RESEARCH

Steady but Slow: Resilience amid Divergence

WORLD ECONOMIC OUTLOOK
APRIL 2024

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The IMF's World Economic Outlook April 2024

- Chapter 1: Steady but Slow: Resilience amid Divergence
- Chapter 2: Feeling the Pinch? Tracing the Effects of Monetary Policy through Housing Markets
- Chapter 3: Slowdown in Global Medium-Term Growth: What Will It Take to Turn the Tide?
- Chapter 4: Trading Places: Real Spillovers from G20 Emerging Markets

Today

- Chapter 1: Steady but Slow: Resilience amid Divergence
- Chapter 2: Feeling the Pinch? Tracing the Effects of Monetary Policy through Housing Markets
- Chapter 3: Slowdown in Global Medium-Term Growth: What Will It Take to Turn the Tide?
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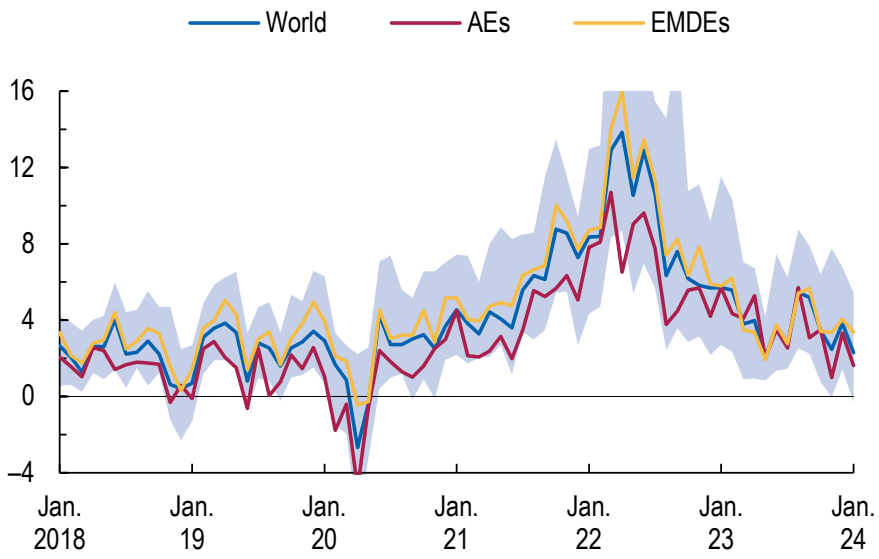
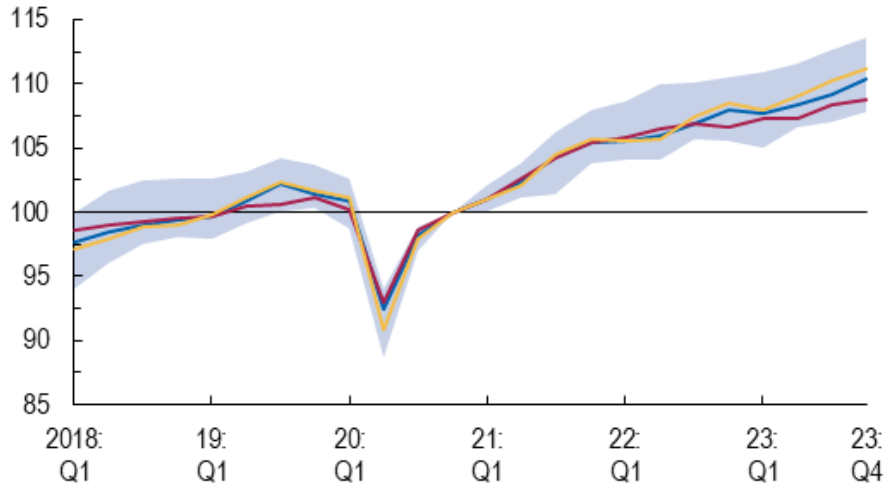
Disinflation amid Resilience

Global Inflation Falling as Output Grows

Headline Inflation
(percent; month-over-month, SAAR)



Real GDP
(Index, 2020:Q4=100)



Sources: IMF, *World Economic Outlook*; Haver Analytics; and IMF staff calculations.
Notes: Left panel plots medians by subgroup of a sample of 57 economies that accounts for 78 percent of *World Economic Outlook* world GDP (in weighted purchasing-power-parity terms) in 2023. Right panel is based on a sample of 44 economies. The bands depict the 25th to 75th percentiles of data across economies. AEs = advanced economies; EMDEs = emerging market and developing economies; SAAR = seasonally adjusted annual rate.

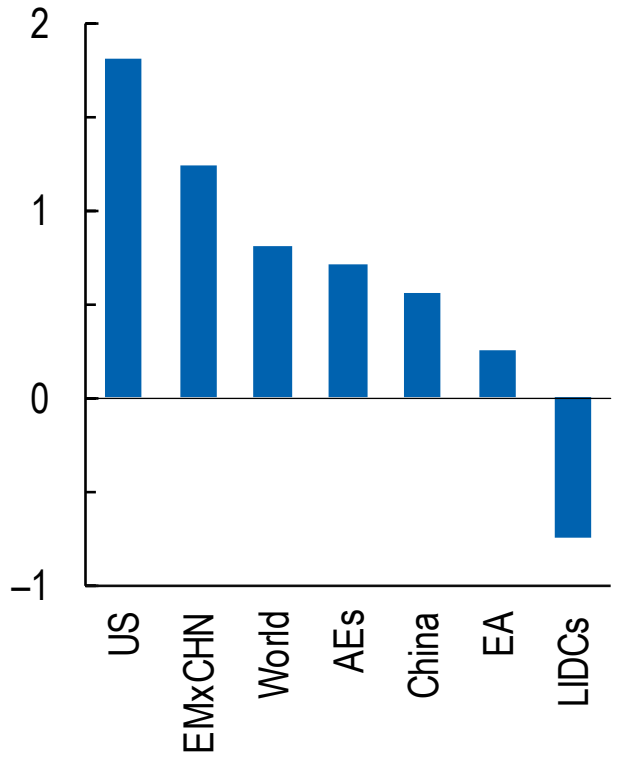
Overview

- Economic activity has been surprisingly resilient
- Risks to the global outlook are now broadly balanced
- Near-term priority is to ensure that inflation touches down smoothly and that fiscal buffers are re-built

