.M. Piacentini
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Antonio Bianco and Paolo M. Piacentini

DISSE, Sapienza University of Rome

Abstract

Six great trends have characterized the evolution of mature capitalist economies in the recent decades: 1. successful efforts to lower inflation from the levels of the 1970s; 2. Real growth significantly lower as compared to early post-WW2 decades; 3. a greater frequency in financial instability episodes; 4. the so-called "financialization" of the economic system; 5. rising inequalities in income and wealth distribution; 6. the escalation of "creative" finance. Specialist contributions have offered empirical evidences and analytical arguments on each of these topics, yet a comprehensive approach is still in a preliminary phase. Without excessive ambitions, our contribution pursues this direction. After a selection of stylized facts for the great trends (Section 1), we consider the principle of shareholder value as the fundamental ideological bias at work behind them (Section 2). In our proposed interpretation (Section 3), the reversal of the intermediation structure, associated with creative finance, may have a pivotal role in the construction of a comprehensive approach, as the diverse channels of its possible adverse effects on the real economy may subsequently account for the other stylized facts. We then point at two "limits" to the expansion of creative finance (Section 4): a “Kaleckian limit” and a “Minskian limit”. Section 5 resumes, with some hints at central banking.

Key words: financialization, creative finance, real economy.

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Contact details: bia.anto@gmail.com, paolo.piacentini@uniroma1.it

Website: www.fessud.eu
Introduction

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2. real-growth significantly lower as compared to early post-WW2 decades;
3. a greater frequency in financial instability episodes;
4. the so-called “financialization” of the economic system;
5. rising inequalities in income and wealth distribution;
6. the escalation of “creative” finance.

Specialist contributions have offered empirical evidences and analytical arguments on each of these topics, yet a comprehensive approach is still in a preliminary phase; yet, without excessive ambitions, our contribution pursues this direction. After a selection of stylized facts for the great trends (Section 1), we consider the principle of shareholder value as the fundamental ideological bias at work behind them (Section 2). In our proposed interpretation (Section 3), the reversal of the intermediation structure, associated with creative finance, may have a pivotal role in the construction of a comprehensive approach, as the diverse channels of its possible adverse effects on the real economy may subsequently account for the other stylized facts. We then point at two “limits” to the expansion of creative finance (Section 4): a “Kaleckian limit”, which may arise from the demand-side of a current income-expenditure flow, with the real sector unable to support the realization of the incomes expected by the financial sector; then a “Minskian limit”, which is relative to the sequences of “booms and busts” that may arise when the reasonable balance between lenders’ expected returns and debtors’ refunding capabilities has been altered. Section 5 resumes, with some hints at central banking.

1. Stylized facts.

Since the late 1970s, inflation control has been the main concern of monetary policy. Behind the erosion of nominal values, the conservative opinion in the economic and
political establishment hinted at the control over the dynamics of income distribution\(^1\). As shown by the following table, most countries had carried disinflation through by the end of the millennium (Table 1). Yet, the mainstream view that nominal stability were per se a sufficient condition of steadier and higher real growth was broadly falsified (Table 2): consolidated expectations of nominal stability are not sufficient to assure that loanable funds are channelled into long-term investment options. Accordingly, we turn our attention to the role of power shifts among the stakeholders, and the place of modern finance in the macroeconomic environment.

The deregulation\(^2\) of the financial environment has implied a (broadly unexpected) rise of the frequency of instability episodes, in particular those due to disruptions in short-term credit supply (the ‘sudden stops’\(^3\) in Table 3). In order to understand this second normative flaw (cf. Section 2), the issues of the “financialization” debate cannot be ignored. As an encompassing term for the attributes of capitalist regimes sorted out of a neo-liberal agenda, “financialization” is surely an efficacious, albeit too general, notion. Diverse accounts of its associated phenomena are available\(^4\). As for a definition, Epstein’s seems quite appropriate – “financialization is defined as the increasing role of financial motive, financial actors and financial institutions in the operation of the domestic and the international economies” (2005: 3) – as it highlights the basic idea of a subordination of the non-financial sector to the interests of the financial one\(^5\). Boyer (2000) provided the seminal model of a finance-led accumulation regime (vs. the previous “Fordist” regime).

Several indicators may be used to show the rise in financial values (relative to GDP) implied by financialization. Here, we suggest the ratio of outstanding debt securities to the issuer’s country GDP (Table 4). Interestingly, these values include only debt securities (private and public), without accounting for derivatives. Despite their patent understatement, these ratios do hint at that fundamental decoupling between the growth of the financial and the real assets stock that is otherwise observed between the macroeconomic accumulation and the profit rates (e.g. van Treek, 2009) (see Table 5).
A good deal of literature has stressed the importance of management and regulation strategies based on the so-called shareholder value. Quite obviously, these implied a polarisation of income distribution, with top deciles (or centiles) earmarking almost all increases in aggregate income. As summary evidence, in Table 6 we report estimates of Gini coefficients for different countries. A new, dual divide appears emerging in the society, between the Haves, who earn financial incomes, and the Have nots, who rely on labour incomes only. Given the recent dynamics of financial and labour incomes, such a divide may not differ much from the Ancien Régime condition (Landowner vs. Landless).

This divide is well reflected in Figure 1, borrowed from Shin (2010: 169). This shows:

1. an abnormal growth, since the 1980s, of securities broker dealers’ revenues relative to other sectors (commercial banks, households, non-financial firms);
2. a substantial coherence of the dynamics of traditional incomes vs. the explosion of revenues associated with modern financial procedures, in particular with the increasing recourse to non-banking, “creative” financial procedures.

