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The Global Crisis and the Remedial Actions: A Nonmainstream Perspective

by

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ABSTRACT

The global financial crisis has now spread across multiple countries and sectors, affecting both financial and real spheres in the advanced as well as the developing economies. This has been caused by policies based on "rational expectation" models that advocate deregulated finance, with facilities for easy credit and derivatives, along with globalized exposures for financial institutions. The financial crisis has combined with long-term structural changes in the real economy that trend toward underconsumption, generating contractionary effects therein and contributing to further instabilities in the financial sector.

The responses so far from US monetary authorities have not been effective, especially in dealing with issues of unemployment and low real growth in the United States, or in other countries. Nor have these been of much use in the context of the lost monetary and fiscal autonomy in both developing countries and the eurozone, especially with the debt-related distress in the latter. Solutions to the current maladies in the global economy include strict control of financial speculation and the institution of an "employer of last resort" policy, both at the initiative of the state.

Keywords: Global Crisis; Expectations; Underconsumption; Ponzi; Labor Flexibility
JEL Classifications: E2, E4, E5, E6, J2, J3, J6

The mayhem, that started in the deregulated financial markets of the US at the end of 2008, spilled over by early 2009 to rest of the global economy at large. Action taken so far on the part of policymakers, especially in the advanced regions which also happen to be the major victims of the recent financial crisis, have not achieved success in deterring the systemic crisis and its sporadic outbursts in global financial markets. The crisis did not remain confined to pockets of US credit and security markets, as can be witnessed by its spread to other countries which include the Euroland (and of late the smaller countries in Southern Europe) as well as developing countries. Nor did it remain confined, from the very beginning, to the financial sphere, thus impacting the already squeezed space of the real economy. Thus the shock which surfaced in the financial sector had its concurrence in the continuing real stagnation of these economies. As we would point out below, the disruptions in the financial sector as well as the underperformance in the real sector can both be related to the logic of the neo-liberal growth models and the policy frame emanating there-from. Our analysis in the present paper has been arranged as follows: Section I offers a critical review of the dominant logic of the "efficient market" paradigm which underlies the mainstream economic theory and policy to justify the deregulation of markets including the financial sector. Section II generates a theoretical framework which we would like to offer as an alternative interpretation of the deepening slump in real activities along with the bursting of financial bubbles as happened recently. Our analysis relies, as theoretical foundations, on both the Post Keynesian structuralist framework of underconsumption led stagnation as well as the Minskyan Financial Instability Hypothesis. Our arguments seek to provide an explanation of the recent turbulence in global financial markets and its long-term real stagnation over the last five decades. We also point at policies in advanced countries, which are often followed in the rest of world, as responsible for generating underconsumption as well as the speculative bubble in the respective economies. Section III narrates the unfolding of the crisis as took place in the financial markets, focusing primarily on the US where it started, while drawing attention to its spread to other countries including Euroland and developing countries. Section IV dwells upon the policy space, drawing attention to the limitations, especially in rich industrialized countries, of the recent moves to deter the financial crisis. Section V offers concluding observations and an alternative plan which chalks out actions which we expect to be more effective, not only to contain the financial crisis, but also to regenerate real activities that can instill growth with distributional justice in these economies.

I. FOR DEREGULATION OF FINANCIAL MARKETS AND ITS CRITIQUE

By postulating full information (relating to the present and future), along with rationality for all agents in the capital market (who are supposed to have free access to such information), mainstream literature dealing with market decisions dispenses, by assumption, the notion of uncertainty. Formulations as above are identified in the literature as an "efficient market" paradigm, with the claim that a set of "rational" expectations can be made regarding all outcomes in the future, relating to decisions which are made today. Reliance is placed in these theories, while framing expectations on what is viewed as probability of future events. However, since a large enough sample to calculate the probability distribution is not easy to obtain, theories use the record of past events as a proxy to guide the probability of future events. As held by critics, this amounts to an "ergodic axiom" which allows the agents to "presume that the future is merely the statistical shadow of the past"[1]. With uncertainty having no role to play in the market for capital, speculation is naturally reduced to arbitrage even in inter-temporal space; and liberalization of finance to achieve optimal allocation of resources follows as a policy conclusion.[2]

Formulations in mainstream doctrines on financial markets include the portfolio (asset market) approach which postulate an "efficient market" equilibrium in allocating capital. Agents operating in the capital market are assumed to have full information relating to the expected changes in variables, thus ruling out uncertain prospects (Davidson 1978, pp. 11-13). Variants of the optimal portfolio models recognize the role of trading and information costs at equilibrium. However, it is also held that prices have a tendency to quickly adjust to such information which is never in private domain. It can thus be held that the system tends to set "conventions" consistent with "fundamentals," with the process similar to what has been described as a "random walk along Wall Street" (Fama 1991, pp. 1575-617, and 2001.).

In a different approach which is identified as New Keynesian Economics (NKE), short period disequilibrium in markets is explained by incomplete (or asymmetric) information. It is held that asymmetric information in the credit market limits the capacity of the lenders to separate out the "good" ones amongst the borrowers from those which are the "bad" (or defaulting types). In this the borrowers are assumed to have better knowledge as compared to lenders in terms of their own inclinations for default. They are also assumed to

[1] For details see Paul Davidson 2009.

[2] See Sunanda Sen 2004 .

have the capacity to choose, and often prefer the high-risk high-return projects, which goes with an ability to exit by default (Sachs 2001, pp. 197-243; Cooper and Sachs 1985, pp. 21-60). For the above reasons, the lenders can resort to credit rationing (Stiglitz and Weiss 1981, pp. 393-410), which excludes a section of borrowers from the market.

