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Financial Crisis, the International Monetary System and the Challenge of the Emerging Economies

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ABSTRACT

Although in the debate over the current financial crisis there is a general agreement on the role played by foreign capital inflows into the United States —that, together with financial deregulation, allowed for an excessive increase of credit in that country—, we think that their importance has not been fully appreciated, in terms of their link with the asymmetrical organization of an international monetary system that uses the dollar as a reserve currency, and their relationship with the economic growth model adopted by the US over the last thirty years; this relied on increased expenditure on the part of credit-financed households in order to maintain its dynamism, while inflation was kept down by importing cheap foreign manufactures at the expense of the domestic sector's profitability. We suggest here that the crisis was related to the impossibility of maintaining this economic growth pattern indefinitely, and that recovery will require a radical reform of the international monetary system, as well as a general increase in economic efficiency.

Keywords: financial crisis, monetary system, emerging countries, Triffin Dilemma.

JEL Classification: G01, E42

Crisis financiera, el sistema monetario internacional y el desafío de los países emergentes

RESUMEN

Aunque en el debate sobre la actual crisis financiera se ha reconocido el rol jugado por el influjo de capitales extranjeros hacia Estados Unidos —el cual, conjuntamente con la desregulación financiera, hizo posible el crecimiento desmedido del crédito en ese país—, pensamos que aún no se ha reconocido la importancia de tal influjo, ni su conexión con la forma asimétrica como está organizado el actual sistema monetario internacional, ni tampoco su relación con el tipo de crecimiento adoptado por ese país en las últimas tres décadas, que pudo mantener su dinamismo gracias al aumento del gasto de los hogares financiado con crédito, y que mantuvo baja la inflación gracias a la importación de manufacturas baratas, al costo de ver caer la rentabilidad de su sector manufacturero. Sugerimos aquí que la crisis surge por la imposibilidad de llevar adelante ese tipo de crecimiento de manera indefinida y sin sobresaltos, y que una recuperación requerirá tanto una reforma radical del sistema monetario, como el aumento de la eficiencia económica a nivel mundial.

Palabras clave: crisis financiera, sistema monetario, países emergentes dilema de Triffin.

Clasificación JEL: G01, E42

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1. INTRODUCTION

Although the financial crisis that began in 2008 is a global crisis, and many countries, especially Europe ones, have been affected by the turmoil —partly because they also rode the financial deregulation wave that started in the 1980s[1]—, it seems unnecessary to emphasize that the phenomenon was engendered in the US economy, and has come to be the most affected by it.

It is also apparent that the crisis is linked to the conjunction of two major and closely related events taking place in the American economy: on the one hand, a disproportionate growth of domestic credit and financial markets, and on the other, its accumulation of persistent and growing current account deficits over the last 30 years, while maintaining its foreign reserve level basically flat. This concurrence was made possible by a net inflow of funds (financial account surpluses) and by the role of the dollar as a reserve currency, as was explained by Robert Triffin more than 50 years ago (Triffin 1960).

Thus, it seems clear that the exhaustive financial deregulation process was a necessary but insufficient condition for the disproportionate growth of credit and financial markets in the US, as such growth, in time, required the borrowing of huge amounts of money from the rest of the world. As a result of this, American banks limited themselves to carrying out the intermediation of those funds, setting off a credit carnival —principally in the real estate market— that was bound to end in tears.

Something that may not be so apparent is that, because of the use of the dollar as a reserve currency, American external deficits were, up to a point, "natural" and even "necessary", and may have continued indefinitely. It may be even more difficult to understand why such an eventuality did not present itself in this case, and we think that this issue underlies the current crisis. We will attest here that such an eventuality did not come about because American external deficits were current account and not financial account deficits, and that this choice becomes a crucial fact to be explained. The explanation we will set forth concerns a falling rate of return on capital in the real sector of the US economy, linked, for its part, to a structure of relative prices that prevents the United States, and rich countries in general, from successfully overcoming the challenge posed to them by a greater integration to the world economy of countries such as China, India and Brazil that we will call the "emerging economies".

We will first try to identify the political and non-political factors that made possible, on the one hand, financial deregulation and expansion in the United States (point 2), and on the other, the persistent widening of its current account deficits (point 3). We will then examine those deficits, and claim that, given their nature, they would necessarily lead to a disaster like that o which broke out in 2008 (point 4). We will then discuss some explanations of the nature of the current account deficits, distinguishing between

[1] In fact, the free-market fundamentalism made its debut in a European country, that is, in the United Kingdom during the government of P.M. Margaret Thatcher.

political factors in the case of fiscal deficits, and economic factors in the case of private deficits (point 5). We will then consider some of the consequences of the crisis, as well as certain conditions for a recovery (point 6). The conclusions are presented in point 7.

2. DEREGULATION, FINANCIALIZATION AND FINANCIAL INSTABILITY IN THE US

With regard to the process of deregulation —financial in particular and economic in general— in the US, we must point out that this process can be seen mainly as a political phenomenon brought about by, among other things, the increased power of giant banks and financial corporations, the resurgence of conservative thinking, etc. Besides tax reductions, the removal of price controls, and the curbing of collective bargaining rights and workers', the deregulation process began during the Carter administration and primarily affected the transport, communication, energy, and, especially, the financial sectors (Niskanen 1989).

The process of financial deregulation was carried out through a set of laws passed during the period 1980-2000, foremost among which where the *Depository Institutions Deregulation and Monetary Control Act* of 1980, the *Garn-St. Germain Depository Institutions Act* of 1982, and the *Gramm-Leach-Bliley Financial Services Modernization Act* of 1999. These laws abolished the financial configuration inaugurated by the *Glass-Steagall Act* of 1933, eliminating controls on interest rates; authorizing banks to offer new types of accounts as well as variable-interest mortgages; and allowing the merger of banks of different types and states, thereby giving rise to financial conglomerates that grouped together commercial banking, investment banking and insurance services (Mishkin 2009: 270/271).

