



**FISCAL AFFAIRS**

# Tokyo Fiscal Forum

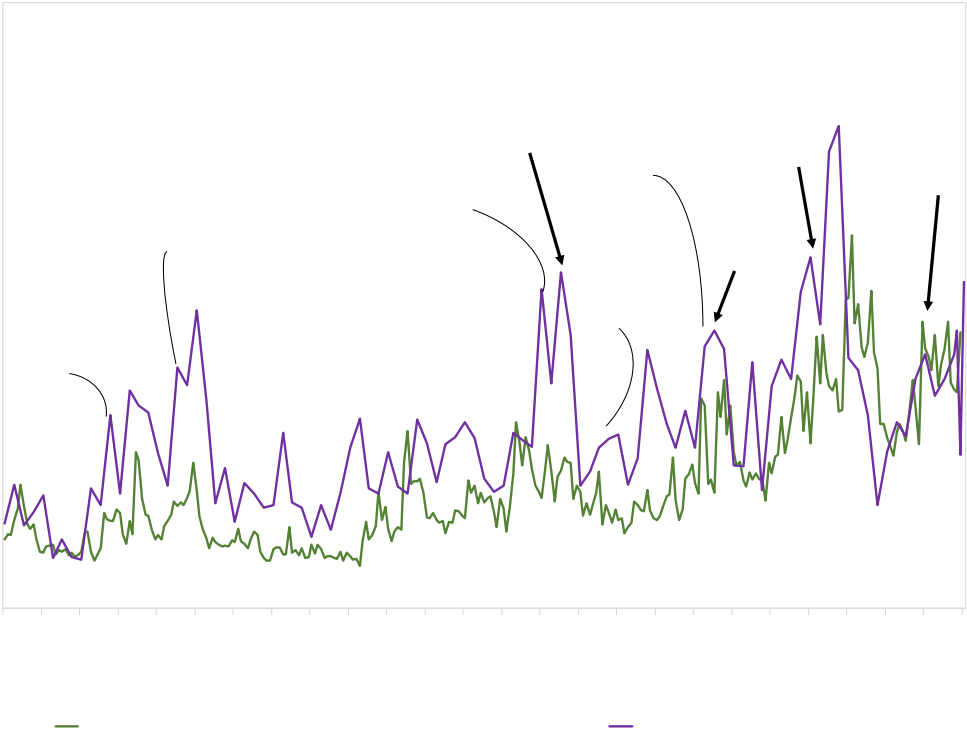
## The Relevance of The Fiscal and Monetary Policy Mix Under Inflation

**JUNE 2023**

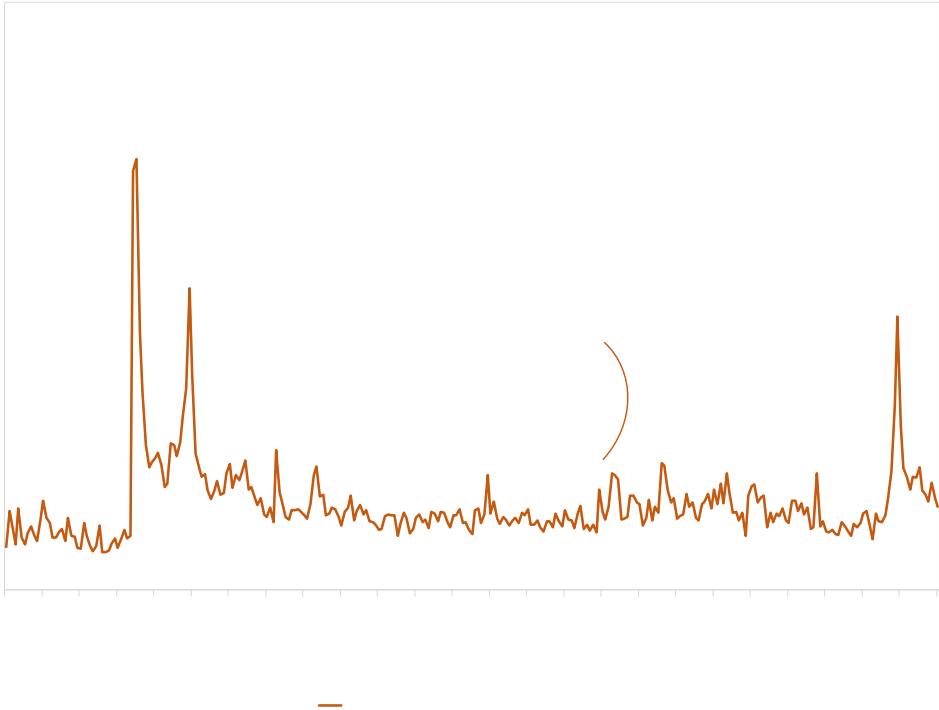
Vitor Gaspar  
Director  
Fiscal Affairs Department

# The Pandemic Stands Out

### World Uncertainty Index & Global Economic Policy Uncertainty



### Geo-Political Risk Index

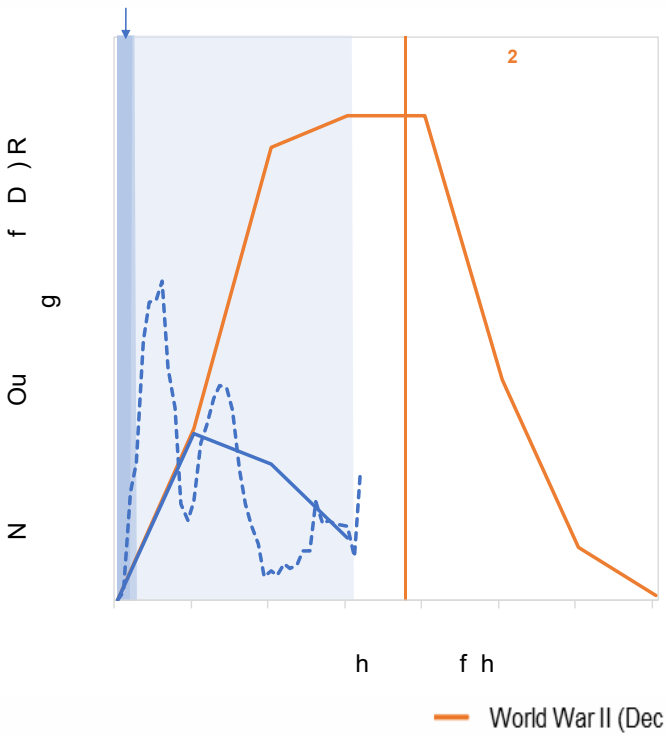


Source: Ahir, H., Bloom, N., & Furceri, D. (2022); Baker, S. R., Bloom, N., & Davis, S. J. (2016).; Caldara, Dario and Matteo Iacoviello (2022).

