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The Application of the Accrual Basis Principle in Dynamic Balance Theory for Ensuring Sustainability in Bulgaria

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Abstract: **In accrual basis accounting, flows are recorded at the time economic value is created, transformed, exchanged, transferred or settled. The period between the time a payment is accrued and the time it is actually made is recorded as a receivable or payable in the financial accounts. The criterion for recognizing receivables and payables that have arisen is the right to receive or pay cash. The financial condition of the organization in the future period is presented in a resulting balance sheet, which is a function of the balance sheet in the current period and the income received and payments made in the future period. The transfer of funds to the future period for the repayment of incurred liabilities leads to a decrease in cash and a reduction in liabilities. The receipt of cash resources in connection with the receivables incurred leads to a decrease in receivables and an increase in cash. This development is described by the theory of the dynamic balance sheet. The dynamic balance sheet is an auxiliary tool for forecasting the financial result and is not part of the annual financial statement of the organization. The theory of the dynamic balance sheet was introduced by Eugen Schmallenbach, a representative of the German accounting school. E. Koisol, his follower, further developed this theory through the concept of the Patagoric balance sheet he developed. The dynamism of the information in the balance sheet reflects the effects of applying the accrual basis in statics and dynamics. The methods of analysis and synthesis, observation and comparison, analogy, modeling and accounting methods of balance sheet summarization were used. The preparation of a dynamic balance sheet allows for the expansion of the application of the accrual basis in budgeting in the private and public sectors.**

Keywords: ***accounting, accrual basis, dynamic, sustainability.***

I. INTRODUCTION

Bulgaria is a member of the European Union. In this regard, in connection with reporting to the Eurostat, the country's commitments to macroeconomic statistics have increased over the last decade. The system of national and regional accounts currently used by EU members (ESA) provides the accounting macro-framework for government and private sector statistics in the EU, which is based on current accrual. "In the European System of Accounts 2010 (referred to as "ESA 2010" or "ESA"), flows are recorded on an accrual basis; i.e. when economic value is created, transformed or lost or when receivables or payables arise, transformed or extinguish."[16] In summary, the principles of accounting are generally known and applicable. The generally known ones are observability, causality, specificity, storage, equivalence of changes, analysis, summary and others.[1] "In applied terms, accounting principles are the restrictive rules for creating accounting information for individual business transactions in the capital turnover carried out in the enterprise."[7] The principles are the basis for implementing the information function of accounting with a view to creating quality information for the reported objects. In this regard, as one of the accounting principles, "the consideration of the problem of accrual accompanies the transition of fundamental accounting concepts from concepts to the formulation of conventions and the formalization of accounting principles."[13] According to the currently effective Accounting Act in Bulgaria, the accrual principle states: "accrual - the enterprise prepares its financial statements, with the exception of statements related to cash flows, based on the accrual principle - the effects of transactions and other events are recognized at

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the time of their occurrence, regardless of the time of receipt or payment of cash or their equivalents, and are included in the financial statements for the period to which they relate."[18, art. 26, para. 1, item 4] As can be seen, the text of the accrual principle sufficiently clearly characterizes the independence of accrual from the moment of receipt or payment of cash or their equivalents, meaningfully emphasizes the right to recognize liabilities or receivables in the current and to receive or pay cash in the next reporting period. It is precisely and comprehensively explained that the effects of accrual are included in the financial statements for the period to which they relate. The application of the accrual principle is characterized by:

-1. The difference between the receipt or payment of cash and the right to receive or pay it.

-2. Accrued income and expenses arise in one reporting period, but the cash will be received or paid in a subsequent reporting period.

These circumstances also emphasize the essence of the accrual principle, which is expressed in the right to recognize receivables and payables incurred in the current reporting period as settlement relations that will be received or paid in a subsequent reporting period. The topicality of the topic is caused by the circumstances that it is impossible to recognize the currently arising receivables and obligations, reported on an accrual basis in Bulgaria as current rights and obligations in the public sector budgets. It is also relevant to submit an interim report containing an accrual and cash basis, which will present accounting information for inclusion in the sustainability report. The purpose of the study is to present a report that contains accounting information on sustainability in the private and public sectors. The study is supported by a comparison of different authors' theses on the balance sheet from the history and theory of accounting. By researching statements in various legal acts, the thesis of applying the accrual basis in a dynamic balance sheet and on this basis preparing accounting information for inclusion in the sustainability report is emphasized. In total, nineteen literary and legal sources are used.

