

## **DERIVATIVE FINANCIAL INSTRUMENTS AS RISK HEDGING**

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Annotation: The article discusses the problems of the development of derivative financial instruments in the global economy. The analysis of the current state of the exchange and over-the-counter markets of derivative financial instruments is carried out. The legal regulation of the derivatives market in international and Russian banking practice is considered. The paper also identifies the main trends in the development of the derivatives market in modern conditions, justifies the need for a new approach to their regulation in the Russian financial market.

Keywords: derivatives, derivative financial instruments, financial institution, bank, risk hedging, underlying asset, exchange market, OTC market, repository.

In modern economic conditions characterized by high volatility of interest rates, exchange rates and prices, as well as increasing financial risks, the use of derivative financial instruments (PFI) becomes particularly relevant. The active development of the derivatives market not only united the global financial market, but also became a mechanism for the massive redistribution of capital from one sphere to another. Over the past decades, virtual capital has flowed from the IT technology market to the mortgage market, then to the oil and other commodities market, then to the gold market and the exchange-traded funds market.

Derivatives are financial instruments derived from various underlying assets (such as stocks, bonds, loans, currencies and raw materials) that allow investors to use various mechanisms to manage their risk. "Derivative" comes from the English word derivative – "derivative". Instruments are called "derivatives" if their prices depend on changes in the prices of other assets (oil, gold, stocks, etc.). Given the diversity and heterogeneity of derivatives, it should be noted that if they differ from each other in terms of complexity, they share a common property: these are contracts that are concluded for a specific request, in which the seller and the buyer specify their obligations in detail. In the second half of the XX century, there was a rapid growth of specialized exchanges engaged in trading financial derivatives. This was due to a number of factors, the most important of which are:

The transition from the Bretton Woods to the Jamaican monetary system, the rejection of a fixed exchange rate (for a number of countries) and the transition

to a "floating exchange rate" (1971-1978); the US refusal to exchange the dollar for gold at the official price unilaterally (1971), as a result, the dollar sharply depreciated against gold. In 1976, the IMF decided to abandon fixing the official price of gold, giving the right to national authorities of countries to dispose of their own gold at their discretion;

The world oil crisis of 1973 (oil embargo), which appeared as a result of the political collusion of the OPEC oil cartel (OPEC); The beginning of the economic crisis in the United States at the end of 1973, which subsequently engulfed Anaya, Japan and Western European countries. The number of bankruptcies in 1974 compared to 1973 It grew in the USA by 6%, in Japan by 42%, in Germany by 40%, in the UK by 47% increased instability in the stock, currency and credit markets of countries, a sharp deterioration in the financial situation. Thus, the emergence of derivative financial instruments has become economically profitable, new opportunities have appeared for investors and risk management companies. Derivatives trading exchanges have started to appear in different countries. The formation of the derivatives market took place in several stages. The first stage of development derivatives are characterized by the appearance of forwards, which were used by the producers of agricultural products and represented a contract for the intended purchase. Thus, they subsidized a certain share of their expenses. The second stage was marked by the appearance of the Chicago Chamber of Commerce in 1848. It was during this period that the first trading platform for futures contracts for grain, soybeans and cattle appeared in the United States. With the help of these contracts, agricultural producers insured themselves against risks arising from changes in the prices of their goods. The main idea of futures contracts then was to reduce or hedge the emerging risk. In the future, these derivatives began to be used by financial speculators. They were engaged in arbitrage, that is, they used price differences on fixed-term contracts to extract profits. The third stage came in 1972, when the International Monetary Fund began to function. The Market (IMM) as an independent financial exchange under the auspices of the Chicago Mercantile Exchange [1]. Derivatives were first exposed there, as currency futures. Futures contracts for depository receipts of the State National Mortgage Loan Association, as well as for US Treasury obligations appeared there a year later. After ten years, derivatives on stock indices appeared.

In the context of financial globalization, a significant increase in transactions with derivatives has led to the transformation of commodity markets into segments of the global financial market, the mechanism of price formation in these markets has changed and the composition of participants has expanded. An analysis of the influence of PFI on the structure of the formation of world prices in the commodity markets showed that the main factor in determining the price was not the ratio of supply and demand, but speculative operations with derivatives, practically unrelated to the real movement of these goods. Simultaneously with the development of securities traded on the basis of gold and oil, the circle of

investors has expanded so much that they can be considered as more one factor influencing the price level in the markets of these goods. At the end of the XX century, there was a steady trend of increasing the market of derivative financial instruments, its volumes increased more than 100 times (1985 – \$500 billion USA; 1995 – 57 trillion US dollars). Moreover, 70% of this market in 1995 was over-the-counter instruments [2]. The intensive spread of derivatives has moved them from the periphery of financial services to the center, while the main share of the derivatives market came from the United Kingdom, the United States and Japan. In addition, the Basel Agreement of 1989 G. required only a small share of cash on the bank's balance sheet to use an interbank swap, which led to the opacity of these operations and their inefficient management by the state [3].