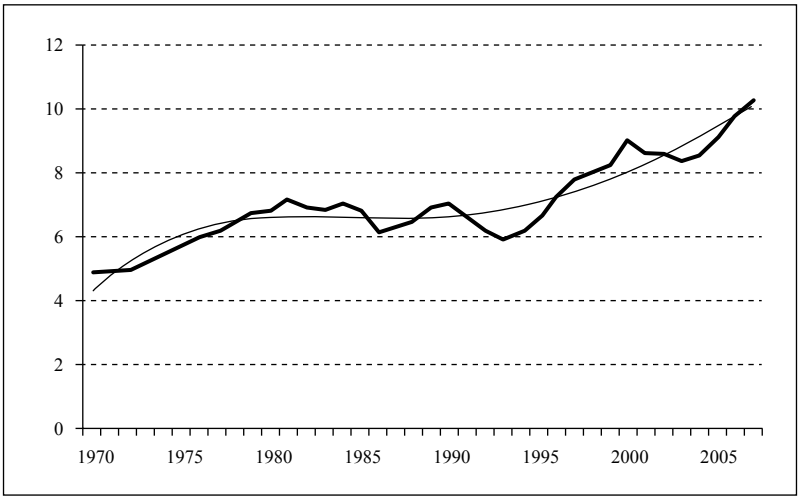
The consequences of financial deregulation may have been of lesser importance had it been confined to the US economy. However —as we have already established—, free-market fundamentalism first appeared in Europe, and the financial deregulation wave was also ridden by those countries and many more besides; the most important milestone in this process was the publication of the Basel Accord II in June of 2004 (Bank of International Settlements 2006).

The *financialization* phenomenon —defined as an increase in the relative importance of the financial sector in a given economy— can be seen as a direct result of financial deregulation, which, because it stimulated the emergence and/or growth of more sophisticated financial instruments and institutions, enlarged both the maneuvering power of private financial agents and the magnitude of the money multipliers in such a way that total liquidity ended up being basically independent of the monetary base; this served to hinder the effectiveness of monetary policy and the power of central banks as lenders of last resort.

Included among the financial instruments and institutions that emerged and/or gained importance are institutional investors (mainly investment funds), the securitization of loans, derivatives (forwards, futures, options, swaps, etc.), junk bonds, etc. The greater significance of institutional investors in the US is revealed by the steep fall of the value of shares held by households, from 90% in 1952 to 37% in 2008.[2] The increased importance of securitization is exposed by the growth of institutions such as Fannie Mae and Freddie Mac, starting in 1984 in the case of mortgages, and its subsequent expansion to other types of bank loans (Gutenttag and Herring 1987: 154). In the case of financial derivatives —involving foreign exchange, interest rates, shares and commodities contracts—, their expansion is revealed by an annual growth rate of 25% of the world's notional amounts of outstanding OTC derivatives between June 1998 and June 2008.[3]

On the other hand, the simplest way of illustrating the rise in value of the money multiplier is by showing the behavior of money circulation in the US; as can be seen in Figure 1, this has increased sharply (M1) since 1994, despite the rise in "exports" of dollars by the US to the rest of the world.

Figure 1
U.S. Velocity of Circulation of Money (M1), 1970-2008



Source: Original data taken from *The Economic Report of the President 2010*, Tables B-1 and B-69.

One of the problems with financialization in this context is that, unlike other types of goods and assets, it is relatively easy to speculate with financial assets, as they are very liquid and have a low storage cost. If we add to this the fact that the demand for financial assets

[2] These figures are given by Authers (2010), quoting the Federal Reserve.

[3] In the case of the gross market values, the corresponding rate is 22%. See BIS Quarterly Review: December 2010, or www.bis.org/statistics/derstats.htm.

tends to increase when prices go up, and to decrease when prices go down —the *herd-like behavior*—, we will find that financial speculation is likely to play a destabilizing role.[4]

In this way, deregulation and financialization, together with an increasing international capital mobility that began in 1973, resulted in growing price instability in a variety of markets such as stocks, foreign exchange, commodities, etc., which contributed to an increased probability and potential severity of financial crises.

The higher international capital mobility —encouraged by, among other things, greater integration of developing countries into international markets, and by the abolition of exchange and capital controls all over the world— became an additional source of instability.[5] This was not only because of the costs implied by sudden reversals in the flow of funds, but also because of the central role played by foreign exchange markets, given their gigantic size,[6] considerable liquidity, and high volatility.[7] Moreover, as has been pointed out by Authers (2010), the closer integration of world markets in a variety of assets implies a higher synchronization of prices, which in time hinders the possibility of assembling portfolios with a low correlation of asset prices (and a more stable total value).

In addition, the greater importance of institutional investors aggravated the problem of instability, not only because it allowed the concentration of huge liquid funds in the hands of a few number of speculators, but also because it worsened the problem of "lending borrowed money", that is, the issue of the separation of *agents* (fund managers) and *principals* (fund owners), which stimulates moral hazard, i.e., the taking of excessive risks by the *agents*.

A similar effect resulted from the bailouts of financial institutions —such as the those of savings and loans and the *Continental Illinois* bank in the 1980s, and the hedge fund *Long Term Capital Management* in 1998— carried out or sponsored by the Federal Reserve. The problem of moral hazard was consequently exacerbated, becoming an additional source of risk and instability. To the bailouts handled by the Federal Reserve must be added those managed by the International Monetary Fund (IMF) by helping international banks recover their money after a number of debtor countries went into default, an activity that gained in importance with the triggering of the international debt crisis after Mexico went into default in 1982.[8]

In the case of financial derivatives, whose purpose is to reduce or eliminate certain risks facing productive activities, the final results do not appear to have been the

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4 Minsky (1982) maintains that in the case of capitalist economies external shocks are not required to explain financial crises. Kindleberger (1978), on the other hand, calls financial crises "a hardy perennial".

5 Obstfeld (1993) presents a discussion on the issue of rising international capital mobility.

6 The Bank for International Settlements estimated that, by April 2010, the **daily** turnover in the world foreign exchange markets was $4 trillion (www.bis.org/publ/rpfx10.htm).

7 See Dornbusch (1976) on foreign exchange "overshooting".

8 Milton Friedman is one of the economists making this type of criticism to the IMF.

expected ones. For example, Dodd (2005) gives several reasons as to why the "extraordinary" growth of derivatives necessarily leads to an increase in the vulnerability of the financial sector; such instruments allow for the increase of leverages, the reduction of the cost of risk taking, the evasion of regulation and taxes, frauds, etc.