II. Materials and Methods

The accounting balance sheet has as its theoretical and scientific basis the balance sheet summary and the double entry of business transactions (the dopika), which are the main elements of the accounting method.[4] It is a technical means for implementing the balance sheet summary of the accounting information reflected up to this point by means of current accounting. The accounting balance sheet is characterized by staticity, because it reflects the accounting information at a certain point in time. As a means and method of knowledge, the accounting balance sheet and the balance sheet summary are inextricably linked to each other. The balance sheet summary is a method by which two sides of something are compared in order to achieve equilibrium (balance) between them.[5] In accounting, achieving equality between the two sides is mandatory, since they are two sides of the same object. The two-sided manifestation of the property of the enterprise is expressed in the two sides of the balance sheet - "Asset" and "Property and liabilities". In the asset, the property is shown as a specific composition of funds (assets) with a given form of embodiment and functional purpose. In the liability, the sources of the property are designated and shown, systematized as equity and foreign sources (liabilities).

TABLE 1 O. SCHMALLENBACH'S DINAMIC BALANCE

Dynamic balance sheet	
Asset	***Property and liabilities***
Cash and non-cash assets such as expenses that have not yet become income, i.e. the organization has spent the money but has not yet absorbed it in its activities.	Capital, reserves, financial result. Income and expenses that give rise to rights and obligations, recorded through estimates.
1) cash (cash, current account, etc.) Decrease: 2) expenses, but not yet invested in production, are in stock (purchase of materials, etc.); 3) values that will become expenses after they receive cost price (semi-finished products, etc.); Increase: 4) estimates that give rise to receivables but are not yet receipts of funds (receivables); 5) values that will become income through sale (finished products, etc.);	1) capital; 2) expenses that will become values (reserves, etc.) Increase: 3) income that will become assets assets (advances received, etc.); 4) proceeds that are the result of liabilities incurred (loans received, credits, etc.); Decrease: 5) estimates that give rise to liabilities, but not yet expenses (liabilities to suppliers, salaries, etc.);

Static balance refers to the state of the object at a given moment, while dynamic balance refers to the state of the object over time. Dynamic balance is an aid to forecasting the financial result and is not part of the annual financial statement of the organization. The theory of dynamic balance was introduced by Eugen Schmallenbach (1873 - 1955), a representative of the German accounting school. If we consider the material results and material costs for a short period, then the excess of the results for this period over the costs is not equal to the financial result, since financial costs and revenues do not always correspond to the material results and costs incurred. O. Schmallenbach's dynamic balance is presented in Table. 1, adapted according to [8]. It is striking that the goal of Schmallenbach's approach is to capture the unfinished business in business operations, to try to distinguish the current moment in which the funds have not been received or paid, but after a certain action (completion of production, delivery, occurrence of dates for payment of salaries and social security contributions, etc.), in a future reporting period, the amounts will be paid or received. This controlled dynamic, launched as early as 1919 by

Schmallenbach, according to other authors, is perceived in practice "as 'accrual accounting', i.e. recording and deriving elements of the economic result based on realized "profits" (income) and the "sacrifices" made for this (expenses in the income statement)."[9] In developing the concept of the dynamic balance, "Schmallenbach based himself on a specific model, in the construction of which he proceeded from the premise that the balance sheet does not show the state of economic resources and their sources, but on the contrary, the movement of both resources and sources."[8] In this sense, the main task of the dynamic balance sheet is to obtain the financial result.

Unlike the static balance theory, representatives of the dynamic balance sheet theory consider the depreciation of assets not as depreciation (i.e., as a decrease in their value), but as the distribution of the purchase value of assets between the individual periods during which these assets will bring economic benefit to the enterprise. Representatives of the dynamic balance theory believe that "... assets are generated future costs (such as depreciation costs, material costs, etc.), which will manifest themselves as such in subsequent reporting periods." [6, 84]

The main purpose of the static balance is to establish the financial condition of the organization as of a certain date. Therefore, the dynamic balance considers this date as the beginning of the current reporting period and disposes of the future by calculating the rights to receive receivables or repay liabilities. The dynamic balance can be interim or annual. Its purpose is to support the reporting, management and control of the organization.

