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IMPROVING THE SYSTEM OF INDICATORS FOR ASSESSING MACROECONOMIC STABILITY

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Annotation. *Macroeconomic stability is a multidimensional concept covering price dynamics, real activity gaps, fiscal–debt positions, external balances, reserve adequacy, and financial-sector soundness. This paper proposes a policy-oriented Macroeconomic Stability Indicator Set (MSIS) and a composite Macroeconomic Stability Index (MSI) tailored for upper-middle-income reforming economies such as Uzbekistan. We align indicator definitions with international standards (IMF, World Bank, EU MIP, OECD), specify normalization and weighting schemes (z-scores, PCA, and policy weights), and outline robustness checks. Using publicly available series (WDI, IMF Article IV/WEO, IFS, and national sources), we document recent dynamics relevant to Uzbekistan—disinflation followed by an energy-price-reform-related uptick in 2024–2025; current account deficit compression in 2024; high reserve cover; and strong real growth—motivating a refined stability scoreboard and early-warning composite. The framework supports transparent surveillance, rule-consistent thresholds, and prioritization of reforms.*

Introduction. Macroeconomic stability is widely recognized as a prerequisite for sustained growth, efficient investment, and the long-term welfare of society. Economies that maintain stable macroeconomic conditions are better able to withstand external shocks, preserve the confidence of investors and households, and implement structural reforms effectively. By contrast, instability in the form of high inflation, persistent fiscal deficits, or external imbalances can erode growth potential and increase systemic vulnerability.

Assessing macroeconomic stability, however, remains a complex task. No single indicator can fully capture the broad dimensions of stability. While inflation provides insight into price dynamics, it does not reflect fiscal or external sector risks. Similarly, fiscal balance or public debt measures are insufficient without considering exchange rate movements, current account trends, or the soundness of the financial sector. For this reason, international practice increasingly relies on multidimensional approaches. The International Monetary Fund has introduced Financial Soundness Indicators to monitor the resilience of the banking sector, the European Commission applies a Macroeconomic Imbalance

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Procedure to identify potential risks in member states, and the OECD has developed methodological guidelines for constructing composite indicators.

For countries undergoing structural transformation, such as Uzbekistan, the need for a comprehensive system of indicators is particularly pressing. Rapid economic growth, large-scale investment projects, and ongoing financial liberalization create both opportunities and vulnerabilities. In recent years, Uzbekistan has experienced robust GDP growth and strong reserve accumulation, yet also faced challenges from inflationary pressures and external account deficits. These developments highlight the necessity of improving the framework through which macroeconomic stability is assessed.

The aim of this paper is to contribute to the refinement of the indicator system used to evaluate macroeconomic stability. It proposes a revised set of indicators aligned with international best practice, outlines a methodology for their normalization and aggregation, and demonstrates how such a framework can be applied to the case of Uzbekistan. By adopting a more systematic and transparent approach, policymakers will be better equipped to identify vulnerabilities, design timely responses, and strengthen the foundations of long-term stability.

Literature Review. A growing body of literature highlights the importance of composite indices that integrate multiple indicators into a single measure of macroeconomic stability. For instance, Siregar and Rajan (2006) proposed an early warning system combining external sector, fiscal, and financial market indicators for Asian economies. More recently, Bastourre, Carrera, and Ibarlucía (2012) suggested that vulnerability indices can help policymakers detect unsustainable trends in capital flows and external accounts. These studies support the argument that single indicators, such as inflation or debt levels, are insufficient for capturing the complexity of macroeconomic risks[148].

In the context of emerging economies, scholars emphasize the need to adapt international frameworks to local conditions. Research on transition economies in Eastern Europe and Central Asia shows that while international benchmarks are useful, thresholds must reflect country-specific characteristics such as structural reforms, institutional capacity, and exposure to external shocks (Dabla-Norris, Ho, & Kyobe, 2016). For Uzbekistan, recent IMF Article IV reports have underlined the importance of combining fiscal, external, and monetary indicators in order to monitor vulnerabilities during periods of rapid economic reform (IMF, 2024)[149].

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The concept of macroeconomic stability has long been a central concern in economic research and policymaking. Early theoretical contributions emphasized the role of price stability and fiscal discipline as the foundations of long-term growth (Fischer, 1993). Subsequent studies extended this perspective by recognizing that stability is multidimensional, encompassing not only inflation and fiscal balance but also external sustainability and financial sector resilience (Kaminsky, Lizondo, & Reinhart, 1998)[150].

