

Translated Article[†]

THE CONTEMPORARY GLOBAL DERIVATIVES MARKET: OPPORTUNITIES FOR RUSSIA



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Abstract

Subject The research focuses on economic relations arising from deals with derivatives on international and national stock exchanges.

Objectives The research represents a comparative analysis of various financial derivative instruments used worldwide. We trace new trends in their development and discern where and how they will be used in the Russian regions.

Methods We apply the dialectical method of research into economic phenomena, scientific abstraction, analysis, synthesis, grouping and comparison, visual analysis of financials.

Results We articulated why it is more preferable to conclude OTC derivative contracts as opposed to those traded on stock exchanges. The article also challenges the financial derivatives market in Russia and what it should await in the future, mentioning its actors' needs at the current phase of its development.

Conclusions and Relevance There should be a specialized national platform for derivatives trade. It will expand their use for international payments and mitigate economic risks of national parties to foreign economic trade. We systematized how various business segments may use them in Russia, thus determining probable risks and opportunities. This amplifies scholarly views of the system for international settlements and deals with these instruments, unveils its substance and shows how it can be improved. The findings and conclusions can be applied by experts in international finance, researchers, attendants of professional advancement courses, students and postgraduates in higher schools of economics. This material may also prove useful to traders handling investment processes in financial markets.

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Financial derivative instruments (derivatives) serve for hedging operations of today's international businesses

among other key means. However, their scope of application gets more diverse as the global and national financial markets evolve. Derivatives is a brainchild of financial intermediaries, which consider wants and needs of financial market actors and existing financial mechanisms and offered instruments that would be

[†]For the source article, please refer to: Заболоцкая В.В., Квиткина Ю.А. Современный мировой рынок деривативов: перспективы для России. *Финансы и кредит*. 2018. Т. 24. № 10. С. 2184–2203. URL: <https://doi.org/10.24891/fc.24.10.2184>

more efficient for consumers, unlike market assets underlying such instruments¹. Parameters and qualities of derivatives are more robust as opposed to ordinary market assets, being much more lucrative for financial market actors². Derivatives stipulate terms, time for income to be paid, interests on financial liabilities, specifics of tax treatment, higher liquidity and investment opportunities, lower agency fees and other substantial terms.

Derivatives are popular among various actors of the financial market, such as governments, leaders of financial departments in major corporations, dealers, brokers and individual investors [1]. However, those ones holding financial derivative should scrutinize them and take into consideration that derivatives can be used to hedge risks associated with business operations. Doing so will help use derivatives as effectively as possible.

According to the Bank for International Settlements, in international trade, derivatives are subdivided into exchange-traded derivatives and over-the-counter derivatives (OTC derivatives). *Fig. 1* depicts their distinctive features.

To get the overall understanding, the derivatives market should be analyzed by place at which such derivatives are used.

As reported by the World Federation of Exchanges, in the global market of exchanged-traded derivatives 48 stock exchanges recorded a 0.2 percent decline in trade in 2016, while 25.03 billions of fixed-term contracts were concluded in 2017 (10.5 billion of options and 14.5 billion of futures)³. As compared with 2005, overall trading volume has increased by 170.4 percent, which is the average annual growth rate of 9.3 percent, for the recent 12 years. Regionally, an increase in trading volumes in the Americas (by 5.8 percent) was offset by a decrease in the trading volumes in Asia Pacific and EMEA (by 3.5 and 5.3 percent respectively).

¹ Fel'dman A.B. *Proizvodnye finansovye i tovarnye instrumenty* [Derivative financial and commodity instruments]. Moscow, Finansy i Statistika Publ., 2003, 463 p.

² Loginov E.L., Loginova V.E. [Derivatives in the Russian economy: Strategic management trends asymmetric of distribution market]. *Finansy i kredit = Finance and Credit*, 2012, no. 30, pp. 26–33. URL: <https://cyberleninka.ru/article/v/derivativy-v-rossiyskoy-ekonomike-strategicheskie-trendy-upravleniya-asimmetrichnostyu-raspredelelynyh-rynkov> (In Russ.)

³ Annual Statistics Guide. IOMA Derivatives Market Survey 2017. World Federation of Exchanges. URL: <https://www.world-exchanges.org/home/index.php/statistics/annual-statistics>

In 2017, classes of assets also underwent some changes, as depicted in *Fig. 2*. While the percentage of equity derivatives and interest derivatives rose by 3 and 2 percent respectively (48 and 16 percent of total derivatives traded in 2017), the percentage of currency derivatives remained unchanged (11 percent). This made the percentage of commodity and other derivatives reduce totally by 3 and 1 percent, thus accounting for 24 and 1 percent.

Trade generally intensified in the Americas, which account for 43 percent of total trade volumes, because the same trend was seen in all product lines other than equity traded funds (ETF). In 2017, fewer contracts were concluded in Asia Pacific, where 34.8 percent of total contracts were sold, after the number of commodity derivatives reduced, which used to account for almost 38 percent of total trading volume in the region. Trade in derivatives is 22.2 percent of total contracts in the EMEA region. Fewer contracts were concluded there as trade in equity derivatives, currency derivatives and others decreases. *Fig. 3* shows the structure of the exchange-traded derivatives market in 2017 by region and type of underlying assets.