As documented by Shin (2010: 152-7), since the 1980s there has been a spectacular growth (circa 45 times from 1980-Q1 to 2008-Q1) in the stock of home mortgages hold by market-based (non-banking) firms as compared to bank-based (circa 5 times). This is logically and numerically coherent with the relative growth as documented in Figure 1. Accordingly, in what follows we explore the possibility to build a comprehensive approach to the six great trends by considering the rise of creative finance as the main driver of the current phenomenology of financial dominance.

2. From high-inflation to low-regulation: the shareholder value.

After the Great Depression, almost all countries dropped the 19th century lax regulation on capital flows and financial intermediation. In a world where the memory of economic and social crises was so vivid, political regulation was inclined to hamper “speculation” (short-
term trading) so to avoid repetition of interwar conditions and social strife. The legal approach to economic issues was oriented toward the harmonization of the common interests of the stakeholders. This played an important role in promoting the sustained growth and robust stability that characterized the post-WW2 period up to the 1970s.

The crisis of the Fordist regime set off as the USA faced the unexpected duration of the Vietnam War. In the Bretton Woods monetary context, its associated costs resulted in a widespread monetization of the US trade and fiscal deficits. While revitalizing international speculation, this global surge in money supply was not, as monetarists might suppose, the actual trigger of high inflation. High inflation was rather linked (in a vicious circle) to the exchange rate volatility started by the end of Bretton Woods: putting a peg of uncertainty on international trade plans, the Nixon Shock of mid-August 1971 had kick-started a ‘flight to quality’ on commodities, especially oil reserves.

In the new *stagflationary* context, the avalanche of petrodollars found no adequate room for loans to the real economy. The shortage of banking *débouchés* encouraged financial operators to engage in new forms of intermediation, more oriented to value *protection* than value creation: *securitization* procedures were the primary instruments of *non-banking* intermediation. Already in 1987, H. Minsky suggested that securitization was changing the rules of the game of economic policy.

The mainstream of economic research, however, kept on focusing on price-stability, with a benign neglect of the financial system. Broadly speaking, the IS-LM relations were boiled into the AD, where inflation depresses growth. This view was then prefaced by the AS relation, stating that inflation is caused, via cost-push forces in the labour market, by growth itself. The moral was that factors markets deregulation, to repress any cost-push pressure on the supply-side, ought to be the prime object of public policy.

This theoretical strategy relied on a *post hoc ergo propter hoc* line of reasoning, *hoc* being inflation, and resulted in a “new classical” approach based on the principle of certainty-equivalence (rational expectations), which is a dogmatic extension of an earlier notion of
superiority of private over public knowledge. The resulting view of the economic system was radically “Leibnizian” and the life of economists much simplified, as they were allowed to pay no heed to the consequences of policies over market uncertainty⁹. That is how the conditions of Paretian optimality became the benchmark of the progress, “deregulate!” the first commandment, “greed is good!” the social urge.

All through the 1980s financial deregulation made huge steps. The political argument for financial laissez-faire was very simple: “if free trade is generally desirable, then what is wrong with free trade in the financial services sector?” (Dowd, 1996: 679). The view that unregulated finance was the appropriate frame to achieve also financial stability rested on the economic argument that “with no lending of last resort or state-run deposit insurance system, depositors would be acutely aware that they stood to lose their deposits if their bank failed” (ib.: 681). An acute awareness shall induce banks to avoid moral hazard and stick to long-term expectations and incentives. Free banking shall discourage herd behaviour so to result in a stabilizing (anti-cyclical) pressure to the whole system. This economic argument was also called “the Greenspan doctrine” and inspired all those “structural reforms” to make the financial market ‘open access’.

The argument was just an application of an earlier and more general “Leibnizian” doctrine that economic welfare shall be enhanced, always and everywhere, by reducing “frictions” to the pursuit of shareholder value. It was the raw material of the three pillars of the “New political economy”: Ricardian equivalence for fiscal policy, inflation-targeting for monetary policy¹⁰, Value-at-Risk (a measure of proprietary risk only) as the measure of market risk in the Basel framework for financial regulation. All in all, the Efficient Market Hypothesis (EMH) can be deemed the paradigm of the Leibnizian approach to policy issues. The EMH essentially rephrases the first theorem of welfare economics, as certainty-equivalence enables to suppose that market prices reflect all available relevant information. As learning-latency can reasonably be expected to be lower in private than in public decision-making, the public protection of collective interests (financial stability among them) is deemed “inefficient” by default.
3. From banking loans to ABS trading: the reversal of intermediation.

Extensive evidence contradicts the free-banking argument that financial liberalization lengthens the time-horizon of the prevailing incentives: actually, the average maturities and holding periods of financial intermediaries’ operations have shortened to near-zero levels. An interplay of IT progress (abating the costs of learning procedures, i.e., the costs to monitor unexpected outcomes and elaborate reactions) and financial deregulation (removing the post-war curbs on short-term capital movements and highly leveraged positions) has resulted in the colonization of financial markets by platforms of electronic trading, in a rise of leveraged positions, and in a drastic shortening of the decision horizon of the average investor.

