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THE BALANCE SHEET AS A STATISTICAL TOOL OF RESEARCH OF FINANCIAL COMPONENT OF NATIONAL WEALTH

В статті з позицій СНР охарактеризовано сутність національного багатства як сукупності запасів фінансових та нефінансових активів, зменшених на суму зобов'язань економіки країни перед інституційним сектором «іншого світу».

Охарактеризовано існуючу практику української статистики щодо побудови балансів активів і пасивів. Показано її відмінності від європейської практики. Здійснено порівняльний аналіз структур запасів фінансових активів і пасивів України та ЄС.

Доведено необхідність удосконалення вітчизняної практики балансових побудов на концептуальних засадах SNA-2008.

Ключові слова: фінансиалізація, макроекономічний аналіз, Система національних рахунків, національне багатство, баланс активів і пасивів, чиста вартість капіталу, чисті вимоги до решти світу, фінансові активи і зобов'язання.

Problem definition and its relation to important scientific or practical issues. The national wealth of any country consists of financial and non-financial assets. Over time, the absolute size of national wealth is changing, as well as its structure. During recent decades, it takes place in particular due to enhancing of impact of the financial component of economies of modern countries on various aspects of their functioning. This new economic phenomenon was named "financialization". Gerald A. Epstein determines financialization as «... increasing role of financial motives, financial markets, financial actors and financial institutions in the operation of the domestic and international economies» [1, p. 3].

Quantitative analysis of the dynamics and structure of financial assets as a component of national wealth requires appropriate methodological and informational support. The methodological basis of macroeconomic analysis is a System of national accounts. Statistical information formed on the basis of the SNA is an initial data array to study trends and proportions in the movement of goods, services, income and financial resources within the cycle of social reproduction.

It should be noted that the latest version of SNA-2008 is more suitable for study of functioning of the financial component of the economy in current conditions through amendments compared with the previous version 1993. The update of SNA-2008 was essentially based on a list of 44 issues for discussion. More than 10 of them were related to new financial products [4, pp. 19, 27].

In particular, in SNA-2008 the subsectoring of the financial corporation sector was revised to reflect new developments in financial services, markets and instruments; definition of financial services enlarged; refined of the treatment and definition of financial instruments and assets [2].

Analysis of recent researches and publications. Scientific papers of R. Mink, M. Shrestha, S. Fassler, A. M. Teplin, S. H. McIntosh deal with the problems of study of functioning of the financial component of the economic system. Among domestic researchers this problematic is studied by S. Gerasymenko, V. Golovko, V. Mayba, L. Momotyuk, R. Motorin, A. Shytko. Quantitative estimates of financial assets as a component of national wealth could be found in studies of M. Kvak, O. Lyakhovets, S. Shumska.

But now theoretical aspects of using appropriate statistical tools are not fully covered by the domestic scientific literature; Ukrainian statistical practice of building balance sheets and financial accounts needs improvement. Some extremely informative tools for study of the movement of financial flows in the economy, provided by the central framework of System of National Accounts, are not used by Ukrainian statistics. It narrows the opportunities of macroeconomic analysis of financial processes and perspectives of development of an effective financial policy.

The research aims at highlighting the central framework of SNA-2008 concerning the construction of balance sheets; describing the features of the national statistical practice of construction of financial balance sheets; comparative analysis of stocks of financial assets and liabilities of Ukraine and the European Union.

Methods. To achieve this goal were used following methods: balance, comparison, grouping, spreadsheet, graphic.

Results and discussing. The amount of national wealth on the central framework of System of National Accounts can be defined from the data of balance sheet. The balance sheet is a logical completion of SNA, because the balance sheet completes the sequence accounts, showing the ultimate result of the entries in current accounts and accumulation accounts.

A balance sheet is a statement, drawn up in respect of a particular point in time, of the values of assets owned and of the liabilities owed by an institutional unit or group of units [2, p. 257].

Consequently, the balance sheet can be concluded at both the level of the whole economy (in the sovereign level) and the level of institutional units, sectors and subsectors. Schematic diagram of the balance at any level is based on the method of balance generalization, according to which a mandatory equality between the assets side and the liability side of the balance sheet must be complied (Fig. 1).

