

# CHANGES IN BANKING ACTIVITY IN THE CONTEXT OF THE DEVELOPMENT OF FINANCIAL DERIVATIVES MARKETS

**Roman Angela**

*„Al. I. Cuza” University of Iași, Faculty of Economics and Business Administration, Address: Carol I Boulevard, No. 11, Building C, 6th Floor, C805, Email: aboariu@uaic.ro, Phone: 0232.201440*

**Anton Sorin Gabriel**

*„Al. I. Cuza” University of Iași, Faculty of Economics and Business Administration, Address: Carol I Boulevard, No. 11, Building C, 6th Floor, C804, Email: sorin.anton@uaic.ro, Phone: 0232.201450*

*Abstract: In the last years, in the context of financial globalization, it has been registered a significant development of the financial markets, but also an increase of the instability of the interest rates, of exchange rates, of prices in general, that determined the creation of new instruments and of protection markets against risks. Within those, one should mention from the point of view of the spectacular development and of the economic implications, the derivative financial products and markets on which these are negotiated.*

*The paper analyses the role of financial derivatives in managing financial risks in the process of financial globalization and their implications on the systemic risk, on the banking activity, and on the monetary policy.*

*Key words: financial globalization, financial markets, derivatives markets, banking activity, monetary politics, systemic risk, risk management.*

## **1. Introduction**

In the last two decades, the financial systems of the majority of the world states were marked by profound transformations. The process of deregulation, subdivision and non-intermediation, the financial innovations, the new informational and telecommunication technologies determined the financial globalization process and influenced significantly the financial systems both of the developed countries and of the ones in course of development. Thus, these are characterized by the free circulation of the capitals, the creation of liquid financial and inter-connected markets, the intensification of the competition between markets, as well as between the financial institutions.

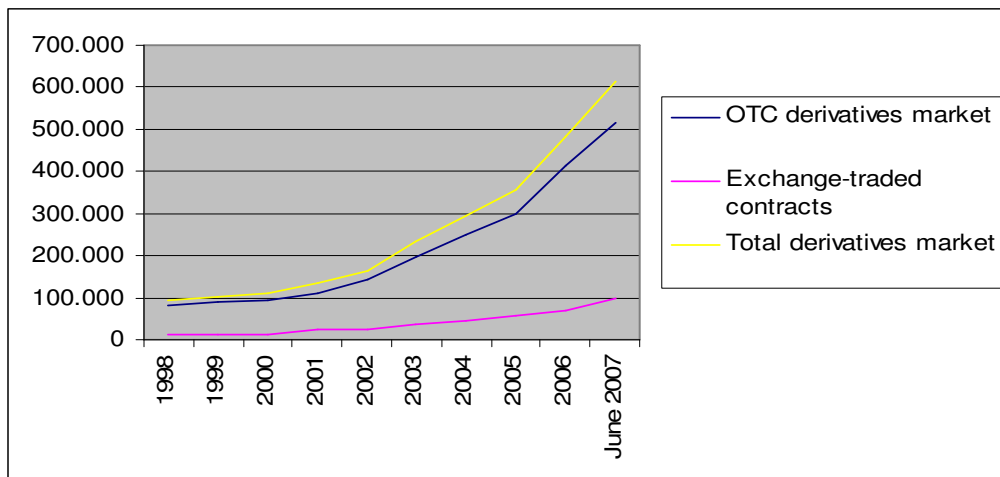
Under these changes, it has been registered a significant development of the financial markets, but also an increase of the instability of the interest rates, of exchange rates, of prices in general, that determined the creation of new instruments and of protection markets against risks. Within those, one should mention from the point of view of the spectacular development and of the economic implications, the derivative financial products and markets on which these are negotiated.

## **2. Recent Developments in the Global Derivatives Markets**

The derivative financial products allow the protection against the risks regarding the currency, the interest rates, credit etc., but they are used also for performing arbitration and speculation operations. The main derivative products are represented by the forward contracts, futures contracts, option contracts, and swap contracts and from 1990 a major innovation is brought by the credit derivatives.

By means of the derivative products, the participants from different markets can be protected against the fluctuations of the interest rates, of the exchange rates or of other prices of the assets.