The actual shape of this interplay was also influenced by the pragmatic need to manage the after effects of the monetarist experiment on the financial system: expectations of a high long-term cost of money encouraging short-term gain strategies, financial operators increasingly moved from fund-income to fee-income strategies, particularly by way of securitization procedures (Minsky and Wray, 2008: 3). That is how the financial system was colonized by procedures of “creative” (non-banking) finance, whose primary “creations” are asset-backed securities (ABSs). Whereas a banking intermediary extracts fund-income from her debtors’ future streams of income, a creative intermediary extracts fee-income as a trading profit on securities collateralized by his own future streams of income (from the underlying assets).

As ABSs are the better tradable the more the market deems them liquid, i.e., “more certainly realizable at short notice without loss” (Keynes, 1930: 67), financial institutions issuing ABSs have a strong interest in enforcing a market belief that their creations are structured in a secure way, i.e., that the “securitization” service is performed employing highly solvent underlying assets. Financial firms are thus bound to engage in a sensitive protection (hedging) of their assets’ value. That is why, by the mid of the 1980s, strategies and instruments of portfolio insurance became a central element of the market structure.
and a critical factor for its stability (Brady Commission, 1988). Among them, *dynamic hedging* (Taleb, 1997) played a pivotal role. Hedging “dynamically” means to adjust position (to price variations), continuously and as fast as possible, by replicating the value of an appropriate option through a combination of cash and (blue-chip) security.

Fast risk-management obviously fed short-termism. In traditional “banking” intermediation, the maturity of managed funds is typically lengthened: as fund-incomes rely on the capability to manage measurable and non-measurable risks, so the dynamics of banking loans leans on *low-frequency* (i.e., long-term) incentives. On the other side, “creative” intermediation does typically shorten the average maturity of managed funds: as fee-incomes rely on a capability to *compete on speed* (i.e., on the “financial engineering” of sole measured risks), so trading operations lean on *high-frequency* (i.e., short-term) incentives. Portfolio insurance strategies are no else than the modern analogue of what Keynes (1936: 155) referred to as “to beat the gun”; yet, this is no more a question “to outwit the crowd, and to pass the bad, or depreciating, half-crown to the other fellow”, but to dispose of the fastest hardware and algorithm to generate and process orders.

The effects of creative finance can be assessed by a comparison of the intermediation chains implied by the two models (low vs. high frequency). Given an asset at the beginning of the chain, we focus on its repercussions along the balance sheets of successive links. Besides on Minsky’s 1987 notes (now in Minsky and Wray, 2008), our exercise is based on Shin’s chains (2010: 101) and his (quite Kaleckian) point (ib.: 110-13) that credit to non-intermediaries is financially based on the intermediaries’ equity and non-intermediaries’ loans to intermediaries. To stress our further points, we simplify things by disregarding equity and bank reserves (infinite leverage), and assuming constant fee-income (net assets).

In banking finance (Figure 2) the intermediaries’ job is to employ a given stock of liabilities (depositors’ savings) in order to extract a fund-income. As banks borrow short and lend
long, they act as *liquidity providers* to the final debtor, and the intermediation chain is functionally short. In creative finance (Figure 3), instead, financial operators issue and trade (originate-to-distribute) new liabilities in order to extract fee-income. The creative process can go on indefinitely (first row) but, for sake of portfolio insurance, the creative process is bound (the faster the more uncertain is the financial environment) to glide in ultra-short credit markets (second row).

The critical aspect of creative finance (overlooked by Shin) is a fundamental change in the structure of its intermediation chain: now, the first link is a final *debtor*. This is associated with a tendency to the shortening of average maturities because the higher the layering of ABSs, the more liquid underlying assets are needed to sustain the marketability of new issuances\(^\text{17}\). At the end of the (virtually unending) chain there is a form of “money”\(^\text{18}\) that is possibly available to quit the circuit of creative finance and be channelled into traditional banking intermediation.

Although a rough outline, our illustrations (Figure 2 and Figure 3) allow to hint at the distributional effects of “financialization” (interpreted as the rise of creative finance) quite well. In our view, four “channels” are particularly relevant for their effects on the real economy. We label them as follows:

1. long-chain channel,
2. hand-over channel,
3. debtor-first channel,
4. pro-cyclicality channel.

1. *The long-chain channel.* To the extent that it results in a lengthening of the chain, creative finance is likely to produce an adverse net effect on credit allocation to the real sector as well as on income allocation to the final creditor. The benefits of the increase in the global value of marketable assets (credit relations)\(^\text{19}\) are confined within the financial sector. In our example, while banking finance warrants a majority share (100/190) of gross credit to the final debtor (real economy), creative finance a minority share (a warranted-
potential range of 100-140/490). While banking finance warrants a majority share (90/100) of total income to the final creditor, creative finance a minority share (40/100). Conversely, intermediaries’ incomes rise from a minority (10/100) to a majority share (60/100).

2. The hand-over channel. To the extent that it results in a shortening of average maturities and holding periods, the high-frequency strategies associated with creative intermediation can hardly enhance credit to the construction of new productive capacity. Long-term investments indeed typically require instruments whose maturity is long enough as to assure the continuity of credit over the whole time span of required anticipations (from the start-up till the break-even point).

