Eureka Open Access Journals
Open Access | Peer Reviewed | International Journals | Multidisciplinary Areas

Eureka Journal of Business, Economics & Innovation Studies (EJBEIS)

ISSN 2760-4950 (Online) Volume 2, Issue 6, June 2026

https://eurekaoa.com/index.php/6

THE LEVEL OF A COUNTRY'S INTERNATIONAL RESERVES: A METHODICAL APPROACH AND ITS APPROBATION

Siddikov Alisher Jurakulovich,
Professor of the Department of Economic Statistics at TSUE,
Doctor of Economics, Professor

Sayfullayev Siddik Nosirovich,
Associate Professor of the Department of Economic Statistics at TSUE, PhD.

Abstract

In this article develops a methodological approach for determining the sufficient level of a country's international reserves and presents the results of its testing. As part of this study, recommendations have been developed for the Central Bank of the Republic of Uzbekistan to ensure the country's solvency in terms of public borrowing and stability in the foreign exchange market in the context of a dynamic increase in external debt.

Keywords: Country's solvency, external debt, stability, government borrowing, gold and foreign currency reserves, crisis, financial leverage, indicator of money supply security, monthly volume of imports, and short-term debt.

Introduction

In the context of the imbalance of the global economy and the observed external shocks, in the form of rising food prices, due to a shortage in the global market,

Eureka Open Access Journals
Open Access | Peer Reviewed | International Journals | Multidisciplinary Areas
Eureka Journal of Business, Economics & Innovation Studies (EJBEIS)
ISSN 2760-4950 (Online) Volume 2, Issue 6, June 2026

https://eurekaoa.com/index.php/6

or a shortage and decrease in the mobility of capital resources, due to instability in the global stock market, requires the development of responses to these issues. This is particularly important for countries that are dependent on external capital and have high levels of external debt. Along with the lack of external investment capital for developing countries, including Uzbekistan, the burden is to service external debt with a constant deficit in foreign trade turnover.

Therefore, international financial institutions from developing countries require the formation of gold and foreign exchange reserves relative to the level of external debt.

It should be noted that the volume of international reserves depends not only on servicing external debt, but also on other factors and market segments, which requires research and development of a methodology to determine a sufficient level of a country's international reserves.

Research Methodology

It is well known that international reserves are considered as insurance reserves that protect the national economies of the countries of the world from external macroeconomic risks.

First, this is the risk of providing the domestic economy with the necessary imported goods and services, in the absence of revenue from the country's exports.

Secondly, it is a risk to the solvency of the country's external debt, in the event of a lack of foreign exchange earnings and creditors' refusal to prolong debt obligations.

Third, there is a risk of an uncontrolled change in the money supply due to the outflow or inflow of foreign capital.

In this regard, international organizations, in particular the IMF and the World Bank, propose a system of indicators for developing economies that assess the adequacy of reserves [2, pp. 414-415].

Eureka Open Access Journals
Open Access | Peer Reviewed | International Journals | Multidisciplinary Areas
Eureka Journal of Business, Economics & Innovation Studies (EJBEIS)
ISSN 2760-4950 (Online) Volume 2, Issue 6, June 2026

https://eurekaoa.com/index.php/6

The above-mentioned indicators include the indicator international reserves in months of imports.

The international reserves indicator in months of imports is determined by comparing the ratio of the volume of international reserves to the average monthly value of a country's imports and acquires the following mathematical formula.

$$\mathbf{R}_{\mathbf{Im}}^{\mathbf{m}} = \frac{\mathbf{R}}{\mathbf{Im}/12} \qquad (1)$$

Where,

$\mathbf{R}_{\mathbf{Im}}^{\mathbf{m}}$ - international reserves in months of imports;

R – the country's international reserves, billion US dollars;

Im – annual imports, billion US dollars.

In foreign literatures, the generally accepted value of international reserves in months of import of this indicator is from 3 to 6 months.

It is within 3 to 6 months that the country can overcome the import blockade and establish security by concluding new contracts in the foreign market, mobilizing domestic production and other measures.

