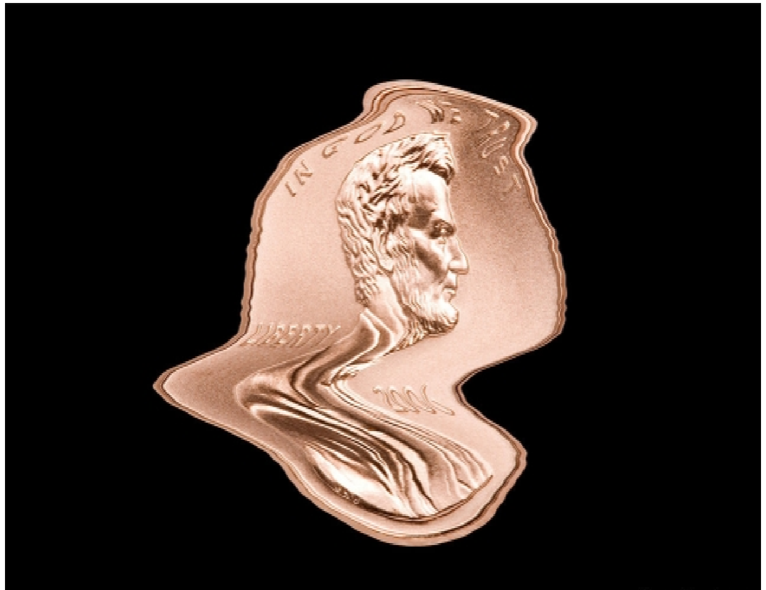
The Economist: “*Low inflation is a global phenomenon with global causes*”

SPECIAL REPORT: THE WORLD ECONOMY

The end of inflation?

Inflation is losing its meaning as an economic indicator

Economic policy must adapt, says Henry Curr



Alvaro Dominguez

SPECIAL REPORT: THE WORLD ECONOMY

Prices without borders

Low inflation is a global phenomenon with global causes

The price of commodities, trade in goods and capital flows all play a part

Alvaro Dominguez

Inflation in Emerging and Developing Economies: *Evolution, Drivers, and Policies*

Jongrim Ha, M. Ayhan Kose, and Franziska Ohnsorge

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Four Questions

1 **How has inflation evolved in EMDEs?** *Declined over time thanks to the sharp fall in global inflation, supported by cyclical and structural developments.*

2 **What have been the global and domestic drivers of inflation?** *A wide range of shocks… A global inflation cycle has emerged and inflation synchronization has strengthened among EMDEs over time. Global shocks have become more important over time but domestic shocks remain the main source of national inflation variation.*

3 **How well-anchored are EMDE inflation expectations?** *Despite becoming better-anchored since the 1990s, inflation expectations remain less well anchored in EMDEs than advanced economies. Stronger monetary frameworks and central bank independence are associated with better anchoring of expectations.*

4 **What are the main policy implications?** *Strong monetary policy frameworks, more central bank independence, robust exchange rate regimes and resilient fiscal policy frameworks are all necessary to achieve and maintain low and stable inflation.*

** EMDEs = Emerging Market and Developing Economies*

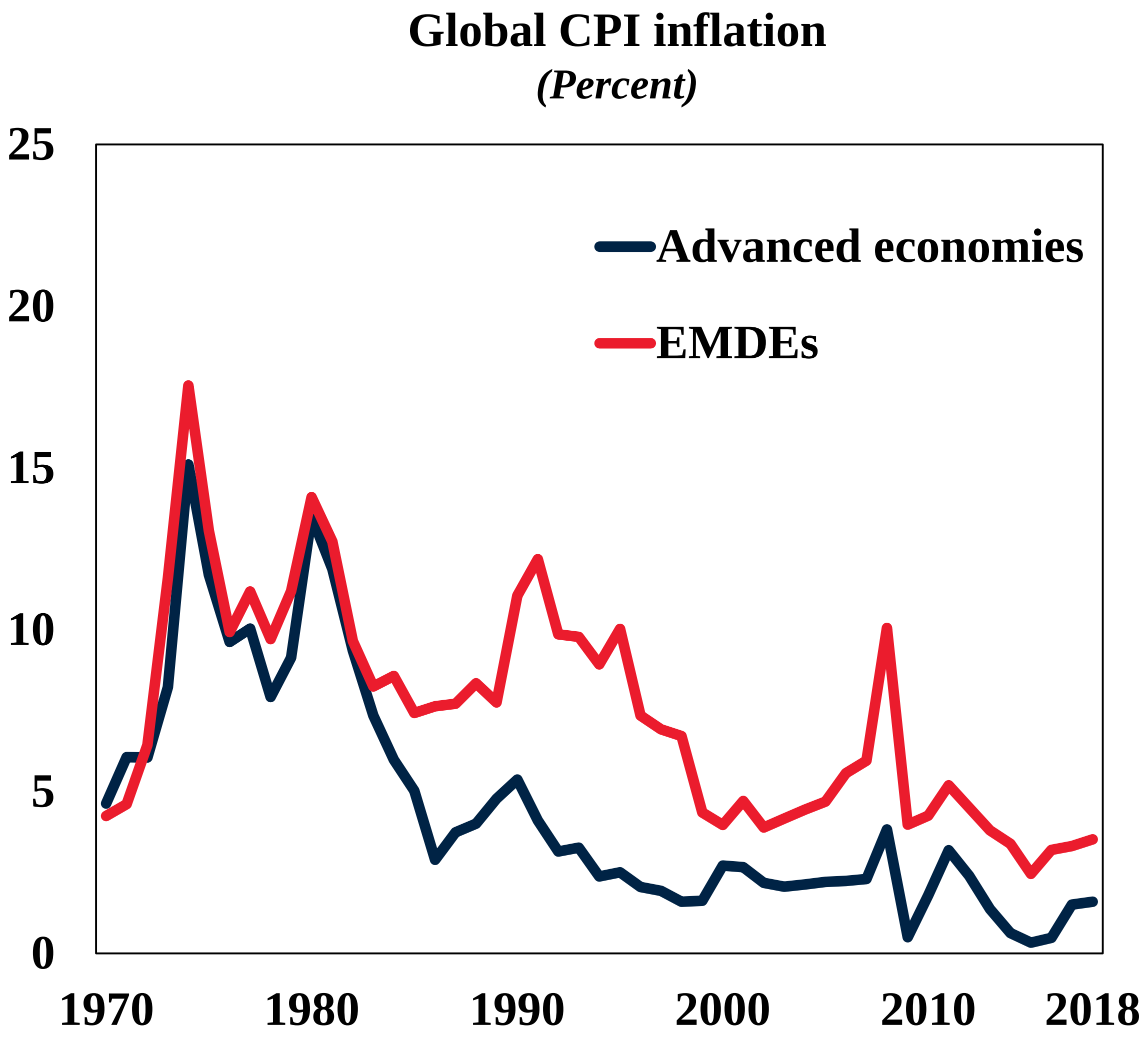
Four Questions

1

How has inflation evolved in EMDEs? *Declined over time thanks to the sharp fall in global inflation, supported by cyclical and structural developments.*

Evolution of Inflation - 1

Synchronized Decline across Country Groups, including LAC

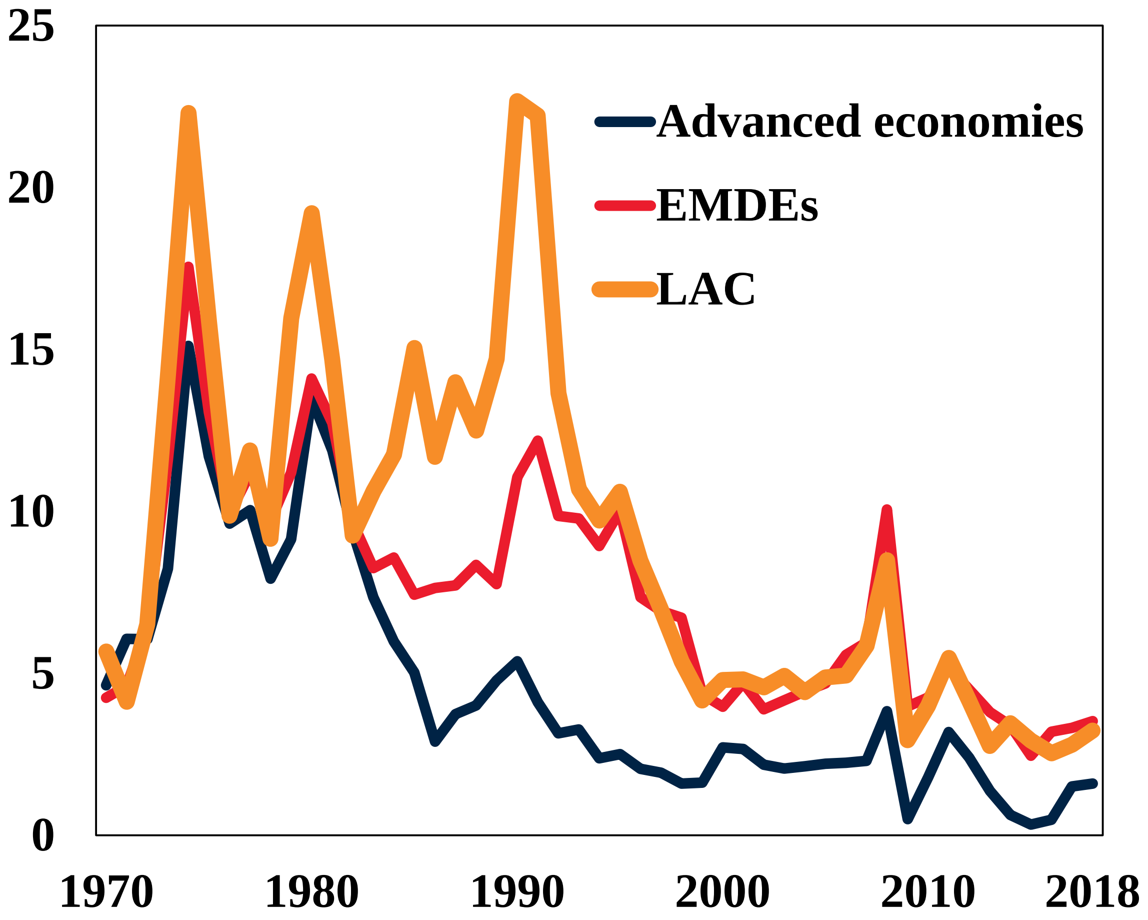


Source: World Bank.
Left Panel. Median headline CPI (consumer price index) inflation of 155 countries. Right Panel. Median headline CPI inflation, based on 29 advanced economies, 126 EMDEs, and 32 Latin American and Caribbean (LAC) countries with available data.