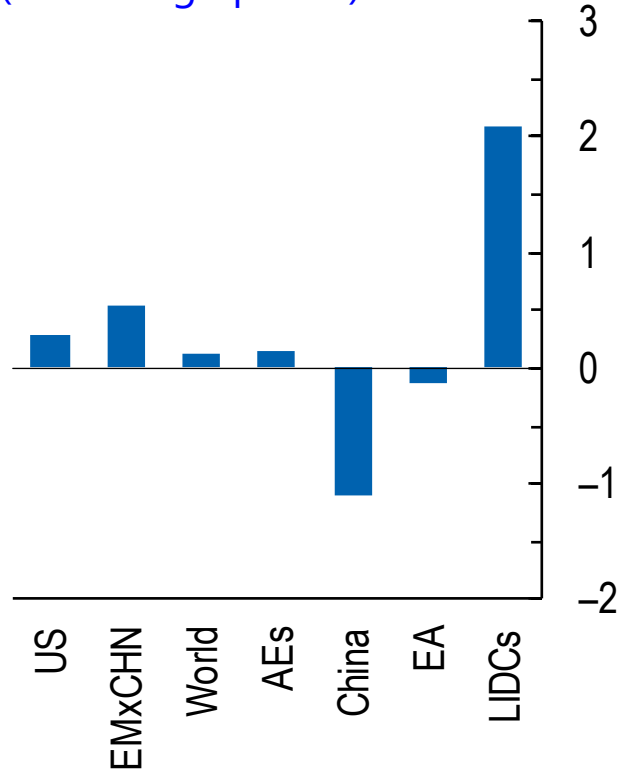
Surprising Strength amid Divergences

Surprising Strength in 2022-23 Compared with Projections at Time of "Cost-of-Living Crisis": Points to both Supply and Demand Shocks

Cumulative GDP Growth
(Percent)



Inflation Rate
(Percentage points)

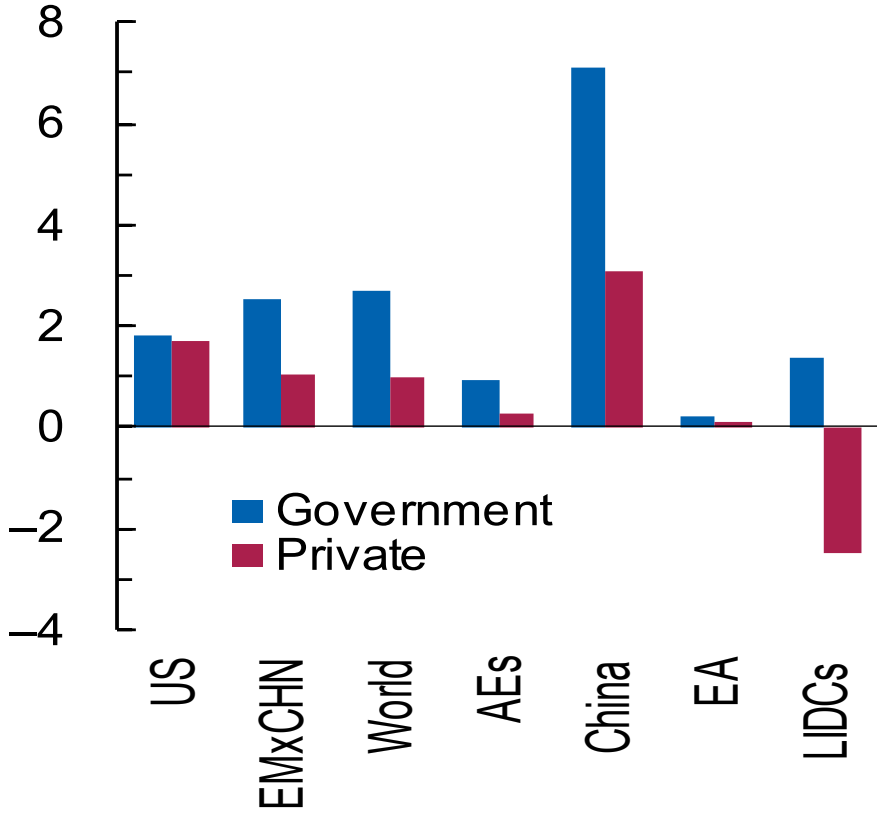


Sources: IMF, *World Economic Outlook*; and IMF staff estimates.
Note: GDP cumulative deviation from October 2022 forecast and average annual inflation deviation over the same period. AEs = advanced economies; EA = euro area; EMDEs = emerging market and developing economies; LIDCs = low income developing countries.

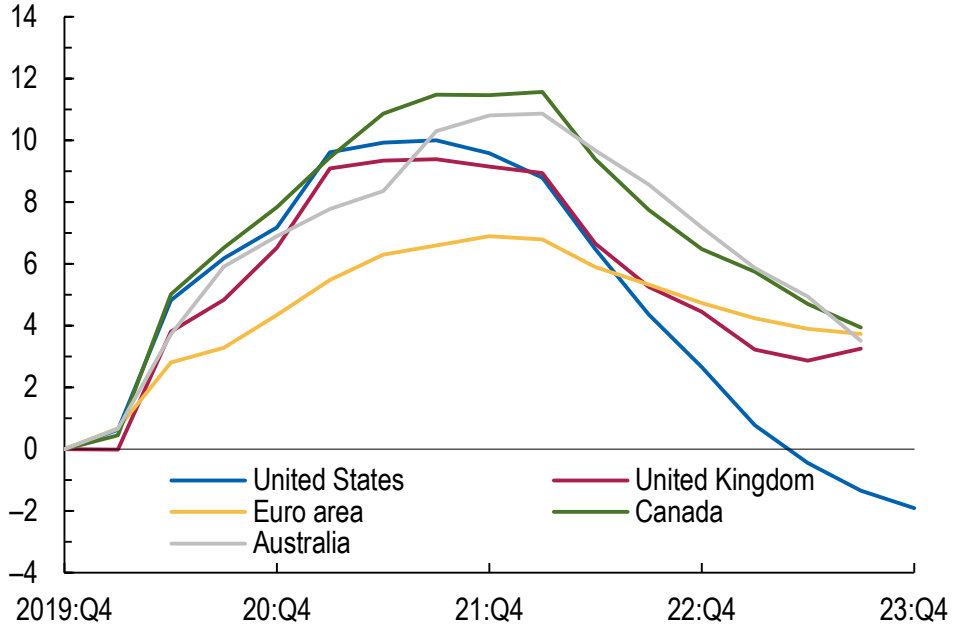
Favorable Demand Development

Particularly Strong Private and Public Consumption

Cumulative Government and Private Consumption
(Percent deviation from projection in October 2022)



Accumulated Excess Savings from the Pandemic Financed Consumption
(Percent of GDP)

