








# Balance Sheet (Statement of Financial Position) Transformation in the Light of New Digital Technology: Ukrainian Experience

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**Abstract.** The paper contains suggestions on balance sheet (statement of financial position) transformation based on the Ukrainian reporting Form 1 in the context of approaching IFRS and European integration with the use of digital computer technologies to make it more analytical. Historical aspects of the balance sheet as an information base on the financial position of an enterprise are considered and clarified. Suggestions are put forward on transforming the assets of this reporting form in the light of digital computer technology, which is expected to improve the quality of its information content. In scientific literature, there are various ways of analyzing the financial position on the basis of the financial position statement data. Unfortunately, until recently, this issue was not sufficiently described in scientific literature with regard to the essence of the concept of financial position and a clear articulation of the organizational stages of its analysis, systematization of methods and obtained results at each stage, which necessitates the research.

**Keywords:** Balance sheet · Assets · Liabilities

## 1 Introduction

The fourth industrial revolution is introducing rapid changes into all areas of human activities. The changes are due to the use of artificial intelligence, robotics and digital technologies of various kinds. The wide use of digital computer technologies induces changes in such professions as accountant, financial analyst, auditor, etc.

The Statement of Financial Position (balance sheet) of an enterprise is the first main form of an enterprise's financial reporting in any country. The balance sheet is an accounting category representing a synthesis of accounts. We should be able to read a balance sheet and assess it critically in terms of content, structure and rational use of data. These issues have become especially important in the light of digital economics and modern computer technology.

So, the issues of generating financial reports (including balance sheets) and their application are addressed by: 1) USA: L.A. Bernstein (2002) [1], T.P. Carlin (2001) [2], A.R. McMeen (2001) [2], Conrad Karlberg (2008, 2015, 2016, 2019) [3–6], R.C. Higgins (2007) [7], Charles H. Gibson (2013) [8, 9], Lyn M. Fraser, Aileen Ormiston (2010, 2013, 2016) [10], Walter Aerts, Peter Walton (2013, 2017) [11, 12], Joanne V. Flood (2015) [13]; 2) France: B. Kolass (1997) [14]; Krishna G. Palepu, Paul M. Healy (2013) [15]; 3) British scientists (London): McKenzie Wendy (2003, 2006) [16], D. Stone (1998), K. Hitcheeng (1998) [17]; P. Atrill (2007, 2015) [18, 19], E. McLaney (2007, 2015, 2017) [18–20]; 4) Ireland: Walsh Ciaran (2001) [21]; 5) Latvia: V. Paupa (2008) R. Sneidere (2008) [22]; 6) Russia: M.I. Kuter (2017, 2018, 2019, 2020) [23–26], M.M. Gurskaya (2017, 2018, 2019, 2020) [23–26]; 7) Iraq: Saoud Chayed Mashkooor Alamry (2019) [27]; 8) India: T.S. Grewa, H.S. Grewal, G.S. Grewa, R.K. Khosla (2019) [28]; 10) Scotland: A. Sangster (2017, 2020) [25, 26] and others. Many unsolved problems are discussion.

Such issues as the structure, content and assessment of the articles of an enterprise's financial position are under constant review by academic economists worldwide. Nevertheless, they do not seem to be completely solved. The problems of analytical possibilities of the balance sheet are also subjects of debate. The content and methodology of determining the finance indicators based on the balance sheet data remain unsolved problems. The current relevance of these problems is increasing in a globalized economy and with accelerated development of digital computer technology.

The aim of the article is to develop proposals to transform the Ukrainian balance sheet (financial statement) under conditions of approaching the IFRS and European integration with the use of digital computer technologies to make it more informative and analytical.

The tasks of the article are: studying the concepts of 'balance sheet' and 'statement of financial position'; presenting the history of the development of balance sheets in the world and in the independent Ukraine in the context of approaching the IFRS and European integration; describing the structure and content of the assets and liabilities of the Ukrainian balance sheet, making suggestions for their improvement under conditions of digital computer technologies; describing the analytical possibilities of the Statement of Financial Position under conditions of digital computer technologies and in conjunction with other forms of financial statements; developing organizational stages of the statement of financial position (balance sheet) taking into account the National Accounting Standard № 1 "General Requirements for Financial Statements" (Ukraine), international standards for financial statements and the EU Directive 2013/34/EU on yearly financial statements.

The solution of the tasks set will make the balance sheet more informative and analytical, which would accelerate the adoption of science-based management decisions by its users in the context of digital computer technologies.

## 2 Research Method

The study used: 1) general scientific methods: historical and logical approach, induction, deduction, analysis and synthesis; 2) special techniques: accounts, double entry, balance, reporting, spreadsheet, generalization.