3. The debtor-first channel. The fact that in creative intermediation the final debtor is the first link of the chain highlights Epstein’s defining fact of financialization, i.e., the dominance of financial motives over real investments. The driver of the actualization of a real project is no longer a consensus between entrepreneur and banker about its profitability (i.e., its banking solvency), but the sole financer’s judgment about its liquidity as an asset in his own portfolio. These three channels can be jointly considered under the light of so-called High Frequency Trading (HFT), a label for the extreme and most relevant case of low-latency, automated trading. The intuition behind HFT is that betting on the conservation of the existing prices (statistical arbitrage) is more profitable the more “sensitively” the portfolio is managed (i.e., the faster it is adjusted). At market closure (i.e., overnight), HFT funds characteristically reach a flat position (all cash). From the perspective of who is betting on the innovation of the correlations – typically an entrepreneur (in the real sector), the final debtor of our illustrations – HFT funds are liquidity consumers.

4. The pro-cyclicality channel. The fourth adverse effect is indirect yet pregnant: to the extent that it encourages high-frequency strategies, creative finance is a momentous factor of financial instability and, via an uncertainty effect, of real growth compression. To our knowledge, the point that high-frequency strategies implied financial instability was
first made by Pantaleoni in his 1911-12 seminars. He argued that, as they can hardly verify new information, fast traders are prone to overstate short-term incentives, i.e., to interpret all variation in asset prices as a variation in fundamentals\(^{23}\). This implies that their demand follows a rule that is opposite to the stabilizing, classical law (buy cheap, sell dear).

Shin – now Head of Research at the BIS – put the “buy dear, sell cheap” dynamics\(^{24}\) implied by portfolio insurance strategies at the core of his interpretation of the financial risk. Shin’s point is that automated risk management is pro-cyclical as it is prone to read any variation in asset prices as a variation in risk premia. Shin (2010) maintains that each and every adoption of \(i\) mark-to-market as legal benchmark for fair value conventions (ibid.: ch. 1), \(ii\) Value-at-Risk (a measure of proprietary risk) as the Basel measure of credit risk (ibid.: chs. 2, 7), and \(iii\) Black-Scholes techniques of portfolio insurance (ibid.: ch. 4), embedded a pro-cyclical impulse resulting in an amplifying effect on the financial cycle. We here merely add that these “reforms”, so long as they have added volatility to equity and credit markets, they have also indirectly – but surely – added artificial uncertainty into the real economy.

4. The real limits to financialization: the decoupling.

The break of the “Fordist compromise” has involved a reshaping of the distribution pyramid adverse to middle-low quintiles and advantageous for restricted minorities only. At the same time, the spread of creative finance procedures has led to a marginalization of traditional banking strategies. A crucial question to be addressed in a comprehensive research agenda on financialization is the macro-sustainability of these trends.

The fragility of a creative-finance-led growth regime may be argued upon two levels of analysis, one related to the flow-side of macroeconomic activity, the other to its stock-
side. As for the flow-side, in order to explore the impact of creative finance on distribution, we start up with the Kaleckian identity for expenditure and income flows:

$$C_W + C_I + I + X = Y_W + \Pi + T.$$

On the left, there are the components of aggregate expenditure (consumption out of wages or profits, gross investment, and exogenous components as the sum $X$ of public expenditure and net exports); on the right, the components of aggregate income (wages, profits and tax revenues). With $Y_W = C_W$ standing for the original Kaleckian assumption (zero workers' savings), and $B = X - T$ for the net contribution to aggregate demand by the public sector and foreign trade, the identity can be simplified to:

$$C_n + I + B = \Pi.$$

The Kaleckian intuition is that, in the main, profit incomes are to be sustained (or "realized", a term of Marxian reminiscence) by the expenditure coming out from the side of the same profit-earners ($C_n + I$).

As a shareholder-value-oriented regime aims at raising the quota of gross profits appropriated by the proprietary interest (including the extra-remunerations of managers dedicated to the latter), an increasing part of $I$ is to be financed out of debt. Procedures of creative finance are liable to raise gross credit, but also to retain increasing portions of resources potentially available for investment: the redistribution of income from labour to profits will thus add a leakage\(^2\) amounting to the intermediaries' fee-incomes\(^2\).

If we allow for some saving out of wages ($S_W = Y_W - C_W$), we can rewrite the identity as:

$$\left(Y_W - S_W\right) + C_n + I + X = Y_W + \Pi + T.$$

Having an adverse effect on current profits, $S_W$ is a further source of leakage in the income/expenditure circular flow. The specular implication that a fall in $S_W$ would enhance profits in the short-run is highly evocative of the ways advanced economies have actually performed during the roaring years of financialization, especially the US. Finally,
as for the components of the exogenous expenditure, orthodox views upon fiscal austerity do not leave much room for deficit spending. It is then not casual that success stories in growth performance, where the internal components of demand are constrained (wage moderation, etc.), have always relied on export-led growth strategies (Asian countries, Germany). Accordingly, the sustainability of a creative-finance-led growth would eventually call for a macroeconomic regime that is either Mercantilistic (export-led), or Malthusian (demand sustained by opulent consumption).

Literature inspired by Kaleckian hypotheses generally predicts “stagnationist” implications out of the distributive trends associated with financialization (labour penalization, decline in firms’ retention rates). This “underconsumptionist” conclusion may be overcome only if we add additional behavioural hypotheses affecting the spending propensities. Wealth effects should be introduced, inducing either a higher propensity to luxury consumption, or a profit-expectations-propelled rise in the entrepreneur’s animal spirits.

If the rentier’s consumption is important, demand compensation and profit realization may be sustained in the short-term, but as for real accumulation and growth the same does not necessarily apply: a “high profit and low growth” regime may arise. A finance-led growth may become viable only if wealth effects and promising profit expectations excite the animal spirits. In Boyer’s [2000] seminal contribution, a finance-led growth regime may substitute the previous Fordist regime, but this result is produced only out of ad hoc values for demand and supply elasticities.