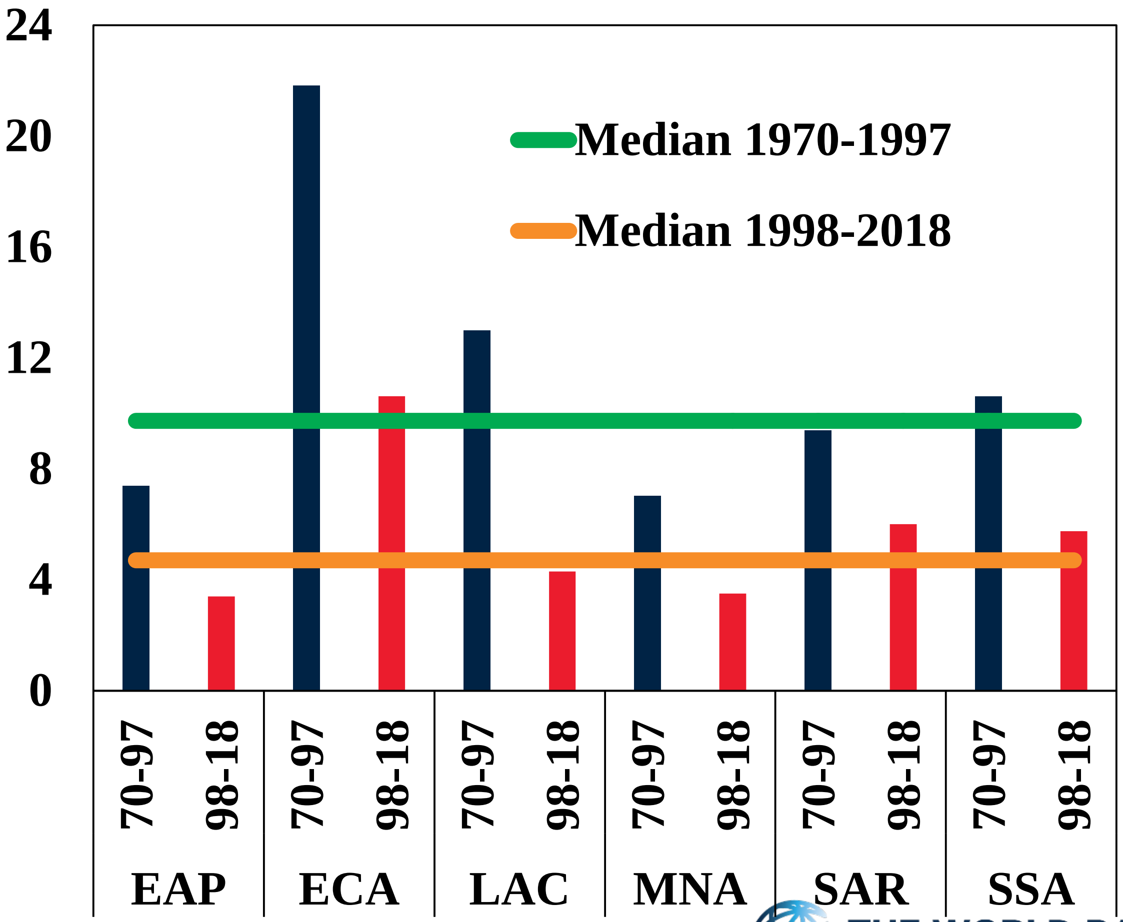
Evolution of Inflation - 2

Synchronized Decline across Country Groups, including LAC

Global CPI inflation
(Percent)



CPI inflation, by regional groups
(Percent)



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Factors Associated with Disinflation during 1970-2018

1 Globalization

- *Greater trade and global value chain integration can improve competition and productivity growth.*
- *Greater financial integration can increase central banks' anti-inflation bias.*

2 Better policy frameworks

- *Move to credible monetary policy frameworks and exchange rate regimes can help anchor inflation expectations.*
- *Greater central bank independence and transparency can improve anchoring of inflation expectations.*
- *Better fiscal frameworks can bolster credibility of monetary policy.*

3 Other structural factors

- *More flexible product and labor markets can increase competition and reduce wage rigidities.*
- *Population aging can dampen domestic demand growth.*
- *Digitalization can promote competition and productivity growth.*

4 Multiple disinflationary shocks over past decade

- *Global financial crisis; Euro Area debt crisis*
- *2014-16 oil price plunge*

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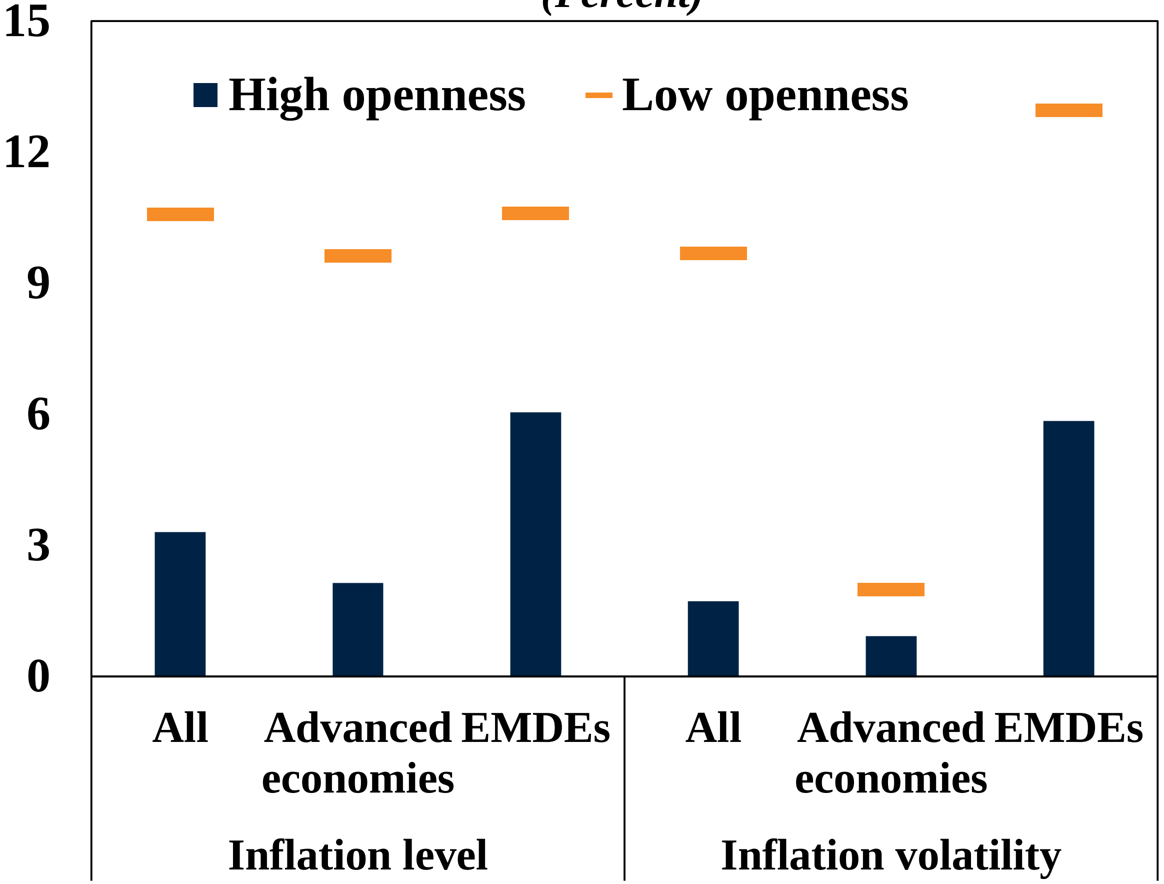
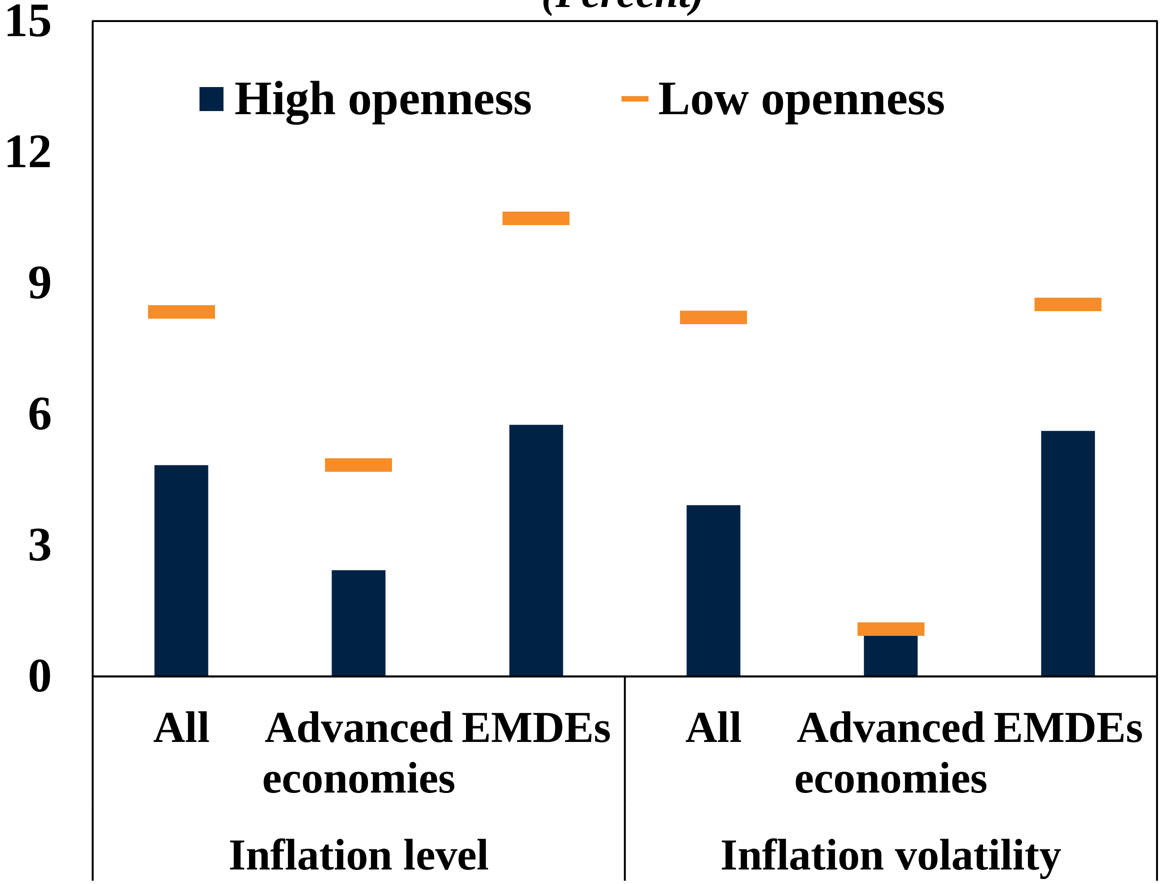
Factors Supporting Disinflation - 1

