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RESUMEN

La Gran Recesión es la manifestación de ciertos problemas fundamentales en el sector real de la economía global, relacionados básicamente con la pérdida de competitividad de los Estados Unidos y otras economías centrales, y que se han reflejado en sucesivos desequilibrios externos en la forma de paralelos déficits en cuenta corriente y superávits en cuenta financiera. Las actuales políticas de ajuste doméstico no están funcionando porque se trata de un problema global que requiere de soluciones globales que permitan el ajuste de ciertos precios relativos fundamentales y la reversión de algunos desequilibrios estructurales básicos, a fin de hacer posible una recuperación sostenible. Además, las dificultades para encontrar una solución muestran la necesidad de reevaluar los paradigmas teóricos que sirvieron de base a las políticas económicas previas a la crisis actual (por ejemplo, *supply-side economics*).

ABSTRACT

The Great Recession is the manifestation of some fundamental problems in the real sector of the global economy, related basically to the loss of competitiveness of the U.S. and other central economies reflected in continuous external disequilibria in the form of parallel current account deficits and financial account surpluses. Domestic monetary and fiscal (or domestic adjustment) policies are not working because we are dealing with a global problem that requires multilateral solutions allowing the adjustment of some fundamental relative prices and the closing of some key structural imbalances in order to make a sustainable recovery possible. Besides, the difficulties in finding and engineering a solution show the need to reassess the theoretical paradigms underlying the economic policies preceding the current crisis (e.g., supply-side economics).

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THE GREAT RECESSION: ON THE INEFFECTIVENESS OF DOMESTIC ADJUSTMENT POLICIES AND THE NEED OF MULTILATERAL ARRANGEMENTS[*]

Jorge Rojas [**]

INTRODUCTION

The current world economic crisis —usually called the *Great Recession*— has been recognized as the most serious economic crisis affecting above all rich countries since the Great Depression. What is not generally recognized is that its final solution will still take some time, as domestic monetary and fiscal (or domestic adjustment) policies are not working, not only because of their own deficiencies, but mainly because we are dealing with a global problem —affecting both the real and financial sectors of the world economy— that requires multilateral, not national, domestic solutions.

A second fact that is not fully acknowledged is that, although the crisis first erupted in —and has most severally affected— the financial sector of the U.S. and other rich nations, it should not be seen simply as a "financial crisis", as the current financial turmoil is the manifestation of some fundamental problems in the real sector of the global economy, related basically to the loss of competitiveness of the U.S. and other central economies, a loss that is particularly important in an environment of increasing globalization.

A third question that is not often raised in the discussions about the crisis is that —although authors such as Henry Kaufman, Nouriel Roubini and George Soros had issued warnings concerning the dangers of debt expansion, the real estate bubble and financialization— the economic and financial authorities in rich countries, as well as international institutions and renowned credit rating agencies, were incapable to foresee the crisis, something that partially explains their difficulties in finding and

[*] The author wishes to thank Professor Adolfo Figueroa for valuable comments and encouragement to write on this topic.

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engineering a solution; it also shows the need to reassess the theoretical paradigms underlying the economic policies preceding the financial crisis in the countries now most affected by the crisis (e.g., supply-side economics, rational expectations, the efficient-market hypothesis, etc.).

We argue here that —as we are dealing with a global problem— to understand the Great Recession we need to pay special attention to the tools of the international economics theory, as the importance of international economic transactions has increased exceptionally with the rapid integration of the world economy —the so-called globalization process. This is why, in the case of the U.S. —as in other severely affected countries— the Great Recession cannot be considered as the result mainly —much less solely— of the errors of economic authorities, and more attention should be paid to the characteristics of its economic relations with the rest of the world.[1]

It is also our intention to stress the central role played in the incubation of the crisis by the external disequilibria experienced by the U.S. economy, in the form of parallel current account deficits and financial account surpluses, recurrent for a period of 25 years before the bursting of the bubbles, and the importance of reversing such disequilibria as a necessary condition for making a sustainable recovery possible. The importance of the growing external disequilibria preceding the Great Recession is revealed by the magnitude of their two most noticeable consequences —financialization and global excess liquidity—, as it was such disequilibria that encouraged the increase of the international flow of funds and the general expansion of financial markets —in time reinforced by financial deregulation policies that promoted greater financial activity and complexity; lower inflation rates that prevented the devaluation of financial assets; and the lack of multilateral mechanisms for managing global liquidity; among others— and the asset bubbles that preceded the Great Recession.

[1] For example, the Financial Crisis Inquiry Commission (2011), in a very interesting and detailed official account of the causes of the Great Recession in the U.S., centers its attention on basically domestic events, such as the housing bubble and the inability of regulators to control it.

Given the importance of its consequences, we need to study first the nature and causes of external disequilibria, above all in the case of the U.S. —the country issuing the reserve currency— that became a net importer of capital some thirty years ago. In this respect, it is our intention to argue here that —in the case of the U.S. and some other rich countries— such kind of disequilibria was basically caused by the loss of external competitiveness together with an expansion of domestic absorption in relation to total output. Ultimately, the loss of competitiveness was the product of lagging technological innovation at a time when the Asian Tigers, and then China and other emerging, export-led (or export-oriented) economies integrated themselves into the world economy,[2] and the problem was only exacerbated by an unrelenting world demand for debt issued in the U.S. that prevented the devaluation of the dollar.

The employment by the central economies of domestic adjustment policies —that is, fiscal and monetary policies— has so far been ineffective, and their situation concerning growth, employment, real wages, firms' profitability, income distribution, fiscal and external balances, public and private debt, etc., has not been improving.[3]

But even if those countries could partially relieve their situation by employing domestic adjustment policies, they will remain unable to finally solve the fundamental problems they face, as their solution requires the adjustment of some fundamental relative prices and the closing of some structural imbalances, objectives that cannot be accomplished in the short run, much less unilaterally.[4] In effect, fixing distorted relative prices —especially real wages— and closing (or reversing) deficits of every kind will require an active exchange rate policy on the side of the rich economies, seeking a devaluation of their currencies. Even more, not only the independent use of these instruments —fiscal, monetary and exchange rate— is severely constrained by the "impossible trinity" (or "policy trilemma"), but the use of each of them is in some cases limited —as fiscal policy

[2] China became a member of the WTO in 2001.

[3] This situation is shown, for example, in the IMF's *World Economic Outlook. October 2013*, and in the Bank for International Settlements *83rd Annual Report* (June 2013).

[4] The fact that national or regional arrangements will remain unable to solve the crisis was recognized almost from the beginning. See, for example, United Nations (2009), pp. 17-18, *The Global Crisis Needs a Global Response*.

is restricted by the public debt overhang—; or does not have the desired effects —as the most likely consequence of monetary expansion ("quantitative easing") in a situation of liquidity trap is the inflation of prices of financial assets[5]—; or is just not feasible —as currency devaluations can only give rise to currency wars ("competitive devaluations") and beggar-thy-neighbor policies in what would be a zero-sum game.[6] In other words, the necessary realignment of exchange rates will require some multilateral arrangements. The importance of the realignment of exchange rates must be emphasized as it will also contribute to the deleveraging of the highly indebted —with de consequent distribution of losses between creditors and debtors— but should not be seen as the only instrument to be used in helping rich countries to regain competitiveness.

Finally, we must also understand that the origin of the problems should be sought in the expansion of the world economy starting in the mid-eighties, that can be seen —to a great extent— as the result of a territorial expansion of capitalism with the integration of China —with its huge stock of resources, including a one-billion labor force— into the world economy. What the current turmoil is telling us is that the completion of such integration requires a re-accommodation of the world economy, including not only the re-alignment of some basic relative prices, but also the implementation of a program of multilateral financial regulation and the creation of a new, symmetrical international monetary system.

1. THE NATURE AND CAUSES OF U.S. EXTERNAL DISEQUILIBRIA

The interest of focusing on the nature and causes of recurring U.S. foreign disequilibria during the last thirty years lies in the significance of its two main consequences —financialization and global excess liquidity— in the engendering of the Great Recession.

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5 See, for example, Nouriel Roubini (2013).

6 Although rich countries have already recognized the importance of newly industrialized countries —especially China— as sources of aggregate demand, negotiations with them seeking to revalue their currencies and encourage their demand for imports have not yet begun.

We will leave the examination of the consequences for section 2, so we can first analyze in this section the nature, causes and importance of U.S. external disequilibria.

External disequilibria grew during the past thirty years with the increased openness of all economies around the world, and were particularly relevant in the case of the U.S. Measured as $(X + M)/Y$, the openness of the U.S. economy went from 10% forty years ago, to more than 30% currently. Regarding external disequilibria, the U.S. began suffering current account deficits, year after year, since 1982,[7] reaching a record of $800 billion the year 2006 (i.e., 6% of GDP). And it is the persistence of U.S. external disequilibria we are concerned about because the U.S. was the country where the crisis first erupted; it (still) is the largest economy in the world; and is the country that issues not only the world reserve currency, but also the financial papers with the lowest risk and highest liquidity in the world.

To understand the nature and importance of U.S. foreign disequilibria we must take notice that the role of reserve currency assigned to the dollar in Bretton Woods (1944) —a role the dollar kept after the demise of Bretton Woods in 1971— forced the U.S. to have external deficits as a way to satisfy the world's demand for liquidity, as it was first observed by Robert Triffin in 1960.[8] As the U.S. was forced by the asymmetry of the international monetary system to experience external deficits, we cannot "blame" those deficits on the U.S. However, it is of the utmost importance that we also point out that, concerning the nature of its foreign deficits, the U.S. still had a choice between current account and financial account deficits, and that it chose the first option; that is, importing instead of exporting capital.

This is a central issue that is regularly overlooked —or not well understood— in the literature, as authors seem to believe that such an option did not exist —and that the

[7] Actually, in 1991 the U.S. had a current account surplus equal to $2.9 billion, which can be considered statistically equal to zero.

[8] As it was observed by Robert Triffin (1960), this configured a dilemma between restricting the supply of dollars and having a negative effect on global economic activity, and increasing such supply and undermining the dollar convertibility, as a result of the higher ratio of dollar holdings to the U.S. stock of monetary gold.

only way for the U.S. to export liquidity was by exporting capital[9]— or was of no consequence. However, the option existed, and it was the U.S. choice of meeting the world demand for liquidity by selling financial assets through a current account deficit, instead of buying productive capital through a financial account deficit, that finally undermined the convertibility of the dollar; and the reason is simple: the reserve-currency-issuing country has the option of backing its currency with gold reserves or with some type of foreign assets (by investing abroad). But the U.S. chose neither option.

The causes of the U.S. preference for parallel current account deficits and financial account surpluses —a phenomenon closely linked, we must insist, to financialization and global excess liquidity— is another matter of discussion. Perhaps the best known explanation is the one given by Ben Bernanke (2005 and 2007), that sees such phenomenon as the result of a "global savings glut" caused by "a large increase in net desired savings… in emerging market and oil-producing economies … that transformed these countries from modest net demanders to substantial net suppliers of funds to international capital markets".[10] However, Bernanke's explanation fails to give a full account of the situation, as a "savings glut" can explain the U.S. financial account surplus, but not the parallel current account deficit, and we need a way to simultaneously explain both phenomena. That is, the increase in savings in emerging and oil-exporting economies is only part of the explanation, as we also need to explain why (and how) those countries' funds ended up flowing into the U.S. to be used to finance imports of goods and services. And the most appropriate explanation is a U.S. loss of external competitiveness, together with an increase of domestic absorption in relation to total output.

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9 Take, for example, David Stockman (2013: loc. 1470) asserting that "The reserve currency country was supposed to run a trade surplus and export capital to less developed trading partners, not incur massive deficits and drain capital from them".

10 In fact, with this argument Bernanke intends to jointly explain three facts pertaining the 1996-2004 period: (1) the substantial increase in the U.S. current account deficit, (2) the swing from moderate deficits to large surpluses in emerging-market countries, and (3) the significant decline in long-term real interest rates. See Bernanke (2007: 2-3).

But, how can we explain the loss of external competitiveness and the increase of domestic absorption in relation to total output in the U.S.? In the case of **the U.S. loss of external competitiveness**, we see such phenomenon as the result of a lag in technological progress and productivity growth, that led to the shortening —or even a breakdown— of the Product Life-Cycle proposed by Raymond Vernon (1966), according to which the more advanced countries can compete with lower income economies by using technological innovation to introduce new manufactured products; that is, rich countries will be able to compete with lower income economies in spite of their higher costs and wages only as long as they keep renewing their technologies and introducing new, more sophisticated products into the markets. And the problem is that there is some evidence that, for some time now, and in spite of the surge in productivity associated with the computer and Internet revolution, the speed of the production of new technology has been below the levels required by rich countries to remain competitive.

