

## CORPORATE SECURITIES AND DERIVATIVES MARKETS IN EMERGING ECONOMY: OPPORTUNITIES FOR NON-FINANCIAL ORGANIZATIONS IN THE REPUBLIC OF BELARUS

*Pavel Pankou, Polotsk State University*

*Ludmila Masko, Polotsk State University*

*Anna Lavrinenko, Polotsk State University*

**Abstract.** The instruments of financial market provide an effective way to mobilize free funds of investors and manage market risks, which, however, isn't fully used in Belarus. Some steps to improve the situation in financial sphere have been taken from the government side, but the area of corporate securities and derivatives still cannot be considered effective for all market participants. The aim of the research is to analyze the current state of corporate securities and derivatives markets in Belarus, identify problematic aspects and provide possible solutions for further development of those markets. For this purpose following research methods were used: analysis, synthesis, generalization, induction, deduction, observation, method of logical analysis, classification.

According to the results of the study we have identified that corporate securities market, as well as derivatives market in Belarus, can be characterized by a significant role of the state in the creation process and high ratio of securities issued by banks and state institutions. In the article have been defined factors that constrain the development of those markets. Some factors lay in theoretical sphere, where have been proposed our own definition of corporate securities. Other factors arise in practical sphere: we have identified problems in accounting, taxation, legal regulation. For better understanding the necessity of hedging and its practical importance, we have considered the organization as an opened system, which is influenced by external factors. In this system, we have developed the model of hedging the most significant risks arising in the current activity of non-financial organizations.

**Keywords:** *corporate securities, derivatives, hedging.*

**JEL code:** G32

### Introduction

The strategy of financial market development in the Republic of Belarus until 2020 sets a goal to provide its qualitative transformation, increase stability and efficiency of its functioning in compliance with the directions of national economic growth. Creation of necessary conditions for the formation of an integrated, liquid, transparent and efficient securities market as a component of the financial market of the Republic of Belarus will help to attract investment in the real sector of the economy. In this regard, spheres of corporate securities and derivatives can be distinguished as priority areas of qualitative transformation of Belarussian financial market, where an important place is given to the creation of the variety of corporate financial instruments, useful for all market participants. We provide the analysis of the essence of corporate securities and give our own definition of that category, which contributes to existing studies of Shershenevich (1994), Mammanovich (2008), Endovitsky (2009). Also from the practical side of corporate securities it can be noted, that nowadays corporate financial instruments in the Republic of Belarus are presented mainly by shares and bonds. And trading volumes remain rather low.

For non-financial organizations derivatives may also be interesting, because they can be used for hedging market risks. Hedging market risks is a common practice in developed economies. For example, in the global study, conducted by Bodnar (2011), it is noted that 71 % of companies from the extractive sector, 67 % from the manufacturing sector and 46 % from the services sector use derivatives in their risk management strategy. Non-financial organizations in the Republic of Belarus are also interested in hedging to ensure the stability of cash flows, which are exposed to the influence of constantly changing market variables. We have identified a number of factors that constrain the use of derivatives by non-financial organizations in the Republic of Belarus.

At the level of national economy, the problematic aspects include, firstly, insufficiently effective legal regulation in the field of civil relations, accounting and taxation in the part that is related to derivative instruments, and, secondly, the underdevelopment of exchange and OTC derivatives market in the Republic of Belarus.

At the level of organizations the derivatives usage is complicated by the lack of clear understanding from management side of how the particular hedging strategy will look like step by step and what benefits it can give their company. Also the issues of planning, organization, control and accounting for transactions with derivatives are still relevant at the company level. The results of our research on derivatives market in Belarus contribute to the existing works, provided by the following authors: Sidorenko (2017), Demidenko et. al. (2016), Usefalchick (2017).

The purpose of this research is to analyze the current state of corporate securities and derivatives markets in Belarus, identify problematic aspects and provide possible solutions for further development of those markets. According to this aim the following tasks will be solved:

- to consider existing research in the field of corporate securities market, derivatives market and hedging implementation in non-financial organizations;
- to characterize the current state and identify problematic aspects in the development of financial market at the Republic of Belarus;
- to consider the organization as an opened system and determine in this system the place of such risk management tool as hedging with derivatives.

For this purpose general scientific research methods were used: analysis, synthesis, generalization, induction, deduction, observation. Methods of theoretical research: idealization, formalization, method of logical analysis, classification.

#### **Literature review**

The issue of securities by business entities, their purchase from other companies necessitates the formation and receipt of complete and accurate information on organization's financial instruments. In this regard study of the economic nature of corporate securities and derivatives has particular relevance and practical importance.