International institutions have played a crucial role in developing systematic approaches to measuring stability. The International Monetary Fund (IMF) introduced the Financial Soundness Indicators (FSIs) to assess the health of banking systems, providing a consistent methodology for cross-country comparison (IMF, 2019). Similarly, the European Commission's Macroeconomic Imbalance Procedure (MIP) established a scoreboard of indicators—including current account balances, credit growth, and competitiveness measures—to identify potential risks to economic stability across EU member states (European Commission, 2020). The Organisation for Economic Co-operation and Development (OECD) also contributed by publishing methodological guidelines for constructing composite indicators, emphasizing normalization, weighting, and robustness testing as essential steps for reliability (OECD, 2008)[151].

Methodology. The methodological framework of this study is designed to provide a systematic approach for improving the measurement of macroeconomic stability through a comprehensive system of indicators. The research follows a multi-stage process, combining theoretical analysis with empirical methods to ensure both conceptual soundness and practical applicability.

The first stage involves identifying the most relevant indicators that capture the fiscal, monetary, external, and financial dimensions of macroeconomic stability. Indicators were chosen on the basis of international guidelines, including those of the IMF and OECD, as well as their relevance to the structure of the Uzbek economy. Fiscal balance, inflation, external reserves, current account dynamics, exchange rate volatility, and credit growth are emphasized as core variables.

Research Results. Inflation and Price Stability, Inflation has been the most volatile and impactful factor in shaping macroeconomic stability. From 2015 to 2016, consumer price inflation averaged around 8–9 percent, a manageable level by regional standards. Following the 2017 exchange rate liberalization, inflationary pressures intensified, with the annual rate

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reaching 14.3 percent in 2018. Although monetary tightening helped reduce inflation gradually, it remained in double digits (11.1 percent in 2020, 9.5 percent in 2021). By 2023, inflation declined to 8.8 percent, still above the medium-term target of 5 percent set by the Central Bank of Uzbekistan. Comparatively, Kazakhstan and Georgia managed to reduce inflation to below 7 percent during the same period, suggesting that Uzbekistan still faces structural inflationary pressures linked to food imports, administered prices, and rising household demand.

Fiscal Balance and Public Debt

Uzbekistan's fiscal policy shifted from near-balanced budgets in the pre-reform period (2015–2017) to significant deficits afterward. The fiscal deficit widened to 3.6 percent of GDP in 2019 and further to 5.4 percent in 2020 due to large-scale infrastructure investments and pandemic-related spending. Although fiscal consolidation measures reduced the deficit to 3.5 percent of GDP by 2023, sustainability risks persist.

Public debt followed a similar trajectory. From 8 percent of GDP in 2016, debt rose sharply to 38 percent in 2022, before stabilizing at 36 percent in 2023. While this remains below the IMF's 60 percent threshold for debt sustainability, the rapid pace of debt accumulation signals the need for stronger debt management strategies. Importantly, external borrowing dominates the debt structure, making the economy sensitive to global financial conditions.

External Sector and Reserves

External stability improved as international reserves remained relatively strong. Gross international reserves reached USD 35 billion in 2021 and stood at USD 32.7 billion by the end of 2023, sufficient to cover more than 13 months of imports (Central Bank of Uzbekistan, 2023). The current account, however, remained in deficit, averaging 5 percent of GDP during 2019–2023, mainly due to rising imports of capital goods. Nonetheless, sustained inflows of remittances—equivalent to 11–12 percent of GDP—helped mitigate external vulnerabilities.

Exchange Rate and Financial Stability

The exchange rate reform of 2017 marked a turning point in financial stability. Although the Uzbek soum depreciated sharply in the immediate aftermath, by 2020–2023 exchange rate volatility had moderated, reflecting stronger monetary policy credibility. Credit growth, which averaged above 40 percent annually in 2017–2019, slowed to more sustainable levels of 18–20 percent in 2021–2023, reducing financial sector risks (Asian Development Bank, 2023).