As reported by the World Federation of Exchanges, trade in option contracts grew by 10.8 percent, while futures contracts got back by 6.9 percent in 2016, thus spurring the percentage of options contracts (out of total) from 38 percent in 2016 up to 42 percent in 2017 but suppressing the percentage of futures contracts from 62 percent in 2016 down to 58 percent in 2017. *Fig. 4* illustrates the positive trend of the growing number of stock exchange contracts.

Although secondary securities are still the most actively traded derivatives, making 48 percent of total volume, they continue to go below 50 percent of total contracts for the second year in a row. Total volume of trade in derivatives rose by 5.4 percent against 2016, thus multiplying the volume of equity options, futures and stock index options by 3.9, 12 and 21.5 percent respectively. Trade in stock index futures and ETF decreased by 7.1 and 3.6 percent in 2016. In the mean time, in the Americas and Asia Pacific accommodating almost 80 percent of total financial derivatives traded, traded contracts went up by 2.4 and 23.9 percent respectively. The EMEA region saw a 10.9 percent decrease.

Interest rate derivatives are 16 percent of total fixed-term contracts traded in 2017, with more than 3.9 billion of contracts, being the absolute maximum in

the analyzable period (from 2005). Trade in such contracts expanded by 13.1 percent in 2016 after short-term interest rate (STIR) and long-term interest rate (LTIR) options and futures grew. Accounting for almost 94 percent of total interest rate derivatives, the Americas and EMEA saw a rise in interest rate derivatives by 11.7 and 18 percent respectively in 2016.

In 2016, trade in foreign exchange derivatives (11 percent of total trade in derivatives) reduced by 3.2 percent in 2016 mainly due to a 19.9 decrease in trading volume in the EMEA region, which accounts for 32 percent of total trade in such contracts. In the mean time, the Americas and Asia Pacific registered an 18.8 and 3.8 increase respectively in 2016.

As for commodity derivatives, trading volumes have decreased for the first time within the analyzable period (from 2005) by 14.5 percent as compared with 2016 year-on-year. This results from a slump in trading volumes in Asia Pacific (by 25.3 percent), where 56 percent of contracts circulated. There was an increase in trading volumes of commodity derivatives (by 3.5 and 6 percent respectively) in the Americas and EMEA. However, commodity derivatives are the second most popular product in 2017, making 24 percent of total exchange-traded derivatives.

The class of other derivatives encompasses a wide array of products, including Volatility Index (VIX) options and futures, real estate derivatives (REIT derivatives), dividend index derivatives, contracts for differences (CFD) and inflation futures and options. This category shrank by 4.3 percent in 2016 as a result of a slowing down trade in the Johannesburg Stock Exchange and Japan Exchange Group by 36 and 6 percent respectively in 2016.

Although total financial derivatives were traded in 2017 as were in 2016, the percentage of exchange-traded equity, interest rate and commodity derivatives shifted to 48, 16 and 24 percent respectively of total exchange-traded contracts (in comparison with 45, 14 and 28 percent in 2016).

According to the Bank for International Settlements⁴, the global OTC derivatives market observed the amount of unsettled OTC term contracts to overwhelm the previous declining trend and assumed to grow in H1 2016. Conditional amounts grew from USD 482 trillion as of the end of 2017 up to USD 542 trillion as of

the end of June 2017, thereby approximating the previous year level. Contributing to a more substantial market and credit risk of counterparties, their gross market value had even a greater drop in H1 2017, from USD 15 trillion down to 13 trillion, as showed in *Fig. 5*.

In 2008 and onward, the market value of all OTC derivatives exceeded the lowest value year-on-year, i.e. being USD 14 trillion. Reshaping the gross market value with respect to legally binding bilateral offsetting agreements (rather than collateral), gross credit risks has also reached their lowest level since 2007. They decreased from USD 3.3 trillion as at the end of December 2016 by USD 2.8 trillion as at the end of June 2017.

Interest rate contracts notably dominate OTC derivatives markets. Therefore, this segment and its trends determines the general situation. The conditional amount of unsettled OTC interest-rate derivatives rose from USD 368 trillion to 416 trillion in H1 2017. Contracts denominated in all key currencies, other than yen, appreciated. As USD exchange rates of key currencies grew during the period, the USD value of contracts denominated in the above currency responded likewise. However, after being adjusted for changed in the foreign exchange rates, conditional amounts increased.

A growth in conditional amounts results from interest-rate contracts with one-year maturity of less. They rose from USD 160 trillion as of the end of December 2016 up to USD 193 trillion as of the end of June 2017. The fact is evidence that a grow is triggered by higher positions and hedging at the short end of the yield curve as a response to changing expectations about the future monetary policy in leading countries of the world.

