

ANALYSIS OF THE FORMATION OF THE INTERNATIONAL RESERVES OF THE NATIONAL BANK OF UKRAINE IN THE CONTEXT OF THE GLOBAL ECONOMY

АНАЛІЗ ФОРМУВАННЯ МІЖНАРОДНИХ РЕЗЕРВІВ НАЦІОНАЛЬНОГО БАНКУ УКРАЇНИ У КОНТЕКСТІ ГЛОБАЛЬНОЇ ЕКОНОМІКИ

The article performs a retrospective theoretical, methodological and practical analysis of the formation of the Ukraine's international reserves in the current global framework. The main stages of the formation of the Ukraine's gold and foreign currency reserves are identified. A comparative analysis of the international reserves, in particular in the Ukrainian and foreign scientific doctrines, allows to establish differences in the theoretical and methodological basis for the reserves' formation. To highlight the trends in the formation of the Ukraine's international reserves, the dynamics of their volume for the period 2002-2023 is analysed. The calculations show that the level of the international reserves has been fluctuating significantly, which is explained by the NBU's foreign exchange interventions, increase in the gross external debt and the official exchange rate, and changes in the consolidated balance of payments. The study of these dynamics allows to structure the process of the international reserves formation in Ukraine and statistically substantiate each of its stages.

Key words: international reserves, gold and foreign currency reserves, methodological basis, state analysis, dynamics, trends, stages of formation, currency.

У статті для усебічного прояснення сучасного стану міжнародних резервів України здійснено ретроспективний теоретико-методичний та практичний аналіз їх формування, приймаючи до уваги світову кон'юнктуру. Висвітлено, що вітчизняна та світова теоретичні інтерпретації міжнародних резервів як елемента економічної парадигми мають розбіжності. Для цього визначено основні етапи формування золотовалютних резервів України. Доведено, що визначальними рисами формування сутності міжнародних резервів центрального банку в українському контексті були часові обмеження, інтенсивність формування адміністративно-правової середовища для оперування міжнародними резервами, співпраця з міжнародними фінансовими організаціями, як міжнародний валютний фонд, проблеми з ліквідністю та контролем, тощо. Натомість, у світовій економіці трансформація концептуальних засад золотовалютних резервів відбувалась еволюційним шляхом. Порівняльний аналіз міжнародних резервів, зокрема в українській та зарубіжній наукових доктринах, дозволив констатувати розбіжності теоретико-методичного базису формування резервів. Для виокремлення тенденцій формування міжнародних резервів України проаналізовано динаміку їхнього рівня за період 2002-2023 рр. Згідно з проведеними розрахунками, за 2002-2023 рр. обсяг міжнародних резервів НБУ збільшився на 35,9 млрд. дол. США, або у 8,8 разів. З одного боку, це є позитивним явищем, адже свідчить про розширення можливостей регулятора з їх використання у загальноекономічних цілях. З іншого боку, як показують розрахунки, рівень міжнародних резервів значно коливався, що пояснюється валютними інтервенціями НБУ, зростанням валового зовнішнього боргу, офіційного валютного курсу та змінами у зведеному платіжному балансі. Дослідження динаміки дозволило структурувати процес формування резервів в Україні та статистично обґрунтувати кожний етап: докризовий; міжкризовий; підйому; воєнного стану. Таким чином, проведений аналіз дозволив довести, що формування міжнародних резервів НБУ відбувається у векторі розвитку глобальної економіки, з присутністю локально обґрунтованих відхилень.

Ключові слова: міжнародні резерви, золотовалютні запаси, методична база, аналіз стану, динаміка, тенденції, етапи формування, валюта.

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Formulation of the problem. A major part of the national wealth in the state is represented by its gold and foreign currency (i.e., international) reserves, which are essential in meeting the needs of the national economy, determining its world status and self-hedging from external and internal upheavals. Nowadays, global economic issues, such as financial and economic crises, economic inequality, reflect the urgent need to study properties of the international reserves formation to foster their positive influence on the national economy. Given the turbulent process of the domestic economic development, this issue is even more relevant in Ukraine.