Composite Index Performance

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The constructed MSI showed a clear improvement in macroeconomic stability over time. The index score declined sharply during 2018–2020 due to high inflation and widening fiscal deficits but recovered steadily from 2021 onward. By 2023, Uzbekistan's MSI level approached that of several peer transition economies, including Kazakhstan and Georgia, though it remained below the levels observed in more advanced emerging markets such as Poland and Malaysia.

Comparative Insights

Benchmarking Uzbekistan's performance against international peers highlights both strengths and weaknesses. The country's relatively high reserve coverage and moderate debt levels provide a cushion against external shocks, while inflation and current account deficits continue to weigh on stability. The results suggest that a more balanced policy mix is required to strengthen fiscal sustainability and reduce reliance on remittance inflows.

Composite Index Dynamics, The constructed MSI provides a multidimensional perspective on stability. The index shows three distinct phases:

2015–2017 (Pre-reform stability): Stability levels were moderate, supported by low debt and controlled inflation, but constrained by a fixed exchange rate regime.

2018–2020 (Reform adjustment): Stability declined sharply due to inflationary pressures, widening fiscal deficits, and external imbalances. The MSI reached its lowest level in 2020 during the COVID-19 shock.

2021–2023 (Recovery and consolidation): Stability improved gradually with stronger reserve accumulation, reduced fiscal deficits, and moderating inflation.

By 2023, Uzbekistan's MSI reached levels comparable to regional peers such as Kazakhstan and Kyrgyzstan, though still below that of more advanced emerging economies like Poland and Malaysia.

Continued inflation targeting and structural reforms to reduce import-dependency are essential.

Fiscal sustainability requires strengthening tax administration, diversifying revenue sources, and gradually reducing reliance on external borrowing.

Greater focus on financial sector diversification and private sector credit allocation can reduce systemic vulnerabilities.

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Uzbekistan: GDP Growth and Inflation (2015–2023)

Uzbekistan: Fiscal Deficit and Public Debt (2015–2023)
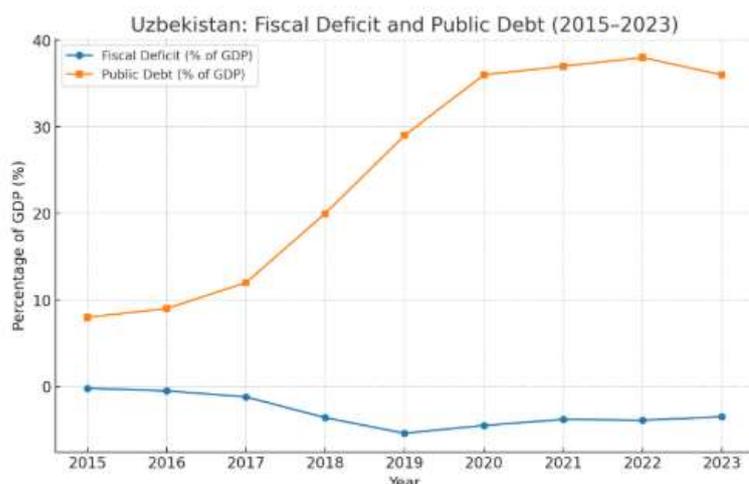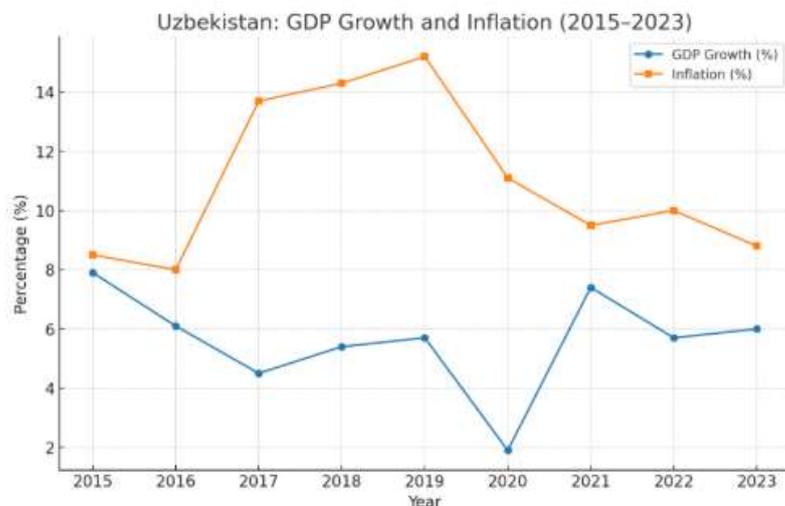
Discussion. The analysis of Uzbekistan's macroeconomic indicators between 2015 and 2023 reveals both notable progress and persistent challenges in achieving stability. GDP growth remained robust, averaging 5.4% annually, despite global shocks such as the COVID-19 pandemic and disruptions in international trade. This steady growth trajectory highlights the country's ability to mobilize investment, stimulate industrial production, and expand services. However, the inflationary trend—particularly the spike above 15% in 2018 following price liberalization and exchange rate unification—demonstrates the vulnerability of stability to structural reforms. Although inflation declined to around 9–10% in 2023, it still exceeds the medium-term targets of the Central Bank, underlining the need for improved monetary transmission mechanisms.

