

# The Role of Effective Management of Currency Risks on Ensuring the Stability of the Public Debt in Uzbekistan



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# **The Role of Effective Management of Currency Risks on Ensuring the Stability of Public Debt in Uzbekistan**

## **ABSTRACT**

Public debt sustainability is a growing concern for many countries, particularly those with high exposure to foreign-denominated debt. Currency risk—arising from fluctuations in exchange rates—can significantly affect the cost of servicing public debt and increase a country's vulnerability to financial instability. This research investigates how effective management of currency risks contributes to maintaining public debt stability, with a focus on both theoretical perspectives and real-world practices.

The study employs a mixed-method approach, combining empirical data analysis with case studies from selected countries. Key indicators such as debt-to-GDP ratios, interest payment burdens, and exchange rate volatility are analyzed using data from the International Monetary Fund, World Bank, and national debt management offices. The paper explores various strategies used to mitigate currency risk in Uzbekistan.

Findings suggest that countries with strong institutional frameworks and proactive currency risk management are better able to withstand external shocks and maintain debt sustainability. Conversely, countries with weak governance and a high reliance on foreign-denominated debt are more prone to crises triggered by exchange-rate depreciation. The study concludes that integrating currency risk management into public debt strategies is essential for fiscal resilience and recommends targeted policy reforms and international cooperation to strengthen debt management capacity in vulnerable economies.

# 1. INTRODUCTION

## 1.1 Background and Context

In the era of global interconnectedness, public debt management has become one of the most crucial elements of a nation's economic policy. For many countries, particularly emerging markets and developing economies, public debt is an essential tool for financing infrastructure projects, economic development, and social services. However, the management of public debt is complex, especially when a significant portion of the debt is denominated in foreign currencies. In these cases, exchange rate fluctuations introduce substantial risks, potentially increasing the burden of debt servicing and threatening fiscal stability.

Currency risk arises when a country's currency depreciates relative to the currencies in which its foreign debt is denominated. This risk can lead to higher costs of debt servicing, as a devalued domestic currency makes foreign-denominated debt more expensive to repay. As such, effective management of currency risk is vital to maintaining the sustainability of public debt and ensuring that a country can meet its financial obligations without resorting to austerity measures or excessive borrowing.

The issue of currency risk has become particularly relevant in the context of increasing global economic volatility, with many developing nations struggling to manage their foreign debt exposure. Exchange rate volatility, along with external shocks such as global financial crises, trade disruptions, and commodity price fluctuations, can exacerbate the challenges faced by governments in stabilizing public debt. In light of these challenges, this research aims to explore the role of currency risk management strategies in ensuring the stability of public debt in Uzbekistan.

## 1.2 Problem Statement

Many countries including Uzbekistan, especially those with high levels of foreign-denominated debt, remain vulnerable to external shocks that can destabilize their fiscal positions. The depreciation of a nation's currency can increase the burden of debt repayment, leading to higher interest payments and an increased risk of default. Despite the growing recognition of this risk, many governments lack effective strategies to manage currency exposure, often relying on short-term solutions that do not address the underlying structural issues.

In particular, developing economies that rely on foreign capital are at risk of escalating debt levels due to exchange rate fluctuations. This research identifies the need for comprehensive and effective currency risk management strategies that align with broader public debt management frameworks to ensure fiscal sustainability in Uzbekistan.

## 1.3 Research Objectives

This research aims to investigate the role of effective currency risk management in ensuring the stability of public debt in Uzbekistan. The study focused on the following objectives:

- **To analyze the negative impact of currency risk on public debt sustainability in Uzbekistan:** Investigate how fluctuations in exchange rates affect the cost of servicing foreign-denominated debt and the broader fiscal health of a country.
- **To assess the risk management strategies used by governments:** Examine the various tools and approaches (e.g., strengthening domestic currency, debt diversification, and natural hedging tools to mitigate currency risk in public debt management).
- **To evaluate the effectiveness of these strategies:** Analyze case studies to assess how different countries have managed currency risks and identify best practices and lessons learned.

- **To provide policy recommendations for improving currency risk management for Uzbekistan:** Suggest policy reforms to strengthen the capacity of governments to manage currency risk and ensure long-term public debt sustainability.

#### 1.4 Significance of the Study

The significance of this study lies in its potential to provide valuable insights into how countries can better manage the risks associated with foreign-denominated public debt. As many economies, especially developing countries, face rising public debt burdens, understanding and mitigating currency risks is vital to ensuring fiscal sustainability. The findings of this research can help policymakers and debt managers of Uzbekistan, and international financial institutions design more effective debt management strategies that account for currency risks.

Furthermore, this study contributes to the broader field of public finance by expanding the understanding of how currency risks can be integrated into debt management frameworks. It also provides actionable recommendations for improving debt sustainability in Uzbekistan, which is crucial for maintaining economic stability and growth, especially in the context of global economic uncertainties.

#### 1.5 Structure of the Paper

The paper is organized as follows:

- **Chapter 1: Introduction** – overall statement
- **Chapter 2: Literature Review** – A review of the theoretical and empirical literature on public debt sustainability, currency risk, and the strategies used by governments to manage currency exposure.
- **Chapter 3: Methodology** – An outline of the research design, data collection methods, and analytical techniques used to examine the impact of currency risk on public debt.
- **Chapter 4: Data Analysis and Empirical Findings** – An analysis of trends in currency composition, the impact of currency risk on public debt sustainability, and case studies.
- **Chapter 5: Policy Recommendations** – Practical recommendations for the government of Uzbekistan to strengthen its currency risk management strategies.
- **Chapter 6: Discussion** – An interpretation of the findings, discussing the implications of effective currency risk management and its role in debt sustainability.
- **Chapter 7: Conclusion** – A summary of the key insights, limitations of the study, and directions for future research.

## 2.LITERATURE REVIEW

### 2.1 Concept of Public Debt Sustainability

Debt sustainability is commonly defined as a government's ability to meet its current and future debt service obligations without resorting to exceptional financing or compromising economic growth. According to the International Monetary Fund (IMF, 2009), a debt is considered sustainable when “the borrower is expected to be able to continue servicing its debts without an unrealistically large correction to its income and expenditure.” Key indicators include the debt-to-GDP ratio, interest payments as a share of government revenue, exports, and the primary balance.

The foundational work of Reinhart and Rogoff (2009) emphasizes that while moderate levels of debt can support economic growth, excessive debt burdens often lead to crises, especially when combined with structural weaknesses. In this context, the currency composition of public debt plays a pivotal role in determining its sustainability.

Additionally, according to Olivier Blanchard and Mitali Das (A New Index of External Debt Sustainability, 2017), external debt is sustainable if there is a high enough probability that, at the current exchange rate, net debt is equal to or less than the present value of net exports.

### 2.2 Understanding Currency Risk

Currency risk refers to the potential for financial losses due to fluctuations in exchange rates that affect the value of assets, liabilities, or income denominated in foreign currencies. For sovereign borrowers, this risk materializes when a depreciation of the domestic currency increases the cost of servicing debt issued in foreign currencies.

Governments often borrow in foreign currencies due to the limited depth of domestic capital markets, favorable interest rates on external loans, or conditionalities from international lenders. However, foreign-denominated debt exposes countries to volatility in global financial markets. Eichengreen, Hausmann, and Panizza (2002) point out that the phenomenon of “original sin”—the inability of some countries to borrow abroad in their own currencies—has been a structural constraint for many developing economies.

In periods of domestic currency depreciation, the local currency value of external debt and interest payments can surge, straining fiscal balances. This is particularly dangerous in countries with weak export bases or low foreign exchange reserves, where currency depreciation cannot be offset by increased foreign earnings. Therefore, managing currency risk is not just a financial consideration but a core component of sovereign risk and macroeconomic stability.

### 2.3 Theoretical Frameworks: Debt Dynamics and Exchange Rate Risks

The interaction between public debt dynamics and currency risk is grounded in several theoretical frameworks. One of the most cited models is the debt sustainability framework (DSF), employed by the IMF and World Bank. It evaluates a country's capacity to sustain debt through projections of fiscal and macroeconomic variables, including growth, interest rates, and exchange rates.

Debt dynamics are driven by the well-known differential between the real interest rate ( $r$ ) and the real GDP growth rate ( $g$ ). When  $r > g$ , debt accumulation can become unsustainable unless offset by large primary surpluses. The presence of foreign-denominated debt introduces another layer: changes in the exchange rate ( $e$ ) affect the real value of debt ( $D$ ) and interest payments ( $i$ ).

The basic dynamic equation of debt accumulation can be expressed as:

$$\Delta D_t = (i_t - g_t) D_{t-1} + PB_t + \varepsilon_t$$

where  $\varepsilon_t$  reflects the exchange rate shock component. A sudden depreciation increases  $D_t$ , especially when debt is not hedged.

Reinhart, Rogoff, and Savastano (2003) introduced the concept of “debt intolerance,” where countries with histories of default and weak institutions face tighter constraints in managing foreign-currency debt. Debt intolerant countries tend to have weak fiscal structures and weak financial systems. Default often exacerbates these problems, making these same countries more prone to future default.

## 2.4 Empirical Studies on Currency Risk and Sovereign Debt Crises

Empirical literature consistently finds a strong link between exchange rate volatility and sovereign debt instability. Countries with higher proportions of foreign currency debt are more prone to fiscal crises following currency depreciations. Asonuma (2016) empirically demonstrates that emerging market economies often experience real exchange rate depreciation around sovereign defaults; particularly when these economies have a large share of foreign-currency-denominated debt, such depreciation both precedes and amplifies default episodes. Similarly, Jeanne and Guscina (2006) show that emerging market economies with a higher share of public debt denominated in foreign currencies tend to exhibit greater macroeconomic and fiscal vulnerability, particularly in the face of external shocks.

In the case of Latin America, numerous studies have highlighted how reliance on USD-denominated bonds made governments vulnerable to sudden stops in capital flows. Argentina’s 2001 default is often cited as a textbook case, where excessive dollar-denominated debt, combined with a fixed exchange rate regime, led to fiscal collapse when external conditions shifted. In contrast, countries like Chile and Mexico have developed local-currency bond markets and implemented currency hedging, which reduced their exposure during the 2008 and 2020 crises. The findings consistently emphasize the need for better foreign exchange risk management in national debt strategies.