Particularly, the international reserves in Ukraine have been emerging under circumstances that featured varying theoretical-methodological (approaches to determining the concept, structure and functions

of international reserves) and practical (regulatory and infrastructural support for the formation of international reserves) origins. Moreover, all influence points have been forming both connected with the global economic processes and separately from them. Therefore, for a comprehensive clarification of the current state of the international reserves in Ukraine, a retrospective theoretical-methodological and practical analyses of their formation in respect to the global framework should be performed.

Analysis of recent research and publications. Issues of international reserves are studied by many Ukrainian and foreign researchers. Their theoretical interpretation, composition and functions are provided by D. Diakovskiy [1], L. Sus [2], M. Korol [3; 4], A. Hrytsyshyn [5], O. Chubar [6], Yu. Derkach [7], B. Eichengreen [8] and others. Nevertheless,

certain trends in the international reserves formation in Ukraine require further research in the international context.

Formation of the objectives of the article.

This study aims to perform retrospective theoretical-methodological and practical analyses of the formation of the international reserves in Ukraine, taking into account the global framework of the subject under study.

Presentation of the main research material.

To achieve this goal, it is reasonable to first analyse theoretical aspects of the formation of international reserves (hereinafter also referred to as IR). It is worth mentioning that theoretical interpretations of international reserves as an element of the economic paradigm in Ukraine and other countries in the world do not coincide. This may imprint on the width and depth of the methodological basis for managing them in the present time.

In Ukraine, methodological principles for the international reserves' formation were established imperatively in 1991 (Table 1). The absence of a separated gold and foreign currency reserve in the times of the USSR resulted in a lack of managerial experience, personnel and infrastructure at dawn of the Ukrainian statehood. For this reason, the first theoretical and methodological studies of the IR concept and their practical implementation in Ukraine were being performed on short notice. In 1991-1992, institutional and organizational foundations were established (in 1991, the National Bank of Ukraine was founded; in 1992 – the foreign exchange market), and during 1993–1995, approaches to the IR formation through foreign exchange regulation and controls were developed and fixed in the law [3, p. 18].

Therefore, the conceptual transformation of the central bank's international reserves in the Ukrainian context featured a tight schedule and intensity, administrative (not evolutionary) formation of the IR's frameworks, cooperation with international financial institutions such as the International Monetary Fund (IMF), problems with liquidity and control.

In contrary, in the world economic science and in practice, development of conceptual foundations for international reserves has been evolutionary. It

is advisable to characterise it through a breakdown of the international monetary system development stages:

1. The “gold standard” (end of XIX – early XX centuries). International reserves emerged as a gold reserve in the 1870s. At the time, it was reasoned by the fact that the countries which were pioneering in the development of economic sciences (such as the United Kingdom, Germany, France and the USA) were actively importing this precious metal.

2. The “gold exchange standard” (1922 – 1943). In 1922, the transition to the “gold exchange standard” took place. This strengthened the role of a foreign currency reserve, because “... governments borrowing in London, Paris, or Berlin were required by the lenders to keep a portion of the proceeds on deposit in that financial center...” [8, p. 22].

3. The Bretton Woods monetary system (1944 – 1975). This stage is marked by the acquisition of the main reserve currency status by the US dollar because “central banks of countries with deficit balances of payments sent gold to the US and exchanged it for dollars” [4, p. 129]. In addition, special drawing rights (SDRs) were created in 1967 and became part of international reserves.

4. The Jamaican monetary system (1976 – nowadays). The introduction of a floating exchange rate regime in the 1970s laid the foundations for this stage [9]. Before the financial and economic crisis of 2007–2008, international reserves were diversified thanks to the euro's emergence. However, later “... the increase in oil and gold prices, the trade war between the USA and China, the rapid accumulation of gold by the central banks of Russia, China and Turkey (i.e. the modern “gold rush”) ...” led to a revision of conceptual approaches to the accumulation of reserve assets [10, p. 27].