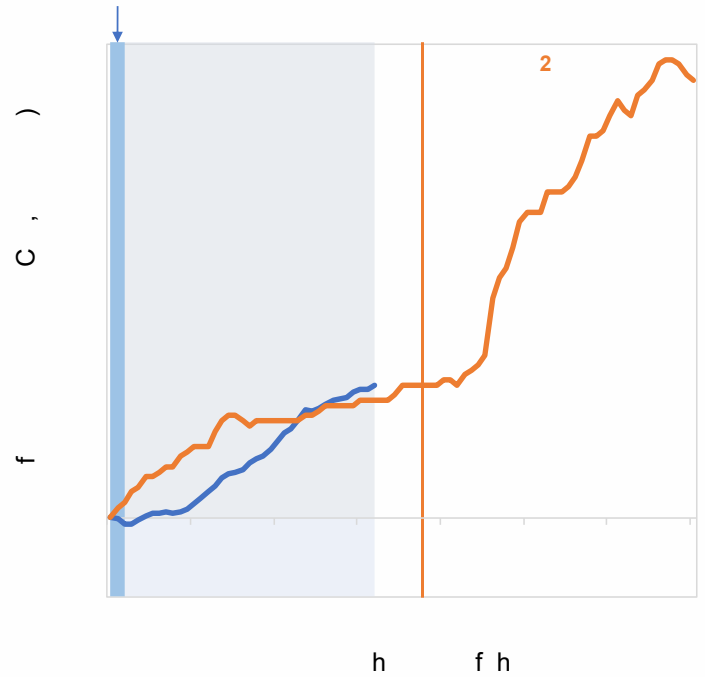
Note: The World Uncertainty Index uses quarterly frequency before December 2022 and uses monthly frequency for January, February, March and April of 2023. The Global Economic Policy Uncertainty Index is in monthly frequency and ends in March 2023. The Geo-Political Risk Index is in monthly frequency and the last data point is April 2023.

# COVID As War

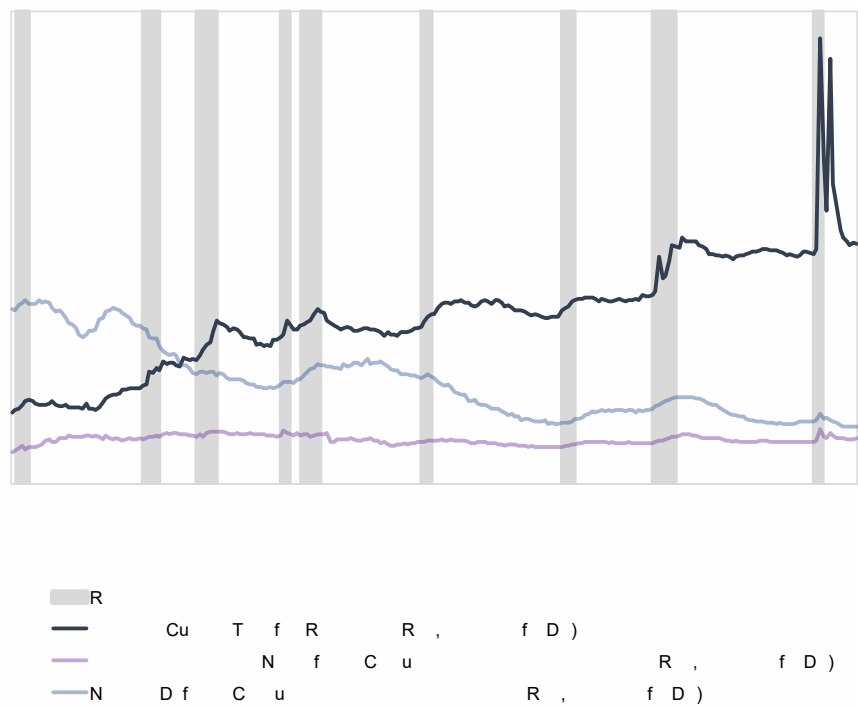
US Federal Government Spending



US Inflation (CPI)



US Government Expenditures Shares & Transfer Payments

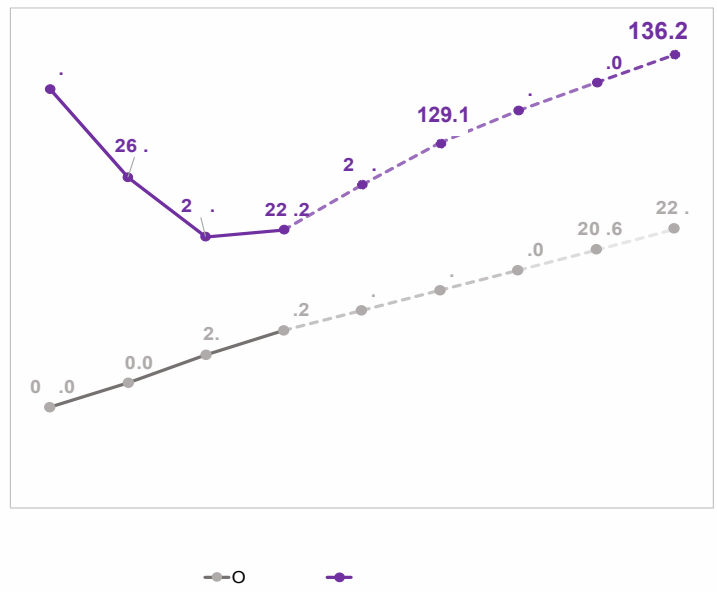


Source: Federal Reserve (FRED); Bureau of Labor Statistics (BLS); Global Financial Database (GFD); Office of Management & Budget (OMB)/Haver Analytics; NBER & IMF Staff Calculations  
 H , . J., & , . J. (2022). 'Three world wars: Fiscal-Monetary Consequences'; Right chart is based 6 " The COVID-19 Pandemic and  
 Inflation: Lessons from Major U.S. Wars", Kliesen and Wheelock (2022). Data comes from Bureau of Economic Analysis (BEA), Haver Analytics; Federal Reserve Economic Data (FRED) & IMF  
 Staff Calculations