Globalization of Finance and Trade

Inflation, by financial openness
(Percent)



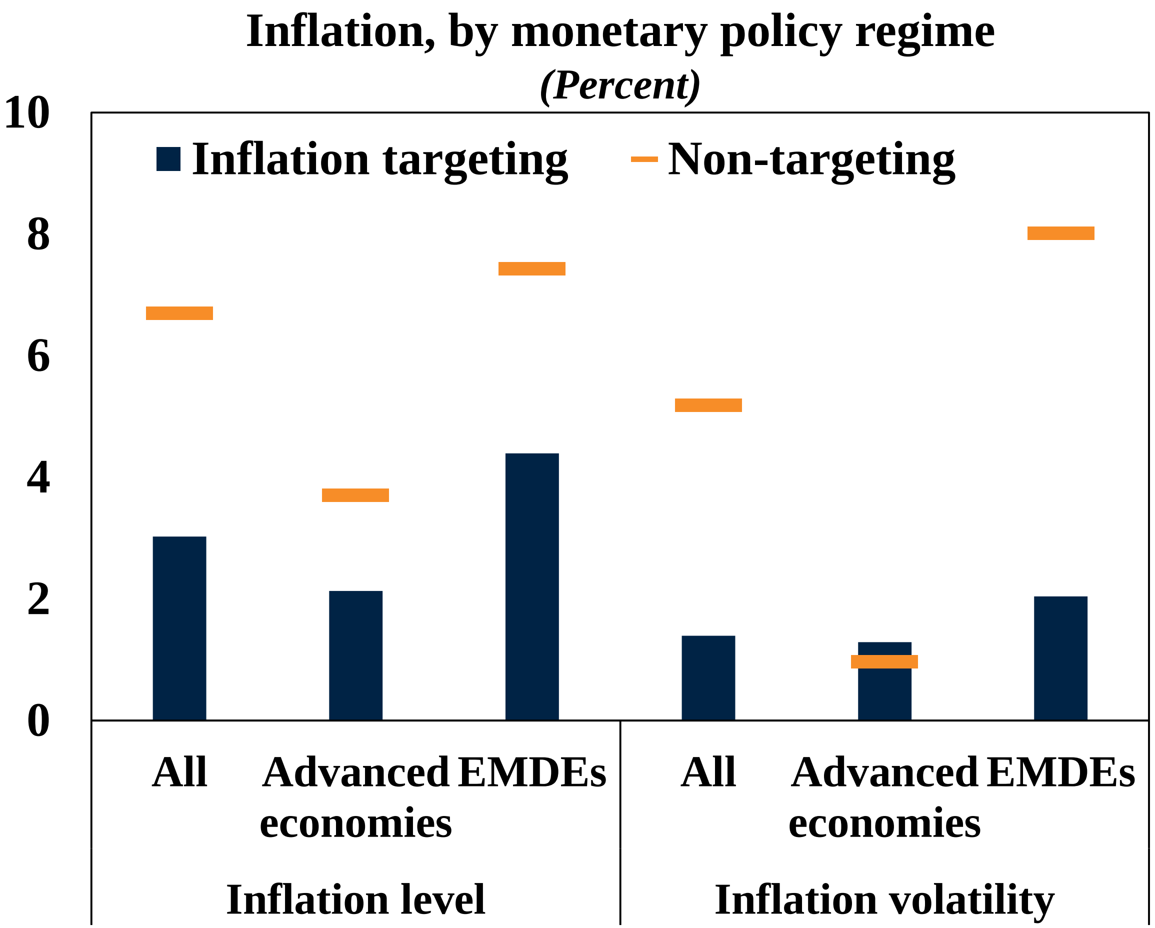
Inflation, by trade openness
(Percent)

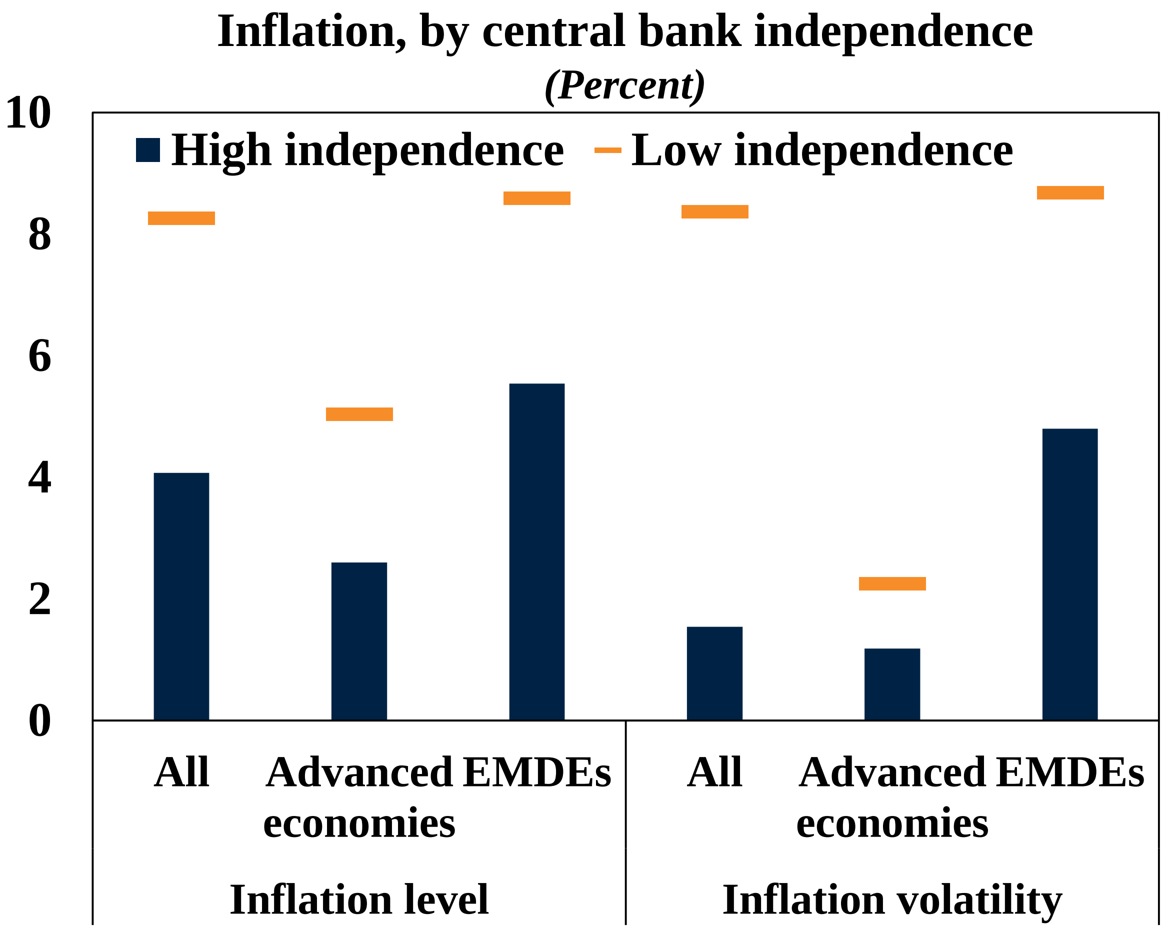


Sources: International Monetary Fund; Lane and Milesi-Ferretti (2007); World Bank.
Note: Blue bars indicate median inflation levels or inflation volatility (defined as standard deviation of inflation) in countries with financial openness (Left Panel) and trade openness (Right Panel) in the top quartile. Orange tickers indicate median inflation levels or inflation volatility in countries in the bottom quartile. Left Panel. Financial openness is measured as the sum of foreign assets and liabilities, as a share of GDP. Right Panel. Trade openness is measured as the sum of exports and imports as a percent of GDP.

