Terminological basis of financial engineering: comparative analysis of the definitions "financial product" and "financial instrument"

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Abstract. The article deals with up-to-date analysis of "financial product" and "financial instrument". There are similarities and differences of these terms. Analysis of financial categories "financial product" and "financial instrument" has been made on the basis of six criteria. It should be noted that the country's difference in levels of the financial market's development leads to various applications of definitions of "financial product" and "financial instrument".

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Introduction

The financial crisis of 2007-2009 exposed the weaknesses of the existing financial system and created even a greater demand for innovative financial developments. Development of globalization and acceleration of financial markets crisis raise the urgency of research in the field of financial engineering.

The result of financial engineers' work can be presented by definitions "financial product" and /or "financial instrument". In this regard, introduced terms of analysis and their comparative characteristics become highly significant.

They will allow us to estimate the current situation in more details in this field in Russia and state accurate proposals on the development of this scientific direction, expansion of the financial products and instruments practical application at the financial market of Russia.

Method

It is advisable to begin the study with the concept of "financial product".

The founder of the "financial engineering" John F. Marshall in his work "Financial engineering: a complete guide to financial innovation", expounded: "Financial innovations, in our understanding, are mainly connected with the results of research on the products improvement in the field of consumer goods production. Specialists in the field of products enhancement became interested in financial products only in the last years. Therefore it's not surprising that ways of financial innovation are closely related to the ways of improving products" [1, 2].

Thus, we can say that the financial product is a financial innovation, developed for the goals of a particular client.

And turning it into the financial instrument is possible only owing to: "... for further use forces and resources are allocated for the standardization of the received product and for rationalization its distribution... The process of fitting of ready-made solution designed on an individual order to the goals of other customers, its standardization and adjusting supply situation is called "productizing" of solution.

Productizing turns developments of an identity character with a high margin into developments of plural types of low-margin, and profit from them is able to be obtained by only those dealers who can provide them with high efficiency and who have the necessary competencies to manage risks, which are associated with it [1].

Therefore, we can summarize that the financial instrument is a financial product used in large numbers.

Yakov Mirkin, a Russian scientist, gives the next definition: a financial product is a package of interrelated financial services, financial instruments and technologies offered by financial institutions in the financial market as goods. Financial products are classified into sectors of financial activity: banking product, insurance product, pension product, investment product [3].

This definition fully describes the "financial product". But we can't see the differences between the financial product and the financial instrument.

A.B. Feldman, another Russian researcher, defined the category "financial product" as a special consumer value characterized by significant attributes of Finance, which causes demand and supply and is intended as good for sale.

Financial products act as financial instruments, i.e., special financial products during their implementation through specific mechanisms of interaction between financial market participants.

Table 1. Criteria characterizing the category of "financial product"

Criteria of "financial product"	Characteristics of "financial product"
Time of being in the financial market	Short
Legislative basis	No / under development
Jurisdiction	No
Margin level	High
Quantity of market participants that use this product	Small
Quantity of deals with the use of a financial product	Small

The definition given above discloses not only the point of phenomenon, but also makes it possible to define limits of differences between the product and the instrument. Continuing his investigation, A.B. Feldman shows a deeper difference: financial products and financial instruments are the results of conscious social activity:

- A product is a result of financial market participants business;

- An instrument is a result of both private participants of this market and the state business.

According to the author, the state role in the described relationship is to create legal conditions, contributing to “productizing” of the financial product as a financial instrument [4]. According to opinions of foreign [5, 6, 7, 8, 9] and Russian researchers [10, 11, 12, 4], we can represent criteria to characterize such economic category as "financial product", and distinguish it from the category "financial instrument" (Table 1). Data analysis given in the table 1 allows to have an idea what the financial product is and what its inherent characteristics are [13].

Thus, under the "financial product" we should learn the financial innovation that: 1. newly created; 2. developed for a particular client, what makes it expensive and exclusive; 3. de facto (legislative base is absent or under development).

Then it is important to explore the definition of "financial instrument" to carry out a comparative analysis with the "financial product".

According to the author, the study of "financial instrument" should begin with an analysis of legislative acts containing common definitions and then to add them to the consideration of scientific views.

According to International Financial Reporting Standards (IFRS-32) the financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument (if the financial instrument doesn’t contain a contractual obligation of funds transfer, other financial assets or exchange of this instrument to another on potentially unfavorable terms by the issuer) of another entity.

For the purposes of study it is really important that the instrument is a contract.

According to V.V. Kovalev, Russian scientist, this definition is the most accurate. Arguing about the concept of a financial instrument, he gives the following data.

Initially, there was quite a common simplified definition, where there were three main categories of financial instruments: 1) funds (cash and settlement account balance, foreign currency); 2) credit instruments (bonds, loans, deposits); 3) ways to participate in the share capital (stocks and shares) [14].

Kovalev says that terminology was specified with increasing complexity of financial activities. There was a necessity of separating the instruments from those subjects which these instruments are manipulated by or that underlie a particular instrument, i.e., financial assets and liabilities. The author's view is that the problem is not only topical, but also requires a quick solution at legislative level.

The Federal Legal Act of Russian Federation by 22.04.1996 Volume 39-FZ "On the Securities Market" introduces the following definition: "financial instrument is a security or derivative [15].