That is, the loss of competitiveness of the central economies is related to the decline in the rate of return of productive capital, which in time is reflected in the low interest rates and explained mainly by lagging technological progress. Although innovation is only one of the five possible sources of growth —the other four being a larger supply of labor; capital accumulation; an increased access to natural resources; and the opening to free trade[11]— technological progress (that increases the productivity of labor and capital) is of particular importance for the competitiveness of the central economies. A variety of explanations concerning lagging innovation in the U.S., that may have begun in the 1980s, have been produced by many authors, among them Tyler Cowen (2011) —the technological plateau—, Robert J. Gordon (2012) —the educational plateau as one of the six headwinds facing the U.S. growth[12]— and Edmund Phelps (2013) —the

[11] Although opening to free trade will not directly enlarge a country's production possibility frontier, it will partially ease such constraint over its consumption (and welfare) level.

[12] Actually, Gordon quotes a study by Claudia Goldin and Lawrence F. Katz (1998). *The Race Between Education and Technology*. Cambridge and London: Belknap Press of Harvard University Press.

weakening of grassroots dynamism and indigenous innovation (or grassroots innovation).

An interesting, straightforward summary of the diverse causes of U.S. lagging technological leadership —as well as assorted pieces of evidence— was provided ten years ago by Adam Seagal (2004). One of Seagal's findings is that China, India and South Korea appear to have been the countries that most gained in relative terms —a fact also recognized by Galama and Hosek (2008). We consider this a remarkable fact inasmuch as it explains the loss of competitiveness not only of the U.S., but also of other rich countries, such as Japan and the European countries.

In any case, the importance of the consequences for growth of the lag in technological progress was initially shrouded by the entrance —or closer integration— of the Asian Tigers, and then of China and other BRIC countries, into the world economy, that since the mid-1980's played the role of a simultaneous massive supply and demand shock, that allowed the world economy to grow faster and with lower inflation. The significance of this phenomenon can be assessed by observing that currently China and India together represent one fifth of world output and one third of world population. The supply side shock this represented —via an increase in the stock of capital, labor and natural resources— reduced the importance of the fall in productivity growth, but now rich countries have to face the fact that this was a one-time-only event.

However, in spite of lagging technological progress, the U.S. could have been able to confront the competition of cheap manufactures by lowering **the value of the dollar**. Although a definite assertion concerning an overvaluation of the U.S. dollar cannot be made,[13] as there is no clear evidence of an increase of its real value in relation to other important currencies, we can argue that its reserve currency role prevented a

[13] Given the central role that the exchange rate plays in the determination of the relative price between tradable and non-tradable goods, some evidence of the dollar overvaluation may be seen in the fact that non-tradable sectors bloomed in the middle of the invasion of Chinese manufactures. In fact, the Bank for International Settlements (2013, p. 27) talks of "bloated" construction, financial and real estate sectors in the U.S.

devaluation of the dollar, warranted by the persistent U.S. current account deficits. Although China and other Asian countries have been accused of undervaluing their currencies and following hideous "mercantilist" policies of accumulating huge amounts of foreign exchange reserves —accumulation that may have prevented a devaluation of the dollar— the situation is clearly a bit more complicated. To begin with, a more appropriate characterization would not be "mercantilist" but "export-led" (or "export-addicted", as some would say);[14] and, on the other hand, any exchange disequilibria between two countries occur only if both countries want (or need) and can have an imbalance, one as a surplus creditor, and the other as a deficit borrower (there are always two sides in an economic transaction). In any case, in 2007 the U.S. trade deficit with China was comparatively much smaller than the corresponding deficit of the European Union (31% vs. 80%).[15]

While the Chinese may not be fully exonerated of an overvaluation of the dollar, via an undervaluation of their currency, large capital inflows (the importing of capital) into the U.S. economy may be seen as causing some sort of financial Dutch Disease, with the increase in the demand for domestic currency —and financial assets in general— resulting in this case not from the higher prices of its exports, but from the larger inflow of foreign funds. In any case, the Federal Reserve could have prevented —up to a point— the appreciation of the dollar by printing more money —i.e., by increasing the supply of dollars— not for lending it to domestic agents, but for buying foreign currencies. But the reserve currency role of the dollar allows the U.S. to keep a minimal amount of foreign exchange reserves, and that is one of the reasons why the Federal Reserve played a passive role in the foreign exchange markets.[16]

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[14] The term "mercantilism" more properly alludes to the monopolization by European powers of their colonies foreign trade during three centuries.

[15] Although, curiously, in 2011 the absolute amount of their trade deficits with China were almost equal (155 and 157 billion euros).

[16] There exists a Exchange Stabilization Fund (ESF) of the United States Treasury, created in 1934 "to contribute to exchange rate stability and counter disorderly conditions in the foreign exchange market", but its intervention in that market –if at all exists– is totally irrelevant. See, for example, Federal Reserve Bank of New York (2007).

On the other hand, the correspondence between external and internal disequilibria tells us that a country´s loss of competitiveness will not necessarily cause a current account deficit —but only the reduction of both exports and imports, inducing a less open economy— unless that same country's domestic absorption is larger than its total output.[17] So, a pertinent question in this case would be what caused **the increase in domestic absorption in relation to output in the U.S.** We can list several factors concerning this phenomenon: falling interest rates (that increased present consumption); higher propensities to consume (particularly noticeable because it occurred in spite of higher income and wealth inequality) and to import (because of the loss of competitiveness); lower tax burdens (resulting, in time, from supply-side tax cuts to the rich and the taking advantage of offshore tax havens by multinational corporations)[18]; and increases of military spending after 9/11.[19] Stockman (2013) links the increase in U.S. public absorption to the demise of Bretton Woods by President Nixon in 1971, which would have allowed the American government to finance public deficits by printing more money without any concern for the convertibility of the dollar.

But, if the loss of competitiveness and the increase in domestic absorption in relation to domestic output explain current account deficits, **how can we explain the financial account surpluses?** This question is pertinent because, while any country can finance a current account deficit with a combination of a negative change in foreign-exchange reserves and a financial account surplus (borrowing from foreign countries), a reserve-currency-issuing country like the U.S. has an additional option, which is having its current account deficits financed by its own central bank (i.e., printing money), and —as it does not usually keep foreign exchange reserves— the pertinent options are printing money or borrowing from foreign countries (see Table 1).

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17 The correspondence between external and internal disequilibria alludes to the identity $Y \equiv C + I + G + X - M$, where domestic absorption A is equal to $C + I + G$, and the current account is equal to $X - M$, in such a way that $Y - A \equiv X - M$.

18 See Stiglitz (2013a)

19 See Joshua Holland (2013).

Table 1
Options for Financing Current Account Deficits

Options Open to a Reserve-Currency-Issuing Country	Options Open to Other Countries
Financial Account Surpluses Selling of Foreign Exchange Reserves Printing Money	Financial Account Surpluses Selling of Foreign Exchange Reserves

But the U.S. would not be able to borrow money (i.e., having a financial account surplus) if the foreign countries (the rest of the world) used all the dollars they obtain through their current account surpluses with the U.S. to satisfy their demand for liquidity, and in that case the Federal Reserve must intervene buying domestic debt (i.e., printing money). But if the current account deficit is larger, foreign countries will employ only part of the dollars they get to satisfy their demand for liquidity, and use the rest to buy IOU's from deficit units (both private and public) in the U.S. Thus, the U.S. current account deficits were financed mostly by a financial account surplus, and only partially by printing money, because they were too large to be financed solely by printing more money.

This situation is better understood if we also take into consideration that the current account deficits and financial account surpluses of borrowing countries necessarily require as a complement current account surpluses and financial account deficits by other lending countries, and that —given its 40% savings rate— China could easily play that role, and rapidly became the most important U.S. creditor. Niall Ferguson (2009) points out that "Significantly, the net increase of China's foreign exchange reserves almost exactly matched the net issuance of US Treasury and government agency bonds",[20] and talks of a "Chimerican partnership".

[20] Ferguson (2009), p. 335.

2. THE CONSEQUENCES OF U.S. EXTERNAL DISEQUILIBRIA

The fact that the way the U.S. chose to satisfy the world demand for liquidity —through current instead of financial account deficits— is not sustainable in the long run, as it would lead to some sort of Ponzi scheme, is not seen by many as directly linked to the Great Recession because they fail to recognize that the flooding of the U.S. economy by foreign financial funds —and consequent financialization and excess liquidity— resulted precisely of its current account deficits and parallel financial account surpluses. Having found that the causes of U.S. external disequilibria lie in the real sector of its economy, we now need to study the effects of such disequilibria on financial markets, i.e., financialization, global excess liquidity and asset market bubbles.

To begin with, as evidence of **financialization** we can present a number of indicators concerning the U.S. and other central economies, among them, the higher ratio of money supply to GDP; lower interest rates; the bigger private non-financial (both household and corporate) and government debts in the U.S.,[21] and —particularly— banks' higher leverage ratios; the increased stock markets' capitalization; the larger foreign exchange markets turnover; the expansion of high-yield (non-investment-grade or junk) bond market; the rise of the financial sector's share of corporate profits in the U.S.;[22] the larger and faster capital flows, and the falling importance of U.S. foreign direct investment when compared with total U.S.-owned assets abroad;[23] the increase in the number and value of mergers and acquisitions;[24] etc. All these indicators point in the same direction.

Although it is a very complex phenomenon, global financialization can be defined simply as the absolute and relative growth of financial markets that has accompanied the

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21 Kaufman (2009: 52).

22 Johnson and Kwak (2010: 60-61).

23 In the case of the U.S., a relative decline of both inward and outward direct investment can be observed, at least since 1999. See Table B–107 of the Economic Report of the President, several years.

24 According to the Institute of Mergers, Acquisitions and Alliances, the average annual value of worldwide mergers and acquisitions went from approximately $800 million in 1988-1997 to $2,900 in 1998-2007. See http://www.imaa-institute.org/docs/.

globalization of the world economy during the last thirty years; thus, there were two simultaneous phenomena involved: financialization and globalization. Concerning the first phenomenon, Batt and Applebaum (2013: 1) see it as "a shift from managerial capitalism, in which the returns on investments derive from the value created by productive enterprises, to a new form of financial capitalism, where companies are viewed as assets to be bought and sold and as vehicles for maximizing profits through financial strategies". Regarding the second phenomenon, Obstfeld (1998) alludes to the starting in the 1970´s of an "integration of global capital markets" or, more properly, to the formation of a "global capital market".

Authors on financialization usually discuss issues such as its definition, measurement, characteristics and consequences, giving generally less importance to the discussion of its causes, and pointing mainly to financial deregulation in case they do.[25] We consider that the main impact of global financialization was the setting of the stage for the Great Recession, and contend that it should be seen mainly as a result of the growing external disequilibria affecting many central economies —and particularly the U.S.— since the early 1980's, although there were several additional factors involved, such as —in order of importance— lower rates of return on productive capital; financial deregulation and the emergence of more sophisticated financial instruments;[26] price stability; etc.

The way in which the **growing external disequilibria** affecting many large economies – particularly the U.S. since the early 1980's– contributed to the global financialization process is very simple: as financial markets require of surplus and deficit units, the growth of the international financial markets required lending economies with larger current account surpluses on the one hand, and borrowing economies with larger current account deficits, on the other hand. Even more, even if all countries had balanced current accounts with the rest of the world, international financial transactions will still be required as a result of bilateral imbalances, and such

[25] See, for example, the papers compiled by Epstein (2005).

[26] The Gramm–Leach–Bliley Act of 1999, which repealed the provisions of the Glass–Steagall Act of 1933 separating commercial and investment banking, could be considered the most important milestone of the deregulation process in the U.S.

requirements should be more apparent in the case of countries with persistent net current account deficits. Anyway, although authors such as Maurice Obstfeld (1998) acknowledge the importance of the relationship between current account imbalances and international capital flows, a cause-effect relationship is not usually considered.

While the disproportionate growth of global financial activity required both a larger demand for credit by deficit economies and a larger supply of credit by surplus economies, the decline of interest rates during the last thirty years reveals that the demand for credit lagged behind the supply of credit,[27] most probably as a result of a **decline in the rate of return on productive capital** that caused a recomposing of the stock of capital in favor of financial capital, i.e., a preference for financial over real (productive) investment. In effect, as pointed out by Kaufman (2009: 161): "In some ways, it appeared that financial intermediation had become more important than activities in the real world".