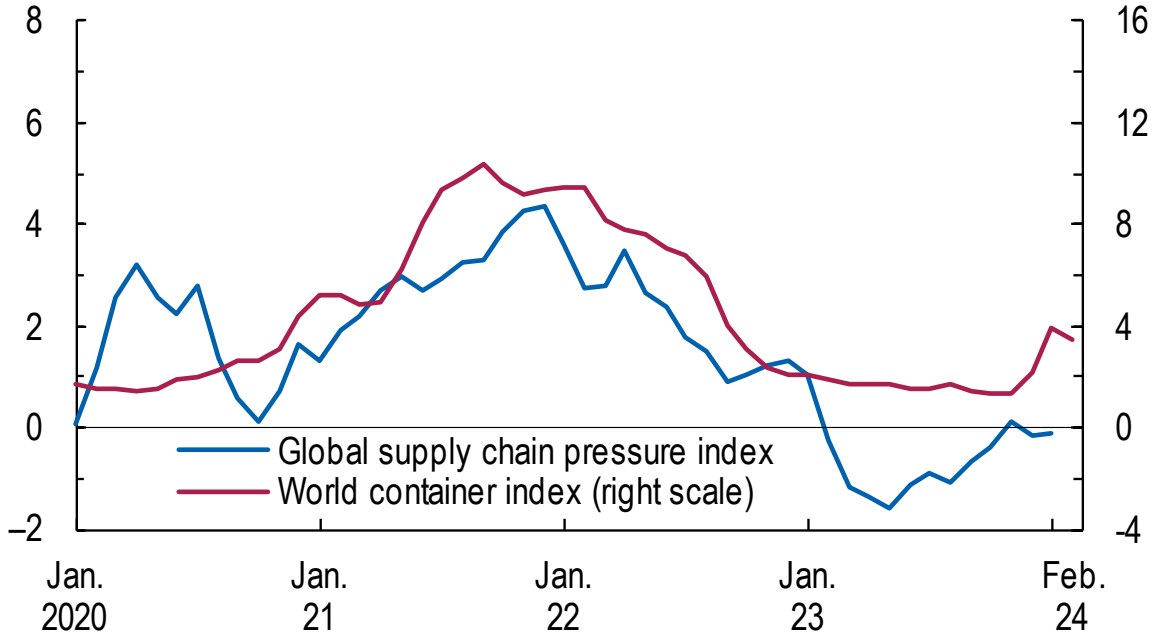


Sources: IMF, *World Economic Outlook*; and IMF staff estimates, Soyres, Moore and Ortiz, (2023).

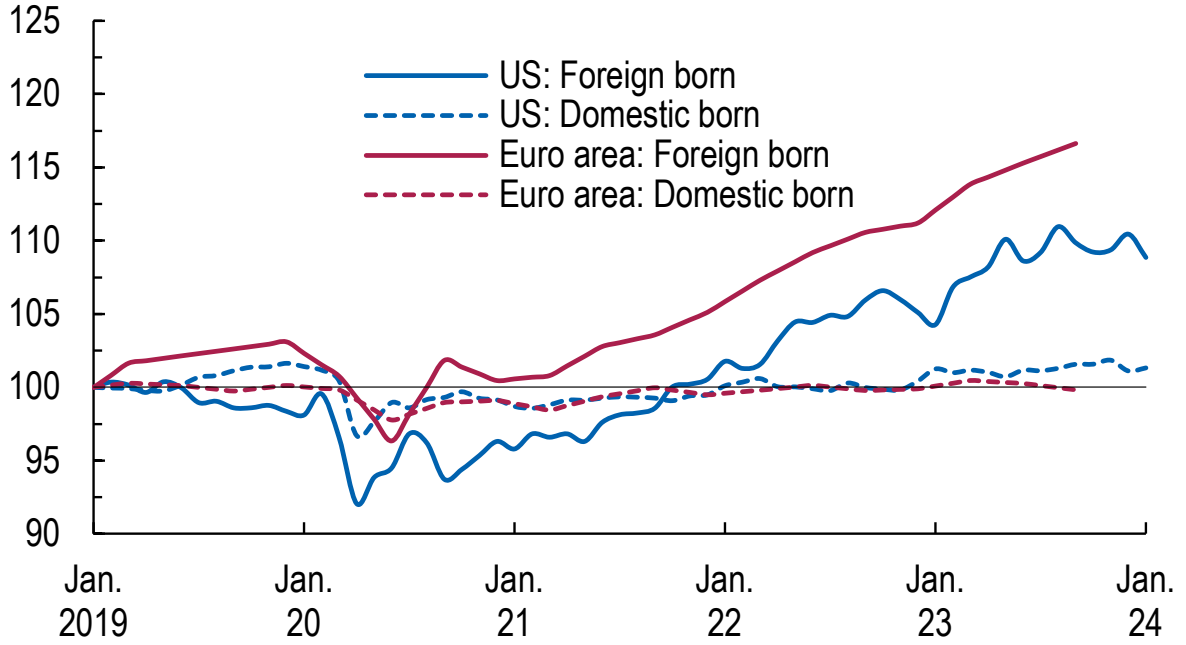
Favorable Supply Development

Unclogged Supply Chains and Increased Labor Supply

Supply Chain Constraints
(St. dev. from average value; thousand of US dollars per 40-foot contained; right scale)



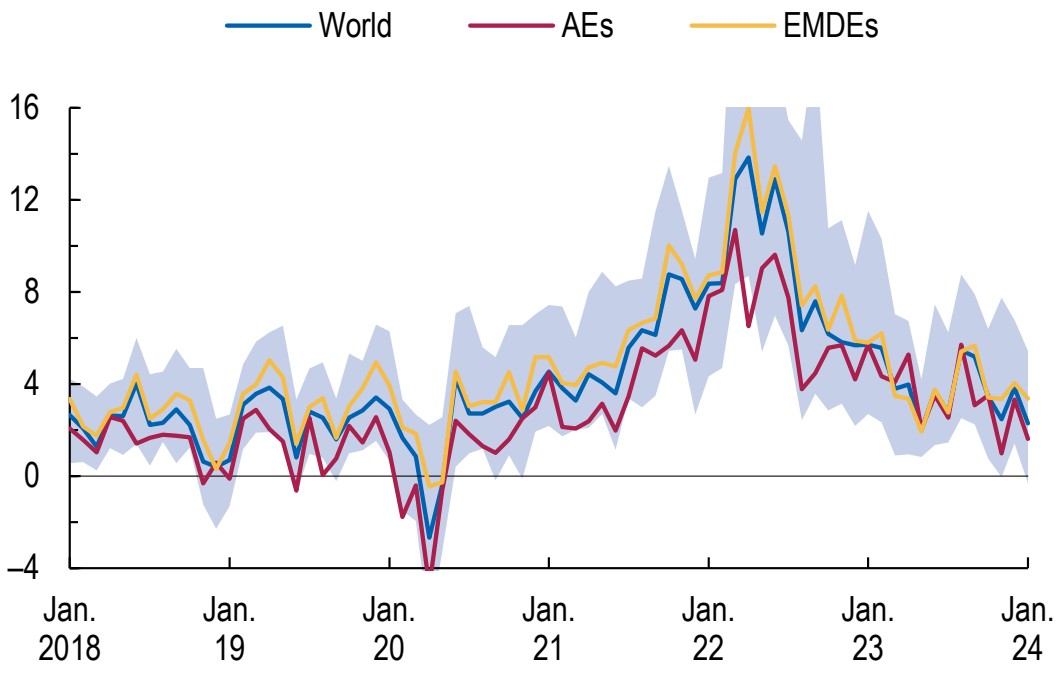
Domestic- and Foreign-Born in the Labor Force
(Index, January 2019 = 100)