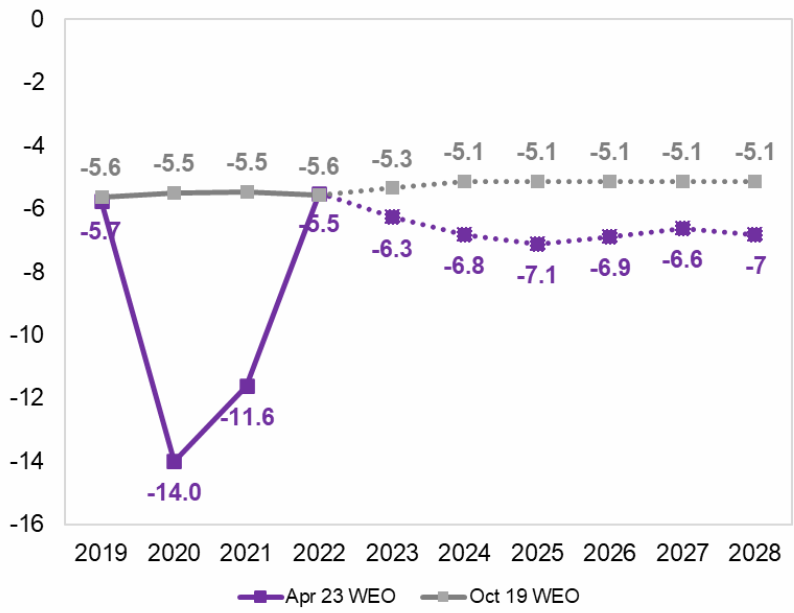
Note: Figures represent trends in the United States. In the right figure, data is in monthly frequency. In the left chart, data is in annual frequency, with the dashed line being federal government spending for COVID in monthly frequency. Federal Net Outlays (Spending) is shown as the difference relative to federal spending at the start (point 0, which is the 12-month rolling average of federal government spend g). The COVID R , f NB R' f f , h gh u , u h ths of February, March and April 2020. The last date for federal spending is the month of August 2022, and for inflation is the month of September 2022.

# Mounting Public Debt In The US

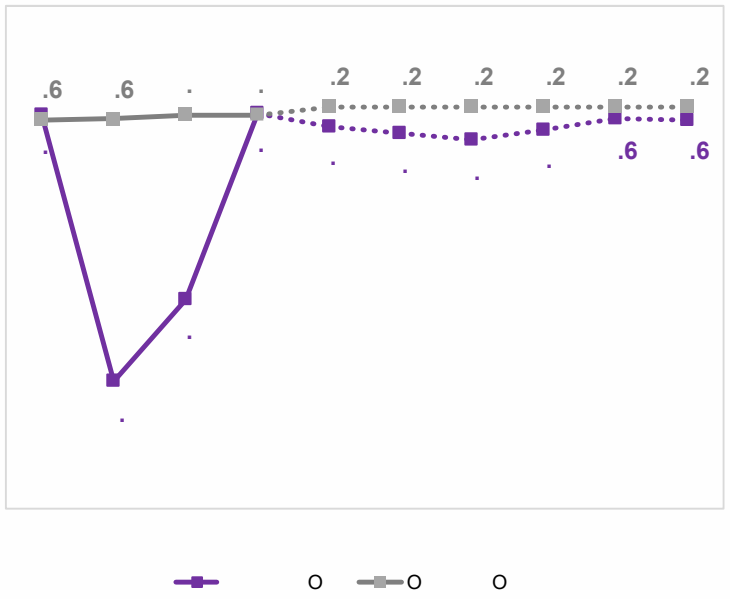
Public Debt  
(in Percent of GDP)



Overall Balance  
(in Percent of GDP)



Primary Balance  
(in Percent of GDP)

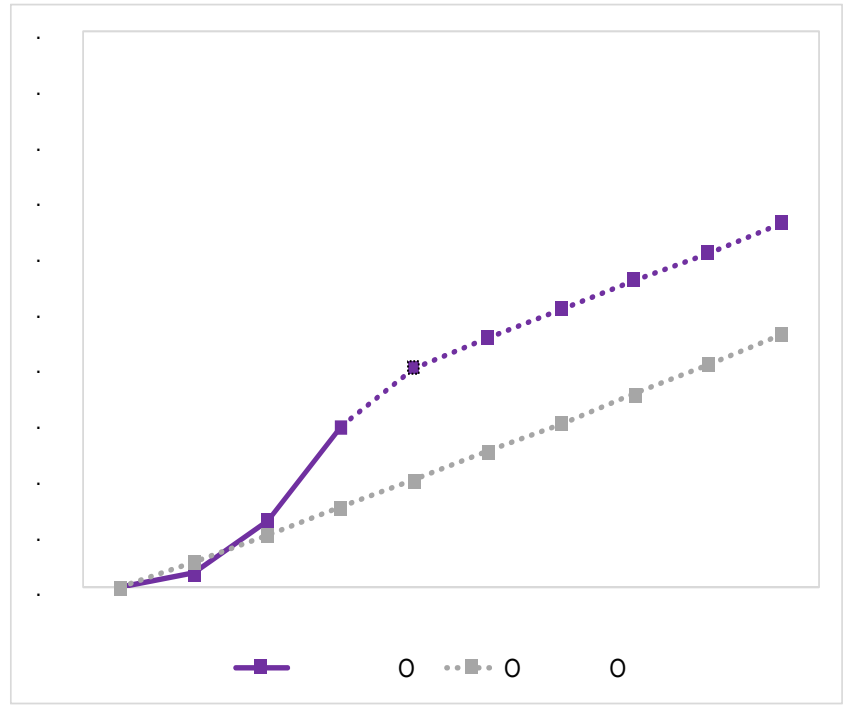


Source: IMF World Economic Outlook (October 2019 and April 2023) & IMF Staff Calculations.

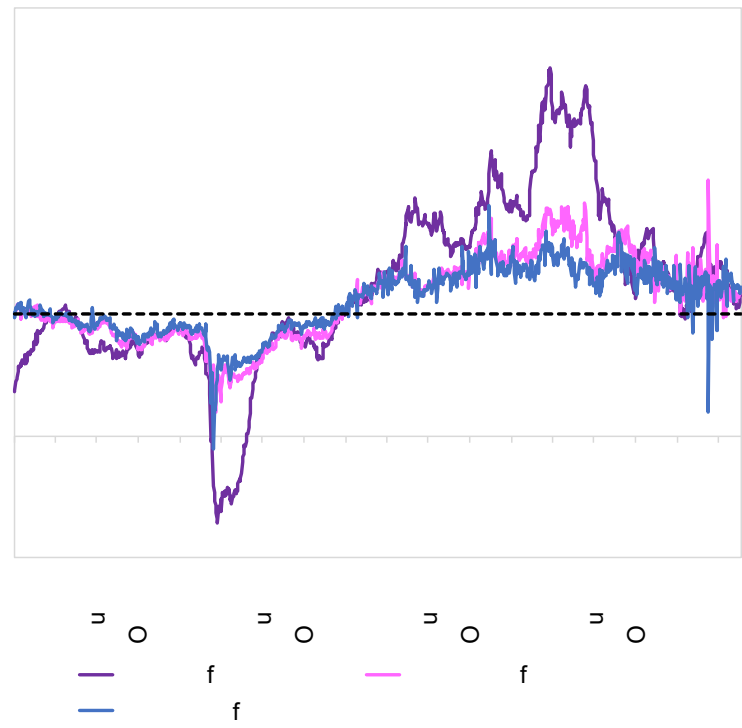
Note: WEO October 2019 provides estimates until 2024, therefore figures for 2025-2028 are calculated assuming the same debt-growth rate as in 2023/24.