The decline in the rate of return of productive capital in the central economies is related to the competitiveness problem we have already discussed, as means such as foreign investment, offshoring and outsourcing were not enough to compensate the losses of their manufacturing companies. Concerning this issue —the decline of the rate of return of productive capital— there is also the capitalist stagnation hypothesis, as presented —for example— by Foster and McChesney (2012). Although, according to them, the central cause of the stagnation tendency is not related to the competitiveness problem, but to "the high, and today rapidly increasing, price markups of monopolistic corporations" (loc. 505), they nevertheless underline the importance of the link between financialization and economic stagnation (loc. 261).

A third factor —besides growing external disequilibria and lower return on productive capital— behind the financialization process was the passing of **financial deregulation** measures which —together with the imagination and mischief of financial executives—

[27] The only way a larger output (market) and a lower price can be observed is in a case in which there is an increase in supply that is proportionately larger than the increase in demand.

created the conditions for a set of new, increasingly sophisticated financial instruments, such as adjustable-interest-rates and credit default swaps (CDS), seeking the transfer of risk, and the securitization of corporate debt and mortgage loans (CDOs and CMOs), seeking the spread or pooling of risk, creating in this way an illusion of safety that allowed and encouraged the growth of investment banking and of high-yield ("junk") bond market, the overleveraging of banks, etc. Concerning this issue, Ferguson (2009) points out "Not only have new forms of financial firms proliferated; so too have new forms of financial asset and service" (p. 355). But Kaufman (2009: 56-57) considers financial deregulation as only one factor of a total of seven causing the increase in debt in the U.S. economy, others being the "attitude toward debt", "financial innovation", the "internationalization of finance", etc.[28] On the other hand, Batt and Appelbaum (2013) emphasize the importance of deregulation and institutional change in the creation of the conditions for a new, more powerful role for finance capital in the governance of U.S. companies, and maintain that it was "the interaction of changes in financial regulations, new forms of financial engineering, the rise of institutional investors, and the theories of activist academics" that led to the emergence of a new model for the American corporation, "one based far more on financial strategies than productive ones" (p. 14). The fact that some of those financial strategies were not altogether honest is reflected on the settlements by Bank of America Corp. ($16.7 billion), JPMorgan Chase & Co. ($13 billion) and Citigroup Inc. ($7 billion) in order to end investigations mostly related to the mishandling of mortgage-backed securities sold by the banks, thus avoiding the prosecution of their executives.

Another factor contributing to the financialization process —and usually overlooked in the literature— was the falling of the rates of inflation in the central economies (and everywhere). In effect, although firms in the productive (non-financial) sector should not be directly affected by increases in the level of prices,[29] **price stability** (or low inflation) is particularly important for the growth of real liquidity, and financial activity

[28] To these we should add much faster financial operations (program –and automated– trading.

[29] Unless these have an effect on the relative prices of goods and services (including real wages).

in general, not only because it prevents the depreciation of nominal assets, but also because it involves a lower level of risk.

Although twenty years of policies of inflation targeting are sometimes attributed the lower inflation rates, actually inflation has been falling in the U.S. for at least thirty years now, and the idea that inflation is an economy's greatest danger began gaining force in the early 1970s, with the publications by Robert Lucas and Thomas Sargent, and has prevailed under three successive Federal Reserve chairmen: Paul Volcker (1979-1987), Alan Greenspan (1987-2006) and Ben Bernanke (since 2006). Average annual inflation of consumer prices in the U.S. fell from 9% in the 10 year (1973-1982) period to about 3% during the following 25 years (1983-2007). The simultaneous larger balance of payments disequilibria and increased price stability in rich countries were made possible, to a great extent, by the (closer) integration of China and other emerging economies into the world economy.

Other factors —less important and less frequently mentioned in the literature— behind the financialization process were the larger income and wealth inequality (as the rich accumulated investment funds); the revolution in information and communications technology that enabled faster and cheaper financial transactions; demographical changes that contributed to the growth of pension funds; the involvement of multinational banks in money laundering and Ponzi schemes;[30] not to mention facts such as the returns from Wall Street speculation being taxed "at a far lower rate" than other forms of income.[31]

Although many may not see financialization as a problem per se, it should be observed that rent-seeking, non-productive activities can be much more important in financial

[30] The United Nations Office of Drugs and Crime (2013) estimates the amount of money laundered globally in one year to be 2% - 5% of global GDP, or $800 billion - $2 trillion in current U.S. dollars. The best known case of a bank being involved in money laundering is that of the British bank HSBC, fined with a $1.92 billion payment by U.S. authorities in December 2012. In the same way, the best known case of a bank involvement in a Ponzi scheme is that of JPMorgan Chase ties to Bernard L. Madoff that involved $2 billion in penalties.

[31] Stiglitz (2013).

markets;[32] that financial institutions' higher leverage ratios imply an increase in financial vulnerability and moral hazard;[33] and that financialization has contributed to create a **global excess liquidity**, a condition that would imply that financial assets are currently overvalued. Several German authors have paid special attention to the evaluation of global excess liquidity and its consequences, as well as to discussing the difficulties of its measurement.[34] Originally seen as a useful indicator of inflationary pressure, these authors —particularly Becker— pay now more attention to the causes of global excess liquidity, and see it as the result of "extremely accommodative monetary policies in the US, Euroland and Japan between 2002 and 2005 coupled with firmly managed exchange rate regimes in many Asian economies, as e.g., China, Taiwan and South Korea" —and its consequences concerning financial asset prices, warning that "an overabundance of liquidity has been chasing assets around the globe and that this search for yield has in turn importantly contributed to well-performing asset markets (including rising world equity prices, low long-term risk-free interest rates, narrow sovereign emerging market and corporate bond spreads as well as rising real estate prices)".[35]

The global excess liquidity brought about a disproportionate growth of credit, equity, real estate, foreign exchange and commodities markets, with the subsequent bubbles in the stock and real estate markets being the most noticeable. In the equity market, after a period of stability of two decades, prices began accelerating by the early 1980's, in such a way that the average annual growth rate of the Dow Jones Industrial Average (DJIA) during the period 1983-2000 was 14.9%, that is, more than double the 6.4% rate corresponding to the U.S. nominal GDP during the same period (and ten times larger than its own rate of growth during the 1960-1982 period). These results —presented in Figure 1— show that the effervescence in equity markets and the current account

[32] An example of such activities would be junk debt buyers, such as the so-called "vulture funds" involved in the restructuring of the Argentine debt.

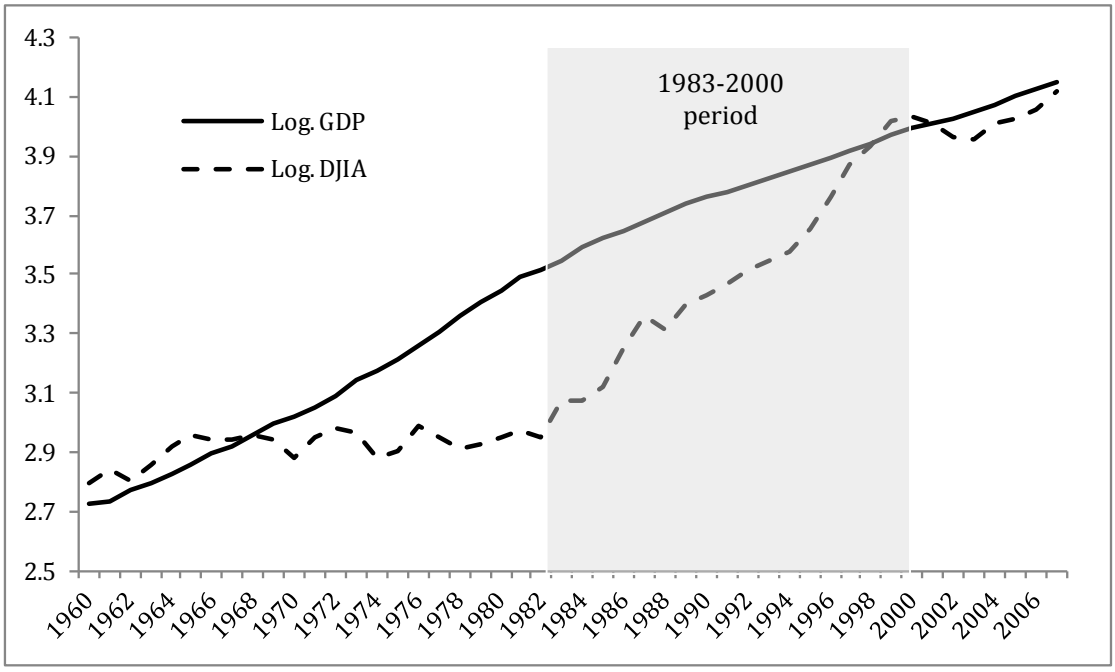
[33] Ferguson (2009). He remarks that, by September 2008, Bank of America´s leverage ratio was 73.7 to 1 (p. 358).

[34] See Becker (2007 and 2009), Polleit and Gerdesmeier (2005), and Rüffer and Stracca (2006).

[35] Becker (2007: 3).

deficits began simultaneously in the U.S., underlining not only their connection, but also the long period of incubation of the crisis.

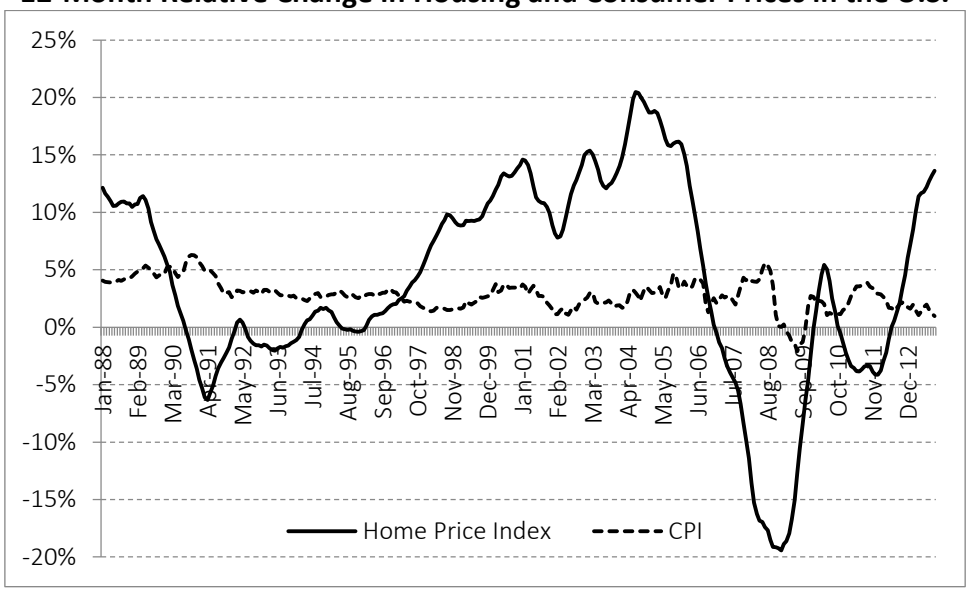
Figure 1
United States GDP and DJIA Index (1960-2007)



Another manifestation of excess liquidity in the U.S. was the behavior of housing prices, that began recovering by the early 1990's, accelerated in a few years, and reached and (basically) kept a double-digit annual rate of growth for almost eight years (from September 1998 through May 2006). The inflation of housing prices —presented in Figure 2— was made possible by the rapid growth of mortgage loans, in time helped by the expansion of the subprime market of mortgage-backed securities and the securitization process in general. In fact, the recovering and acceleration of housing prices overlaps almost exactly with the behavior of mortgage debt, which grew at an annual average rate of 9.1% during the 1993-2006 period.[36] Again, as in the case of equity prices, the data on real estate prices clearly shows that the bubbles preceding the Great Recession had a long period of development (in fact, some fifteen years).

[36] See historical data of total mortgage debt outstanding in http://www.federalreserve.gov/econresdata/releases/mortoutstand/current.htm

Figure 2
12-Month Relative Change in Housing and Consumer Prices in the U.S.



