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CONTENT

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THE CHART OF OPERATIONAL AND FINANCIAL ASSETS, CAPITAL AND LIABILITIES IN THE ACTUARIAL ACCOUNTING SYSTEM

Problem statement. The system of actuarial accounting as well as the traditional accounting system requires the development of a systematic list of actuarial accounts. This is due to the urgent need to accumulate information on changes in the economic value of an enterprise that is necessary for making managerial decisions by investors and creditors, as well as by other capital providers. Therefore, in today's transition to a new actuarial stage of accounting, there is a need to develop an Actuarial Accounting Account for operational, financial assets, capital and liabilities. Moreover, it requires a detailed and comprehensive justification of the structure of actuarial accounts in 3D-dimensional space.

Review of recent publications. The problems of the theoretical and methodological necessity of implementation of actuarial accounting are reflected in the fundamental works of leading domestic and foreign researchers, as V.B. Ivashkevicha, M.I. Kutera, A.O. Lahovskoy, J. Martin, S. G. Penman, J. Petti, J. Richard, Y.V. Sokolova, B. Stewart, A.I. Shigaeva and others. Each researcher drew attention to the most interesting, from his point of view, aspects of necessity of implementation of actuarial accounting. But domestic works about the need to develop a plan of actuarial accounting are generally absent, which caused the need for further research in this direction.

Unresolved issues. The problem of constructing a modern accounting system requires substantiation of its effective methodical toolkit. Accounts are one of the elements of the traditional accounting method. In turn, the chart of accounts is a systematic list of accounting records for the display of business operations and the accumulation of accounting information about the activities of the company necessary for users to make decisions. Accordingly, the system of actuarial

accounting, as an innovative level of accounting, requires the development of an actuarial account system.

The goal of this research is to improve the theoretical framework and develop scientific and practical recommendations on development of an actuarial accounting plan, operational, financial assets, capital and liabilities.

Key research findings. The modern system of actuarial accounting determines the basis for its construction in a dynamic economic environment not only of our homeland, but also beyond its borders, and also acts as the basis for the legislative support system of actuarial accounting for investment activity in financial markets. It is worth noting that so far no domestic scholars have focused on the need to develop an Actuarial Accounting Account for operational, financial assets, capital and liabilities. In addition, there are no gains in substantiating the structure of actuarial accounts at all. In our opinion, they should be built in 3D projection. That is, actuarial accounts need to be formed in a multidimensional space.

Space is what accumulates points and the environment. Accordingly, the point is the smallest integral part of the space. Accordingly, the dimensionality of the point determines the dimensionality of the space. In turn, dimensionality is the number of possible directions for the given space [4].

3D space has a graphical interpretation in the form of a «point of the volume», but the feature is that time (t) is not the fourth coordinate of the fourth dimension. Time is the 5th dimension (5D = 4D + time (t)). Since we live in a fourfold space, we see, accordingly, its projection, so we operate only three coordinates in space (x; y; z) [4].

3D – space – this is a kind of geometric model of the material world. The three-dimensional space is characterized by three homogeneous measurements, which are: height, width and length. In other words, 3D – space is described by three orthogonal vectors.

Euclidean space is a space whose properties can be described using the axiom of Euclidean geometry. That is, it takes into account that the space has dimensionality equal to 3. The movement of the Euclidean space is a transformation that preserves

the metric (isometry). An example of motion is a parallel transfer to the vector v, which translates point p to the point p + v. It is not difficult to see that any motion is a parallel translation and transformation composition that stays one point. When selecting fixed points as the origin of coordinates, any such movement can be regarded as an orthogonal transformation. The orthogonal transformation of the n-dimensional Euclidean space form a group of matrices n * n satisfying the condition Q = E, where Q is the transport matrix, and E is the unit matrix [6].

A. Kotlin [2] defines the notion of "dimensionality" as the direct number of admissible for the corresponding space of movement directions, for example, for D = 3 is: forward ↔ back; left ↔ right, up ↔ down.

The Free Economic Encyclopedia Wikipedia interprets the term dimension ("English") as a certain number of independent parameters that are necessary for the direct description of the state of an object or the total number of degrees of a system that has an abstract expression of the form [6].

Evident examples of the Euclidean space can be the following spaces:

- dimensionality 1 (Section on a plane);
- dimensionality 2 (Euclidean plane);
- dimensionality 3 (Euclidean three-dimensional space) [6].