# Inflation Expectations In The US

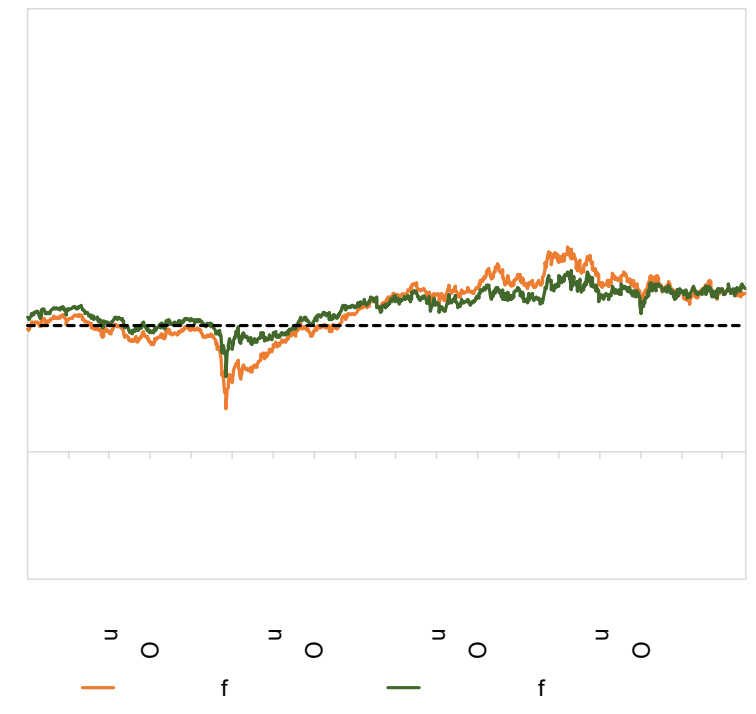
Consumer Prices, Period Average  
Base year 2019=1



1y, 1y1y, and 1y2y Inflation Expectations



5y5y, and 10y Inflation Expectations



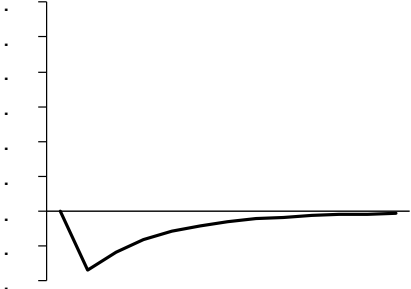
Sources: WEO (October 2019 & April 2023 vintages) & IMF Staff Calculations; Refinitiv Eikon Datastream & IMF Staff Calculations.  
Note: The last data point is 5/22/2023

# Fiscal Policy And Inflation

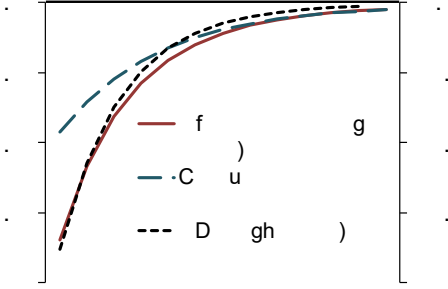
Disinflation via Different Policy Tightening Options in the HANK Model  
 (Deviation from long-term value, unless stated otherwise)

Variation In Interest Rates

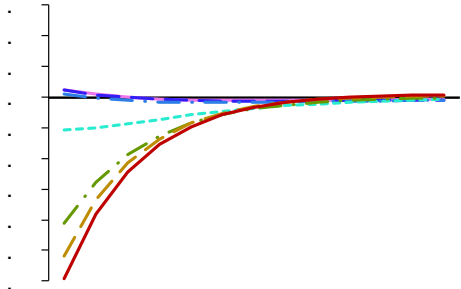
1. Fiscal Restraint Only



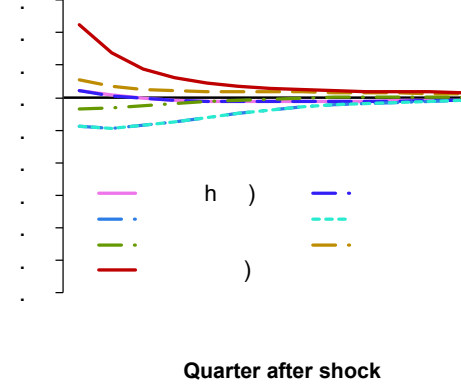
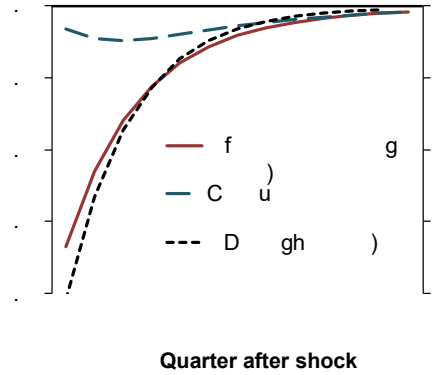
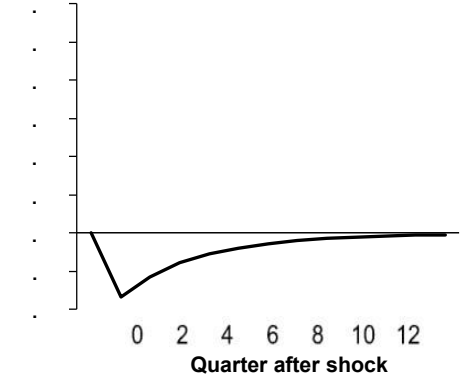
Impact on Inflation, Consumption, and Output