Belarussian research in the field of corporate securities have mainly theoretical character of economic (Mammanovich, 2008; Endovitsky, 2009; Mahovikova, Selishchev, 2008; Mirzazhanov, 2006), law (Shershenevich, 1994) and accounting (Sosnauwskene, 2008) features of that term. Empirical studies are not widespread in Belarus in this very area, statistical bulletins and reports of National Bank can be considered, if we speak about real situation in corporate securities market.

By contrast in the sphere of derivatives Belarussian authors provide more research related to the practical problems, for example: Sidorenko (2017), Demidenko et. al. (2016), Usefalchick (2017). Due to the lack of fundamental works on derivatives and hedging in Belarus, we had to look for those researches in the countries, where futures market are well developed. As noted by M. Bartram (2017), the global (not only the companies from the United States) studies for both hedging and speculation are very limited. Theoretical issues of derivatives and their influence on the company value considered in the work of Smith and Stulz (1985), Stulz (2013), Aretz and Bartram (2010), while the empirical works try to demonstrate real impacts of derivatives usage on the company's value (Bodnar, 2011; Erik, P. Gilje, 2017; Carter et al., 2006, etc.). For the purposes of this study we can distinguish the area of corporate securities and sphere of derivatives. The substantive aspects and opportunities for non-financial organizations in each direction from theoretical and practical sides will be discussed further.

#### **Research results and discussion**

The essence of the corporate securities

In modern conditions of formation the stock market in the Republic of Belarus the creation of corporate diversity in financial instruments is very important for the redistribution of temporary free funds, which allows expediting the process of obtaining debt capital and attracting additional investment resources. For this purpose Belarus has adopted the "Program for the development of the corporate securities market of the Republic of Belarus". However, the term "corporate securities" isn't sufficiently studied by domestic authors and even not clearly defined in the mentioned program. So our aim here is to research the essence of that category to provide more transparency in terminology.

It should be noted that nowadays the remark of Russian Professor G. F. Shershenevich (1994) that «the concept of securities isn't clearly understood neither in life nor in science...» is still timely and fair. «Obviously, the paper becomes valuable not itself, but because it expresses the right to obtain something that has value. On the other hand, if a right could be exercised freely without paper, there was no need for it to be embodied in paper. So, not every document, confirming the right to value, should be recognized as a valuable paper (*in English it is more natural to say security*), but only the document which places the right to value in close relationship with the paper» (Shershenevich, 1994).

It should be noted that in the legal acts of the Republic of Belarus, as well as in the economic literature there is no definition of «corporate securities». Moreover, an indirect definition, which can be derived from the legislation, regulating procedures of circulation of financial instruments, leads to ambiguity of the term «corporate securities» by the issuer's criterion. The contradictory interpretation of that economic category complicates its understanding. In its turn, this leads to the situation, when the information doesn't meet the needs of investors, isn't suitable for making management decisions, related to the placement of capital in the stock market.

Based on the conducted research, it should be noted that only some authors, studying the essence of the «securities» category, mention the concept «corporate securities», but at the same time they don't provide a clear definition. We consider that particular relevance relates to the full classification of corporate securities, which will allow to get necessary information of higher quality, as well as to monitor movement and effectiveness of corporate securities usage. However, the authors, studying the category of «corporate securities», don't classify them, but only note some types and groups. Literature review on this matter has been summarized in table 1.

Table 1

**Analysis of the authors' views on the classification of corporate securities**

Author	Types of corporate securities			Groups of corporate securities		
	stocks	bonds	promissory notes	debt	equity	derivative
Mamanovich	+	+	+			
Belzetskiy				+	+	
Kolesnikov, Torkanovsky	+	+	+	+	+	+
Mahovikova, Selishchev, Mirzazhanov	+	+	+			
Sosnauwskene	+	+				
In total:	4	4	3	2	2	1

*Own development based on the study of literary sources*

As a result of conducted research it may be concluded, that the absence of a thorough definition of the economic essence of category «corporate securities» is common for all authors, and also there is no legally fixed formulation of this part of financial instruments. Thus, based on the performed study it can be argued that corporate securities are relatively new and insufficiently studied type of securities. But at the same time, the usage of this exact type of financial instruments should be significantly expanded in order to mobilize and provide rational use free funds of investors on the strategic directions of economic development.