The features of the methodological modification of the international reserves' frameworks in Ukraine and the world have shaped a modern view on this category. First, it is reflected in the legal plane. Thus, the Law of Ukraine “On the National Bank of Ukraine” states that “... gold and foreign exchange reserves are reserves of Ukraine reflected in the balance sheet

Table 1

Development of the international reserves' framework in Ukraine

Stages	Description of the IR's frameworks
I stage (1991–1992)	Formation of the IR's infrastructure: establishment of the NBU (1991); establishment of the currency exchange (1992); training of personnel and establishment of correspondent relations of the NBU with foreign banks.
II stage (1992–1995)	Regulatory registration of the IR: introduction of foreign exchange regulation and controls. Setting up an obligation to sell part of foreign currency earnings of exporters allows the increase in the IR's volume.
III stage (1995–1998)	Development in the IFIs' paradigm: the increase in the IR's volume at the expense of the IMF's loans and foreign short-term portfolio investments.
IV stage (1998–nowadays)	Recognition of the problems within the IR: insufficient liquidity level (long-term financial instruments prevailing); performing operations with the IR with offshore banks.

Source: own processing according to [1–4; 6; 7]

of the National Bank of Ukraine, which include assets recognised by the world community as international and intended for international settlements" [11]. This formulation corresponds to the approach of the International Monetary Fund, according to which international reserves are considered as "... those external assets that are readily available to and controlled by monetary authorities for meeting balance of payments financing needs, for intervention in exchange markets to affect the currency exchange rate, and for other related purposes ..." [12, p. 3].

At the same time, there are noticeable differences among Ukrainian and foreign researchers in respect to classifying components of international reserves. According to the Decision of the Board of the National Bank of Ukraine No. 229 "On Approval of the Regulation on the Policy of Management of International (Gold and Foreign Currency) Reserves of Ukraine", reserve assets are divided into monetary gold, SDRs, reserve position in the IMF, foreign currency in the form of banknotes and coins or funds in accounts abroad, securities (except shares) payable in reserve currency, any other internationally recognized reserve assets provided that their reliability and liquidity are ensured [13].

The practice of foreign central banks demonstrates a more systematic grouping of reserve assets, namely:

- 1) gold reserves, i.e. centralised reserves in the form of gold reserves that can be sold at any time;
- 2) freely convertible currency (US dollar, Australian dollar, British pound sterling, Chinese yuan, euro, Japanese yen);
- 3) special drawing rights;
- 4) reserve position in the IMF [12, p. 3].

Ultimately, prior to analysing trends in the international reserves' formation, we should emphasize functions they perform:

- 1) payment and settlement functions (covering external government liabilities to service external

public debt and settlement for exports of goods and services under foreign economic contracts);

- 2) monetary and foreign exchange regulation (interventions of the regulator in the foreign exchange market);

- 3) risk management (mitigation of shocks within balance of payments, ensuring foreign currency liquidity within the banking system during a crisis period, use as a collateral in external credit relations to reduce a "rollover risk");

- 4) generating profit for the central bank.

Therefore, the analysis of international reserves in Ukrainian and foreign scientific doctrines gives grounds to state the differences in the theoretical and methodological basis, as depicted in Table 2.

To separate trends in the formation of the Ukraine's international reserves, we will analyse the dynamics of their volume for 2002–2023 (Figure 1 and Table 3).

The selected period is representative for it reflects the financial and economic crises, the COVID-19 pandemic, military aggression, as well as changes in exchange rate regimes in Ukraine. According to the calculations, in 2002–2023, the volume of the international reserves of the NBU increased from 4.6 billion USD to 40.5 billion USD, that is, by 35.9 billion USD, or 8.8 times. On the one hand, this is a positive phenomenon, as it points to an expansion of the regulator's capabilities to use the IR for general economic purposes. On the other hand, as the calculations show (Fig. 1 and Table 3), their level was fluctuating significantly, which is explained by the NBU's foreign currency interventions, the increase in the gross external debt and the official foreign exchange rate, and changes in the consolidated balance of payments.