Many economists understood that the role of derivatives in reducing risks is ambiguous. With on the one hand, hedging operations allow you to redistribute risk and contribute to the integration of different segments of financial markets. For example, the credit derivatives market has closely linked the global credit and equity markets. On the other hand, speculative motives prevail in transactions with derivatives, and a small amount of invested capital can bring both significant profits and significant losses. In addition, the cumulative risk does not disappear anywhere, it is simply transferred from one group of investors to another. Due to the growing market integration shocks in one segment of the financial market are transmitted to others that are not externally related to it. Therefore, as noted by financial investor W. Buffett, the existence of derivatives creates serious problems at the macro level. Thus, the German industrial giant Metallgesellschaft lost 1.5 billion US dollars trading oil futures, Proctor and Gamble suffered losses of 157 million US dollars; Kashima's losses amounted to 1.5 billion US dollars. Established in 1994, the Long-Term Capital Management Fund, which performed operations in the form of derivatives for more than \$1.25 trillion, required intervention the US Federal Reserve System, since in 1998, as a result of the Asian financial crisis, the fund lost more than 90% of its capital.

The use of derivative securities exacerbated the course of the financial crisis in economies with emerging markets. For example, in the Mexican financial crisis in 1994 and the crisis in Southeast Asia in 1997, exchange rate derivatives played a destabilizing role [4].

Derivatives markets have been heavily criticized because of their role in the credit crisis, Beginning in 2007, derivative products were created from portfolios of risky US mortgages using a procedure known as securitization. When real estate prices fell, many of the derivatives issued depreciated. Financial institutions and investors around the world have lost a huge amount of money.

In September 2009 in Pittsburgh (USA) and in June 2010 in Tokyo, the G20 meetings were held between the participating countries, which were devoted, among other things, to the regulation of the OTC derivatives market. As a result, the G20 leaders agreed that information on over-the-counter derivative contracts should be brought to the trade repository, that all standardized over-the-counter

contracts must be cleared through central counterparties and, if necessary, traded on exchanges or electronic trading platforms. In addition, it was stipulated that contracts without centralized clearing should be subject to higher capital requirements and that margin standards should be developed for transactions that are not subject to centralized clearing. The G20 statement gave impetus to a number of related global initiatives, including work to enhance the regulation of financial infrastructure and ensure bilateral transactions. In general, the intention to ensure the implementation of the agreements reached by the end of 2012 even prompted countries such as South Africa and Russia to think about developing laws regulating the activities of central counterparties.

The result was the rapid development of the price of trading counterparties outside of developed countries and their rapid growth in the Asian region. In 2009, the total amount of transactions on shares on 16 stock exchanges from the Asia-Pacific Region, which were members of the World Association of Stock Exchanges, exceeded the same indicator for 26 members of the Association from Europe, Africa and the Middle East. For 10 years, from 2000 to 2009, the value of shares traded on the exchanges of the Asia-Pacific region increased from about 5 to 18.6 trillion dollars, compared with the fall of this indicator from 17.4 to 13.1 trillion dollars in the markets of Europe, the Middle East and Asia. Financial infrastructure providers, especially in Europe, have begun to make efforts to establish business ties with fast-growing Asian markets [1].

It should be noted that there are certain differences in the regulation of the over-the-counter derivatives market in Europe (the Rules governing the Infrastructure of the European Financial Market of July 4, 2012) and the United States (the Dodd-Frank Law on Wall Street Reform and Consumer Protection of July 21, 2010). In the United States on transactions with over-the-counter derivative financial instruments, including credit derivatives, must be reported to the trading repository within T+1 by those persons who have made this transaction, and in Europe this may be an informing person endowed with the corresponding rights, and the term is T+3.

Regulation of the international derivatives market is currently carried out at the level of supranational structures and self-regulatory organizations. There are two similar structures recognized by the world community – the International Organization of Swaps and Derivatives (International Swaps and Derivatives Association, ISDA) and The Bank for International Settlements (The Bank for International Settlements, BIS). These organizations perform the following functions: development of the infrastructure of the derivatives market; global regulation of the market; unification of contracts and terms of transactions; collection and analysis of information about the market; control of the activities of market participants.

ISDA was established in 1985 and includes more than 800 financial institutions from 55 countries on 6 continents. ISDA members are the largest dealers of the derivatives market. There are also various government agencies and non-

financial organizations that use derivative financial instruments to optimize their economic activities and to hedge risks. The oldest international financial organization is the Bank of International Settlements (BIS), founded in 1930. It coordinates financial and monetary relations between states, promotes the development of international financial settlements, and also acts as a bank for all central banks. In addition, this organization acts as a guarantor and guarantor in the framework of international financial relations.

