

On: 13 August 2015, At: 09:59

Publisher: Routledge

Informa Ltd Registered in England and Wales Registered Number: 1072954

Registered office: 5 Howick Place, London, SW1P 1WG



VOL. 35 NO. 2
SUMMER 2014

Journal of Post Keynesian Economics

Editorial Board: Luis Carlos Blanco-Pardo, The Global Journalist; and a team of international authors including John Latafis, Guillermo de Larosque, and Frank Rees. See complete articles in contents. For more information on the journal, visit <http://www.tandfonline.com/loi/mpke20>.

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Publication details, including instructions for authors and subscription information:

<http://www.tandfonline.com/loi/mpke20>

Securitization and financialization

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Published online: 10 Dec 2014.

To cite this article: Alicia Girón & Alma Chapoy (2012) Securitization and financialization, *Journal of Post Keynesian Economics*, 35:2, 171-186

To link to this article: <http://dx.doi.org/10.2753/PKE0160-3477350201>

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Securitization and financialization

Abstract: *Securitization and financialization are the main causes of the financial crisis. These two concepts explain not only Minsky's financial instability hypothesis but also the off-balance-sheet operations represented by derivative products, which are closely related to mortgage loans. Financial intermediaries in need of liquidity did everything in their power so that the securitization of assets could have a life of its own in financial operations. This is a process that is endogenous to the development of financialization. Because said process was a violation of the monetary economy, it was necessary for central banks to intervene as "lenders of last resort" as well as to nationalize and restructure all the financial intermediaries.*

Key words: *development, financial intermediaries, financialization, securitization.*

JEL codes: E44; E58

Contrary to some over optimistic interpretations the financial world crisis which started in 2008 is not just the outcome of an unbridled speculation initiated by a banking system freed of any regulation. It is much more than a "Minsky moment." What reveals the financial crisis is the systematic violation of the whole stability conditions of the real dynamic monetary economy.

—Alain Parguez, 2009

The great transformation of the financing process by financial intermediaries beginning with financial deregulation and liberalization makes securitization and financialization the biggest cause of the current financial crisis. The seriousness of the crisis necessitated the intervention of the central banks as "lenders of last resort," nationalization of major banks, and the bankruptcy or restructuring of other banks.

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The financialization process consisted of the buying and selling of assets or financial securities that can take place in orderly form in the capital markets. The new jointing of large conglomerates participated in this through off-balance-sheet transactions with derivatives or financial products and services that were the consequence of technological and financial innovations. The financial intermediaries' need for liquidity made it possible for the securitization of assets to take on a life of its own in financial transactions, this being a process that is endogenous to the development of financialization.

Those participating in the financial markets expect the market to provide liquidity so that financial assets can be bought and sold easily; this happens whenever the markets remain stable and there are no unexpected situations. However, in a world where uncertainty prevails, the risk is latent. In his book about John Maynard Keynes, Paul Davidson (2007) explains how a monetary economy operates, referring not only to the revolutionary thought of the most important economist of the twentieth century in terms of the theory of liquidity and aggregate demand but also to what John Kenneth Galbraith (2004) classifies as "innocent fraud" in his last book, *The Economics of Innocent Fraud: Truth for Our Time*.

In accordance with this, taking into account the post-Keynesian perspective of the principles of a monetary economy, the behavior of the markets is irrational. To this are added the uncertainty in the financial markets, the constant fragility in which financial investors move, and the risk involved in going from stable financial structures to deregulated structures or structured finances. Fraud and speculation rule in this setting, having been worsened following the breakdown of the Bretton Woods agreements and the end of the Glass–Steagall Act of 1933. Later, the *new monetary consensus*, in the setting of the Basel Agreements and the Gramm–Leach–Bliley Act of 1999, favored the development of securitization and financialization by the intermediaries.

The subject matter of this article is an analysis of the financialization that arises from financial deregulation and liberalization, demonstrating how the development of securitization maintains a relationship of causality with financialization and the crisis, the interventions of the big banks, and the ups and downs of the dollar as well as the consequences of the crisis. There are different theoretical opinions about this crisis, but unquestionably, it is the result of having gone from a regulated financial system to a deregulated one where the system of financial accumulation reigns.