Factors Supporting Disinflation - 2

Resilient Monetary Policy Frameworks; Central Bank Independence





Sources: Caceres, Carrière-Swallow, and Gruss (2016); Dincer and Eichengreen (2014); World Bank.

Left Panel. Blue bars show median inflation levels or inflation volatility in countries with inflation targeting monetary policy regimes during 1970-2017. Orange tickers indicate median inflation levels or inflation volatility in countries without inflation-targeting monetary policy regimes during the same period. Inflation targeting regimes are defined as in Caceres, Carrière-Swallow, and Gruss (2016) and the IMF Annual Report on Exchange Arrangements and Exchange Restrictions. Right Panel. Blue bars show median inflation levels or inflation volatility in countries with a score of the index of central bank independence in the top quartile of the sample. Orange tickers indicate median inflation levels or inflation volatility in countries in the bottom quartile. Central bank independence is measured by the index of central bank independence and transparency, taken from Dincer and Eichengreen (2014). The index ranges from 0 (least independent and transparent) to 15 (most independent and transparent).

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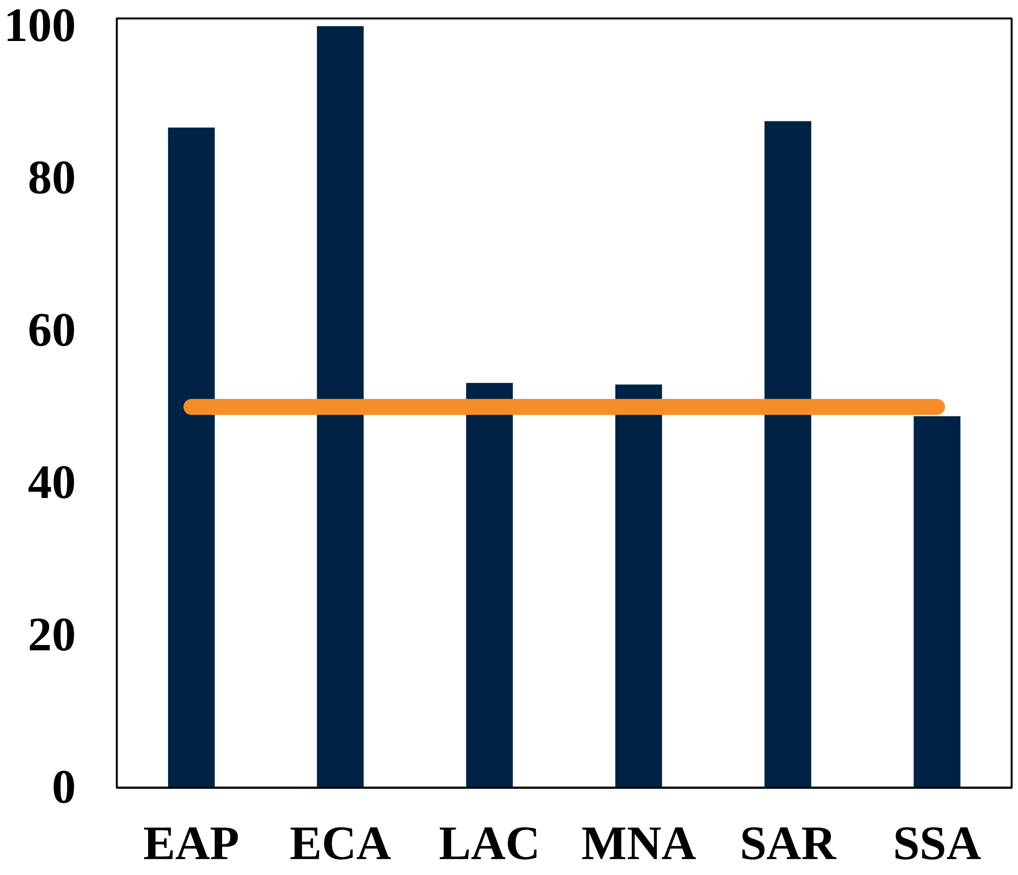
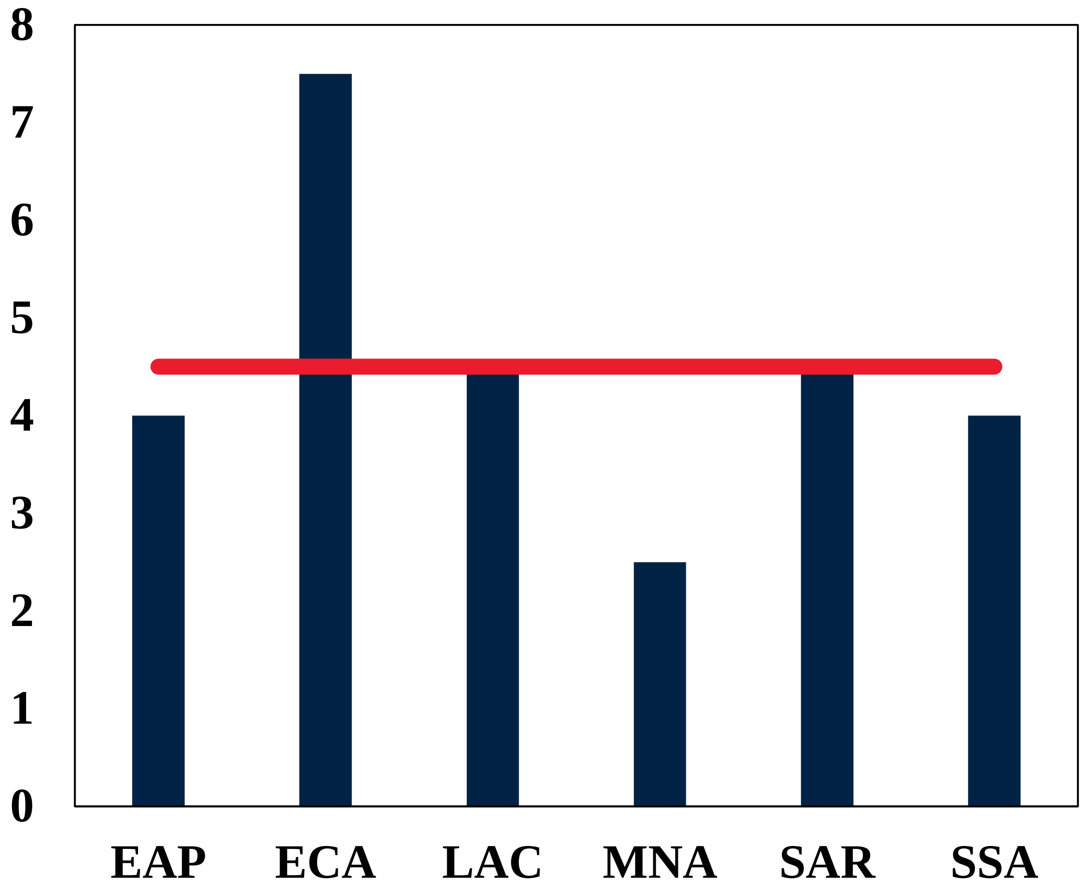
Factors Supporting Disinflation - 3

Central Bank Independence across EMDE regions

Countries with improving central bank transparency, by region (1998-2014, Percent of countries)



Central bank transparency, by region (2014, Index)



Sources: Dincer and Eichengreen (2014); World Bank.
Left Panel. Central bank independence and transparency index (CBI) is defined as in Dincer and Eichengreen (2014), extrapolated as described in Database Annex. The index ranges from 0 (least independent and transparent) to 15 (most independent and transparent). Left Panel. CBI index of EMDEs by region. Based on 13 EAP, 16 ECA, 16 LAC, 14 MNA, 6 SAR, and 19 SSA EMDEs. Red horizontal bar indicates average across regions.