### **3 The Concepts of «Balance Sheet» and «Statement of Financial Position». The History of the Development of Balance Sheets in the World and in the Independent Ukraine in the Context of Approaching the IFRS and in Compliance with the EU Directive 2013/34/EU on Yearly Financial Statements**

The word «balance» comes from the Latin word «bilanx», which means two-scale. The Romans used this word in conjunction with the word 'libra' (balance) to mean two-scale balance (libra bilanx). Afterwards, words, close to «bilanx», appeared in many languages to denote «balance»: «la bilancia» in Italian, «la balance» in French, «a balance» in English, «баланс» in Ukrainian. Thus, the word 'balance' means equilibrium.

Consider the accounting balance sheet. It represents an element of the accounting method consisting in grouping the property of an enterprise by: 1) structure and allocation, 2) sources of formation. In the accounting balance sheet the word 'balance' has two meanings: 1) equality of debit and credit entries, equality of analytical and synthetic accounts, equality of the assets and liabilities of the accounting balance sheet; 2) the principal form of accounting statements that shows the condition of the assets of an enterprise and the sources of its formation in monetary terms on a certain date.

Modern American scientists Fraser Lyn M., Ormiston Aileen (2016) note: «The balance sheet shows the financial condition or financial position company on a particular date. ... The balancing equation is expressed:  $Assets = Liabilities + Stockholders\ equity$  [10, p. 48]. American scientists Aerts Walter, Walton Peter (2013, 2017) note: «The balance sheet (the IASB terminology is statement of financial position) gives a picture at a given moment – the last day of the financial year – of how company has been financed and how that money has been invested in productive capacity (plant, buildings, computers, inventories etc.)» [12, p. 4]. American scientist Joanne V. Flood (2015) також розкриває баланс [13, pp. 45–60]. French scientists Stolowy Herve, Lebas Michel, Ding Yuan (2013) note: «The very term balance sheet (now called statement of financial position) contains a message about its format. It is a set of two lists: resources on one side (also called assets) and obligations to external parties on the side (liabilities or creditors and the net worth, conceptually owed, by the firm as a separate entity, to Shareholders or owners)» [29].

A balance sheet is the most important accounting document, a significant source of information for the management, planning, production organization, standardizing, analysis and control. The balance sheet represents a synthesis of accounts. That's why we ought to be able to read a balance sheet and assess it critically in terms of content, structure and rational use of data.

As an accounting concept, the balance sheet has been in existence for over 500 years. The earliest reliable information concerning the usage of this word in accounting practices can be found in a ledger of the Italian banking house in 1408. In literature the word 'balance' was first used by Luca Pacioli, a famous Italian mathematician, in his work issued in 1494 and by Benedetto Cotrugli in his work written in 1458 and issued in 1573 in Venice. In legislation, the word 'balance' was first mentioned in the

Napoleonic French Commercial Code (1807). The balance sheet is the oldest form of generalizing data on the economic and financial developments of companies. More exact information on the origin of the accounting balance sheet are not available.

Luca Pacioli's work aroused a lot of debate among researchers of a history of last year's accounting. Especially much debate emerged about the structure and content of balance sheets. Fabio Besta (Besta, 1909; Sargiacomo, 2012) was the first to investigate and describe internal trial balances [30, 31]. He focused on the Balances of Andrea Babarigo, a merchant. E. Peragallo referred to Besta in his research and came to the conclusion: "Andrea Babarigo, a merchant from Venice, used such a balance in his reports in 1434, long before Pacioli" [32, p. 392]. De Roover described the balance sheets and Profits and Losses account in Francesco Datini's company in Barcelona in 1399 (Roover, 1956) [33]. The issues of Balances were highlighted by F. Melis (Melis, 1950; 1962; 1972) [34–36]. Earlier balance sheets were investigated and described by A. Martinelli (1974) [37].

The modern researchers M. Kuter and M. Gurskaya have proved that in the proprietorships of F. Datini in Pisa (the first proprietorship – 1383–1386; the second proprietorship – 1387–1392) the Profits and Losses account appeared earlier than the Trial Balance and the balance sheets, which were first produced in companies in 1394. The latter circumstance is caused by the partners' requirements to the reliability and timeliness of financial result calculation in order to distribute the profit as a reward (Kuter, 2017; Kuter, 2020; Sangster, 2017) [25, 26]. The authors mentioned above paid special attention to the fact that the Profits and Losses account had always been in the Ledger, and nobody had ever made a copy of the Profits and Losses account as it was very detailed and occupied several folios. When studying medieval balance sheets, M. Kuter and M. Gurskaya and co-authors discovered the earliest examples of Asset Impairment and Depreciation assessments. Using archive sources, they have proved that only the Asset Impairment was assessed at companies of that time whereas the Depreciation was assessed only once in 1399 in Barcelona (Kuter, 2018) [23]. And, which is especially important, it was shown how medieval "accountants" established reserves from the profit before its distribution for improving the accounting reliability (Kuter, 2020) [23].