Financialization process

To understand the development of the current crisis, one needs to understand what the financialization process was from the time the Bretton Woods Agreement broke down in 1971. What in the long term led to the crisis of the international financial system was its going from a regulated banking system, where the banks' commercial and banking operations served to finance industrial capitalism, to a system where speculation is reinforced through the *process of originate and distribute*. The financial deregulation and liberalization transformed the financial systems of the big countries and caused banking crises not just in the developed world but in underdeveloped countries, as well. Structured finance, and therefore financialization, played a very important role in this.

Epstein (2001, p. 1) defines "financialization" as "the increasing importance of financial markets, financial motives, financial institutions, and financial elites in the operation of the economy and its governing institutions, both at the national and international level." For his part, Arrighi (1994) considers that the benefits of financialization are obtained mainly through the financial channels more than through trade and the production of raw materials. Referring to this process, Palley (2007, pp. 15, 26) has the following to say, "financialization has changed the structure and operation of financial markets. . . . [They are] at the heart of the financialization process, and this suggests there is an urgent need to restore effective control over these markets." In fact, because of everything that has happened, it is urgent to regulate the financial intermediaries, financial innovation, and financial markets again.

This paper defines financialization as the process whereby the profitability of financial capital, through financial innovation, surpasses the transactions of the international monetary system. Consequently, financialization becomes the dominant axis, displacing the International Monetary Fund (IMF) and the World Bank, institutions created at Bretton Woods (1944) to regulate liquidity, provide financial flows with stability, and develop finance. In the various countries, development banking and commercial banking in the hands of domestic investors attained development objectives supported by the central banks. The "golden age," as Crotty (2000) classified it, a quarter of a century after the postwar period, was a result of social regulation of economic principles whose prime aim was economic growth and development. When the Bretton Woods system fell (1971), the international financial institutions became spectators and accomplices in the financialization process.

In this new setting, the financial markets turned into the main source of funds, largely displacing the international financial institutions, domestic development banks, and domestic commercial banking, the protagonists of the Bretton Woods golden age. Thus, the primary focus of financing became securitization through mutual funds, hedge funds, pension funds, insurance companies, and other, noninstitutional investors.

The securitization of financial assets, analyzed by experts like Crotty (2004) and Epstein (2001), is fundamental for understanding the process of financialization and the development of the current financial crisis. Guttmann (2008), based on studies by Boyer (1986) and Chesnais (2000), defines this crisis as the first systemic crisis of a new finance-led accumulation regime. Financial assets acquired their own life, sowing uncertainty and growing risks in the global financial system.

To go more deeply into a study of the financialization process in the United States, Orhangazi (2008) establishes two levels. In the first, he refers to the exponential growth of financial market transactions and the surprising increase in the number of financial institutions. In the second, he deals with the corporate government of the big institutional, nonbanking conglomerates and their form of financing, which has allowed mergers and megamergers of the big conglomerates through securitization.

Securitization and derivatives

In a paper produced for the Levy Economics Institute on the lessons left by subprime negotiable instruments, Wray (2007) mentions the word “securitization” on more than twenty occasions, based on some notes of Hyman P. Minsky about the importance of the securitization of mortgage loans, as well as the role played by those participating in that process. Wray explains the importance that mortgage loans had in the speculation of the twenties and until the collapse that began in 1929. In recent years, securitization, derived from financial innovation, increased the risk of financial instruments. The Federal Reserve System (the “Fed”) (2008), the central bank of the United States, manages its reference rate, the federal funds rate (FFR), in relation to the needs of the financial corporations; two decades ago, it went from applying monetary policy to promote economic development to applying it in order to control inflation, in keeping with the prevailing financial system. As inflation decreased, because of the economic recession and the worldwide drop in the price of raw materials, the Fed was able to lower that rate in an attempt to reactivate the

economy. The changes in the FFR between 1999 and 2009 are related, however, to the securitization process.