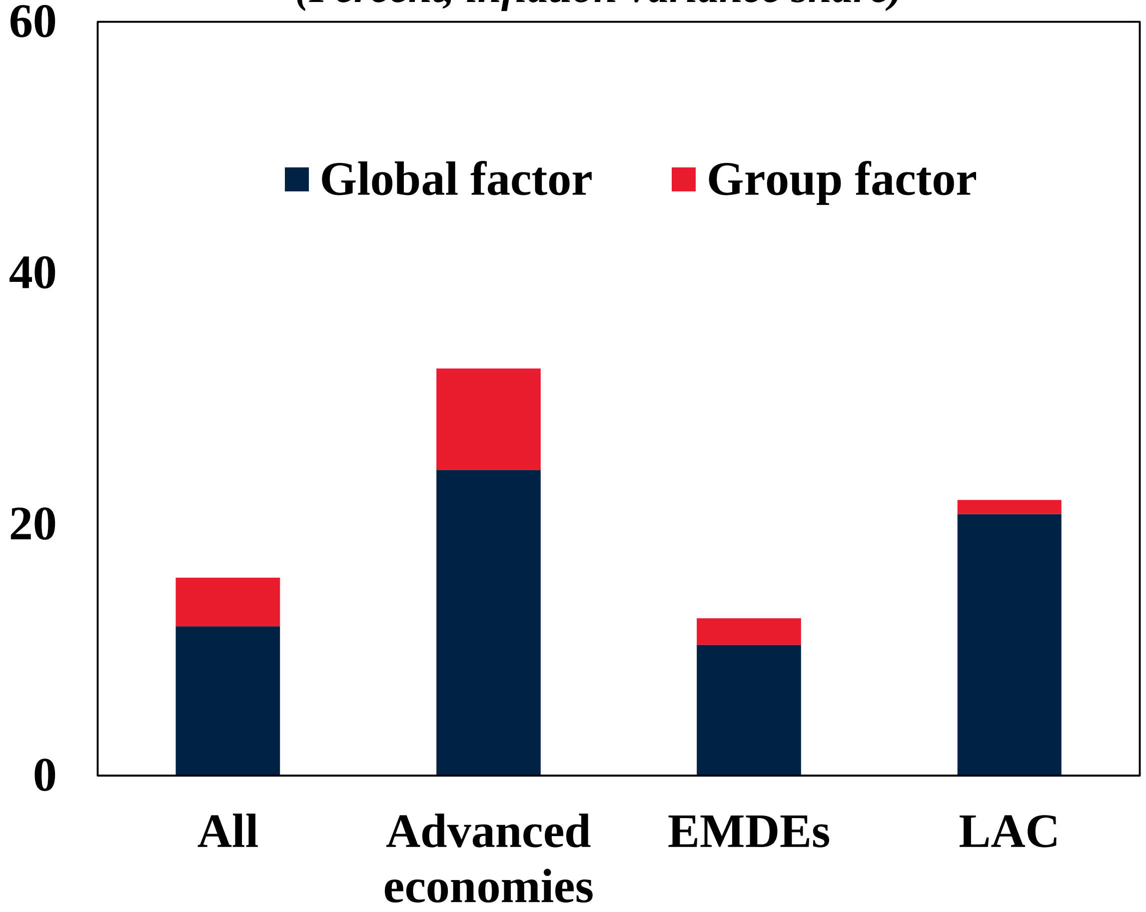
Four Questions

2 **What have been the global and domestic drivers of inflation?** *A wide range of shocks… A global inflation cycle has emerged and inflation synchronization has strengthened among EMDEs over time. Global shocks have become more important over time but domestic shocks remain the main source of national inflation variation.*

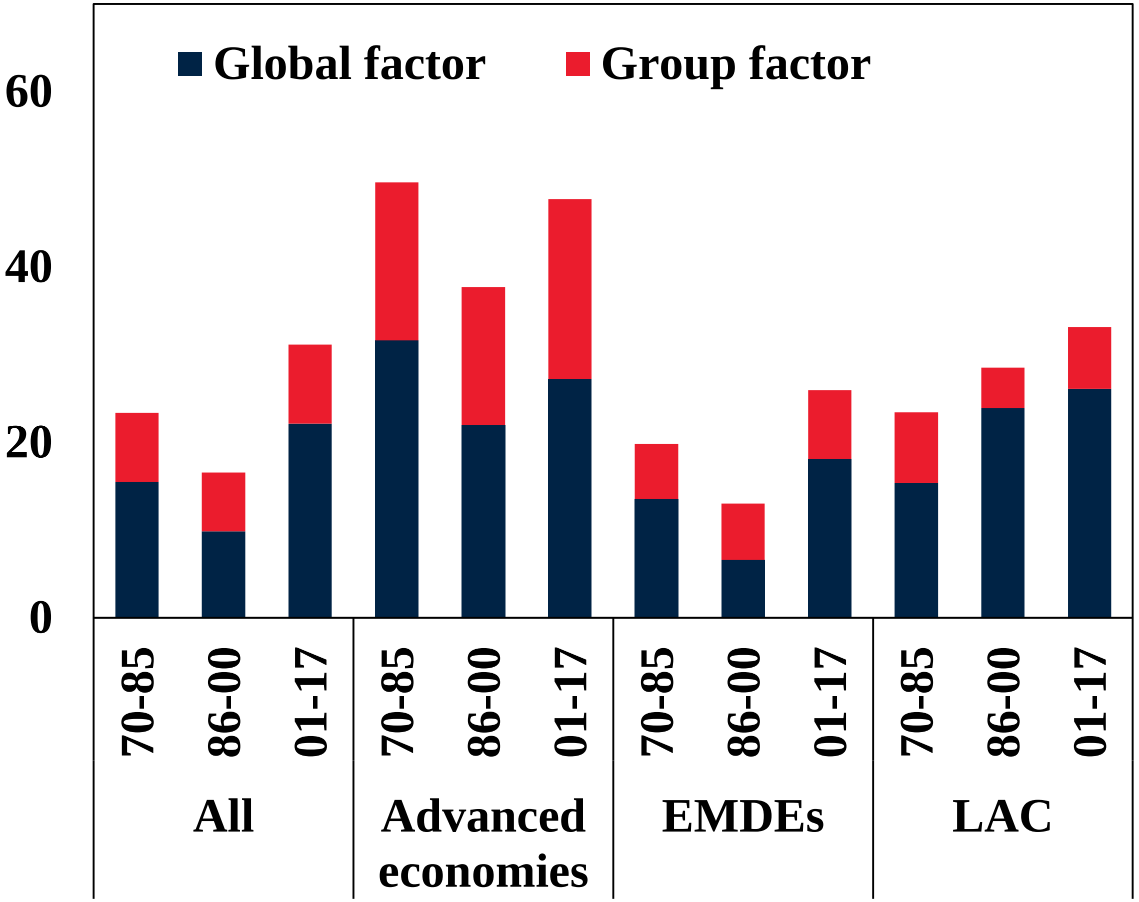
Inflation Synchronization Over Time

Global Factor Explains a Growing Share of Inflation Variation

Global and group factors, 1970-2017
(Percent, inflation variance share)



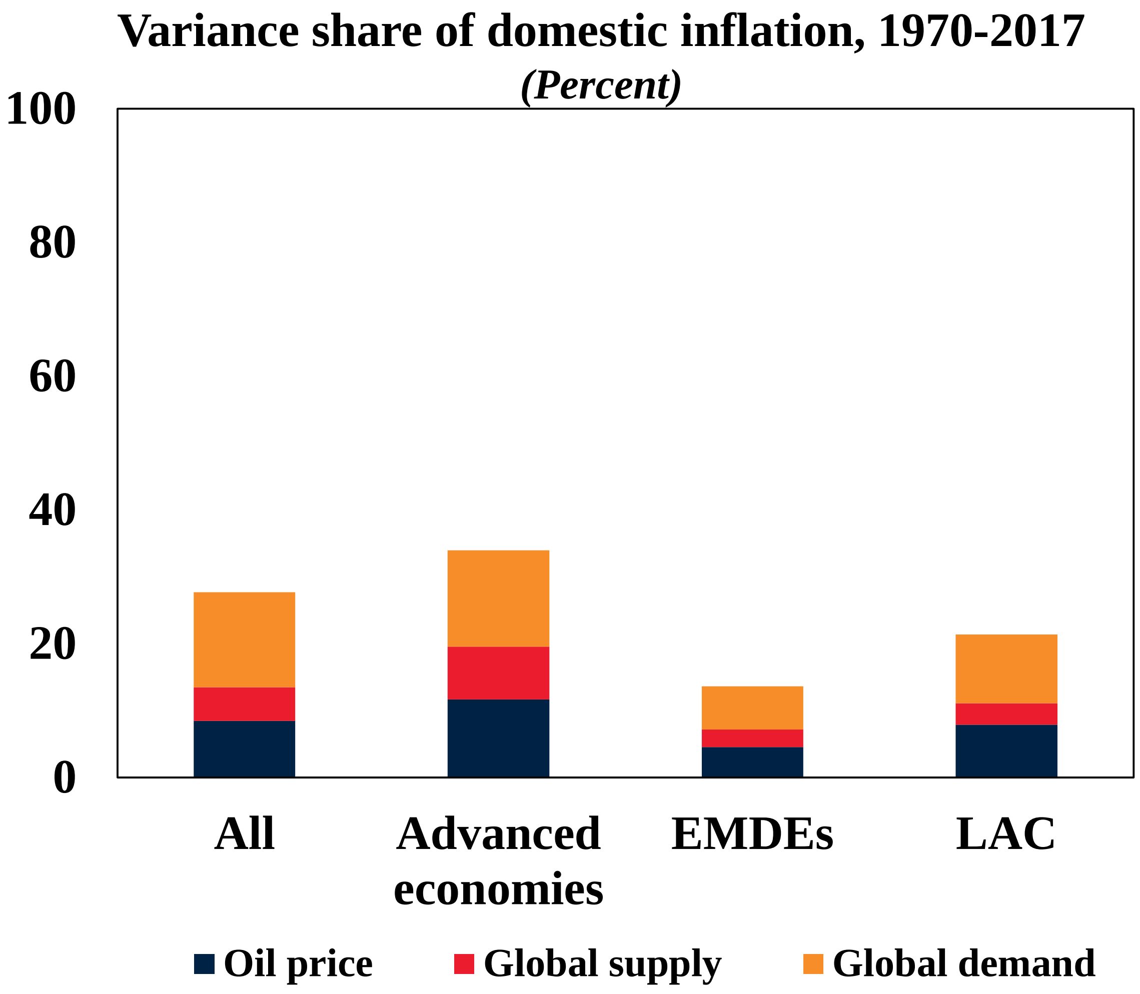
Global and group factors, by sub-period
(Percent, inflation variance share)