In those early years, discussions were already held about the content and structure of balance sheets. The theory of a single row of accounts became widespread. The first yearly accounting balance sheet was compiled at Francesco Datini's trading company in the 1390s. The sheet was the prototype of today's balance sheet. In XIX century joint stock companies began to appear in Europe, and they published their balance sheets in newspapers. The weird structure of the balance sheets drew attention of unbiased users who started criticizing the existing balance sheet form. The French accountants Eugène Léautey and Adolphe Guilbault were the first to respond. In their work issued in the middle 1880s, they remarked that the assets of the balance sheet contained fictitious assets. Similarly, the liabilities of the balance sheet contained fictitious liabilities.

In the first half of the XX century, Johann Friedrich Schehr, the founder of the German cameral accounting, suggested reforming the balance sheet compiling procedure and renaming the balance sheet headlines: **PROPERTY** – for the left side and **CAPITAL** – for the right. The theory of two rows of accounts (this is what the theory of Schehr is called) substituted for the theory of a single row of accounts. The balance sheet became more understandable.

In the second half of the XIX century, financial markets and banking actively developed in the USA and Great Britain, which brought about presenting financial statements in order to get loans or participate in a stock market. As a consequence, well structured and quite uniformed financial statements appeared. They were compiled based on the interests of various users of these statements including managers. Now balance sheets compiled in accordance with the IFRS requirements includes not two but three components: assets, capital and liabilities.

Balance studies is a field of knowledge dealing with the economic substance of accounting balance, principles of its design, rules of assessing the entries and the use of balance information for managing an enterprise. In the second half of the XIX century the following accounting schools were created: Italian, German, French, Anglo-American (pragmatic approach). Each of them had its own approaches to studying balance sheets.

Balance sheets have come a long evolutionary way to form. Each stage of social development has been characterized by its own structure of balance sheets. In Ukraine, the most typical features (since 1925) have always been: sources of compiling, time frames for compiling, amount of data, content, form. The transformation of the content and structure of accounting balance sheets in Ukraine has been dependent on the development of accounting (Table 1).

**Table 1.** Stages of the development of accounting and financial statements in Ukraine

Years	Stages of the development of accounting and financial statements
1917–1932	Accounting during the transition from capitalism to socialism. Development of the socialist type of accounting principles
1932–1945	Development of the methodology and organization of accounting that was aimed to monitor the implementation of plans, conservation of the social property, implementation of cost-effectiveness measures, creation of new forms of accounting, creation of new methods and techniques of cost accounting and product costing, establishment of internal controls and of sectorial accounting
1945–1965	Improvement of the unified accounting system on a national scale. Primary documentation content regulation, introduction of the regulatory method for accounting and calculation
1965–1991	Implementation of the economic reform aimed to empower enterprises. Introduction of economic self-sufficiency. Methodological change in planning. Improvements in planning accounts, development of general and sectorial regulations on planning, accounting and product costing. Creation of automated control systems. Intensification of research in the methodology and organization of accounting
1991–2000	Transition period caused by the political transformations in Ukraine. Formation of the socialist-to- market economy transition accounting. Ukraine emerges as an independent country. Emergence of preconditions for development of the Ukrainian national accounting and reporting system Adoption of the Programme of accounting system reformation using international standards (28.10.1998)

(continued)

**Table 1.** (continued)

Years	Stages of the development of accounting and financial statements
2000–2013	Emergence of the national accounting system, with international standards taken into account. Implementation (on 01.01.2000) of the Law of Ukraine “On Accounting and Financial Reporting in Ukraine” (16.07.1999). Issuance of Accounting Standards (AS) and National Accounting Standards (NAS) complying with IFRS and IAS. Adoption of the new plan of accounts, new accounting registers and financial reporting forms. Improvement of the methodology of evaluating assets, liabilities and capital. Development of auditing. The Cabinet of Ministers of Ukraine approves the strategy of IFRS application (Decree № 911-p of 24.10.2007)
2013–up to now	Improvement of the plan of accounts, accounting registers and financial reporting forms. Intensification of bringing the national accounting system to IAS Compiling financial statements in compliance with IFRS (for enterprises representing the public interest). Development of activities aimed to fulfil the Directive 2013/34/EU. Implementation of the national standards: NAS 1 and NAS 2

As Ukraine used to be an integral part of the USSR, the history of Ukraine’s accounting development is viewed accordingly. In 1991 Ukraine became an independent country and began to develop its accounting system independently. During these stages the balance sheets of enterprises were changed.