According to Kregel (2008, p. 5), the crisis arose because of the banks' ability to procure huge earnings and to reestablish their financial statements that were damaged by the foreign debt crisis of underdeveloped countries in the eighties. The banks were able to do so when the restrictions imposed by the Glass–Steagall Act disappeared. It needs to be stressed that the Basel I Accord (1988), the Gramm–Leach–Bliley Act (1999), and the Basel II Accord (2004) stimulated both financial innovation and the new financial products; suffice it to say that when Basil II refers to regulation of the banks' off-balance-sheet transactions in point 82, it mentions that “counterparty risk weightings for OTC derivative transactions will not be subject to any specific ceiling” (Bank for International Settlements [BIS], 2004, p. 20). In short, derivative transactions were not regulated.

The scope of financialization and securitization is observed not just in the off-balance-sheet operations, but also in the synthetic derivative products, closely related to mortgage loans. During the apogee, mortgage values in particular, were *repackaged* in collateralized debt obligations (CDOs) and leveraged buyouts (LBOs). Because of financial engineering, these instruments, with different features, gave attractive returns to experienced investors.

Thanks to securitization, the banks got rid of their portfolio of assets, issuing a variety of instruments as derivatives (i.e., securities) that were bought by investors; in other words, instead of keeping their portfolio of loans, the banks transferred them to entities created for that purpose, called “conduits” (in French) or “special purpose vehicles” (SPV), that served as trustees of the current of money created by the original loans; in short, the banks issued negotiable instruments, backed by the original portfolio, that were bought by investors. The name “structured investment vehicles” was given to SPVs that were incorporated for this purpose.

When they sold the loans to banks and investment funds in the United States and abroad, the lenders no longer kept them on their accounting records. Whoever bought the securities could in turn use them as collateral to apply for loans. Thus, the lenders distanced themselves from the risk of payment default, which lowered the incentive to check the trustworthiness of the borrowers. When the subjacent assets fell into noncompliance, the crisis was precipitated.

The issue of these instruments “(cash and hybrid) was USD 1.47 trillion at the end of 2007, and much larger if unfunded synthetic CDOs

are included. The sharp acceleration from mid 2004 in underwriting of what were to become the key problem mortgages, were to a large extent securitised, and found their way mostly into private-label RMBS (including home equity); which totaled USD 2.3 trillion at the end of 2007” (Blundell-Wignall, 2008, p. 4). The leverage created an infinite speculative bubble whose instruments touted to be of great value, were later deemed “toxic” instruments.

The financial bailouts by central banks, particularly the Fed, show the errors of securitization. It is the “innocent fraud” that Galbraith referred to in *The Economics of Innocent Fraud*. Financialization and securitization worsened any financial instability. For Volcker (2008), the current financial crisis was the culmination of at least five very deep, significant bankruptcies during the past twenty-five years—a warning that something fundamental was happening. Since 2005, because of the fraud with synthetic products and the irrational rise of securitization, stock prices fell, not just of mortgage loans, and real estate companies and financial corporations fell into bankruptcy. Between May and October 2007, the price of stocks recorded heavy variations. After reaching its peak, the price of bank stock began to descend (Krugman, 2008, p. 181).

Financial instability hypothesis

The works of Minsky (1982, 1986) have become mandatory references to explain how the current instability arose. Financial fragility and instability are related to the economic cycle and are the causes of the financial crisis. Closely following the financial fragility hypothesis, Kregel (2007, 2008), Papadimitriou et al. (2007), and Wray (2007) define the current crisis as a “Minsky type.” Surprisingly, the BIS (2008, p. 7) acknowledges that “Hyman Minsky’s work in the 1970s seems of particular relevance to current circumstances. He warned that a continuous worsening of credit standards over the years would eventually culminate in a moment of recognition and recoil (what others have since dubbed ‘a Minsky moment’), when market liquidity would dry up.” At some point, evolution of the crisis effectively presented elements that led to thinking a Minsky moment was appearing and to asking, “Can it happen again?”

Kregel (2007) says that the present crisis is due to the endogenous nature of the financial system itself and to the way in which financialization has developed. At bottom, the current financial crisis puzzle goes beyond the fall of home prices or default by debtors; its root lies in speculation based on the expansion of securitization.

Minsky (1987), in his notes on securitization, was hugely concerned by the significance of this new way of financing the economic system. He said that there was a symbiotic relationship between globalization of the world financial structure and the securitization of financial instruments. Globalization needs institutions that surpass national borders, and in particular, the creditors' ability to attract assets that back the securities. Securitization reflects a change in the relative importance of bank financing and financing in the market; the capacity of the latter has incrementally increased, chipping away at financing by banks and by financial intermediaries who receive deposits.

