FINANCIAL INNOVATIONS AND THEIR ROLE IN THE MODERN FINANCIAL SYSTEM –IDENTIFICATION AND SYSTEMAIZATION OF THEM PROBLEM

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ABSTRACT

This paper discusses the role that financial innovations play in the modern financial system, aiming at identifying and systematizing the core problems and definitions related to this issue. The paper first describes the importance of the financial system and financial markets in the economy, explaining their functions and presenting their particular characteristics, focusing on their innovativeness. Then, based on the theoretical studies, the broad definition of the financial innovations is developed, stating that any new developments in any elements of the financial system, including: markets, institutions, instruments and regulations, can be regarded as financial innovations if they are perceived as new by the end-user of innovation. Next, the systematization of the most important types of financial innovations is presented regarding different classification criteria, such as: sources of innovations, motives for innovations, their effects or functions. As financial innovations are not a homogenous group of financial developments, their implications for the financial system can be ambiguous, thus the final assessment of their role cannot be generalized and should be made on a case-by-case basis. The information presented in this paper can be regarded as an introduction, encouraging to do further research, as the complexity of the financial innovations makes them an interesting and important subject for this.

1.1 INTRODUCTION

The dominant feature of the modern financial system is a high pace of innovations, both in terms of their number and value. Thus, it is important to analyze their influence on the financial system. Recently, many studies devoted to this problem have been published; however, they concentrated mainly on the global financial crisis perspective or on a single type of financial innovations. In addition, there is neither a unified definition of financial innovations nor uniform classification of their types applied in these studies.

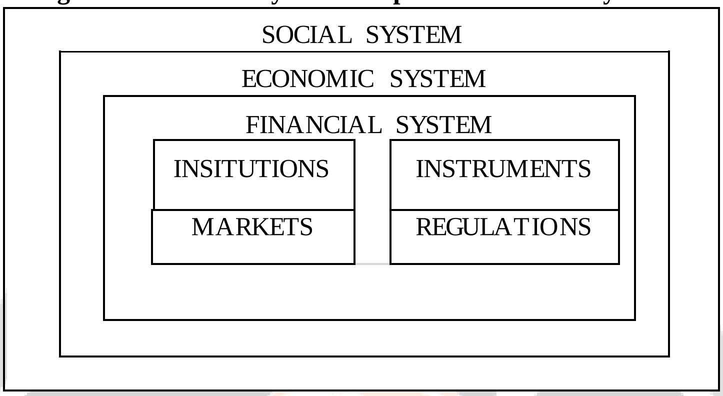
Therefore, the main aim of this conceptual paper is to undertake an attempt to systematize the current state of knowledge relating to the financial innovations. This paper examines the existing literature relevant to the problem of financial innovations and their role in the financial system.

Developed. Then, the applied classifications of the financial innovations are analyzed and systematized, according to the most important criteria. Another issue discussed in the paper is connected with the functions that are fulfilled by the financial innovations. As they are not a homogeneous group, they can perform various functions, however these functions should be also classified. The paper includes the proposition to order these functions according to the functions of the financial system, based on the assumption that the main aim of the financial innovations is to improve the efficiency of the financial system in performing its functions. Obviously different financial innovations can have different effects on the financial system. Thus, the paper ends with the conclusion that each single financial innovation should be analyzed separately regarding its mechanism of functioning and potential consequences for the entire economy.

1.2 The importance of the financial system in the modern economy

The modern economy cannot exist without the efficient financial system that is defined as the collection of markets, institutions, instruments and regulations through which the financial securities are traded, interest rates are determined and financial services are produced and delivered around the world.

Figure 1: Financial system as a part of the social system



Source: Own elaboration

The general approach, the financial system plays functions that can be grouped in three sets: (1) monetary function, (2) capital allocation function and (3) controlling function. The monetary function is connected with the process of money creation in the economy and the process of money transfer between economic entities by the organization of the payment system. The capital allocation function is realized in two dimensions – the market financial system and the public financial system. In case of the first dimension, the market financial system enables to transfer the surplus funds to the most promising deficit units and by this contributes to the economic growth. In the second one – the public financial system enables us to gather funds that can be used to finance public goods, social services and social benefits, promoting and sustaining the economic growth. The controlling function enables us to monitor the flow of funds in the economy regarding their effective usage. The interactions between the distinguished functions are multidimensional and their efficient realization determines the development of the entire economy.