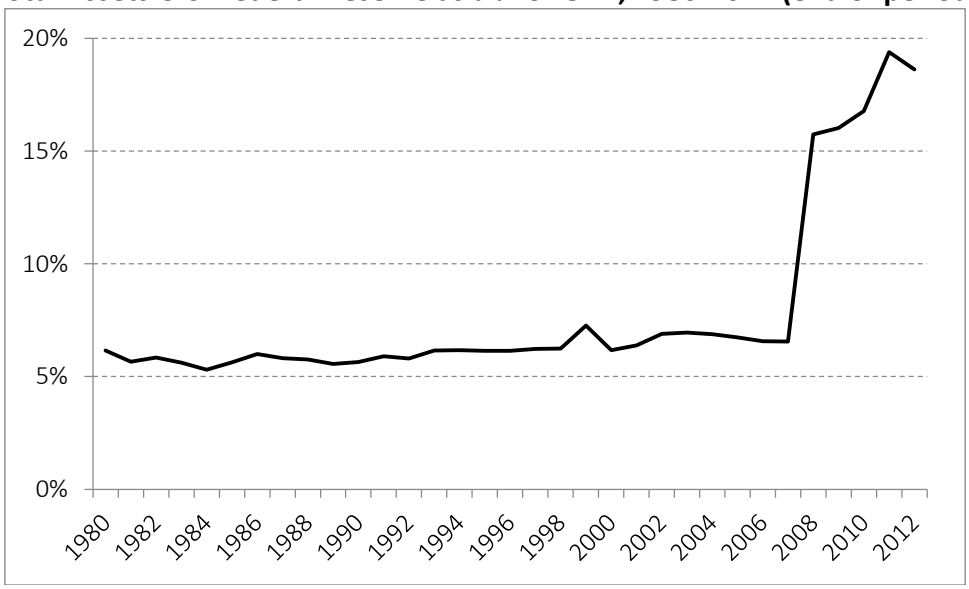
http://www.spindices.com/index-family/real-estate/sp-case-shiller
S&P/Case-Shiller 10-City Composite Home Price Index.

As a way to put emphasis on the fact that these bubbles did not respond to an active monetary policy by the U.S. Federal Reserve, but instead to an excess of liquidity resulting from the inflow of foreign funds into the U.S. economy, we show in Figure 3 below that the Federal Reserve maintained a basically neutral monetary policy between 1980 and 2007, during which its total assets remained fairly stable at around 6% of GDP, only jumping afterwards to almost 20% by 2011.

Before moving ahead, we must stress that the problem of the asset bubbles was not limited to the U.S., but was also present —in a higher or lower degree— in several other OECD countries —specifically Australia, Ireland, Italy, New Zealand, Portugal, Spain and the United Kingdom— that had a similar pattern of continuous current account deficits and financial account surpluses since de 1990's. In the case of the other three most important OECD countries —France, Germany and Japan–, the experience of France was

the most similar to that of the countries we have listed; that of Japan was exactly the opposite, while Germany´s experience was the most peculiar.[37]

Figure 3
Total Assets U.S. Federal Reserve as a % of GDP, 1980-2012 (end of period)



Sources:
Total Assets U.S. Federal Reserve: Annual Report of the Federal Reserve System. http://fraser.stlouisfed.org/publication/?pid=117.
U.S. GDP: The Economic Report of the President 2013.

In the specific case of the U.S., the unsustainable condition of its financial system — referred to as "financial fragility" by authors such as Minsky (1992)— brought about by excess liquidity by 2007-2008 is depicted in detail in an official 600-page report published by The Financial Crisis Inquiry Commission in 2011. A passage from the Conclusions of such report reads: "In the years leading up to the crisis, too many financial institutions, as well as too many households, borrowed to the hilt, leaving them vulnerable to financial distress or ruin if the value of their investments declined even modestly… To make matters worse, much of their borrowing was short-term, in the overnight market… And the leverage was often hidden –in derivatives positions, in off-balance-sheet entities, and through "window dressing" of financial reports available to the investing public… The heavy debt taken on by some financial institutions was

[37] Balance of payments statistics for OECD countries can be found in http://stats.oecd.org/Index.aspx?DataSetCode=MEI_BOP#.

exacerbated by the risky assets they were acquiring with that debt… the dangers of this debt were magnified because transparency was not required or desired… Key components of the market —for example, the multitrillion-dollar repo lending market, off-balance-sheet entities, and the use of over-the-counter derivatives— were hidden from view, without the protections we had constructed to prevent financial meltdowns… When the housing and mortgage markets cratered, the lack of transparency, the extraordinary debt loads, the short-term loans, and the risky assets all came home to roost. What resulted was panic" (pp. xix-xx)

The consequent implosion of equity, real estate and commodities prices, and a general increase of nonperforming loans caused the collapse of giant financial institutions, and nonperforming loans as a percentage of total gross loans rose up from 0.7% in 2005 to 5.4% in 2009.[38] The fall of the market value of equity and —above all— housing had a severe impact on consumption because of its negative wealth effects.[39] Thus, firms were affected not only by the lower value of their assets, but also by the lower households' consumption expenditures. Firms may have continued cutting spending in order to reverse positions of excessive leverage by reducing debt, a process that should continue for as long as firms' debt levels are seen as abnormally high, a process similar to the one experienced by Japanese firms since the 1990's, and called "balance sheet recession" by Richard Koo (2003).[40] And this situation may only have been worsened by the firms' "fear of risk".[41]

All this had a negative impact on production, especially in OECD countries, whose product grew at an annual average rate of only 1.6% per year during the period 2001-2012, barely above one half the corresponding rate of growth during the previous twelve years; and basically did not grow between 2007 and 2012, as can be seen in Figure 4. And as can be observed in Table 2, the slower rate of growth in rich countries

38 See http://data.worldbank.org/indicator/FB.AST.NPER.ZS.

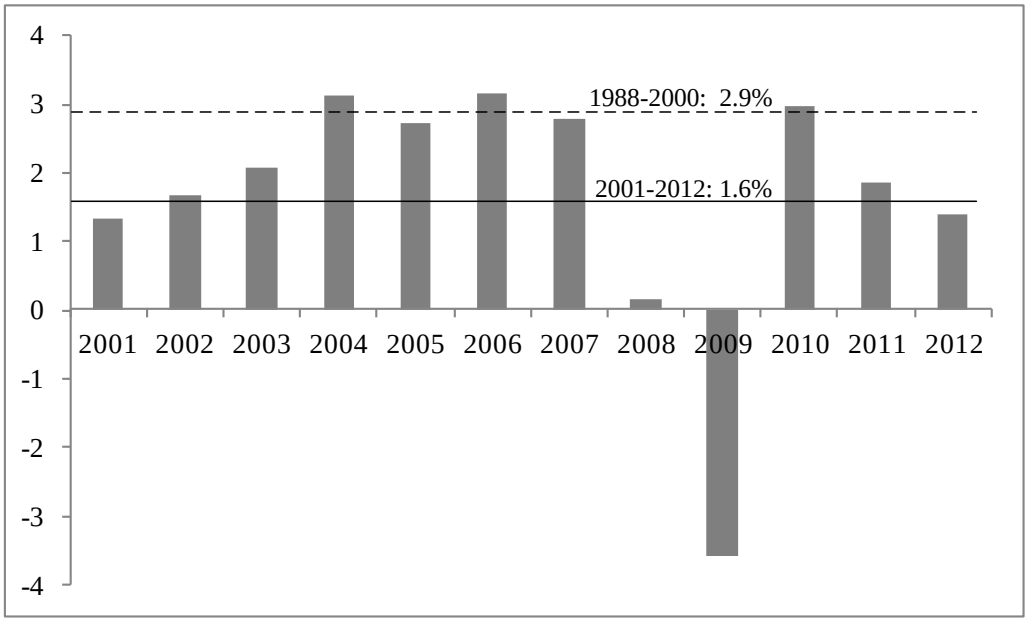
39 According to Helbling and Terrones (2013: 72), "Housing price busts have larger wealth effects on consumption than do equity price busts".

40 See also Helbling and Terrones (2013: 76).

41 See Iwamoto et al. (2012).

has allowed the emerging economies to start closing the product gap, and the difference between the U.S. and China should disappear in 10 or 15 years, although in this case the comparison is made employing purchasing power parity techniques.

Figure 4
OECD Countries GDP Growth, 2001-2012



Source: OECD

Table 2
GDP as a Share of World GDP – 2011

Rich Countries	%	Emerging Economies	%
United States	19.13	China	14.32
Japan	5.63	India	5.65
Germany	3.93	Russian Federation	3.02
United Kingdom	2.87	Brazil	2.91
France	2.81	Mexico	2.11
TOTAL	34.37	TOTAL	28.01
Note: GDP based on purchasing power parity.			
Source: World Economic Forum: *The Global Competitiveness Report 2012-2013* , p. 385.			

3. THE OPTIONS OPEN (AND NOT OPEN) IN THE SHORT RUN

In the case of the U.S., monetary authorities were forced to take emergency measures in September-October 2008 in order to rescue "too-big-to-fail" banks and non-financial corporations, by means of a $700 billion Troubled Asset Relief Program, which entailed a temporary nationalization, possibly with the supplementary purpose of preventing foreign capitals from playing the role of rescuers. Even though the bailing out of large corporations —can be alleged— helped prevent a total financial collapse and a dangerous drop in global liquidity —thus avoiding an economic depression— the fact is that the ensuing recession has been more widely spread geographically and lasted longer that what was initially expected, and an aggregate depressed demand remains as the central problem facing the central economies in the short run; therefore increasing aggregate expenditure should be the main objective of policy –the main tools available being domestic adjustment (monetary and fiscal) and exchange rate policies. As we have already pointed out, not only the simultaneous use of these instruments is severely restricted by the "impossible trinity",[42] but their separate, unilateral use also faces very serious obstacles. We will now examine these issues in some detail, and do it in order of importance, starting with monetary policy.

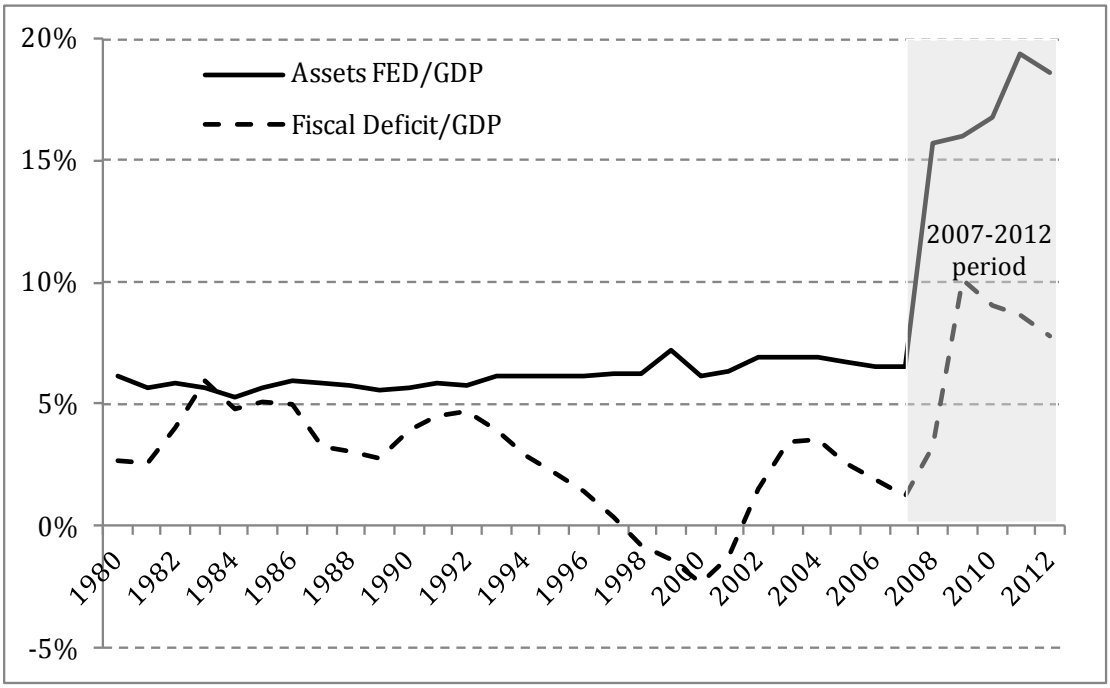
Even though, in principle, it appears to be absurd to try to solve a problem that was fueled by excess liquidity by creating even more liquidity, **monetary expansion** —or "quantitative easing"— has remained the tool of choice of economic authorities, particularly in the U.S. In this case, monetary policy —measured by Total Assets of the U.S. Federal Reserve as a percentage of GDP— is represented again in Figure 5 below, where it can be compared with fiscal policy, which we measure as the fiscal deficit (G – T) as a percentage of GDP, where it should be observed that the apparent vitality of fiscal policy —the fiscal deficit going from 1.2% to 10.1% of GDP between 2007 and 2009— results from the fact that the GDP in the denominator is falling behind.

[42] The "impossible trinity" refers to the fact that policy makers can simultaneously and independently control at most two of these three instruments: government expenditure, money supply and exchange rate, as —for example— an increase in money supply, given government expenditure, should lead to a devaluation of the exchange rate.