E. Kosiol, a follower of O. Schmalenbach, further develops the theory of the dynamic balance through the concept of the pagatoric balance developed by him. In English, pagatoric means something related to payment. The pagatoric balance is an application of both the accrual and cash basis. The dynamism of the information in the balance sheet reflects the effects of applying the accrual basis and cash basis in statics and dynamics. According to Kosiol, "the actual business operations are designated as income – an increase in economic benefits, and expenses – a decrease in economic benefits, which is different from cash inflows and outflows."[6, 86] The reason for this is that income and expenses include receivables and liabilities, recorded as estimates, which are the right to pay and receive payment in a future period. Total reflection of the benefits is achieved through business turnover for current and future reporting periods. The disadvantage is that there is no reflection of the material embodiment of the purchased assets in the balance sheet, as well as their capital source. The latter means that in the Pagatoric balance sheet the depreciation expenses reflected do not correspond to the asset to which they are accrued. This balance sheet does not include long-term assets, which may be related to environmental, social and management sustainability.

The conclusion that can be made is that O. Schmalenbach's dynamic balance sheet can be used to account for sustainability. Through this balance sheet, the accrual basis forms and maintains the sustainability of expected financial results. The balance sheet also includes long-term assets and the sources of their financing, as well as their depreciation when used to form and maintain environmental, social and management sustainability.

Sustainable development is often defined as "development that meets the needs of the present without jeopardizing the ability of future generations to meet their own needs".[11] It is understood as a comprehensive approach that unites the three pillars of environmental, social and economic sustainability.[2] Budgeting fits into the general framework of the planning, decision-making and control process. Velcho Stoyanov defines the budget as "... a digital financial expression of government policy, ... an instrument for public accountability and control over state financial resources ... and ... a means of managing the financial economy."[2] Other authors believe that "the budget is an element of a performance management system, which is a quantitative plan of dynamically changing target values, expressing the relationship between the organization's goals and the resources needed to achieve them."[10, 49] Budget planning specifies the implementation of a medium-term and long-term plan in the current accounting year. The budget serves as a tool through which the activities of the different parts of the organization are synchronized for the implementation of the overall plan. Budgets are planned, managed, reported and controlled at all management levels in the organization. Therefore, the budget is a tool for planning and controlling environmental, social and economic sustainability. In response to the static theory of balance sheets, the organization's budget planning provides a static budget as of a certain date. This budget is characterized by low flexibility and cumbersome procedures for introducing corrective parameters. In the transition from the current to the next reporting period, the identified deviations often impose significant changes in the planning of the organizational and financial goals of the business enterprise. Maya Lambovska proposes a process of budget management of the organization, which has the form shown in Fig. 1.[3] The dynamic balance is the basis for the implementation of the described corrective actions for the implementation of budgetary control in the reporting of environmental, social and governance sustainability. For the purposes of reporting through a dynamic balance, both in the management of public finances and in the economic organization, result-oriented budgeting can be used. "Result-oriented budgeting seeks to ensure the achievement of the set goals, by focusing on the optimal measures for assessing their implementation."[10, 26] Budgeting in the public sector in Bulgaria is carried out on a cash basis. The manual for the implementation of the applicable chart of accounts of budgetary organizations – introductory, general part – item

11 states that the reporting of budgetary enterprises is on an accrual basis. Nevertheless, the principles of current accrual and cash-based reporting are applied simultaneously. The Public Finance Act (PFA) legally defines that the "Cash Basis" is a budgeting and reporting system that covers all cash receipts and payments subject to recording in the bank accounts of budgetary organizations, their cash transactions, as well as transactions equated to them in accordance with the relevant provisions of the standards and guidelines for the reporting of budgetary organizations under Art. 164, para. 1."[19, § 1, item 17] of the PFA. The "cash basis" principle is also called the cash flow principle. The "cash basis" principle through the Unified Budget Classification facilitates the budget process through the possibility of planning and control over the reporting of budget revenues and expenditures, but does not take into account the receivables and liabilities formed through estimates in the state budget. There is no legally permitted methodological toolkit for reporting the state budget on an accrual basis. The Public Finance Act stipulates that the Minister of Finance shall approve accounting standards and the chart of accounts and shall issue instructions to budgetary organizations, which shall be by the requirements of the European Union for public sector reporting, statistics, and budgeting [19, Art. 164, para. 1, item 1]. The Accountancy Act does not comment on the issue of sustainability in the public sector, as this issue is regulated by a subordinate regulatory act issued by the Minister of Finance.