Assets	Liabilities and net worth
Non-financial (AN)	Net worth (NW)
Financial (AF)	Liabilities (L)

Fig. 1. Balance sheets structure.

Net worth is the balancing item of balance sheet. It is defined as a value of all assets (financial and non-financial) owned by

institutional unit or sector, reduced by the amount of liabilities (unlike assets, all liabilities in the SNA are financial):

$$NW = AN + AF - L \quad (1)$$

For the economy as a whole, the balance sheet shows the sum of non-financial assets and net claims on the rest of the world. This sum is often referred to as national wealth [2, p. 257].

That is for the sovereign level equation (1) can be rewritten as equation (2):

$$NW = AN + NC, \quad (2)$$

where NC – net claims on the rest of the world

$$NC = AF - L \quad (3)$$

Assets	Liabilities and net worth
Non-financial (AN)	Net worth (NW)
Financial (AF)	} <i>net claims (NC)</i>
	Liabilities (L)

Fig. 2. Balance sheets structure on sovereign level.

Thus figure 1 for the balance sheet of the sovereign level can be represented in the detailed form (Fig. 2).

For assets and liabilities of balance in SNA-2008 is used the same classification of financial instruments, described in the Table 1 below.

Table 1 – Codes of financial assets and liabilities

Codes for stocks in the balance sheet	Financial assets and liabilities	Codes for transactions in the financial account
AF.1	Monetary gold and special drawing rights (SDRs)*	F.1
AF.2	Currency and deposits	F.2
AF.3	Debt securities	F.3
AF.4	Loans	F.4
AF.5	Equity and investment fund shares	F.5
AF.6	Insurance, pension and standardized guarantee schemes	F.6
AF.7	Financial derivatives and employee stock options	F.7
AF.8	Other accounts receivable/payable	F.8

*Monetary gold and SDRs issued by the IMF are financial assets for which there are no corresponding financial liabilities.

Theoretically, the balance sheet can be composed on any date; in practice it is composed at the beginning and end of the reporting period. The value of the stock at the start of the period is referred to as the opening stock and the value at the end of the period is referred to as the closing stock.

Ukrainian official statistics composes the balance sheet at the end of the year. Promulgation of data of experimental balance sheets started in 2011 with the balance for 2009. The feature of the national balance sheet is that it consists of two separate documents – non-financial balance sheet and financial balance sheet and is published on the official website of the State Statistics Service of Ukraine [12].

We consider it necessary to pay attention to the following methodological problem of national balance sheet: the difference between amounts of financial assets and liabilities in it is called «net worth»,

not «net claims», as it should be (Fig. 2). Under the current formulation of the question non-financial assets as a component of national wealth are actually ignored.

European Central Bank also composes financial balance sheet both for euro area as a whole and for individual country members [13]. Data of this balance are available on a quarterly basis, and balancing item is called «net financial assets (+) / liabilities (-)».

Comparison of data of financial balance sheets of Ukraine and the EU at the end of 2013 allowed to make the following generalizations.

At first, net claims on the rest of the world are negative both in Ukraine and in the EU, i.e., the value of financial liabilities exceeds the value of financial assets. Thus, these economies use external sources of formation of financial assets received from the institutional sector «rest of the world». In Ukraine, negative value of net claims makes 8,0 % of total financial assets, as in the EU – only 1,3 %, but in both cases balances of financial assets are scarce. Thus, negative value of net claims decreases on appropriate amounts the total amount of national wealth.

Secondly, structures of stocks of assets and liabilities in the EU are more similar (Fig. 3) than in Ukraine. So, the biggest deviation of financial instruments particles in stocks of financial assets and liabilities in the EU by instrument AF.3 Debt securities makes -1,2 percentage points. Instead, the share of cash and deposits in Ukraine in stocks of assets is bigger than in stocks of liabilities for almost 12 percentage points (in the EU (-0,1) percentage points). Consequently, stocks of financial assets and liabilities in the EU are more balanced than in Ukraine. In our opinion, the reason is the instability of functioning of the domestic economy in a market mode. Since Ukraine is categorized as emerging markets, for its economy is inherent a larger volume of need for external financing sources, i.e., the inflow of foreign capital. Despite higher levels of risks, including financial, than in the developed countries, foreign investors are interested in forming their assets from financial instruments in developing countries in view of the much higher levels of profitability.