Consumption by Income Bracket Percentile

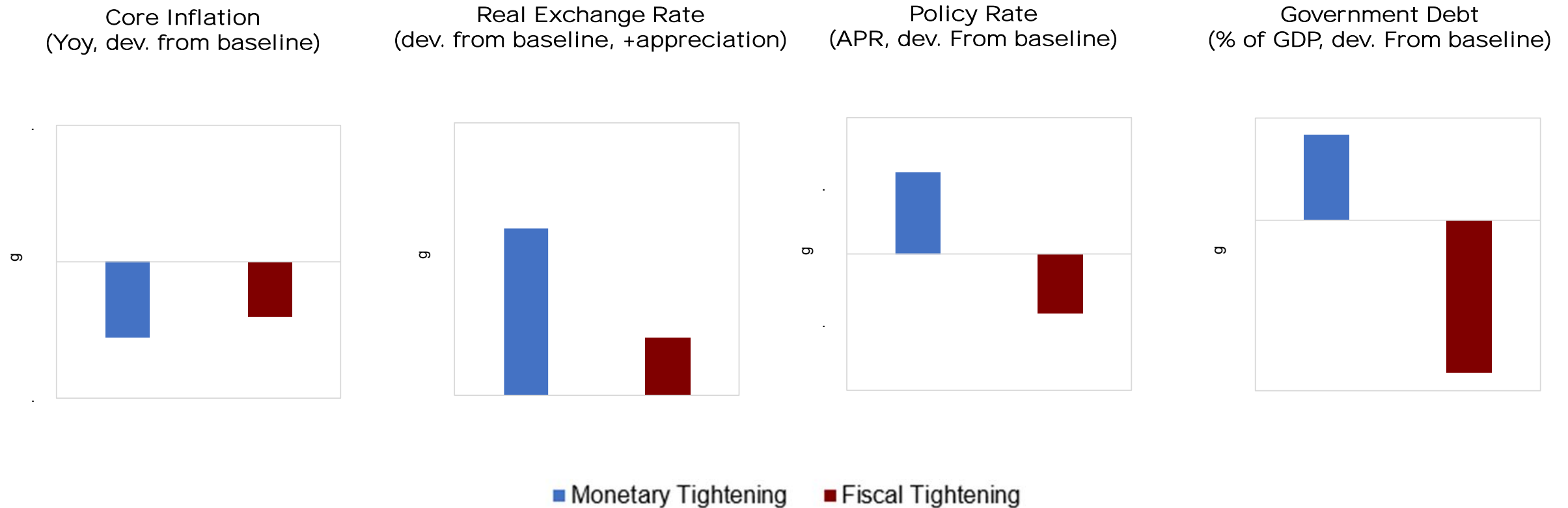


2. Fiscal Restraint with Targeted Transfers



Source: Forthcoming Fiscal Monitor April 2023; Auclert et al. (2021) & IMF Staff Calculations.  
 Note: HANK = Heterogenous-Agents New Keynesian.

# More Traction For Fiscal To Reduce Inflation In EMs



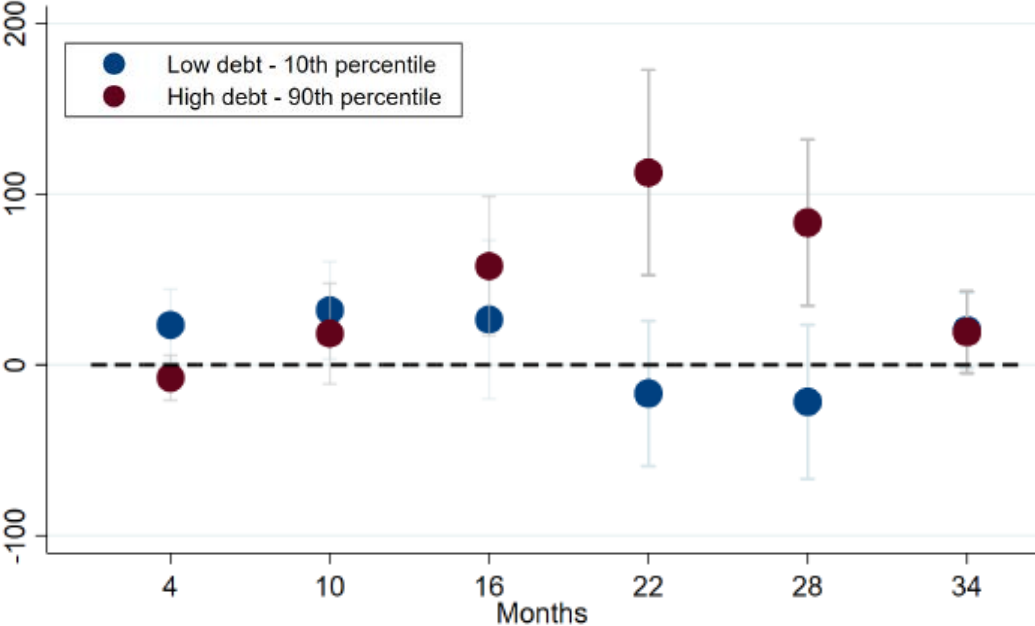
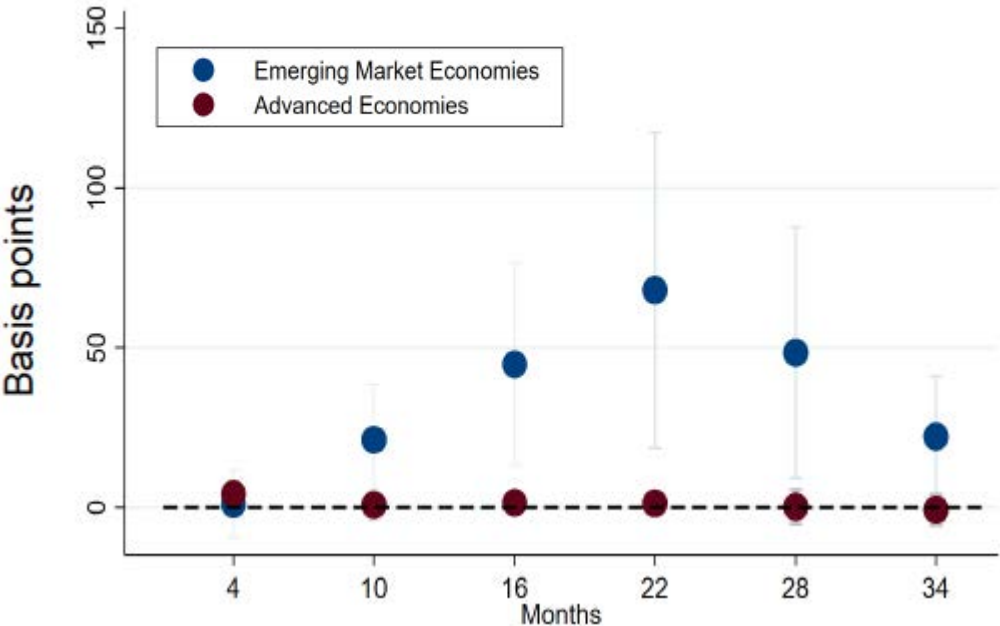
**Source: Erceg and Linde, 2012; and IMF Staff calculations.**

Note: The simulations by IMF staff use a two-country dynamic stochastic general equilibrium model. The chart for core inflation is average of 12 quarters. The chart for real exchange rate is average of first 4 quarters. The chart for policy rate is average of first 4 quarters. The chart for government debt is deviation from baseline after 5 years.