The further consideration of the attained dynamics allows us to identify certain stages of the IR's accumulation in Ukraine.

Table 2

Main theoretical-methodological properties of international reserves in Ukraine and world

Criteria	Characteristics	
	Ukraine	World
Emergence	Imperative, 1991	Evolutionary, starting in the 1870s
Definition	Reserves of Ukraine reflected in the balance sheet of the National Bank of Ukraine, which include assets recognized by the world community as international and intended for international settlements (the Law "On the National Bank of Ukraine")	Highly liquid external assets managed by monetary authorities to meet the needs of financing the balance of payments, conducting foreign exchange interventions and influencing the exchange rate, as well as other related purposes (the IMF guidelines)
Contents	Monetary gold, SDRs, reserve position in the IMF, foreign currency in the form of banknotes and coins or funds in accounts abroad, securities (except shares) paid in reserve currency, any other internationally recognized reserve assets, provided that their reliability and liquidity are ensured (the Decision of the Board of the NBU No. 229)	Gold reserves, freely convertible currency, SDRs, reserve position in the IMF (the IMF guidelines)

Source: own processing

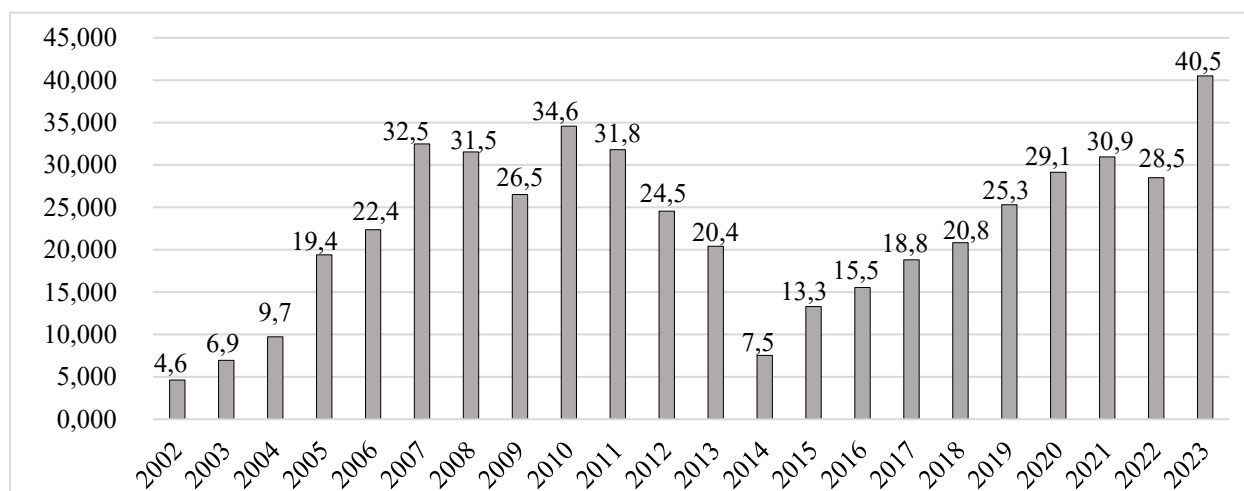


Figure 1. The volume of the international reserves of Ukraine for the period 2002–2023, billion US dollars

Source: prepared and calculated by the authors based on [14]

Table 3

Dynamics of the Ukraine's international reserves in the period 2002–2023

Years	Absolute change, billion USD	Growth rates, %	Years	Absolute change, billion USD	Growth rates, %
2002	1.540	49.84	2013	-4.130	-16.83
2003	2.314	49.99	2014	-12.882	-63.10
2004	2.772	39.92	2015	5.767	76.55
2005	9.676	99.60	2016	2.239	16.84
2006	2.968	15.30	2017	3.269	21.04
2007	10.121	45.27	2018	2.012	10.70
2008	-0.936	-2.88	2019	4.482	21.53
2009	-5.038	-15.97	2020	3.831	15.14
2010	8.071	30.45	2021	1.808	6.21
2011	-2.781	-8.04	2022	-2.446	-7.91
2012	-7.248	-22.80	2023	12.02	42.18