As pointed out by critics, on scrutiny these models around asymmetric information seem to rely on rational agents in the credit markets, both as borrowers and lenders. In the absence of the former, the equilibrium reached would thus correspond to the Pareto optima. In this regard it has been pointed out that even regulations like a Tobin tax on currency speculation, which aims to curb noise traders in the market, when effective, are expected to reach equilibrium which will be Pareto optimal (Davidson 1999, pp. 91-91).

Critics of the "efficient market" hypothesis have pointed at its limitations, both on logical grounds and on grounds of the failure of these theories to relate to reality. It is observed that shortcomings, as above, are mostly due to an inadequate handling of uncertainty in these formulations. Questioning, in particular, the legitimacy of the portfolio (or asset market) approach and the efficient market equilibrium, critics in the Keynesian tradition point at the difficulties of calculating the probability of these risks with actuarial precision, especially under uncertainty. Interpretations, as above, are consistent with Keynes's position on probability in the General Theory (1936) and later, in his *Economic Journal* (1937) article. The notion of "animal spirits" is further clarified by Keynes as follows: ". . . By 'uncertain' knowledge, let me explain I do not mean merely to distinguish what is known from what is probable....About these matters, there is no scientific basis on which to form any calculable probability whatever. We simply do not know" (Keynes 1973, p. 114 [1937]).

Dwelling further on related positions, it can be suggested that knowledge (and its absence which is uncertainty) tend to be subjective. Hence it can never rely exclusively on past events and thus be ergodic. Also knowledge (or uncertainty) is not a natural phenomenon which is time invariant. It is ontological and is embedded in social reality which, as Shackle described it, is "kaleidoscopic" and also one which relates to what Joan Robinson labeled as "historic time" (Shackle 1974).

As for the implications of the policies advocated in the mainstream literature, it is not difficult to see that it is the combination of uncertainty and easy access to credit which can be held responsible for financial crises under deregulation. By making possible the short-run entry and volatile exit of players in the financial market, financial liberalization makes for short-termism, especially with high returns on the high risk assets which often fail to generate

real assets in the long run. Instead the demand for financial assets are guided by prospects of "quasi-rents" as determined by profits and losses in the short run (Davidson 1999, pp. 91-92). With availability of credit and information technology which make for fast communications, perceptions are also prone to quick revisions. This explains the bandwagon effects often observed in the financial markets.[3]

Reflecting further on what we have mentioned above, it can be held that knowledge (and its opposite, uncertainty) can improve if institutions like contracts and conventions remain "stable"; a situation warranting policies of effective intervention and stabilization on the part of the regulatory authorities (Dequech 1995; Terzi 1999; Lawson 1988). It is sometimes argued that uncertainty is "gradable" and that it is a subjective notion which is based in part on "epistemic" theories of probability and otherwise on properties of real world (ibid). This view is based on the notion that both uncertainty and knowledge are "gradable." To quote, ". . . if uncertainty is gradable, government action may reduce it and thereby increase confidence" (Dequech 1995). The above is particularly relevant in a money economy where it matters to "… protect the sanctity of money contracts …(and) the essence of the entrepreneurial system we call capitalism" (Davidson 2009). As it has been held, there exists a role in the above context for the "market makers," to provide an assurance to those who hold financial assets "…that the market price of their holdings will always change in an orderly manner" (ibid). The need thus arises for a "credible market maker" to provide an anchor to "market psychology." One can distinguish between private and public agencies, say, the former with expert advice from Merril Lynch or similar private bodies which finally failed to fulfill their promises to investors during the recent global crisis in US (ibid).

In a paper relating to investment decisions in Keynesian theory, (Anderson and Goldsmith 1997) the authors stressed the role of the weight attached to expectations in these decisions. The approach, as argued, is consistent with what Keynes visualized as "expectations of future profitability" and the "confidence with which we forecast the future." Thus investment is driven by the expectations of future profits on the part of the decision-making business manager and also by the confidence assigned to them on the basis of these forecasts based on expectations. Their approach, as claimed, "…can be viewed more broadly as a test of those theories that suggest that expectations matter in the determination of investment." The

[3] Connected with the above sequences is the social construction of credit, which speaks for the social exclusion of borrowers relatively weak in terms of their ability to enter the credit market. These borrowers however, have a great deal of potential in a recession-prone economy due to their higher consumption propensities See for an elaboration of the argument, Gary Dymski, 'The Social Construction of Creditworthiness: Asymmetric Information and Trivialization of Risk' (mimeo), October 1994

authors provided an empirical test of their hypothesis to explain investment in a market economy (ibid). The model specified in the paper goes as follows:

I = f(BEF, weight)

where I:investment;

BEF: business executive forecast and weight, or confidence associated with that forecast.

The above can also be expressed as

I = f(BEF, MISS)

where MISS: forecast inaccuracy which is the inverse of weight such that MISS = 1/weight (ibid, pp. 67-68).

Testing the model on the basis of sample data, the authors arrive at the conclusion that ". . . whether ill-informed or not, whether rational or not, whether stable or not, they (*managers with their subjective perceptions*) are of fundamental importance in the determination of investment, and hence, macroeconomic stability" (italics added) (ibid, p. 72).

One can here interpret the low weight (or the high MISS observed by the manager) as "paucity of evidence" in terms of probability. Thus uncertainty implies situations where knowledge is incomplete and not totally reliable. This is also consistent with the theoretical position subscribed by the authors that ". . . uncertainty is not total ignorance" (Dequech 1997). One can here dwell again, on the influence the "market maker" can have on the "weight" associated with forecasts of business managers, as in the model mentioned above.