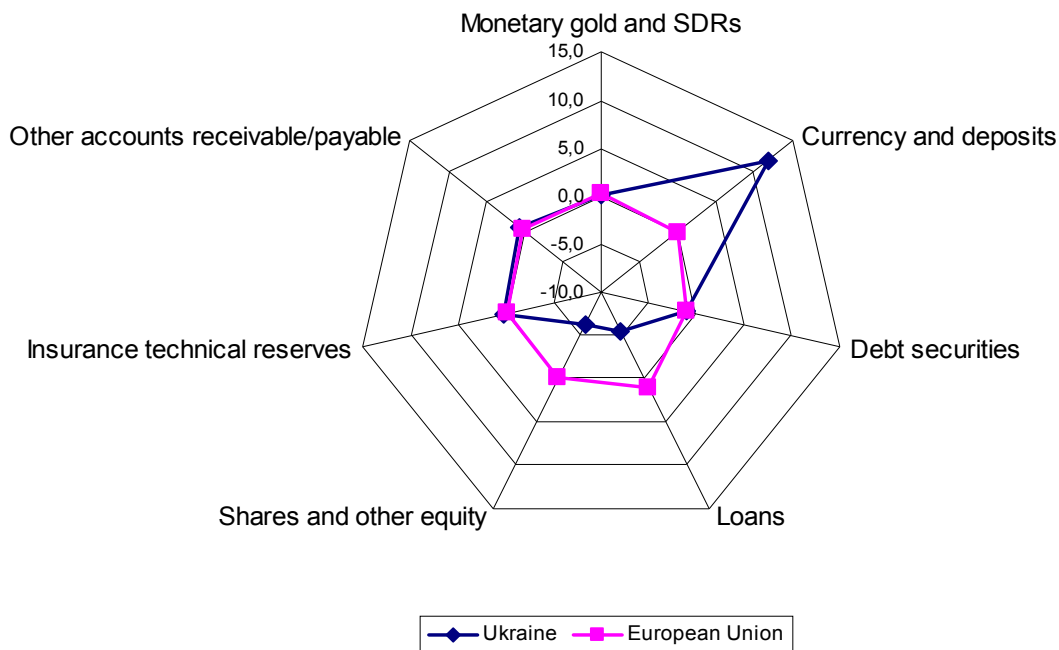


Fig. 3. Differences in the structure of stocks of financial assets and liabilities of Ukraine and the EU by December 31, 2013, percentage points.

Unfortunately, domestic statistics does not detail information about stocks of assets and liabilities by the instrument AF.2. In the EU by December 31, 2013 from 22489 bln. euro of assets by the instrument «Currency and deposits» 21642 bln. euro make deposits and only 846 bln. euro – cash funds. Liabilities by AF.2 in the amount of 22853 bln. euro are distributed accordingly on 983 and 21869 bln. euro. This demonstrates the high level of confidence to depository corporations and provides transparency of circulation of money supply.

Third, in the EU financial instrument AF.8 «other accounts receivable/payable» makes only 6,0 % of all liabilities and 6,2 % of assets, while in Ukraine it is the most used tool – its share makes accordingly

39,1 % and 38,5 % (Fig. 4). This shows, on the one hand, a high level of financial risk; on the other – a low mobility of assets and possible problems with solvency.