As for the stock-dimension (supply and demand for stores of value), trends in distribution and regulation (e.g., the downsizing of public retirement schemes obliging households to increasingly entrust savings to private funds), have fed the demand for items in the so-called “coupon pool”, i.e., “all coupon investment opportunities, including bonds, venture capital and securitized paper” (Froud et al, 2002: 778). A stock-aspect of decoupling
between financial and real values has occurred, with assets prices sustained by demand for portfolio hedging instruments *even in a period of real stagnation*. How can the aggregate value of the coupons inflate without limit, without eventually triggering re-coupling mechanisms arising from the real side? In our view, this question (the real limits to the financial valorisation) is decisive to make sense of the evolution of mature capitalism. We ask, then, if and how values of diverse forms of stores of wealth might be affected by negative evolution in the real side of the economy.

a) Equities and obligations: their market valuation is based on expectations about their issuers’ profitability and solvency. When negative events in some market segment interrupt repayments out of some underlying asset, forced sales by operators having to meet liabilities in the shorter term out of their leveraged position may trigger further depreciations possibly contagious to other markets. Something like a “Minsky moment” may occur: attempts at hedging portfolios contribute to an increasing distrust about the liquidity of assets on offer, and eventually lead to a “sudden stop”. In Marxian terms, the surplus generated by the economy may be insufficient to satisfy all the claims of “monetary capitalists”, revealing that some assets were “fictitious” capital.

b) Real stores of value: when market confidence upon financial claims is shrinking, demand may increasingly turn to direct or indirect (through shares of specialized funds) ownership of real wealth (e.g., real estate, commodities, gold). The fact that real-estate bubbles do bust reminds us that scarcity is a time-relative concept: initial excesses of stock-demand may bring to excesses of a flow-supply later, with bubble deflation. Only exceptions are those goods with an intrinsic low elasticity of production and substitution (e.g., unique masterpieces and particularly valuable properties). These items are, normally, at the reach of the happy few with large liquid position (“sovereign” funds, etc.), so that alarming dominant positions may follow. The moral about relative protection from real events for wealth invested on scarcities may refer to Keynes: really scarce goods need to have, in the longer run, “low elasticity of production and substitution and low...
carrying-costs” (1936: 238). Only in these (quite delimited) cases, the value of wealth may remain relatively unaffected by the dynamics of the real sphere\(^3\).

(c) “Liquidity”: in periods of deepest uncertainty, the final investment option becomes (Uncle Scrooge’s) “taking the plunge” into money (or near-money, e.g., sovereign debts of “safe-harbours”): returns are sacrificed to the target of preservation of nominal values. The plunge is likely to have severe consequences upon intermediation chains\(^3\). At first, defaults and depreciations (risk premia rise, markets “freeze”) hit the initial links of the “reversed” chain (Section 3). The need not to lose credit as ABS issuers, which is essential to protect their funding capacity, will compel financial firms to make positions by selling position, i.e., to sell existing credits in order not to lose access to new credits. As better assets must be the first to be liquidated, a creeping tendency to overall depreciation is set. The classical description by Minsky (1975) of debt-deflation remains highly relevant and unsurpassed on this point.

The high momentum of the crisis is eventually reached, as in the experience of September 2008, when MMMFs “broke the buck” (the net asset value of a MMMF – i.e., the value of “private money” – falls below 1$ per share). At that point, even the more liquid end of the financial trades comes at a loss, so that the whole chain of market-based finance implodes under the pressure of the complete distrust in its circuits. In this case, the faith in the invisible hand, on the superiority of private rationality always and everywhere, is bound to collapse, and can only be restored after that a massive intervention of the Lender of Last Resort has repaired the intermediaries’ balance-sheets.

5. Concluding remarks, with a clue on “the Greenspan Era”

In these pages, we have argued that the main systemic trends of last decades should be understood under the light of the shareholder value principle and that the subsumption of the traditional banking intermediation under the progressive dominance of primary
(securitization) and secondary (portfolio insurance) procedures of “creative finance” can be considered as the pivotal trend as it allows to highlight five points of consequence for the macro-economy:

1. By reversing and lengthening the intermediation chains, creative finance procedures reduce the relative share of credit made available to the real economy; this reduction is further strengthened by the shortening of average maturities and holding periods, which adversely affects incentives to real projects (that typically call for long-term financial options);

2. the dominance of “low latency” strategies leads to a systematic overstatement of short-term signals (price variations being read as variations in the fundamentals) triggering perverse reactions (buy dear, sell cheap) that lay at the core of the instability experienced in recent financial cycles, and inject additional uncertainty into real economy;

3. regulation oriented to shareholder value may have stagnationist implications on the income and expenditure flows, depressing the dynamics of wage-earners’ consumption as well as of real investments financed out of retained profits;

4. distributive trends oriented to shareholder value inflate demand for stores of value, encouraging securitization procedures that eventually feed an inflation of debt instruments potentially conducive to Minskian instability;

5. such an inflation of debt instruments due to “creative” intermediation (whose chains begin with final debtors) is reflected in the rising ratios of their nominal values to GDP; in this environment, the enactment of a real project no longer depends upon a consensus between the entrepreneur and the banker about its solvency, but on the sole judgement of the financier about its liquidity. That is how the economic role of finance is perverted, from a service function to one of dominance over real enterprise.
The core of our presentation was the role of “creative” intermediation, as deduced out of a possible image of the chain where money emerges as the final, endogenous product of the debt-creation process. In this, we have been inspired by Minsky’s point that the emergence of creative finance significantly lowered “the weight of that part of the financing structure that the central bank is committed to protect” (Minsky and Wray, 2008: 3). However, as this intermediation chain (Figure 4) seems to suggest, our argument is robust to a change of scenario where a role for exogenous money is allowed for.