In 1998 was adopted the Program of accounting system reformation using international standards according to which all Ukraine’s enterprises were to implement the new accounting system within 2000–2001. The duration of the transition period was established 2 years.

On January 1, 2000 the Law of Ukraine “On Accounting and Financial Statements in Ukraine” was implemented (16.07.1999) [38]. The law defines the legal framework for accounting regulation, organization and implementation and compiling financial statements in Ukraine. In 1999 the first Ukrainian Accounting Standards (hereinafter AS) regarding financial statements and the methodology of their compilation were designed and introduced with effect from 01.01.2000: AS 1 «General Requirements for Financial Statements», AS 2 «Income Statement», AS 3 «Statement of Cash Flows», AS 4 «Report on equity» (invalid since 19.03.2013).

During 2000–2013 the Ukrainian balance sheet was in constant transformation and improvement. But we will not study the retrospective changes. Instead, we will consider in detail the balance sheet form (financial statement) provided by Form № 1 now in force in Ukraine. This balance sheet form has changed its content and title in compliance with the National Accounting Standard (hereinafter NAS) 1 «General Requirements for Financial Statements» approved by the Ministry of Finance of Ukraine (Decree № 73 of 07.02.2013) [39]. During 2013–2020 the content and structure of the balance sheet were also changed. However, we will criticize the form of the Ukrainian balance sheet now in force and give our proposals regarding it.

In 2017 the Law of Ukraine «On Changes to the Law of Ukraine «On Accounting and Financial Reporting in Ukraine» [40] was adopted to bring the national legislative norms to the provisions of the Directive 2013/34/EU [41]. The law came in force on 01.01.2018, with some of its provisions implemented on 01.01.2019. The changes introduced in accounting and financial statements are supposed to have the following influence on enterprise operation: 1) introducing an electronic format of financial reporting (the year 2019 was the first reporting period) and its publication on a company's website together with the audit findings (for financial institutions, large and medium-sized enterprises that represent the social interest). This enables increasing the transparency and comparability of financial reporting figures; 2) compulsory use of IFRS [42] by enterprises representing the social interest. It will increase the responsibility of Ukrainian companies to the society and allow minimizing the users' information and economic risks (in particular, investment risks) for their financial statements; 3) introduction of the management report containing both financial and non-financial information on the state of an enterprise and its development prospects, major risks and operational uncertainties. This report allows the enterprise to develop an effective risk-oriented management system that meets the company's all strategic objectives and tasks; 4) gradation of domestic enterprises: micro-, small, medium-sized and large. Such differentiation defines the requirements for compiling financial statements – large enterprises must use IFRS, small and micro-enterprises are exempt from submitting the management report; medium-sized enterprises are allowed not to show the non-financial information in their management reports; 5) introduction of accessible and public financial reporting information allows prompt responses to requests for information from individuals and entities on the whereabouts of the enterprise. Thus, the role of the financial report, including the balance sheet (financial condition statement), has significantly increased. The legislative framework list for compiling financial reports in Ukraine can be found on the website of the Ministry of Finance of Ukraine.

In accordance with the Law of Ukraine «On Accounting and Financial Reporting in Ukraine» and NAS 1 “The National Accounting Standard is a regulatory act establishing principles and methods of accounting and of compiling financial statements by enterprises (except the ones which, as provided for by law, compile financial reports in compliance with IFRS and National Accounting Standards in the public sector), which is designed based on IFRS and EU legislation for accounting and approved by the central executive body responsible for the development and implementation of public policy in accounting» [38]. NAS 1 «General Requirements for Financial Statements» defines the purpose and structure of financial statements, the principles of their compilation and the requirements for recognition and description of their elements. The provisions of NAS 1 apply to financial statements and consolidated financial statements of entities (enterprises) of all forms of ownership (except banks and budgetary institutions) that are obliged to submit financial statements in accordance with the law. According to NAS 1, the balance sheet (statement of financial position) is a statement of financial position of an enterprise that shows its assets, liabilities and equity on a certain date [39].