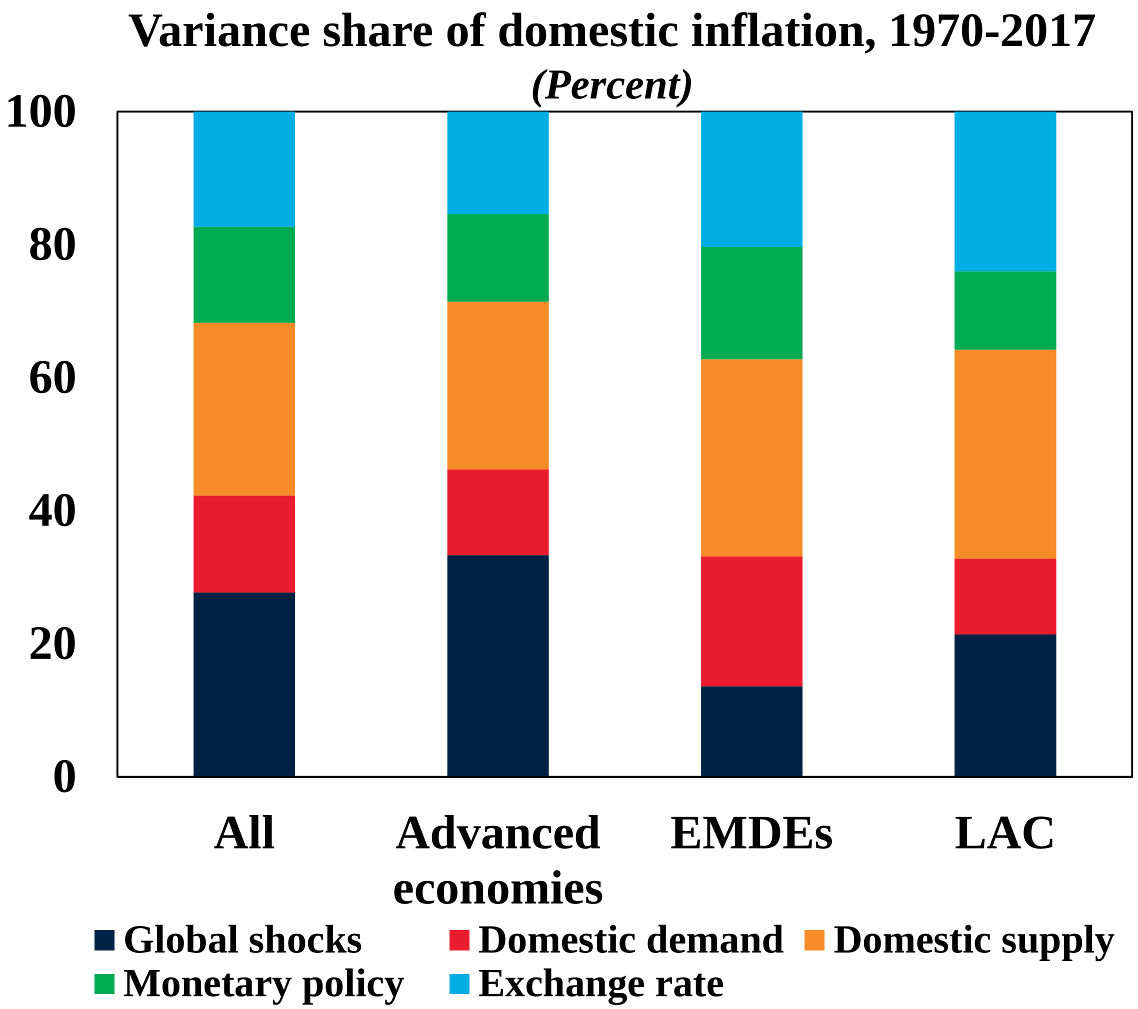


Source: World Bank.
Note: Contributions of global and group factors to inflation variance, estimated with the baseline dynamic factor model (2-factor model with a global factor and a group factor) for the period of 1970-2017 (Left Panel) and for three sub-periods (Right Panel). Median estimates across 99 countries (25 advanced economies and 74 EMDEs including 16 low-income countries, and 18 LAC countries).