## 2.5 Risk Management Strategies in Public Debt Management

Effective currency risk management in public debt hinges on proactive debt portfolio planning and access to diversified financial instruments. The main strategies include:

- **Debt Portfolio Diversification:** Issuing debt in a mix of currencies to spread exposure and reduce dependency on a single foreign currency.
- **Development of Domestic Capital Markets:** Encouraging borrowing in local currency by deepening domestic bond markets.
- **Use of Derivatives and Currency Swaps:** Employing hedging instruments such as currency swaps and forward contracts to lock in exchange rates, though often limited in low-income countries due to cost and market access.
- **Institutional Reforms:** Strengthening Debt Management Offices (DMOs) to integrate risk analysis tools, improve transparency, and adopt international best practices.

The World Bank’s Medium-Term Debt Management Strategy (MTDS) framework strongly emphasizes assessing and managing currency risk as a central component of sovereign debt strategy. This is because a government’s exposure to exchange rate fluctuations can significantly affect debt sustainability, especially in countries with a large share of external debt denominated in foreign currencies. Under the MTDS approach, policymakers are encouraged to analyze the currency

composition of their debt portfolio and evaluate the potential impact of exchange rate movements on debt service costs and the overall fiscal position.

### 3. METHODOLOGY

This study sought to understand the relationship between currency risk management and the stability of public debt in Uzbekistan. Specifically, it analyzed how effective strategies for managing currency risk contribute to the stability of a nation's debt, particularly when it involves foreign-denominated debt. The methodology for this research was designed to thoroughly investigate this relationship through a structured process that incorporated qualitative and quantitative approaches. The study employed a combination of secondary data, primary data, and case study analysis to examine the factors that influence the success of currency risk management strategies in the context of public debt sustainability.

#### 3.1 Research Design

This study adopted a **mixed-methods** approach. **Quantitative analysis** was used to assess the statistical relationship between currency risk exposure and public debt stability using historical macroeconomic and fiscal data. Meanwhile, **qualitative methods**, including case study analysis and expert interviews, provided contextual insights into how currency risk is managed in practice and what institutional mechanisms contribute to its effectiveness.

Given the complexity of the subject matter and the diverse ways countries handle currency risk, a comparative case study approach was considered most suitable for this type of investigation. The research design followed a multi-case approach, analyzing several countries with different levels of success in managing currency risk. This allowed for a more comprehensive understanding of how risk management strategies operate in practice, as well as their broader economic implications.

The study focused on historical data, starting from late 2015 to the year of examination, to analyze how the management of currency risk evolved over time in various countries. This approach allowed for a comparison of different strategies across several economic cycles, providing valuable insights into the long-term impacts of effective and ineffective risk management.

#### 3.2 Data Sources and Collection

The research relied on both **primary** and **secondary data** sources. Secondary data served as the foundation for understanding the broader economic context and historical trends in currency risk management and public debt. Primary data was collected through interviews with experts and practitioners, which provided more detailed, up-to-date insights into the real-world practices of currency risk management.

##### Secondary Data:

1. **Government Reports:** The study examined official documents including state budgets, debt management strategies, and reports from the **Ministry of Economy and Finance**, as well as the **Central Bank**. These reports provided valuable data on the levels of public debt, foreign currency exposure, and the strategies employed by governments to mitigate currency risk. Reports from international organizations such as the **World Bank**, the **International Monetary Fund (IMF)** and **OECD** were also consulted for additional insights into the public debt situation and macroeconomic stability.

2. **Academic Literature:** A comprehensive review of academic literature on public debt, currency risk, and debt management strategies provided the theoretical frameworks for understanding the topic. This included journal articles, working papers, and books from leading scholars in the fields of public finance and international economics.

### **Primary Data:**

To complement the secondary data, the study collected primary data through semi-structured interviews and surveys with key stakeholders in the field of public debt management and currency risk. These included:

- **Economists and Financial Analysts:** These professionals provided insights into how currency risk was assessed and managed in practice, as well as the challenges faced by governments in maintaining public debt stability.
- **Debt Management Practitioners:** Experts who were directly involved in public debt management, such as debt managers or treasury officials, provided practical insights into the day-to-day processes involved in managing currency risk.

The interviews followed a semi-structured format, allowing for a flexible but focused conversation around key topics like risk management policies, hedging strategies, the role of international financial institutions, and government responses to currency crises. This allowed for deeper exploration of the nuanced practices used by the government of Uzbekistan to manage its debt portfolio and reduce exposure to currency risk.

### **3.3 Case Study Selection**

The case study selection focused on countries that provided valuable examples of both successful and less successful currency risk management in the context of public debt. The selection of case studies was based on the following criteria:

1. **Foreign-Denominated Debt:** Countries with significant foreign-denominated debt are most exposed to currency risk. These countries are highly relevant for this study because the risk of currency fluctuations directly impacts their debt servicing costs.
2. **Risk Management Strategies:** The countries selected should have implemented some form of currency risk management strategy, such as currency diversification, hedging (e.g., using financial instruments like swaps or forwards), or stabilization policies. The focus was on understanding the effectiveness of these strategies in reducing debt volatility.
3. **Data Availability:** The countries selected must have had sufficient data available on public debt, exchange rate fluctuations, and the policies they have employed to manage currency risk. This includes both quantitative data (e.g., debt-to-GDP ratio, exchange rate data) and qualitative data (e.g., policy documents, interviews with policymakers).

### **Potential Case Studies:**

1. **Argentina:** Argentina's historical struggles with currency risk and debt crises make it a valuable case study. Argentina's experience helps to highlight the consequences of ineffective currency risk management and the potential for economic instability resulting from large foreign-denominated debt.
2. **Poland:** Poland provides a relevant example of a country that has navigated both periods of currency risk exposure and successful risk management. Poland's approach to managing

foreign debt and exchange rate volatility, including its debt diversification strategies, was analyzed.

3. **Japan:** Japan provides an important example of a country with one of the highest public debt levels in the world, yet has maintained debt sustainability through effective monetary and financial management. Unlike many countries exposed to foreign currency risks, Japan's public debt is overwhelmingly denominated in its own currency, the Japanese yen.

By comparing these case studies, the research explored the diverse strategies adopted by different countries and the outcomes of their efforts to manage currency risk.

### 3.4 Analytical Framework

The analysis combined both **quantitative and qualitative methods** to assess the relationship between currency risk management and public debt stability. A **regression model** was also used as part of the quantitative analysis. This **mixed-methods** approach allowed for a more comprehensive understanding of the topic.

#### Quantitative Analysis:

1. **Debt Sustainability Indicators:** The quantitative analysis involved examining economic indicators such as the debt-to-GDP ratio, foreign exchange rates, and interest rates to assess how currency risk influences the sustainability of public debt and state budget.
2. **Correlation Analysis:** Statistical techniques were used to determine the correlation between exchange rate fluctuations and public debt indicators. For example, the analysis explored how changes in the exchange rate affect the cost of servicing foreign-denominated debt. This involved analyzing historical debt servicing data alongside exchange rate movements.

#### Qualitative Analysis:

The qualitative component focused on case study analysis, using both primary and secondary data to identify patterns and themes related to currency risk management practices. Content analysis was applied to policy documents, reports, and interview transcripts to extract key insights about the strategies used by governments and their effectiveness in reducing currency risk.

### 3.5 Limitations of the Study

Despite its thorough approach, this study had several limitations that must be acknowledged:

1. **Data Availability:** Reliable data on public debt and currency risk management may not be equally accessible for all countries. Some emerging economies or smaller nations may have limited reporting on the strategies they employ.
2. **Generalizability:** While the case study approach provides in-depth insights, the findings may not be directly applicable to all countries or regions. The context-specific nature of public debt management means that strategies effective in one country may not be easily transferable to others.
3. **Changing Economic Conditions:** Currency risk management is influenced by broader macroeconomic conditions, which are subject to change over time. The strategies assessed in this study may evolve, limiting the long-term applicability of the conclusions drawn from historical data.

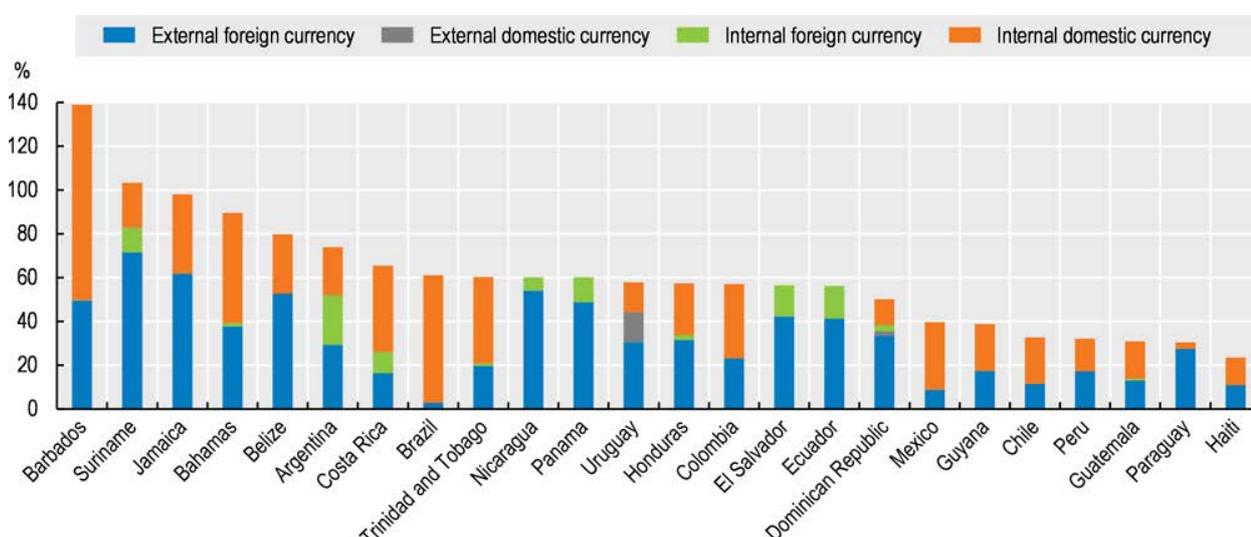
## 4. DATA ANALYSIS AND EMPIRICAL FINDINGS

This section provides an empirical examination of how currency risks affect public debt stability, with a focus on Uzbekistan. It analyzes the composition of debt, the implications of exchange rate volatility, the efficiency of mitigation tools, and presents comparative insights from other countries facing similar challenges.

### 4.1 Trends in Currency Composition of Public Debt

The **OECD** has conducted an in-depth analysis of public debt in **Latin American countries**, focusing not only on the overall debt levels but also on the composition of public debt—particularly the proportion denominated in foreign currencies. This analysis provides valuable insights into the region’s fiscal vulnerabilities and exposure to exchange rate fluctuations.