II. ON INTERPRETING THE CRISIS: AN ALTERNATIVE VIEWPOINT

To provide a well-rounded view of the recent crisis in the global economy one can here mention the short-term factors which relate to the flare-up of the financial crisis (with its spillover to the real sector in recent times) and distinguish those from forces of a longer duration. The latter relates to the structural changes in the pattern of growth and distribution as have taken place in the global economy. In our judgment those structural changes can also be related to the recent mayhem in the financial markets.

We would first dwell on the pattern of structural changes which can also be held responsible for the recent mayhem in financial markets, to be detailed later in this paper. In providing our analysis we have made use of supportive arguments in recent studies which use the underconsumption thesis to explain the recent crisis (Cripps, Izurieta, and Singh 2010; Boyer 2000 and 2010; and Patnaik 2010).

A symmetric change in wages and labor productivity marked the beginning of the post-Second War period when both were rising with production subject to Fordist expansions over the next three decades. Successive changes which affected the international economy over these years included the oil price hikes causing inflationary potentials and current account imbalances in the advanced economies. These developments initiated a regime change in economic policies with monetarism superseding the earlier policies which made for a Keynesian welfare state. With deregulation of markets, a logical corollary to the shift in policies, a systematic pattern came up where expansions in financial activities were no longer backed by proportionate growth rates in the real economy. The above contrasted the pattern in the earlier years, often described as the "Golden Age of Capitalism." The tardy growth in employment and wage rates in the advanced countries could be attributed to the flexible labor policy which was a component of the on-going liberal economic policies. With deregulated finance providing high returns on financial assets in the market, investments in the real sector sounded much less attractive. Also the competitive pressures, as a consequence of the globalization of markets generated further compressions of labor costs in the flexible labor market. Competitive pressures also led to an upgrading of technology with rising capital-labor ratios which considerably reduced the wage share in aggregate output.

Structural transformations, as above, have been responsible for a chronic under-consumption tendency, not only in advanced countries but also in the developing area. As for the advanced countries, goods produced at home faced demand shortfalls within the country. This was both, with a lack of competitiveness vis à vis cheaper imports and a drop in domestic demand, caused by the ongoing wage squeeze as well as unemployment. This created a situation which can also be identified as one of a "realization crisis" at home. However, the tendency for underconsumption did not surface in the aggregate as long as liberal credit in the deregulated financial markets continued to provide facilities for leverages, largely to take advantage of capital gains in the overpriced property and stock markets. This resulted in tendencies toward "over-borrowing" by the private sector which was reflected in the continuing deficits in the current account balance, especially of United States. The excess spending that resulted from those borrowings, however, did not necessarily generate

additional import demand from the developing world because much of those financial flows were recycled within the financial sector.

As for the financial boom under deregulated finance, the pace of financialization of assets was triggered by rising expectations of future value as well as returns on assets held with the financial sector. One can observe the connection between investment and finance, changes which are subject the state of expectations under uncertainty. We refer to the initial formulation of the above link in Keynes's General Theory (1936), where liquidity preference has been related to asset prices and new investments.[4] Thus uncertainty and the state of expectations are expected to shape the level of confidence relating to movements in yield as well as asset prices and also the need for liquidity held as a contingency. A rise in the level of confidence, held by all who operate in the asset market, is expected to contribute to expectations of higher yields as well as a rise in future prices of assets which reduce the need for contingent reserves of liquidity.[5] There exists, therefore, a clear connection between investment and the need for finance as a contingent, with the two moving in opposite direction under uncertainty.

Analyzing the pattern of changes in the financial institutions of the advanced countries over the last two decades, the unprecedented boom, in our view, was a major force driving the crisis, while a considerable part of these sequences (as described in section III below), can be explained by relying on Minsky's characterization of deregulated financial markets and the "unstable economy." Considering the new-fangled sources of credit, especially, with the involvement of banks in the security market under universal banking, Minsky drew attention to the fact that in the new institutional setting, banks and non-bank financial entities can follow an "originate and distribute" model which involve a re-packaging of assets and their sales. In this the shifting of risks to counterparties generates more profits

[4] As formulated by Keynes, net returns on individual assets (including money) are determined by the expected yield in physical terms (q), carrying costs (c), the liquidity cost (l) (for holding the asset) and expected changes if any, in the price of the asset (a). One thus arrives at a notion of the "own rate of interest", on assets including money and measured in terms of itself (as q-c+l+a).The "own rate" also reflects the marginal efficiency of capital for each such asset. As Keynes viewed it, to continue with the purchase of individual assets (new investments), the respective own rate of interest (marginal efficiency as defined above) has to be higher than those on other assets including money. However, for assets other than money the own rates of interest are likely to fall with additional investments, especially due to a drop in yield (both actual and expected). But such declines are absent for money (which, as held by Keynes, has no intrinsic yield, carrying cost, or price appreciation during the short period). Thus a point will come when the own rate of interest on money will be equalized to those on other assets, indicating an equilibrium situation where the returns on all assets including money are equalized (Keynes 1951, pp225-229).

[5] See also Kregel 2009.

than is possible from the simple "commitment models" which rely on the rate spread at the loan officer's desk.[6] These practices, according to Minsky, made for higher profitability with market-based funding, as compared to bank-based funding of projects. In the process banks got involved in the security market. Thus there is, as held by Minsky, a "symbiotic relation" between the universalized financial structures (which contrasts the earlier pattern of segregated banking) and the related securitization of financial instruments (Minsky 2008).