Contributions of Global and Domestic Shocks

One-Quarter of Inflation Variance due to Global Shocks

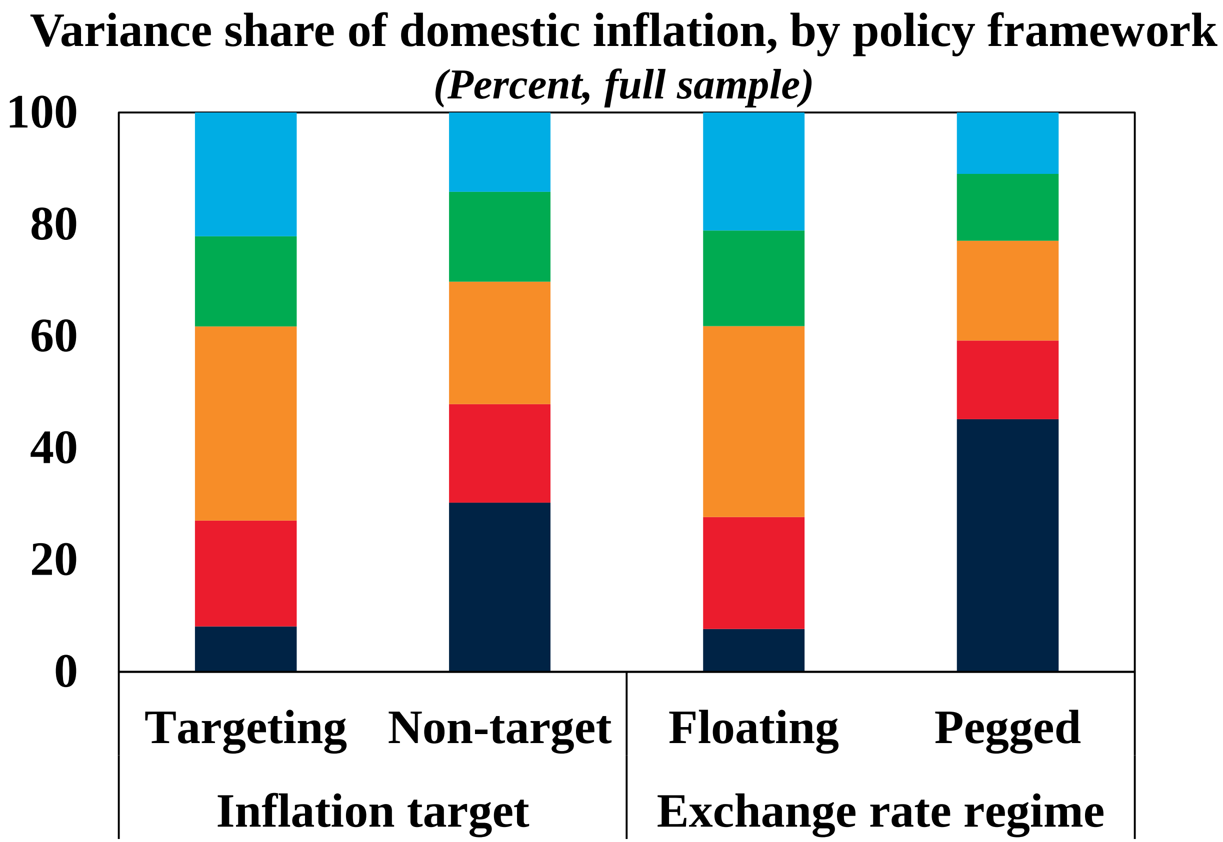


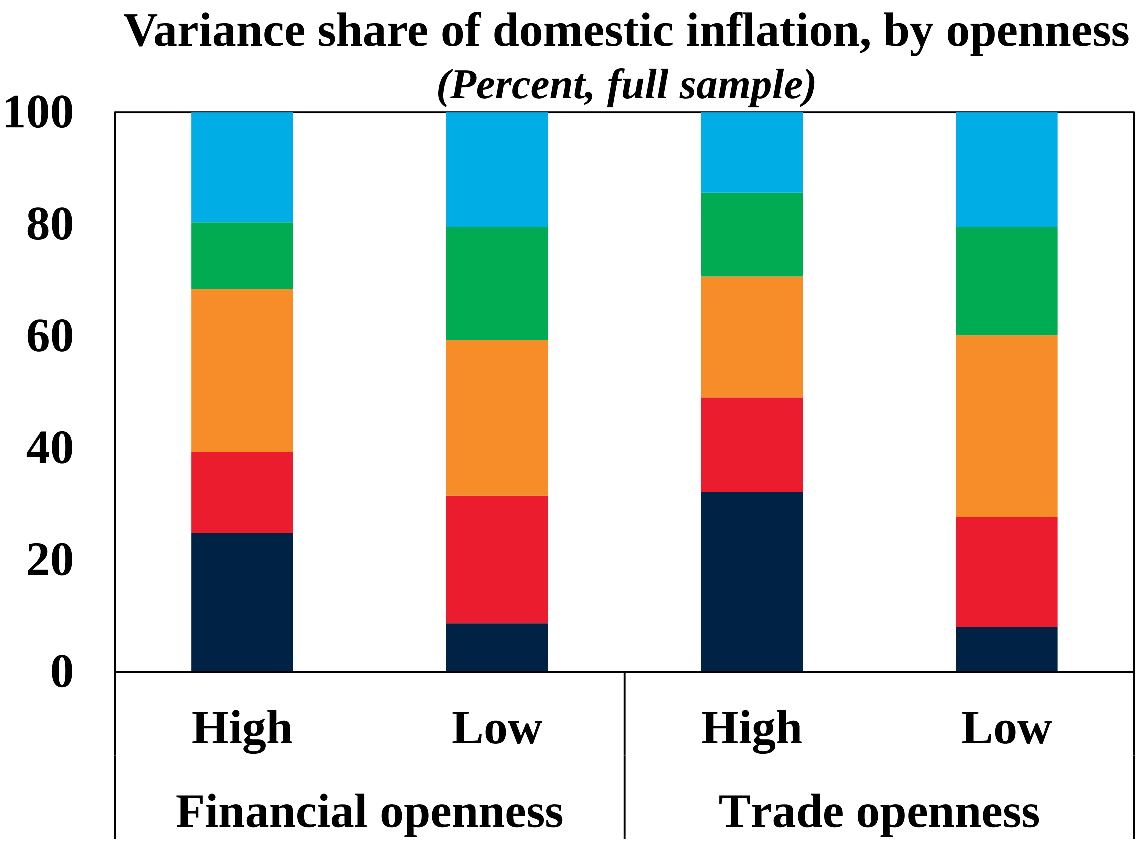


Source: World Bank.
Note: Median shares of country-specific inflation variance accounted for by global shocks (i.e., global demand, global supply, and oil prices) based on country-specific factor-augmented vector autoregressive (FAVAR) models for 29 advanced economies and 26 EMDEs, and 7 LAC countries (MEX, HND, DOM, CRC, COL, CHL, and BRA) for 1970-2017 (Left Panel) and by global and domestic shocks (Right Panel).

Contributions of Global and Domestic Shocks

Domestic Shocks More Important in Less Open Economies





Global shocks | Domestic demand | Domestic supply | Monetary policy | Exchange rate

Sources: Chinn and Ito (2006); Ilzetzki, Reinhart, and Rogoff (2017); IMF (2016); World Bank.

Note: Median shares of country-specific inflation variance accounted for by global shocks and domestic shocks (i.e., domestic demand, domestic supply, monetary policy (interest rates), and exchange rates) based on country-specific factor-augmented vector autoregressive (FAVAR) models, estimated for 29 advanced economies and 26 EMDEs for 1970-2017. Left Panel. Inflation targeting regimes are defined as in IMF (2016). Flexible exchange rate regimes ("Floating") are defined as freely floating and managed floating exchange rate regimes (Ilzetzki, Reinhart, and Rogoff 2017), and all other regimes are defined as pegged exchange rate regimes. Right Panel. Countries with "high" and "low" financial openness are, respectively, those above and below median of the capital account openness index in Chinn and Ito (2006). Countries with "high" and "low" trade openness are defined as those with trade-to-GDP ratios above and below median, respectively.

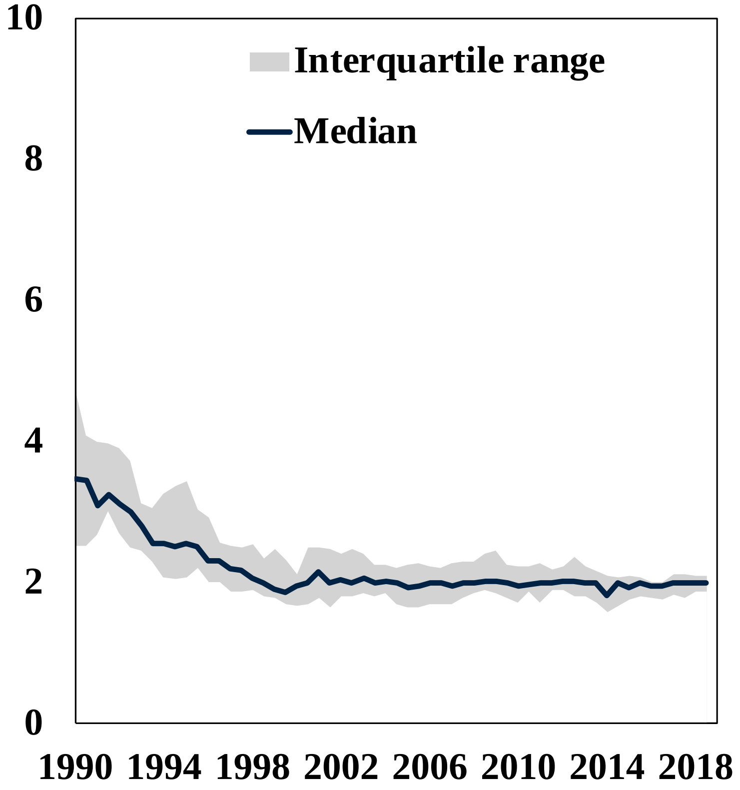
Four Questions

3 **How well-anchored are EMDE inflation expectations?** *Despite becoming better-anchored since the 1990s, inflation expectations remain less well anchored in EMDEs than advanced economies. Stronger monetary frameworks and central bank independence are associated with better anchoring of expectations.*

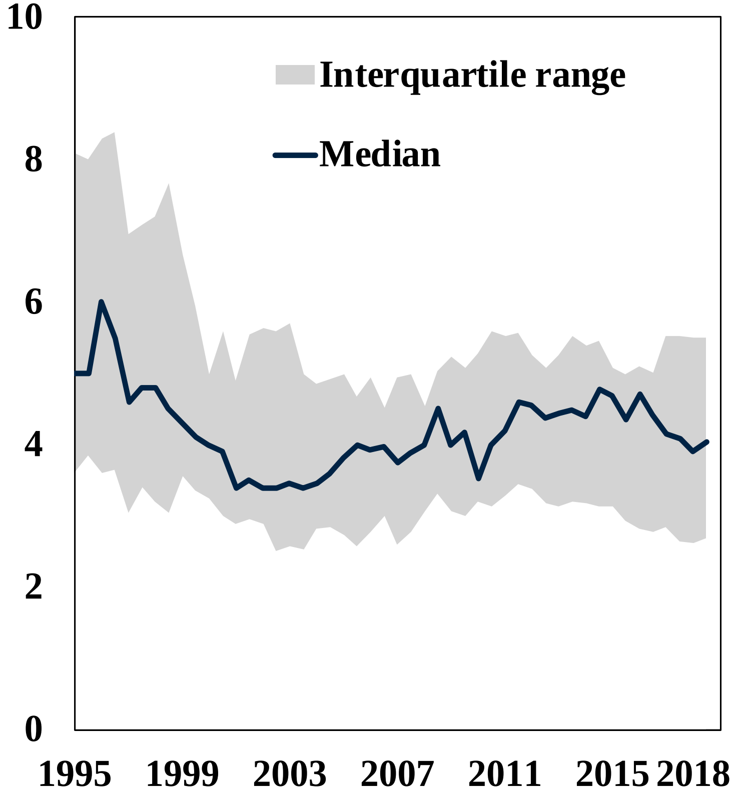
Inflation Expectations

Broad-Based Decline, but Remain Higher in EMDEs

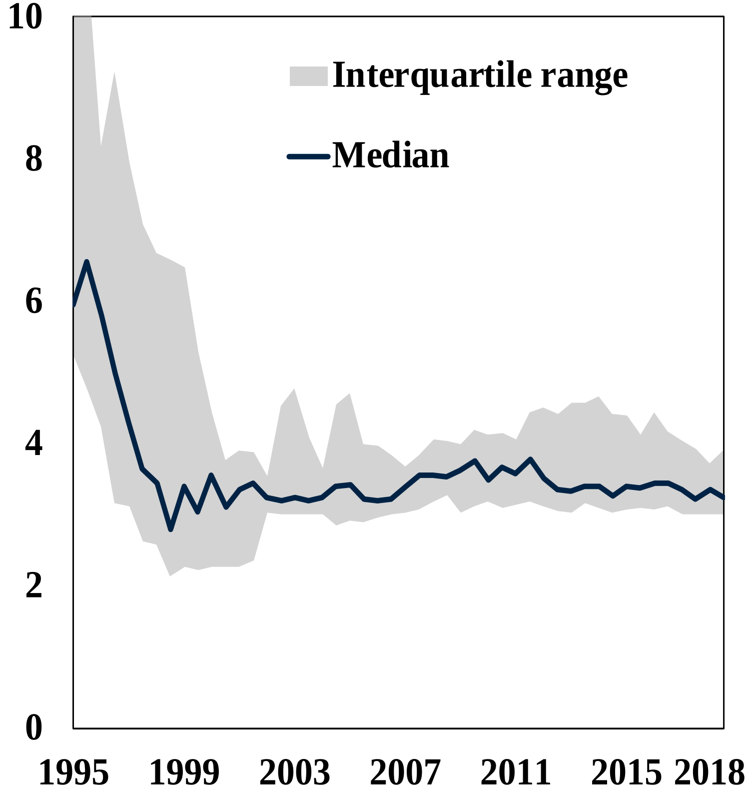
Inflation expectations in advanced economies
(Percent)



Inflation expectations in EMDEs
(Percent)