Loan securitization, on the other hand, involved the bundling of thousands of loans —residential mortgages, for example— into securities that were then sold to investors, mainly investment funds. Guttentag and Herring (1984) point out that this process has not achieved its main objective, which was to allow banks to obtain the liquidity they need, and that, in point of fact, ended up contributing to their vulnerability. Moreover, this phenomenon appears to have given rise to questionable practices on the side of the banks.[9]

Finally, technological innovations such as the internet, which allow the instantaneous carrying out of financial transactions, ended up aggravating the problem of instability.

3. THE US EXTERNAL DEFICITS AND THE TRIFFIN DILEMMA

Concerning the question of what led to —and necessarily so— American external deficits of the magnitude and duration in which they have been observed, we consider that the role of the dollar as an international reserve currency was an important factor. Indeed, the situation that has been in evidence is analogous to the one described more than 50 years ago by Robert Triffin, who pointed out that the monetary system established in Bretton Woods in 1944 —which assigned the dollar the role of reserve currency with a fixed value in terms of gold— would only be feasible if the US met the growing international demand for liquidity (dollars) by means of sustained external deficits; he went on to warn that this would eventually erode other countries' confidence in the dollar.

We must, then, consider two questions: Firstly, how was it possible for the dollar to maintain its role of reserve currency after the demise of Bretton Woods? and secondly, how topical are Triffin's concerns regarding the dollar's reliability?

To understand the permanence of the dollar as a reserve currency we must bear in mind that markets, by their very nature, prefer the use of a single currency, as money fulfills its functions as a means of exchange, storage of value and unit of account if it is universally accepted. While a number of countries that are completely isolated from each other will experience no harm when each of them has its own currency, the option of a single currency is the most efficient, (and the one preferred by the markets), if the counties are, or seek to be, economically integrated.

In this way, given the absence of alternatives, the dollar was able to maintain its role as a reserve currency. The prospects of the yen as a possible option receded after the

[9] In fact, the New York attorney general is currently investigating major Wall Street banks, accused by investors of dumping loans they knew to be troubled into securities sold to them.

emergence of the Japanese crisis in 1989. In the same way, the prospects of the Special Drawing Rights (SDRs) becoming an alternative disappeared as a consequence of the refusal by wealthy countries (particularly the United States) to assign a more important role to them.

Although as a reserve currency the dollar has contributed for more than 60 years to the world's economic growth and financial stability, we must make the point that it has not done so for nothing, and that there has been an exchange of mutual favors between the United States and the rest of the world; playing the role of the world's central bank, the US was able to spend money it had not earned but merely printed (the seigniorage revenue), while the rest of the world obtained the liquidity it needed to pursue its increasingly valuable economic activities.

The point is that growing economic activities, in time, required the rest of the world to accumulate the also-growing dollar reserves. It is in a situation of this type that the Triffin Dilemma becomes relevant, in the sense that the rest of the world may start to have doubts concerning the capability (and/or willingness) of the United States to defend the value of its currency. Besides, even if they bear out this view of the mutual exchange of favors, some countries may still begin to feel that such an arrangement is not totally symmetrical, and be moved to consider alternatives to the dollar.

In this way, the introduction of the euro in 1999 and its rapid initial growth suggests, up to a point, that the world economy takes a sympathetic view of the possibility of having alternative currencies (or liquid assets in general): something that reflects a degree of distrust towards the dollar. In the same way, the disproportionate increase in the price of gold in recent years can also be seen as a means for the markets to satisfy the world´s demand for liquidity by resorting to an asset alternative to the dollar, in spite of its lower liquidity.

The need for alternative liquid assets has already been recognized by rich countries, as is shown by the approval of a new issue of Special Drawing Rights (SDRs) by the IMF in 2009 (the first two had been made in 1970-1972 and in 1979-1981), which increased the total stock of SDRs from 21.4 billion to 204 billion, with a dollar value of 308 billion by August 2010.[10]

Finally, the problem of the disproportionate size of the world's dollar reserves was started to worsen in 1990 after Asian central banks (including China) and those of developing countries in general began to increase their dollar reserves as a means of increasing their degrees of freedom in the face of external crises, while obtaining more bargaining power in their negotiations with the IMF and creditor international banks.[11]

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[10] See www.imf.org/external/np/exr/facts/sdr.HTM.

[11] The Report of the UN Commission chaired by Joseph Stiglitz (2009) indicates that "Developing countries hold reserves which are, in proportion to their GDP, several times those of industrial countries (26.4% in 2007 vs. 4.8% for high-income OECD countries)" (p. 116).

4. The Nature of External Deficits and the Financial Crisis

As has been indicated, it was as a result of the dollar role as a reserve currency that the US was able (and forced) to have continuous *external deficits* over the last 30 years. It should also be pointed out that an international monetary system that allows the country issuing the reserve currency to accumulate external deficits indefinitely can be neither feasible nor unstable; the problem emerges when such deficits cannot, for whatever reason, be maintained in the long run.

In order to understand this issue, it is very important to take into account that countries can have two types of external deficits: *current account* and *financial account* deficits. While a current account deficit implies that, over a given period of time, the country´s spending is greater than the value of its production (or income), a financial account deficit implies that, also for a given period of time, the value of the country´s foreign investment is greater than the foreign investment it receives; that is, while in the first case the country is increasing its foreign debt or reducing the value of its foreign assets, in the second it makes a net purchase of foreign assets. The same can be said if the external deficit occurs as a combination of a current account deficit and a smaller financial account surplus. Thus, it is apparent that it is the first type of situation that may not be feasible in the long run.

As the issuer of the reserve currency, the US had the privilege of being able to pay for at least part of its imports —or current account deficits in general— by printing more dollars. However, it could take advantage of this benefit only up to a point: eventually, if the deficit grew too much, it would become necessary to exert another privilege associated with the reserve currency role of the dollar, and pay issuing dollar-denominated liabilities. This was the situation for the 25 years preceding the onset of the crisis, during which the US had annual current account deficits of an average nominal value of $269 billion, while its average financial account surplus —the net capital inflows— was $256 billion; this gives us an annual average external deficit of $13 billion. Given that during the same period the level of US foreign reserves remained basically flat,[12] we can consider this $13 billion external deficit as a proxy of the US annual supply of dollar liquidity (a flow) to the rest of the world, in time equal to the portion of its current account deficit it was able to pay by printing dollars.