Another approach distinguished six core functions are performed by the financial system. According to this, the financial systemprovides mechanism for
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1) The transfer of economic resources through time, across borders and among industries,
2) The risk management,
3) The clearing and settlements of payments to facilitate trade,
4) The pooling of resources.
5) the financial decisions made on the price information,
6) Dealing with the incentive problems created by the asymmetric information or the agency relationships.

2. The definition and origin of financial innovations

The role of innovations in the economic development is indisputable. The general definition of innovations explains that they appear when new ideas, solutions and instruments are implemented in order to change the conditions of business entity and to improve its situation. The application of innovations increases the competitiveness of a business entity and creates value for its owners. The sustainable growth of the modern business entity is impossible without the proper innovation management accompanied by the knowledge, information, reputation and trust management.

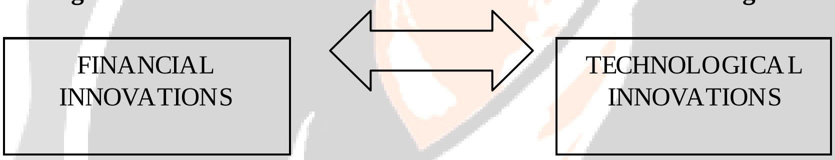
According to the demand theory, the innovations are created as the response to the demand of business entities that want to acquire competitive advantage in their business environment (this type of new developments are called the demand-driven innovations). However, this demand can be influenced either by the internal needs of the business entity aiming at improvement in its activity or by the changes in its environment requiring the proper adjustment in its business strategy.

The second approach stresses the role of the supply side, as innovations are firstly created by the innovation providers and then they are implemented in the business entities. This category of new solutions is called the supply-driven innovations and they are achieved as a result of the process consisting of three phases: (1) the creativity phase (invention), (2) the innovation phase and (3) the diffusion phase. The presented approaches to

the theory of technological innovations can be adopted to the theory of financial innovations; however, the specific features of the latter must be taken into account.

The financial innovations are not a new phenomenon, as they have been accompanying the technological innovations from the very beginning. It is commonly known that financial and technical innovations are bound together and they evolve together over a time (see figure 2). As on the one side, the financial innovations provide mechanism to finance innovative technological projects when traditional sources of funds are unavailable due to high investment risk. And on the other hand, the technological and economic progress resulting in the higher complexity of business processes and new types of risk forces the financial system and financial markets to adopt to the changes, to be modernized according to the new requirements of the business entities and to the challenges of the modern world. This leads to the conclusion that without financial innovations, the technological and economic development would slow down and the wealth of nations would be lower. At the same time, the application of the financial innovations would be limited without the demand arising from the technical progress.

Figure 2: The interactions between the financial and technological innovations



Source: Own elaboration

The main features of the product financial innovations can be listed as follows: they can be entirely new solutions or just traditional instruments in which new elements of construction have been introduced improving their liquidity and increasing the number of their potential applications as they are better suited to the circumstances of the time,

1) they can be used as substitutes to the traditional financial instruments improving the financial situation of the business entities using them,
2) they cannot be easily assigned to one particular segment of the financial market,
3) they can be used to hedge against the intensive volatility of the market parameters,
4) they can be used in a form of complex instruments including several simple, traditional financial instruments,
5) they can be used in a form of new financial processes or techniques or new strategies that primary use these new products,