#### Public debt and currency as % of GDP, 2021



Countries such as **Argentina**, the **Dominican Republic**, **Paraguay**, and **Suriname** hold sizeable issuances in non-domestic currency, amounting to 70% to 90% of their total debt. For these countries, debt service has the potential to increase significantly in national currency terms, creating pressure to mobilize additional resources or cut public spending to meet obligations.

Although foreign currency debt is typically associated with external debt, certain countries in the region also issue domestic debt in foreign currency. **Ecuador**, **El Salvador**, **Nicaragua**, and **Panama** hold domestic debt exclusively denominated in foreign currency.

Source: *Latin American Economic Outlook 2024*

The currency composition of Uzbekistan’s overall public debt in 2024-2025 is as follows:

№	Currencies	2024		2025 1-quarter		2025 2-quarter	
		<i>mln USD</i>	<i>Percentage of total</i>	<i>mln USD</i>	<i>Percentage of total</i>	<i>mln USD</i>	<i>Percentage of total</i>
<b>PUBLIC DEBT</b>		<b>40 215</b>	<b>100%</b>	<b>42 591</b>	<b>100%</b>	<b>43 376</b>	<b>100%</b>
<b>I</b>	<b>EXTERNAL DEBT</b>	<b>33 726</b>	<b>84%</b>	<b>35 562</b>	<b>83%</b>	<b>36 414</b>	<b>84%</b>
1	US dollar	24 102	60%	24 626	58%	24 762	57%
2	Japanese yen	2 599	6%	2 749	6%	2 867	7%
3	SDR	2 105	5%	2 098	5%	2 124	5%
4	Euro	2 555	6%	3 208	8%	3 518	8%
5	Uzbek sum	561	1%	1 026	2%	1 047	2%
6	Chinese yuan	855	2%	845	2%	1 012	2%
7	Korean won	215	1%	220	1%	282	1%
8	Saudi Arabia real et al.	733	2%	790	2%	801	2%
<b>II</b>	<b>DOMESTIC DEBT</b>	<b>6 489</b>	<b>16%</b>	<b>7 029</b>	<b>17%</b>	<b>6 962</b>	<b>16%</b>
1	Uzbek sum	3 072	8%	3 462	8%	4 061	9%
2	US dollar	3 140	8%	3 285	8%	2 618	6%
3	Chinese yuan	192	0%	194	0%	197	0%
4	Euro et al.	84	0%	88	0%	87	0%

These figures show a **dominant reliance on the US dollar** in Uzbekistan’s public debt. This high percentage of foreign-currency-denominated debt exposes the country to substantial currency risk, where fluctuations in the exchange rate between the Uzbek sum (UZS) and major foreign currencies (primarily the US dollar) can significantly increase the cost of debt servicing.

### Trends in Currency Composition: Changes Over Time

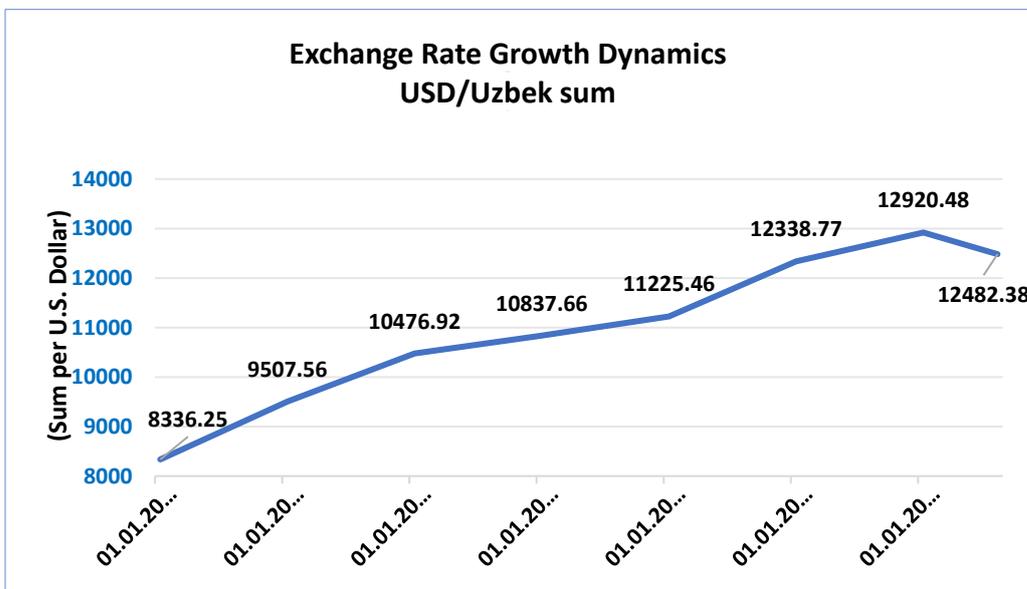
Comparing the currency composition of external public debt over the past few years reveals a gradual shift aimed at **reducing** the country’s reliance on the **US dollar**. For example, the share of dollar-denominated debt, which stood at **68% in 2024**, has decreased slightly to **63% in the 2-quarter of 2025**. This reduction is the result of ongoing efforts to diversify debt instruments and explore financing in other foreign currencies, such as the **Japanese yen** and **euro**. This trend towards diversification reflects Uzbekistan’s desire to minimize the risk associated with currency volatility and reduce the potential fiscal impact of a sudden depreciation of the sum.

## Uzbekistan's External Debt in 2022 – 2024: A Creditor-Based Breakdown

№	Indicator name	2022		2023		2024	
		<i>mln USD</i>	%	<i>mln USD</i>	%	<i>mln USD</i>	%
<b>1</b>	<b>State external debt, total</b>	<b>25 914</b>	<b>100%</b>	<b>29 639</b>	<b>100%</b>	<b>33 726</b>	<b>100%</b>
<b>1.1.</b>	<b>International financial institutions</b>	<b>13 804</b>	<b>53%</b>	<b>16 627</b>	<b>56%</b>	<b>19 143</b>	<b>57%</b>
	Asian Development Bank	6 030	23%	6 441	22%	7 415	22%
	World Bank	5 527	21%	6 570	22%	7 639	23%
	Islamic Development Bank	904	3%	911	3%	946	3%
	Asian Infrastructure Investment Bank	570	2%	1 321	4%	1 652	5%
	International Monetary Fund	367	1%	811	3%	669	2%
	European Bank for Reconstruction and Development	132	1%	174	1%	341	1%
	Other	274	1%	399	1%	481	1%
<b>1.2.</b>	<b>The organizations of foreign governments</b>	<b>9 519</b>	<b>37%</b>	<b>9 614</b>	<b>32%</b>	<b>10 448</b>	<b>31%</b>
	China Development State Bank, China Eximbank, etc.	3 965	15%	3 775	13%	3 767	11%
	Japan International Cooperation Agency	2 300	9%	2 359	8%	2 889	9%
	Korean Eximbank, Korean Economic Development Fund	966	4%	794	3%	740	2%
	French Development Agency	718	3%	828	3%	977	3%
	Saudi Development Fund	143	1%	140	0%	139	0%
	State Bank of Germany	116	0%	114	0%	415	1%
	State Bank of Spain	80	0%	73	0%	66	0%
	Others	1 230	5%	1 531	5%	1 455	4%
<b>1.3.</b>	<b>Investors</b>	<b>2 591</b>	<b>10%</b>	<b>3 397</b>	<b>11%</b>	<b>4 135</b>	<b>12%</b>
	International bonds	2 591	10%	3 397	11%	4 135	12%

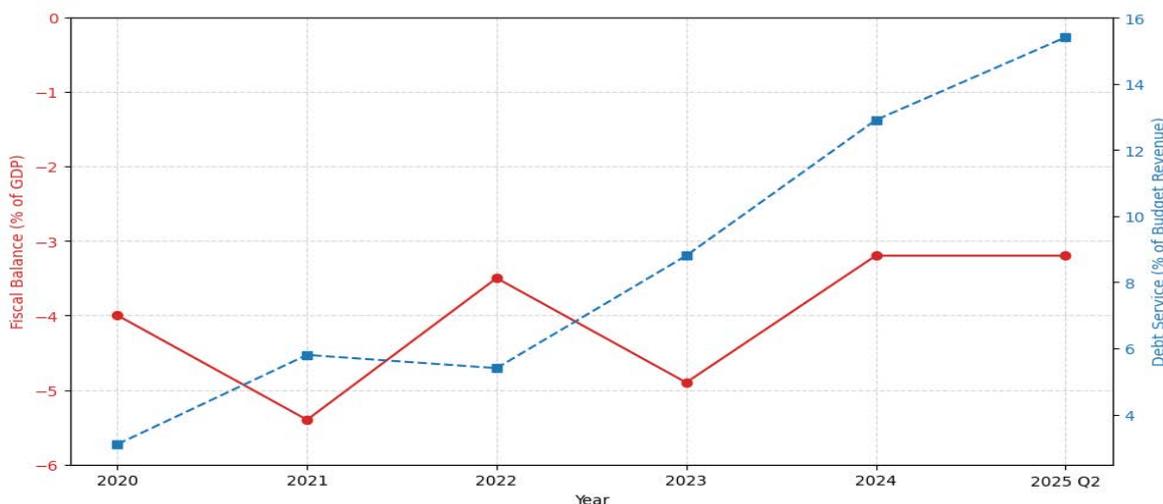
## 4.2 Impact of Exchange Rate Volatility on Debt Servicing Costs

One of the primary risks faced by Uzbekistan in managing its public debt is **exchange rate volatility**. Given that a substantial portion of Uzbekistan's external debt is denominated in foreign currencies, primarily the US dollar, fluctuations in the exchange rate between the **Uzbek sum (UZS)** and these foreign currencies significantly impacts the country's **debt servicing costs**. As observed over the past few years, an **average 5% depreciation** of the sum against the **U.S. dollar** resulted in a noticeable increase in the cost of servicing external debt, as more sums were required to meet dollar-denominated obligations.