Source: prepared and calculated by the authors based on [14]

1. Pre-crisis period (2002–2007). In 2002–2007, the NBU's international reserves were constantly growing, with their largest relative increase compared to the previous year recorded in 2005, namely by 99.6% (almost double increase). In particular, this was facilitated by the provision of a Stand-by stabilisation loan from the IMF in the amount of 16.5 billion USD, which contributed to the NBU's ability to maintain a fixed exchange rate regime.

2. The worst decline in the researched period was the absolute and relative decrease in the international reserves in 2014 compared to 2013 (12.9 billion USD, or 63.1%). This was primarily due to servicing the Ukraine's external debt, which decreased by 16.8 billion USD, or 11.8% compared to 2013, under political (parliamentary elections) and economic ("gas contracts") factors.

3. The recovery period (2014–2021). During the period 2014–2021, the introduction of inflation targeting and currency liberalisation enabled the transition to a floating exchange rate. It ensured the increase in the Ukraine's international reserves by

17.6 billion USD, i.e., by two times. In addition, the rise was facilitated by the elimination of the balance of payments deficit – in 2021, the balance of payments total increased by 4.4 billion USD, or 3.5% compared to 2014, therefore, the need to further finance it by the official reserves disappeared.

4. The martial law period (2022 – nowadays). The armed attack on Ukraine in February 2022, the partial occupation and annexation of a number of territories have provoked the devaluation of the hryvnia by 18.5% compared to the previous period. This has necessitated a return to a fixed exchange rate regime and the NBU's support of the liquidity on the foreign exchange market (in 2022, the net balance of foreign exchange interventions amounted to 3.2 billion USD, which is 20.7 times more than in 2021). Together with the need to finance the balance of payments deficit of 2.9 billion USD, this caused significant expenditure from the international reserves, which for the year are estimated at 2.4 billion USD (7.9% decline compared to the previous year).

In 2023, thanks to the foreign support (5.5 billion USD was stocked on the NBU's foreign exchange

accounts, of which 44.5% was transferred through the World Bank Trust Fund, in particular from Japan, Norway and the USA), the volume of the Ukraine's international reserves increased to 40.5 billion USD. This is a record value for the entire reporting period [15]. Compared to 2022, the IR increased by 12.0 billion USD, or 42.2%. Primarily, this allowed to switch to the regime of a managed flexibility of exchange rate, as well as to finance the country's balance of payments deficit (the balance in 2023 is positive – 9.5 billion USD).

Overall, the dynamics of the Ukraine's international reserves state during 2002-2023 is ambiguous. The periodicity of the IR's development associated with the economic cyclicity is blurred due to unpredictable events, such as armed aggression. It is also noticeable that during financial-economic and other crises, external borrowings are activated, which leads to a temporary increase in the reserves' volume. However, this rise is then offset by expenses for stabilising the exchange rate and eliminating the balance of payments' deficit. In general, we see an increase in the Ukraine's international reserves over the reporting period.

Conclusions. The theoretical-methodological analysis of the formation of international reserves' frameworks has shown that in Ukraine this process was happening with a delay, in an imperative (administrative) way and on short notice, outside the global context of the monetary system transformation.

Practical analysis of the international reserves' formation has shown that since the beginning of this century, the formation of the IR in Ukraine has been occurring under the influence of both national and global factors. The following stages can be distinguished: pre-crisis; inter-crisis; recovery; martial law. At the stages of economic difficulties, Ukraine's foreign partners were providing assistance to our country.

Therefore, despite the initial isolation from the global context, the formation of the IR in Ukraine since the 2000s has been taking place in line with the development of the global economy, with the presence of locally justified deviations.

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