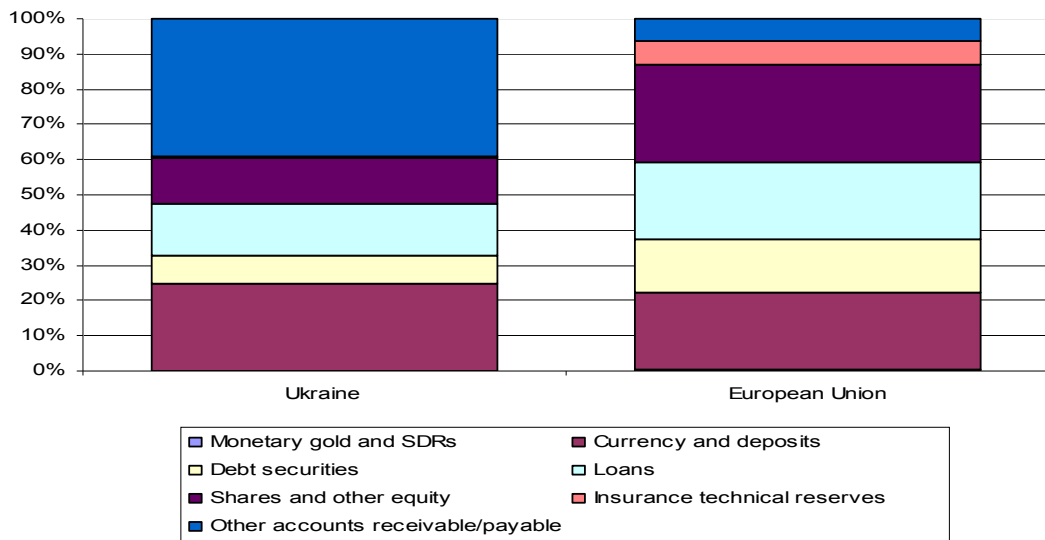
Further, the share of loans in the structure of liabilities in Ukraine and the EU is almost equal (accordingly 19,3 % and 20,7 %), which indicates a fairly active use of debt financing. Instead, placement of temporarily free funds in the instrument AF.4 is used by Ukrainian residents significantly less than in the EU (14,7 % vs. 21,6 %).

Finally, insignificant shares of insurance technical reserves (AF.6) in the domestic balance sheet (on 0,3 % vs. 6,8 % and 7,0 % accordingly in the EU) indicate lack of development of insurance market in Ukraine.

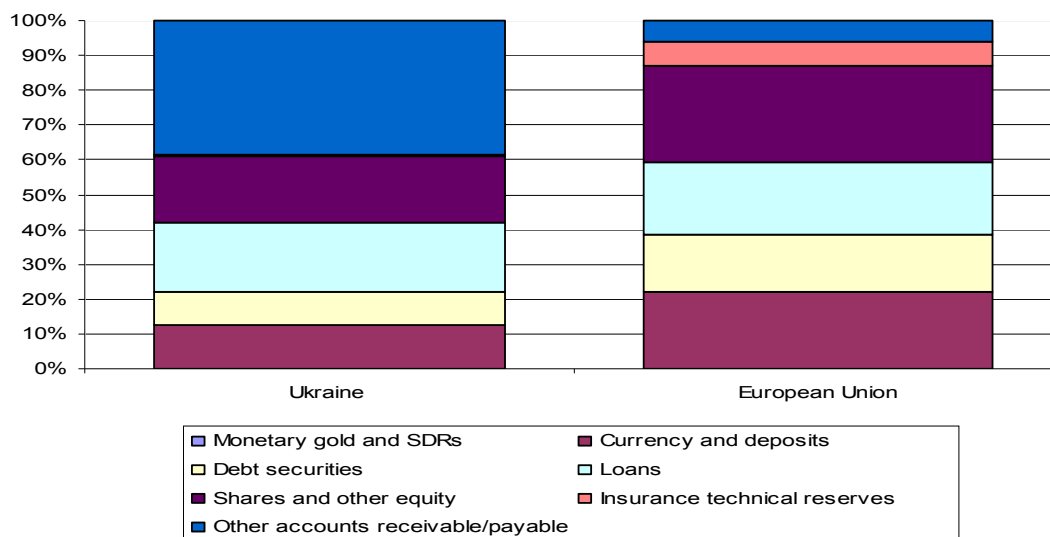
Another kind of market, less developed in Ukraine – securities market: the share of his instruments (AF.3, AF.5) collectively account for 21,1 % of all stocks of assets (in the EU 42,9 %) and 28,5 % of all stocks of liabilities (44,1 % in the EU). Despite differences in numerical values, approaches to the use of instruments of the securities market to create stocks of assets and liabilities in Ukraine and the EU are common: instruments of ownership (shares and other equity) are increasingly used both for raising capital and for investment, than debt securities.