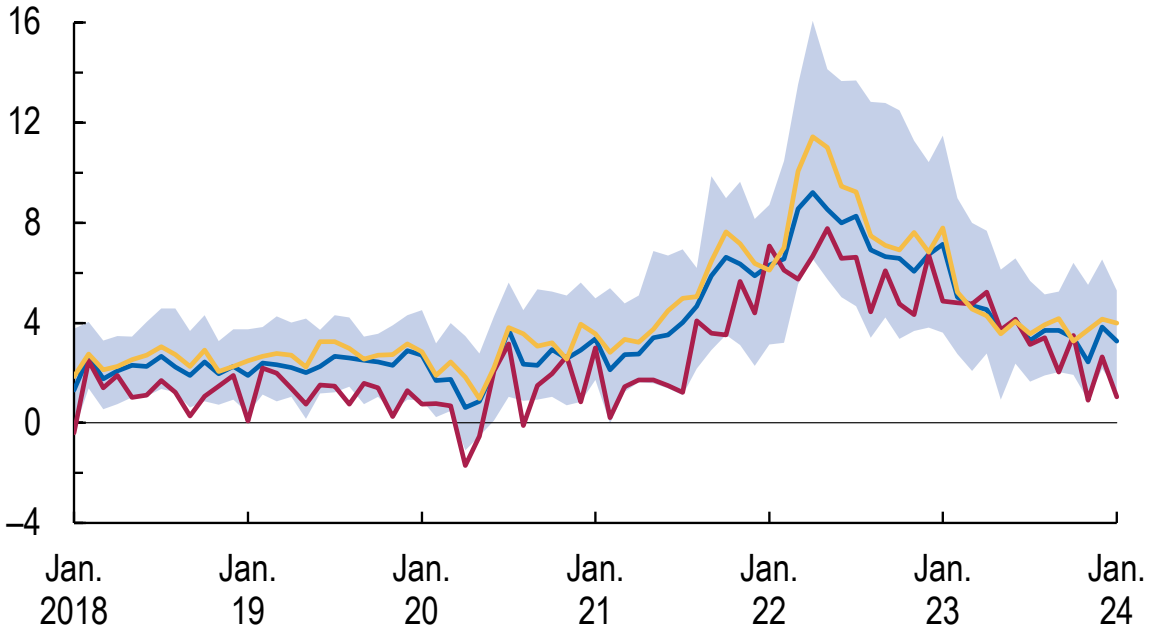
Sources: Eurostat, Haver analytics, Bureau of Labor Statistics, IMF, FRBNY, *World Economic Outlook*; and IMF staff estimates.

Inflation: Nearer but Not Quite There Yet

Headline Inflation Falling
(Percent, three-month moving average; SAAR)



With Core Inflation More Sticky
(Percent, three-month moving average; SAAR)

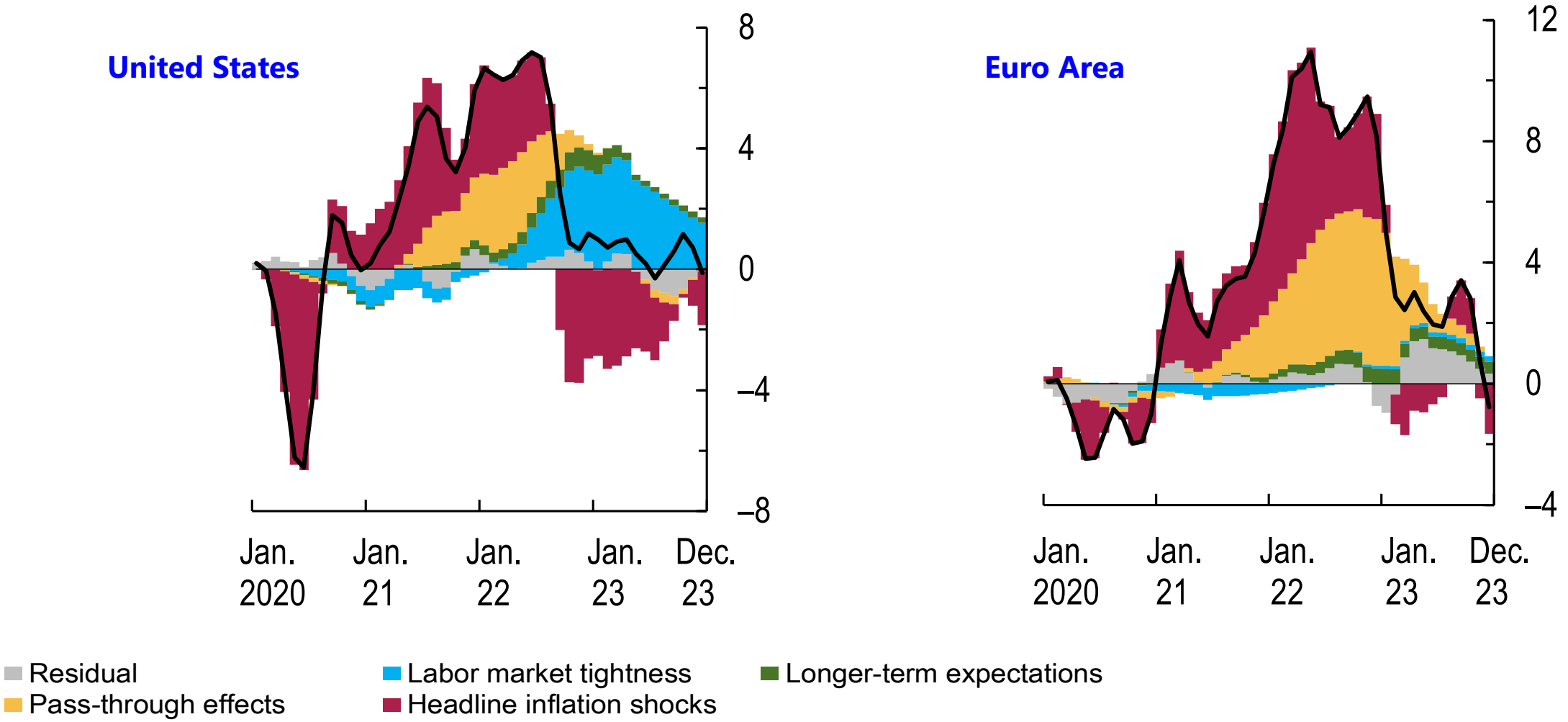


Sources: Haver Analytics; and IMF staff calculations.
Note: Chart based on the median of a sample of 57 economies that accounts for 78 percent of *World Economic Outlook* world GDP (in weighted purchasing-power-parity terms) in 2023. The bands depict the 25th to 75th percentiles of data across economies. AEs = advanced economies; EMDEs = emerging market and developing economies; SAAR = seasonally adjusted annual rate.