A financial statement in Ukraine is composed of: a balance sheet (statement of financial position) (hereinafter balance sheet), an income statement (statement of comprehensive income) (hereinafter *дали* income statement), a statement of cash flows, a report on equity, and notes to the financial statements [39]. The balance sheet of an enterprise is prepared as at the end of the last day of the reporting period [39]. The form and structure of financial statement items are established by NAS 1 and presented in appendices 1 and 2. Information in a balance sheet is shown in an appropriate item if it meets the criteria: the information is essential; the item can be reliably assessed. According to the Methodological Recommendations on How Financial Statements Are to Be Filled Out, «balance sheet compilation is aimed to provide users with complete, accurate and unbiased information on the financial situation of the enterprise at the reporting date» [43]. Part II of the Recommendations describes the balance sheet structure, which presents the enterprise's assets, liabilities and equity. The total assets in the balance sheet shall equal the total liabilities plus equity. The assets are shown in the balance sheet if they can be reliably assessed and they are expected to entail economic benefits in the future. The liabilities are shown in the balance sheet if they can be reliably assessed and the expected economic benefits may decrease as a result of their repayment. The equity is shown in the balance sheet simultaneously with the assets or liabilities that influence its change [43].

The financial situation of an enterprise is not defined in regulatory instruments. However, in IFRS, IAS and NAS the concepts of balance sheet and of statement of financial position are equated. French scientists Stolowy Herve, Lebas Michel, Ding Yuan (2013) note: «The very term balance sheet (now called statement of financial position) contains a message about its format» [29]. Information given in a balance sheet describes the financial position of an enterprise. It includes the assets, liabilities and equity. Thus, assets, liabilities and equity are the elements directly related to financial position assessment. Now there are various opinions on the structure of enterprise financial position indexes. The American scientists Fraser Lyn M., Ormiston Aileen (2016) [10, pp. 204–238]; Aerts Walter, Walton Peter (2013, 2017) [11, pp. 231–260; 12, pp. 450–483]; Joanne V. Flood (2015) [13, pp. 29–44] analyze the financial condition of a company in detail.

We will consider financial position assessment indexes such that can be defined by the balance sheet data only: 1) dynamics of the content and structure of the balance sheet assets, of the current assets, non-current assets, receivables and inventories; 2) dynamics of the content and structure of the balance sheet liabilities, of the equity, creditor's equity, long-term liabilities and ensuring, current liabilities and ensuring and accounts payable; 3) indexes of the financial stability of an enterprise; 4) enterprise liquidity indexes; 5) balance sheet liquidity and its critical value; 5) enterprise solvency. The complex of the indexes above represents the core of the financial position of an enterprise and its assessment.

The substantive content of a balance sheet is defined by its structure. Here we present Form 1 of the enterprise balance sheet as part of a financial statement now valid in Ukraine (Table 2).



**Table 2.** Balance sheet content and structure according to AS 2 NAS 1

AS 2 «Balance» [44] (annulled)		NAS 1 «General requirements for financial position» [39] (actual)	
Balance sheet (Form 1)		Balance sheet (statement of financial position) (Form 1)	
Assets	Equity and liabilities	Assets	Equity and liabilities
I. Non-current assets	I. Equity	I. Non-current assets	I. Equity
II. Current assets	II. Ensuring of future expenses and payments	II. Current assets	II. Long-term liabilities and ensuring
III. Future expenses	III. Long-term liabilities	III. Non-current assets kept to be sold and disposal units	III. Current liabilities and ensuring
	IV. Current liabilities		IV. Liabilities associated with non-current assets kept to be sold and to disposal units
	V. Future incomes		
<b>Balance</b> (Line Code 280)	<b>Balance</b> (Line Code 640)	<b>Balance</b> (Line Code 1300)	<b>Balance</b> (Line Code 1900)

As seen from Table 2, the balance sheet structure has changed significantly. A new approach has been introduced to the numeration of the balance line codes: three-digit codes have changed to four-digit ones. Part III of the actual balance sheet assets has been changed, and future expenses are incorporated into Part II «Current Assets». The separate sub-account 286 «Non-current assets and disposal units kept to be sold» has been introduced into the plan of accounts, and Part III of the balance sheet shows «Non-current assets kept to be sold and disposal units». Part II «Ensuring of future expenses and payments» has been excluded. In the actual form of the balance sheet (statement of financial condition) there are Part II «Long-term liabilities and ensuring» and Part III «Current liabilities and ensuring». Part V «Future incomes» has been removed and the separate Part IV «Liabilities associated with non-current assets kept to be sold and to disposal units» has been formed. The annulled form contained more parts for Equity and Liabilities. The content of each part of the balance sheet (statement of financial condition) has changed. The number of compulsory items has reduced whereas that of additional ones has increased. The additional items are not compulsory to use if their related information is absent and was absent in the previous periods. The methodology of compiling Form 1 is presented in the Methodological Recommendations on How Financial Statements Are to Be Filled Out [43]. Changed the march to line code numbering balance. There were three-digit codes, four-digit line codes became. Thus, Form 1 has changed greatly. We will consider the changes in the balance sheet in terms of assets and liabilities.