Pointing at the role of securitization and the use of security-based assets, the above version draws attention to the changing character of money as had already taken place by the late sixties, especially with credit flows no longer constrained, by the value of reserves and capital held by banks as had been the case under a fractional reserve system. Thus "...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) (ibid). This also considerably lowers the weight of central banks to protect credit, as evident in the recent financial crisis. Efforts on part of monetary authorities (following monetarist norms) to raise interest rates in order to control inflation may even lead to a collapse of stock prices and hence to a financial crisis rather than to a state of financial stability (ibid).

It has been pointed out that the range of assets in the portfolio choice by the investor can be spaced between liquid (cash and short-term financial assets) and physical assets (which include real estate). Given the above asset structure, the investor may prefer to move away from long-term to short-run financial assets which are relatively liquid when uncertainty extorts a heavy toll on discounting the future. Similar to Keynes's liquidity trap, such situations characterize the tendencies of "short-termism" in a money/credit economy. Assets here, however, are not subject to a binary classification (of money/bonds) as in Keynes, but have a range with varying degrees of liquidity along a whole spectrum (Hicks 1974).

According to some, the "financial excess" as above was a major driver of the neo-liberal growth models which relied on borrowing along with asset-price inflation, both facilitated by financial deregulation (Palley 2010). Thus the financial boom played a critical role in the advanced economies by providing sources of demand which came from outside the real sector. However, the system was essentially an unstable one, as witnessed by the collapse of the economy which started with the disrupted financial sector in 2008.

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[6] See Wray and Tymoigne 2003

As for the developing countries, inadequate domestic demand (with a shortfall of purchasing power, especially of the wage earners) often led these countries to follow export-oriented strategies, which require further disciplining of labor in a bid to save on labor costs. The shortfall in domestic demand could hardly be compensated by rising exports to advanced countries which, as explained above, were also subject to low growth rates. Not much space is thus left for expansion in the real sphere in either the advanced or the developed nations, for reasons which are not too different from each other. On the whole, the world economy has been subject to a lop-sided pattern of expansions, with growth in the real sector falling far behind the unprecedented growth of the financial sector, which was subject to sporadic as well as unprecedented gyrations in the recent past.

The alternative perspective on the melt-down of the global economy provided above contests the notion of an "efficient market" postulated by the mainstream school. Drawing attention to the underconsumptionist tendencies of product markets in advanced countries, which are tagged by export-drives in the developing world, our analysis highlights the repression of labor in these liberalized regimes which rely on labor flexibility. The shortfall in demand, while partially compensated by the brisk churning of asset-backed securities, failed to sail through when financial markets in advanced economies virtually collapsed by late 1980. A major reason for the latter was the erosion of confidence in those transactions, an aspect which mainstream theory and policy never recognized. The alternative position we offer looks at the uncertainty-ridden trail of markets, which often deviates from the predictions of the private "market makers." A position, as above, has considerable significance for policies that are appropriate to mend the system.

III THE MELT-DOWN OF FINANCIAL MARKETS AND THE REAL ECONOMY

The crumbling down of financial markets which started in late 2008 has been instrumental in generating varieties of arguments on the causes of the crisis and large numbers of remedies as are considered appropriate. While views differ, especially in identifying the specific factors that might have led to the crisis, it is now well accepted, even in circles subscribing to mainstream economic policies, that the theme of growth under the "efficient market" paradigm has failed to deliver what it initially had promised. We dwell, in this section, on the sequence and intensity of the crisis in the real and financial sectors of the advanced economies along with its spread to other regions.

As for the advanced economies, despite the rather poor record of their real activities experienced over the last three decades, they witnessed marked expansions in their financial dealings until the onset of the financial crisis in late 2008. The latter pulled down the output and employment growth rates which were already low in those economies, thus putting both financial and the real sectors in serious disarray. Growth rates of GDP in the US, which were hovering around 2 percentage points on an average between 1998 and 2007, dropped sharply, to 0.3, (-)3.6, and 2.9 percentage points respectively during 2008, 2009, and 2010. For the Euro, declines were similar, from an average of 3.0 percent during 1998-2007 to 0.0, (-)2.6, and 2.9 percentages for 2008, 2009, and 2010. Japan also recorded similar declines, from 1.2 percent during 1998-2007 to (-)1.2, (-)6.3, and 4.0 percentages during 2008, 2009, and 2010.[7] The unemployment rate, even by official statistics (which is often an underestimate) showed an average of 8.3 percent for OECD as a whole by May 2009, and recording higher rates in individual countries like Spain (18.9 percent), Portugal (10 percent), Ireland (12.2 percent), and US (9.4 percent). [8] According to the US Bureau of Labor Statistics, the US unemployment rate edged up from 8.8% to 9.0 % over April 2010, with respective rates for Blacks and Hispanics at 16.1% and 11.6%[9]. There has not been any significant degree of reduction in unemployment rates and/or a rise in output growth rates in OECD countries between 2009 and 2010. As we will point out later, a comprehensive policy package under the head of ARRA was introduced by the US President in February 2009 to combat unemployment.