This time —in a situation of virtual liquidity trap— monetary policy has lost much of its effectiveness, as the only way to increase aggregate demand via lower real interest rates would be to increase the inflation rate. In this way, quantitative easing by the Federal Reserve can be seen as seeking to increase the inflation rate (or prevent deflation) with the purpose of augmenting consumption and lowering real interest rates and debt loads, in such a way that plain higher inflation would still be a desired result, and not just a simple side effect.[43] However, so far quantitative easing has not been working, and the reason appears to be that the larger supply of funds is allowing (and inducing) investors to move out to riskier assets and activities, and has ended up increasing the demand for (and prices of) financial assets, and not expenditure on goods and services; i.e., the larger supply of money appears to be feeding financial speculation, mergers and acquisitions, leveraged buyouts, etc., without a significant effect on aggregate demand or the price level, as can be seen in Figure 6, where the straight lines represent the corresponding lineal trends.

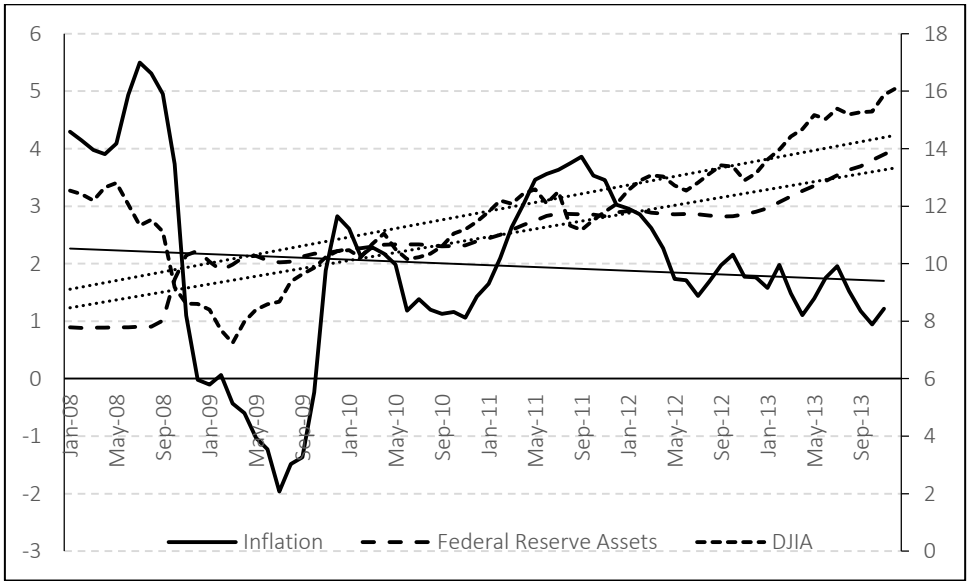
[43] Reinhart and Rogoff (2008, Sec. VI) use the expression "'default' through inflation" to allude to the episodes of high inflation and currency debasement in highly indebted countries.

Figure 5
Fiscal Deficit and Total Assets U.S. Federal Reserve as a % of GDP, 1980-2012 (end of the period)



Sources: Total Assets U.S. Federal Reserve: Annual Report of the Federal Reserve System. http://fraser.stlouisfed.org/publication/?pid=117
U.S. GDP and Fiscal Deficit: The Economic Report of the President 2013.

Figure 6
Monetary Base, Inflation and Stock Prices (2008-2013)



Annual CPI Inflation: percentage points; left axis.
Federal Reserve Assets: trillions of dollars; left axis.
DJIA: thousands of points; right axis.
http://www.federalreserve.gov/monetarypolicy/bst_recenttrends_accessible.htm

Even more, as it is shown in Table 3, the "problem" of low inflation affects not only the U.S., but OECD countries in general, thus opening the possibility that other OECD countries will choose to emulate the Federal Reserve policy of quantitative easing, a situation that would enlarge —perhaps more than proportionately— the dangers associated such type of policy.

Table 3

G20 Consumer Price Index – Annual Percentage Change

2009	2010	2011	2012	2013*
-0.7	3.1	4.1	3.2	2.8
(*) October. Source: OECD, except 2009 figure, that corresponds not to G20 but to an OECD countries estimate taken from Yardeni Research.				

In a situation like this, in which quantitative easing fails to prop up aggregate demand, an option to be considered would be Friedman´s "helicopter money" policy —which could take a variety of forms, e.g., payment of unemployment benefits— that would have the benefit of directly affecting expenditures, as the central bank would not be lending money but giving it away. One problem with the "helicopter money" would be its irreversibility (the central bank cannot take that money back), but —under the current conditions— this wouldn´t be a contentious matter. Another result would be that seigniorage would be directly appropriated by the public, but this cannot be regarded as a problem. Obviously, none of these considerations would make the "helicopter money" less politically controversial.

But even if it would have maintained its effectiveness, conventional monetary policy would still be facing serious difficulties. To begin with, there is the problem of a virtual "exhaustion" of monetary policy, as pointed out by the Bank for International Settlements (2013: 76): "Central banks have become increasingly overburdened, as they have been relied on heavily for years to stimulate economies through very accommodative monetary policies. There are growing concerns at this juncture about the effectiveness of these policies and their negative side effects. Monetary

accommodation can only be as effective as the balance sheet, fiscal and structural policies that accompany it".

Then, there is a series of conflicts than can be generated by an expansive monetary policy. David Stockman (2013: loc. 236) point to one of them when he accuses the Federal Reserve of "crucifying the nation´s savers on a rack of ZIRP" (zero-interest-rate policy). Stockman's argument is relevant, and points to the fact that while low interest rates have allowed the U.S. government —and also firms in the private sector— to refinance its debt at a lower cost, it is the nation's —and foreign— savers who are paying the bill. Besides, measures of quantitative easing seeking to increase the inflation rate are controversial also because they can be seen by the rest of the world as a way for the U.S. to export inflation.[44] Similarly, quantitative easing will eventually put an economy in a situation where interest rates can only go up, bond investors will end up being hurt by eventual rises in prices and interest rates, as bond prices will have to fall if interest rates rise.

Besides the conflicts they generate, inflationary policies also present a dilemma to the central economies as they can affect their foreign competitiveness by appreciating their currencies in real terms. In the case of the U.S., to prevent this from happening, the dollar would have to be devalued with respect to foreign currencies by a proportion larger than the growth of the ratio of domestic to foreign price indexes, but this may be something difficult to maneuver.

On the other hand, in the case of **fiscal policy**, the fact that it is the instrument closest to the "helicopter money" makes it the most politically controversial, having some accusing the others of "austerity mania", and being accused by them of "fiscal profligacy". Although fiscal policy arouses a controversy with an important political

[44] In March 2012, Brazilian daily *Jornal da Globo* reported that president Dilma Rousseff had accused developed nations of unleashing a "tsunami monetário", which undermines the competitiveness of emerging economies. See http://g1.globo.com/politica/noticia/2012/03/dilma-assina-pacto-para-melhorar-condicao-de-trabalho-em-obras.html

content —confronting liberals and conservatives— that is not present in the case of monetary policy, its advocates should nevertheless recognize its practical limitations. Going in order of increasing importance, the first problem with fiscal policy is the deflationary effect of pure fiscal policy, as a result of its "crowding out" effect, which makes necessary to concurrently increase money supply if a positive effect on aggregate demand is to be expected.

A second problem with fiscal policy in the case of the U.S. is the lower value of the fiscal multiplier resulting from the higher (average) propensity to import, that has risen from 4% to 18% during the last 50 years. This not only reduces the expansionary impact of fiscal policy, but also increases its negative effect on current account. Econometrical evidence showing the falling value of fiscal multipliers has been found by Roberto Perotti (2004) in a study of the effects of fiscal policy on GDP in five OECD countries — the U.S., Canada, the United Kingdom, West Germany and Australia— in which he distinguishes a pre- and a post-1980 period.[45]

The third, most important, problem with fiscal policy in the case of the U.S. —and other rich countries— is that of "debt overhang", analogous to the problem of "exhaustion" alluded to in the case of monetary policy by the Bank for International Settlements. In effect, the BIS (2013: 51) endorses policies of "fiscal consolidation", aimed at reducing government deficits and debt accumulation, asserting that "Public debt has reached record peacetime levels in many advanced economies. And it continues to rise. Greater debt represents a clear vulnerability for these countries. It leads to higher interest payments and hence higher taxes, and implies less room for countercyclical policy. It also makes investors fret about future inflation or default and hence demand higher risk premia. Fear of default leads to higher borrowing costs for financial institutions that hold government securities and less credit to firms and households". To understand the BIS concerns, information showing how public debt in the U.S. and other rich countries has been growing year after year since 2007 is presented in Table 4.

[45] See Cumulative responses to a spending shock in Perotti (2004), Table 6, p. 20.

Table 4
Public Debt in the OECD Countries, USA and Euro Area as a % of GDP

	2007	2008	2009	2010	2011	2012	2013
OECD	74.2	80.7	92.2	98.7	102.9	108.7	111.4
USA	63.8	69.9	85.0	93.3	97.9	102.3	n.a.
Euro Area	66.4	70.2	80.1	85.6	87.5	90.8	92.7
Sources:	OECD: OECD Economic Outlook no. 92. USA: Economic Report of the President 2012, Tables B-1 and B-81. Euro Area: Eurostat (17 countries).						

Similar arguments in favor of austerity policies have been provided by Olivier Blanchard et al. (2013): "The costs of high public debt, from higher equilibrium real interest rates to the distortions associated with the taxes needed to service the debt, have long been recognized. The crisis has brought to light another potential cost: the risk of multiple equilibria associated with high levels of debt. If investors, worried about a higher risk of default, require higher risk premiums and thus higher interest rates, they make it more difficult for governments to service the debt, thereby increasing the risk of default and potentially making their worries self-fulfilling."

Eduardo Borensztein et al. (2007), in a report analyzing the evolution of sovereign debt in Latin America, explicitly allude to the use of the expression "debt overhang" in the international finance literature since the mid-1980s to characterize a situation in which future debt burden "is perceived to be so high that it acts as a disincentive to current investment, as investors think that the proceeds of any new project will be taxed away to service the pre-existing debt… A weaker version requires only uncertainty by investors as to whether the government will expropriate the return on their investment, or even uncertainty on the part of lenders to investors who may not be sure whether their claims will take precedence over —or be superseded by— the government's taxing power... Lower levels of current investment, in turn, lead to lower growth and, for a given tax rate, lower government revenues, lower ability to pay, and lower expected value of the debt" (p. 186).

The most important piece of empirical evidence supporting the "debt overhang" hypothesis was provided by Carmen Reinhart and Kenneth Rogoff, who used information on financial crises for more than 60 countries over 200 years to publish a series of studies, showing —among other things— that countries with higher debt loads tend to grow more slowly.[46] Although their results have been disputed by several noted economists, some very important arguments contained in these studies should be taken as addressing the criticisms of debt-overhang skeptics. One of them is that debt overhangs are associated with lower growth, irrespective of whether real interest rates rose, declined, or remained about the same, which implies that the "growth-reducing effects of high public debt are apparently not transmitted exclusively through high real interest rates".[47] Thus, current interest rates near historic lows should be seen only as palliating the debt overhang, but not as a sign that financial markets are welcoming the emission of more public debt.

Another important point presented by Reinhart and Rogoff is their contention that domestic debt should not be treated as equivalent to foreign debt. In effect, Reinhart (2013) explains the apparently incredible capacity of the U.K. and the Netherlands to keep growing under high debt loads for decades during the first half of the XIX century observing that both countries "played a prominent role as international financial centers; and in both cases, high public debt coexisted with high private saving. The two nations, in effect, were creditors to the rest of the world —unlike the U.S. today. The U.K. and the Netherlands enjoyed a substantial and well-documented transfer of resources from their colonies that no modern economy can count on". Reinhart's explicit reference to "the U.S. today" should help us understand the importance of thirty years of current account deficits and the consequent accumulation of foreign debt at the time of evaluating the U.S. government ability to implement expansionary fiscal policies.

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46 See, for example, Reinhart and Rogoff (2008), Reinhart, Reinhart and Rogoff (2012), and Reinhart (2013).

47 Reinhart, Reinhart and Rogoff (2012: 69).

The fact that the U.S. government inevitably faces a budget constraint —made more restrictive by the previous accumulation of debt— has been questioned, among others, by Paul Krugman (2013), who pointed out: "Washington has spent the past three-plus years in terror of a debt crisis that keeps not happening, and, in fact, can't happen to a country like the United States, which has its own currency and borrows in that currency". However, its condition of issuer of the reserve currency relieves the U.S. government of its budget constraints only to some extent, as we cannot consider the markets will allow the Federal Reserve a totally discretionary handling of the supply of dollars.