Different Drivers of Inflation

Headline Inflation

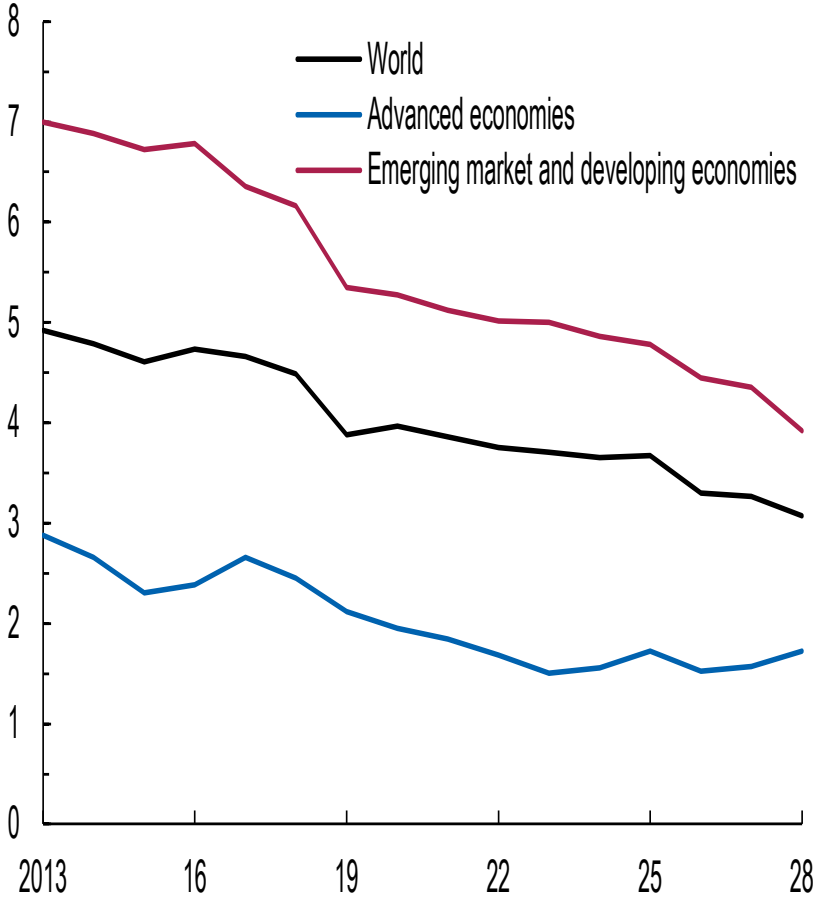
(Percentage points, three-month SAAR; deviations from December 2019)



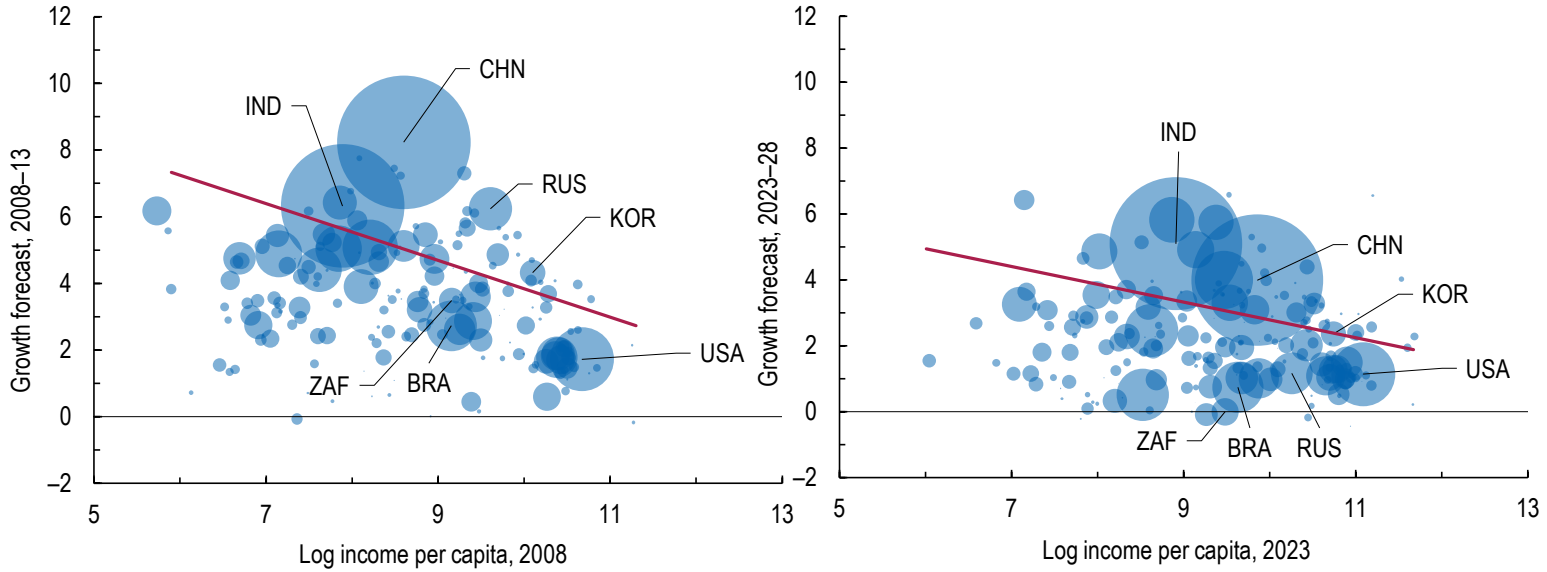
Note: IMF staff estimates. Methodology as in Ball, Leigh and Mishra (2022) and Dao and others (2023).