The annual dollar supply to the rest of the world, representing only 5% of the annual US current account deficit, was able to pay for the remaining 95% of the deficit by selling dollar-denominated liabilities to foreign investors. That that this ability to sell dollar-denominated liabilities to foreign investors also is often considered a privilege for the US as the issuer of the reserve currency is not challenged by the fact that other

[12] It is possible to say that the United States does not actually require foreign reserves: their value at the end of 2007 was $74 billion; small change for such a big economy.

—mostly large— countries are able to do the same.[13] Likewise, the fact that the world market of US debt is extremely large and complex, and that many factors — concerning both the supply and the demand of funds— must be considered if we want to have a clear view of what actually happened, only serves to tell us that the reserve currency role of the dollar cannot explain the whole picture.

Thus, the facts appear to tell us that the United States preferred to use the role of the dollar as a reserve currency to increase its expenditure in goods and services (current consumption), instead of increasing its level of investment in the rest of the world (future consumption); this resulted in it becoming net debtor country at least 20 years ago, having accumulated a federal debt equivalent to more than 100% of its GDP, and the largest debtor nation in the world (Ott 2002). This choice between current account and financial account deficits is a key question that has not received the attention it deserves. For example, when Joseph Stiglitz proposes the reform of the international monetary system, he writes: «A country whose currency is being used as a reserve must —if it is to continue to be used as a reserve— "sell" its currency (or more accurately, its T-bills or bonds) to other countries, who hold on to them» (2006: 252).

Thus, according to Stiglitz, the only way that the United States could meet the growing demand for liquidity was by issuing more debt through current account deficits. Obviously, the fact that the US chose this option does not imply that it was the only available means of "selling" its currency to other countries.

In any case, the US could have gone on indefinitely spending more than what it produced without running out of foreign reserves if the rest of the world had been willing to maintain the dollars it received in the vaults of its own banks. In fact, what happened was that those countries used the dollars they obtained by means of their current account surpluses with the US not to invest in their own productive activities, but to buy more financial assets (debt) issued by that country; that is, to lend even more money to the US which, in time, did not invest the money but increased its imports of consumption goods.

In this way, the recycling back towards the US of the dollars that it exported through its current account deficits became a *vicious circle* in which the US functioned as a central bank that fed an excessive growth of dollar liquidity in the world (Ruffer and Stracca 2006), accumulating a debt that became larger and larger. Were it to continue, a situation of this type would lead to the issuance of more debt only to pay for the outstanding debt, a situation analogous to a *Ponzi scheme* —which does not imply malice or premeditation—, and that cannot be sustainable in the long run.

However, it is apparent that the crisis did not erupt as a result of the breaking of a Ponzi scheme led by the US; i.e., by the whole country, including households, firms

[13] Studying the question of the developing countries' inability to borrow abroad in terms of their own currency —their *original sin*—, Eichengreen *et al*. (2002) find that the only significant explanatory variable of such condition representing the characteristics of the countries is their size.

and government. In the case of the government, for example, a fiscal deficit would force the government to ask congress to raise the federal debt limit, and instruct the Treasury Department to offer more bonds into the markets. But if investors —foreign, in particular— refuse to buy more bonds, the only alternative open to the Treasury would be to sell them to the Federal Reserve. A refusal by the Federal Reserve to buy these bonds, in order to avoid an increase in the supply of money, would force a government shutdown, which would entail the interruption of the scheme.

However, for the scheme to be interrupted by the whole country, situations like the one we have depicted for the government would have to simultaneously act upon households and firms; this would bring about an apocalypse. What has been observed is that the government has intervened to prevent an interruption of the scheme in the case of the banks, in time affected by an interruption in the case of heavily indebted households, and this was enough to generate the crisis.

Once the crisis erupts, everything is complicated by contagion in financial markets, and by the importance of subjective factors in both financial and exchange markets. Subjective factors comprise phenomena such as *self-fulfilling prophecies* and Dornbusch´s *exchange overshooting*; these assumed a great deal of significance with the expansion of exchange markets, in time associated with financialization and to the increased international mobility of capital.

5. THE PREFERENCE OF THE UNITED STATES FOR CURRENT ACCOUNT DEFICITS

A central question that still requires explanation is why the US preferred to meet the international demand for liquidity through current-account instead of capital-account deficits; that is, by borrowing money (selling debt) instead of investing abroad (buying foreign assets). Obviously, this was not a unilateral phenomenon, as the larger size of the US debt required increases in both US supply and foreign demand. Bernanke *et al*. (2011) emphasize the role played by the rise in *foreign demand* for "apparently safe" US assets in encouraging banks to develop products that "transformed" risky loans into highly-rated securities (Bernanke *et al*.). We are interested here in giving an alternative explanation that emphasizes the rise in the *US supply* of financial assets (or demand for foreign financing).

To come to such an explanation, we must first distinguish the two basic components of a current account balance: the private balance (surplus or deficit), equal to the difference between private savings and private investment; and the public balance, equal to the difference between tax revenue and fiscal expenditure. That is, both the private sector and the government can contribute to a deterioration of the current account if their balances deteriorate over a given period of time.

In the case of the US government balance, we find a deterioration that resulted from the conjunction of an increase of fiscal expenditures by 3 points of the GDP, and a decline in fiscal revenues also by 3 points of the GDP over the ten years prior to the crisis; this phenomenon —in the same way as the deregulation process— can essentially be read as a political phenomenon. In the case of the increase in fiscal expenditures, this is reflected by the fact that the single largest contribution to this increase was made by military expenditure, which doubled in the period 2001-2008: a rise equivalent to 1.3 points of GDP (*The Economic Report of the President 2010*, Tables B-78 and B-79). This can be attributed to a dangerous accumulation of political power by the military-industrial complex. In the same way, the political character of the reduction of tax revenues is revealed by the fact that the largest contribution this reduction came from the lowering of income and property taxes affecting rich people. These measures —implemented by Republican administrations— reflect a change in the correlation of political forces in that country.

In the case of the private balance, its deterioration implies private savings falling in relation to private investment. In the case of private savings, we must distinguish between firms' savings (non-distributed profits) and households' savings (the difference between disposable income and consumption expenditure). What was observed in the case of the US was a deterioration of the private balance that started in the 1980s and is chiefly explained by a decline in households' savings, which fell from 8.1 points of the GDP in 1982 to one point in 2005. Meanwhile, the balance of firms (the difference between non-distributed profits and investment) posted a slight improvement (0.7 points) over the same period.