If we interpret the above-mentioned approach to the structure of our proposed innovative 3D power accounts (F, from English force) in the actuarial accounting system, then the 3rd dimension for the traditional T-account in the 3D format is three independent measurements to describe the state an actuarial account object that is formed at the intersection of two T-accounts, one of which accumulates the traditional form, and consists of parts such as «debit» (Dt) and «credit» (Кт), the other - acquires a perspective format, and consists of such a part as – «excpect», which can be positive or a negative prospective trend of change («+» and «- »). The last 3rd part of the 3D account, called the «excpect» (*from the Latin «expectandum» – I expect*) reflects the projected trends in the value changes of actuarial accounting objects. The left side of the 3D-account within the «excpect» axis reflects the prospect of reducing the amount (-), and the right is an increase.

More detailed aspects of the structure of 3D-accounts in the system of actuarial accounting were discussed in previous studies published at the XIII International Scientific and Practical Conference in Bulgaria (Sofia), «Achievement of high school-2017».

In the system of actuarial accounting, as in the traditional accounting system, continuous strategic control over the prospects of changing the economic potential of a business through the actuarial account is to be achieved using actuarial 3D power accounts (F), that is, in the n-dimensional space.

Until now, the notion of n-dimensionality of space was used in various fields of science, but the scope of accounting was bypassed by the party. We propose to apply a n-dimensional approach to the spatial interpretation of a promising change in the business potential of a business on the accounts of accounting in the 3D-space. We suggest treating «actuarial 3D accounts» as a means of creating and storing accounting information from the system of actuarial accounting, which is not necessary for actuarial financial statements and adopting promising managerial decisions in the conditions of investment activity in the capital market.

In analytic geometry, each point of a three-dimensional space is described as a set of three coordinate values. In this case, three mutually perpendicular axes, which intersect at the origin of the coordinates, are determined. The placement of a point is given relative to these three axes by the ordered ordered three numbers. Each of these three numbers determines the distance from the beginning of the countdown to a point along the corresponding axis, which is equal to the distance from the point to the plane formed by the other two axes [6].

According to the structure and purpose of our proposed actuarial 3D-accounts of force (F), in our opinion, it is expedient to attribute to the regulatory accounts.

As it is the regulatory actuarial 3D-accounts that are intended to specify (determine) the prospective assessment of operational and financial assets, operational and financial liabilities, and capital of an entity that information is accumulated on the accounts of classes 1 to 9 of the Accountancy Account for assets,

liabilities and business operations of enterprises and organizations [1]. That causes the need to open class 10 «Actuarial 3D-accounts» in the current Accounts plan [1].

In our opinion, 3D accounts should be attributed to sub-accounts, that is, actuarial accounts, the indicators of which are used to determine the perspective assessment of actuarial accounting objects that are reflected in traditional T-accounts. In the system of actuarial accounting, in contrast to the traditional approach, this regulation is carried out in order to determine the prospective value of an object of actuarial accounting that is regulated.

In the domestic accounting practice, regulatory accounts are used to assess economic instruments and determine the actual size of the sources of their formation. Distinguish the following types of specified accounts: counterparty, complementary and counterparty complementary.

We suggest that actuarial 3D-accounts be classified as complementary, since they combine signs as subtractive (used to reduce the assessment of actuarial objects of accounting, and in their structure are opposite to the accounts that they reduce, that is, they are contractive (KA) – that is, they themselves are passive, and counter-passive (KP) - that is, they themselves are acquiring) and supplementary accounts (used to increase the valuation of the value of actuarial objects, respectively, in structure such accounts are opposite to the accounts that they reduce).

CAA (Contractual Actuarial Accounts) 3D-accounts – are intended to regulate the valuation of certain major active accounts, therefore, they are passive. For a loan - an increase in sums is shown, as deductions from the balance of the main active account, and by the debit - decrease. The balance of this account reflects the information on the final amount to be deducted from the balance of the main active account. Reverse trends are characteristic for counter-passive actuarial accounts (CPAs).

3D accounts should be defined as complementary, as they reflect the perspective value assessment of actuarial accounting objects that may have both a tendency to increase and a decrease in the forecast period. That is, they are complementary to the main T-accounts.

Accounts in the actuarial accounting system are directly related to the actuarial balance sheet (Actuarial Statement of financial position).

As a result, based on the conceptual form of the Actuarial Balance Sheet (Actuarial Statement of Financial Position) consisting of the following parts: net operating assets (left-hand side) and net financial liabilities; Equity (right side), 3D accounts should be opened directly to such actuarial accounting objects as:

- operating assets (OA);
- operational obligations (OA);
- financial liabilities (FL);
- financial assets (FA);
- equity (EQ).

In more detail, the specificity of deepening information from the system of actuarial accounting on 3D-accounts, in the context of sub-accounts, was disclosed in our previous studies.

