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The Main Trends in the Development of the Global Market of Derivative Financial Instruments

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Annotation: The article is devoted to prospects of development of derivatives market in respect of projects implemented by international organizations participants in the derivatives market.

Key words: derivatives, exchange-traded derivatives market, over-the-counter (OTC) derivatives market, swaps, options.

Introduction.

Derivatives markets have become an essential part of the global financial system and are significantly transforming both the quantitative and qualitative aspects of international monetary relations and financial interactions. The processes of globalization affect not only the structure of the global market and its individual segments but also play a vital role in shaping the integration of economic development across many countries and prioritizing investment strategies. In this context, studying the main trends in the development of derivatives markets is becoming increasingly important. Among the tools used to manage various risks in financial markets, futures contracts are considered to be the most prominent.

The trading of derivatives in the global market ensures the integration of regional capital markets. As a result, it helps global economic participants reduce existing risks and fosters the further development of international trade and monetary relations. Derivatives facilitate international capital flows and offer more opportunities for investment diversification. Moreover, the rapid growth in derivative transactions has led to a transformation in the pricing mechanisms within commodity markets. Today, commodity prices are often shaped not by the classic supply and demand ratio, but under the influence of speculative operations with derivatives [1].

A derivative is a contract (financial instrument) that confirms the transfer of funds or assets at a predetermined price within a specific timeframe. Derivative financial instruments can be used to hedge positions, speculate on the directional movement of an underlying asset, or engage in arbitrage operations. Their value depends on the fluctuation in the value of an underlying asset (such as oil, gold, stocks, currencies, raw materials, etc.). Standardized derivatives are traded on exchanges, whereas over-the-counter (OTC) contracts are concluded directly between two parties.

The international derivatives market is currently regulated at the level of supranational structures and self-regulatory organizations. International institutions involved include the International Swaps and Derivatives Association (ISDA) and the Bank for International Settlements (BIS). These organizations are responsible for developing the infrastructure of the derivatives market, regulating the global derivatives market, standardizing contract terms and deals, analyzing market data, and monitoring the activities of market participants [2].

Research and methods.

The Bank for International Settlements (BIS) was established in 1930 [3]. Its primary function is to coordinate financial and monetary relations among states and promote the development of international financial settlements. BIS acts as the central bank for all central banks around the world. It also serves as a guarantor and underwriter within the scope of international financial relations.

The BIS regularly collects and analyzes statistical data concerning the current state of international financial relations.

The International Swaps and Derivatives Association (ISDA) is a trade organization for participants in the over-the-counter derivatives market. The association was established in 1985 [4]. ISDA's members include the largest dealers in the derivatives market, as well as various government agencies and non-financial organizations that use derivative financial instruments to conduct economic activities and hedge risks. Today, ISDA has more than 800 member institutions from over 56 countries around the world.

Let us now examine recent indicators reflecting the dynamics of the OTC derivatives financial market.

Table-1 Derivatives exchange and over-the-counter volume in the world trade market, USA. [5]

Trading volume	2018	2019	2020	2021	2022
Exchange	127,72	125,54	120,76	170,87	148,98
Interest rate contracts	5,72	6,54	5,76	8,87	8,98
Currency contracts	122	119	115	162	140
Over-the-counter market	539,08	530,6	510,33	583,95	629,66
Interest rate contracts	446,46	435,21	416,65	481,086	523,96
Currency contracts	85,86	88,43	87,11	95,798	98,651
Other contracts	6,76	6,96	6,57	7,071	7,046
Total	666,8	656,14	631,09	754,825	778,637

Analyzing the information provided, we can say that most derivatives trading takes place in the over-the-counter market and accounts for about 80% of the total volume. In 2022 , the trend of significant growth in over-the-counter trade is 7%, while exchange trading is 22 trillion. reduced to dollars. In 2022, the total volume reached US $ 778.6 trillion, a 3% increase from the previous year. A large part of trading on the exchange is occupied by currency contracts, about 90%, and on the over-the-counter market-interest rate contracts (about 80%).