Dwelling on the great turbulence in global financial markets, its origin can be traced back to the crisis in the sub-prime loan market of the US. A boom in the latter over the last few years ended up in a crash by the autumn of 2008. Even before that, the booming financial market in the US had been spurring transactions in derivative markets. The latter included the Asset Backed Securities (ABS) and the Credit Default Swaps (CDS). Those got a boost as the booming property market in US opened up newer profit opportunities on the mortgaging of houses, which turned out as both easy and lucrative. While the housing market was targeting US citizens so-far excluded by banks from the financial markets on grounds of race and/or income, (as well as on grounds of the risk-weighted credit-rationing) (Dymski 2008), it became an opportune moment for banks and non-bank intermediaries to venture out

[7] OECD Economic Outlook 2011, vol. 1, p. 18

[8] http://www.oecd-ilibrary.org/employment/unemployment-rate_20752342-table1

[9] *www.bls.gov/news.release/empsit.nr0.htm*

to these new markets with easy sources of credit for leveraging. Possibilities to securitize the mortgaged assets threw open new channels of investments, for the mortgage-brokerage firms, the issuers and insurers of ABSs, for investment bankers, as well as for other financial institutions which readily purchased and repackaged those securities. Each, by acquiring an asset, were able to leverage by obtaining credit against the same, which in turn was no longer subject to monetary control by the Fed. In the event, a large number of US firms were able to access short-term credit by making use of securitized assets as collateral which were even treated in the market as commercial papers (Wray 2008). Transactions as above facilitated the churning of those ABSs, generated on the basis of the underlying (or the original) asset, while propping up multiple counterparties which held those assets. Credit flows as above (along non-banking channels of the derivative markets, described as "shadow banking") (Nersisyan and Wray 2011) were not only unrestrained, but also offered at rates which had much lower spreads as compared to those usual along conventional banking channels. The wave of securitization spread to financial markets in other parts of the advanced region and to developing countries which were all following a globalized financial structure. It also resulted in a massive increase in the use of derivatives.

In the deregulated financial markets, the changing pattern of the financial transactions have been generating myriads of derivative instruments (like futures, swaps, options and so on), which aim to protect asset values in uncertain markets. Financial instruments, as above, have made it possible to invest in and to acquire assets far more easily, as compared to what it could be otherwise. Financialization did open up, since the 1980s, vast potentials for an explosion in the financial markets of advanced nations which included the US. These transactions were no more constrained by the availability of bank credit. Nor were these subject to the regulations and the surveillance of the Central Bank like the Federal Reserve in US.

Transactions as above in the financial sector could be sustained as long as the instruments used for hedging worked to minimize and compensate for the risks under uncertainty. Risk-adjusted returns/losses on assets with long (buy) positions (of assets) had to be more than covered by the losses/returns on short(sell) positions on assets.[10] An outcome, as above, failed to materialize in a typical "ponzi" situation which we will define in the following pages. It can be observed that a ponzi situation came up during the recent

[10] As pointed out in a recent study, "Financialization is the concept that marries Minsky's ideas about financial instability with new Marxist and structural Keynesian ideas about demand shortage arising from the impact of neoliberal economic policy on wages and income inequality" (Palley 2010).

financial crisis which rendered the on-going financial transactions insolvent since leveraging to service past debt was no longer made possible by accessing fresh credit.

Dwelling further on developments which of late had been instrumental in pushing the deregulated financial markets to a state of virtual collapse,[11] the easy access to credit provided the finance needed, initially for hedging when the realized and expected income flows, under favorable circumstances, were adequate to cover (and hedge) the mandated payments liabilities on interest and repayments. However, hedging often ended up in speculation when such income flows fell short of the payment liabilities and attempts were made to "roll over" past debt, thus making what has been described as "balance sheet flows." Finally a state arose when payment liabilities could only be met by additional borrowings. This is a typical case of "portfolio flows" with speculation leading to a state of ponzi finance which ushers in fragility and a potential collapse of the system (Minsky 1986, p. 203).

With ponzi finance the high returns the borrowers promise to pay the lenders in order to entice new loans, are not necessarily realized when these funds are invested. To avoid an impending default and an interruption of business, the need arises, on the part of borrowers, to speculate and roll-over the debt related liabilities on previous investments. However, with the declining state of confidence in the value of financial assets held by lenders, such dealings in the market come to a grinding halt, leading to big holes in the balance sheets of the concerned parties and heralding the onset of a typical ponzi crisis. The high stakes prevailing in the financial markets under uncertainty may thus turn out to be disproportionately high compared to what eventually turns out as their realized returns. Transactions, as above, are both unsustainable and hazardous compared to acts of simple hedging (or even speculation) on asset prices in these financial markets.

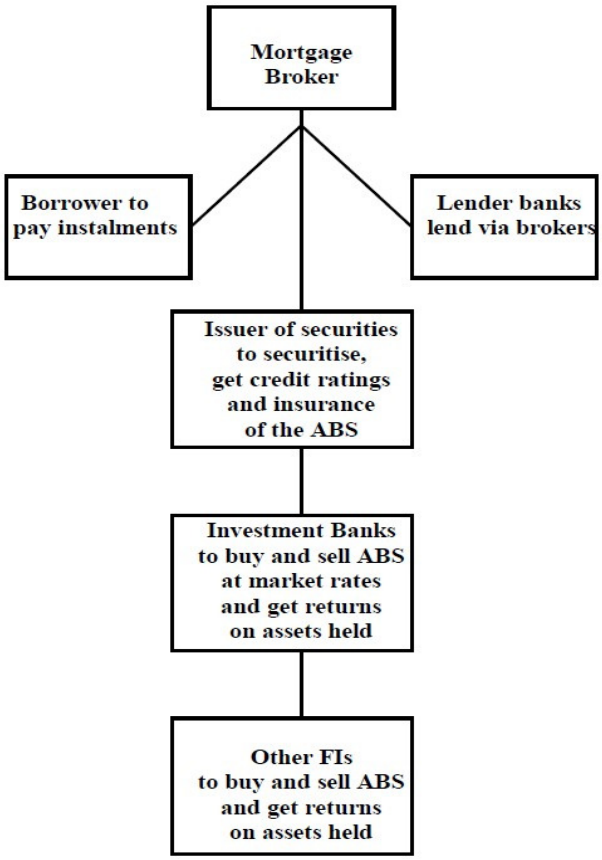
Ponzi finance is very different from hedge or even speculatory finance, which to some extent keeps business going. Speculatory finance, which dwells on more risk than hedging, can be sustained until it becomes ponzi, when borrowing at high rates no longer generates compensating returns. This situation, as we point out below, did clearly plague the US financial markets in the fall of 2008.