# Public Debt Reduction May Help EMs Reduce Inflation

Debt surprises cause an increase in medium-term inflation expectations

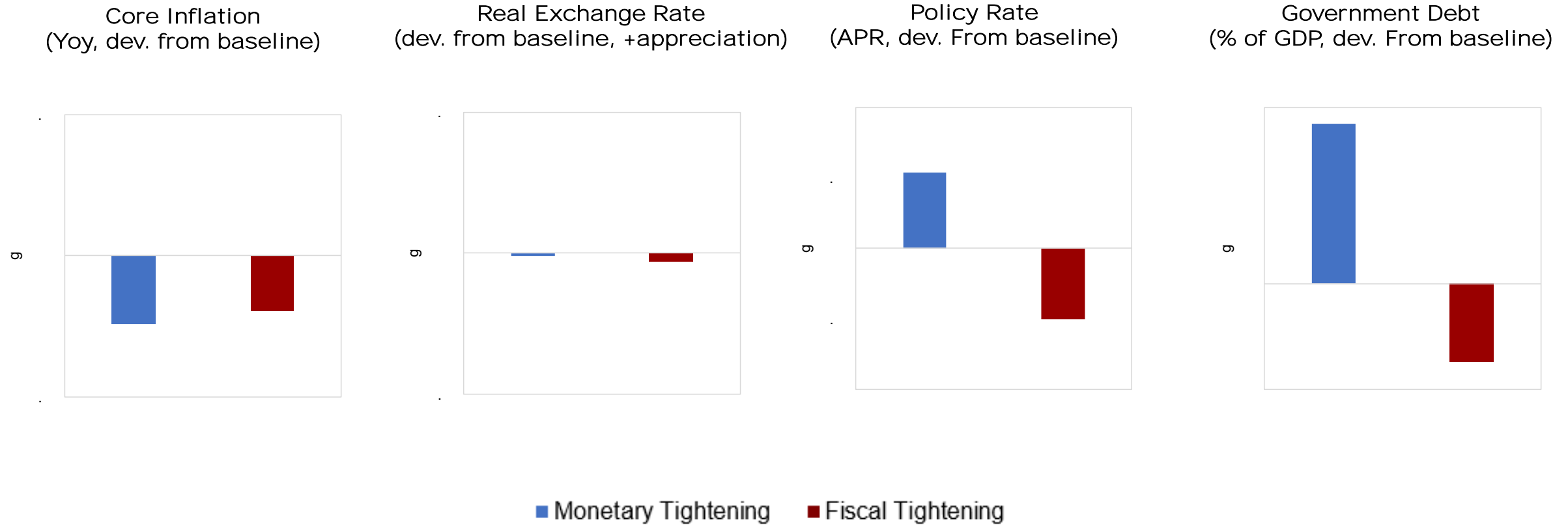
The effect is more pronounced for high-debt EMs than for low-debt EMs



Source: Brandao-Marques, Casiraghi, Gelos, Harrison, Kamber (2023) Note: t=0 is the quarter of the shock. The whiskers represent 90 percent confidence intervals. Note: For the LHS chart the 5-year ahead inflation expectations response to a 10 percent surprise in the debt-to-GDP ratio. For the RHS chart conditions on the initial debt level for a sample of emerging market economies only



# Fiscal Outcomes Similar To Monetary If All Countries Tighten

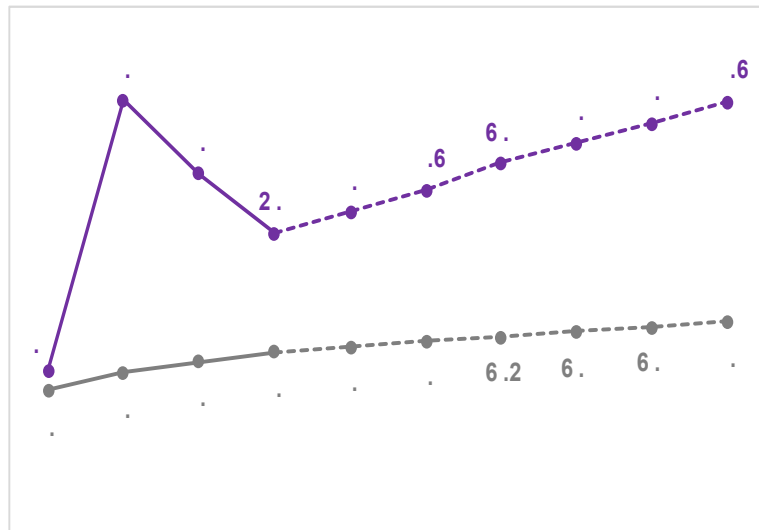


**Source: Erceg and Linde, 2012; and IMF Staff calculations.**

Note: The simulations by IMF staff use a two-country dynamic stochastic general equilibrium model. The chart for core inflation is average of 12 quarters. The chart for real exchange rate is average of first 4 quarters. The chart for policy rate is average of first 4 quarters. The chart for government debt is deviation from baseline after 5 years.