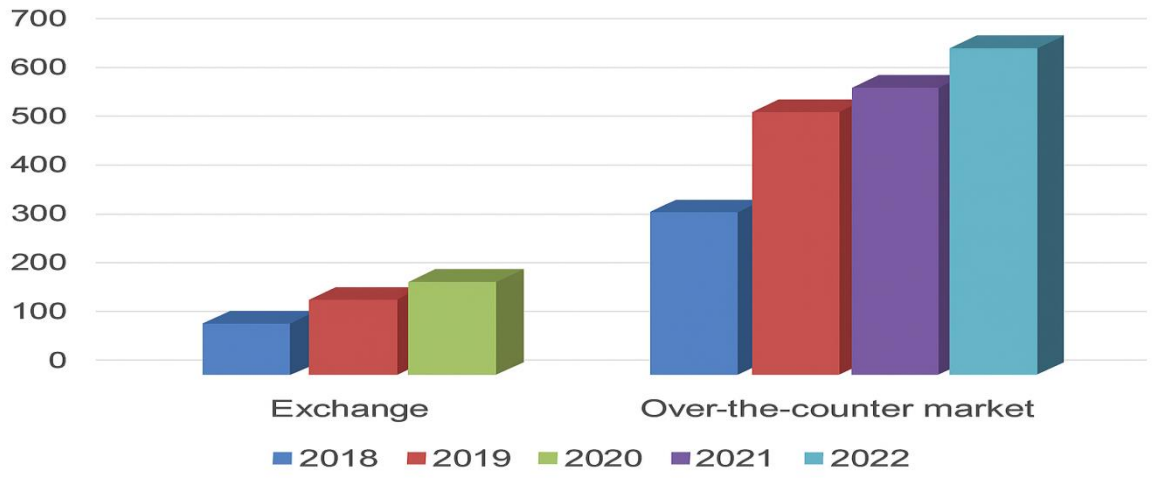


Figure - 1 dynamics of trading on the exchange and over-the-counter World derivatives. [6]

Result and discussion.

It can be stated that non-standard contracts dominate the derivatives market. This leads to a number of unfavorable consequences for investors.

Many firms have created their own systems for trading derivatives. However, these systems do not provide any commercial advantage to the organization. Consequently, firms must constantly reconcile their operations to ensure that they have access to all relevant data, which in turn increases the need for additional resources. Such systems hinder automation development and raise operational risks.

A distinctive trend in the modern derivatives financial instruments market is the increasing complexity of these instruments, including swaps, forward swaps, open swaps, contracts for yet-to-be-issued securities, and others.

In the over-the-counter (OTC) market, the creation of new technologies reduces the complexity of settlements and decreases the cost of transactions involving derivatives. However, effective automation can only be built on the basis of standardization. Participants in the derivatives market are constantly looking for ways to reduce costs and improve the efficiency of back-office processes. To address this issue, ISDA proposed a new technological solution [7].

Conclusion

ISDA CDM (Common Domain Model) is a joint project aimed at managing the entire lifecycle of trades. Having a single, unified digital representation of derivative trading events and actions enhances consistency. It facilitates interactions between companies and platforms and creates a foundation for implementing new technologies. Standardizing data and processes in the derivatives trading market helps participants process information more efficiently.

ISDA CDM ensures a consistent view of all trades, portfolios, and events, enabling advanced risk management and trade processing capabilities.

This model, supported by emerging technologies like artificial intelligence, lays the foundation for long-term transformation of processes. ISDA CDM is available in machine-readable and machine-executable formats and languages that these technologies can utilize [8].

Furthermore, this new technology supports a different trend in the derivatives market — increasing transparency and consistency between regulators and market participants, thereby enabling more effective implementation of regulatory objectives.

Today, the OTC market is regulated as follows: authorized bodies and trade associations publish rules and develop best practices, while industry participants make decisions based on individual interpretations. This algorithm leads to fragmented and inconsistent implementation and operational inefficiencies.

Under **ISDA CDM**, regulation is carried out differently. Authorized bodies and trade associations continue to publish rules and develop best practices (e.g., trade scenario maps, sample reports for each scenario). Then, **ISDA CDM** rules and best practices are implemented (software enforces the rules, eliminates coordination problems, and ensures solution consistency). After that, industry participants implement the same software code in their own solutions.

CDM digitally simulates the legal documentation involved in an OTC deal. Therefore, it establishes a consistent model for the critical data and calculations that must be executed according to a single standard.

Collateral sufficiency for OTC derivatives operations is a key area of ISDA's work. It seeks to establish a standard and model it in **CDM**. Resolving inconsistencies in settlements takes time, so ISDA is working on modeling settlements in CDM functions for parameters such as delivery amounts and margin requirements.

Digitizing the settlement of attached documents in software form will be a necessary step. Information from the legal document regarding delivery of the underlying asset is translated into an equivalent digital settlement code in **ISDA CDM**.

ISDA CDM accelerates the development of new solutions for the market, allowing vendors to focus on specialized components—technologies—rather than requiring individual interpretation and presentation of market events and processes. This activity creates conditions for the emergence of innovations in financial markets.

To fully realize the potential of **CDM**, all industry stakeholders (investment banks, investors, technology providers, etc.) must work together and adhere to standards. Operational and technological costs of derivatives market infrastructure are estimated to be between $3 and $7 billion USD [9]. Utilizing advanced technologies for standardized data management and processing could reduce these costs by up to 50%.

CDM plays a key role in building the next-generation derivatives trading infrastructure. More work is expected on the digital version of CDM, which will be showcased and tested using various new technologies along the path to scaling.

Thus, the main trends in the derivatives market point toward process standardization and increased transparency and efficiency in investment management.

Participants in the derivatives market can significantly reduce costs and improve the efficiency of all back-office processes. Financial institutions may initiate projects that integrate modern technologies—such as artificial intelligence and distributed ledger technology (DLT)—with legacy systems. **CDM** promotes transparency and helps various stakeholders better coordinate their actions to ensure regulatory compliance.

These processes support effective interaction among financial market participants and create new opportunities for integration within the framework of global economic globalization.

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