It may be relevant at this point to highlight that ponzi finance is another name for fraudulent behavior on the part of financial agents, as can be seen in the various scams and related acts in recent times.[12]

[11] See Nesvetailova 2008 for a lucid analysis of the Ponzi constitution of today's financial system.

[12] See Sen 2009, Nesvestailova 2008, and Black 2005.

To follow the sequence that led to the recent sub-prime crisis in the US we provide below a rough sketch of the possible links in the system:



To look at the statistics relating to derivatives, the gross market value of outstanding OTC derivatives steadily shot up, from $9.79 trillion at end of December 2005 to $35.28 trillion by December 2008. The latter, incidentally, was more than 60 percent of world GDP in 2009. This was followed by a temporary dip during 2009 when these reached $21.54 trillion, with a reversal in 2010 with the value of outstanding OTC derivatives climbing up again, to $24.67 trillion by June 2010.[13]

As mentioned above, the creation of the debt financed assets through leveraging (often to finance derivatives) could continue only as long as there was trust and confidence in these newly created financial assets in the uncertain financial markets. This was evident in the temporary drop of the outstanding gross market value of derivatives, as mentioned above,

[13] BIS, Quarterly Review various issues

during 2009. As for the flow of private finance via the security sector, aggregate flow of equities across nations dwindled over 2008-2010 since the crisis started, recording a significant drop from the previous three years between 2005 and 2007. Similar declines were visible with debt finance, and especially from private sources. Thus, trading in derivatives continued to dominate the financial market, even when transactions in the aggregate had tapered off.

As mentioned earlier, the boom in the market for financial assets eventually gave way to a lull in the US. The financial crisis was prompted by a slump in the over-priced property market. These developments made it difficult to continue riding on the expanding mortgage market. Repackaging of these mortgage-based assets (which changed hands to generate further assets and credit opportunities) finally proved to be an Achille's heel by impairing the credentials of the entire financial system in the US. Use of futures and other derivatives (swaps, options, etc.) expanded the scale of operations by making it possible to bid on positions in the security market with small margins of the final transaction in cash until full payment was due when the contract matured.

The crisis of confidence which started in the sub-prime loan markets of the US spread to the real as well as the financial sectors of all advanced nations, which were sharing the inter-linked financial institutions and trade across the region. The drop in financial flows via securities and loans, were matched by similar cuts in the flow of trade. Thus the average value of exports and imports of the advanced regions during 2008-10 fell sharply as compared to the respective values for 2005-07.

The financial crisis pulled down the already low output and employment growth rates in the advanced economies, thus rendering in a serious disarray both their financial and the real sectors. It may be pointed out that despite the massive financial bail-out in the US there has not been any significant reduction in unemployment rates nor a rise in output growth rate since 2009. While the contagion spread to the major European countries financial institutions, which had high exposures to those in the US, real activities were also hard hit in these countries with the dampening of trade flows across the region.

Of late the spread of the crisis to Euroland has taken a form which is different but no less severe. Some EU members in Southern Europe are experiencing a similar crisis, which is of serious proportions. In particular, financial institutions in Greece and Ireland have been affected very badly, which has damaged the credit-worthiness of those nations in the international credit market. A large part of these developments were related to the management of deregulated financial institutions. The impact, as can be expected, was not

confined to the financial sector alone, a fact which was apparent with the sharp contractions in real activities since 2008.

The financial crisis which erupted in Greece and Ireland, while sharing a pattern which was similar, seems to be different if one traces back the nature of the problems. With Greece it has been a typical case of insolvency caused by public borrowings, which was made possible with Greece's entry to the EU in 2002, helping the country to sell public bonds floated by the monetary authorities in the deregulated capital market. This was especially true with interest rates hovering within a low range consistent with the rates fixed elsewhere within the EU. Public debt of Greece started rising since the country had resorted to the "Restoration of Democracy Act" in 1979, which directed expenditures to the public sector. In the meantime Greece's GDP was growing reasonably well at 4.2% between 2000 and 2007. Between 2007 and 2009 the government was run by a conservative party led by Costas Karamanlis, replacing the pro-socialist government led by George Papandreou, who was re-elected by 2009.

The large debt and the rising fiscal deficit which Greece incurred since the early years of 2000 deviated from the Maastrich Treaty of the EU which stipulated the respective upper limits of debt to GDP ratio and the budget deficit at 60% and 3%. To remain in business, especially in international capital markets, attempts had been made by the Greek government to camouflage official figures. As disclosed later by official and other sources, attempts had been made to downplay the actual figures, with borrowings backed by trading in currency (treated as swaps) and with upfront cash payments by investors , the latter against future trading of expected revenues from sources like highways, airports, etc. Deals to conceal actual figures were often attributed to policies followed by the short-lived, right-wing government during 2007-09. Currently, the Federal Reserve Bank in the US has been engaged in an investigation of these deals, implicating Goldman Sachs for manipulating the transactions involving the use of derivative instruments.