Conclusions. The methodological basis for quantifying the national wealth as a whole and its individual components is the System of National Accounts. The information base for this analysis is the balance sheet of SNA. Its balancing item – net worth – in constructing the balance sheet for the economy in general complies the index of national wealth.

The value of net worth can be defined in two ways: 1) as the value of total assets decreased by the sum of liabilities; 2) as a sum of non-financial assets and net claims on the rest of the world. Net claims, in their turn, are determined as the difference between amounts of financial assets and liabilities. If the amount of financial assets is less than the amount of financial liabilities (net claims on the rest of the world have a negative value), national wealth is reduced by appropriate amount.



a) assets



b) liabilities

Fig. 4. Structures of stocks of financial assets and liabilities of Ukraine and the EU by December 31, 2013, %.

Ukrainian official statistics mixes the indexes of net worth and net claims on the rest of the world (in domestic financial balance sheet balancing item is called net worth). With this formulation of the question, given the negative value of this index, it should be concluded that Ukraine by December 31, 2013 had national wealth in amount of (-593757) mln. UAH, which is not true, because non-included amount of non-financial assets makes 4713455 mln. UAH.

Domestic practice of composing the balance sheet on the central framework of SNA has both similar and different features with the European. So, as State Statistics Service of Ukraine, European Central Bank (ECB) also composes financial balance sheet (as a part of balance sheet), but not on an annual basis and on a quarterly. Moreover, classification of financial assets and liabilities in ECB is more detailed, which allows to examine more thoroughly the patterns of functioning of the financial component of economic system.

The comparative analysis of data of financial balance sheet of Ukraine and the European Union showed that net claims on the rest of the world are negative both in Ukraine (-8,0 % of the total amount of financial assets) and in the EU (-1,3 %).

Stocks of financial assets and liabilities in the EU are more balanced (because their structures are more similar) than in Ukraine.

The most used financial instrument in Ukraine – «other accounts receivable/payable», while in the EU – «equity and investment fund shares». This demonstrates the lack of development of securities market in Ukraine as a part of market of financial services, which is understandable in view of the short period of its existence. The insurance segment of the domestic market of financial services is also very narrow (an instrument «insurance technical reserves» accounts for 0,3 % of total stocks of financial assets and liabilities). Instead, loan financing as a source of formation of liabilities is used both in Ukraine and the EU almost with the same intensity.

Consequently, financial assets are an important part of the national wealth. Since the financial balance sheet is an information base for analyzing the impact of the size and dynamics of the financial assets on the amounts of national wealth and its structure, the national statistics should improve techniques of balance composing on the central framework of SNA-2008.

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Баланс активов и пассивов как статистический инструмент исследования финансовой составляющей национального богатства

Р.П. Задорожная

В статье с позиций СНР охарактеризована сущность национального богатства как совокупности запасов финансовых и нефинансовых активов, уменьшенных на сумму обязательств экономики страны перед институциональным сектором «остального мира».

Охарактеризована существующая практика украинской статистики относительно построения балансов активов и пассивов. Показаны ее отличия от европейской практики. Осуществлен сравнительный анализ структур запасов финансовых активов и пассивов Украины и ЕС.

Обоснована необходимость совершенствования отечественной практики балансовых построений на концептуальных основах СНС-2008.

Ключевые слова: финансовая либерализация, макроэкономический анализ, Система национальных счетов, национальное богатство, баланс активов и пассивов, чистая стоимость капитала, чистые требования к остальному миру, финансовые активы и обязательства.

The balance sheet as a statistical tool of research of financial component of national wealth

R. Zadorozhna

The essence of national wealth as a combination of stocks of financial and non-financial assets, reduced by the amount of liabilities of the economy before the institutional sector of the rest of the world, is described in the article from positions of System of national accounts.

The current practice of Ukrainian statistics on the construction of the balance sheets is characterized. Its differences from European practice are shown. The comparative analysis of structures of stocks of financial assets and liabilities of Ukraine and the EU was carried out.

The necessity of improving national practice of balance constructions on the framework of SNA-2008 was proved.

Keywords: financialization, macroeconomic analysis, System of National Accounts, national wealth, the balance sheet, net worth, net claims on the rest of the world, financial assets and liabilities.

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