Despite growing conditional amounts, gross market value of OTC interest rate derivatives continued dropping, down to USD 8.5 trillion as of the end of June 2017, reaching their record low since 2007. The gross market value of USD-denominated contracts decreased by 22 percent in H1 2017, down to USD 1.8 trillion. Contracts denominated in JPY and EUR demonstrated a similar declining trend for the same period, a 16 percent decline, down to USD 0.6 trillion, and a 14 percent decline down to USD 4 trillion respectively. In opinion of top experts of the Bank for International Settlements, the decline is indicative of an increasing long-term yield. This narrows the gap between market

⁴ BIS Statistics Explorer. Derivatives Statistics. The Bank for International Settlements. URL: <https://stats.bis.org/statx/toc/DER.html>

interest rates as of the reporting date and rates prevailing as of the contract signing date.

In OTC currency markets of financial derivatives, conditional amounts hit their record high of USD 77 trillion in the end of June 2017 in comparison with USD 69 trillion in the end of December 2016. The dynamics of short-term instruments, such as foreign exchange forwards and swaps, induced a growth in the OTC derivatives market. Unlike other OTC derivatives, most foreign exchange derivatives make counterparts pay off the conditional amount at the maturity date. Therefore, such derivatives can be considered as a form of secured borrowing with respective risks associated with foreign currency repayments and liquidity.

The market of foreign exchange dealers gets more concentrated in H1 2017, though the concentration of reporting dealers, that is measured with the Herfindahl index (a greater index means the predominance of several dealers in the market), went downward steadily throughout the years after the 2007–2009 global financial crisis. As seen in *Fig. 6*, the trend vanished in 2015 when the lowest Herfindahl index was 444 for all the currencies as a whole.

In the case of foreign exchange forwards and swaps, the Herfindahl index grew from 444 at the end of June 2014 up to 488 at the end of June 2017. This means that larger dealers won a considerable share of the market in this period. Higher concentration ratio was also observed in the case of all principal currencies, USD, EUR, JPY, GBP. Although these statistical data are germane to conditional amounts of debt, trade dynamism data presented in the 2016 review of the Bank for International Settlements revealed high concentration in foreign exchange markets.

Besides, the practice of central counterparty clearance (CCP) gained momentum in markets of OTC derivatives. As for the credit default swaps market, the segment of principal counterparties expanded from USD 4.3 to 4.9 trillion in H1 2017, though total conditional amount of unsettled credit default swaps tapered off (*Fig. 7*). Hence, the share of unsettled credit default swaps processed through CCP went up from 44 percent at the end of December 2016 up to 51 percent at the end of June 2017. Comprehensive value of bilateral contracts between reporting dealers reduced to USD 2.9 trillion in H1 2017. It is worth mentioning that these shifts correspond with the novation of contracts with dealers and central counterparties.

As for markets of OTC interest rate derivatives, the CCP share remained almost unchanged in H1 2017. Reporting positions of dealers increased concurrently with the conditional amounts up to USD 320 trillion at the end of June 2017. Cleared positions still accounted for 77 percent as were in the previous year.

Thus, we infer distinctive characteristics of the global financial derivatives market during the crisis and post-crisis periods of the global economic development.

1. The percentage of exchange-traded derivatives have been observed to grow for the recent several years, while OTC derivatives demonstrate the opposite trend, thus indicating that the global financial market actors changed their nature and preferences.
2. The global secondary trading market is dominated by exchange-traded equity derivatives and OTC interest rate contracts.
3. International secondary trading demonstrated the fastest pace of growth than identical local contracts (country/stock exchange) among all the contracts in circulation. This signifies that the global financial derivatives market actors are willing to trade abroad [2].
4. Global market actors opt for USD as the underlying currency of financial derivatives, however, currencies of the emerging Asian economies also become more frequent.
5. During the post-crisis period (in 2017 against 2016), total trade in derivatives fell by 14.5 percent on stock exchanges mainly due to the reduced extent of agriculture, non-precious metals and other commodity contracts.
6. In 2016–2017, exchange-traded power contracts accounted for the largest share in derivatives trade. They were followed by contracts involving non-precious metals, agriculture, other resource-based commodities, precious metals and derivative commodity indices.
7. During the post-crisis period, power engineering, agriculture and metal derivatives were the sectors that were flourishing in terms of international trade. So, trade has its own specifics in the Americas. Trade in agricultural, exchange-traded power and precious metal contracts account for 33 percent, 40 percent and 44 percent of deals respectively. The Asia Pacific economies feature massive trade in secondary agricultural contracts (65 percent), non-precious

metals contracts (89 percent) and other derivatives (99 percent). A considerable part of power (44 percent), commodity derivatives (100%) and contracts for precious metals (16%) was made in the EMEA region in terms of trading volumes.

So, we discerned the following patterns in the development of the global derivatives markets before, during and after crises. The patterns supplement the findings made by O. Masood, F. Bashir, A.L. Sahi [3], N.N. Rubtsov [4], J.E. Jarett [5], A.V. Kavkin [6].

1. Financial crises transform the nature and preferences of the global financial derivatives market actors, that is, speculative deals are secondary to hedging contracts. Moreover, the derivatives market morphs structurally. Commodities, price indices and currency become underlying assets of deals. Anticipating a new economic crisis worldwide, market actors get involved into speculative derivatives deals.
2. Financial crises boost the development of new types of financial derivatives, which subsequently become very common and attractive for market actors.
3. As OTC derivatives are more frequently used as a speculative instrument, new crises originate (global financial crises of 2008) and risk hedging instruments gain momentum on stock exchanges.
4. At the current development phase, the global financial derivatives market offers a variety of means to hedge against financial risks, which are mostly regulated by the State. The State pursues to strengthen mechanisms for corporate management of risks and market infrastructure, and implement promising instruments and incentives for developing and consolidating national markets by introducing new derivatives and setting special trading platforms.