The analysis of the authors' views shows that most of them name only specific securities that may be corporate, but at the same time they don't classify them. In its turn it won't allow to organize the formation of data on the

acquisition of this type of financial instruments at a higher level, to obtain the information, necessary for the analysis, and also it will reduce the quality of financial statements. As an economic category, corporate securities have different characteristics and their classification should contribute to a more rational organization of gathering information by types of financial instruments and meet the requirements of detailed data provision.

The conducted research of the essence of corporate securities allowed us to provide own definition: corporate securities are securities of shared-ownership legal entities, which collectively own property (capital) and united by common professional and other interests in achieving goals that doesn't contradict the law. Such definition will help to unify the terminological apparatus. In turn, the emergence of corporate securities will contribute to the development of domestic financial instruments.

The essence of derivatives market and the impact of hedging on the efficiency of non-financial organizations.

Risk management – is the process of assessing and re-evaluating a variety of possible variants for the relationship between risk and potential profit on an ongoing basis for making management decisions (Dafir, 2016). Risk reduction generally entails certain costs in the form of lower expected return on investment. In this context, it can be noted that risk management can be defined as the assumption of risks, which are inherent in the specifics of the company's work and hedging undesirable risks. This choice ultimately depends on the company's competitive advantages.

Before the advent of derivatives markets, risk management was quite burdensome. Ensuring that the actual level of risk was consistent with the desired level required transactions with underlying assets. «Derivatives solve these problems very effectively: they allow to trade risk without trading the underlying asset itself» (Wendy et.al, 2017).

Kovalev V. V. (2010), investigating hedging risks, emphasizes that the idea of hedging can be implemented in almost any enterprise, regardless of whether its operational activity aimed at financial markets or not. Galanov V. A. (2011) notes, that it is impossible to protect company from the price movement, because it is an objective process. It is possible only to try to protect against the resulting capital losses. Accordingly, hedging is a way of active capital protection, because it is connected with making additional transactions.

In order to make hedging work there should be speculators, who ready to bear risks. Derivatives markets are undoubtedly attractive to speculators, who act as professional traders and are willing to accept the risk that others want to get rid of in order to profit from price fluctuations. The more speculators work in the market, the cheaper it is for hedgers to transfer risk. In this sense, the distribution of risks improves both within the markets and in the world economy in general. Despite major financial turmoil the crisis of 2008-2009 didn't significantly affect the use of derivatives around the world. This is confirmed by a study, conducted by Bodnar (2011), where it is noted that out of 624 respondents (risk managers of large organizations around the world) 27 % indicated that the crisis prompted them to reduce the use of derivatives, 23 %, on the contrary, noted that the crisis forced them to expand the scope of derivatives usage, and the remaining 50 % indicated that the crisis didn't affect their attitude to derivatives.

Since the use of derivatives isn't widespread in the Republic of Belarus we consider foreign research in this area. A considerable part of these studies pay attention to the issues of hedging risks with derivatives: the objectives, volumes, types of hedging are studied, and special emphasis is made on the relationship between this method of risk management and the value of the company and its investment attractiveness. Some of these studies are presented in table 2.

Empirical researches don't allow us to say unambiguously that hedging is a source of increasing firm value, however as noted by Stulz (2013), corporate managers have an intuitive sense that an effective risk management program contributes to shareholder value, but they typically find it difficult to measure the success of such program.