In this instance, in parallel with a greater ABS layering, we consider a lender of last resort (LLR, i.e., the central bank) as final creditor and base of the banking circuit of the financial system. Even in this case, the above-mentioned channels apply (namely the loss of credit due to the lengthening of the chains, to the shortening of average maturities and holding periods, and to hermeneutical short-termism). However, besides the role of central banking in stabilizing an unstable financial system shown by the opposite arrows, it also becomes visible the potentiality of the LLR in sustaining stability via an expansionary bias in interest-rates management.

Having this in mind, let us conclude by hinting at a recent issue in monetary policy. A reflection on “the Greenspan Era” has been, indeed, at the background of our reflections. When he was appointed (1987), he put on public view a more “ideological” monetarism than the “practical” one of his predecessor (Volcker). While everyone expected a fiercer fighter of inflation and regulation, he kept only the latter promise: during the 19 years of his reign the Fed displayed an expansionary bias (which, however, did not cause inflation!). After the first attempt at tightening in 1987 – which resulted in the Black Monday (Oct. 19) – other similar experiments brought distress in financial markets (e.g. Mexican and Asian-tigers crises in 1994 and 1997, LTCM crack in 1998, dot-com burst in 2000). In order to stress the risk of moral hazard implied by this bias, armchair monetarists mocked it as “the Greenspan Put”; recently, Taylor (2010) has argued that this had been the fundamental cause of the eventual financial crisis.
Taylor’s interpretation is fascinating but, in our view, it is more convincing to think that Greenspan’s Fed gradually became aware that the new financial reality was posing more serious questions that the monetary theory could figure out. As soon as 1988, more pragmatic circles as the Brady Commission did express pioneering reservations about, e.g., micro-foundations of macro-regulation, portfolio insurance strategies, systemic risk, and academic failures. Greenspan found himself bound to manage the monetary system in a way that resulted much more empirical than he, or anyone else, could ever imagine. Eventually, he himself acknowledged that a great illusion was behind what is known as “the Greenspan Doctrine” (his putative catechism of the free-banking doctrine), i.e., a faith in the stabilizing, anti-cyclical character of the market forces, at least in the medium-long run:

> All of the sophisticated mathematics and computer wizardry essentially rested on one central premise: that enlightened self interest of owners and managers of financial institutions would lead them to maintain a sufficient buffer against insolvency by actively monitoring and managing their firms’ capital and risk positions. (Greenspan, 2009)

After all, the trouble is that when finance is led by the “sophisticated mathematics and computer wizardry” devoted to financial engineering and portfolio insurance algorithms, any track of a medium or lung run is fatally lost to sight: when “beating the gun” is the national sport, “in the long run we are all dead”.

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Endnotes
The FESSUD project is funded by the European Union under the 7th Research Framework programme (theme SSH) Grant Agreement nr 266800

1 E.g., so-called ‘Nairuvian’ models attribute inflation to organized labour [and oligopolistic firms] posing ‘excessive’ targets for wage claims [and price mark-ups]. For a concise formal presentation, see Layard, Nickell and Jackman (1994).


3 For detail on definitions of crisis typologies we refer to the source of Table 3.


5 We suggest reading this definition as the inversion in the functional relationship between finance and the real economy. In the conventional wisdom, common to all school of economic thought across centuries, finance is one out of the set of servicing activities for the more general economic process [like commerce or transport]. Nowadays, it seems that the real economy is servicing a larger financial operation.

6 E.g.: the escalation of compensations of “top managers” [via share options, etc.]; the spread of corporations’ share buy-backs in order to sustain their stock market quotation; the decline in self-financed investment matched by an increase in dividend pay-out ratios. For a critical discussion of the shareholder value principle, see Lazonick and O’Sullivan (2000).

7 For US evidence see Autor et al. (2008), for top-incomes shares Picketty and Saez (2006).

8 “The interest rates of the monetarist experiment destroyed the funding capabilities of the thrift ‘industry’ in the U.S. by undermining the value of mortgages and thus impairing their net worth. The ability of the thrifts to create mortgages was unimpaired even as their ability to fund holdings was greatly impaired. Securitization as we know it began in the U.S. mortgage market. It enabled the thrifts to continue to initiate mortgages even though their funding ability was sorely compromised. Although modern securitization may have begun with the thrifts, it has now expanded well beyond the thrifts and mortgage loans. … It is necessary to understand what securitization involves and how it might affect the development of the world economy if central bank interventions and the government interventions that guide institutional developments are to be successful.” (Minsky and Wray, 2008: 2-1).

9 Within certainty-equivalence, the role of public policy can only be negative, i.e., not to undermine confidence with “artificial” money-issues or “excessive” public indebtedness: monetary stability, by itself, would promote economic growth and financial stability.

10 The goal of stabilizing the value of money is stressed, regardless of its distribution, i.e., of any possible role of monetary policy in promoting growth and financial stability.

11 Brunnermeier and Oehmke (2013) have labelled this tendency “the maturity rat-race” and Haldane (2011) “the race to zero”, i.e., the race to “the promised land of zero ‘latency’ where trading converges on its natural (Planck’s) limit, the speed of light” (ib.: 5).