Steady but Too Slow: A Longer Path to Income Convergence

Five-Year-Ahead Growth Projections
(Percent)



Per-capita GDP Growth Over the Medium Term
(Percent)



Note: Medium term = five-year forecast. Bubble size represents the population in year *t*. Projections from April WEO of 2008 and 2023, respectively.

Risks to the Outlook: Broadly Balanced

On the Upside

- Short-term fiscal boost in the context of elections
- Further supply-side surprises, allowing for faster monetary policy easing
- Spurs to productivity from artificial intelligence

On the Downside

- New commodity price spikes amid regional conflicts
- Higher for longer leading to financial stress
- China recovery faltering
- Disruptive fiscal adjustment and debt stress
- Geoeconomic fragmentation intensifying

Policies: From Fighting Inflation to Rebuilding Buffers

Delivering a Smooth Landing

- Durably restoring price stability
- Monitoring potentially disruptive capital flows as monetary policy become less synchronous (IPF)

Rebuilding Fiscal Buffers

- Building credibility with sound framework
- Fiscal consolidation easier as monetary policy eases gradually
- Calibrate the pace of adjustment to avoid disruptions
- Addressing debt distress

Fostering Faster Productivity Growth

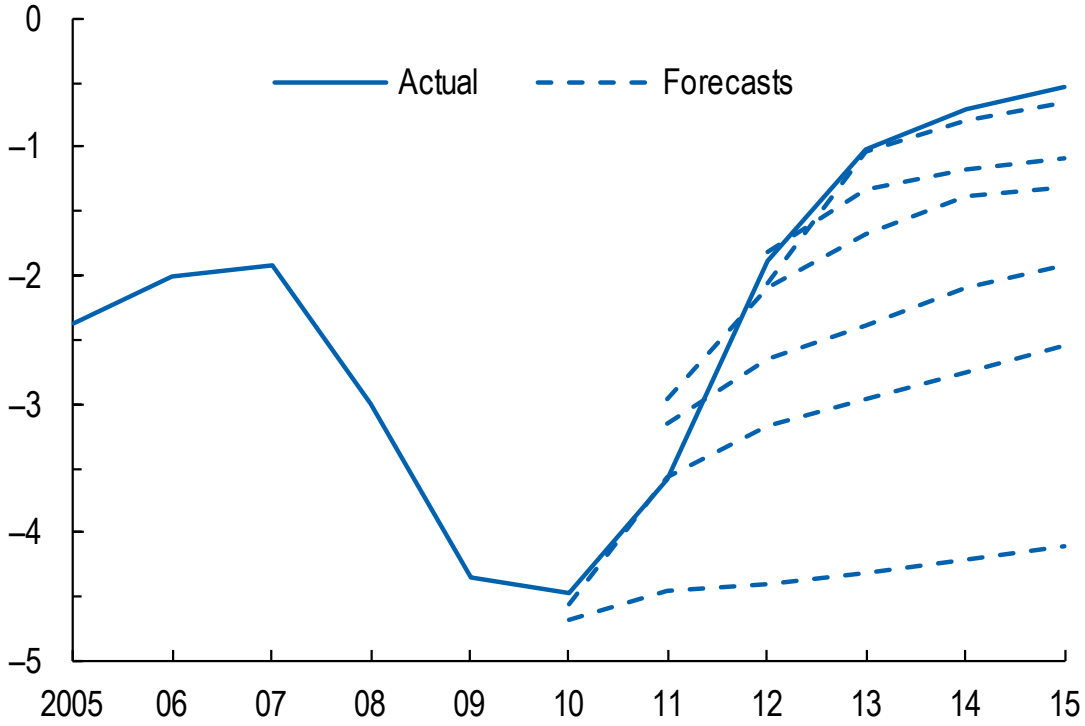
- Carefully sequencing reforms
- Harnessing potential of AI

Risk of Disruptive Fiscal Adjustment

- Fiscal consolidation is necessary in many AEs and EMDEs
- Credible medium-term consolidation plan necessary to avoid adverse market reactions
- The experience of euro area during 2010-15 illustrates costs of forced adjustment

Sharper-than-Expected Fiscal Adjustment in the Euro Area

(Structural balance; percent of potential GDP)



Source: IMF staff calculations.

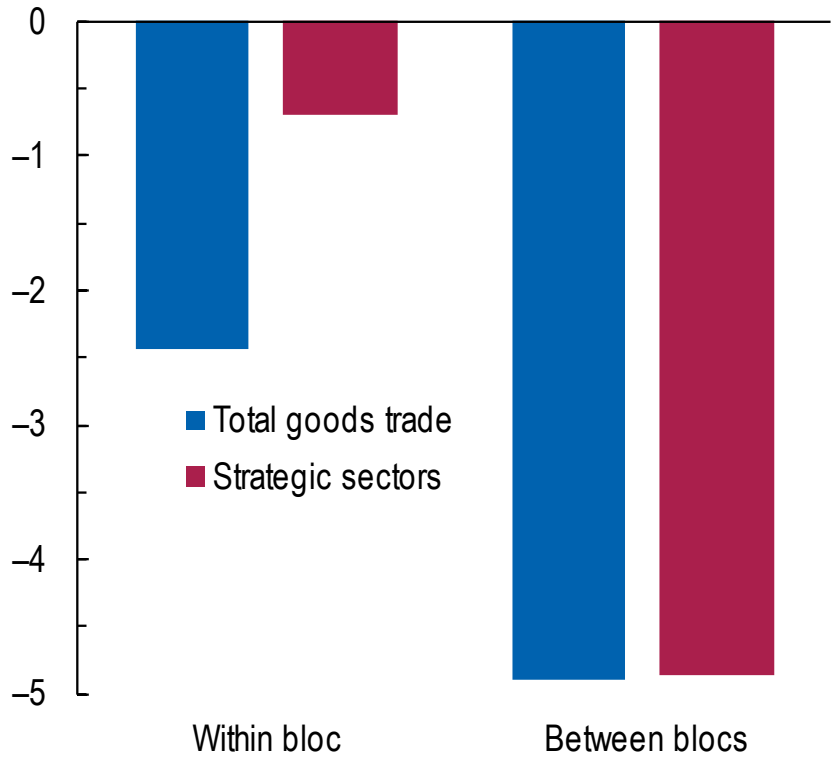
Note: Solid line denotes structural balance from April 2024 WEO, and dashed lines denote structural balance forecasts from April and October 2010, 2011 and 2012 WEOs. WEO = *World Economic Outlook*.