Table 2

### **The usage of hedging with derivatives at the corporate level**

Author and research direction	Brief results of the research
Aretz, K., Bartram, S., & Dufey, G. (2007) The analysis of hedging objectives at the corporate level	With the help of hedging, the problem of lack of investment can be solved, when managers of loan companies prefer not to invest in projects with positive NPV. Hedging creates a stable cash flow that ensures that project profits are less likely to be below their initial investment plus liabilities to bondholders.
Aretz and Bartram (2010) The relationship between hedging and firm value	Corporate hedging may be considered as a source of increasing shareholder value due to the fact that corporations use hedging to minimize expected taxes, underinvestment and financial costs.
Smith and Stulz (1985, 2013) Determinants of corporate hedging strategies	Hedging using derivatives can bring significant benefits in countries, where companies have a convex (non-linear) tax scale, and also it is possible to increase shareholder value by easing the costs, associated with financial shocks.
Bodnar (2011) Global risk management study	With the support of ISDA, a survey was conducted among risk managers of large companies around the world on various issues of risk management, including the use or refusal from hedging with derivatives.
Erik P. Gilje (2017) The impact of hedging on the company's value: evidence from refiners in the USA and Canada	The benefits of hedging are theoretically well understood. Yet empirical evidence documenting the channels through which hedging affects firm value remains limited. The main reason for this lack of evidence is due to the endogenous nature of hedging policies; inferring causality is a delicate exercise in most situations. Results of research provide direct empirical evidence that reducing the probability of financial distress and mitigating underinvestment are first-order reasons why firms hedge.
Allayannis and Weston (2001) The usage of currency derivatives	Authors checked the relationship between hedging the risks of activities in foreign currency and the Tobin Coefficient (Q) and concluded that hedging increases the investment attractiveness of the firm.
Carter et al. (2006) Relationship between hedging and investment attractiveness in the aviation industry	It is noted that hedging has a positive effect on current activities on the example of US airlines.
Jin and Jorion, Impact of hedging in the oil and gas sector (2006), and for gold mining companies (2007)	Hedging does not affect the value of the firm in oil and gas production and even negatively affects the value of the firm in the gold mining company.
Phan et al.'s (2014) The analysis of hedging impact on 94 companies specializing in oil and gas exploration and production from 1998 to 2009	Authors document a negative and significant relationship between hedging and firm value, i.e. a hedging discount. At a theoretical level, hedging can enhance firm value by reducing the costs relating to underinvestment and financial distress. Nevertheless, there is little reason to expect that these costs materialize in the presence of upside risk. As a result, it is noted that hedging adds value only in the presence of downside risk, when underinvestment and financial distress risks are more substantial.
Wang and Birkeland (2017) Corporate hedging in US oil and gas companies	Investors recognize the effects of hedging on stock price exposure towards fluctuations in oil and gas prices in periods of negative shocks in these prices. These periods are the only periods, where hedging proves to be value adding. Outside these periods hedging brings discount on firm value. This is connected with investor loss aversion, i.e. investors being more sensitive to negative surprises than to positive.

Source: own development based on the study of literary sources

It can be concluded that the results are quite contradictory. It depends on the specifics of a particular industry and the corresponding time period. At the same time, in the research of derivatives usage at the corporate level, conducted by M. Bartram (2017), it is noted that most companies use derivatives from case to case based on their vision of the market at a particular time.

In the conditions of the Republic of Belarus it is also necessary to take into account the fact that shares of almost all large non-financial organizations aren't traded on the stock exchanges, so there are no benchmarks for assessing the market value of companies. From the other side it can be noted, that the main result of hedging is predictability of cash flows, but the direct connection between firm value and that predictability may be absent at a certain time interval. At the same time losses can be significant, if derivatives are used for speculative purposes in a gambling manner, especially if such transactions are positioned as hedging operations or hidden from investors and the company's

management at all (Masko, Pankov 2019). For example, Jacques L. (2016) notes that the Japanese company Showa Shell Sekiyu in 1993 announced a huge loss on foreign exchange transactions in the amount of \$1.07 billion USD. What had been starting as legitimate hedges mysteriously turned into a colossal loss-making position on forward contracts for the dollar/yen currency pair between 1989 and 1993.

As noted by Smith & Stulz (1985) quite often losses on derivatives with well-thought-out hedging are considered as a failure in the risk management system. Although the company applies hedging because it cannot predict, what result will bring the asset, liability or future cash flow, which is exposed to market risk, in the future. And to avoid this uncertainty, organizations resort to hedging, while if the market movement is favorable for the company, then the hedging instrument will show an offsetting loss.

Thus, it can be concluded that, despite the inconsistency of empirical results, hedging with derivatives is an effective way for non-financial organizations to manage risks arising from fluctuations in market variables, which finally can improve the stability of the company's operational activity.

Current state and problematic aspects of the financial market components in the Republic of Belarus.

As noted by Goldstein et al. (2013), the key feature of modern financial markets is that capital is relatively segmented and moves slowly, but information is relatively integrated and moves quickly, and traders actively use this information. At the same time neither the market of corporate securities nor the market of derivative financial instruments can be considered sufficiently developed in the Republic of Belarus. As a result, the potential for improving the current activity of non-financial organizations in these markets remains undisclosed. Further we will consider how these markets are characterized in the Republic of Belarus and what problematic aspects can be identified in this area.

At the moment the «Strategy of financial market development until 2020» is the main document, governing financial market development in the Republic of Belarus. According to which the goal of the financial market development for the period up to 2020 is its qualitative transformation, increasing its stability and efficiency of functioning, aimed at economic growth and welfare of the whole nation. To achieve this goal, it is necessary to solve, among others, the following tasks. To form a full-fledged, structurally developed financial market, this requires: ensuring accelerated development of non-banking sectors of the financial market; improving the range of banking products; development of financial market infrastructure; increasing confidence in the financial market. Also it is necessary to intensify competition through: development of the institutional structure of the securities market; development of the insurance market; increasing the share of private property, reduction of the capital concentration in the banking and insurance sectors; improvement of corporate governance; increasing the degree of information openness of all financial market participants.