BIS is a major analytical and scientific center for the collection and analysis of statistical information on the current state of the international financial system. The development of financial markets in the post-crisis period and increased attention to risk management contributed to the rapid growth of the global PFI market [15,16, 21, 22]. According to the data of the Bank for International Settlements, in 2014, positions on derivatives worth 700-710 trillion US dollars were opened in the world, despite the fact that global GDP did not exceed 80 trillion US dollars, that is, the derivatives market was nine times larger than the world production [2]. The central place in the world of derivatives is occupied by over-the-counter trading (more than 90%).

In 2014, the volume of the OTC PFI market amounted to 630.2 trillion US dollars, including 505.5 trillion.

US dollars accounted for contracts whose underlying asset is interest rates (80.2%), 75.9 trillion US dollars were contracts with the underlying asset in the form of foreign currency (12%), the volume of credit derivatives amounted to 16.4 trillion US dollars (2.6%).

Such development of over-the-counter PFIs is due to their flexible mechanisms, adaptable under customer demand and weak regulatory control. However, there has been a tendency to reduce this segment in recent years. For example, in 2012, the market volume decreased slightly — by 2.3% [5], and for the period from 2013-2014, there has been a decrease in the market — by 9%. One of the reasons for the reduction of the OTC derivatives market is the tightening of measures to regulate it.

Considering the exchange market of derivative financial instruments, it can be noted that the volumes of this market have recently been trending upward.

In the world market, about 30 exchanges specialize in trading derivative financial instruments. During the period 2012-2014, the volume of world trade in exchange contracts increased by 20% and amounted to 64.84 trillion US dollars. The largest share in the structure of the global stock exchange market PFI is occupied by options — 58%, and futures account for 42% [6].

Thus, there is an interesting dynamic: the market of PFI traded on exchanges, the market for over-the-counter instruments is growing, and the market for over-the-counter instruments is shrinking. In our opinion, this is due to the fact that the level of standardization of circulating instruments is constantly increasing, and this stimulates the trading of PFI on organized exchange platforms, develops links between exchanges.

A characteristic trend of the modern market of derivative financial instruments is the processes associated with the complication of instruments, among which are: options for swaps, forward swaps, open swaps, contracts for securities not yet issued, etc. The spread of credit derivatives is a promising direction for the development of the derivatives market.

Companies have corporate programs for using derivatives for hedging. They try to take into account the external market and internal production specifics of financial risks. The parameters external to the production company include especially the region and the country: the degree of development of the economy and the national derivatives market, the development of national legislation regulating the processes in this legal field.

Summary statistics on developed Western countries show that derivatives for 54.3% of manufacturing firms use risk hedging: currency derivatives — 45.9%, interest rate derivatives — 32%, commodity derivatives — 11.8%, other types of derivatives — more than 10% [7].

The experience of manufacturing companies in developed Western countries shows that, depending on the type of financial risk, foreign firms use different types of derivatives.

For to hedge currency risk, 28.1% of manufacturing firms use foreign exchange forward contracts, and 10.8% use swaps. To hedge interest rates, 1.8% of manufacturing firms use currency forward contracts, 28.6% use swaps. 3.1% futures are used to hedge commodity price risk (as opposed to hedging currency and interest rate risks). Non—linear derivatives are also used to hedge various types of risks (in particular interest rate risk); for example, 9.4% of companies use currency options, 7.4% use caps, floors and swaps.

It is generally recognized that corporate risk management can increase the value of a company through competent financial risk management, taking into account the peculiarities of regional capital markets.

Most analysts believe that the use of derivatives is not just speculation on the stock exchange, but an effective method of managing financial risks. Analysis of the experience of countries

The OECD makes it possible to identify a number of features of the use of derivative financial instruments in international companies:

Risk hedging using derivatives is typical for companies in small but well-developed economies with a low share of international trade;

Derivatives for hedging financial risks are actively used by companies in those countries where civil legislation is poorly protected;

1. firms with large volumes of sales and income in foreign currency occupy large positions in currency derivatives;
2. firms using interest rate derivatives apply greater leverage.

The trend of increasing integration of Russian financial institutions and corporations in the global financial space raises the question of the need for

effective risk hedging systems even more acutely, which provokes additional growth both on the stock exchange, so it is in the over-the-counter markets of derivative financial instruments in Russia.