In relation to the Actuarial Balance Sheet (Actuarial Report on Financial Condition), there are three types of 3D-accounts:

- active (counter-passive);
- passive (contractual);
- active-passive (counter-complementary).

Active and passive accounts, by their nature, combine signs of active and passive accounts, that is, the formed balance at the end of the period on such accounts may be, both debit and credit.

Similar to the traditional accounting system, there is a close relationship in the system of actuarial accounting between actuarial 3D-power accounts and the Actuarial Financial Statement Report.

- A separate actuarial 3D-account corresponds to each article of the Actuarial Financial Statement, except for cases where individual articles aggregate accounting information from several 3D accounts;

- 3D-accounts are classified as contractual (passive) and counter-passive (active) in the same way as Articles of the Actuarial Balance Sheet (Statement of Financial State);

- the sum of the balances on all active accounts is the level of the balance of the asset of the Actuarial Balance Sheet (Statement of financial position), and, in all passive accounts, the Actuarial Balance Sheet (Statement of financial position);

- The actuarial balance is based on accounting information from actuarial 3D accounts, and 3D-accounts are opened based on Actuarial Balance data.

Table 1

A fragment of the actuarial accounting, operational, financial assets, capital and commitments bill on the basis of foreign experience account [2; 8]

Synthetic bills		Subaccounts	Scope of application
Code	Name		
1	2	3	4
Class 10. Actuarial 3D-accounts			
Section 101. Operational activities			
Group 1010. Net operating assets (liabilities)			
10101	Operating assets	101011 Operating cash	Operational activity
		101012 Settlements with different debtors	
		101013 Commodity and material values	
		101014 Fixed assets	
		101015 Intangible assets	
10102	Operating commitments	101021 Payments with suppliers and contractors	
		101022 Payments for taxes and payments	
		101023 Payments to employees	
		101024 Settlements with participants	
		101025 Payments for other operations	
Section 102. Financial activities			
Group 1020. Net financial liabilities (assets)			
10201	Financial assets	102011 Financial investments in cash	Financial activities
		102012 Short-term financial investments	
		102013 Long-term financial investments	
10202	Financial liabilities	102021 Short-term loans	
		102022 Current debt on long-term liabilities	
		102023 Obligations under lease agreements	
Group 1021. Equity			
10211	Equity	102111 Registered capital	Financial activities
		102112 Capital in surplus	
		102113 Additional capital	
		102114 Retained earnings (uncovered losses)	

So, an actuarial 3D-account is two T-accounts in a 3D-projection, corresponding, in addition to the traditional two sides: the left, which is called debit

(*from lat.* «*Debet*» – *guilty*) and the right, which is called a loan (*from lat.* «*Credit*» – *to believe*), the third dimension of the account appears - excpect (*from lat.* «*Expectandum*» – *I expect*), that is, a promising 4D format (3D + forecasting time lag) is formed.

Directly fragmentary suggestions on their detail on the basis of taking into account foreign experience [8] and the specifics of the domestic legislative space are summarized in Table 1.

In addition to the tabular summary of the Actuarial 3D-accounts, we have to open corresponding actuarial accounts for the accumulation of accounting information from the system of invoice accounting for the aggregate financial result, free cash flow and the economic value of the business.

Conclusion. Taking all of this into account it is necessary to to develop a plan for actuarial accounting, operational, financial assets, capital and liabilities. Moreover, it should be noted that 3D-accounts should be attributed to sub-accounts that are additional, supporting accounts in the actuarial accounting system and used to adjust indicators, refinement of valuation of operational and financial assets and liabilities that are reflected in main accounts. Contractual actuarial accounts should be subtracted from contractual actuarial accounts (KAAs) and counter-pass actuarial accounts (CPAs). In our opinion, actuarial 3D power accounts (F) should be attributed to complementary accounts, that is, actuarial accounts, the indicators of which are used to determine the perspective valuation (value) of actuarial accounting objects that are reflected in traditional T-accounts. To accumulate accounting information from the system of actuarial accounting, we propose to provide for the opening of the 10th class accounts in the plan of accounts of accounts of assets, capital, liabilities and business operations of enterprises and organizations with the same name «Actuarial 3D-accounts». The latter outlines the prospects of further exploration within the framework of the chosen problem, namely, the disclosure of the main aspects of detailed justification of the structure of synthetic accounts and subaccounts of accrual accounting and their use for improving the efficiency of management of domestic business entities through the prism of spatial interpretation

of economic activity in the multidimensional format of the accutane accounting concept.

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