#### 4 Structure and Content of the Assets and Liabilities of the Balance Sheet. Suggestions for Improving the Statement of Financial Position in the Light of New Digital Technology

The actual form of the balance sheet (statement of financial position) is presented in Appendix 1 of NAS 1 “General Requirements for Financial Statements” [39]. Suggestions for improving the assets and liabilities of the balance sheet (statement of financial position) concern the changes in the number, headlines and list of their items (Table 3).

**Table 3.** Balance sheet content and structure according to NAS 1 (left) and to the suggested balance sheet form (right)

NAS 1 «General requirements for financial statements»		Suggestions	
Balance sheet (statement of financial position) (Form 1)		Statement of financial position (balance sheet) (Form 1)	
Assets	Equity and liabilities	Assets	Equity and liabilities
I. Non-current assets II. Current assets III. Non-current assets kept to be sold and disposal units	I. Equity II. Long-term liabilities and ensuring III. Current liabilities and ensuring IV. Liabilities associated with non-current assets kept to be sold and to disposal units	I. Non-current non-financial assets II. Non-current financial assets III. Current non-financial assets IV. Current financial assets	I. Equity II. Long-term liabilities and ensuring III. Current liabilities and ensuring IV. Liabilities associated with non-current assets kept to be sold and to disposal units
<b>Balance</b> (Line Code 1300)	<b>Balance</b> (Line Code 1900)	<b>Balance</b> (Line Code 1300)	<b>Balance</b> (Line Code 1900)

The balance sheet in the information base of financial analysis occupies a central position. For that reason its structure and content must be directed at strengthening the logic of displaying information, improving comprehension, raising analytics, simplifying for the use of information in further analytical studies in the light of new digital technology. This is due to the requirements of approaching to IFRS and fulfilling requirements of the EU Directive № 2013/34/EU, accelerating European integration processes, developing digital economics, globalizing economical processes and harmonizing financial statements. The changes made to the name of the reporting Form 1 are quite correct. The expression «Statement of financial position» added in parentheses is a correct specification of the name. We accept this name. It sets the Ukrainian balance sheet form closer to the recommendations of IFRS. Due to the discussion among scientists from different countries of the world about the concept of financial

condition and the area of its analytical research it is assessed rather positively. In the specified name of the given reporting form the attention is focused on the purpose of the balance sheet as an information base for assessing financial position of an enterprise. But the word «balance sheet» in the name is appropriate to be put second.

The balance sheet asset reflects the economic resources of the enterprise as to their content and allocation. Balance sheet asset reflects the nature (direction) of the use of capital, so it is divided into fixed and working. Balance sheet assets are divided into non-current and current assets. This is also stated in IFRS. According to IFRS, each enterprise individually decides on the feasibility of dividing assets into current and non-current assets.

According to NAS, all assets of an enterprise are necessarily divided into non-current and current assets. In order to further improve the presentation of source information in the balance sheet to assess the financial position of the enterprise, it is considered appropriate to make changes to the structure of the asset reporting form No. 1.

Suggestions are made to: 1) divide the existing part I «Non-current assets of the balance sheet asset into two separate parts: part I «Non-current non-financial assets» and part II «Non-current financial assets»; 2) divide the existing part II of the balance sheet asset «Current assets» into two separate parts: part III «Current tangible assets» and part IV «Current financial assets»; 3) the existing third part «Non-current assets kept to be sold and disposal units» of the balance sheet asset is recommended to include in the proposed part III «Current tangible assets» as a specific commodity.

Such changes in the content of the balance sheet asset will make it more detailed and informative. The information provided is more open, simple, accessible, and understandable to users. This will facilitate and speed up the financial position analysis process. There is no need to further group and select source information to analyze the absolute and relative indexes of asset, liability, financial stability, solvency and liquidity. This is especially important in the context of artificial intelligence and new computer technology.

In addition, it is generally accepted and understood that balance sheet parts are formed by combining individual items. Thus, each part of the balance must distinguish separate items (indexes). But in the current form of balance sheet (both in assets and liabilities) separate parts are presented, although no items are provided in them.

It is incorrect to enlarge the item «Inventories» and include production inventories, low value and non-durable items, unfinished production, finished goods and commodities in its content. According to the information in these items, it is visually that the user can make a conclusion about the type of activity of the enterprise. It is the content of inventories that is determined by the peculiarities of the activity of a manufacturing, trading, or service enterprise. Combining the information in this item reduces the information content of the balance sheet, and confuses users. It further complicates the work of financial analysts and managers. In accordance with the Methodological Guidelines for Completing the Financial Reporting Forms, the list of balance sheet items is additional. We consider items «Production inventories», «Unfinished production», «Finished goods», «Commodities» (excluding non-current assets kept to be sold and disposal units), «Non-current assets kept to be sold and disposal units» should be made mandatory in the balance sheet. As to their nature and in economic terms, non-current assets kept to be sold and disposal units are

commodities. Commodity is a current asset. In Ukraine information on this type of commodities in the Chart of Accounts is displayed in the sub-account of the account «Commodities». Therefore, it is logical to show this type of product in the content of current financial (tangible) assets in the balance sheet too.