It should be noted that the availability of such gold and foreign exchange reserves is particularly important for countries with limited access to global capital markets.

This is also confirmed by the fact that in world practice, most developing countries exceed the standard value of international reserves in months of imports.

The next indicator included in the system of indicators assessing the adequacy of reserves is the indicator of the provision of short-term external debt with the country's international reserves.

Eureka Open Access Journals
Open Access | Peer Reviewed | International Journals | Multidisciplinary Areas
Eureka Journal of Business, Economics & Innovation Studies (EJBEIS)
ISSN 2760-4950 (Online) Volume 2, Issue 6, June 2026

https://eurekaoa.com/index.php/6

The ratio of international reserves to the country's short–term external debt is an indicator that demonstrates the economy's ability to pay off current external obligations using its own resources.

The calculation for determining the volume of current external liabilities includes debt with a maturity of up to 1 year and long-term debt servicing, i.e., interest payments on it.

The ratio of international reserves to the country's short-term external debt takes on the following mathematical formula.

$$\mathbf{R_{ED}^{Shrun}} = \frac{\mathbf{R}}{\mathbf{ED_{run}^{Sh}+EDS_{run}^{L}}} \qquad \mathbf{(2)}$$

Where,

R_{ED}^{Shrun} - the ratio of short-term external debt to the country's international reserves;

R - the country's international reserves, billions of US dollars;

ED_{run}^{Sh} – short-term external debt, billion USD;

EDS_{run}^{L} – Long-run external debt service).

The ratio of the country's short-term external debt to international reserves should be equal to or above unity.

The third indicator included in the system of indicators assessing the adequacy of reserves is the indicator of the supply of money with foreign exchange reserves.

The indicator of money supply with foreign exchange reserves plays an important role in countries with non–independent monetary regimes with national currencies pegged to stronger foreign currencies.

It is believed that such a peg insures weak currencies from their further depreciation, and maintaining reserves plays a stabilizing role by connecting the

Eureka Open Access Journals
Open Access | Peer Reviewed | International Journals | Multidisciplinary Areas
Eureka Journal of Business, Economics & Innovation Studies (EJBEIS)
ISSN 2760-4950 (Online) Volume 2, Issue 6, June 2026

https://eurekaoa.com/index.php/6

effect of trust in the national monetary unit and the disciplining effect in monetary policy" [3, p. 289.].

The indicator of the money supply with foreign exchange reserves is calculated as the ratio of the country's international reserves to the monetary aggregate M_2, and acquires the following mathematical formula.

$$\mathbf{RM} = \frac{\mathbf{R*ER}}{\mathbf{M_2}} \qquad \mathbf{(3)}$$

Where,

RM – mass money security coefficient by international reserves;

R - international reserves, billion US dollars;

ER- US dollar exchange rate in national currency, billion US dollars;

M_2 - mass money in broad definition (M_2), billion sum.

It should be emphasized that in order to assess the macroeconomic equilibrium of a country, as part of financial stability, we have considered the indicator of the sufficiency of international reserves of developing countries to cover the costs of short-term debt and its servicing, imports, and the broad money supply.

To do this, we initially determined the required amount of short-term debt and the amount of its servicing, the volume of imports for 3 and 6 months, as well as the total money supply of the Republic of Uzbekistan for 2010-2025.

Taking into account the 3 and 6 monthly volume of imports, the required minimum and maximum volume of the country's foreign exchange reserves has been calculated.

Subsequently, the indicator of the level of sufficiency of international reserves to cover the costs of short-term debt and its servicing, imports, and the broad money supply was determined.