At this point, a provisional balance would be that monetary and fiscal policies have failed to bring about an increase in aggregate domestic demand and/or to reduce "overindebtedness" via higher price levels. Nevertheless, there is a third possibility, which is to increase aggregate foreign demand for domestic output and to reduce the debt load via a **devaluation of the exchange rate**. Thus, the advantage of a devaluation is that both objectives that can be tackled with a single instrument. However, discretionary exchange market intervention seeking currency devaluations should be discarded because most probably would trigger open beggar-thy-neighbor policies and accusations of exchange rate manipulation. In fact, even if this type of disputes were not of concern to policy makers, exchange rate targeting via discretionary exchange market intervention would still conflict with the prevailing policies of inflation targeting. That is, if manipulating nominal exchange rates is already difficult, managing real exchange rates (ExP^*/P) is even more complicated: if a given country cannot fix independently its exchange rate and price level, much less can affect the foreign price level (P^*).

The impossibility of discretionary policies and the necessity of multilateral arrangements regarding exchange rates arise from the fact that, given n different currencies, there are only n - 1 independent exchange rates. This is why, assuming only two countries, we cannot guarantee the existence of an "equilibrium" exchange rate consistent with full employment in both countries, in such a way that the country with

unemployment will try to devalue its currency —which implies a revaluation of the other country's currency— giving rise to competitive devaluations, or a currency war, in which both countries print more money to buy the foreign currency, affecting in this way global liquidity but not the relative price of their currencies.

Even though we cannot currently talk of an open currency war, the situation still remains controversial with regards to the value of some Asian currencies, and the U.S. government keeps criticizing the lack of "transparency" of Chinese and Korean authorities' intervention in foreign exchange markets, but —after pressing with partial success for a revaluation of the yuan— no longer accuses China of "currency manipulation".[48] More recently, tensions rose because of the Bank of Japan intervention that took the Japanese yen from 80 to 100 to the dollar in less than two months. In a way, all the Bank of Japan really did was to replicate the Federal Reserve practice of monetary easing, although with much better results in its case.

A key demand made by the U.S. to foreign countries is not to accumulate foreign reserves. In this way, although the Federal Reserve does not directly intervene in the foreign exchange market —as it prints money to buy not foreign currencies but Treasury bonds—, by demanding other countries to refrain from accumulating foreign reserves is in fact telling them to use the dollars they have to buy not American debt but American goods and services. Obviously, this would involve a negative change in the current account balance of those countries, for which the only necessary requirement would be that those countries increase their expenditures in relation to their outputs. That is, the devaluation of the dollar is neither a necessary nor a sufficient condition for achieving the objective sought by the U.S. (an improvement of its current account).

We must insist that all this reflects the fact that unilateralism will not work, and that a final solution requires negotiations between two groups of countries: one, with the U.S. at the top, that needs to regain competitiveness and devalue its debt, and another group, with China at the top, that has accumulated a very large amount of foreign

[48] U.S. Department of the Treasury (2013: 4).

reserves (= credit to countries in the first group) by means of persistent current account surpluses. An agreement should be reached to increase global aggregate demand and simultaneously reverse —up to a point— the current account imbalances. The simultaneous achievement of both objectives will not only require the devaluation of the dollar and the euro, but also the increase of domestic expenditure by those countries —mostly emerging economies— that have accumulated large amounts of foreign reserves.

A devaluation of the dollar and the euro is required not only for helping the U.S. and European countries to regain competitiveness, but also for the deleveraging (the reduction of debt/income ratios) of their economies. As it is shown in the Table 5, two thirds of the world's total reserves are held by emerging and developing economies; 54% are allocated, of which 85% are in dollars or euros. However agreements regarding exchange rate adjustments leading to a devaluation of the dollar and the euro will be hampered not only by the fact that such devaluation would hurt U.S. and European creditors, but also because the emerging economies might want to keep accumulating foreign exchange reserves in order to prevent a revaluation of their currencies.

Table 5
Currency Composition of Official Foreign Exchange Reserves (COFER) – 2013 - Q3
(Billions of U.S. dollars)

	World	Advanced economies	Emerging and developing economies
Total foreign exchange holdings	11,434.3	3,763.7	7,670.7
Allocated reserves 1/	6,191.2	3,349.0	2,842.2
Claims in U.S. dollars	3,803.7	2,075.5	1,728.2
Claims in euros	1,495.9	819.5	676.4
Claims in other currencies	891.6	454.0	437.6
Unallocated reserves 2/	5,243.1	414.7	4,828.5
1/ Shows reserves data whose currency composition has been identified. 2/ This line is the difference between total foreign exchange reserves and the allocated reserves.			
Source: www.imf.org/external/np/sec/pr/2005/pr05284.htm			

Finally, to understand the importance of the emerging economies' large amount of foreign exchange reserves as a potential source of additional aggregate demand, we should first recognize that debt-loaded rich countries cannot be asked to spend money they do not have. In fact, the U.S. demand to emerging economies not to accumulate foreign reserves implicitly recognizes their importance as a source of demand, and that an increase of domestic absorption in those countries would be the only feasible way to increase global aggregate demand. Thus, it will not be enough that foreign countries refrain from accumulating foreign reserves, but they will have to spend part of the reserves they have already accumulated. Obviously, the countries with the greater capability to have an impact on global aggregate demand are those with the highest level of reserves. As we can see in Table 6, the main holders of funds at this time are the BRIC countries (China, Russia, Brazil and India), with a total of $5 trillion, and other five countries (Saudi Arabia, Taiwan, Korea, Hong Kong and Singapore) hold an additional $2 trillion. However, some of those countries —e.g., Brazil— may not be willing to spend foreign reserves they consider an instrument of stability, and others —like the Asian countries— may find it difficult to increase their levels of private expenditure because of their high propensity to save and the aging of their population.

Table 6
The Main Holders of Foreign Exchange Reserves

Country	Millions of US$	Date
People's Republic of China	3,820,000	Dec 2013
Japan	1,277,058	Jan 2014
Saudi Arabia	727,106	Jan 2014
Switzerland	535,883	Dec 2013
Russia	509,595	Dec 2013
Taiwan	422,015	Jan 2014
Brazil	360,935	Jan 2014
Republic of Korea	346,460	Dec 2013
Hong Kong	311,185	Dec 2013
India	291,070	Jan 2014
Singapore	273,065	Dec 2013
Germany	202,645	Jan 2014
Figures include foreign currency, gold and SDR. Source: IMF.		

4. THE OPTIONS OPEN IN THE LONG RUN

In the previous section, we put emphasis on the insufficiency of short term unilateral adjustment policies to resume global sustainable growth. The ineffectiveness of such policies in the long run has been admitted —up to a point— by an organism above suspicion of activism like the Bank for International Settlements, that has asserted that countries should "use the time provided by expansionary macroeconomic policy" to remove structural rigidities in product and labor markets that hinder the reallocation of resources needed to return to strong and sustainable growth.[49]

The ineffectiveness of the current adjustment policies results mainly of the limitations of each instrument and their combined use. For example, quantitative easing at a time of a liquidity trap has failed to boost aggregate demand, and may be feeding new

[49] Bank for International Settlements (2013: 27.).

financial bubbles; fiscal expansion is severely restricted by the debt overhang; and exchange rate targeting via discretionary exchange market intervention would not only conflict with the prevailing policies of inflation targeting, but may set off currency wars.

But what has to be understood now is that in the long run the problems will not be definitively solved by each country employing unilateral expansionary monetary and/or fiscal policies that have not been able to boost aggregate demand, much less help close some deep-rooted unbalances and correct some distorted fundamental relative prices. In the long run, a full solution requires a multilateral effort concerning the regaining of competitiveness by the central economies, the deleveraging of highly indebted families, firms and governments everywhere, the multilateral regulation of financial markets, and the construction of a new, symmetrical international monetary system. Let us consider each of these options.

a. The regaining of competitiveness by the advanced economies

The closing of deep-rooted current-account unbalances requires of necessity the regaining of competitiveness by the central economies, which —in time— requires the correction of some distorted fundamental relative prices. The options for regaining competitiveness are not usually discussed in the literature, to some extent because there is a lack of awareness of its importance, a condition that is partially explained by the precedence given in economic theory to comparative advantage over absolute advantage (i.e., "competitiveness"), and the belief that all a country needs to engage in gainful foreign trade is comparative advantage, although in real life absolute advantage is also required; in fact, in David Ricardo's classical illustration, England can compete and trade with Portugal, in spite of its absolute disadvantage in both products, because its real wages —measured both in terms of cloth and wine— are lower than Portugal's.[50] Moreover, it should be pointed out that the concept of absolute advantage is not pertinent in the case of the neoclassical model of international trade —i.e., the

[50] See chapter vii of Ricardo´s *Principles*.

Heckscher-Ohlin-Samuelson model—, given the assumption of countries with equal technologies made in such case.

Anyway, apparently the easiest way for rich countries to regain competitiveness would be the **devaluation of their currencies**;[51] but, as it was underscored in the previous section, this option has several problems: unilateral monetary expansion —or explicit exchange-rate targeting policies— on the side of the central economies will not work unless the emerging economies go along.

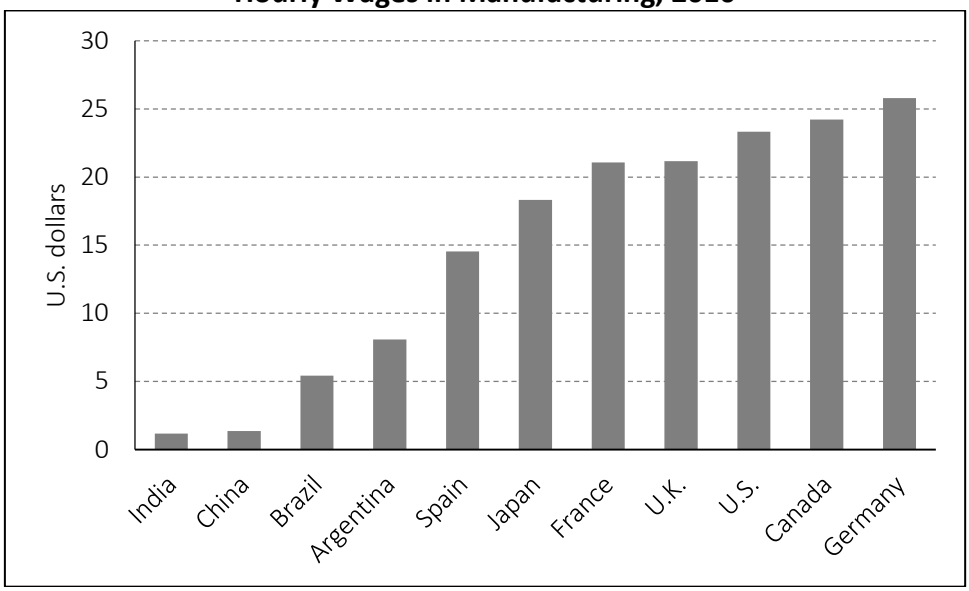
Besides currency devaluation, a second option open to rich countries would be to **reduce their worker's wages**.[52] This is a particularly important issue because currently there is an absurd disparity between wages in rich and emerging countries, as can be seen in Figure 7. This disparity does not disappear if differences in productivity are taken into account, as it was done by Ashenfelter (2012). And the absurdity of this disparity becomes more apparent under the light of Paul Samuelson's international factor-price equalization theorem that shows that international differences in absolute (real) factor prices should disappear with free trade.[53]

[51] In 1953, Milton Friedman made an important case for the use of exchange rate adjustments for maintaining equilibrium in the balance of payments. See Friedman (1970).

[52] There is also the option to increase the workweek length, but that would be politically even more difficult and controversial.

[53] The two most important assumptions made are that countries share the same technology and factor quality. See Samuelson (1948).

Figure 7
Hourly Wages in Manufacturing, 2010



Source: ILO (2013: 10-11). India 2007, and China 2008. U.S. Department of Labor, Bureau of Labor Statistics.