The rising deficits and debt ratios relating to Greece have become a cause of concern for the global financial community, especially when made public. By December 2009, the country's international credit ratings were downgraded, in quick succession, by Fitch and by Standard and Poor's, rendering Greek bonds a junk status. The spread between the respective returns on Greek bonds and German bunds were more than 4% in the market. With private sources of credit beyond access, Greece could avoid a possible default of past loans only by seeking official loans which were finally sanctioned by the ECB, the EU and the IMF, with strict conditions which introduced austere economic policies. The government announced the

passage of an Economy Protection Bill which initiated a series of contractionary fiscal measures. The latter took its toll on GDP growth and employment, both of which have fallen during subsequent years. While the number of officially unemployed rose to 10.6% (and 27.5% for young people), GDP growth was reduced to 0.7% by 2010. Developments also included severe cuts on social sector expenditure which were met with rising protests within the country.

Ireland of late has been facing a situation which is similar to Greece's experience in terms of a near insolvency in world's capital markets. Unlike Greece, Ireland's debt problem lies with private borrowings accumulated by the actions of the Anglo-Irish bank, a major financial institution. With GDP growth faltering around (-)7.06%, unemployment rates in Ireland were hovering around 11.8% and public debt (which was privately incurred) was at around 64.8% in 2009[14]. Ireland was clearly in a tight corner, especially since it sought fresh credit to meet the debt charges. Domestically, the taxpayers had already paid heavily at a swooping € 84 billion (or 56 percent of gross domestic product) for the bailout of banks, while the government had applied, by end of November, to international agencies for a bailout amounting to €85 billion[15]. The Anglo-Irish bank which was the major scene of trouble has since been closed down by the regulators. In the meantime Greece's credit rating was slashed by Standard & Poor's on the 13th of June by three notches which makes it the world's lowest. Later the agency said a likely debt restructuring would be considered a default[16].

Financial crises in Ireland or Greece do not represent isolated cases and can be followed by similar episodes in several other countries within the EU in coming years. As pointed out by Herman Van Rompuy, president of the EU, the situation is a "survival crisis," with the risk of contagion spreading from Ireland across the continent.[17] This also explains the concerted move of the 27 member EU to budget a €750bn fund for bailing out member

[14] Central Intelligence Agency, USA World FactBook.

[15] "Regulators have ordered that Anglo Irish Bank be closed. Many in Ireland blame the bank for precipitating the country's current crisis." Liz Alderman New York Times December 10

[16] http://www.cnbc.com/id/43381710/Greece_s_Debt_Rating_Slashed_Making_It_World's _Lowest Published: Monday, 13 Jun 2011

17 "Ireland crisis could cause EU collapse, warns president" Julia Kollewe guardian.co.uk, 16 November 2010

nations, of which Ireland and Greece have obtained € 85bn and € 110bn respectively, already.[18]

IV. RESPONDING TO CRISES: HOW HAS IT WORKED?

In response to the sub-prime crisis and the successive bankruptcies of major financial institutions, the US Fed and the European Central Bank sought to inject liquidity in the respective countries, largely in a bid to avoid a credit squeeze. An initial move, often mentioned as Quantitative Easing I was launched in October 2008 by George Bush. It aimed to buy assets from financial institutions by committing $700bn under the Troubled Assets Recovery Programme (TARP). Of the sum committed, $382bn was spent. Later, monetary authorities in the US tried to bail out several financial institutions, especially when a failure to act led to the bankruptcy of Lehman Brothers, a major investment bank. The cumulative sum deployed to rescue the ailing financial system included about $11 trillion as committed funds by 2011. The rescue package for the giant insurance company AIG alone amounted to $182 bn as committed and $127bn as invested funds. Other categories of rescue packages included programs designed to revive the housing market and to prevent foreclosures by earmarking $745bn (committed) and $130bn (actual investment) funds.[19]

Responses to mitigate the financial crisis also included a series of regulatory proposals which were introduced in June 2009. These addressed, among others, consumer protection, executive pay, financial cushions or capital requirements for banks, expanded regulation of the shadow banking system and derivatives, and enhanced authority for the Federal Reserve to safely wind down systemically important institutions. In January 2010, President Obama proposed additional regulations limiting the ability of banks to engage in making speculative investments that do not benefit their customers. Supporting the move, Paul Volcker had argued that such speculative activity played a key role in the financial crisis of 2007–2010. [20] The measure, introduced as the Dodd-Frank Wall Street Reform and Consumer protection Act[21] sought to limit bank activity in speculation, especially in the

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[18] "Europe set to bail out Ireland as debt crisis grows" by Carmel Crimmins and Luke Baker, Reuters, Nov 27, 2010

[19] CNN Money.com's bailout tracker at www.CNN.com

[20] ibid

[21] banking.senate.gov/public/_files/070110_

context of the security market and also in terms of bailing out corporations, often considered "too large to fail."

While the earlier bail outs and recent regulatory measures in the US, to provide consumer protection in the financial sector, somewhat worked to directly address what these measures were targeted for, the real sector continues to be in disarray. As pointed out by critics, the regulators, while framing the Act, completely ignored the message from Minsky's work in terms of the need to shift production from capital-intensive areas to investment in job-creation. The latter, as pointed out by Minsky, was capable of ensuring both stability and an equitable income distribution (Levy Economics Institute 2100). It may be mentioned here that for Minsky the state should operate as "the permanent employer of last resort" (Minsky 1986, pp. 308-13).