According to NAS 1, the item «Accounts receivable for products, goods, works, services» is shown at net realizable value only. The information about provision for doubtful debts is removed. This is irrelevant and ambiguous. The calculation of the provision for doubtful debts is borrowed from foreign accounting practices, information on it is important for management decisions. Therefore, the «Provision for doubtful debts» item should be made mandatory again and reflected in the balance sheet. It is worth dwelling on the complex item «Cash and cash equivalents». In order to eliminate the additional work of users in obtaining the transcript of this complex item, it is obligatory to select the item «Cash», «Cash at banks in national currency», «Cash at banks in foreign currency». For countries where national currency (in Ukraine - hryvnia) is used in domestic turnover, it is important to show in the statement of financial condition cash in different types of currencies. The amount of cash equivalents should be included in the item «Current financial investments». Indeed, they are a type of current financial investments and are reflected in the Chart of Accounts in a single control account with division into sub-accounts. The availability of these items in the Reporting Form 1 will accelerate the analysis of cash, solvency and liquidity of the enterprise, the liquidity of the balance in new digital technology. If you refer to IFRS, they do not provide for the display of non-current assets and sales groups in a separate part of the statement of financial position. Therefore, the proposed recommendation to remove this part in the balance sheet asset approximates the Ukrainian balance sheet to IFRS. Research on balance sheet liability items will be a matter for future research.

Thus, the proposed recommendations expand the source information and enhance the analytical balance. This is important for users. They will be able to quickly obtain financial analysis results and make timely management decisions through the use of advanced computer technology. It should be noted that the proposed recommendations for the balance sheet (statement of financial position) increase the usefulness of its information. We emphasize that users have access to the information about the activities of the company only through financial statements. According to the Law of Ukraine «On Accounting and Financial Reporting in Ukraine» financial statements (including balance sheets) are not a trade secret [40]. IFRS developers can take into account our suggestions and supplement the classification of non-current and current assets and improve the information content of this reporting form.

## **5 Analytical Capabilities of the Balance Sheet in Conjunction with Other Forms of Financial Report. The Organizational Stages of the Analytical Study**

Analysis of a balance sheet (financial position) is an issue of financial analysis and analysis of financial statements of enterprises. The history of balance sheet analysis as well as the methodology and organization of its analytical study has long been

researched in the academic world. Lately, balance sheet analysis (financial report analysis) has been covered by:: 1) USA: Conrad Karlberg (2008, 2015, 2016, 2019), Lyn M. Fraser, Aileen Ormiston (2010, 2013, 2016), Walter Aerts, Peter Walton (2013, 2017); 2) France: Krishna G. Palepu, Paul M. Healy (2013); 3) British scientists: P. Atrill (2007, 2015), E. McLaney (2007, 2015, 2017); 4) Iraq: Saoud Chayed Mashkoo Alamry (2019); 5) India: T.S. Grewa H. S. Grewal G. S. Grewa, R. K. Khosla (2019) and others. The balance sheet represents a clear picture of the financial condition of an enterprise. In order to assess and predict the financial condition of an enterprise one should be able to read the balance sheet and have good proficiency in the methodology of its analysis. To be able to read the balance sheet means to know the content of each its item, ways of its assessment and its relationships with other balance sheet items, the character of possible changes in each item and the influence of these changes on the financial position of the enterprise. Consider the analytical capabilities of a balance sheet (statement of financial position) and the organizational stages of analytical processes (Table 4).

**Table 4.** Analytical capabilities of the financial report (balance sheet) and organizational stages of the study

Analytical capabilities of the balance sheet (statement of financial position)	Analysis stages	Methods of analysis	Analysis results
Assessing the dynamics of the content and structure of the balance sheet liabilities by its parts, of the equity, creditor's equity, long-term liabilities and ensuring, current liabilities and ensuring, commercial and other accounts payable	I	Horizontal, vertical; absolute and relative indexes	Absolute and relative indexes of the content and structure of the balance sheet liabilities by its parts, of the equity, creditor's equity, long-term liabilities and ensuring, current liabilities and ensuring, commercial and other accounts payable
Assessing the dynamics of the content and structure of the balance sheet assets by its parts, non-current non-financial assets, non-current financial assets, current non-financial assets, current financial assets, inventories, commercial and other receivables	II	Horizontal, vertical; absolute and relative indexes	Absolute and relative indexes of the content and structure of the balance sheet assets by its parts, non-current non-financial assets, non-current financial assets, current non-financial assets, current financial assets, inventories, commercial and other receivables
Assessing the financial stability of the enterprise and the reserve of the main operating activity (safe operation area)	III	Horizontal, vertical; absolute and relative indexes	A set of absolute and relative indexes of the financial stability of the enterprise and of the reserve of the main operating activity запасы (safe operation area)