Financial innovations in the broad and narrow meaning

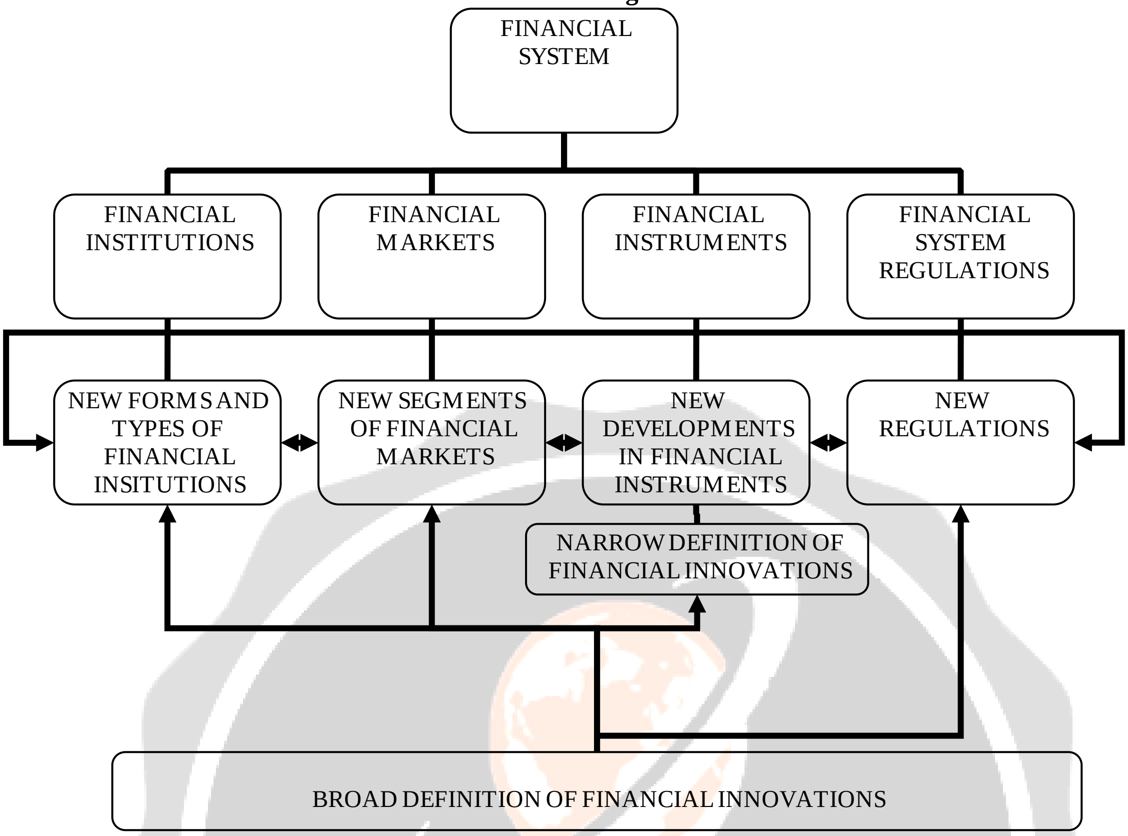


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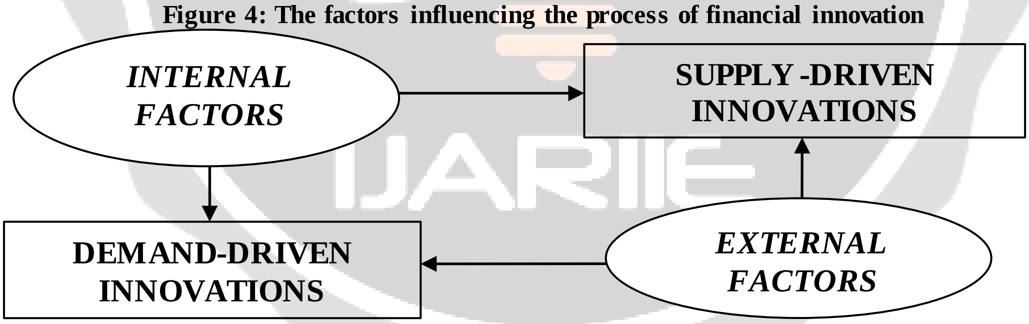
Figure 4: The factors influencing the process of financial innovation



Source: Own elaboration

The differences in sources of financial innovations, the process of their creation and implementation is quite similar. A huge number of financial innovations observed in the modern financial system are the consequence of the relatively rare patent protection procedures compared to the technological innovations. Due to this situation the diffusion of the financial innovations is quite fast. At the beginning the new developments are introduced in the less regulated international market and then, after they have been positively verified they are implemented into more supervised domestic market. Financial innovations that have not succeeded are withdrawn from the market, and after some time their modifications are implemented. The successful financial innovations can be easily imitated by the competitors in the market, so the new financial developments that are introduced by different financial institutions may be quite similar. Thus, the process of creating and implementing financial innovations is quicker, less complicated and cheaper than the similar process in case of the technological innovations. The speed of financial innovations diffusion in the global financial system is enhanced by the dynamic development of new communication and information technologies.

2.1 Classification and functions of the financial innovations

As there is no unified definition of financial innovations, there are also various approaches to their classifications and their functions.