12 Secured titles had a huge diffusion parallel to a presumption that securitization allowed the issuer to transfer the credit risk on her assets (cf. ECB, 2006: 16; Shin, 2010: 152-3) and attain the promised land where leverage could be augmented while diminishing liquidity risk. As a matter of fact, however, issuance and trading of ABSs is not the same thing as selling a debt: whereas in the latter case the credit risk is indeed transferred, in the former case the underlying asset, with its associated credit risk, is still in the issuer’s assets column. Moreover, the issuer’s credit risk is now associated with the buyer’s credit risk on the ABS; this fact provides the rationale for a rise, not a diminution as presumed, of systemic risk.

13 This is precisely the job rating agencies are called for: AAA ratings induce the market to consider an ABS “as secure(d) as cash”, so that its buyer is in a position to dispose of an asset which can
alternatively be hold, sold on the secondary market, and even be used as the "underlying" for the issuance of other ABSs and fee-income extraction.

14 The M2 aggregate is a good indicator of the consistency of ultra-short-term instruments; it includes M1 plus the deposits in commercial banks and in the so-called money market mutual funds [MMMF], i.e., all instruments with an intra-day maturity. Adrian and Shin (2009: 604, Figure 8) reported that primary dealer repos and financial commercial paper accounted for some 25% of M2 at the beginning of the ‘90s, 55% in 2000 and 80% from 2005 till the beginning of the crisis (then precipitated at 50%). Overnight repos were such a ubiquitous funding instrument that, before the crisis, Wall St. operators were used to roll over more than a quarter of their debt every night (Brunnermeier, 2009).

15 “In aggregate, the assets of the banking sector as a whole against other sectors of the economy consist of lending to non-bank borrowers. This lending must be met by two sources—the total equity of the banking system, and the liabilities that banks have to lenders outside the banking system”. That’s the logic: take a generic intermediary’s balance sheet and single out, among the assets, loans to final debtors (a) and loans to other intermediaries (b); equity (e), debts to final creditors (c) and debts to other intermediaries (d) among the liabilities. The sum of all intermediaries’ balance sheets – being 

\[ \sum y = Y, \sum a = \sum b, \sum e = E, \sum x = X \]

gives the accounting identity \( Y = E + X \).

16 “Securitization implies that there is no limit to bank initiative in creating credits for there is no recourse to bank capital, and because the credits do not absorb high-powered money [bank reserves].” (Minsky and Wray, 2008: 3)

17 This a variation on Minsky’s point that “Securitization is viable—profitable for all concerned—if the total cash pledged by the securities is less than the total cash the corpus of the trust is expected to yield.” (Minsky and Wray, 2008: 4).

18 "Securitization throws light on the nature of money: money is a financial instrument (a debt) that develops out of the financing of activity and positions in assets and becomes generally accepted in an economic community as a means of payment for goods and services and as an instrument by which debts are discharged. … Private money is a distinct possible future outcome of current developments” (Minsky and Wray, 2008: 3).

19 From 190 to 490, i.e., the sum of all assets but those of the final debtor.

20 Roubini (2006) at the IMF in occasion of his celebrated speech: “I have estimated that about 30 to 40 percent of the increase in employment since 2001 has been due to housing either directly or indirectly.” In our interpretation, this was due to the fact that new buildings were functional to creative financiers: they needed a greater basis of liquid assets to issue new ABS (senior tranches). Also, buildings could be written as equity to release leverage constraints.

21 “HFT is one of the most significant market structure developments in recent years. Estimates of HFT volume in the equity markets vary widely, though they often are 50% of total volume or higher. By any measure, HFT is a dominant component of the current market structure and is likely to affect nearly all aspects of its performance.” (Clark, 2011: 280). “As in the United States, there are now concerns in the United Kingdom, Australia and elsewhere that the problems identified with HFT and highlighted by the US ‘flash crash’ could eventually hit other overseas equity markets and change share trading around the world. This threat is real given the rapid growth of HFT. In the United Kingdom, for example, it is estimated that HFT now accounts for 77% of the total flow and almost 50% of equity market volumes. In monetary value of shares trade, HFT is estimated to make up 56% of all equity trades in the United States and 38% in Europe as a whole. In Asia, while
the amount of HFT is presently small it is growing significantly and is estimated now to be over 10%.” (ib.: 294)

22 Fee incomes are so high as trading operations are up-to-date with real time data (and technology). Statistical arbitrageurs can count on a huge market due to the plethora of operators who, holding ABS, need to recur to strategies of so-called “dynamic hedging”, which consist in trading assets as to mimic the payoff of an option and so to hedge their portfolios against measured risks. That is why statistical arbitrage is typically involved in trading blue-chip assets, the most common type of underlying for ABS.

23 “In short time-periods ... it is always supposed that that the depreciation or appreciation is due to a qualitative variation of the commodity; this is admittedly possible with securities that can easily experience qualitative variations in a few hours’ time lag; this is not possible with the commodities of other markets” (Pantaleoni, 1912: 198). In Haldane’s view (2011: 8), high-frequency finance leads to financial instability so long as it promotes “what sociologists call ‘normalisation of deviance’ – that is, ignoring small changes which might later culminate in an extreme event”.