Thus, "irrational exuberance," a phrase coined by Alan Greenspan, is a constant in the financial world. Structured finances are fundamental to explaining how the crisis developed. The unusual increase in financial products, a result of financial innovation, caused financial fragility; the real estate bubble that occurred because of strong speculation looking for earnings through securities that financed investment in this sector had an influence. In short, the valorization of capital by this kind of instrument, when it reached a certain level, caused their value to drop, and later, caused credit to contract. Minsky (1992), as does Parguez (2009), when he talks about the monetary economy and the dynamic monetary circuit process, hypothesizes that any crisis starts as a result of financial instability.

"Money appears (is created) at the request of spending groups by a fourth agent, the banking system, out of implicit or explicit credit contracts between the spending group and the banking system. It means that money materializes as liabilities of the banking system instantaneously transformed into expenditures on services (labor) and commodities. In the banking system balance-sheet its counterpart on the asset side is explicit or implicit claims on the spending group to be paid back in the future, out of the revenue generated by aggregate expenditures. Paying back the initial debt reflects an equal destruction of money for the economy as a whole" (Parguez, 2009, p. 2).

Thus, the cause of the current financial crisis is the very endogenous nature of money and the way in which banks grant loans. Parguez, one of the most serious critics from the perspective of monetary circuit theory, uses the butterfly-effect metaphor to explain the present crisis. On the one hand, the financial fragility is due to the financial innovation of structured finances, in particular when from the circuitist perspective of money, we see the creation of debt. Rochon and Rossi (2003, p. 123) mentions "circuitists see money first and foremost as debt, within the context of a generalized monetary theory of produc-

tion. They emphasise the *nature* of money (as debt), and only after look at the roles and functions of money. In this sense, *what* money is (debt issued by banks) is the same as *where* money comes from. . . . Money is always and everywhere an endogenous phenomenon.” In turn, the endogenous nature and the construction of structured finances deepened the financial fragility and speculation, creating a bubble, as demonstrated by looking at graphs of Dow Jones variations and their relationship to the Fed’s FFR that show a symmetry between these variables and the GDP rate.

Crisis evolution

Consequent to the crisis, from mid-2007, big banks began to register losses, several hedge funds went bankrupt, there were official bailouts of financial institutions, and the central banks applied a lax monetary policy. The securities markets became ever more volatile and declined within several months.

The crisis erupted owing to the drop in value of securities in the international market. The excessive leverage caused investors to feel insecure because the value of many financial assets, not just of subprime mortgages, was unknown. This insecurity followed the massive reduction (up to three or four levels) in the classifications of mortgage-related *structured* values. In Kregel’s words (2008, p. 22), “there is no effective pricing mechanism for collateralized obligations.”

In May of 2008, Blundell-Wignall (2008) calculated that the losses on the subprime and Alt-A mortgages fluctuated between \$350 and \$420 billion. At that time, the official figures were at \$100 to \$500 billion. The estimate was based on a 14 percent probability of losses due to bankruptcy applied to the stock of mortgages (subprime and Alt-Am, etc.) of approximately \$2.3 trillion, of which \$1.3 trillion were subprime. The 14 percent reflects weighting of the ABX indexes.

The Keefe, Bruyette & Woods Bank index reveals that in the first quarter of 2008, U.S. commercial banks accumulated losses of 31 percent. The Amex Securities Broker/Dealer Index (XBD), established with a reference value of 300.00 on October 15, 1993 and designed to measure the performance of companies highly capitalized in the U.S. securities industry, began to decline substantially at the end of 2007 (from 237 in October to 207 in December) and faster from September 2008, reaching a minimum (64.42) on February 27, 2009.

As the crisis progressed, the IMF raised its estimate of the loans and securities losses in the United States from \$945 billion in April 2008

to \$1.400 trillion in October of that year. As the Bush government's plan (\$700 billion) for the Treasury to buy troubled stock and thereby lower sales to laughable prices was not very successful, the situation worsened, and the figure consequently rose to \$2.7 trillion in April 2009 (IMF, 2009a). If assets that originated in other markets are included, the figure reaches \$4 trillion (United States, \$2.7 trillion; Europe, \$1.2 trillion; Japan, \$149 billion) for the next two years. That is why total credit for the private sector in the advanced economies declined (IMF, 2009b). The estimate covers the period from the second half of 2007 up to 2010.