The drop in households' savings was made possible by the increased access to credit by consumers, as was pointed out by Parker in 1999, and reasserted by Parker and Palumbo in 2009:

> In the 1960s and 1970s, the two nonfinancial business sectors [non-corporate and corporations], the two government sectors [federal and municipal], and the rest of the world were consistently net borrowers, meaning their rates of investment almost always exceeded their rates of saving. The household and the financial business sectors served as the net lenders to all the other sectors. In the 1980s and 1990s, the primary change was to net lending by foreign institutions… In the 2000s, however, as household switched from being the largest lending sector to the largest borrowing sector, a large inflow of foreign (financial) capital provided the lion's share of net lending, complemented by new lending by nonfinancial corporations (pp. 7-8).

That is, the greater access to credit by households was financed by a larger inflow of foreign capitals.[14] This drop in households' savings was exacerbated by the lowering of interest rates during the second half of the 1980s: from the larger variety of financial

[14] The importance of this phenomenon is stressed by Bernanke *et al.* (2011).

instruments; from the "democratization" of credit; from the expansion of an advertising industry with an astonishing capacity to promote conspicuous consumption (Schechter 2008), etc.

Although the increased access to credit made it *possible* for households to increase their debts, it is perhaps more important to understand what made such an increase *necessary*. Robert Reich, President Clinton's Secretary of Labor, sees it as the last mechanism households found to maintain their consumption levels at a time of lagging real wages (the two previous mechanisms having been the incorporation of women to the labor force), and the increase of the number of working hours (Reich 2010). It is, then, evident, given the stagnation of investment and exports, that in order for the US economy to keep growing after the mid-1980s, it became necessary to force households to increase their consumption expenses; they also acquired more debt, given the larger concentration of income and the fall of real wages[15], thus forcing banks to enter the subprime market, lending money to new and less solvent clients, with the results that we already know.[16]

In the case of the balance pertaining to firms, although its variation was quantitatively less important than that of the households' (while the firms' deficit contracted by 0.7 points of GDP between 1982 and 2005, the households' surplus fell by 8 points), that the change was in the opposite direction is very significant. Loeys *et al.* (2005) also present evidence of an increase in firms' savings rates, as their average financial *surplus* has amounted to 1.7 points of GDP since 2002, after having an average financial *deficit* equivalent to 1.2 points over the previous 40 years: a total change that amounts to almost 3 points of GDP.

Many explanations can be given of why firms did not increase their investment rates concurrently with the increasing foreign financing they were receiving, and one of them is a fall of the rate of return on capital as it is suggested, for example, by Amin (1996). That is, US firms did not use the foreign financing at their disposal to increase their investment expenditures simply because they did not find profitable investment projects to undertake.

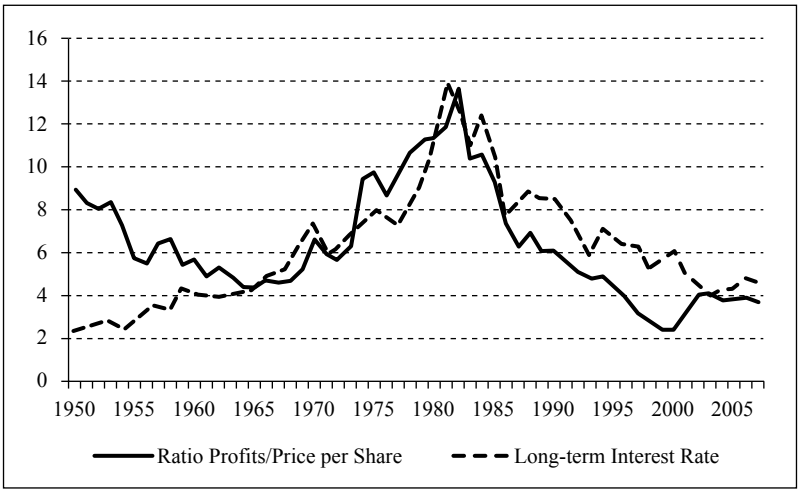
A simple way to illustrate the fall of the rate of return on capital is given in Figure 2, which shows the behavior of the ratio annual profits per share/price per share —i.e., the reverse of the Price to Earnings Ratio— for the New York Stock Exchange, whose sharp decline from around 1980 can be seen as revealing a fall in the rate of return on capital. As the conduct of the ratio profits per share/price per share may be particularly affected by the more volatile behavior of its denominator, it seems appropriate to include in the figure the series long-term interest rate, which should maintain a very close relationship

[15] Levy and Tremlin (2007) quote data that show that the richest 1% of tax declarers captured 80% of the total income increase between 1980 and 2005 (p. 5).

[16] This linkage between income distribution and credit expansion is emphasized by authors such as Rajan (2010), Ch. 1.

with the rate of return on capital. What we find is that this series confirms our assertion of falling rates of return on capital, which has a similar profile.[17]

Figure 2
Profits/Price per Share Ratio and Long Term Interest Rate, 1950-2007

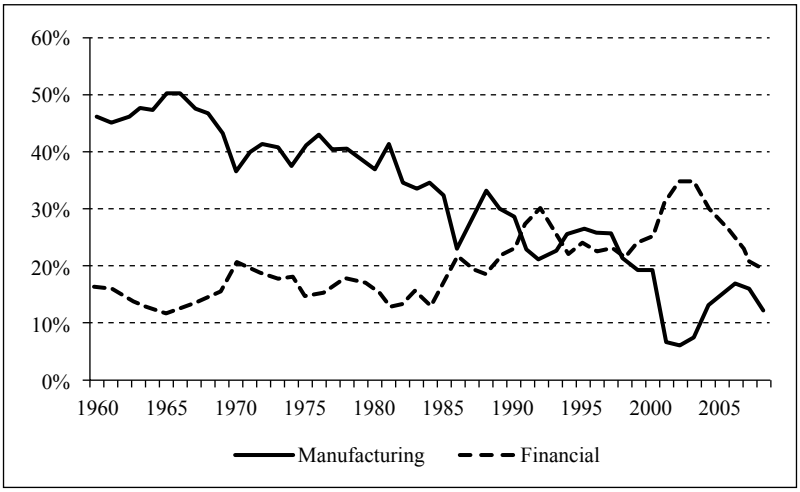


Source: Original data taken from Robert J. Schiller (2005), updated.