Russia is still on the margins of the global derivatives market. A.K. Kochieva and A.G. Zaporozhskaya analyzed the development of the investment market [7], these are major national corporations that are able to enjoy advantages of derivatives. Considering the current development level of such corporations and their numbers, we can conclude that derivatives are not widely used in Russia due to the scarcity of such corporations and their sectoral specifics. The issues are also reviewed in the proceedings by N.S. Kozyr' and A.V. Getmanova [8].

We suggest the Russian companies should draw upon the developed economies' practices of implementing

the expanded financial derivatives system making those countries flagship platforms for corporate innovative development. This will possibly help Russia gain a larger niche in the global derivatives market.

Furthermore, there is not a uniform open platform in Russia for common profit-making entities to make deals with derivatives. To promote derivatives in Russia, it is necessary to primarily set up a specialized trading venue that is to duly provide relevant information to participants, thus stimulating the use of financial derivatives for hedging risks of companies involved in foreign trade. This issue is also investigated in proceedings by A.A. Svetlov [9] and M.A. Dmitrieva [10].

Thus, bolstering the national derivatives market through specialized platforms, the State should outline the respective regulatory and legislative framework, provide necessary information and streamline trade in secondary contracts and re-use of such (Fig. 8).

Reviewing the existing regulatory and legislative framework of the derivatives market, we should highlight only two documents. These are Federal Law of April 24, 1996 № 39-ФЗ, *On the Securities Market*, and Instructions of the Central Bank of Russia of February 16, 2015 № 3565-У, *On Types of Financial Derivative Instruments*, which insufficiently define the market actors, their functions and key aspects of derivative transactions.

In our opinion, such specialized venues for derivatives trade will induce positive economic and financial effects for large companies and medium-sized and small businesses. To say it in other words, they will focus the public and financial institutions' attention on such venues, inspiring them to master the practice of handling the instruments. It is worth mentioning that our views are shared by, for example, E.F. Avdokushin and A.V. Krylov⁵.

Specialized venues would generally contribute to the development of Russia's financial system and attracting new foreign investors, which should pursue to hedge international dealings. S. Litvinova delves into the efficiency of this process [11]. Considering ethnic distinctions of the Russian society, growing trade driven by such venues presumably spur the demand for such financial instruments since the Russian businesses

⁵ Avdokushin E.F., Krylov A.V. [The place and role of financial innovation in the origination and development of financial economy]. *Vestnik IMSIT*, 2013, no. 3-4, pp. 3-6. (In Russ.)

strive to cut their costs, risks and other unreasonable spending, which is, however, indispensable without high professional qualification and financial literacy.

It is noteworthy that the Russian businesses should in no way confine themselves to one or several derivatives only. *Table 1* presents our recommendations for certain business segments in Russia to use derivatives.

For example, when foreign exchange rates demonstrate explicitly negative volatility, foreign exchange derivatives may serve for hedging the available fund in the future. This is especially important during the Russian ruble devaluation. Interest rate derivatives should indeed be more widely used to hedge the volatility of interest rates. Equity derivatives can work for investing activity since they may be a hedge against risks of failure to obtain the agreed upon stocks, yield on them or the other party's refusal to acquire them [12]. Credit default derivatives is a hedge against the credit risk or interest rate risk, being of practical significance in case of non-performing loans in Russia during 2014–2017⁶ [13].

Fig. 9 schematizes positive effects of derivatives that have not yet been common to the Russian financial system, and possible risks.

Summarizing the above, we outline key trends in the development of the derivatives market in Russia.

1. Under the current circumstances, the regulatory and legislative framework governing the financial derivatives market is not well elaborated. In this respect, it is reasonable to amplify the legislation guiding the market by amending the Federal Law, On Commodity Exchanges and Exchange Trade, in line with the proposed novelties. Furthermore, it seems to be the right time for the Central Bank of Russia to mandate the establishment of a specialized venue in order to regulate the financial derivatives market and transact in it. Whereas derivatives are virtually digital products, they are subject to tax. However, the Russian Tax Code fails to stipulate any rules for charging taxes on secondary financial contracts, thus

triggering respective trade risks. Hence, we consider it legitimate to spell out the taxation procedure for transactions with derivatives in the Russian Tax Code and locate the place of such transactions by introducing the term digital product and additional clauses into Article 38 and Article 146 of the Russian Tax Code classifying taxable items.

2. If established, specialized derivatives trading venues will embrace more market actors, thus fostering the active development and growing turnover. Currently, the Russian derivatives market mainly provides for foreign exchange derivatives of speculative nature, which are initiated by large Russian multinational companies. The specialized derivatives trading venues will not only involve new market actors, but also contribute to mastering financial derivatives, which are yet uncommon to the Russian market, thus reshaping the general structure of the Russian derivatives market. Such transactions will serve as a hedge against possible financial and business risks.
3. What Russia's derivatives market distinctive is that national companies show no interest and motivation to use financial derivatives due to their poor financial literacy. Moreover, the Russian entities have no tradition of hedging their financing and operating activities against risks. As the business environment and business mentality currently transforms, many national entities tend to this segment of the financial market willing to make secondary transactions for risk hedging purposes.