Also in this Strategy the assessment of the current state is characterized as follows: despite the fact that the financial market as a whole performs its functions, the existing structural imbalances and accumulated problems don't allow it to develop dynamically enough and also these problems affect the quality of financial services. The dominance of the banking sector reduces competitive pressure and reduces incentives for financial market development.

The following results have been achieved in the development of the securities market. In general the legislation, regulating activities in the securities market, has been formed; the basic elements of its infrastructure (depository, exchange and settlement-clearing systems) have been created. Population and organizations are being attracted to this market. However, certain segments of the market (secondary equity market, derivatives market and securitized assets) and its institutions (investment, pension funds) haven't been sufficiently developed.

Quantitatively the development of the securities market is characterized by the following indicators. As of January 1, 2017: the volume of share issues reached 29.2 billion rubles, which is almost 5 times higher than the level as of

January 1, 2011. At the same time, the ratio of shares to gross domestic product for the period decreased by 3.7 percentage points to 30.9 percent. The annual volume of secondary trading in shares ranged from 0.03 billion rubles in 2011 to 0.08 billion rubles in 2012 and amounted to 0.05 billion rubles in 2017. Liquidity of the stock market remains low: in 2017, market prices were calculated on shares of only 63 from 2,300 open joint stock companies (in 2010 – 61 issuers); trading volumes in 2018 on both organized and OTC markets was only 0.096 billion rubles.

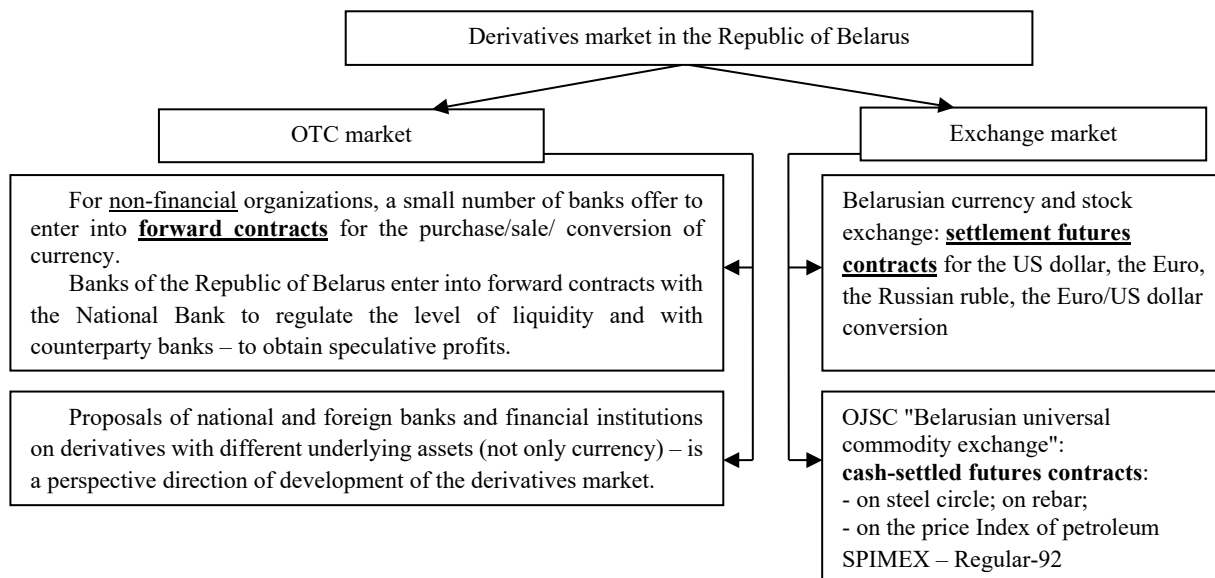
The volume of transactions of purchase and sale of bonds of legal entities, including local executive and administrative bodies in 2017 amounted to 2.5 billion rubles and increased from 2010 to 4.5 times. In 2018 both organized and OTC bond trading volumes reached the level of 2.2 billion rubles. Since 2010, the volume of this market has increased in more than 15 times. That means that investors in Belarus prefer to make investments in less risky operations with bonds, rather than to take a greater risk through investments in shares of Belarussian corporations.