But even if wage differences do not disappear, they will certainly have to decline, most likely through a combination of wage increases in emerging economies and reduction or stagnation in rich countries. In fact, this may be already happening, as it was found by the International Labor Organization using information for the 2006-2011 period that shows that while real wages in developed economies grew at an average annual rate of 0.4%, in other regions of the world the corresponding rate was between 2.1% and 6.8% (see Table 7). Similarly, in a study of the impact on U.S. labor markets of rising Chinese import competition between 1990 and 2007 by David Autor et al. (2012), it was found that "increased exposure to low-income country imports is associated with rising unemployment, decreased labor-force participation, and increased use of disability and other transfer benefits, as well as with lower wages, in affected local labor markets" (p. 4).

Table 7
Annual Average Real Wage Growth by Region, 2006-2011

Region	Rate
Africa	2.6
Asia	5.7
Developed Economies	0.4
Eastern Europe and Central Asia	6.8
Latin America and the Caribbean	2.1
Source: computed using figures presented in Internacional Labor Office (2013), Figure 7.	

We must also bear in mind that the lack of interest by Western political leaders in the unemployment issue —pointed out, among others, by Paul Krugman— may reveal their understanding of the need to reduce real wages (a possibility that is not considered by Krugman). In similar fashion can be considered the fact —reported by PEW Research Center— that U.S. federal minimum wage has been stagnant in real terms for more than fifty years now,[54] and also the possibility of an overhaul of the U.S. immigration system to legalize 11 million undocumented immigrants.[55] Less plausible options would be the extension of the workweek length and the period of productive activity of workers' lives. In any case, what is actually needed is not the lowering of absolute (real) wages in rich countries, but the lowering of the ratio between wages of rich and poor countries. Again, exchange rates can play an important role here; hence the need for multilaterally designed policies.

In addition to currency depreciation and real wage reductions, a third —and the most advantageous— major option available to rich countries for regaining competitiveness would be **technological progress**, i.e., to surmount Tyler Cowen's *technological plateau*. The most important and straightforward piece of evidence concerning lagging technological progress is the fact that the two main devices for the production of mechanical energy currently employed in human activity —the internal combustion

[54] http://www.pewresearch.org/fact-tank/2013/07/19/who-makes-minimum-wage/

[55] An immigration reform plan supported by President Barack Obama was approved by the U.S. Senate in June 2013, but it has not been considered in the House of Representatives.

engine and the electrical motor— were designed and patented in the XIX century. And it is apparent that the modern revolution in information and communications technology —the "digital revolution"— will not be able to fully compensate the slower progress in technologies concerning more physical activities.

In relation to this issue, it is important to understand that technological progress is particularly important to developed countries, as the emerging economies have a way to grow that is not possible in the case of the central economies: to adopt new technologies since —as pointed out by Tyler Cowen (2011: loc. 130)— "A lot of the world … has a form of low-hanging fruit that the United States does not, to wit: Borrow and implement the best technologies and institutional ideas of North America, Europe, and Japan."[56]

A very important author —Nobel Prize Edmund Phelps (2013)— sees a decline in the supply of innovation ("the innovatorship, risk capital, and venturesome end-users that innovation requires") and, at the same time, a reduction of the demand for innovation ("the rewards of innovation"), as the result of a "reprise of a surfeit of *traditional values*" (pp. 314-315). However, it is very difficult to accept that innovation (scientific advancement, discoveries and inventions) during modern times was basically the result of a change in attitudes and values, as there had to be more tangible, including mostly random factors involved. In any case, we should not talk of a loss of creativity that results of a change in attitudes and values, but instead of a "misuse" of such creativity, an example of which is provided by the world's largest retailer and private employer, the American multinational corporation Walmart. In effect, according to Varoufakis (2011: 123): "Unlike the first conglomerates that evolved on the back of impressive inventions and technological innovations in the 1900s, Wal-Mart and its ilk built empires based on next to no technological innovation, except a long string of 'innovations' involving ingenious methods of squeezing their suppliers' prices and generally hacking

[56] In a way, Rojas-Suarez (2010) points in the same direction when asserts that the reason most Latin-American countries fared relatively well the recent economic crisis was their adoption, starting during the 1980s, of a model of "open and deregulated markets".

into the rewards of the labourers involved at all stages of the production and distribution of its wares".

In any case, discussing how to change attitudes and values is not all that is needed, and more money and efforts will have to be invested in research and development activities, especially those addressing the solution of some fundamental problems currently impairing world economic growth, such as the deterioration of the environment.[57] Moreover, government spending in research and development would be one of the healthful types of fiscal policy at a time of lagging aggregate demand. Funds to be used for such purpose can be made easily available by reducing global military expenses, but this will only be possible if the most important military powers previously engage in multilateral dialogue and negotiations to foster mutual trust.

b. The deleveraging of highly indebted agents

The current level of financialization is a plain indicator of the increased indebtedness of economic agents around the world, but especially the governments of rich countries. Although debt overload is not a problem only of the public sector, it is in that case where it can be more easily observed. In effect, as we saw in Table 4, the OECD total government financial liabilities as a percentage of GDP went from 74.2% in 2007 to 111.4% in 2013, and these figures entail a duplication of the ratio every 10 years.

The fact that debt overload works in detriment of aggregate expenditure makes a general deleveraging process a necessary ingredient of any strategy designed to boost global aggregate demand. The harmful effects of debt overload at the time of recovering from a recession have been observed by Jorda, Schularick and Taylor (2012), who studied economic crises in 14 rich countries since 1870, finding that financial-crisis recessions are more painful than "normal" recessions (p. 2). The explanation they give asserts that: "Increased leverage raises the vulnerability of economies to shocks. With

[57] An example of this type of activities is the development of "new, clean ways of generating and using energy", as it was proposed by UNCTAD in its *Technology and Innovation Report 2011*.

more nominal debts outstanding, a procyclical behavior of prices can lead to greater debt-deflation pressures. Rising leverage can also lead to more pronounced confidence shocks and expectational swings, as conjectured by Minsky. Financial accelerator effects described by Bernanke and Gertler (1990) are also likely to be stronger when balance sheets are larger and thus more vulnerable to weakening. Such effects could be more pronounced when leverage "explodes" in a systemic crisis. Additional monetary effects may arise from banking failures and asset price declines and confidence shocks could also be bigger and expectational shifts more 'coordinated'."[58]

Although employing quantitative easing to lower interest rates may help reduce the cost of debt, it will not directly affect leverage, and other instruments will be required for that purpose. A first possibility for deleveraging is simply the devaluation of the currencies in which debt is denominated (i.e., inflation of prices), but the experience is telling us that price inflation and currency devaluation may not be easy to make happen, at least not in the magnitude required.[59] For that reason, governments and multilateral agencies will have to mediate in the distribution of losses between creditors and debtors employing debt write downs, write offs and debt-for-equity swaps

The fact that a lot of money has been lost has to be recognized, and the problem of who pays for it has to be dealt with.[60] The same banks rescued with taxpayers' money now generally refuse to recognize their guilt by accepting the market value of their credits and obstruct the deleveraging of the indebted economies. But losses will have to be shared by lenders and borrowers, and bond investors and creditors in general will have to lose some of their capital. The need for lenders and borrowers to share the losses is

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58 Jorda, Schularick and Taylor (2012: 3-4). The references made are: Hyman Minsky. 1986. *Stabilizing an Unstable Economy*. New Haven, Conn.: Yale University Press, and Ben Bernanke and Mark Gertler. 1990. Financial Fragility and Economic Performance. *Quarterly Journal of Economics* 105: 87–114.

59 Besides, as pointed out in section 3, inflationary policies can affect a country's foreign competitiveness by appreciating its currency in real terms.

60 The cost of bailouts constitutes the most apparent –but not the only– type of loss. Ferguson (2009: 357) gives an illustrative figure of the amount of money lost: "Worldwide losses on US asset-backed securities and other forms of risky debt are estimated by the International Monetary Fund to be around $2.2 trillion."

emphasized by Graeber (2011, Ch. 1), who questions the assumption that "debts *have* to be repaid", pointing out that banks have to accept a certain degree of risk (of not being repaid), because "If all loans, no matter how idiotic, were still retrievable… the results would be disastrous. What reason would lenders have not to make a stupid loan?"

Anyway, whatever the way employed to achieve it —currency depreciation, debt write downs, etc.— the mending of the balance sheets of households, banks and governments in Europe and in the United States will necessarily involve a redistribution of assets from creditors to debtors, and this explains its conflictive nature. And the problem can only be exacerbated by the fact that creditors and debtors may be across the border, making the deleveraging process an international issue.[61]

c. The construction of a new symmetrical international monetary system

As pointed out by Robert Triffin, the role of reserve currency assigned to the dollar in Bretton Woods (1944) forced the U.S. to have external deficits in order to meet the world's demand for liquidity, and —as emphasized in section 1 of this essay— the U.S. choice of meeting the world's demand for liquidity by selling financial assets instead of by buying productive capital (i.e., importing instead of exporting capital) was not feasible in the long run, and resulted in the U.S. economy being flooded by foreign funds, with the consequences that now we all know.

As indicated by Richard N. Cooper (2011), international monetary systems (or regimes) require mechanisms sustainable over time for the adjustment of international imbalances and for the providing of appropriate levels of liquidity. As it was supposed to be a system of fixed exchange rates, the Bretton Woods regime lacked a mechanism for the adjustment of international imbalances. And it also lacked an orderly mechanism for the creation of additional international liquidity, and the Federal Reserve ended up

[61] An illustrative case is that of the "vulture funds". See Stiglitz (2013b).

printing more dollars mainly in exchange for U.S. Treasury bills, although the supply of dollars was supposed to be kept in proportion to the Federal Reserve stock of gold.[62]

An initial signal of the unfeasibility of the Bretton Woods arrangement was the fall of the U.S. gold reserves beginning in the early 1960s. The ensuing introduction of the Special Drawing Rights (SDRs) as an artificial reserve asset in 1969 did not constitute a solution, and the abandonment of convertibility by president Nixon in 1971, that gave origin to the post Bretton Woods international monetary system (or non-system), may have only worsen the problem since —as pointed out by Stockman (2013)— it allowed the American government to finance public deficits by printing more money without any concern about the dollar convertibility.

In any case, the disposal of Bretton Woods did not solve the problems of the adjustment of imbalances and the creation of liquidity, although the floating of exchange rates and the introduction of SDRs may have helped up to some point. The ineffectiveness of the floating of exchange rates was shown by the growing external disequilibria affecting many rich countries, and particularly the U.S., since the early 1980's, a situation that gave rise to accusations of "currency manipulation". But what the U.S. external (current account) imbalances suggest is that a central problem was the overvaluation of the dollar resulting from an unrelenting world demand for the reserve currency; and this was the price the U.S. had to pay for what Eichengreen (2011) calls the "exorbitant privilege" of issuing the reserve currency.

The failure of the SDRs to solve the problem of liquidity creation was even more evident, as it occurred in spite of the partial de-dollarization of foreign exchange reserves starting in the 1970s. New SDRs are issued and allocated to member countries by the IMF following a procedure without clear, established rules, and in which the U.S. has a veto power. In any case, currently the IMF is not playing the role of manager of global liquidity, neither has it used its power and influence to try to assume such role, and most of its activities concern the issuing of certificates of good behavior to indebted

[62] That is, more dollars should have been printed mostly to increase the U.S. stock of monetary gold.

countries in need of a bailout (a.k.a. “letters of intention”). Partly as a response to those suggesting its abolition, the IMF has been proposing its own reform at least since 2005 under its managing director Rodrigo de Rato. In spite of its limited goal —that basically concerns only its governance and some operational issues, without seeking a major role for the IMF as manager of global liquidity—[63] the reform of the IMF is currently being blocked by the U.S. Congress, although it has been backed by the Group of 20 leading economies (G20).

Obviously, then, if we are interested in solving the problems of the adjustment of international imbalances and the management of global liquidity, we should be aware that a simple reform of the IMF will not constitute the final solution, and the minimum goal should be the **creation** of a symmetrical international monetary system —as, in a strict sense, there isn´t any at this time— designed to solve the problems of imbalances adjustment and liquidity creation and management in the most efficient possible way.

Given that talking of the “creation” of a new system may sound too ambitious and a bit pretentious, authors usually talk of the “reform” of the international monetary system, and their proposals generally do not have an ample reach. One of such proposals has been presented by Richard Cooper (2011), suggesting that IMF member countries negotiate the setting of target levels for their foreign exchange reserves five years hence, and then have the IMF issue SDRs over such period to match the total target. Although repeating this process at five-year intervals —as proposed by Cooper— would make possible the growth of global liquidity in a more harmonious and orderly way, serious issues would still remain. A first question results from the fact that new SDRs could not be allocated to countries on the basis of their own targets —and only the totals would match— and choosing specific criteria to settle such allocation may result a very contentious issue. A second question to be solved concerns the mechanism to enforce the adjustment by each country to the target level of its foreign exchange reserves; obviously, such adjustment would have to occur through external unbalances —surpluses in countries with reserves lower than their targets, and deficits in countries

[63] See, for example, Peter Kenen (2007).

with reserves above their targets— but consistent results may require more than floating exchange rates, as the type of foreign unbalance (current account or financial account) should also be relevant.