Promoting and implementing new financial derivatives in various sectors of the economy, the State will thereby create a new and internationally compliant model of the Russian financial model, let willing national companies and foreign investors enter the national derivatives market. Implemented in real business practices, methods and schemes for handling financial derivatives will be an advanced shield to protect commercial interests and hedge against risks as part of international settlements and transactions.

⁶ Temishev M.Kh. [Credit derivatives as a method for credit risk management]. *Finansy i kredit = Finance and Credit*, 2007, no. 12, pp. 44–57. (In Russ.)

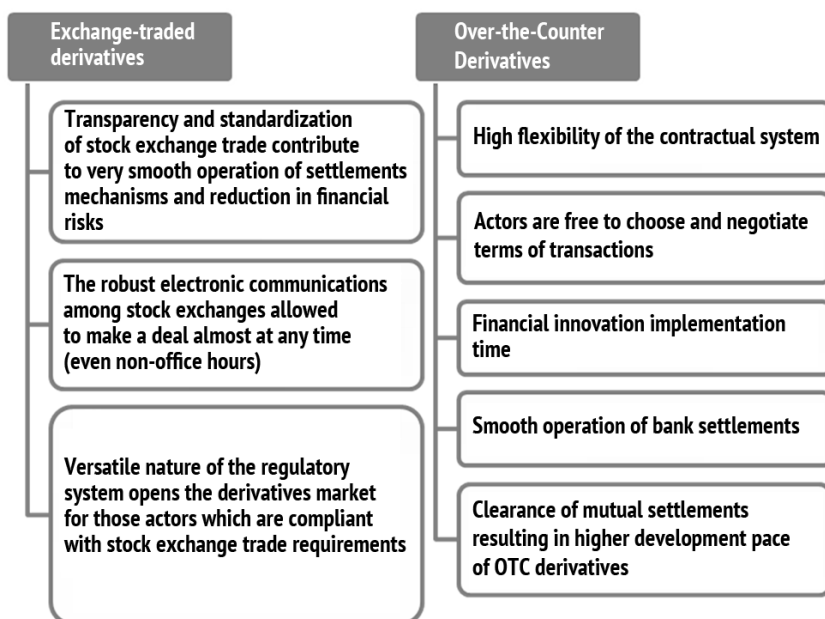
Table 1**The practical use of specific types of derivatives in Russia across business segments**

Type of derivatives	Brief description	Type of derivatives holder	Strengths	Weaknesses
Equity derivatives (over-the-counter options, warrants, equity swaps)	Financial instruments for exchange, arrangements for shares in the future at fixed prices. Over-the-counter equity derivatives are special-purpose contracts applied to stock index, portfolio of shares or a specific type of shares	Large business	Opportunity to conclude an individual agreement between the investor and issuing dealer. Very flexible structure of an instrument in terms of exercise price, term and payment terms	Credit risk is attributed to the investor of the deal
Foreign exchange derivatives (foreign exchange forwards, swaps, options and futures)	Financial instruments allowing for an exchange of two currencies at a specific date or during a period of time in the future at the agreed upon exchange rate	Large and medium-sized business	Hedging opportunity for the investor (buyer of a term contract) against risks associated with changed in the foreign exchange rate. The risk for the seller of foreign exchange option is mitigated (offset) with fees	Futures and options require that certain financial resources be available (as much as initial margin) for purposes of transactions
Interest rate derivatives (interest rate swaps, cap and floor options, agreement for pegging interest rates, etc.)	Financial instruments for pegging the interest rate (for profit generation, repayment of a loan in the future, exchange of payments in case of fluctuating interests rates, etc.). These are types of term contracts for ensuring the specific interest rates in the future	Large and medium-sized business	Mitigation of interest rate risks. Opportunity to lock in the yield on corporate and government bonds. Ensuring the acceptable level of deposit rates	Fees are paid upon the purchase of foreign exchange option
Commodity derivatives (commodity forward, commodity swap, commodity futures, commodity option)	Financial instruments for exchange, delivery of commodities, services, work in the future at a specific price	Large, medium-sized and small business	Opportunity to find a seller/buyer in the future. Hedge against increased prices upon the provision of an asset to be acquired in the future. Hedge against decreased prices upon the provision of an asset to be sold in the future	Payoff on a derivative contract directly depends on interest rates
Credit default derivatives (credit default swap, credit-linked notes, etc.)	Financial instruments for transferring credit default risks associated with an asset from one person to the other without selling the asset	Banks	Opportunity to sell loan risks without selling loans to other banks. Preservation of customers' confidence in the bank. Lower legal and some other initial costs. Mitigation of tax risk exposure	Difficulty to forecast the volatility of price for an asset in the future. Unfairly and unreliably assessed credit risks causing the loss and excess costs

Source: Authoring based on: Levin V.S., Matveeva T.A. [Classification of derivative financial instruments]. *Finansy i kredit = Finance and Credit*, 2011, no. 39, pp. 9–14. (In Russ.); Kiselev M.V. [Functions of derivatives]. *Finansy i kredit = Finance and Credit*, 2008, no. 3, pp. 45–49. (In Russ.)