III. Results and Discussion.

Sustainability reporting in Bulgaria as a member of the European Union is in line with transposed directives in 2024. Regulation (EU) 2023/2772 (ESRS) provides an updated proposal for European Sustainability Reporting Standards (ESRS) and the structure of a sustainability report.[14] The European Sustainability Reporting Standards apply to all companies falling within the scope of the Corporate Sustainability Reporting Directive (CSRD) - Directive (EU) 2022/2464 of the European Parliament.[15] Specifically, the ESRS sets out the information that an enterprise must disclose about its material impacts, risks, and opportunities in relation to environmental, social, and governance sustainability issues. In response to the ESRS requirements, the term “non-financial statement” is replaced by “Sustainability Report” in the Bulgarian accounting legislation, which is part of the annual report of the organization.[18, Art. 48, para. 1-12]

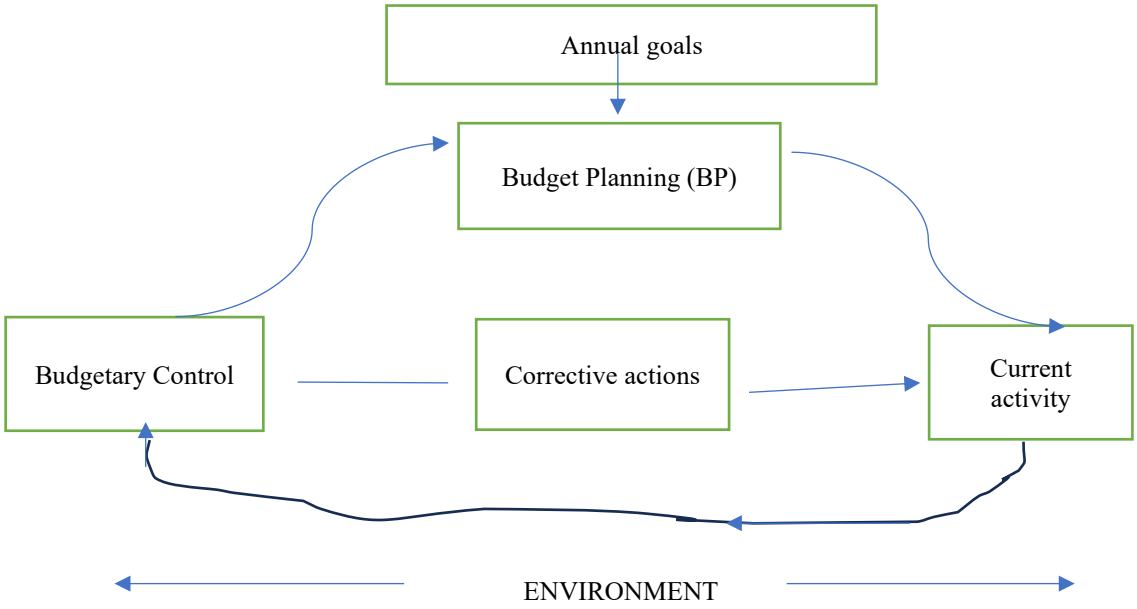

Fig. 1. Process of budget management of the organization.

The sustainability report is not a component of the annual financial report of the business organization. According to the ESRS, and in particular through Disclosure Requirement GOV–4 – Due Diligence Report, it is facilitated to understand the process of the enterprise for due diligence in relation to sustainability issues. Appendix D of the ESRS, European Sustainability Reporting Standard 1, presents the Structure of the Sustainability Report. The company structures its sustainability report in four parts, following the following

order: general information, environmental information (including the information disclosed under Article 8 of Regulation (EU) 2020/852), [17], social information and management information (management information) [14, ESRS 1 General Disclosures, par. 115].