24 Shin's version is that an asset’s appreciation, being interpreted as a decrease in the risk premium, is reflected, in the balance sheet, in an appreciation of equity, and hence in a decline in the leverage ratio. Being this interpreted as an improvement of the prospect, not to react implies missing a profit opportunity. The principles of portfolio insurance call for a rapid releveraging, i.e., buying on credit a further stock of the appreciated assets: buy dear. Conversely, a depreciation is read as an escalation of the risk premium and is reflected in a devaluation of equity (increase in leverage); risk-management algorithms order a deleveraging: sell cheap.

25 While re-invested profit is an income with a propensity to spend of one, the “homecoming” of distributed profits is likely to imply leakages. Abandoning for a moment the so far implicit assumption of a closed economy, we mention the implication of a full capital mobility, for which loanable funds originated in any location can be redirected to any other location out of the original context.

26 See Table 5 from stylized facts for the increasing excess of \( P \) over \( I \).

27 The “underconsumptionist” visions were rejected or neglected by economic orthodoxies at all time, surviving “below the surface, in the underworld of Karl Marx, Silvio Gesell or Major Douglas” (Keynes, 1936: 32). Is this underworld imposing renewed attention, because of the implication of modern financialization? See also King (1997).

28 See Hein (2010) for a formalization of the “basic” Kaleckian model, with amendments to account for wealth-effects.

29 In the United States, “A fundamental driver of this increase in debt liabilities was the insatiable demand for safe debt instruments. This demand came from foreign central banks and investors, but also from many U.S. financial institutions. The demand for safe debt instruments could not be readily met by existing sources of triple-A debt. ... The U.S. financial system created safe assets from unsafe ones by pooling assets and issuing senior claims on the payoffs of the pools ... The claims on these pools of assets are called collateralized debt obligations, or CDOs. ... Global issuance of CDOs grew from $185 billion in 2000 to $1.3 trillion in 2007. A large share of these assets carried triple-A ratings, at least before the crisis.” (Caballero, 2009: 36-8).

30 We here leave out of account the “derivatives”, that allow to gain out of appreciation/depreciation of some underlying “principal” without committing oneself to bear the full cost of an effective transaction/transfer of the principal itself (Dodd 2005). However, even trades in derivatives should find a limit in the state and evolution of real activity. We resort to a metaphoric case: the value of the money bet on horse racing is much higher than the value-added of a horse racing industry.
However, bets could not exist without races: collaterals are conditions for the existence of the derivatives, and the collapse of the collateral leads to the collapse of the derivative (unless the bet is on the collapse, i.e., a “naked” CDS). As for its possible effects upon the “systemic fragility” of financial markets, it should be reminded that market makers, assuring liquidity and clearings to these trades, most often form a restricted oligopoly. Greater financial companies have suffered huge losses, out of “mistaken” operations of a single branch (or a single broker).

31 The actual possibility for “liquidity traps” to occur has been illustrated by Krugman (2008) with reference to the Japanese stagnation of the 1990’s and the recent episodes in European markets.

32 The Brady Commission was instituted by Reagan in 1988 to look into the causes of the 1987 stock market crash and provide for policy recommendations:

The Task Force concludes that the precipitous decline in the stock market was characterized by large sales by a limited number of institutional investors throughout the interrelated system of markets—stocks, futures and stock options. The massive volume, violent price volatility, and staggering demands on clearing and credit raised the possibility of a full scale financial system breakdown.

The Task Force also concludes that stocks, stock index futures and options constitute one market, linked by financial instruments, trading strategies, market participants and clearing and credit mechanisms. To a large extent, the problems in mid-October can be traced to the failure of these market segments to act as one. Institutional and regulatory structures designed for separate marketplaces were incapable of effectively responding to inter-market pressures. The activities of some market participants, such as portfolio insurers, were driven by the misperception that they were trading in separate, not linked, marketplaces.

The simple conclusion is that the system grew geometrically with the technological and financial revolution of the 1980’s. Many in government, industry and academia failed to understand fully that these separate marketplaces are in fact one market. (Brady Commission, 1988: 68, our emph.)
Tables and figures


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**TABLE 2. Decadal averages of annual GDP growth.** Source: Oecd.

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**TABLE 3. Average number of financial crises over decades.** Source: appx from Claessens and Kose (2013: 61).

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<td>“Sudden stops”</td>
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<td>4</td>
<td>7</td>
<td>8</td>
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TABLE 4. *Total debt securities (private and public origin): ratios of nominal values outstanding for country of residence of issuer to its GDP*. Source: our elaborations on BIS data.

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<td>2.36</td>
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TABLE 5. *Investments as percentage of operating surplus*. Source: Stockhammer (2008:190, Table 2).

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Figure 1 – Growth of four US sectors, *in log scale*. Source: Shin (2010: 169)

Figure 9.8: Growth of four US sectors (1954 Q1 = 1) (*in log scale*)
*Source:* Federal Reserve, Flow of Funds.
Figure 2 – Chain of banking intermediation

```
final creditor  bank  final debtor
90 100 90 100 90
```

Figure 3 – Chain of creative intermediation

```
final debtor  ABS issuer  ABS² (=CDO) issuer  ABS³ (=CDO²) issuer
real inv. 100 90 80 70
```

Figure 4 – Creative intermediation with exogenous money

```
final debtor  ABS issuer  ...  ABSⁿ (CDOⁿ⁻¹) issuer
real inv. 100 90 20
Lender of Last Resort  primary dealer repos  comm.paper issuer  repo issuer
10 11 10
```

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References


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

THE ABSTRACT OF THE PROJECT IS:

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

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