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ACCOUNTING SYSTEM TRANSFORMATION: ACTUARIAL APPROACH IN 3D

Transformation of the modern accounting system is essential, since its content based on the method of double entry does not give a complete picture of the business entity spatial functioning in the conditions of crisis and COVID-19 pandemics. Because of its one-dimensional direction it relies only on the statement of actual business transactions according to the documented facts of past events (ignoring the prospective potential of business development, as well as the increase in its economic value). With the dynamic development of human society, there is an urgent need for a complete reorientation of accounting to changes in the entity potential attractiveness in future. Under such circumstances, and in terms of selling the business as a whole property complex, it is not the traditional accounting paradigm based on the double entry method that comes to the fore, but the dynamic concept of actuarial accounting, which should be based on a triple accounting system.

For the first time, scientific declarations of the triple accounting system were present in the works of the nineteenth century scientists. In particular, the foreign representative of accounting thought and innovation F.V. Ezersky (1836 – 1916) fully substantiated the potential need for the triple accounting system introduction with relevant accounts separation. However, the world community accepted the researcher's innovative approaches, who quite harshly criticized the Italian system of double-entry bookkeeping, rather negatively and without much enthusiasm [1].

J.V. Sokolov remarks that accounting is conducted day by day, but the financial result can be determined only later. That is why F.V. Ezersky undertook to create a form, which in his opinion was to ensure profits calculation after each business transaction. This form of accounting was called "three-window" or "three-storey" by the scientist (because only three accounts were used – "Cash", "Values" and "Capital") [2]. So to speak, it was an analogue of the modern approach to 3D-interpretation of socio-economic phenomena and processes.

That is, the researcher proposed his own approach to accounts separation and the appropriate methodological basis for recording information about the economic entities' business activities through substantiating comprehensively the innovative approaches to the triple accounting system and the etymology of the accounting terminology. But this approach could not resist the Italian accounting concept based on the method of double entry, which was already quite deep-rooted in accounting. In this context, the implementation of the appropriate informational and accounting provision of management with economic activity financial results, as well as prospects reproduction and lost

opportunities assessment to achieve the desired level of business profitability as a whole becomes of primary relevance [2, p. 64].

In today's conditions, some foreign scientists [3; 4; 5] to some extent offer their own approaches to the triple accounting system. But in contrast to the F.V. Ezersky's approach [2], the main emphasis in the accounts system separation is on the potential opportunities for business development, by separating the force accounts.

Dynamics is the level at which profit is made, so it is measured in monetary units for a year or a month. Force is measured by the level of dynamics change, thus in accounting it is expressed in monetary units for the period squared. Considering foreign approaches it is possible to assert that the triple entry model is an important step in the theory of profit calculation and various forces identification that affect the calculation result. The system application in practice encounters some difficulties, especially related to algorithms that identify the causes and significance of dynamics changes [3, p. 654].

The study of the etymological nature of "actuarial accounting" suggests that it is a complex dynamic system, which under a three-dimensional accounting system grounded on force accounts consideration is based on the methods of descriptive, simple, double and triple entry and provides thorough information about changes in enterprise market value in a three-dimensional space, grounded on the application of the triple accounting system [5, p. 137]. Accordingly, the dynamic concept of the triple accounting system, in our opinion, can find expression in actuarial accounting quite rationally.

Within the framework of the triple accounting system and in the current legislative space, it is necessary to take into account the approaches of foreign scholars to the actuarial accounting system. As for the traditional decimal system of accounts, which has long taken root in the domestic accounting field, it assumes that all accounts in their economic content are divided into no more than 10 groups. It is the decimal system of coding accounts that is considered more rational than the ordinal and serial ones. According to the vast majority of scholars, it creates unlimited opportunities for detailing accounting objects by introducing the accounts of the third, fourth and larger order into the accounting practice. That is, the decimal system makes it possible to distinguish "Actuarial Accounts" of the 10th class when displaying transactions that should be distinguished by the method of triple entry.

Actuarial accounting is aimed at meeting informational needs of the functional-cost approach to management. However, the scientists' opinions on the need and effectiveness of the actuarial accounting introduction into the practice of domestic enterprises differ significantly [4, p. 217].

In the conditions of further development of the actuarial stage in accounting, which is repeatedly emphasized by J. Richard [3] and which is characterized by the focus on the business entity market value increase (in order to further attract investment) and in the conditions of the business sale as a whole property complex, there is an urgent need to change approaches to the methodological basis for recording facts in the system of accounts.

F.V. Ezersky tried to solve the main task of management: to monitor the success of the enterprise in real time. Yes, all businesses around the world still, however paradoxically, work "blindly", because the financial result can be determined only after the balance sheet preparation. But even when it is compiled, there is a certain time lapse between the balance sheet date and the date of its compilation, sometimes it is several months (for the annual balance sheet) [2]. That is, there is an urgent need to change approaches to building a traditional accounting system, mainly in line with the actuarial concept.

In the modern accounting system of the 21st century innovations are possible at the junction of a number of fundamental disciplines. According to foreign experience, actuarial accounting is formed at the intersection of financial statistics, corporate finance theory, probability theory, mathematical statistics and accounting. In its turn, a triple accounting system is formed at the junction of actuarial accounting and mechanics as the basis for the three-dimensional space of future accounting paradigms in 3D format. That is, the intersection of different scientific branches serves as an impetus for new discoveries and the exploratory research system development on a particular issue.

A modern (actuary) accountant must not only know the theoretical and practical aspects of accounting organization and methodology, but also possess practical skills of actuarial calculations as well as abilities for direct organization and keeping actuarial accounting. This approach will contribute to the progressive revival of domestic business by creating a thorough accounting informational support to management through the prism of actuarial reporting, which in its turn will help amplify its investment attractiveness.

A 3D-paradigm of actuarial accounting takes into consideration foreign non-trivial approaches to the formation of financial statements in 3D, and presupposes its transformation into the actuarial managerial reporting considering the time factor (3D + time = 4D). This is achieved through the use of accounting information accumulated in actuarial 3D-accounts. The latter should be displayed in a separate 10^{th} class of accounts with the same name, which should be opened in the current Chart of Accounts. Such innovations in domestic accounting will contribute to the formation of the economic entities' investment attractiveness image, even with the sale of business as a whole property complex (WPC) and will ensure the national economy exit out of crisis by attracting necessary investment in the development of its definite sector, mainly an agrarian one.

According to foreign scholars, it is the actuarial accounting which is based on the system of double entry, but due to modern trends, its foundation should be based on a three-dimensional accounting system. Actuarial accounting is a system that uses the method of a descriptive, simple, double and 3D entry and displays information about the prospects of changes in the entity economic value and its cash flows in 3D format based on the use of 3D force accounts with their subsequent generalization in the actuarial managerial reporting.

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The content of actuarial accounting as a new stage in modern accounting system transformation is revealed. The foreign non-trivial approach to the triple accounting system based on the application of the "three-window" system of accounts and descriptive entry is studied. The concept of the "triple accounting system" is defined in terms of modern interpretation of socio-economic phenomena and processes in 3D format. The necessity to open a separate class of actuarial accounts in 3D format is substantiated. Particular emphasis is placed on the generalization of accounting information from the actuarial accounting system in actuarial reporting.