(continued)

**Table 4.** (continued)

Analytical capabilities of the balance sheet (statement of financial position)	Analysis stages	Methods of analysis	Analysis results
Assessing the balance sheet liquidity	IV	Horizontal; absolute indexes	Indexes of the balance sheet liquidity or non-liquidity and of the balance sheet liquidity critical value
Assessing the solvency and liquidity of the enterprise	V	Horizontal, vertical; absolute and relative indexes	A set of absolute and relative indexes of the solvency and liquidity of the enterprise
Involving the data of Form 2 “Income Statement (Statement of comprehensive income)”			
Assessing the turnover of various kinds of the enterprise’s capital	VI	Horizontal; relative indexes	A set of relative indexes of the capital turnover
Assessing the profitability of the enterprise, assets and equity	VII	Horizontal; relative indexes	A set of relative indexes of the profitability of the enterprise, assets and equity
Generalization and summing up of the obtained results on the enterprise’s financial position and financial results	VIII	Horizontal, vertical; absolute and relative indexes	Generalized conclusions and recommendations on improving the financial position and financial results of the enterprise

As seen from the table above, we can speak about 8 organizational stages of balance sheet analysis. The table is a representation of the logical analytical study of the statement of financial position. The methods of the balance sheet analysis at each stage of the study are specified in it. The results of the analysis are displayed for each of its stages. Special attention should be paid to the last stage of the analysis. In addition to the correct calculations at the previous stages, financial analysts and other users should be able to correctly generalize the conclusions and develop recommendations on improving the financial position of an enterprise for the future and enhancing its competitiveness.

Highlighting the proposed four sections of the balance sheet asset is expected: 1) to facilitate and accelerate, without additional processing of the initial information, the determination of the following financial position indicators: financial risk coefficient based on the net debt; coefficient of liabilities associated with non-current assets kept to be sold and with disposal units; six assets liquidity groups (absolute liquidity, high liquidity, accelerated liquidity, quick liquidity, slow liquidity, hard liquidity); balance liquidity and its degree depending on the enterprise status (large, medium, small, microenterprise), business type and industry sector; availability of permanent working capital; high, accelerated (strict), quick (critical), current liquidity indexes; liquid cash flow, etc.; 2) to accelerate the calculation of the financial needs of the enterprise; 3) to facilitate the determination of a minimum sum of money required for further successful activity of the enterprise. Recommendations on improving the financial position of an enterprise for the future and enhancing its competitiveness.

Appropriate analytical work performed by financial analysts and financial managers will be helpful in making sound decisions on the timely choice of enterprise activities financing methods and on enhancing its competitiveness.

## 6 Conclusion

In the course of the study, the following results have been obtained: the conclusions on the history of the development of accounting and balance sheets have been clarified; an approach to defining the essence of the financial position is suggested; suggestions have been put forward on clarifying the name of the form of the Ukrainian statement of financial position and on balance sheet assets transformation; the logical structure (organizational stages) of the enterprise performance analysis on the basis of the statement of financial position data has been described. The paper represents a significant contribution to modern thinking concerning the issues of the statement of financial position structure and content, understanding the concept of financial position and analytical capabilities of the balance sheet at all stages of its study.

The recommended transformation of the statement of financial position (balance sheet) will help to ensure a more rapid implementation of a thorough analytical study of the financial position of the enterprise in the digital technology. Analytical calculations will be accelerated on the basis of the source information correctly grouped according to the balance sheet data. There is no need for users to further process the balance data. It will increase efficiency, timeliness, economy, quality of information processing of through the application of modern computer technologies. The suggestions made will facilitate the calculation of the totality of all indicators of financial position. Many scholars studied the nature and content of the balance sheet, analyzed the statement of financial position differently, but we do not have information on the precise formulation of the organizational stages of analysis, systematization of methods and its results in the context of each step. This research is an important contribution to theoretical and practical knowledge in the fields of accounting, financial reporting, financial analysis and financial statement analysis. The existing discussion issues on the concept of financial stability, solvency, balance sheet and enterprise liquidity, critical value of balance liquidity, a set of financial position indexes in terms of their content, grouping, methods of determination are the subject of future scientific research.

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