Figure 1

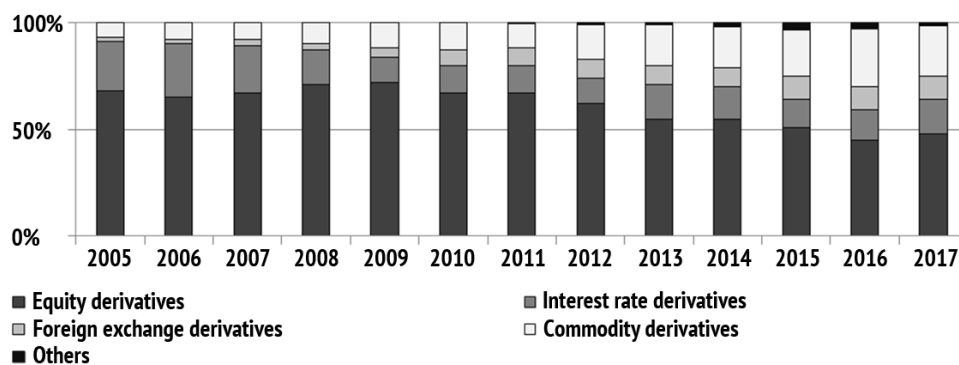
Distinctive features of exchange-traded and over-the-counter derivatives



Source: Authoring

Figure 2

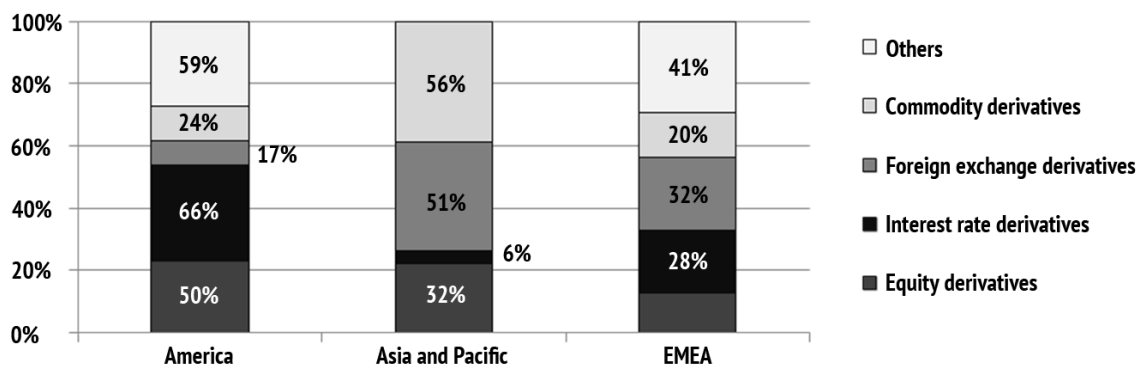
Trends in the structure of exchange-traded derivatives by number of contracts traded in 2005–2017, percentage point



Source: The World Federation of Exchanges data

Figure 3

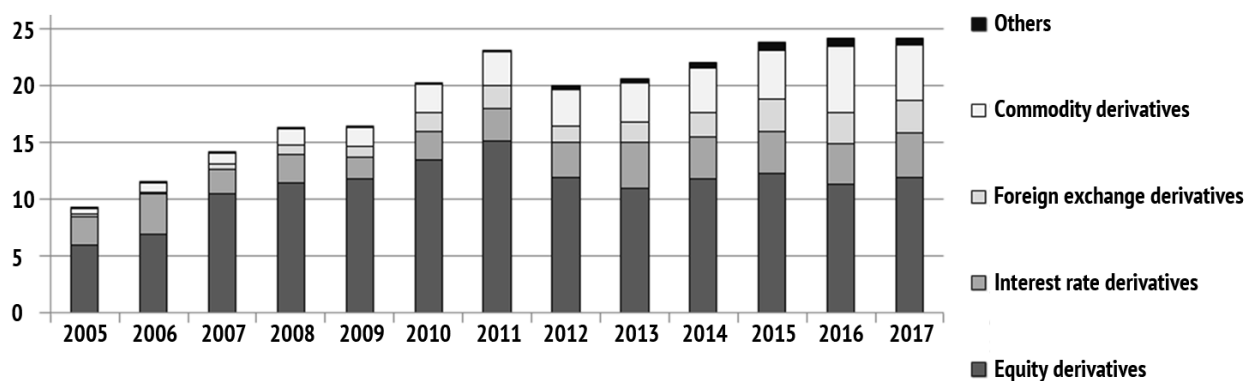
The structure of regional trading volumes of exchange-traded derivatives by type of underlying assets in 2017, percentage