In the last thirty years the use of derivatives and the range of products available for companies have grown spectacularly worldwide. According to the estimations made by the Bank for International Settlements (BIS) in its statistics about the evolution of the volume of traded derivatives, the total market value of derivatives increased from 94.253 billions of US dollars in 1998 to 613.089 billions of US dollars in June 2007 as figure 1 shows.



**Figure 1 Evolution of global derivatives markets in 1998-2007 (notional amounts in billion of US dollars)**

Source: Bank for International Settlements, [www.bis.org](http://www.bis.org)

In June 2007, the total amount of derivatives traded over-the-counter was \$516.407 billions, from which 52.64% represents interest-rate swaps. In 1987, the notional amount of interest-rate swaps outstanding was \$865 billion; 20 years later, it was \$271.853 billion, implying growth at an average annual rate of 15 percent. The growth of interest rate contracts was mainly due to market participants' changing perceptions about the future path of policy rates. Consequently, the increase in turnover was greatest in derivatives on short-term interest rates, both futures and options, whereas activity in long-term bonds contracts declined slightly.

In terms of outstanding, however, OTC markets are five times bigger than organized markets. In fact, it is not possible to compare the statistics for the amounts outstanding in the two types of market because the figures for organized markets reflect open interest only (i.e. positions not offset by countervailing transactions).

The notional amount of exchange-traded derivatives (options and futures) grew from \$13.935 billion in December 1998 to \$96.682 billion in June 2007. By far the most commonly traded derivatives on organized markets are interest rate contracts, accounting more than 50% of the total number of contracts in the last five years. The international derivatives market CME Group continues to expand its position as the world's largest derivatives exchange with record open interest on the exchange.

### 3. The Influences Exercised by the Significant Usage of the Financial Derivatives

The financial derivatives have as main function the risk's transfer; they allow to stand a risk considered bearable and to transfer the undesired risk part towards other operators that accept it due to their position opposite to the respective risk or from the desire to perform speculative operations.

The transfer of the risk by means of the derivative products can be accomplished due to their capacity to establish prices for risks and to separately negotiate different elements of the price risk for the support-assets, on the one hand; on the other hand due to the lever effect of these products, allowing the users to negotiate the risks without being necessary to acquire or sell the support-assets [4, p.100]. The leverage effect of the derivative products allows the users of these products to achieve a considerable volume of operations with limited expenditures and with reduced transaction costs. For example, the futures agreements allow the opening of positions, immobilizing only a low level of liquidities under the form of the guarantee deposit. In a similar way, the option agreements allow the opening of positions if the option's buyer pays a bounty that can be modified according to its expectations of gain.

The leverage effect that characterizes the derivative products stimulates the performance of speculation operations that are much easier to be achieved on the derivative markets in comparison with the markets of the support-assets, a fact that explains the considerable growth of the speculative positions and of the volatility of the markets, but also of the losses if the anticipations do not come true. Thus, the derivative products can constitute also a factor of instability for the markets.

The main function of the derivative of protection against risks allows the reduction of the uncertainty by using these products so that one can better appreciate if he/she contributes to the creation of a more favorable climate for the development of international transactions and investments.

The development of the derivative financial products can also contribute, under normal conditions (where no tensions appear on the markets), by stimulate of the transactions from the support-assets markets. This is due to the fact that the derivative products facilitate the coverage of risks, stimulates the investors to acquire support-assets and this allows the development of the respective assets' markets, the amelioration of the liquidity and their efficiency. For example it was observed that the derivative markets facilitate the issuance of securities of the public debt because they allow the agents that buy them to protect themselves against the interest rates' risk.

In the context of financial globalization, the accentuated development of the financial markets and especially of the derivative financial products' market has significant implications also over the activity of the bank institutions. As a result of the deregulation, subdivision and non-intermediation process, it was registered an intensification of the competition between the bank financial intermediates and the non-bank ones, the diversification of the bank institutions' activities and, at the same time, the reassessment of the role of the banks in the economy.