Risk of Intensification of Geoeconomic Fragmentation

- The separation of the world economy into blocs could result in large output losses
- Data on bilateral goods trade before and after Russia's invasion of Ukraine confirm fragmentation is underway
- Especially for strategic sectors (e.g., chemical and machinery)

Fragmentation Affecting Trade

(Percentage points difference in trade growth before and after war in Ukraine)



Note: the analysis assigns countries to a hypothetical bloc including Australia, Canada, the European Union, New Zealand, and the United States or a hypothetical bloc comprising China, Russia, and countries that sided with Russia during the March 2, 2022, UN General Assembly vote on Ukraine, with all other countries considered nonaligned. Conclusions robust to other definitions of blocs

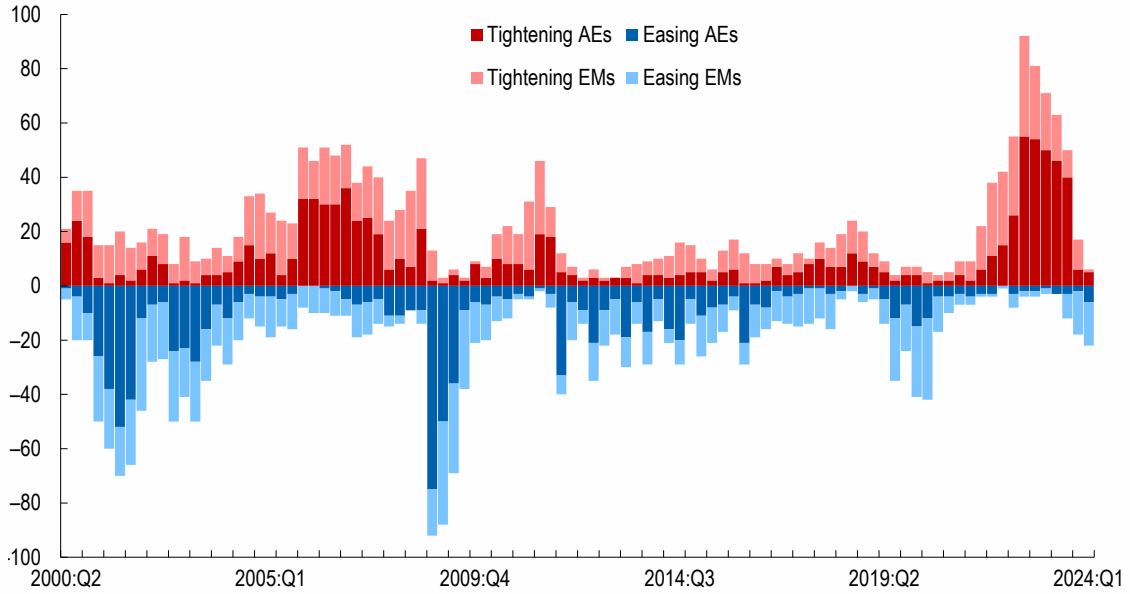
Feeling the pinch? Tracing the effects of monetary policy through housing markets

Mehdi Benatiya Andaloussi, Nina Biljanovska, Alessia De Stefani, and Rui Mano (lead), with support from Ariadne Checo de los Santos, Eduardo Diaz, Pedro Gagliardi, Gianluca Yong, and Jiaqi Zhao

Context: Broad-based and sharp tightening, yet housing and consumption evolving differently across countries

Steep and broad rate increases follow "low-for-long" and ultra-low COVID rates, and…

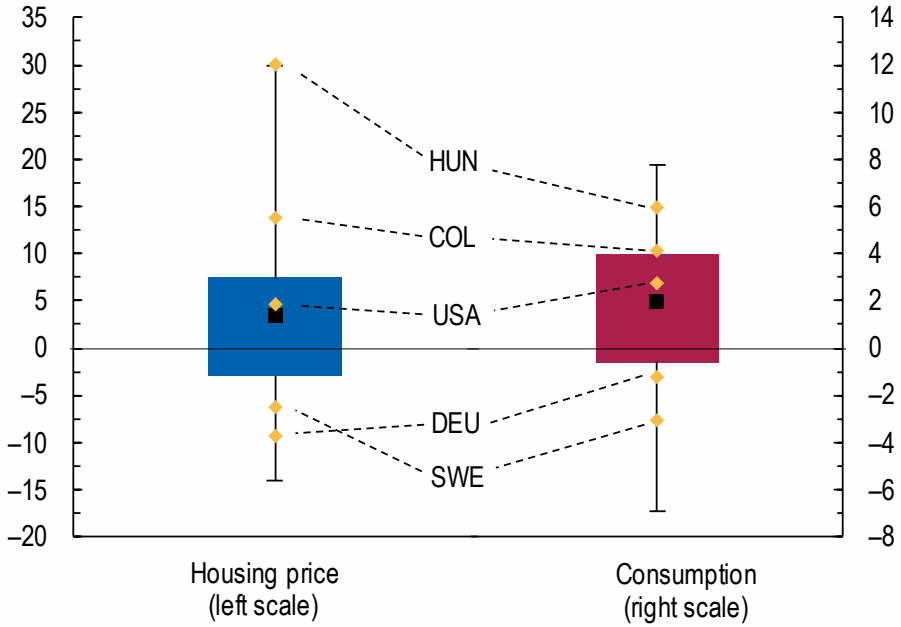
(number of hikes/cuts in policy rates)



Sources: IMF-Global Data Source (GDS); and IMF staff calculations.
Note: Counts of the number of monetary policy actions across 31 AEs and 20 EMs.

…yet house prices and resilience of aggregate demand vary significantly across countries

(cumulative change since first hike of this cycle)

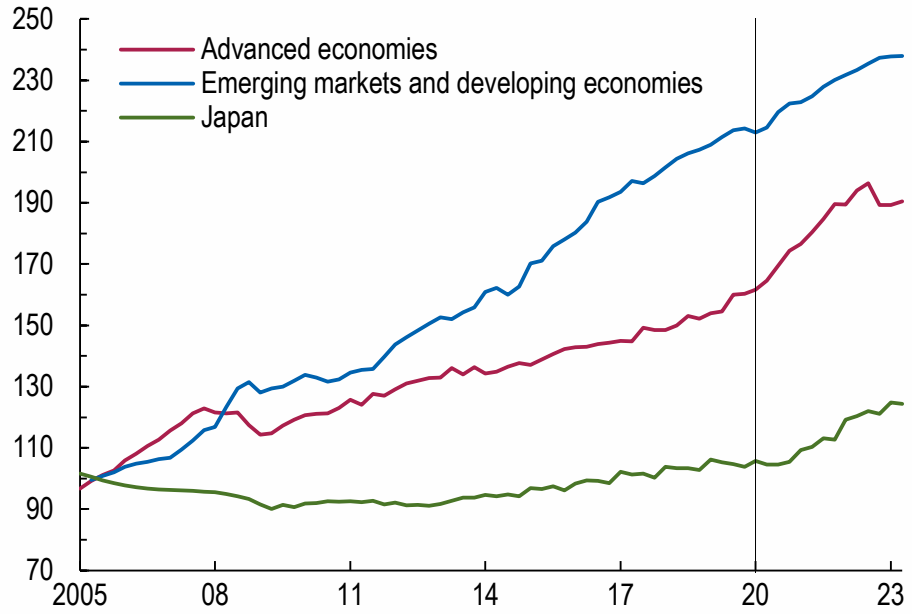


Sources: Bank for International Settlements; Haver Analytics; and IMF staff calculations.
Note: Whiskers indicate the minimum and the maximum; the bars show the 25th and the 75th percentiles; black squares within each box indicate the median. The left (right) box plot represents the distribution for country-level changes in nominal house price (real consumption) between 2023:Q2 and the quarter of the first country-level rate hike. Data labels in the figure use International Organization for Standardization (ISO) country codes.