The market of corporate securities of the Republic of Belarus can be characterized as developing, because its intensive formation falls on the beginning of 90-ies of XX century. Its main characteristic is the significant role of the government in the process of creation, as well as the high percentage of bank and state securities. Also it should be noted that an important indicator – the number of reformed enterprises of Republican ownership in the process of privatization. «Overall, for the entire period the most enterprises were privatized under the Ministry of industry, Ministry of agriculture and food, Ministry of architecture and construction» (Jernoseck, 2008).

In the Strategy of development of the financial market in the Republic of Belarus until 2020 it is noted that the greater flexibility of the exchange rate of Belarussian ruble increases the relevance of hedging currency risks by non-financial organizations, which will require development of derivatives market instruments for hedging currency risk.

Currently among non-financial organizations the most popular derivative financial instruments for hedging currency risks are forward contracts for the purchase, sale or conversion of currency. As a rule, the counterparty to such transactions is the servicing bank. Offers of banks on forward transactions for purchase, sale and currency conversion represent the OTC market of derivatives. In addition, banks and financial institutions both registered in the Republic of Belarus and abroad may offer organizations to purchase derivatives with different conditions and underlying assets. While the volume of OTC transactions with such derivatives is rather difficult to estimate, it can be noted that the usage of OTC derivatives with a variety of underlying assets (not only currency) by non-financial organizations of the Republic of Belarus hasn't received widespread at the moment.

Generally, the derivatives market in the Republic of Belarus can be represented in figure 1.



Source: own development based on the materials of National Bank, Sidorenko (2017), Usefalchick (2017)

### Fig. 1. Derivatives market in the Republic of Belarus

The main problematic aspects that hinder the development of the derivatives market in the Republic of Belarus can be structured in the following way.

Firstly, as noted by Ph. Jorion (2007), one of the first steps of effective risk management is to evaluate assets and liabilities at fair value. For a long period derivatives were reflected in the accounting on off-balance accounts, hence didn't appear in the balance sheet and the statement of profit or loss. The growth of derivative markets and a number of financial shocks due to losses on derivatives contributed to the adoption in 1998 the standard SFAS 133 in the United States, and IAS 39 «Financial Instruments: Recognition and Measurement». These standards established requirements for mandatory assessment and revaluation of the fair value of derivatives with the attribution the results to profit or loss.

Despite the introduction of international financial reporting standards (IFRS) as technical regulations on the territory of Belarus since January 1, 2017 the national system of accounting and reporting in the field of derivatives still doesn't provide a clear accounting of these instruments, therefore, doesn't facilitate the receipt by users of reporting relevant information on the opened market positions (Masko, Pankov, 2017). It should be noted that in the CIS countries there is a focus on convergence with IFRS. For example, until recently, the accounting standards for investors in Russia were US GAAP, because they regulated the accounting for real situations in detail. However, in 2010 organizations, whose securities were admitted to the organized trading had to prepare consolidated financial statements in accordance with IFRS (Pashkevich, 2017). In Belarus is currently pursuing a policy of convergence with IFRS as well. The adoption of the National accounting standard «Financial instruments» in January 1, 2019 had to clarify accounting for derivatives; however certain significant aspects, related to the use of derivatives in the practice of business entities, remain unsolved. Also, organizations note that accounting for this standard is more difficult than under the rules of IFRS 9.

Secondly, the regulation of transactions with derivative financial instruments in the field of taxation in the Republic of Belarus affects the value added tax and income tax, applicable only to banks, and income tax for individuals. In the taxation of income of non-financial organizations there is no any features related to income tax. At the same time, it can be noted that in the Republic of Kazakhstan, in Russian Federation and in the United Kingdom the legislation, governing the calculation and payment of income tax to a greater or lesser extent defines the features of transactions with derivatives, including those used for hedging.

Thirdly, from the point of view of civil law, nowadays operations with net-settled derivatives can be qualified as wager transactions, judicial protection for which is not provided. For comparison, in the Russian Federation this gap was eliminated in 2010 by the introduction of the corresponding norm in the Civil code of the Russian Federation.