This definition corresponds to the scientific terminology of financial science, but it doesn’t allow to understand essence of the phenomenon due to the need of preliminary analysis of other financial categories through which it is presented. At the same time, this characteristic is applied weakly in practice, because there are no indications of any forms execution of financial relations.

Further research is necessary to continue on basis of works by foreign authors, because financial science of developed countries explores this field more than fifty years and has not only extensive theoretical knowledge, but also practical experience.

The study "Financial Engineering" by John F. Marshall, Vipul K. Bansal indicates that physical means of the financial engineering instruments includes those instruments and processes that can be put together to achieve a particular goal. Among the wide range of financial instruments are: fixed income securities; equity shares; futures; options; swaps, and many variations on these themes [9].

Combining physical means by different ways, the financial engineer can develop projective solutions aimed at clients for a very wide and, at first sight, very heavy set of tasks [1, 16].

This point of view allows us to understand the nature of the financial instrument, which is seen in the management of financial relations.

Galitz L., an economist, notes that forwards, FRA, futures and swaps are examples of financial engineering instruments that can create comfort of specificity to anyone who is a subject of financial risk. The scientist emphasizes that financial engineering instruments are articles of trade and components for building more complex systems. They can be used as finished products in the standard form or modified to meet specific requirements, also they can be combined in a variety of ways [5, 17].

Thus, we can conclude that the financial instruments are contracts (instruments) of financial engineering, which help to manage financial risk. Look for confirmation of this point of view in the paper by K. Redhead, S. Hughes [18, 19].

A collaboration “Fundamentals of Investing” of L. J. Gitman, M.D. Joehnk and S.B. Smart states that financial instruments can be securities, investments in property, etc. Researchers specify that all depends on operation life, prices, profitability and risk level, taxation conditions. They can be used for accumulating of funds, getting dividends and / or interest, getting periodic income, fixing the date of the purchase and sale of assets, protecting from taxes, creating of mutual funds, etc. [6, 20].

This definition coincides implicitly with the definition introduced by Russian lawmaker. However, it does not reveal the nature of the financial instrument as a financial and economic category.

The opinion of James C. Van Horne and John M. Wachowicz coincides with the views of L.J. Gitman and M.D. Joehnk. They investigated the role of financial instruments in the investment activities of organization and concluded: financial instruments are convertible securities, securities that can be exchanged for other securities and warrants. Scientists specify that the various financial instruments have different risk level and these instruments provide investors with different volume of expected profit [9, 21]. Consequently, they focus on the fact that the functional purpose of the financial instruments is to manage financial risks.

A.B. Feldman, a Russian scientist, reveals the essence of the term "financial instrument": it’s the result of the financial product work in the process of commercial relations between the participants of the financial market.

The definition reveals that the prototype of a financial instrument is a financial product and the financial instrument is used in a relationship between participants of financial market.

A. Ajupov, a Russian researcher, defines the financial instrument as any contract, resulting, on the one hand, in appearance of an asset of one enterprise, and on the another hand, in a financial liability of different character of another enterprise, e.g. in the end their choice affect assets and liabilities of enterprises [10, 11, 22].

This view coincides with the IFRS-32, which represents that financial instrument is a contract.

According to the author, Ajupov gave the most appropriate definition for a practical use.

Result

After analyzing the above definitions, we can say that the financial instrument is a legislative financial mechanism, fixed in the contract between the subjects of financial relationship that allows to manage financial risks and other parameters. A contract must have the following characteristics to be considered as a financial instrument:

- existing at the market for a long time, evoking the trust of financial relationships’ entities;
- legal basis, which build greater confidence of financial relationships’ entities;
- to have judiciary law that allows the financial relationships’ entities to assess the consequences of the decisions made and predict future actions more fundamentally;
- low margins, allowing to be available for use by a large number of participants at the financial market;
- to be in demand among a large number of financial relationships’ entities;
- the volume of transactions with the use of this type of contract must be high.

This analysis is a research of "financial product" and "financial instrument" essence. It allows us to generalize results, highlight similarities and differences in concepts based on introduced criteria (Table 2).

It should be noted that the country’s difference in levels of the financial market’s development leads to various applications of definitions of "financial product" and "financial instrument".

The financial instrument at the developed market can be the financial product in the developing market. For example, credit default swaps (CDS) as a financial instrument are widely used in world financial market.

Russian financial units use them in the credit risk management in the global market, using it rarely inside the country. Attempts to use international experience in Russia build the basis of the financial instruments in developed countries as a financial product in the Russian market.

Table 2. Comparative analysis of "financial product" and "financial instrument"

Criteria of the financial product/instrument	Characteristics of "financial product"	Characteristics of "financial instrument"
Similarities		
Purpose	Management of the financial risks and other parameters that build the financial relations	
Execution of documents	Contract, additional agreement, additional points in contract	
Scope of application	Financial market	
Differences		
Time of being at the financial market	Short	Long
Legislative consolidation	Absent or under development	Legislative acts accepted and they are in force
Jurisdiction	No	It has been forming and/or operates on basis of accepted normative documents
Margin level	High	low
Quantity of market participants that use this product	Small	big
Quantity of deals with the use of a financial product	Small	big

Conclusion

In conclusion, it should be emphasized that an analysis of financial categories "financial product" and "financial instrument" has been made on the basis of six criteria. It made it possible to reveal the similarities and differences of these terms. The results will help to carry out more fundamental research in the field of financial engineering, as well to increase the efficiency of financial innovation in practice.

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