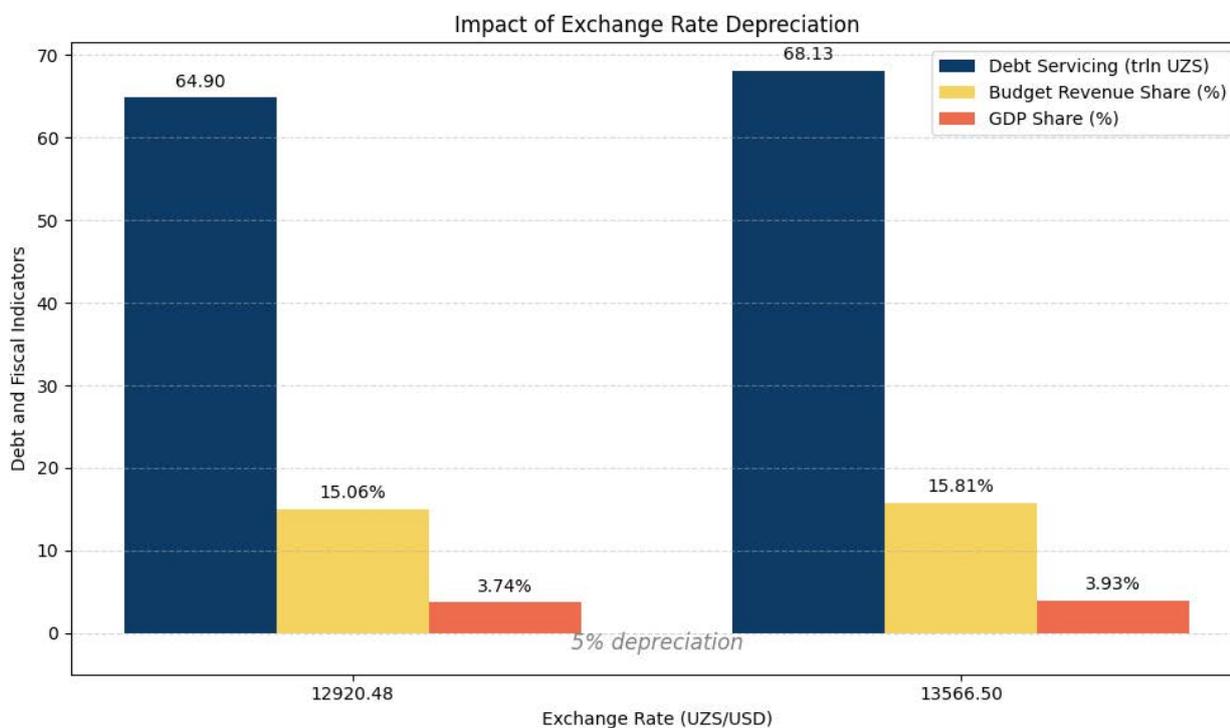
This depreciation trend has directly increased the **domestic currency equivalent** of Uzbekistan's foreign debt obligations, thereby raising the **debt servicing burden**. Moreover, the reliance on foreign currencies means that **debt servicing costs** are influenced by global market conditions, such as shifts in global interest rates or fluctuations in the value of the U.S. dollar, which are beyond the control of the Uzbek government. Increases in the value of the U.S. dollar relative to the Uzbek sum can significantly inflate the **national debt servicing burden**, creating fiscal challenges and potentially leading to higher borrowing costs.

Fiscal Balance and Debt Service Ratio (2020 - 2025 Q2)



According to the above analysis, the fiscal balance remained in deficit between -3% and -5% of GDP, while **debt service** as a share of budget revenue steadily increased, **reaching over 15%** by mid-2025. According to IMF methodology, a debt service-to-revenue ratio between **10–20% is considered safe**, while 30% or higher indicates a high risk.

### Illustration of the Exchange Rate Impact on Uzbekistan’s 2025 Public Debt Servicing



This simple calculation demonstrates how exchange rate fluctuations can **increase the domestic cost of public debt servicing** significantly, impacting government expenditure and overall fiscal stability.

### Macroeconomic Implications of Exchange Rate Volatility

In addition to increasing the **immediate debt servicing costs**, exchange rate volatility also affects overall **macroeconomic stability**. The impact of exchange rate fluctuations extend beyond public debt to other areas such as:

- **Inflationary Pressures:** A depreciating Uzbek sum leads to higher import costs, contributing to inflation. This reduces purchasing power and may require tightening of monetary policy, further impacting economic growth.
- **Foreign Reserves:** As exchange rate volatility increases the cost of debt servicing, foreign reserves are put under pressure. Although the Central Bank holds substantial reserves, sustained depreciation could eventually erode the reserve buffer, making it harder to stabilize the currency.
- **Credit Rating and Borrowing Costs:** Persistent exchange rate volatility can lead to a downgrade in the country's credit rating. A lower credit rating would make future borrowing more expensive, further compounding fiscal pressure.

### 4.3 Econometric Analysis Using Regression Models

To empirically assess the relationship between currency fluctuations and economic performance in Uzbekistan, a simple regression model was estimated. The model is specified as follows:

$$GDP\_growth = 7.02 - 0.185 \times EX\_rate\_change$$

where GDP\_growth represents the annual growth rate of Uzbekistan's Gross Domestic Product, and EX\_rate\_change denotes the annual change in the official exchange rate of the Uzbek sum. The estimated coefficients indicate a negative relationship between exchange rate changes and economic growth. Specifically, a one-unit increase in the exchange rate change (i.e., a depreciation of the sum relative to foreign currencies) is associated with a 0.185 percentage point decrease in GDP growth. The intercept of 7.02 suggests that in the absence of exchange rate fluctuations, the Uzbek economy would have grown at an average rate of approximately 7% per year during the study period.

$$Fiscal\_balance_t = -2.30 - 0.0808 \times EX\_rate\_change_t - 0.2028 \times GDP\_growth_t$$

where Fiscal\_balance\_t denotes the government's fiscal balance as a percentage of GDP in year t, EX\_rate\_change\_t represents the annual change in the official exchange rate of the Uzbek sum, and GDP\_growth\_t is the annual GDP growth rate.

The estimated coefficients indicate that both exchange rate fluctuations and economic growth significantly influence Uzbekistan's fiscal balance. Specifically, a one-unit increase in the exchange rate change (i.e., sum depreciation) is associated with a 0.0808 percentage point deterioration in the fiscal balance, while a one-percentage-point increase in GDP has negative effects on the fiscal balance by approximately 0.2028 percentage points (*increases investment and infrastructure spending during periods of economic growth*). The negative intercept of -2.30 suggests that, in the absence of exchange rate changes and GDP growth, the Uzbek government would experience a fiscal deficit of about 2.3% of GDP.

$$Fiscal\_balance = -2.96 - 0.14 \times EX\_rate\_change - 0.27 \times GDP\_growth - 0.04 \times Debt$$

where Fiscal\_balance represents the government's fiscal balance as a percentage of GDP, EX\_rate\_change is the annual change in the Uzbek sum exchange rate, GDP\_growth denotes the annual GDP growth rate, and Debt indicates the public debt level as a percentage of GDP.

The regression results reveal that all three variables exert significant influence on fiscal performance. A one-unit increase in exchange rate change (sum depreciation) is associated with a 0.14 percentage point deterioration in the fiscal balance, reflecting the cost of currency risk on government finances. Economic growth has a stronger negative effect: a one-percentage-point increase in GDP growth reduces the fiscal balance by approximately 0.27 percentage points. Public debt also negatively impacts the fiscal balance, with a one-percentage-point increase in debt corresponding to a 0.04 percentage point worsening of the fiscal position. The negative intercept of -2.96 indicates that, in the absence of exchange rate changes, GDP growth, and debt, the Uzbek government would experience a fiscal deficit of about 2.96% of GDP.

The regression analyses collectively highlight the significant impact of currency fluctuations, economic growth, and public debt on Uzbekistan's macroeconomic and fiscal outcomes. The GDP growth model indicates that depreciation of the Uzbek sum negatively affects economic growth, with a one-unit increase in exchange rate change associated with a 0.185 percentage point decline in GDP growth. Subsequent models examining fiscal balance demonstrate that both exchange rate changes and GDP growth play crucial roles: sum depreciation consistently worsens the fiscal balance, while higher

GDP growth improves it. Furthermore, the extended model incorporating public debt reveals that rising debt levels exacerbate fiscal pressures, with a one-percentage-point increase in debt reducing the fiscal balance by 0.04 percentage points. Overall, these findings provide robust empirical evidence that effective management of currency risk, promotion of sustainable economic growth, and prudent debt management are essential for maintaining fiscal and macroeconomic stability in Uzbekistan.

#### 4.4 Currency Risk Mitigation Tools - A Theoretical Overview

Currency risk management plays a crucial role in safeguarding the stability of public debt. This section displays the effectiveness of these tools, examining both existing strategies and the challenges in implementing them.

##### *1. Local Currency Bond Market Development*

Emerging market economies have been focusing on developing their domestic bond markets to increase the proportion of debt issued in local currencies. By issuing bonds in their own currencies, governments can reduce the reliance on foreign-currency-denominated debt in their public debt portfolios.

##### **Effectiveness:**

- **Reducing Currency Exposure:** Local currency bonds directly reduce the need for foreign currency to service debt. Currency fluctuations in the exchange rate will have no impact on the debt servicing costs for domestic bonds.
- **Strengthening the Domestic Market:** Developing a vibrant bond market helps in mobilizing domestic savings and providing a reliable source of capital. This also encourages the development of domestic financial institutions and capital markets, contributing to broader economic stability.

##### *2. Debt Diversification*

A key strategy in reducing currency risk has been the **diversification of debt**. For example, Uzbekistan has sought to **expand the number of foreign creditors** and issue debt in a variety of currencies beyond the **US dollar**. This includes debt issued in **euros, Japanese yen, Chinese yuan, and SDRs**.

##### **Effectiveness:**

- **Reduced Exposure to Single Currency Risk:** By diversifying its debt across multiple currencies, Uzbekistan is reducing its reliance on any single currency, particularly the US dollar. This diversification strategy helps mitigate risks associated with any single currency's fluctuation, making the country less vulnerable to dollar depreciation.
- **Broader Investor Base:** The diversification of debt instruments also allows Uzbekistan to tap into global capital markets and attract a broader range of investors from different parts of the world. This can result in more favorable borrowing terms and a greater supply of capital.

### *3. Foreign Exchange Reserves Management*

**Buffer Against Depreciation:** The foreign exchange reserves serve as a **financial cushion** during periods of exchange rate volatility, ensuring the government can continue to service its external debt without needing to purchase large amounts of foreign currency on the open market.

### *4. Monetary Credibility and Exchange Rate Policy*

**Monetary credibility** plays a crucial role in mitigating currency risk by fostering market trust in a country's monetary policy and exchange rate stability. When investors believe that the Central Bank can maintain low inflation and manage currency fluctuations effectively, the volatility of foreign-denominated debt is significantly reduced.

**Exchange rate policy** is a key instrument for reinforcing monetary credibility. Whether through fixed, floating, or managed exchange rate regimes, governments aim to control currency volatility and provide predictability to markets. For example, countries adopting managed float systems can reduce exchange rate shocks, helping to stabilize debt servicing costs and attract foreign investment.