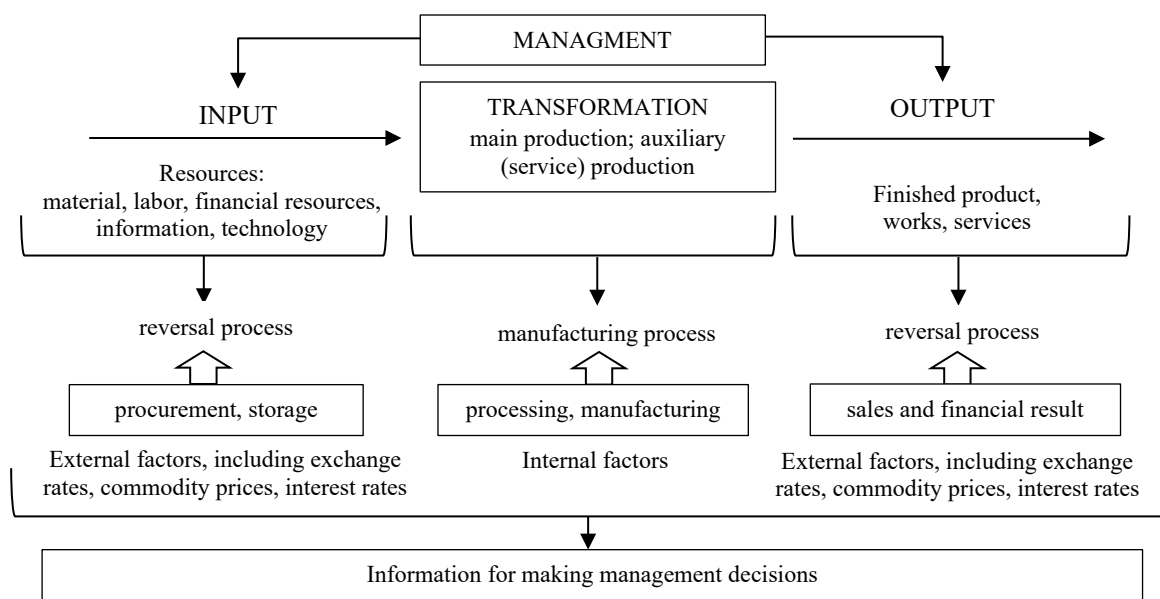
With regard to the implementation of the hedging transactions themselves, we note that are more likely to arise at the OTC market, because on the exchanges the contracts of the futures market section are standardized and there are well-established mechanisms for ensuring the fulfillment of obligations. Complexity can be caused by OTC contracts, where there is more flexibility, however, can be disputable moments concerning the order of calculations, determining the prices and terms of collection the debt from the defaulter.

Fourthly, the Belarusian authors name the low level of corporate risk management as one of the reasons for the underdevelopment of derivatives market. It should be noted that it is rather difficult to assess this level, especially within the country; therefore, here we should speak about the fact that the management of non-financial organizations of the Republic of Belarus is focused on solving critical issues related to current activities. While reducing exposure to non-core commodity or currency risks through hedging may improve the efficiency of an organization, but it is not



a critical aspect of their operations. No doubts that if there is a clear in implementation and well-understood in possible benefits hedging strategy, every manager won't refuse to use derivatives, but so far everything remains very confusing. Opportunities for non-financial organizations of the Republic of Belarus in the derivatives market.

In modern conditions any organization is closely connected with the environment and depends on it both in terms of its resources and in terms of consumers. Openness of both individual organizations and the economy as a whole is associated with many risks that are caused by external factors. The impact of external environment and the necessity of coordination within the organization require making management decisions constantly. Management is understood worldwide as the process of planning, organization, motivation and control necessary to achieve the company's goals. Theory and practice of management allow us to present economic entities of any level as opened systems. The characteristics of management activity in that system may be presented in the following form (figure 2).