Source: The World Federation of Exchanges data

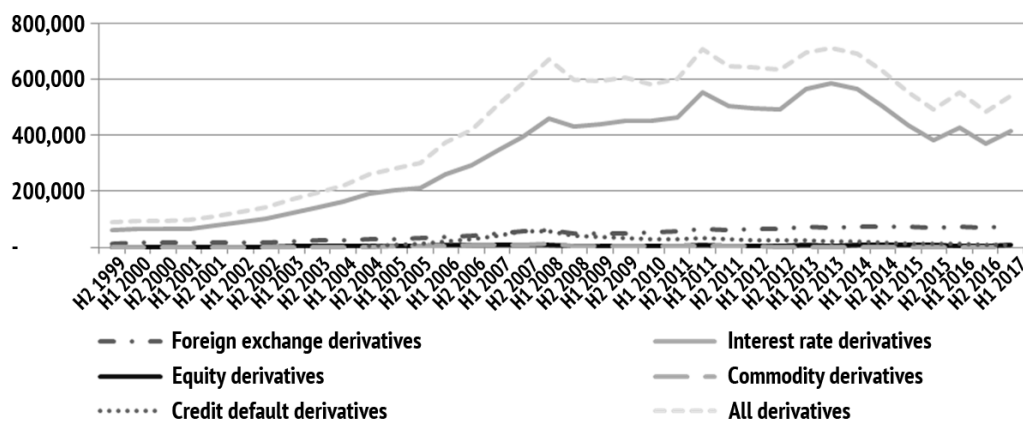
Figure 4

Trends in exchange-traded derivatives traded worldwide in 2005–2017, million contracts



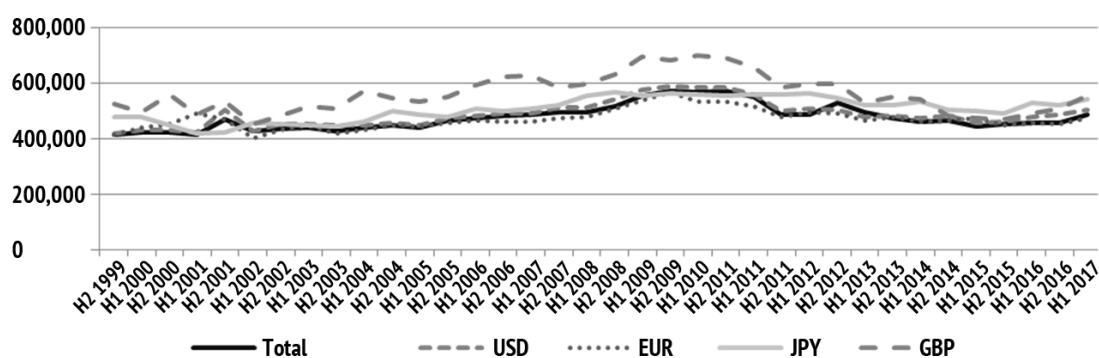
Source: The World Federation of Exchanges data

Figure 5
Development trends in the global over-the-counter derivatives mark



Source: The Bank for International Settlements data

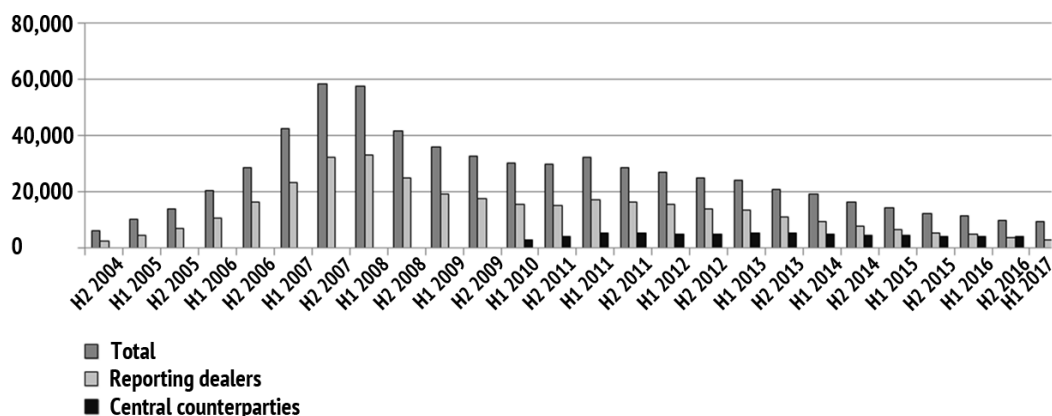
Figure 6
Trends in over-the-counter foreign exchange forwards and swaps by type of currency used worldwide in 1999–2017, by the Herfindahl index, percentage point



Source: The Bank for International Settlements data

Figure 7

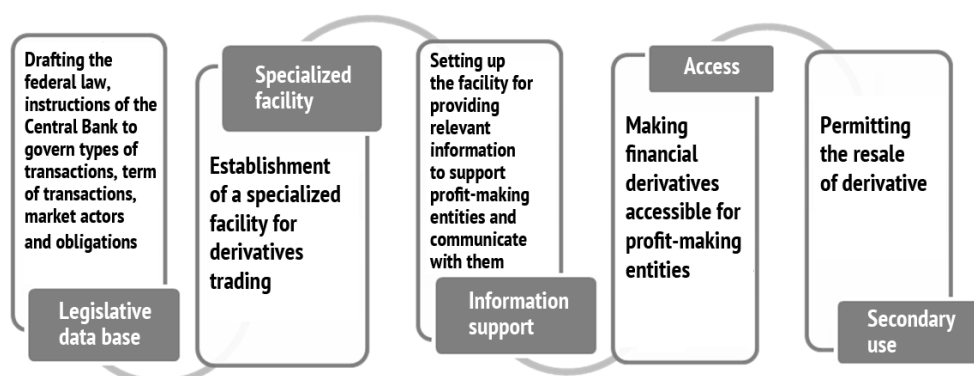
Trends in contingent liabilities related to over-the-counter credit default swaps in 2004–2017, billion USD