### *5. Hedging Mechanisms*

**Hedging mechanisms** are financial instruments and strategies used by governments and corporations to protect themselves against adverse currency fluctuations. Common hedging tools include **forward contracts, futures, options, and swaps**, which allow entities to lock in exchange rates or offset potential losses arising from exchange rate volatility.

By utilizing hedging, countries can reduce the risk of unexpected increases in foreign currency debt servicing costs, thereby enhancing debt sustainability. Although these mechanisms can incur costs and require technical expertise, they provide a valuable means of managing currency risk, especially for economies with significant foreign-denominated liabilities.

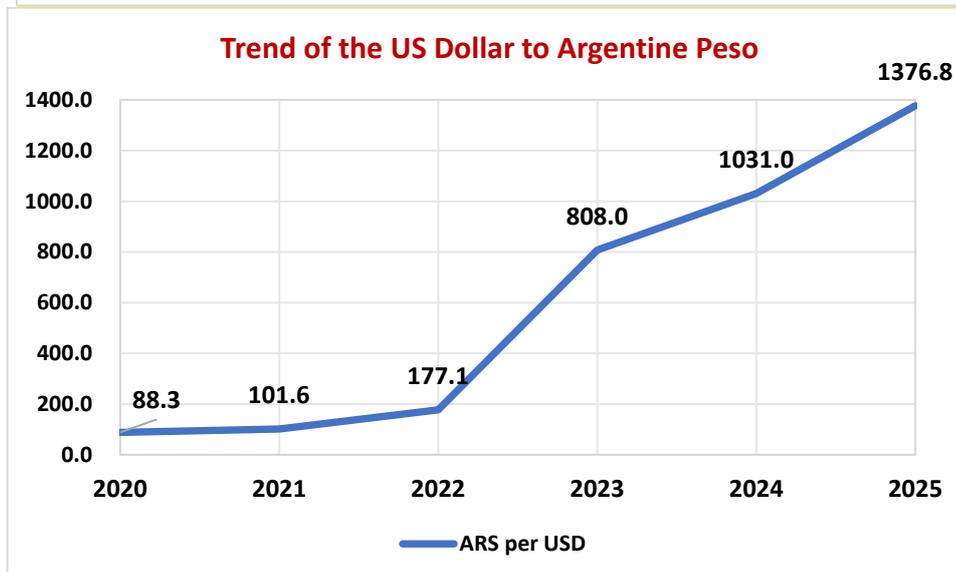
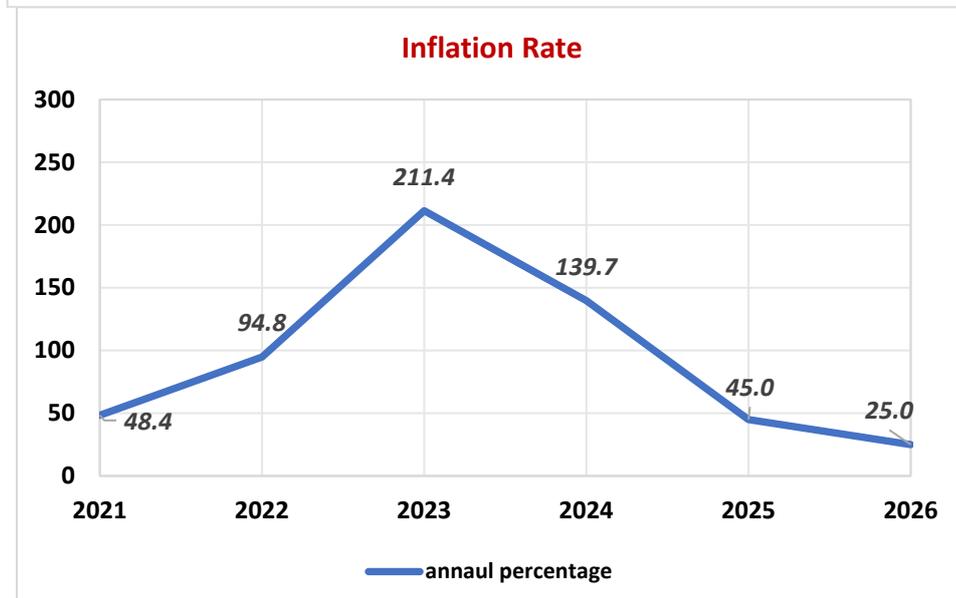
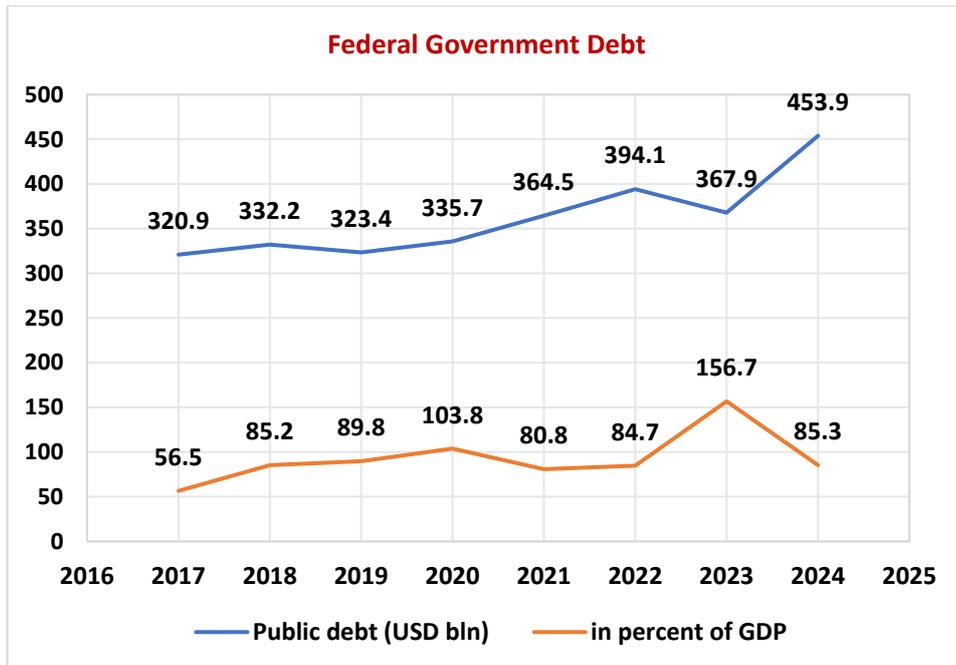
## **4.5 Case Study Analysis: Lessons from Argentina, Poland, and Japan**

Understanding how countries with varying economic structures and policy frameworks manage currency risk provides valuable insights for designing effective public debt strategies. This section analyzes three countries—**Argentina, Poland, and Japan**—highlighting different approaches to currency risk management, their outcomes, and lessons applicable to Uzbekistan.

### **Argentina: Measures to Overcome the Crisis**

Argentina is currently experiencing one of the most severe macroeconomic crises in its recent history, characterized by hyperinflation, unsustainable public debt levels, persistent currency depreciation, and chronic fiscal deficits. Annual inflation has surpassed 100% in recent years. The Argentine peso continues to lose value against major foreign currencies. Meanwhile, the government's reliance on foreign-denominated debt has heightened its exposure to currency mismatches, exacerbating debt servicing pressures.

**Selected economic indicators of Argentina:**



## The Policy Measures Implemented by the Argentine Government to Ensure Public Debt Sustainability and Manage Exchange Rate Risk

Measures		Beneficial effects
<b>Exchange rate flexibility</b>	<p><b>In December 2023</b>, the official exchange rate was changed to <b>800 pesos</b> to the U.S. dollar from the previous <b>366.5</b>.</p> <p><b>Crawling peg</b> was restored (<i>monthly devaluation target of 2%</i>).</p>	<ol style="list-style-type: none"> <li><b>1.</b> An artificially low exchange rate undervalues foreign-currency debt, providing misleading signals to the government and investors.</li> <li><b>2.</b> Aligning the rate closer to market levels (800 ARS/USD) reveals the true debt burden and grounds fiscal planning in reality.</li> <li><b>3.</b> This makes debt servicing projections and financing much easier to calculate.</li> </ol>
<b>Debt diversification and strengthening the local currency</b>	<p>To reduce its reliance on the US dollar, Argentina is pursuing a strategy of <b>diversifying its debt portfolio</b> by increasing the issuance of <b>SDR and Euro</b>, and <b>domestic bonds</b> denominated in pesos (in May 2025, Argentina issued <b>peso-denominated bonds</b> totaling <b>USD 1 billion</b>).</p>	<ol style="list-style-type: none"> <li><b>1.</b> Reducing reliance on the US dollar mitigates the impact of sharp exchange rate fluctuations.</li> <li><b>2.</b> Issuing debt in pesos strengthens the domestic currency and enhances resilience to external shocks.</li> <li><b>3.</b> Diversification serves as a signal of stability to investors.</li> </ol>
<b>Currency reserve buffer</b>	<p>According to government regulations, exporters were <b>required to convert 95%</b> of their foreign exchange earnings <b>through the Central Bank</b> at the official exchange rate. In addition, <b>temporary restrictions</b> were imposed on <b>capital outflows</b>.</p>	<ol style="list-style-type: none"> <li><b>1.</b> The government strengthens foreign reserves (<i>Central bank FX purchases have exceeded US\$17 billion</i>).</li> <li><b>2.</b> The increase in foreign exchange reserves reduces the sovereign risk of public debt.</li> </ol>
<b>Hedging operations</b>	<p>FX-denominated domestic debt was reduced through LMO (liability management operations), with <b>USD 7.8 bln debt swapped into peso debt</b>.</p>	<ol style="list-style-type: none"> <li><b>1.</b> The government's debt burden does not increase sharply even in the event of peso depreciation.</li> <li><b>2.</b> The budget is protected from exchange rate risk.</li> <li><b>3.</b> Pressure on foreign exchange reserves is reduced.</li> </ol>
<b>Debt restructuring</b>	<p>Government conducted a range of operations in 2020–21 to restructure its foreign-currency-denominated debt. The restructuring in September 2020 of <b>USD 82 bln of private-sector-held FX-denominated debt</b>.</p>	<ol style="list-style-type: none"> <li><b>1.</b> Interest payments were reduced and debt maturities were extended.</li> <li><b>2.</b> The burden of foreign-currency-denominated debt was alleviated, providing approximately USD 36 billion in cash flow relief between 2020 and 2030.</li> <li><b>3.</b> Pressure on foreign exchange reserves is reduced.</li> <li><b>4.</b> The risk of sovereign default was significantly reduced.</li> </ol>

## Poland: A Model of Currency Risk Containment

Poland has demonstrated how a **strong institutional framework** and prudent fiscal-monetary coordination can **successfully limit currency risk exposure**.