On February 10th, 2009, a package of spending along with tax cuts known as the American Recovery and Reinvestment Act (ARRA) was introduced in the US by its president. The ARRA was expected to create or save approximately 3.5 million jobs by the end of 2010. The transfers and tax cuts included in the legislation were expected to provide relief to low income and vulnerable households, which included those especially hurt by the economic crisis. Also the measure was supposed to support aggregate demand. It has been pointed out that the stimulus required per new job created could be much higher for tax cuts than outlays under all scenarios. This is because, first, consumption spending was constrained by the large outstanding household debt and also, a part of additional consumption could be absorbed by cheaper imports from abroad (Council on Foreign Relations 2010).

As pointed out above, according to the US Bureau of Labor Statistics, unemployment in the US rose from 8.8% to 9.0 % in April 2010, with respective rates for Blacks and Hispanics at 16.1% and 11.6%. After some early signs of recovery in the fall of 2009 and the spring of 2010, economic growth has slowed down. With jobs generated by the private sector negligible, unemployment in the US is stuck near 10 percent. Counting the number of unemployed who were outside the organized sector, the picture has been even worse.

Of late the monetary authorities in the US have been trying to revamp the economy by directly injecting money via quantitative easing, as done earlier in 2008-09 in terms of TARP. Known as QE II, the measure intends to inject $600bn of liquidity in the market by buying back Treasury Securities. The goal is to let banks have the excess liquidity which will lower interest rates by adding on to bank reserves. The above has coincided with a shift in policies

as a result of the recent election in the House of Representatives, with Republicans favoring monetary policy over fiscal deficits as tools of expansionary strategy. A similar policy-shift seems to be underway in Europe with moves for tax hikes and expenditure cuts (Papadimitriou, Hannsgen, and Zezza 2011). Increases in liquidity and the consequent drop in interest rates may not, however, achieve much expansion in real activities, with the insensitivity of investments to cuts in rates, which is common in situations of stagnant demand. The overhang of debt held by households after the mortgage crisis and the record number of bankruptcies in the US at 1.4mn in 2009-10[22] bear testimony to the limits of measures like QE in generating consumption expenditure. However, the effectiveness of QE II in generating domestic demand may also be subject to other limitations including potential leakages via imports and capital flights to other destinations. Incidentally, QE II in the US has provoked reactions from nations facing excess inflows of capital. These countries are often driven to respond by adjusting their exchange rates and/or monetary policy in a manner which is not, strictly speaking, in national interest. Critics have labeled the phenomenon an "impossible trilemma," which is commonly observed in emerging economies like China and India.

On the whole efforts on the part of monetary authorities in advanced countries to rejuvenate their respective ailing economies have generated rather limited results. While helping to thwart further downslides in the financial sector in terms of bankruptcies and closures of financial institutions, the measures have not remedied the structural weaknesses of the system as are related to tendencies for short-termism and speculation in financial markets. No amount of financial injection can bring the system back to a stable and sustainable order of functioning which is free of potential shocks unless these caveats are addressed squarely. Similarly, policy measures like ARRA in the US may not address the squeeze in the consumption of households as related to their outstanding debt burden. The large injection via QE may lead to capital outflows in response to the higher interest rates abroad, and more so, when domestic rates in the US fall as a consequence of the credit injection.

The recovery in terms of real sector activities has still been slow and almost insignificant, for reasons already discussed above.

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[22] *en.wikipedia.org/wiki/* Bankruptcy_in_the_United_States -

V. CONCLUDING OBSERVATIONS AND SOME POLICY PROPOSALS

Our alternative perspective on the melt-down of the global economy contests the theory and related policy prescriptions that are based on the "efficient market" hypothesis of the mainstream school. Drawing attention to the underconsumptionist tendencies of product markets in advanced countries, which in the developing world are tagged by export-drives, our arguments highlight the role of labor flexibility in these liberalized regimes which speak for the wage squeeze. The shortfall in demand caused by the wage-productivity gap direct investments to the short-term high-profit high-risk areas of finance. The latter, while partially compensating for the slow growth in the real sector by the brisk churning of asset-backed securities and high leverages financing the derivative financial instruments, have failed to work when financial market in advanced economies collapsed, simultaneously and also in succession, by late 2008. A major reason for such collapse was the erosion of confidence in those financial transactions, an aspect which mainstream theory and policy never recognized. The alternative position we offer looks at the uncertainty-ridden trail of markets, which often deviates from the predictions of the private "market makers." The above position has considerable significance for policies that are appropriate to mend the system. This is also confirmed by the failure of what was tried with massive bail-outs of the financial institutions along with limited measures to stimulate the real sector with fiscal devices.

Policy moves in the advanced economies have not so far addressed the two major issues which are continuing to plague the global economy. These include the dominance of speculation-led transactions in the markets for financial assets and the relatively higher returns on such investments as compared to those backed by real assets. With wages trailing far behind the growth in labor productivity, growth in the real sector often tends to be demand-constrained, a situation described as one with tendencies for underconsumption. With slow or negative growth rates in the real economy, and profit opportunities moving up in the booming financial sector, investments had a natural tendency to be directed to the latter. As we mentioned earlier, a boom in the financial sector often created little opportunity for expansions in the real economy.

Incentives to invest can be generated in the real sector with higher growth rates therein. This requires an expansionary strategy of public policy with expenditure targeted to generate additional demand by creating employment. At the same time curbs on speculation in the financial market have to be there, both to contain the volatility as well as to dampen the

pace of short-term speculation in these markets. As with an expansionary strategy to revamp the real sector, a move to control speculation and short-termism in the financial sector needs to prop on state level regulation, both at a national and an international level.

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