Anyway, the two main ideas put forward by Jones —an artificial foreign exchange reserve asset and foreign exchange reserves targets— are totally pertinent. The first idea is already in effect in the form of SDRs, but important changes will have to be made in the direction of greater multilateralism and a wider use of the SDRs. This point is not appreciated by Salvatore (2011), who sees the existence of currency misalignments (basically, the undervaluation of the Chinese yuan with respect to the U.S. dollar and the euro) at the basis of the problems currently facing the international monetary system, and proposes the convertibility of the Chinese yuan in order to form a "tri-polar" system together with de dollar and the euro, but without considering any explicit role for the SDRs. On his side, Jones (2011) concedes that currencies such as the dollar, the euro, and the yuan would co-exist with SDRs as reserve currencies, but also asserts that "the allocation of SDRs would be tailored to satisfy incremental demand for official international reserves, so the demand for currencies for these purposes would no longer be necessary".

The second idea is more innovative and clearly more feasible than current account targets as proposed by Williamson (2004), that would play no role at the time of satisfying a larger demand of international reserves and have the inconvenience that "must add up to zero for the world as a whole, and the chances of reaching agreement on a consistent set of targets would be negligibly small", as pointed out by Jones (2011). But this does not mean that Williamson's idea is totally irrelevant, as it may still be applied, but not to all countries in the world, but only in the case of the countries issuing reserve currencies,[64]. Even more, the appropriateness of long-term current account equilibrium can be recognized by the creation of a Tobin tax on international

[64] This being the way to pay for what Eichengreen calls the "exorbitant privilege" of issuing a reserve currency, as such reserves would be composed by currencies other than their own.

capital flows as an indirect way to encourage external balance through current account equilibrium, by making more expensive the financing of current account disequilibria.

d. The multilateral regulation of financial markets and institutions

The increased globalization, complexity and importance of financial markets and financial institutions make now more than ever necessary their multilateral (global) regulation. Steps in this direction have been taken for some time now, the most important ones being the establishment of the Basel Committee on Banking Supervision by the central bank governors of the Group of Ten countries in 1974, and the ensuing negotiation of three Basel Accords seeking to establish risk and capital management requirements designed to protect the solvency and stability of banks.

The financial turmoil that began in 2007-2008 showed that Basel I and II were not completely achieving their objectives, and a Basel III framework was published in December 2010, but the debate has not finished, and the Bank for International Settlements (2013: 55) talks of an "ambitious regulatory reform agenda" in progress that includes "tightening the requirements for capital and liquidity buffers for banks, improving the resolvability of financial firms, enhancing the transparency and resilience of the infrastructure of the over-the-counter (OTC) derivatives market, and addressing the risks posed by shadow banking, broadly understood as credit intermediation involving entities outside the regular banking system".

As negotiations regarding multilateral regulation may take some time, the United States and the European Union have been trying to take some steps by their own. In the U.S., the most important step was the passing of the Dodd-Frank Act in 2010 with the stated purpose of ending "too big to fail" and bailouts, paying special attention to the regulation of OTC derivatives (Title VII). However, former U.S. senator Ted Kaufman talks in his blog of the "failed promises of the Dodd-Frank financial reform package and

the continued, dangerous imbalances in our financial system", and of the "need to end universal (commercial plus investment) banks".[65]

In the case of the European Union, at the beginning of 2013, ten countries —including France, Germany, Italy and Spain— committed themselves to introducing a limited financial transaction tax by 2016. But other E.U. countries have not accepted to go along, although —according to the European Commission— the current uncoordinated national taxes cause distortions of competition between financial instruments, actors and market places across the E.U., and double taxation or double non-taxation. Besides, financial institutions do not currently make a fair contribution to covering the cost of the recent crisis and a level playing field with other sectors from a taxation point of view is not ensured. Additionally, current national taxes do not contribute to providing disincentives for transactions which do not enhance the efficiency of financial markets but which might only divert rents from the non-financial sector of the economy to financial institutions and, thus, trigger over-investment in activities that are not welfare enhancing. [66]

Although it is apparent that a total consensus regarding a renewed regulation of financial markets and institutions has not been yet achieved, there is already an agreement on some possible aspects of such renewal, such as the importance of reconsidering the role played by the credit rating agencies (CRAs). The greater importance acquired by risk measurement and management led financial institutions and regulators to rely more than ever on the credit risk ratings marketed by CRAs —the largest, or "big three", being Moody's, Standard & Poor's and Fitch Ratings–, which were then criticized for their overly optimistic ratings of CDOs ahead of the financial crisis. While some authors question their very existence —Varoufakis (2011: 20) describes CRAs as "a text case of conflict of interest in action"— the Group of 20 (G20) leaders have openly called for reducing reliance on CRA ratings in standards, laws and regulations.[67]

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65 See blog site in http://www.forbes.com/sites/tedkaufman.

66 See European Commission (2013: 4).

67 See Basel Committee on Banking Supervision (2012: 4).

CONCLUSIONS

In order to discuss its solutions, we must first recognize that the Great Recession is not over yet,[68] and understand that it cannot be considered a mostly financial phenomenon, with chiefly financial causes, and solutions that concern basically financial markets and institutions. This entails recognizing that current low real interest rates reflect not merely lax monetary policies, but principally low rates of return of productive investment.[69] Unfortunately, the fact that the basic problems underlying the crisis are in the real, productive sector of the rich economies, and linked to their loss of competitiveness, is not usually acknowledged.

Another fact that remains to be acknowledged is that global financialization and financial bubbles —Bernanke´s "global savings glut"— were made possible by the type and magnitude of the external unbalances of the U.S. as the reserve-currency-issuing country, and that deregulation and financial executives' imagination and mischief played only an accessory role. Unfortunately, the linkage between external deficits and economic/financial crisis is not altogether obvious, although the importance of higher leverage and market fragility and confidence vulnerability is stressed by some authors.[70]

But recognizing that the roots of the crisis are in the productive, real sector of the rich economies will not only help us to better understand what the actual problems are, but also to recognize the ineffectiveness of domestic adjustment policies. Although a central problem with the use of monetary, fiscal and exchange rate policies is the "impossible trinity", this by far is not their only drawback, as the unilateral employment of each of them is also severely restricted. In the case of monetary policy, the unilateral monetary easing by the Federal Reserve may have been only worsening the problem of global excess liquidity, as it has failed to provoke an inflation of prices and the devaluation of the dollar, and may end up increasing the amount of debt by trying to make it cheaper.

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68 This fact has taken Coen and Baldwin (2014) to talk of a "secular stagnation".

69 As capital mobility between financial and productive investment entails a close link between the rate of interest and the rate of profit, the low real interest rates must be also reflecting a fall in profit rates on a global scale.

70 For example, Reinhart and Rogoff (2009, Preamble).

It also must be understood that a crucial problem with monetary policy is the lack of stability of the demand for money, a condition that is currently reflected in the absence of a permanent, stable relationship between the monetary base and aggregate expenditure, and the disproportionate increase of prices of financial assets resulting from monetary easing.[71] Although an increase in private expenditure may be expected as a result of the "wealth effect" of higher equity prices, the truth is that the problem of a lagging aggregate demand has not been solved. And the ineffectiveness of this instrument of choice of the policy makers is complicated by its unilaterality, as the U.S. is accused by other countries of exporting inflation.

On the other hand, three decades of continuous fiscal and foreign deficits by the U.S. now get on the way of its fiscal expansion. Anyhow, fiscal policy is not being employed —a fact that is reflected in the reduction of fiscal deficits as a percentage of total output— and although Paul Krugman's denouncing of "austerity mania" and the use of the economic crisis by policy makers as an "excuse to slash social programs" is fully legitimate,[72] the truth is that the payment of interests cannot be allowed to indefinitely grow as a percentage of fiscal revenue.

In the case of the exchange rate policy, the fact that with *n* national currencies, there can only exist *n* - 1 independent exchange rates, in a way that simultaneous foreign balance and full employment cannot be guaranteed for all *n* countries, much less for the reserve-currency-issuing country, will make that any attempt by the U.S. to implement an active exchange rate policy will provoke competitive devaluations and currency wars (a "beggar-thy-neighbor" situation). A central problem here is the "natural" overvaluation of reserve currencies (the "curse of the reserve currency"). This problem has been aggravated by the emergence of export-led economies, in which domestic firms depend less on the domestic workers' demand for goods and services, and can afford to pay lower wages, achieving in this way some sort of artificial competitiveness.

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[71] In the case of equities, while the DJIA increased by 10,000 points (140%) between March 2009 and August 2014, the S&P 500 rose from 666 to 2,000 (200%).

[72] http://www.nytimes.com/2013/04/19/opinion/krugman-the-excel-depression.html?hp&_r=0.

Anyway, an active U.S. exchange rate policy is not even considered, as the exchange rate is seen as a subsidiary instrument. Although some may see this as the result of a preference for free-floating exchange rate policies prompted by the end of Bretton Woods, the truth is that in the mainstream literature the exchange rate has never been regarded as an instrument of economic policy. [73] However, for the U.S. and other rich nations, a devaluation of their currencies would not be enough to reverse the direction of their unbalances, as it will also be needed that other countries increase their imports in relation to their exports, with the additional problem that those countries will now prefer to have financial —and not current account— deficits. All this shows the importance of a multilateral approach to the solution of the problem.

Summarizing, domestic adjustment policies —orthodox or unorthodox— are not working, to a great extent because —as we said in the Introduction— we are dealing with a global problem that requires global solutions allowing the central economies to regain competitiveness and obtain the deleveraging of their highly indebted agents through the adjustment of some key relative prices. The task regarding the adjustment of relative prices in time requires the realignment of exchange rates via multilateral arrangements. In the same way should be achieved the construction of a new symmetrical international monetary system and the standardization of financial regulation.

A final, critical issue we must consider here concerns the evaluation of the economic paradigm prevailing in the world for at least thirty years now, as its failure to predict the crisis has worried many common —and not so common— people.[74]. The relevance of

[73] Given that most of the mainstream literature was American in origin, this is partly explained by the fact that the U.S. was a basically closed economy until the 1970s.

[74] A well-known anecdote concerning this issue was reported by Andrew Pierce in London's Daily Telegraph, on Nov 5, 2008, narrating that during a meeting by economists at the London School of Economics "on the turmoil on the international markets" the Queen asked: "Why did nobody notice it?"

this issue is recognized by most, except a few ultra-orthodox economists, as it has been pointed out by Philip Mirowski[75]

The main failure of mainstream economic theory when dealing with the Great Recession is not to recognize the importance of international-economics-related issues such as competitiveness, exchange rate policy, the international equalization of factor prices, and the Triffin Dilemma present in the use of a country's currency as the reserve currency. The omission of competitiveness is partly explained by the fact that absolute advantage cannot exist in the prevailing Heckscher-Ohlin model, in which all trading countries share the same technology, and where free trade leads to the international equalization of factor prices. But the importance of competitiveness should have increased with the emergence of export-led economies whose capacity to pay lower wages to their workers is compounded by their low consumption rates. Similarly, although the omission of the exchange rate policy is partially explained by the "impossible trinity", the main reason for American economists' disdain for the exchange rate has been the virtual closeness of the American economy until the seventies.[76] The oversight of the international equalization of factor prices is perhaps the most difficult to understand, given that such phenomenon is already being observed in the lowering of real wages and worker´s wage expectations in the rich economies. In this regard, some analysts may be closing their eyes simply because they do not want to see one of the ugly faces of capitalism. Finally, to recognize the importance of the Triffin Dilemma, it is of the utmost importance to understand first the different outcomes of Current and Financial Account deficits in the case of the reserve-currency-issuing country, and this is a question that has not been treated in the economic literature.

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[75] Mirowski (2013: 254-255) quotes Eugene Fama (University of Chicago) and John Cochrane (Cato Institute) saying that we cannot talk of the existence of a financial bubble because "bubbles" cannot be defined. Mirowski uses the term "agnotology" when referring to this point of view.

[76] In this way, Friedman (1970) is an exceptional case. More recently, Olivier Blanchard (2014: 29) points out: "As an example of the sometimes provincial character of mainstream U.S. macroeconomics, in a number of doctoral programs a student can specialize in macroeconomics without knowing what an exchange rate is,..".

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