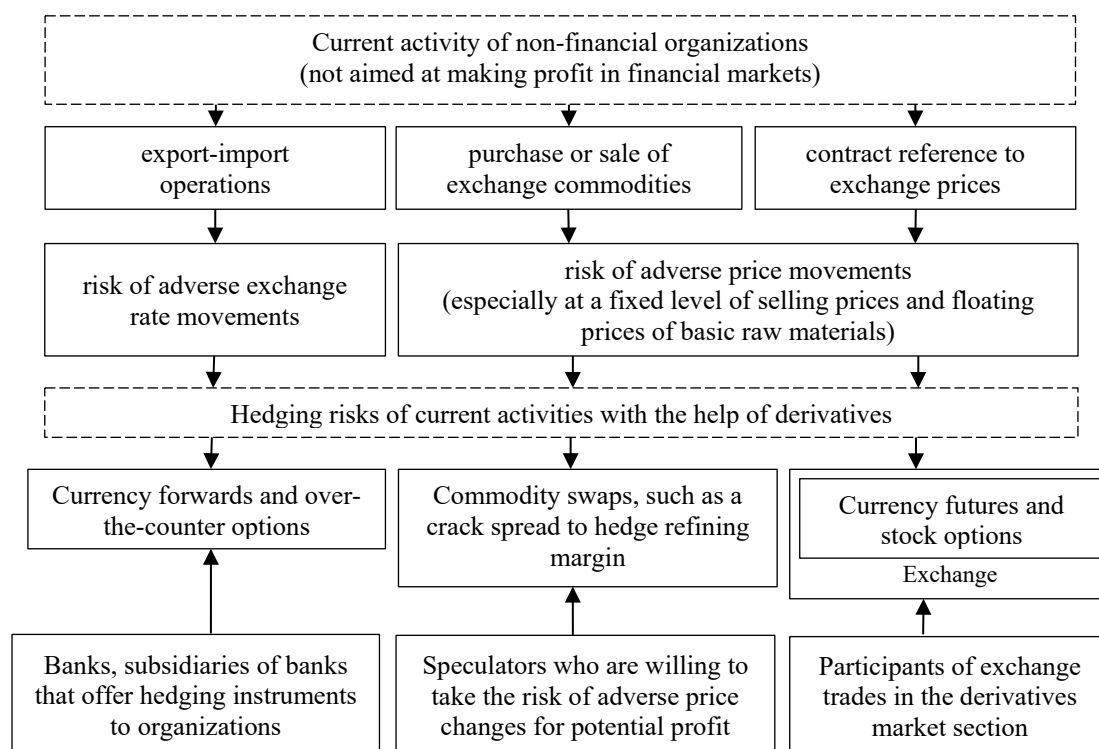


Source: own development based on the scheme, elaborated by Lavrinenko (2010)

Fig. 2. Characteristics of the opened management system

Depending on the field of activity, market variables (exchange rates, exchange prices, interest rates) can have significant impact on the final result of the company's performance indicators. Moreover, exposure to the risk of adverse movement of market variables can occur both at the stage of procurement and at the stage of sale of goods or services.

It is evident that the planning function will be implemented better, if the probability of occurrence of the planned scenario is higher. In this case, hedging with derivatives allows the company to plan the result that won't be affected by market risk. The most evident directions of hedging for non-financial organizations are protection against currency and price risks faced by exporters and importers, or by organizations working with exchange traded commodities. Potential areas of hedging risks that arise in the terms of current activity in non-financial companies are presented in figure 3.



Source own development

Fig. 3. Model of hedging the most significant risks arising in the current activity of non-financial organizations

In assessing hedging effectiveness it's necessary to take into account the changes in the value of the hedged item as well, while consideration only profit or loss on the hedging instrument doesn't take into account the purpose of hedging: the cost of hedged item and hedging instrument in an effectively built risk management system should move in opposite directions and provide the company with a stable level of income with a high probability (Masko, Pankov 2018).

### Conclusions, proposals, recommendations

According to the results of the study, the following conclusions can be drawn.

1. Corporate securities are an insufficiently studied type of securities in the Republic of Belarus, which, however, can provide an effective way to mobilize free funds of investors. Most authors name only specific securities, but do not make their classification. For clear understanding the essence of corporate securities we've provided our own definition of that term, which will help in the development strategic documents from the government side. One type of financial instrument that should be considered separately is derivatives. The use of derivatives at the corporate level has become widespread, as well as research in this area is versatile. Special attention is paid to the relationship between hedging and company value: theoretically, this relationship should have positive direction, but empirical studies are contradictory.
2. In the Republic of Belarus, the stock market, as well as the derivatives market, can be characterized by a significant role of the state in the creation process and high ratio of securities issued by banks and state institutions. If the share and bond market has certain trading volumes and positive growth dynamics, the derivatives market, both exchange and over-the-counter remains nominal: only currency instruments are traded between banks. In our opinion, derivatives with other underlying assets still remain a promising direction of development. We have identified problematic aspects in the legislative sphere, which results in such situation, when top-management of non-financial organizations considers that it is better to avoid financial innovations, because derivatives can bring more difficulties than benefits to their companies.

3. For better understanding from senior management side the necessity of hedging market risks and its place in the management system, we have considered the organization as an opened system, which is influenced by external factors. The planning function in this system will be implemented better, if the organization will be able to obtain the result that is not exposed to market risk. Therefore, we have developed a Model of hedging the most significant risks arising in the current activity of non-financial organizations. It includes such areas as export-import operations, purchase or sale of exchange goods, contract binding to exchange prices. In these cases, hedging with derivatives will be one of the most appropriate risk-management techniques and will have positive effect on the work of a non-financial organization.

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