As the numerator of the ratio annual profits per share/price per share measures total profits, it does not capture the fact that the real sector of the economy suffered an even more acute fall of its rate of profits. One way of illustrating this fact is presented in Figure 3, in which the manufacturing and financial sectors' shares of total profits are compared, showing a steep decline of the manufacturing sector's share of total profits, from 50% in 1964-1965 to less than 10% in 2001-2003. This fall, which accelerated after 1980, reveals that the manufacturing sector was even more affected by the fall of the rate of return on capital observed in Figure 2. Moreover, the situation becomes bleaker if we take into account that the average share of total manufacturing profits of petrochemical firms rose from 21% over the period 1984-1999 to 50% between 2000 and 2008.

[17] The original data was taken from Schiller (2005).

Figure 3
Manufacturing and Financial Profits, 1960-2009
(% of Total Profits)



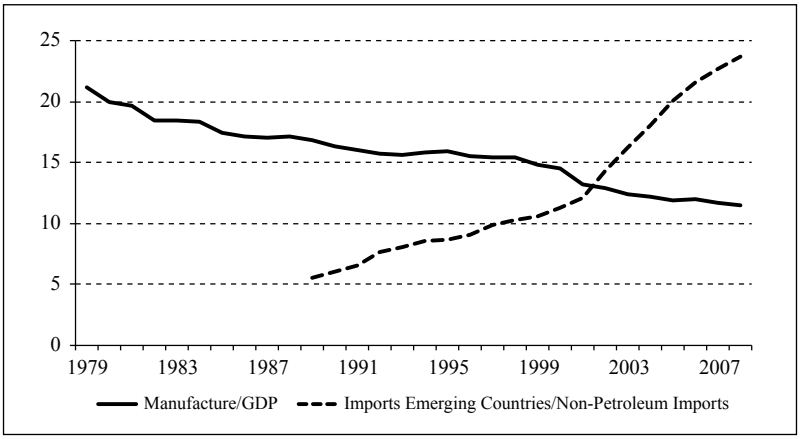
Source: Original data taken from *The Economic Report of the President* 2010, Table B-91.

We must now suggest explanations of the fall of return on capital in the manufacturing sector. Although there are many factors that may have contributed to this situation, we are interested here in emphasizing the role of the increase in competition that resulted from the greater integration of emerging countries into the world economy. One feature of this increase in the case of the US economy is presented in Figure 4, which shows the growing participation of imports from the emerging countries —basically manufactured products— in the value of nonpetroleum US imports. In effect, the share rose from 6% in 1989 to 24% in 2008, after following a growing trend that accelerated after 2000,[18] while the participation of the manufacturing sector in total GDP lost 9 points between 1979 and 2007, a loss that also accelerated after 2000. These developments can be associated to a loss of competitiveness by the US manufacturing sector; already shaken by the competition from the Asian Tigers, the sector is most likely to have been further affected by an unsustainable structure of relative prices: wages in rich countries are exaggeratedly high when compared to those in emerging economies.[19]

[18] The original figures were taken from the U.S. International Trade Administration. It must be pointed out that, in order to obtain those figures, we have assumed, correctly, that the US does not import petroleum from the three emerging countries.

[19] Data on the issue of wage differences is provided by the International Labor Organization (http://laborsta.ilo. org/STP/guest.)

Figure 4
U.S. Manufacturing Product and Imports from Emerging Countries, 1979-2008
(% of GDP and of Nonpetroleum Imports)



Source: Original data taken from The Economic Report of the President 2010, Tables B-12 and-B-104 (nonpetroleum imports), and International Trade Administration, U.S. Department of Commerce (US imports by Country).

The unfeasibility of maintaining this type of situation in the long run is explained by the International Factor-Price Equalization Theorem, which shows that, under certain conditions, the free trade between two countries must equalize the prices of the factors of production —labor and capital— in both countries. The theorem was proven by Paul Samuelson (1949) for the case of two countries, two industries and two factors of production, and assuming the same technology and the homogeneity of production factors in both countries, among others.

In this way, the current gap in real wages can be explained by differences in technology and/or the quality of labor, which should lead us to believe that technological progress and a higher qualification of labor in emerging countries —that cause an increase in their wage levels— will end up eliminating wage differences. However, a more likely evolution is that wage equalization will result from both an increase in wages in emerging economies and their fall in rich countries. In any case, what can be inferred from the theorem is that it is not possible for the current situation to persist indefinitely.

Finally, we must also take into consideration that the closer integration to the world economy of emerging countries poses a challenge to rich countries, as they become competitors not only in the world market of manufactures (as competing suppliers), but also in the world market of raw materials (as competing buyers): two facts that had an important effect on the return on capital in the manufacturing sectors of rich countries. This reinforces our argument that the fall of profitability in rich countries is closely related to the efforts made by emerging countries to become more fully integrated into the world economy.

6. SOME CONSEQUENCES AND CONDITIONS FOR A RECOVERY

In the case of the results or **consequences** of the crisis, these —to a great extent— are already being observed. The most important ones concern financial regulation; the international monetary system and the role of the dollar —and the United States— in the world economy; trade policies; international capital mobility; economic concentration; income distribution; as well as political (in)stability in the United States.

In the case of financial regulation, there is a partial retreat from the movement towards deregulation, basically with the purpose of increasing the financial institutions' capital requirements. At the international level, the most important landmark was the announcement made in 2010 by the Basel Committee on Banking Supervision of a package of reforms changing the rules set by the Basel Accord II of 2004; one of the most important changes was that which required banks to lower their leverage ratios and thus be more safely capitalized. Naturally, this requirement —that is to be implemented by central banks— is generally not welcomed by private banks (Admati et al. 2011).

Regarding the international monetary system, demands are being made for the reform of the system (or *non-system*) set up at Bretton Woods; this would imply the receding, if not the demise, of the dollar as a reserve currency. Proposals to this effect have been made not only at the United Nations' forums and institutions, but also by countries such as China (United Nations 2009, UNCTAD 2009, and Suominen 2010).

In relation to the dollar, the United States is seeking its depreciation as a way of both closing its external deficit and reducing the burden of paying its (dollar-denominated) debt. Although privatization policies may be seen as an alternative means of facilitating the payment of the debt, they would not help to close the external deficit, and could even provoke an appreciation of the dollar, as foreign investors would increase their demand of dollars in order to bid and pay for US assets being privatized. In any case, the purchasing of Treasury Bonds by the Federal Reserve exposes the intention of seeking a depreciation of the dollar as such purchases push down the value of the dollar by increasing its supply.