### Policy Measures for Risk Management

According to the Polish Constitution, public debt must **not exceed 60% of GDP**.

*Polish Constitution (1997) – Article 216, Section 5.*

Based on the “**Public Finance Sector Debt Management Strategy for 2024–2027**,” the share of the **foreign-currency-denominated debt** in State Treasury debt is to be maintained **below 25%** (2014-35.5%, 2023-24.3%, 2025-22.2%, *reducing currency risk*).

The active involvement of the Ministry of Finance and the National Bank of Poland in **the derivatives and hedging instruments market**, a well-defined strategy for the expansion of derivative transactions (*EUR 10 bln swap with The European Central Bank, cross currency swaps USD 3.5 bln exchanged to EUR 3.2 bln for 10 years, Interest Rate Swap Transactions PLN 64.0 bln for distribute debt servicing costs, etc.*).

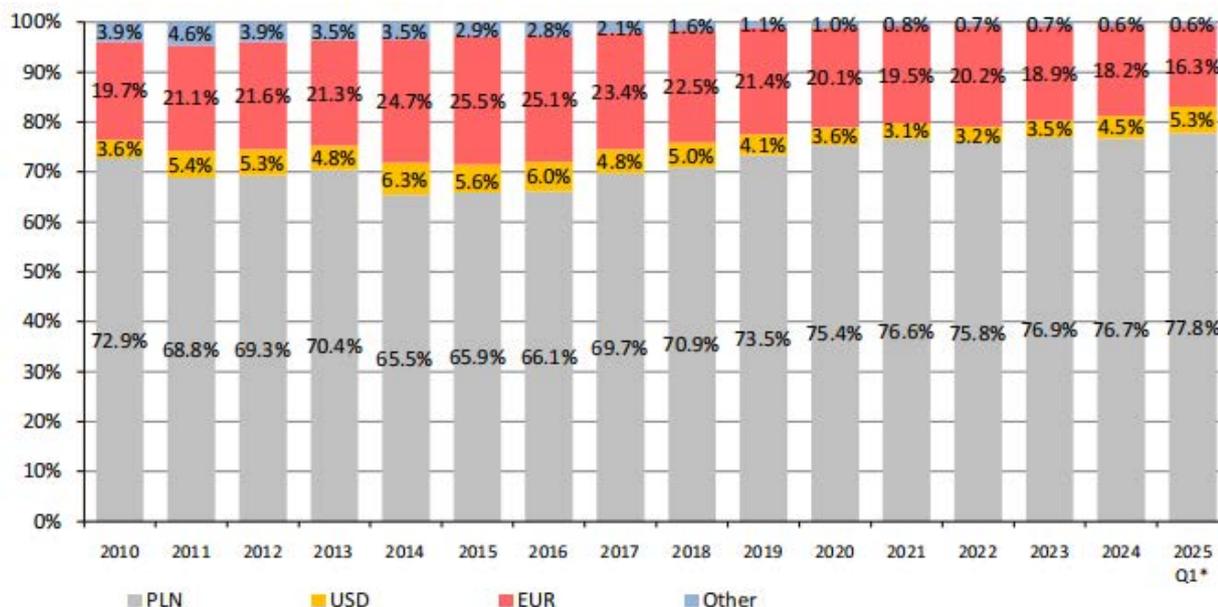
**High liquidity** - The Polish Ministry of Finance maintained liquid assets totaling **PLN 133,5 bln** (as of the end of June) to secure public debt servicing.

### Poland’s Public Debt Indicators

Item	2023 Q4	structure	2024 Q4	structure	2025 Q1	structure
		2023 Q4		2024 Q4		2025 Q1
<b>Public debt</b>	<b>1,328,065.6</b>	<b>100.0%</b>	<b>1,611,561.9</b>	<b>100.0%</b>	<b>1,713,257.1</b>	<b>100.0%</b>
<b>Domestic debt</b>	<b>998,740.9</b>	<b>75.2%</b>	<b>1,210,177.4</b>	<b>75.1%</b>	<b>1,308,119.7</b>	<b>76.4%</b>
1. Debt securities	906,747.9	68.3%	1,100,531.9	68.3%	1,210,041.3	70.6%
2. Loans	74,633.8	5.6%	80,396.0	5.0%	77,330.2	4.5%
3. Other domestic liabilities	17,359.2	1.3%	29,249.5	1.8%	20,748.2	1.2%
<b>Foreign debt</b>	<b>329,324.7</b>	<b>24.8%</b>	<b>401,384.6</b>	<b>24.9%</b>	<b>405,137.4</b>	<b>23.6%</b>
1. Debt securities	179,897.4	13.5%	213,713.8	13.3%	221,642.9	12.9%
2. Loans	147,345.7	11.1%	183,547.5	11.4%	179,877.8	10.5%
3. Other foreign liabilities	2,081.7	0.2%	4,123.3	0.3%	3,616.7	0.2%

At the end of the first quarter of 2025 the consolidated public debt stood at **PLN 1,713.3 bln** (**USD 443.6 bln**); the **debt-to-GDP ratio amounted to 46.3%**.

## Currency Structure of the Public Debt



At the end of the first quarter of 2025, liabilities **denominated in PLN** accounted for **77.8%** of the public debt. The share of debt denominated in **EUR** amounted to **16.3%** and denominated in **USD** amounted to **5.3%**.

### Average Headline CPI Inflation

Year	2024	2025	2026	2027	2028	2029
				<i>projection</i>		
Percent	3.8	4.6	3.5	2.9	2.5	2.5

### Exchange Rate - Freely Floating

Year (period average)	2020	2021	2022	2023	2024	2025
Zloty per USD	3.9	3.9	4.5	4.2	4.0	3.6
Zloty per Euro	4.4	4.6	4.7	4.5	4.3	4.3

### Conclusion:

- Moderate public debt-to-GDP ratio (**below 50%**).
- Around **80%** of public debt is denominated in **Polish zloty**.
- The overall risk of sovereign **debt stress** and **currency risk** exposure is **low**.
- Experience focused on **reducing currency risks** and a well-planned **fiscal strategy**.

## Japan: High Debt - Low Currency Risk

Japan offers a contrasting example: despite having the **highest public debt-to-GDP ratio** in the world (at the end of March 2025 **234.9%** of GDP, Wikipedia), it has **minimal currency risk**.

### The Key Aspects of Japan's Public Debt Management:

№	Key Strategy	Outcomes
1	<b>Debt Composition:</b> Almost all of government debt is denominated in <b>Japanese yen</b>	Currency Risk Exposure is extremely low
2	The practice of using <b>internal resources</b> , held by <b>domestic investors</b> ( <i>Bank of Japan, banks, insurance companies, pension funds, few foreigners and others</i> )	No reliance on foreign capitals and resources
3	Significant <b>FX reserves</b> ( <i>1,272.5 billion USD in assets, as of the end of March 2025</i> )	Resilience to currency volatility and external financial shocks
4	<b>Low inflation</b> and strong Central bank credibility	Domestic and foreign investors' confidence
5	<b>Low-interest bonds</b> ( <i>0.25% -0.5 %</i> ), <b>Yield curve control</b> by the Bank of Japan	Stable debt servicing costs despite high nominal debt. <i>Interest payments-to-GDP ratio is about 1.5%</i>

## 4.6 Cross-country Comparison (Comparative Analysis)

### 1. Currency Composition of Public Debt

Country	Foreign Currency Share	Local Currency Share	Main FX Currency	Implication
Argentina	High (70%)	Low	USD	High risk during peso depreciation
Poland	Low (22%)	High	EURO	Low risk, supported by local markets
Japan	Very low (<5%)	Very high	–	Minimal currency risk ( <i>on domestic currency</i> )
Uzbekistan	High (88%)	Low	USD	Exposed to sum depreciation

## 2. Exchange Rate Regimes and Flexibility

Country	Exchange Rate System	Exchange Rate Volatility	Monetary Policy Credibility
Argentina	Multiple regimes; unstable	Very high	Weak
Poland	Free-floating	Moderate	Strong
Japan	Floating with BoJ influence	Low	Very strong
Uzbekistan	Managed float (since 2017)	Moderate	Strengthening

## 3. Risk Mitigation Tools

Country	Domestic Market Development	Using Hedging tools	Reserve Buffer	Debt Diversification
Argentina	Weak, but improving	No	Low	Low
Poland	Strong	Yes	Moderate	High
Japan	Highly developed	Not needed	High	Not needed
Uzbekistan	Improving	No	Moderate	Improving (euro, yen, yuan)

## 4. Visual Summary: Currency Risk vs Debt Sustainability

	Argentina	Poland	Japan	Uzbekistan
<b>Local Debt Share</b>	● Low	● High	● Very High	● Low
<b>FX Reserve</b>	● Weak	● Medium	● Strong	● Medium
<b>Institutional Quality</b>	● Weak	● Strong	● Strong	● Improving
<b>Currency Risk</b>	● High	● Low	● Very Low	● High
<b>Outcome</b>	✗ Crisis-prone	✓ Stable	✓ Resilient	⚠ At risk

## Conclusion

Cross-country evidence clearly shows that **currency risk management is essential** for debt sustainability, particularly in emerging economies. While **Uzbekistan** has maintained moderate debt levels, its high exposure to foreign currency debt underscores the need for a **strategic shift** toward

**local financing, institutional strengthening, and market development.** Learning from Poland and Japan—while avoiding Argentina’s pitfalls—can guide Uzbekistan’s path toward stable and resilient debt management.

## 5. POLICY RECOMMENDATIONS FOR UZBEKISTAN

### 5.1 Strengthening Local Currency Debt Issuance

**Strengthening local currency** debt issuance is a significant strategy for Uzbekistan to reduce its exposure to foreign exchange risk, manage its public debt more effectively, and enhance fiscal stability. By developing a clear strategy, deepening the domestic bond market, strengthening institutional capacity, and offering attractive local currency debt instruments, this strategy will help the country manage its fiscal position while fostering investor confidence and ensuring long-term economic stability.

In recent years, Uzbekistan’s domestic bond market has shown notable progress, reflecting the government’s efforts to diversify its debt portfolio and reduce exposure to foreign exchange risks.