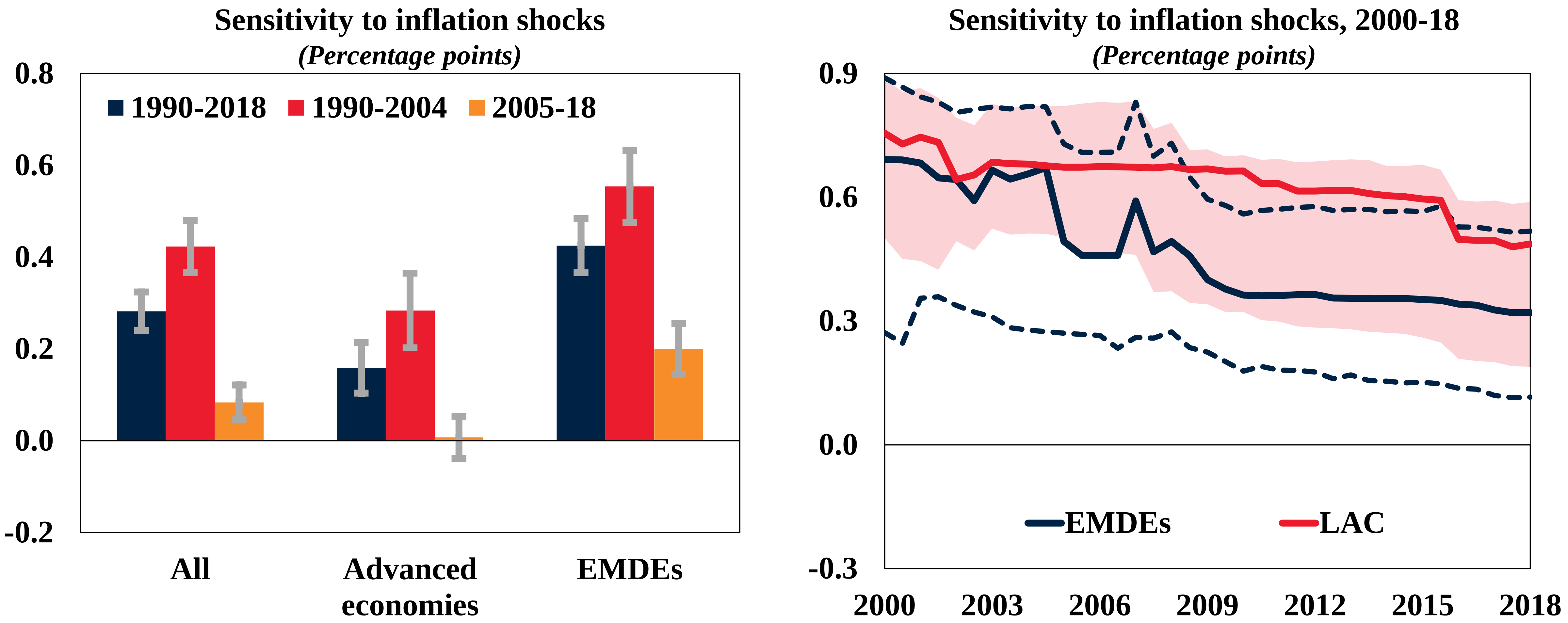
Inflation expectations in LAC
(Percent)



Sources: Consensus Economics, International Monetary Fund, World Bank.
Note: Inflation expectations refer to 5-year-ahead expectations of annual inflation and measured at a bi-annual frequency. Interquartile range of the country sample. Sample includes 24 advanced economies (over 1990H1-2018H2) , 23 EMDEs (over 1995H1-2018H2) and 6 LAC countries of Argentina, Brazil, Chile, Columbia, Mexico, and Peru. (over 1995H1-2018H2).

Anchoring Inflation Expectations in EMDEs - 1

Better Anchored Now; Still Not as Well as in Advanced Economies



Sources: Consensus Economics, International Monetary Fund, World Bank.

Note: Inflation shocks are defined as the difference between realized inflation and short-term inflation expectations in the previous period. Left Panel. Sensitivity is estimated using a panel regression of changes in 5-year-ahead inflation expectations on inflation shocks. Bars denote median estimates and vertical lines denote 90 percent confidence intervals. Based on 24 advanced economies and 23 EMDEs for 1990H2-2018H1. Right Panel. Time-varying sensitivity is estimated by regressing changes in 5-year-ahead inflation expectations on inflation shocks. Solid lines denote median estimates and areas between two dotted blue lines and shaded in pink indicate, respectively, medians of 68 percent confidence intervals for advanced economies and EMDEs. Sample includes 24 advanced economies (over 1995H1-2018H1) and 23 EMDEs (over 2000H1-2018H1) including 6 LAC (ARG, CHL, BRA, COL, MEX, and PER)

Four Questions

4 **What are the main policy implications?** *Strong monetary policy frameworks, more central bank independence, robust exchange rate regimes and resilient fiscal policy frameworks are all necessary to achieve and maintain low and stable inflation.*

Is Low Inflation Here to Stay? – 1

Structural Factors

1 **Slowing globalization**

- *Sizeable tariffs between major economies already in place; trade tensions rising*

2 **Weakening monetary policy frameworks**

- *Threats to central banks independence*

3 **Deteriorating fiscal policy frameworks and mounting debt levels**

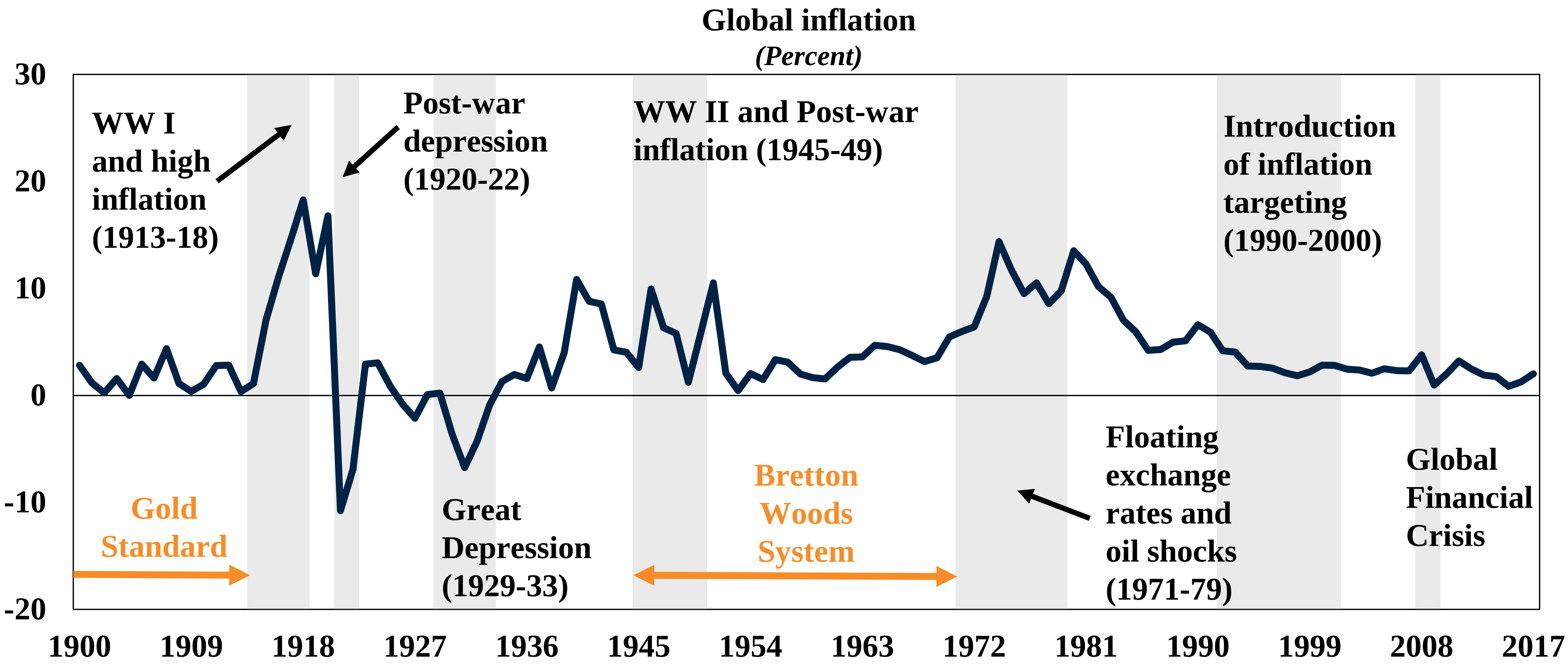
- *Reform fatigue amid growing protectionist sentiment; large public and private debt levels*

4 **Reintroducing market rigidities**

- *Populist policies accompanied by growing labor market rigidities.*

Low Inflation: Miracle or Mirage? - 2

Past Periods of Low Inflation Did Not Last



Source: World Bank.
Note: Median of annual average inflation and inflation volatility in 24 countries where data are available across the full period.

Policy Implications

Learning to Live with the Global Inflation Cycle

1

Establish more resilient monetary policy frameworks

- Greater central bank transparency and independence
- Credible monetary policy frameworks, including inflation targeting
- Robust exchange rate regime

2

Build resilience to changes in global inflation

- Active use of countercyclical policies
- Establishing a fiscal environment resilient enough to effectively contribute to macroeconomic stabilization
- Ensuring stability of financial system
- Considering coordinated monetary policy action to respond to undesirably low or high global inflation

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Thank You!

Questions & Comments

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