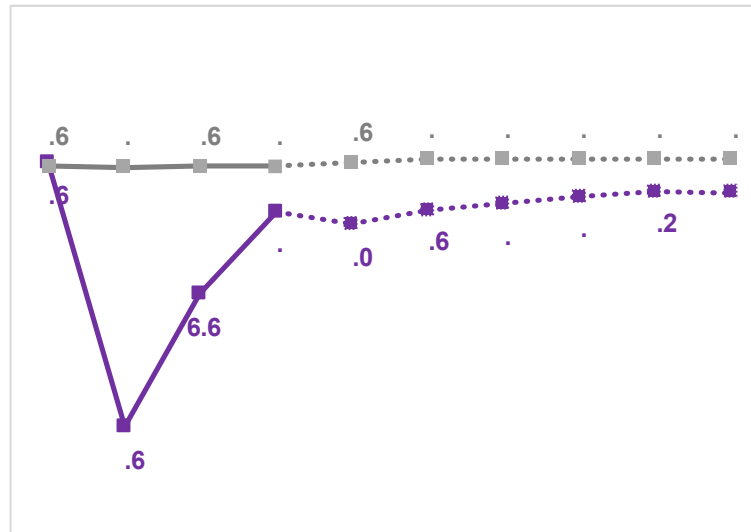
# World Debt & Deficits

Gross Public Debt in Percent of GDP



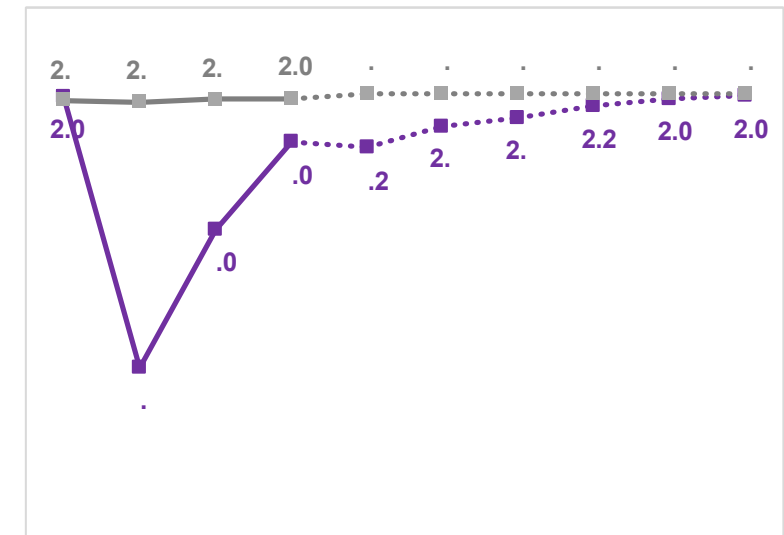
---●--- 0 ---●--- 0 0

Overall Balance in Percent of GDP



—■— 0 —■— 0 0

Primary Balance in Percent of GDP

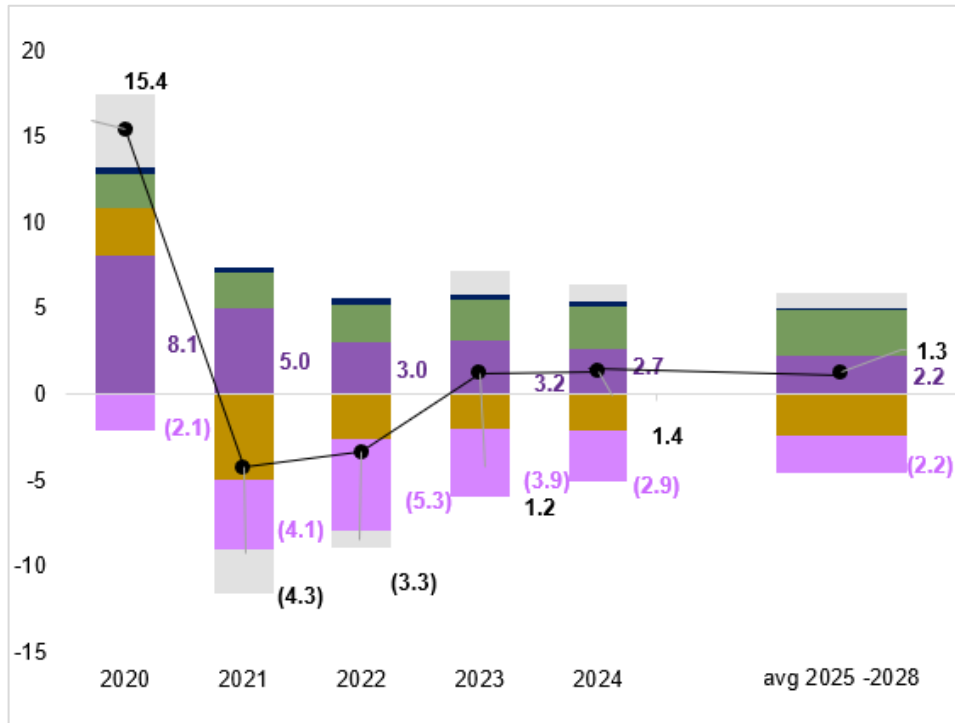


—■— 0 —■— 0 0

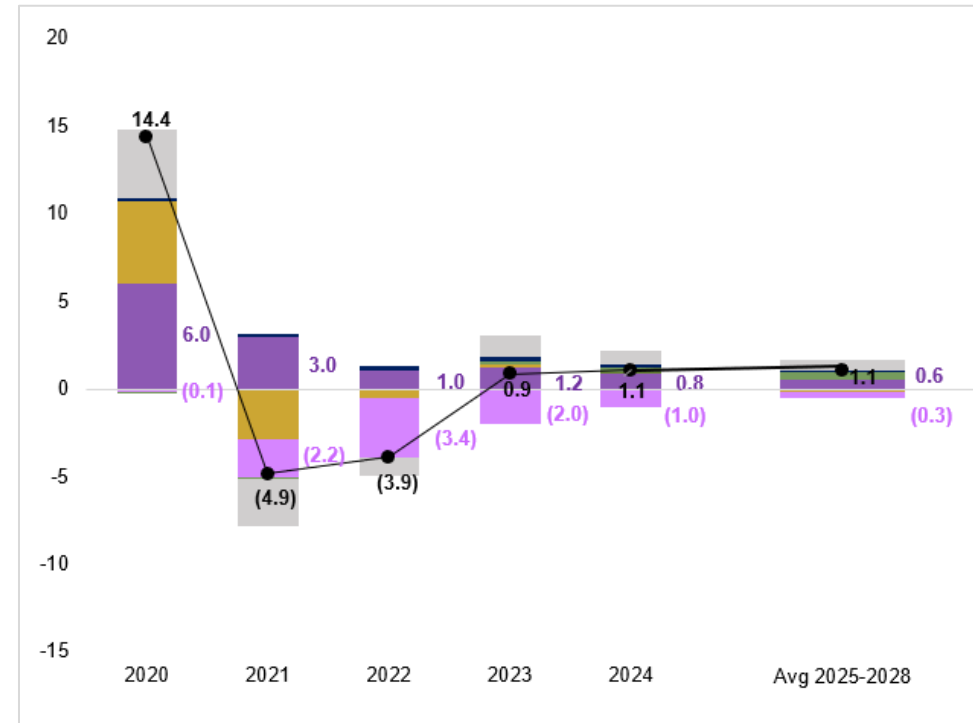
IMF World Economic Outlook (October 2019, and April 2023) & IMF Staff Calculations.