TABLE 2 DINAMIC BALANCE SHEET FOR SUSTAINABILITY REPORTING

Dynamic balance sheet	
Asset	***Property and liabilities***
1) money (cash, current account, etc.) **Decrease** 2) expenses, but not yet invested in production, are in stock (purchase of materials, etc.); Account Materials, analytical accounts for: - environmental sustainability; - social sustainability; - manager-l sustainability. 3) values that will become expenses after they receive cost price (semi-finished products, etc.); Account Costs for main activity, analytical accounts for: - environmental sustainability; - social sustainability; - managerial sustainability. Increase 4) estimates that give rise to receivables, but are not yet receipts of funds (receivables); Account receivables from customers, analytical accounts to the Account receivables for: - environmental sustainability; - social sustainability; - management sustainability. 5) values that will be converted into income through sales (finished products, etc.); Account expenses for main activities, analytical accounts for: - environmental sustainability; - social sustainability; - management sustainability.	1) capital; 2) expenses that will become values (reserves, etc.) **Increase** 3) income that will be converted into assets assets (advances received, etc.); Account advances from customers, analytical accounts to the Advances from customers for: - environmental sustainability; - social sustainability; - management sustainability. 4) proceeds resulting from liabilities incurred (loans, credits received, etc.); Account Financing, analytical accounts to the Financing account for: - environmental sustainability; - social sustainability; - management sustainability. Decrease 5) estimates giving rise to liabilities, but not yet expenses (liabilities to suppliers, salaries, etc.); Account Liabilities to suppliers, personnel and others, analytical accounts to the Liabilities account for: - environmental sustainability; - social sustainability; - management sustainability.

The regulatory framework for the preparation of the sustainability report is complex and does not specify the requirements for the preparation of a sustainability report precisely enough. The requirements for the preparation of a sustainability report by business organizations are proposed in the Accountancy Act, but there is no methodological indication of how to prepare the accounting information in the sustainability report. An interim dynamic balance sheet needs to be proposed. The information from this balance sheet will be included in the sustainability report. The dynamic balance sheet developed by O. Schmallenbach, supported by data from synthetic and analytical current accounting on an accrual basis, for the purposes of preparing the sustainability report, may have the form shown in Table 2.

The transfer of cash in the future period to repay the liabilities incurred leads to a decrease in cash and a decrease in liabilities. The receipt of cash resources in connection with the receivables incurred leads to a decrease in receivables and an increase in cash. No change is observed in the amounts of the asset and liability of the balance sheet.

IV. CONCLUSIONS.

Accounting information obtained through current accounting and synthesized in the interim balance sheet provides reporting according to international accounting standards. Accounting information reported on an accrual basis provides current information on rights that have arisen as receivables and payables and paid in the next reporting period. These circumstances give reason to consider that information on an accrual basis supports the reporting of sustainability in the organization. The regulatory acts of the European Union governing sustainability reporting require the preparation of a sustainability report, which includes financial and non-financial accounting information. Therefore, financial information must be on an accrual basis, and non-financial information should cut off the circumstances of the rights and liabilities that have arisen, regulated in the current and future periods. Therefore, the sustainability report must correctly reflect the data on a current accrual basis. The interim dynamic balance sheet, prepared on the basis of the balance sheet of O. Schmalenbach, provides an opportunity to prepare a report for including accounting information in the sustainability report to the annual activity report. Accrual accounting through interim dynamic balance is a tool that provides a basis for budget adjustments in the public and private sectors. The dynamic balance sheet proposed by E. Koisol, with the inclusion of accounting information on an accrual basis, can be used to improve the cash statement applicable in the public sector in Bulgaria. The presentation of the cash statement in the public sector with an appendix on the rights and obligations on an accrual basis in each budget organization leads to the application of the same reporting for the state budget. For the true and accurate presentation of accounting information in the sustainability report of business organizations, it is necessary to prepare an interim financial report providing data for inclusion in the sustainability report for the implementation of the Corporate Sustainability Reporting Directive (CSRD) and in accordance with the requirements of the Delegated Regulation on the Standards of Sustainability Reporting (ESRS).

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