Linked to the previous point —and concerning trade policies—, protectionist moves are being made by different countries through tactics of exchange manipulation that may trigger "exchange wars", and could end up giving rise to beggar-thy-neighbor policies.

As regards international capital mobility, there is certain willingness to introduce —or increase— restrictions to short-term, speculative, capital flows. Measures with this purpose have already been taken by countries such as Brazil, Thailand, Taiwan, and Iceland, among others (Authers 2010).[20] "Too much capital may be moving too quickly to emerging markets"

[20] See also *The Economist*, October 25th, 2010.

There has also been an increase in economic concentration, particularly in the financial sector, as must be expected from crises of this type, with predictable consequences for global economic efficiency. At the same time, an increase in poverty and income inequality can be observed in rich countries, in part resulting from policies of "union-busting" and the deprival of collective-bargaining rights to workers (Wealth for the Common Good 2009).

At the international level, the most important political consequence is —or will be— the weakening of American economic and political leadership. The most recent global economic expansion without inflation was made possible by the greater integration to the world economy of emerging countries, which will now demand more important responsibilities in international economic and political organizations. Reflecting this point, at the Seoul G20 summit held in November 2010, an agreement was made to transfer 6% of the IMF voting power to India and Brazil.

Finally, a growing level of distrust in the American political leadership is triggering the emergence in the United States of far-right populist movements that seek to capitalize upon this sentiment: something that might end up politically destabilizing the world's most important economy. A consequence analogous to the reintroduction of restrictions to international capital mobility is the escalation of the struggle against illegal immigration and the attendant resurgence of anti-immigration feelings.

On the other hand, in terms of *conditions for recovery*, we must distinguish between those concerning the financial establishment and those more directly concerning economic efficiency. In the first case, the main condition is the reform of the international monetary system, supplemented with a reduction in the international mobility of short-term capitals, and a more effective set of financial regulations. In the second case, the conditions for an increase of economic efficiency are the dismantling of large monopolies; the reduction of unproductive expenditures; the elimination of price distortions; and policies to promote both technological development and diffusion.

The main reason to carry out a reform of the international monetary system is that, for a number of reasons, the current arrangement is not feasible in a global and integrated economy like the one that has been being built over the last 20 or 30 years; firstly, because the country issuing the reserve currency (the United States) ends up being the only one enjoying a truly independent monetary policy. The countries of the rest of the world are forced, in the short run, to keep their interest rates linked to those fixed by the Federal Reserve and, in the long run, to maintain price levels that are consistent with those of their main trading partners: two objectives that may not necessarily be in harmony.

Secondly, in a monetary system with n different currencies there can only be n-1 independent exchange rates, which implies that there should be at least one country to which markets do not guarantee an exchange rate consistent with both foreign equilibrium and full employment. Obviously, the exchange rates relevant to the world economy are those of the largest economies, and each of these countries is most susceptible to this

condition; if the affected country is that which issues the reserve currency, the problem becomes even more complicated. This last possibility is especially pertinent if we consider that international demand for liquidity will tend to induce an overvaluation of the reserve currency.

Thirdly, it is very difficult for a monetary system with *n* currencies and a single reserve currency to be in a symmetrical arrangement, not only because it allows the country issuing the reserve currency to collect seigniorage, but also because it may also allow that country to accumulate external deficits almost indefinitely.

A long-term solution would require a major overhaul of the international monetary system, with the ultimate objective of constructing an optimal system whose main characteristic would be the creation of a world central bank and the introduction of a single world currency. A movement in this direction was made with the introduction of the SDRs by the IMF in 1969, which has, as has already been mentioned, been proposed by several countries as well as United Nations institutions.[21]

However, one problem with a single world currency is that it requires, among other things, a completely free international mobility of all factors of production; this is because, in the absence of exchange rates, such mobility becomes the only efficient way of adjusting external imbalances. We deem this a problem because free international mobility of labor is not politically acceptable in rich countries. This fact reveals the significance of one of the most important asymmetries in the current world economic order: while capital enjoys almost perfect international mobility, restrictions on labor mobility are becoming more severe every day.

In any case, the reform of the international monetary system is a necessary but insufficient condition in preventing crises of this type, as there would remain the problem of an excessive international mobility of short-term capitals. Therefore, as the introduction of a single currency would not end the problem of instability, it may become necessary to introduce a tax on international capital flows of the type proposed by Tobin (1978), as a means of increasing the cost of short-term, speculative capital movements.

It is also important to bear in mind that a more effective financial regulation will require a review of the roles of the International Monetary Fund and the Bank for International Settlements, in order to ensure their contribution to the standardizing and compliance of financial regulation at the international level. The reassessment of the current role of the IMF —the most important one being the emission of good-behavior certificates to debtor countries that agree to sign letters of intention, which in time are used by private banks as evidence of their solvency— is of especial importance, and must entail its more democratic organization and a more equitable assignment of SDRs.[22]

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[21] Stiglitz (2006), for example, makes a very straightforward proposal in that sense (see Ch. 8). Of course, there is also the Gold Standard alternative, but lists of its shortcomings can be found in any text of basic international economics.

[22] Concerning this issue, see Stiglitz (2006), Ch. 8.

The conditions for an increase of economic efficiency —the elimination of monopolistic power, the reduction of unproductive expenditures, the rectification of relative prices and technological progress— cannot be subject to controversy, and we will only make a few comments concerning their less conventional aspects.

The economic concentration arising from the prevalence of huge conglomerates and monopolies in certain production sectors, particularly finance, telecommunications, aerospace and petrochemical,[23] is very harmful; not only because of the significant microeconomic costs resulting from the reduction of the level of competition, but also because of the macroeconomic costs associated with the "too big to fail" problem, and the political consequences, which could end up being even costlier.

A good example that relates to the question of political repercussions of economic concentration is the rapid increase in arms expenditure that has resulted from a dangerous escalation in the political power of the US military-industrial complex. Although a warning of this danger had already been made by President Eisenhower in 1961, the member corporation of the complex have been able to consolidate their power by means of lobbying activities, contributions to political campaigns, the exaggeration of the danger presented to the United States by certain foreign countries, and skillful geographical distribution strategies of productive activities within that country. In addition, the fact that the US has not fought a single war on its own territory since the end of the Civil War, and hence that the average American does not associate wars with economic distress, could be another candidate for the list of explanations.