The coefficient of the sufficiency of international reserves is determined by the ratio of the volume of the country's gold and foreign exchange reserves to the

Eureka Open Access Journals
Open Access | Peer Reviewed | International Journals | Multidisciplinary Areas
Eureka Journal of Business, Economics & Innovation Studies (EJBEIS)
ISSN 2760-4950 (Online) Volume 2, Issue 6, June 2026

https://eurekaoa.com/index.php/6

amount of expenses on short-term debt and its servicing, imports, and the broad money supply, which has acquired the following mathematical formula.

$$C_{IR}^{Adeq} = \frac{R}{RAIR_{MM\&PI}^{ScrIm}} \quad (4)$$

Where,

C_{IR}^{Adeq} - International reserves adequacy ratio;

R - the country's international reserves, billions US dollars;

$RAIR_{MM\&PI}^{ScrIm}$ – Required amount of international reserves to secure imports, mass money and payments of principal and interest.

The main part of the research and approbation of the methodical approach.

We have tested the methodology of the sufficiency level of international reserves based on the data for the Republic of Uzbekistan for 2010-2025.

The coefficient of the sufficiency of international reserves in the Republic of Uzbekistan to cover short-term debt, imports and the broad money supply for the analyzed period showed that the indicator improved from 0.911 (2010) to 1.373 (2025), with an upward trend in a number of dynamics.

As of January 1, 2026, Uzbekistan's international reserves amounted to 66311.8 million US dollars, increased by 25130.2 million US dollars by the comparable period of 2025, which positively affected the increase in the adequacy ratio of international reserves.

In fairness, it is important to emphasize that the ratio of Uzbekistan's international reserves to GDP is relatively high compared to the main trading partner countries. Thus, the ratio of international reserves to GDP in Uzbekistan currently stands at 45.1% and, if necessary, can act as an important state financial lever during the crisis period.

The results of the study also indicate that in 2013-2022, in total terms, Uzbekistan's gross international reserves increased from 22.5 billion US dollars

Eureka Open Access Journals
Open Access | Peer Reviewed | International Journals | Multidisciplinary Areas
Eureka Journal of Business, Economics & Innovation Studies (EJBEIS)
ISSN 2760-4950 (Online) Volume 2, Issue 6, June 2026

https://eurekaoa.com/index.php/6

(in 2013) to 66.3 billion US dollars (in 2025), or almost 1.6 times, with a decrease in their comparative value, i.e., reserve assets relative to the volume of imports of goods and services increased from 21.9 to 15.4 months.

Conclusion

As part of a scientific study, in order to ensure the country's solvency on government borrowing and stability in the foreign exchange market in the context of a dynamic increase in external debt, we recommend that the Central Bank of the Republic of Uzbekistan:

- to form reserve assets to maintain the country's foreign debt solvency at the level of at least 25% of annual imports;
- to maintain the level of formation of financial resources for gold and foreign exchange reserves at a level of at least M0 to maintain the exchange rate of the national currency against foreign currencies;
- to increase the volume of the country's reserve assets, taking into account the expected costs of the ongoing crisis and the observed growth of the third wave in the world with an increase in the incidence of pneumonia and Covid-19 virus infection and the spread of several varieties of the monkeypox virus;
- develop effective measures for the use of reserve assets in order to reduce the costs associated with the possession of reserves, etc.

References

1.Guidance note on the assessment of reserve adequacy and related considerations, International Monetary Fund Washington, D.C. http://www.imf.org/external/pp/ppindex.aspx

2. Kireev, A.P. Applied macroeconomics: textbook / V.P. Kireev. Moscow: International Relations, 2006. 456 p.

3. Malkina M.Y. Management of official international reserves of states in the

Eureka Open Access Journals
Open Access | Peer Reviewed | International Journals | Multidisciplinary Areas
OPEN ACCESS JOURNALS

Eureka Journal of Business, Economics & Innovation Studies (EJBEIS)

ISSN 2760-4950 (Online) Volume 2, Issue 6, June 2026

https://eurekaoa.com/index.php/6

context of global risks. Proceedings of the Nizhny Novgorod State Technical University named after R.E. Alekseev No. 2 (81), pp. 286-293.

4. Siddikov A.J. Methodology for assessing the country's macroeconomic equilibrium based on SNA indicators // Journal of Statistical Bulletin of Uzbekistan No. 3. 2022.