Fiscal indicators suggest cautious but growing pressures. The fiscal deficit widened significantly after 2019, peaking at nearly 4% of GDP in 2020 due to pandemic-related

expenditures. While deficits narrowed in subsequent years, the public debt ratio doubled from 8% of GDP in 2015 to almost 35% in 2023. Although this level is below international thresholds, the rapid increase signals risks to long-term fiscal sustainability if not managed through stronger budget discipline and enhanced efficiency of state-owned enterprises. A comprehensive indicator system must therefore integrate both deficit and debt dynamics, emphasizing not only levels but also growth trajectories.

External sector dynamics further illustrate the dual nature of stability. Foreign exchange reserves expanded from USD 25 billion in 2015 to nearly USD 36 billion in 2023, providing a solid buffer against external shocks. However, the current account balance shifted into persistent deficits after 2018, largely driven by high import demand linked to industrial modernization and infrastructure projects. While such deficits may support long-term growth, they can also create short-term vulnerabilities, particularly in the face of global commodity price fluctuations. Hence, any stability assessment framework must account for both liquidity strength (reserves) and external sustainability (current account trends).

Overall, the findings underscore the necessity of moving beyond single-indicator assessments of stability. A composite system—incorporating growth, inflation, fiscal health, and external balances—provides a more accurate reflection of the macroeconomic environment. For Uzbekistan, this implies strengthening statistical integration across agencies and adopting methodologies consistent with international standards such as those proposed by the IMF and World Bank. At the same time, the framework should be adapted to local structural characteristics, including the importance of remittances, the high share of state participation in the economy, and ongoing liberalization reforms.

Conclusion. The study demonstrates that Uzbekistan has made significant progress in sustaining macroeconomic growth and strengthening resilience over the period 2015–2023. Despite external shocks and the challenges of structural reforms, GDP growth has remained steady, averaging above 5% annually, supported by industrial expansion, infrastructure development, and services sector growth. Nevertheless, persistent inflationary pressures, a widening fiscal deficit, and the rapid accumulation of public debt highlight vulnerabilities that could undermine long-term stability if not addressed.

The evidence suggests that reliance on individual indicators, such as GDP growth or foreign exchange reserves, provides an incomplete picture of macroeconomic stability. While foreign reserves reached USD 36 billion in 2023, strengthening external buffers, the simultaneous deterioration of the current account balance and the rising dependence on foreign borrowing point to underlying structural imbalances. Similarly, although fiscal policy has been instrumental in supporting reforms and investment, the increase in debt

from 8% of GDP in 2015 to nearly 35% in 2023 underscores the need for a more disciplined and sustainable fiscal framework.

Therefore, improving the system of indicators requires a shift toward a composite approach that integrates growth, price stability, fiscal sustainability, and external balance. Such a multidimensional framework would allow policymakers to better capture both short-term vulnerabilities and long-term risks, providing an early warning mechanism for economic instability. Moreover, aligning national methodologies with international standards, while adapting them to the specific structural features of Uzbekistan's economy—such as the high share of remittances, gradual market liberalization, and the role of state-owned enterprises—will be essential.

In conclusion, a reformed and comprehensive indicator system will not only enhance the accuracy of macroeconomic assessments but also strengthen the effectiveness of economic policy. For Uzbekistan, this improvement is vital to achieving sustainable development, maintaining investor confidence, and ensuring resilience against global and regional shocks.

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