The main distortion in relative prices to be eliminated concerns the differences in costs of production —primarily but not only wages— between rich countries and the rest of the world, in order to allow rich countries to face the challenge posed by the emerging economies and —at the same time— achieve a more complete integration of the less developed countries to the world economy. This will require the devaluation of the dollar —and other currencies such the euro— and therefore the reduction of real wages in rich countries, something that will complicate the political scenery in those countries.

Technological progress and diffusion are very important not only because increased productivity would allow rich countries to face their challengers without a significant reduction in their real wages, but also because the limited nature of the world stocks of raw materials may before long begin to be reflected in higher prices. The problem is that research and technological progress usually require important fiscal support, something for which there is no political will at present, much less enough money. Besides, the United States —and rich countries in general— do not appear to be prepared to facilitate technological diffusion.

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[23] In the case of the financial sector, Kaufman (2010) points out that "In 1990 the 10 largest US financial institutions held about 10 per cent of US financial assets. Today, the number is well over 70 per cent".

7. CONCLUSIONS

In an attempt to prevent the debacle of their financial system, the governments of the United States and other rich countries were forced to intervene, esentially by transferring huge amounts of public funds to banks and other private corporations on the verge of going broke; this required their partial, but temporary, nationalization. This intervention did not have as its only, or main, purpose the rescue of banks, (or, more precisely, bankers) in trouble, but also to prevent market forces —i.e., foreign capitals— from assuming the task of solving the problem. We can thus say that the objective was to prevent American banks from falling into the hands of, primarily, those Asian and Arab capitalists who have been accumulating huge amounts of American debt during the last 30 years.

Thus, we are facing crisis that has been incubated over a long period of time, and for which there are no short-term solutions, whether fiscal, monetary or exchange adjustments. It is obvious, for example, that mere liquidity increases will be unable to induce an expansion of private investment and expenditure in general. Current interest rates in themselves show that we already have an excess in liquidity.[24]

Likewise, the fiscal policies option is very troubling, given that at this time there is a conflict between short-term and long-term solutions, as the expansive fiscal policies required to alleviate the problem in the short term might —in the long run— end up aggravating the problem resulting from internal and external disequilibria in rich countries, which do not possess funds in the amount required to finance those policies.

In the case of the exchange adjustments, although the United States may be very interested in the depreciation of the dollar —in order to facilitate the closing of its external deficit and the paying of its public debt— this does not imply that such depreciation will be easy to attain; firstly, because it would imply a higher inflation level and lower real wages in the USl;[25] secondly, because it would require those countries currently holding huge amounts of dollar reserves to agree to get rid of an significant portion of them; Thirdly, because it would allow foreign investors to buy assets in the US while paying lower prices. In any case, the US needs an increase in aggregate demand in order to reactivate its level of activity; but as households and the government are deeply indebted —at the same time that firms do not find reasons to increase their level of investment— the increase in demand will have to come from the rest of the world through their purchases of US goods; that is why exchange rates are so important.

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[24] In the case of the United States, for example, the Federal Reserve Bank of St. Louis reports that the average amount of Excess Reserves of Depository Institutions from September 2008 to August 2010 (US$843 billion) was almost 500 times larger than the average amount during the five previous years. See http://research.stlouisfed.org/fred2/series/EXCRENS/downloaddata?cid=123

[25] A dollar depreciation can also be seen as an appreciation of —for example— the Chinese currency, thus resulting in an export of inflation by that country, that would not be able to continue helping to maintain world inflation low.

As the only superpower over the last 20 years, the United States had the responsibility of adopting a model of economic growth that could be used as a reference for countries in the rest of the world, a task that —for several reasons— the US was unable or unwilling to undertake. As a result of this failure, the US will now have to surrender part of its power, both economic and political. However, it will not be easy to persuade the US to accept a fundamental reform of the international monetary system, which, as has been pointed out by Stiglitz,[26] will complicate an already daunting task all the more. However, a global, integrated, capitalist economy like the one that has been built over the last 20 or 30 years does not allow fornational boundaries, and the reform of the international monetary system with the introduction of a single currency could be one way of acknowledging this.

Although some authors —Shiller (2005), for example— emphasize the psychological factors involved in the development of the crisis —the *animal spirits*—, it is obvious that the crisis is altogether more complex than being the mere result of the bad behavior —or *irrational exhuberance*— of economic agents, particularly those in the financial sector. Even though it is vitally important to have a financial sector that efficiently supports the productive activities in the real sector, we must recognize that we are not witnessing an economic problem that solely concerns financial variables, and that higher efficiency in the real sector may be even more important than a financial reform as a result. Moreover, although the channels are obvious —the eradication of giant monopolies, the elimination of relative price distortions, the cutting of unproductive expenses, and technological progress—, none of them will be easy to implement.

Cutting unproductive expenses, for example, will not be an easy task given that the US government is currently involved in two wars —a *war on drugs* declared by President Nixon in 1971,[27] and a *war on terrorism* declared by President Reagan in 1985 (Chomsky 2002)— in which it will be very difficult —if at all possible— to bring about definitive victories. These wars are very expensive, not only financially, but also because of the risk that they will end up plunging the US government into an authoritarian, even militaristic regime. Again, as the only superpower over the last 20 years, the United States should have played the role of an impartial judge in the solution of international conflicts, and this is another task that the country was unable or unwilling to assume.

Therefore, world capitalism can be said to require a substantial restructuring of both its political and economic configuration in order to stabilize financial markets and to fully integrate new and very important partners —such as China, India, Brazil and Russia— into its sphere. Despite the incorporation of, or the access to, new markets being considered by Schumpeter (1975: 82-85) as one of the fundamental driving forces of capitalist development, other factors, —such as more consumers, new goods, tech-

[26] See report of the UN Commission chaired by Joseph Stiglitz (2009).

[27] See the 1970 Comprehensive Drug Abuse Prevention and Control Act.

nological progress, and new forms of industrial organization— brought about by the integration of the emerging countries into the world economy may appear to refute these ideas. However, it is important to understand that the positive effects of the incorporation of new markets do not have to be observed immediately or without any setbacks.

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