Source: The Bank for International Settlements data

Figure 8

Steps to establish specialized derivatives trading venues: Arrangement and implementation



Source: Authoring

Figure 9

Probable positive consequences and risks associated with the inclusion of derivatives into Russia's financial system

Probable positive effects	Possible risks
<p>Attracting new market actors by defining their rights and obligations and offering a wide array of financial derivatives.</p> <p>The market rearrangement from the speculative nature to hedging.</p> <p>The use of diverse financial derivatives.</p> <p>Increase in financial literacy and culture of hedging the financing and operating activities.</p> <p>Opportunity for the Russian financial derivatives to enter the international market and take the leading positions</p>	<p>National profit-making companies' avoidance of the facility due to mentality reasons.</p> <p>Difficulty to set up the relationship between the trade repository and facility.</p> <p>Multiple new foreign actors will squeeze national companies and speculate on prices for underlying assets.</p> <p>Non-existent information technologies required for appropriate operation of information facilities</p>

Source: Authoring

References

1. Darushin I. [Theoretical framework for the derivatives market functioning and its social and economic role]. *Rynok tsennykh bumag = Securities Market*, 2003, no. 4, pp. 68–73. (In Russ.)
2. Williams B. *Novye izmereniya v birzhevoi trgovle* [New Trading Dimensions: How to Profit from Chaos in Stocks, Bonds, and Commodities]. Moscow, Analitika Publ., 2001, 266 p.
3. Masood O., Bashir F., Sahi A.L. Sovereign Credit Rating Changes and Its Impact on Financial Markets of Europe during Debt Crisis Period (Greece, Ireland). *Journal of Business & Financial Affairs*, 2017, vol. 6, iss. 4. URL: <https://doi.org/10.4172/2167-0234.1000304>
4. Rubtsov N.N. [Credit derivatives as a factor of systemic risk]. *Vestnik Moskovskogo universiteta. Seriya 6: Ekonomika = Moscow University Economics Bulletin*, 2014, no. 5, pp. 27–42. URL: <https://www.econ.msu.ru/sys/raw.php?o=18958&p=attachment> (In Russ.)
5. Jarrett J.E. Financial Markets and Financial Planning. *Journal of Business & Financial Affairs*, 2016, vol. 5, iss. 4. URL: <https://doi.org/10.4172/2167-0234.1000232>
6. Kavkin A.V. *Rynok kreditnykh derivativov* [The credit derivatives market]. Moscow, Ekzamen Publ., 2001, 288 p.
7. Kochieva A.K., Zaporozhskaya A.G. [Current trends in the development of the Russian investment market in the context of international cooperation]. *Ekonomika: teoriya i praktika = Economics: Theory and Practice*, 2013, no. 4, pp. 31–36. (In Russ.)
8. Kozyr' N.S., Getmanova A.V. [Prospects of development of the market of derivatives in Russia]. *Sovremennye tekhnologii upravleniya = Modern Management Technology*, 2016, no. 6, pp. 30–44. URL: <https://sovman.ru/article/6603/> (In Russ.)
9. Svetlov A.A. [Credit derivatives as an instrument of securitisation risk management]. *Bankovskie uslugi = Banking Services*, 2014, no. 5, pp. 13–18. (In Russ.)
10. Dmitrieva M.A. [Russian market of derivatives and opportunities for hedging currency and percentage risks on it]. *Sibirskaya finansovaya shkola = Siberian Financial School*, 2016, no. 2, pp. 74–78. URL: http://journal.safbd.ru/ru/issues/2016-no2-115-mart-aprel_article_74-78 (In Russ.)
11. Litvinova S. [Credit derivatives: Their utilization in Russia]. *Problemy teorii i praktiki upravleniya = Theoretical and Practical Aspects of Management*, 2014, no. 6, pp. 87–91. (In Russ.)

12. Hull J.K. *Optionsy, fyuchersy i drugie proizvodnye finansovye instrumenty* [Options, Futures and Other Derivatives]. Moscow, Vil'yams Publ., 2018, 1072 p.
13. Petrov D.V. [Credit derivatives as a product of financial engineering]. *Ekonomika i predprinimatel'stvo = Journal of Economy and Entrepreneurship*, 2012, no. 2, pp. 117–119.

Conflict-of-interest notification

We, the authors of this article, bindingly and explicitly declare of the partial and total lack of actual or potential conflict of interest with any other third party whatsoever, which may arise as a result of the publication of this article. This statement relates to the study, data collection and interpretation, writing and preparation of the article, and the decision to submit the manuscript for publication.