The formation of the market of derivative financial instruments in Russia is carried out at a rapid pace, but structurally the Russian market still remains undeveloped — a huge share of the volume is made up of the simplest instruments. Interest rate derivatives are also lagging behind in development. The position of Russian banks on ruble—denominated debt instruments is 90 billion. At the same time, according to various estimates, only 10% of them are hedged, so the potential risk remains significant. The collapse of the ruble exchange rate at the end of 2014 brought significant losses to the largest Russian corporations from revaluation of the value of derivative financial instruments totaling at least 290 billion rubles. For comparison: this is approximately 2/3 of the amount spent by the Central Bank in December 2014 to maintain the ruble exchange rate [8]. Losses incurred on derivatives in many ways

They are associated with a low level of financial accounting and professionalism of employees in the company. Foreign companies take into account hedged contracts according to the rules of IFRS or US GAAP, when revaluation of derivatives increases reserves, not losses.

The main obstacles hindering the formation of the Russian derivatives market, These are: the undeveloped infrastructure of the exchange market of derivative financial instruments, the imperfection of the legislative framework regulating their trade; the complexity of accounting transactions on the balance sheets of companies and banks; the inconsistency of the taxation process of transactions with interest rate and currency swaps.

In Russia, the legal regulation of the credit and interest rate derivatives market is based on the Federal Law on Clearing and Clearing Activities adopted in 2011. In this document, clearing activity means the activity of providing clearing services in accordance with the rules approved by the clearing organization, registered in accordance with the established procedure by the Central Bank of the Russian Federation. The central counter agent assumes the function of an intermediary between the seller and the buyer. In this law, the concept of liquidation netting is fixed at the legislative level (full or partial termination of obligations admitted to clearing by offsetting and (or) in another way established by the clearing rules). Since the counterparties (bidders) are required to make mandatory collateral to the central counterparty to cover their arising obligations under each contract, in case of full or partial non-fulfillment of such obligations by the second party, the clearing organization is obliged to carry out liquidation netting and cover the losses incurred.

The creation of a central counterparty has become an important decision for the development of the infrastructure of the financial market and increasing its transparency and reliability.

Since October 28, 2013, OJSC Moscow Exchange has become a qualified central

counterparty providing centralized clearing services for non-exchange derivatives. For this kind of a specialized institute has also been created a trade repository, which is subject to mandatory accounting and registration of all transactions, starting from April 2016. Now there are two such repositories: the National Settlement Repository and the Depository of the St. Petersburg Stock Exchange.

Regulation of this financial market instrument is carried out on the basis of the Decree of the FSFR of 2012 "On Approval of the procedure for maintaining the register of contracts concluded on the terms of the general agreement (single agreement) of providing information necessary for maintaining the specified register and information from the specified register, as well as submitting the register of contracts concluded under the terms of the general agreement (single agreement) to the federal executive authority for the securities market."

This order defines the scope and procedure for providing information on all over-the-counter transactions. At the same time, the regulator currently provides for a restriction, consisting in the fact that reporting is provided only for transactions concluded on the basis of general agreements. These requirements apply only to residents of the Russian Federation who conclude OTC transactions on the basis of general agreements. The procedure for using liquidation netting becomes possible only for those market participants who have timely submitted reports on over-the-counter transactions to the trading repository and after its successful registration. The reporting period is three days from the date of conclusion of the contract, its modification or termination.

The Order defines a list of data by types of instruments and provides for the possibility of providing additional information by agreement of the parties. From the point of view of the frequency of data receipt, it is noted in the order that all changes concerning the status of a particular transaction must be provided by the participants within the specified period. For the implementation of the liquidation netting procedure, an important factor, from the point of view of operational risks, is that the data entered in the repository's register, during the bankruptcy procedure, they take precedence over the data contained in the primary documentation.

The proposals of the Russian regulator fit into world practice, but there is an important distinguishing feature of European legislation — the mandatory central clearing for European counterparties. This requirement came into force in 2013, and all transactions with a nominal amount exceeding the established limit must be closed through a central counterparty. The level of the clearing limit (starting from which the clearing obligation arises) for such transactions is set by the Regulator of the European

Financial Markets — ESMA (European Securities and Markets Authority). The limit for each asset class is set separately and is subject to regular review.

In Russian In the legislation, the introduction of such a practice is also possible, which should have a beneficial effect on the transparency and stability of the

Russian mark.

**Foydalanilgan adabiyotlar:**

1. Norman P. Risk Management. — M. : Publishing House Mann, Ivanov and Ferber, 2013. pp. 131,364.
2. Official website of the Bank for International Settlements (BIS); Review of the currency and activity on the derivatives market in 1995, 1996 — URL: [http://www.bis.org/statistics /](http://www.bis.org/statistics/). (accessed 07.10.2015).
3. Exposure of US banks to foreign financial losses. 2002, May. — URL : [http: //cbo.gov/showdoc.cfm /](http://cbo.gov/showdoc.cfm/).