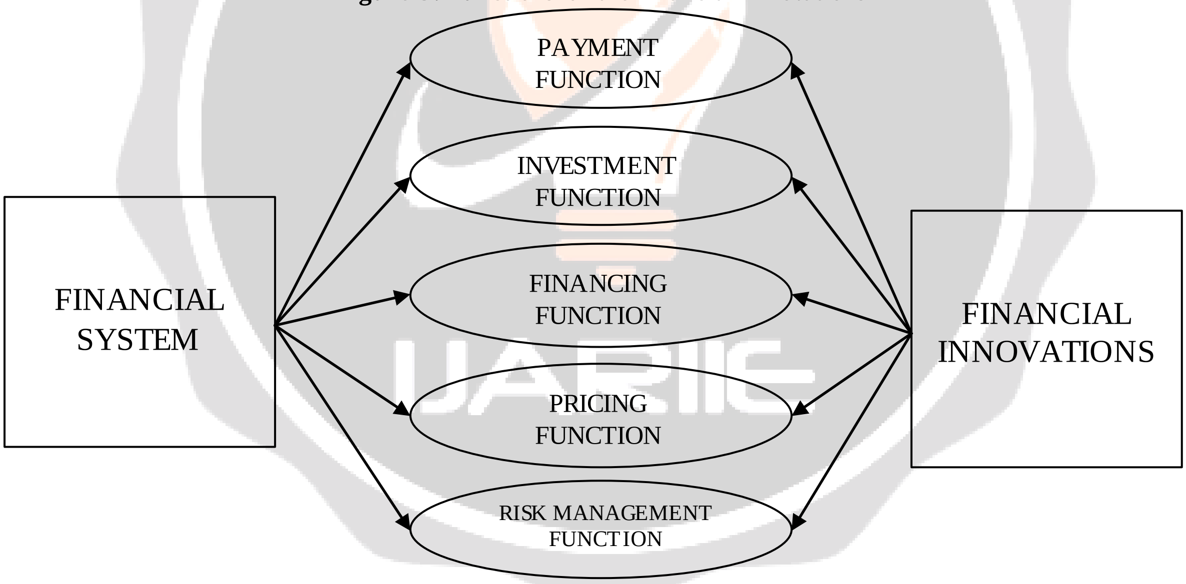
Based on the presented analysis of the financial innovations definitions and the mechanism of their creation and implementation, it can be observed that the financial innovations are not a homogenous group of new financial developments. Therefore, the systematization of their classification would be reasonable. The financial innovations can be classified according to various criteria that have been already discussed in section 2. The most important criteria of the financial innovations classification include: (1) sources of innovations, (2) factors influencing the process of creation and implementation of innovations, (3) the motives of using the financial innovations, (4) the elements of the financial system where the innovations occur, (5) the types of innovations, (6) the effect of the financial innovation application, (7) the moment of creation and (8) the underlying assets.

The presented criteria of classification are not mutually exclusive. This means that each of the financial innovations can be categorized to various groups of financial innovations according to the chosen criteria.

Another important issue is related to the classification of the financial innovations functions, as different approaches to this problem are applied.

According to the Economic Council of Canada financial innovations can be classified into three broad categories regarding their functions: (1) market-broadening instruments, (2) risk management instruments and (3) arbitraging instruments and processes. The first category of financial innovations increases the liquidity of the financial markets, improves the availability of funds to deficit units and ensures access to new investment opportunities to surplus units. The second category of financial innovations enables to reallocate financial risk to those market participants who are less adverse to it or better prepared to handle with it. The last category of financial innovations gives the opportunity for the market participants to benefit from differences in costs and returns between markets.

Figure 5: Functions of the financial innovations



Source: Own elaboration

Regardless the differences in the classification of the financial innovations functions, the two main problems should be considered while analyzing the impact of the financial innovations on the financial system – the potential changes in its efficiency and stability (Llewellyn, 2009, p. 23). The sustainable (true) financial innovations should bring benefits in reducing the negative elements of the financial system by: decreasing level of risk, closing the information gap, lowering the transaction cost and minimizing the tax payments. Simultaneously, they should enhance the positive elements of the financial system by: maintaining its stability, increasing its efficiency in performing its core functions, providing services and instruments better adjusted to the system participant's needs and goals. The harmful innovations have the adverse impact on the financial systemand the entire economy, so they should be avoided.

3. CONCLUSION

The modern financial system is characterized by high pace of innovations that can occur in any of its elements: markets, institutions, instruments and regulations. The financial innovations observed in the financial system can be classified according to various criteria, indicating their heterogeneity. Despite the differences in the applied classifications, the theory of financial innovations is mainly focused on their effects upon the financial system. The sustainable financial innovations are required; as they enhance the efficiency of the financial system and by this they can improve the economic growth and increase the social wealth. However, some of the financial innovations can have some negative side-effects upon the financial system, offering benefits to the single participants and simultaneously being harmful to others. to conclude, the efficient usage of particular financial innovation requires an extensive knowledge about its way of functioning and a thorough analysis of its consequences. As this survey indicates, the problem of financial innovations and their role in the financial system is highly complex and can be an important and interesting subject for further research, both theoretical and empirical.

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