In respect to the derivative financial products' markets it was established a considerable involvement of the bank institutions on these markets, aiming to improve the financing conditions, the administration of the own risks but also of the clients' risks. The banks take part on the derivative markets both as dealer of derivative financial products as well as users, being at the same time the main intermediates on the markets, according to the agreement. Thus in some countries where the process of bank non-intermediation is accentuated (for example in Great Britain or USA), the operations with derivative products performed between the banks hold the predominant share from the total number of transactions from the derivative markets.

The increase of use of the derivative financial products at the level of bank institutions, in the context of bank non-intermediation has contributed to the development of their operations on the financial markets that means the diversification of bank activities and of income resources.

At the same time, it can be observed the fact that, in the event in which the bank institutions develop activities with derivative financial products without complying with the bank caution, there appear errors in the bank system that can determine the manifestation of a system crisis.

Another significant influence of the fast development of the derivative financial products is the one of the monetary policy. The accentuation of the financial innovation process in general and the increase of the usage degree of derivative financial products in particular have determined the growth of the monetary policy's complexity and the difficult evaluation of its impact over real economy.

Since the turn of the millenium, the amount outstanding of futures and options on short-term interest rate has grown significantly. Statistics and econometric evidence show that there is a the relationship between turnover in this market and changes in policy rates operated by central banks, both actual and expected [3, p.1]. The volume of trading with interest rate derivatives appears to respond mainly to changes in expectations of future interest rates.

The outlook for monetary policy promoted by the central banks represents an important driver of activity in the derivatives market. Even if central banks control only the short-term interest rate, their actions have an impact on the whole spectrum of yields and on other asset classes. A study conducted by the Bank for International Settlements on the G3 economies (SUA, Japonia și UE) show the existence of a relationship between monetary policy and turnover in exchange-traded derivatives [3, p.1]. The market participants' changing perceptions about the future path of policy rates tend to have to have an important impact on activity in most exchange-traded money market derivatives. In the same time, anticipated changes in spot rates have no effect on the turnover in most exchange-traded money market derivatives. Increased uncertainty about future central bank actions is also associated with higher turnover.

The development of derivative financial products influences the transmission speed of monetary policy decisions, supposing that they can attenuate their efficiency [5, p.109]. For example, using swap agreements on the interest's rate could delay or accelerate the impact of the directive interest rates' modifications performed by the central banks over the debtor economic agents, in the following manner: the economic agents that anticipate the decisions of restrictive monetary policy and owe a variable interest rate have the possibility to limit the impact of these rates over the financing plans by modifying the loan's

characteristics, respectively by transforming the initial loan (contracted at a variable interest rates) in a loan with a fix interest rate. Under a reversed situation, the economic agents that anticipate a relaxation of the monetary policy can accelerate its effects over the financing plans by transforming the debts, employed at a fix interest rate into debts at a variable interest rate. But such an influence of the derivative products is limited and manifests itself on the short term if we take into consideration the fact that the anticipations can be incorrect. Moreover, even in the case in which the anticipations prove to be correct, not all economic agents can act in the same manner and so some of them will be eventually affected by the modification of the directive interest's rate.

Another aspect regarding the implications of the derivative financial products over the monetary policy aims the influence over the transmission mechanisms of this over the real economy. For example, the use of derivative products can attenuate the role of the exchange rate's mechanism. This is due to the fact that the economic agents that perform foreign trade activities can protect themselves against the fluctuations of the exchange rate by means of the derivative financial products (especially by means of swap agreements on currencies, futures and currency options). But, on the long term, the fluctuations of the exchange rate influence the price level and, consequently, the production decisions of the economic agents.

The development of derivatives markets influences also the structure of monetary aggregate. The low cost of hedging or the low interest rate risk of T-bonds have determined a reduction of the risk associated and transform them in alternative to banking deposits, which represents components of monetary aggregate.

The markets of the derivative financial products offer new information to the monetary authorities, regarding the anticipations of the participators on the markets over the prices' future evolutions of the support-assets. Such information can be used by the central banks for a better grounding of the monetary policy decisions.