**Continuing this policy** of issuing public debt in Uzbek sum is both prudent and strategically important for ensuring long-term debt sustainability. To **further strengthen** this trend, it is recommended that the government **expand the investor base**—particularly by encouraging greater participation from institutional investors such as **State-Owned Enterprises (SOEs)** and **insurance companies**. In parallel, enhancing market infrastructure and improving transparency in bond pricing and trading would contribute to increased market depth and liquidity.

**In addition, the following policy measures are recommended:**

- It is recommended that Uzbekistan develop a medium-term **debt management strategy** for the **period 2025–2030**, aimed at **gradually increasing** the share of public debt denominated in the **domestic currency** while **proportionally reducing** the share of **foreign currency** debt. This strategic shift would help mitigate exchange rate risks, strengthen fiscal resilience, and improve overall debt sustainability over the medium term.
- Additionally, specific **targets up to 2030** should be developed to gradually increase the share of national currency-denominated debt by an **average of 2–3% per year**, with the aim of reducing the **share of foreign-currency-denominated debt to 70%**, in order to guide effective implementation and monitoring of the strategy.
- The strategy should also **cancel the practice of borrowing domestic debt in foreign currencies** (*such as US dollars*) and require that all domestic borrowing be done in the national currency.

## 5.2 Strategic Currency Diversification

Currency diversification in Uzbekistan could be a critical component of the country's broader debt management strategy to enhance fiscal stability, mitigate currency risks, and ensure sustainable external debt management.

### 1. Assessing Trade and Currency Exposures in Uzbekistan's Economic Context

The first step for Uzbekistan would be to conduct a comprehensive assessment of its external trade and foreign currency exposure. Uzbekistan has strong trade relations with neighboring countries and key global players such as Russia, China, and the European Union, and its exports predominantly include commodities like gold, cotton, and natural gas.

- **Trade with China and Russia:** As the country imports a significant portion of its goods from China and Russia, and exports to these countries are also increasing, Uzbekistan could consider issuing part of its debt in the **Chinese yuan (CNY)**.
- **Trade with the European Union:** With growing trade relations with the EU, debt issuance in **euros (EUR)** could be another option to reduce reliance on the U.S. dollar (USD).

### 2. Regular Monitoring and Review of Currency Composition

Currency diversification is not a one-time decision, it should be a continuous process. It is important for Uzbekistan to regularly monitor the composition of its external debt portfolio. The government should set up a mechanism for:

- **Periodic reviews of debt currency exposure:** Regularly monitor exchange rates, inflation trends, and global interest rate changes that could affect the value of foreign-currency-denominated debt. Regular reviews will allow debt managers to assess how changes in global economic conditions.
- Performing **scenario analysis and stress testing** to evaluate how different currency compositions would impact the sustainability of debt under various global conditions (e.g., currency crises, commodity price fluctuations, or geopolitical instability). *Stress testing and scenario analysis should be conducted periodically.*
- **Adjustments based on economic conditions:** For instance, if the Uzbek sum strengthens against a particular currency (like the ruble or yuan), the government could consider adjusting its debt composition to maintain balanced exposure.

**3.** Enhance the use of debt instruments denominated in the **IMF's Special Drawing Rights (SDR)** to diversify the government's external debt portfolio and mitigate exchange rate risks.

**4.** Developing a medium-term **debt management strategy** for the period 2025–2030 that **integrates currency diversification** as a core component to mitigate exchange rate risks and enhance the resilience of the public debt portfolio while **setting specific targets** for the share of foreign debt denominated in different currencies.

### 5.3 Risk Mitigation Strategy through Hedging Instruments

Hedging—the use of financial instruments to reduce or eliminate the risk of currency depreciation—offers a practical and strategic solution for managing such risks. Hedging refers to the use of financial derivatives such as forwards, futures, swaps, and options to offset potential losses due to adverse currency movements.

#### Why Hedging is Important for Uzbekistan

As discussed above, Uzbekistan’s public debt is highly exposed to exchange rate risks, with **nearly 90%** denominated in **foreign currencies**. The largest share is in **US dollars** (approximately **63%**), while the Uzbek sum (UZS) continues to **depreciate** against the USD at an average rate of around **5%** annually. This persistent depreciation increases the cost of debt servicing in local currency terms, placing additional pressure on the state budget.

#### Types of Hedging Instruments Suitable for Uzbekistan

- **Currency Forwards:** Given the relative simplicity of forward contracts, Uzbekistan could use them to fix the exchange rate for upcoming debt repayments in USD or EUR.
- **Cross-currency Swaps:** For long-term projects financed in foreign currency, the Ministry of Economy and Finance (MoEF) could explore swap agreements to convert obligations into UZS equivalents.
- **Natural Hedging:** Uzbekistan earns significant foreign exchange from exports (e.g., natural gas, gold, and cotton). Matching these revenues with foreign currency debt obligations can act as a natural hedge.

## Policy Measures Specific to Uzbekistan

Policy Measures	Details
<b>Regulatory and Legal framework</b>	The first step toward implementing hedging practices is the development of a clear and supportive regulatory framework. Introducing amendments to allow sovereign use of hedging instruments within a clear legal mandate.
<b>Capacity Building</b>	Effective use of derivative instruments requires technical expertise. It is essential to build institutional capacity within the Ministry of Economy and Finance, the Central Bank, and the Debt Management Office.
<b>Hedging Policy Strategy</b>	Include use of financial derivatives in the national Medium-Term Debt Management Strategy (MTDS) and prepare a comprehensive policy framework that defines the key targets.
<b>Risk Exposure Assessment</b>	Conduct a detailed assessment of the currency composition of the debt portfolio and simulate different depreciation scenarios to understand fiscal impacts.
<b>The Tax Treatment of Hedging</b>	In cases where hedging activities result in a profit, the applicable tax treatment should be clearly defined. The tax regime should be simplified, fair, and designed to encourage sound risk management practices.
<b>Accounting and Reporting of Hedging Activities</b>	Clear and accurate accounting and reporting of hedging activities are crucial to show an entity's true financial position and risks. Uzbekistan should adopt simple guidelines based on <b>International Financial Reporting Standards</b> (IFRS 9) to ensure consistent handling of hedging instruments.
<b>Start Practical Implementation</b>	Initially, hedge a small portion of debt due in the next 1–2 years using forward or swap contracts, possibly with technical assistance from the World Bank, the IMF or international experts.

## 5.4 Foreign Exchange Reserves and Stability

Foreign exchange (FX) reserves play a crucial role in ensuring economic stability, particularly for countries like Uzbekistan, which have significant foreign-denominated debt. Adequate FX reserves serve as a buffer against currency fluctuations, volatile global markets, and the obligations of external debt payments.

### International Reserves of the Republic of Uzbekistan

*mln.USD*

Official reserve assets and foreign currency assets	01.01.2025	01.08.2025	01.09.2025
<b>Official reserve assets</b>	<b>41,181.6</b>	<b>48,743.4</b>	<b>50,087.3</b>
<b>Foreign currency reserves</b>	<b>8,597.7</b>	<b>9,496.2</b>	<b>9,447.0</b>
<i>(a) Securities</i>	<i>101.7</i>	<i>1,011.9</i>	<i>1,016.1</i>
<i>(b) Total currency and deposits</i>	<i>8,496.0</i>	<i>8,484.4</i>	<i>8,430.9</i>
IMF reserve position	0.01	0.01	0.01
SDRs	547.3	564.4	574.4
<b>Gold</b>	<b>32 036.7</b>	<b>38,682.8</b>	<b>40,065.9</b>

These statistics highlight Uzbekistan's growing reliance on gold as a key component of its foreign exchange reserves. The continuous increase in gold holdings is an important element of the country's strategy to ensure economic resilience.

Furthermore, in order to further enhance debt sustainability, the following **additional policy measures** are also recommended.

#### 1. Diversify Reserve Composition

Uzbekistan's international reserves have **increased significantly** in recent years. Moreover, the country is undertaking substantial **measures to diversify** its reserves by broadening the foreign currency composition and purchasing securities, including U.S. Treasury bonds.

While actively continuing these efforts, it is also recommended that Uzbekistan should ensure **currency matching** by aligning the foreign exchange reserves with the currency composition of its external debt. The Central Bank needs to hold **enough reserves in the same currencies** (especially US dollars) as the debt obligations. This strategy lowers exchange rate risk, helps ensure timely debt payments, and strengthens the Central Bank's ability to manage market fluctuations.

#### 2. Strengthen Institutional Coordination

Effective coordination between the Central Bank and the Ministry of Economy and Finance is essential to align debt management and reserve policies. For example, maintaining reserves in the same currencies as the debt obligations helps reduce both interest rate and currency risks, enhancing overall financial stability.

## 5.5 Monetary Credibility

Monetary policy plays a pivotal role in managing currency risks, particularly in emerging economies with high exposure to foreign-denominated debt. Through interest rate adjustments, inflation targeting, and exchange rate interventions, Central banks can influence market expectations and stabilize currency fluctuations.

In Uzbekistan, inflation stood at **9.8 percent in 2024**. It is projected to decline to 8.4 percent by the end of 2025, with a gradual convergence towards the Central Bank of Uzbekistan's medium-term **target of 5 percent by the end of 2027**.

To mitigate currency risks, monetary policy should **remain tight, oriented towards** reducing inflation and **firmly anchoring inflation expectations** around the Central Bank of Uzbekistan's medium-term target.

Additionally, the Central Bank of Uzbekistan's policy of allowing **exchange rate flexibility** to help absorb potential shocks—while maintaining interventions in line with the neutrality principle and limiting additional actions to disorderly market conditions—is being effectively implemented and **should be steadily continued** in the future.

## 6.DISCUSSION

### 6.1 Interpretation of Key Findings

The findings of this research highlight the critical role of effective currency risk management in ensuring the long-term stability of public debt. The analysis reveals that countries with a high share of external debt denominated in foreign currencies are particularly vulnerable to exchange rate volatility, which can significantly impact debt servicing costs and fiscal sustainability. This is especially relevant for developing economies such as Uzbekistan.

One of the key findings is that **the devaluation of the sum**—such as the major adjustment in 2017 when the currency was liberalized—can lead to a sharp increase in the local currency value of foreign debt, placing additional pressure on the state budget. This effect is exacerbated when external debt is not matched by sufficient foreign exchange earnings or reserves.

Another significant finding is the **insufficient use of hedging instruments** or financial derivatives to mitigate currency risks. Uzbekistan's debt management strategy has primarily focused on securing concessional and long-term loans, but lacks active measures for protecting against currency fluctuations.