According to the president of the World Economic Forum in Davos-Klosters, Klaus Schwab, \$5 trillion dollars were lost as a result of the global financial crisis. Rupert Murdoch, the newspaper magnate and director general of News Corp., said in that same forum, that around the world some "50,000 billion dollars of personal wealth" had disappeared since September 2008.

According to Boston Consulting Group (BCG), world wealth diminished 11.7 percent from 2007 to 2008 from \$104.7 trillion dollars to \$92.4 billion, the biggest contraction since after the events of 9/11. Europe lost 5.8 percent of its wealth, and North America lost 21.8 percent. Wealth in Latin America, on the other hand, grew 3 percent. In North America, the part of the wealth that is in stocks dropped from 50 percent to 38 percent, but the region still has the highest proportion of wealth that is in stocks. The wealth of the 400 richest people in the United States dropped 19 percent in 2009, the fifth drop since 1992, when *Forbes* began to produce this classification. Those who appear in the first ten places lost \$40 billion in the past twelve months. The benefits of the 500 biggest U.S. companies went from \$645 billion to \$98 billion between 2007 and 2008, a drop of 84.7 percent, the worst result in the fifty-five years the list has been published by *Fortune Magazine*; it is also a reflection of the unprecedented destruction that the financial crisis caused in the net value of banks and the values of the assets they held (World Bank, 2009a).

Government interventions

Among the first institutions that, because they were "too big to fail," had to be bailed out by their central banks or finance ministries, were Northern Rock (United Kingdom), Bear Stearns (United States), and IKW (Germany). The bailouts of Fannie Mae and Freddie Mac, semipublic American mortgage institutions, are among the most talked about because the

bailouts came to \$200 billion (September 7, 2008); both were put under regulatory management and the previous directors were replaced.

The most severe phase of the crisis began shortly afterward, on September 15, with the bankruptcy of the fourth largest American investment bank, Lehman Brothers Holdings Inc., a company established in 1850. The U.S. government, which the week before had rescued Fannie Mae and Freddie Mac and in March helped JPMorgan buy Bear Stearns, resisted backing the potential buyers of Lehman. One day after its bankruptcy, the U.S. government provided an \$85 billion emergency loan to the giant of the insurance branch, American International Group Inc., in exchange for an 80 percent share of its stock. Bank of America bought Merrill Lynch, one of the largest investment banks. After what had happened, there were only two of the five main independent investment banks remaining: Goldman Sachs Group Inc. and Morgan Stanley. On September 17, Morgan Stanley announced the loss of 44 percent of its value, and Goldman Sachs Group Inc. indicated a loss of 26 percent. On September 21, the Fed approved both of their applications to become Federal Reserve-regulated bank holding companies.

These events meant that on October 3, 2008, Congress approved a government plan whose main purpose was to buy mortgage-related stock, including *toxic stock*, for \$700 billion. Thus, the federal government engaged in massive interventions to avoid an interruption in the flow of credit, even with new lines of financing from the Fed and a broad program to buy bad-quality stock and recapitalize the banking system. The European governments also bailed out institutions too big to fail. In two months, there were more than 150 government interventions in the world (Roubini, 2009). Besides this, governments relaxed their fiscal policies, and because inflation was no longer worrisome, the central banks made coordinated cutbacks in their reference rates.

On February 13, 2009, the U.S. Congress approved the economic stimulus package presented by President Obama; the agreement was possible because this package was cut by \$100 billion to \$787 billion. The markets considered it insufficient, and said that it should have been \$3 trillion. More than 35 percent (i.e., \$286 billion) provided direct tax relief to 95 percent of American workers. The plan was to use \$120 billion in the first giant investment in infrastructure since the creation of the interstate highway system fifty years previously. But not only financial institutions were rescued; the most important case was that of General Motors. As the world automotive industry in particular was affected (from January to March 2009, the U.S. automotive market dried up by 36.5 percent), on June 1, 2009, General Motors Corp. took refuge under bankruptcy law

to restructure radically. As a result, a new General Motors arose on July 10 whose capital included a 61 percent government stake.