After the 1990s, the crises registered on stock exchange and real estate markets of numerous countries reflect the important role of the price of real estate shares and goods within the mechanisms of transmission of the monetary policy as their value is sensitive to the fluctuations of the interest rates. What is more, the practice shows that the prices of real estate goods grow significantly in comparison to the share prices, in the context of the excessive relaxation of the crediting conditions in a country.

The problem of the derivative financial products that has been discussed for a long time in the literature, regards their impact over the stability of the financial systems and their role in the occurrence of the systemic risks. Although it is well known the fact that the main function of the derivative financial products is to offer protection against financial risks, one should never forget that, at the same time, they build an instability factor due to the leverage effect that allows the opening of significant speculative positions (for example the case of Long-Term Capital Management). The practical experience highlights the fact that the derivative products can, during periods of tension, amplify the instability of the prices and emphasize their fluctuations.

In respect to the role of the derivative financial products in the occurrence of the systemic risks, some specialists in this field are frequently invoking, as an example, the case of the credit derivatives. The market of the credit derivatives has registered in the last years a very fast development and the value of the transactions with credit derivatives are significantly increasing, according to the estimations of the International Regulations' Bank, from 180 billion USD in 1997 to 42.580 billion USD in June 2007. [1, p. 104]. Although the market of the credit derivatives is much more restricted in comparison with other markets of derivative products, the accentuated development of the transaction with credit products would reflect the fact that the credit risk is considered much more important in comparison with the exchange rate risk or interest risk.

Credit derivative products appeared in the early 90s in USA and represent a new instrument of protection against the credit risk, used on large scale by the banks. By means of the credit derivatives, the bank institutions transfer the credit risk to some investors, such as insurance companies, mutual funds or hedge funds.

The fast development of the credit derivatives markets can determine the apparition of financial crisis (for example, the recent USA crisis from the bank and real estate market that had significant implications also over other countries, including over our country), because the transfer of the credit risk is performed mainly towards the investors much less capitalized and that are not bound to some strict regulations. At the same time, these markets are "Over the Counter" markets that through their nature are less transparent. Moreover, the significant implication of the bank institutions in the transactions with credit derivatives

highlights the use of these products without complying with the bank cautiousness; a fact that can determine the manifestation of instability at the level of the bank system and even the apparition of the systemic risk.

#### **4. Conclusions**

In the last years, in the context of globalization, the financial systems from the majority of the world states register significant economic transformations, especially through a very fast development of the markets of derivative financial products (especially of the credit derivatives) and through the intensification of the hedge funds activity. In this context, the financial systems have become more complex and less transparent so that the monetary authorities confront themselves with difficulties regarding the evaluation of potential risks that threaten the financial stability.

The financial crisis that manifest themselves in the context of financial globalization (especially the crisis from the Asian markets and the recent crises from USA) have determined the intensification of the preoccupations of the monetary authorities from different countries, including of some international institutions (The International Monetary Fund, The Bank of International Settlements) so that they evaluate the implications of the speculative derivative financial products (hedge funds) over the financial stability. Such preoccupations have at least two reasons. On the one hand, a large proportion of the transactions with derivative financial products are being performed by the banks and, consequently, the use of those products that don't comply with the bank cautiousness could determine the instability. On the other hand, the intensification of the direct relations between the bank institutions (especially between the most important banks) and hedge funds can be the source of financial instability of systemic type.

The disastrous effects of the financial crisis, manifested in the context of financial globalization, impose the preoccupation of the monetary authorities for the rigorous analysis of the relationship among the prices of the shares, of the real estate and the economic activity, as well as for the outline of the monetary models that include the prices of these assets for the orientation and the evaluation of the monetary policy.

#### **Bibliography**

1. Bank for International Settlements, *BIS Quarterly Review March 2008*, International Banking and Financial Market Developments, Monetary and Economic Department, Basel, 2008;
2. Plihon, D., *Instabilité financière et risque sistemique: l'insuffisance du contrôle macroprudentiel*, Cahiers française n° 331, 2006;
3. Upper, Christian, *Derivatives activity and monetary policy*, BIS Quarterly Review, Basel, September 2006;
4. \*\*\*, *Les implications de la globalisation pour la stabilité financière*, Banque de France, Revue de la stabilité financière, N° 8, 2006.