# World Debt Decomposition

Gross Public Debt Change in Percent of GDP  
(Decomposition)



Gross Public Debt Change in Percent of GDP  
(Deviation from October 2019)



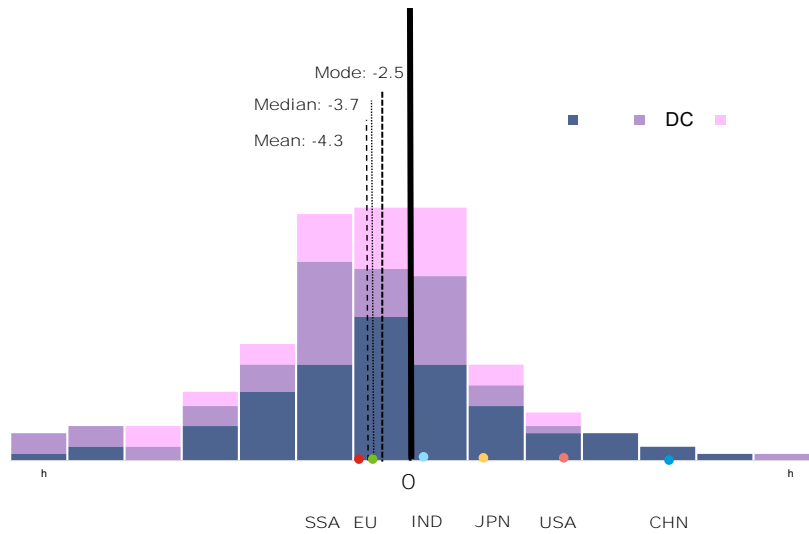
Source: IMF World Economic Outlook (October 2019, and April 2023) & IMF Staff Calculations.

- SFA
- Interest Rate
- Real Growth
- Nominal Exchange Rate
- Inflation
- Primary Deficit
- Change in debt-to-GDP

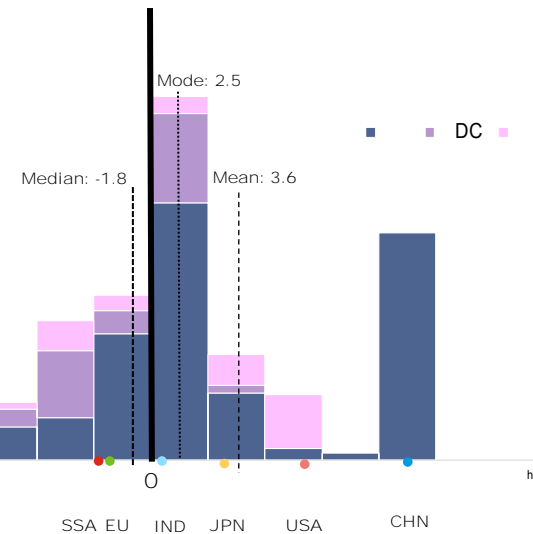
# World Debt Distribution

Gross Public Debt Changes in Percent of GDP, 2023-2028

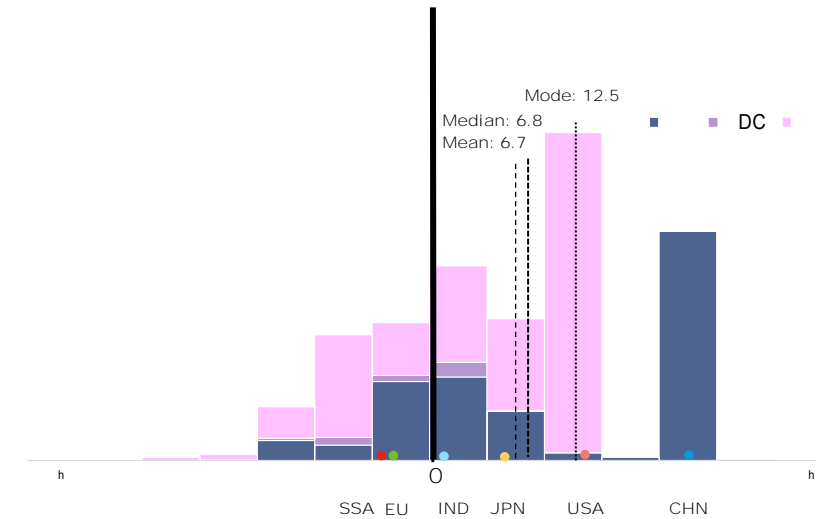
Percent of Countries



Percent of World Population



Percent of World GDP



**Source: IMF World Economic Outlook (April 2023) & IMF Staff Calculations.**

Note: The sample covers 180 countries: 39 (AEs, 21.7%), 86 (EMs, 47.8%) & 55 (LIDCs, 30.6%), 99.9% of world GDP: 57.5% (AEs), 39.7% (EMs) & 2.6% (LIDCs), and 97.3% of the world population: 14.0% (AEs), 64.3% (EMs) & 19.0% (LIDCs). We expect that 36.7% of countries in the sample will experience a rising debt to GDP ratio between 2023-2028, a total of 73.2% of the world GDP and 66.7% of world population. At the same time, we expect that 63.8% of countries in the sample will experience a declining debt to GDP ratio between 2023-2028, a total of 26.8% of the world GDP and 33.3% of world population. Debt change 2023-2028: -4.9 (SSA), -4.4 (EU), 0.3 (IND), 5.8 (JPN), 14.0 (USA) & 22.4 (CHN).

# References

Ahir, H., Bloom, N., & Furceri, D., 2022, [The World Uncertainty Index](#) (No. w29763). National Bureau of Economic Research.

Baker, S. R., Bloom, N., & Davis, S. J., 2016, [Measuring Economic Policy Uncertainty](#). The Quarterly Journal of Economics, 131(4), 1593-1636.

Bullard, James, 2023, The Monetary-Fiscal Policy Mix and Central Bank Strategy, Hoover Institution at Stanford University., May 12, 2023.

Caldara, Dario and Matteo Iacoviello, , “[Measuring Geopolitical Risk](#),” R , , ), . -1225.

Davoodi, Mr Hamid R., et al., 2022, Fiscal rules and fiscal councils: Recent trends and performance during the COVID-19 pandemic.

Hall, George and Thomas J. Sargent, 2022a, Three World Wars: Fiscal Monetary Consequences, unpublished manuscript, April 4, 2022.

Hall, George and Thomas J. Sargent, 2022b, Financing Big US Federal Expenditure Surges: COVID 19 and Earlier US Wars, unpublished manuscript, June 12, 2022.