On June 17, 2009, some rescued U.S. banks began to pay off their debts to the government. JPMorgan, Goldman Sachs, and Morgan Stanley paid back \$45 billion of the government loan granted under the terms of the Fed's Troubled Assets Relief Program. JPMorgan returned \$25 billion, thereby paying off its debt, in addition to paying \$795.1 million to the Treasury Department in preferred stock dividends. Goldman Sachs bought back 10 million shares issued to the government, with which it reimbursed \$10 billion to the Treasury Department, including \$425 million of preferred stock dividends. Morgan Stanley paid back \$10 billion.

The dollar fluctuations

In order to estimate consumption and investment, Ben Bernanke, like Greenspan years before, put the FFR below inflation. From September 2007 to early 2009, the Fed reduced that rate from 5.25 percent to 0 percent to 0.25 percent; in the beginning, these reductions accentuated the depreciation of the dollar against other large currencies, the most notable being the case of the euro, which went from being quoted at 77.71 cents to a euro in December 2007 to 1.60 dollars to a euro in mid-2008. However, in August of that year, when the deterioration of the European economy consequent to the crisis became apparent, the flight of capital began to head to the United States, the result being that the euro began to drop, even to 1.25 dollars, before heading up again (around 1.45 dollars). When the dollar became more robust, the prices of oil and of other raw materials began to descend.

Since the establishment of a floating exchange rate (1973), the value of the U.S. dollar has fluctuated substantially up and down against other currencies; these variations have had negative economic repercussions for the world economy. The post-Bretton Woods system, a *trust dollar pattern*, has been characterized by its instability and imbalance; in 2008, the declining value of the dollar exacerbated the oil price rise.

Unquestionably, the dollar continues to perform a key function worldwide. However, in the future there could be a new distribution of global economic power as a result of the recognition that the U.S. financial authorities' ability to stimulate their economy is based on a willingness on the part of the rest of the world to accumulate more dollar reserves, a situation that could change in light of current circumstances.

Crisis consequences

The financial fragility affected largely financial corporations whose subsidiaries reach throughout the world, principally in emerging countries. The repercussions in the financial systems of countries like Mexico, Argentina, and Brazil were determined by how much those systems had come under foreign influence. The high prices of these countries' export products (oil, ores, wheat, and soy) increased their international monetary reserves. Mention must be made that, in contrast to Mexico, the *foreignizing* of the banks in Argentina and Brazil is not as widespread, and they have public banks that make it possible to direct credit policies to domestic investors with preferential rates. Nonetheless, in Mexico, with a banking system mostly in the hands of foreigners, channeling of these funds is distorted inasmuch as public policies and development financing does not generate an endogenous growth process of job creation and better income distribution. Separately, the effect of the crisis on the main offices of banks like Citigroup, HSBC, Santander, and BBVA greatly affected Mexico.

The high cost of foodstuffs and energetics until the first half of 2008 was highly related to the financial crisis because hedge funds placed a large part of their capital in assets such as raw materials in order to protect themselves from the weakness of the dollar, inflation, and the volatility of the financial markets. Between March 2006 and March 2008, international food prices rose on average 139 percent. As for oil, prices doubled in the year ending April 2008. All this deepened the financial crisis. The futures markets supervisor in the U.S. Congress declared that 70 percent of the oil business was speculation, which coincides with the statement of the oil-producing countries, to the effect that the tensions were not due to lack of supply, but to financial speculation, to the weakness of the dollar, and to geopolitical conflicts (*Economist*, March 22, 2008, p. 87).

As investors repatriated their foreign assets and credit conditions became tighter, companies around the world shrank production and postponed investment plans. Faced with the loss of wealth and fast deterioration in the labor markets, consumers cut back on spending. Economic activity in all the rich countries contracted significantly, Japan being the one hit hardest. When the storm expanded to the periphery, the emerging and underdeveloped countries suffered because of the worldwide credit contraction. The feedback between the economic weakness and the fragility of the financial systems occurred at an unheard of speed and magnitude.