In summary, the research underscores the importance of diversifying the currency composition of public debt, expanding the use of risk mitigation instruments, and strengthening institutional mechanisms to improve resilience against exchange rate shocks. Uzbekistan's case illustrates both the progress made and the challenges that remain in achieving sustainable debt management in the face of currency risk.

## 6.2 Alignment with Existing Literature

The findings of this study on currency risk management and public debt stability are largely consistent with existing literature, particularly in relation to emerging and developing economies. Several prior studies have emphasized that **a high share of external debt denominated in foreign currencies increases vulnerability to exchange rate fluctuations**, which can lead to debt sustainability issues (Hausmann & Panizza, 2003; Eichengreen et al., 2005). This aligns with the case of Uzbekistan, where foreign-currency-denominated debt forms a significant part of the public debt portfolio.

Existing literature also highlights the phenomenon of “**original sin**”—the inability of many developing countries to borrow abroad in their own currency—as a structural weakness that exacerbates currency risk. Uzbekistan exemplifies this pattern, as most of its external borrowing is in U.S. dollars or other reserve currencies, and very limited borrowing is done in the national currency, the Uzbek sum. This confirms the persistence of original sin and supports the argument that **de-dollarization and local currency bond markets** are crucial for long-term debt sustainability.

In addition, studies by the IMF (2025) and World Bank (2021) emphasize the importance of **foreign exchange reserve accumulation and institutional frameworks** in mitigating currency risk. Uzbekistan’s approach—particularly the Central Bank’s accumulation of reserves and reliance on gold holdings—closely follows these recommendations. As of 2025, Uzbekistan holds over \$50 billion in foreign exchange reserves, a figure that aligns with IMF-recommended reserve adequacy metrics for emerging markets. This supports the view that **foreign reserves can act as a shock absorber**, but are not a complete substitute for active risk management strategies like hedging or debt restructuring.

However, the current study also reveals **certain gaps in Uzbekistan’s approach**, which are similarly identified in global literature. For instance, while some countries (e.g., Mexico, Brazil, and Poland) have adopted **hedging instruments** such as currency swaps or forward contracts to manage exchange rate exposure, Uzbekistan has yet to implement these tools systematically. Literature from emerging market case studies (Sweta Saxena and Agustín Villar, 2012) shows that hedging instruments, though complex, can significantly reduce the volatility of debt service costs. The absence of such measures in Uzbekistan reflects an institutional and technical capacity gap, confirming previous findings on the need for **institutional strengthening** in public debt management systems.

In conclusion, the results of this study align closely with the broader academic and policy-oriented literature on currency risk and debt sustainability. Uzbekistan’s experience confirms many of the challenges identified in the literature—such as reliance on foreign currency debt, limited hedging, and weak local currency—while also demonstrating progress in areas like transparency and reserve management. These parallels reinforce the validity of the study’s findings and highlight the continued relevance of global best practices to the Uzbek context.

## 6.3 Policy and Institutional Factors Affecting Currency Risk Management

### 1. Role of Policy in Currency Risk Management

Effective currency risk management in Uzbekistan, as in many other developing economies, is heavily influenced by **policy decisions** at both the fiscal and monetary levels. Over the past decade, Uzbekistan has undergone significant **policy reforms**, including the **liberalization of the exchange rate** in 2017 and the introduction of a **medium-term debt management strategy** (MTDS) that aligns with international best practices. These policies are crucial in creating a **more transparent and stable economic environment**, which is essential for better currency risk management.

However, despite these efforts, the **over-reliance on foreign-currency-denominated debt** remains a challenge. Approximately 88% of Uzbekistan’s external public debt is in foreign currencies, which is typical for many emerging markets. While the government has focused on obtaining **concessional loans** and financing from multilateral institutions, such loans are usually in foreign currencies such as **USD, EUR, and JPY**, exposing the country to fluctuations in exchange rates.

The **devaluation of the sum**—for example, during the 2017 exchange rate liberalization—has shown how sensitive Uzbekistan’s external debt is to currency fluctuations. As the local currency depreciates, the **domestic cost of foreign-denominated debt increases**, placing significant strain on the government’s budget. This is a clear illustration of the **link between fiscal policy and currency risk**, where **foreign borrowing policies** (i.e., issuing debt in foreign currencies) can make a country more vulnerable to currency shocks.

## 2. Transparency and Reporting

In recent years, Uzbekistan has made substantial strides in improving **transparency** in its public debt management. The Ministry of Economy and Finance now regularly publishes **debt bulletins** and reports that provide detailed information on the **composition of public debt**, including currency exposure, interest rates, and maturity schedules. This increased **public accountability** is an important step toward addressing currency risk, as it provides **better data** for decision-makers to assess the potential impacts of exchange rate movements on debt sustainability.

However, while the data is comprehensive, it is still **primarily backward-looking** and lacks **forward-looking risk assessments**, such as **scenario analysis** or **stress testing**. According to international best practices, effective currency risk management requires not only **historical data** but also the ability to project future risks based on various exchange rate scenarios. This is an area where Uzbekistan’s institutional capacity can be strengthened.

## 6.4 Challenges and Limitations of Currency Risk Management

This section discusses the key obstacles Uzbekistan faces in addressing currency risks, examining economic, institutional, and operational factors that influence the management of these risks.

### 1. High Dependence on Foreign-Currency-Denominated Debt

One of the most significant challenges for Uzbekistan’s currency risk management is its **high dependence on foreign-currency-denominated debt**. As noted earlier, approximately 88% of Uzbekistan’s public debt is in foreign currencies, predominantly the U.S. dollar, euro, and Japanese yen. This dependence creates **currency exposure** that is vulnerable to fluctuations in exchange rates. This phenomenon has been discussed in the literature as a form of “**original sin**” (Hausmann & Panizza, 2003), where developing countries are unable to issue debt in their own currency, thus relying heavily on foreign currency loans.

### 2. Limited Use of Hedging Instruments and Risk Mitigation Tools

Another key issue that has emerged from this research is the **underutilization of hedging instruments** and other **risk mitigation tools** in Uzbekistan’s public debt management strategy. In contrast to other emerging markets such as **Mexico, Brazil, and Poland**, which actively use instruments like **currency swaps, forward contracts, and options** to hedge against exchange rate risks, Uzbekistan’s approach has been relatively conservative, relying mostly on concessional loans and long-term financing from multilateral organizations.

### 3. Limited Development of Local Currency Bond Markets

The development of a **robust local currency bond market** is essential for reducing the dependency on foreign-currency-denominated debt. However, Uzbekistan's domestic bond market remains underdeveloped. The **Uzbek sum** bond market is relatively small, and there is limited investor demand for long-term debt in local currency.

A strong **domestic bond market** would allow Uzbekistan to issue **debt in its own currency**, thereby reducing its exposure to exchange rate fluctuations. However, the market for **local currency bonds** remains underdeveloped due to factors such as **low investor confidence**, **lack of liquidity**, and **limited demand for long-term instruments**.

Without a robust local currency bond market, Uzbekistan remains vulnerable to currency risk, as the country must continue to rely on **foreign-currency debt** for financing its budgetary needs. The **development of local capital markets** is a long-term process that requires **structural reforms** and the **establishment of investor-friendly conditions**.

### 4. Limited Access to International Capital Markets

Another challenge faced by Uzbekistan is its **limited access to international capital markets**. Although Uzbekistan has made significant progress in **economic liberalization**, the country's access to global financial markets is still constrained by factors such as **credit ratings**, **market perceptions**, and **geopolitical risks**.

This limited access prevents Uzbekistan from diversifying its debt sources and obtaining financing from a broader range of international investors. It also restricts the country's ability to engage in more **efficient risk management** strategies, such as issuing **currency-denominated bonds** or accessing more favorable financing terms in foreign markets.

## 7. CONCLUSION

This study has provided an in-depth analysis of the **effective management of currency risks** and its importance in ensuring the stability of public debt in Uzbekistan. The key findings of the study reveal that currency risk management is a critical component of the country's debt management strategy, particularly in light of its growing dependence on foreign-currency-denominated debt.

### 7.1 Implications for Debt Management Policy

The findings of this research have important implications for Uzbekistan's **debt management policy**:

1. **Diversification of Debt Instruments:** Uzbekistan must focus on reducing its dependency on foreign-currency-denominated debt. This can be achieved through **local currency bond issuance**, which will help decrease the country's vulnerability to exchange rate fluctuations and reduce the cost of debt servicing.
2. **Adoption of Hedging Mechanisms:** Introducing **hedging instruments** such as currency swaps and forwards should be prioritized to protect the country from the adverse effects of currency fluctuations. This requires improving the **technical expertise** within debt management institutions and creating a regulatory framework to facilitate the use of these financial instruments.
3. **Enhanced Coordination:** A more integrated approach to debt management, involving close coordination between the **Ministry of Economy and Finance** and the **Central Bank**, is essential for effectively managing currency risks. This will ensure that debt issuance strategies and exchange rate policies are aligned, reducing uncertainty and potential risks.
4. **Strengthening Transparency:** Increased transparency in debt management practices, including the publication of debt sustainability analyses and **currency risk assessments**, can improve decision-making and bolster investor confidence.

### 7.2 Suggestions for Future Research

While this study provides valuable insights into the currency risk management challenges faced by Uzbekistan, there are several areas that warrant further research:

1. **Impact of Currency Risk on Economic Growth:** Future studies could explore the broader impact of currency risk on Uzbekistan's economic growth, especially in terms of macroeconomic stability and investment attractiveness. Understanding how fluctuations in exchange rates affect investment flows, inflation, and economic growth can provide deeper insights into the implications of currency risk.
2. **Role of Financial Derivatives in Risk Mitigation:** Further research could focus on the potential benefits and risks of using financial derivatives to hedge currency risk in emerging markets like Uzbekistan. This would involve studying the effectiveness of these instruments in reducing the cost of debt servicing and improving fiscal stability.
3. **Comparative Studies with Other Emerging Markets:** Conducting comparative studies with other emerging markets that have successfully implemented currency risk management strategies, such as Mexico, Turkey, or Brazil, could provide valuable lessons for Uzbekistan. These studies could focus on how these countries have developed their local currency bond markets and utilized hedging mechanisms.

In conclusion, managing currency risk is a crucial factor in maintaining fiscal stability and ensuring the sustainability of public debt in Uzbekistan. The study highlights the key challenges, including the country's reliance on foreign currency debt, fragmented institutional structures, and the limited use of hedging instruments. For Uzbekistan to better manage currency risk, it must focus on diversifying debt

instruments, and adopting modern risk management tools. Further research into the impact of currency risk on Uzbekistan's economic growth will be crucial for refining the country's debt management strategies.

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