In view of this, to avoid repetition in the form of a similar crisis, new regulation and supervision of the financial sector, discussed in variety of international forums, must encompass all the possible sources of systemic risks: cross-border currents of capital, credit bubbles, large and complex financial institutions, hedge funds, and derivatives. These, and especially credit default swaps, played a large part in the severity of the crisis, particularly as they are relatively new products that are negotiated in over-the-counter (OTC) bilateral transactions, in contrast to the standardized derivatives that are negotiated in the stock exchange; OTC contracts are more flexible than standardized derivatives, but they suffer from higher counterparty and operative risks, and less transparency. A few figures suffice to understand the importance and magnitude of OTC derivatives. In December 2008, the amounts outstanding of such derivatives were \$591.963 trillion where six months before the figure was \$683.726 trillion; the figures for OTC derivatives, just in the exchange market, were \$49.763 trillion and \$62.983 trillion, respectively (BIS, 2009). In contrast, the world 2008 GDP was \$60 trillion (World Bank, 2009b).

Another consequence of the crisis was that the support packages obviously increased the fiscal deficit of almost every country, with the U.S. fiscal deficit being by far the highest. Its deficit in July 2009 was \$180.7 billion, a record level for that month and the tenth consecutive deficit month; in the first seven months of 2009 the total accumulated deficit came to almost \$1.3 trillion, a preview of the deficit that in a year would reach \$1.75 trillion, four times more than the deficit accumulated during the administration of President George W. Bush. The federal government deficit would thus go from 1.3 percent of GDP in 2007 to 12 percent, and the gross debt, on the other hand, would go from 63 percent of GDP to 98 percent in the same period (World Bank, 2009b).

Final remarks

According to the *Economist* (January 26, 2008), this has been the first crisis caused by securitization, which at the start of 2008, represented one-third of the U.S. fixed-yield market. The rating agencies did not pay attention to the degree of leverage of banks, insurance companies, government-backed entities, and hedge funds, and the risks that would arise from a disorderly correction. The banks created assets and lent money so that others could buy these assets. Once this system began to wobble, everything tumbled; when the banks restricted credit, there were no longer any buyers for the assets. When the value at risk of a bank is very high, it means that it is very exposed, and when banks began to

lower this coefficient, chain reactions were triggered because everyone tried to sell off at the same time. Global integration multiplies the routes of contagion.

At the time of the U.S. 2000–2001 recession, which was contemporaneous with the September 11, 2001 attack, the Fed lowered the FFR from 6.5 percent in 2000 to 1 percent in 2003. In search of high returns, investors looked to the real estate sector, seeing that the wealth created in previous years and the low interest rates made it possible for them to buy a new house. When the economy recovered, the FFR began to rise, and ultimately, so did mortgage interests, which went from 3 percent to 9 percent.

During the peak years, overexpansion of credit helped to maintain a high employment level, high demand, and accelerated economic growth in the United States and other countries; all of this contributed to the formation of the real estate bubble. Financial globalization made it possible to use funds that drove excessive accumulation in the U.S. building sector. The problem arose when the prices of housing and other assets plummeted in the United States, the United Kingdom, and continental Europe. Consumer spending dropped as a result, and the great economic recession was produced.

Faced with the crisis, the Fed went from being a lender of last resort not just of the commercial banks, but also of the investment banks and of stock brokers or agents, and accepted mortgage-backed securities as collateral. Despite the unprecedented interventions of the central banks, the financial markets continued to function under pressure, which became more acute when the macroeconomic environment and the capitalization of institutions worsened.

The exponential increase of new financial instruments led to the highest level of speculation that has occurred in the international financial system since 1929; the depth of the crisis and its development indicate that the 2008–9 economic recession has its own characteristics, but also characteristics similar to those of the Great Depression.

Financial innovation, the economic cycle, and speculation through securitization formed a very special crisis that, among other things, brought with it a depreciation of the general world equivalent, the dollar. According to George Soros, the current crisis may mark the end of an era characterized by the expansion of credit based on the dollar as the international reserve (Soros, 2008).

The deficient regulation and supervision of the international financial system are clearly plain to view. Governments, regulatory and supervisory authorities, central banks, and private financial institutions have to

analyze the determining factors of this crisis and the characteristics and consequences of the systemic financial risk to diminish the frequency and severity of future crises.

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