Post-COVID housing markets: house prices remain high, following acceleration and structural shifts

COVID-era house price acceleration

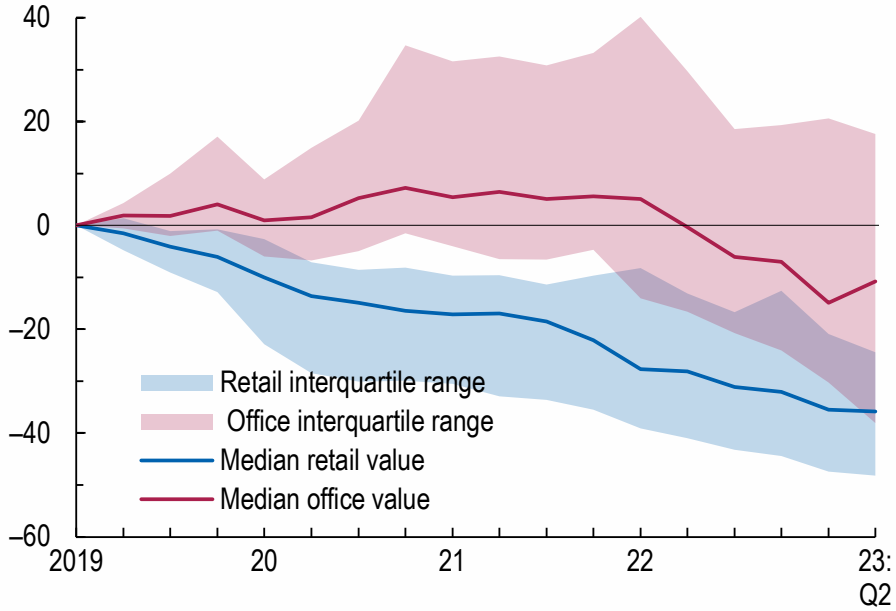
(nominal house price index, 2005 ==1)



Sources: Bank for International Settlements; and IMF staff calculations.
Note: The vertical line corresponds to 2020:Q1, the start of the pandemic.

CRE: capital values are structurally depressed

(percent change in *city* nominal CRE prices since 2019q1)



Sources: Morgan Stanley Capital International (MSCI); and IMF staff calculations.
Note: Lines display the median capital value across 46 cities in 8 advanced economies for retail (in blue) and across 47 cities in 11 advanced economies for offices (in red). Shades correspond to interquartile ranges. CRE = commercial real estate.

Key questions

1. **Conceptual framework.** What are the housing channels of monetary policy transmission?

2. **Heterogeneity in transmission across countries.** How do the housing channels transmit differently across mortgage finance and housing market characteristics?

3. **Transmission over time.** Have housing channels weakened due to shifting mortgage and housing market characteristics?

Key findings

- **Cross-country heterogeneity** in housing channels of monetary policy transmission. Transmission is stronger:
  - The regulatory LTV limits are looser
  - Household debt ratios are higher
  - The share of fixed-rate mortgages in stock is lower

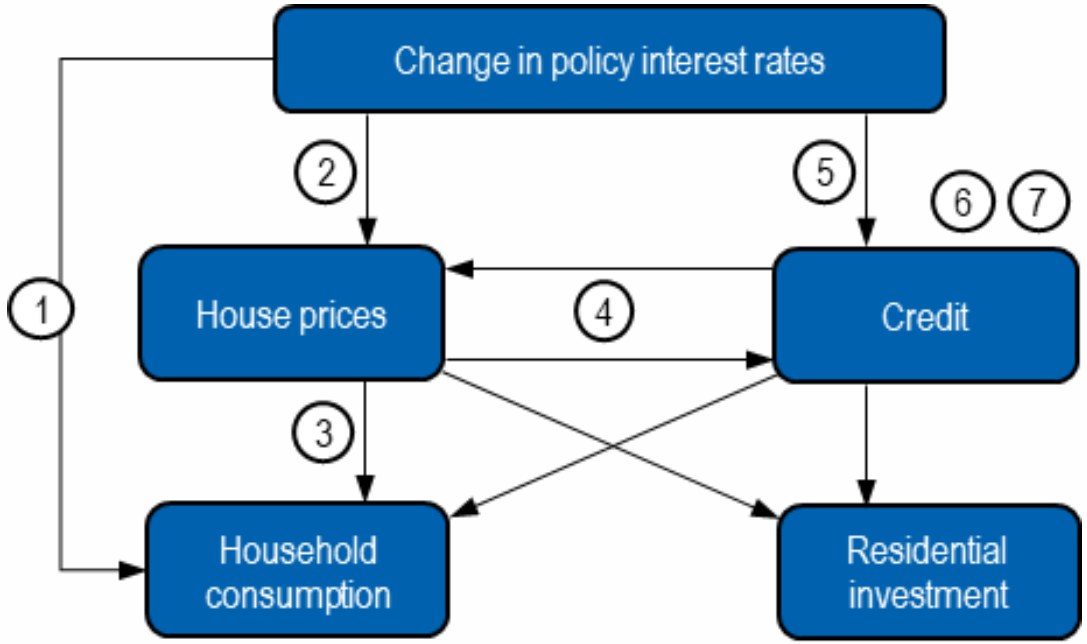
  } **Mortgage finance** characteristics

  - In regions facing housing supply constraints
  - In regions experiencing house price overvaluations

  } **Housing market** characteristics

- **Housing channels may have changed** in several countries, pointing to:
  - Weakening where (1) LTV limits have been tightened, (2) the share of FRMs has increased, or (3) populations moved away from high density areas
  - Strengthening where (1) household debt increased, or (2) overvaluations increased most in already-overvalued regions

Housing channels: we find evidence for the cash flow, expectations, wealth, collateral, and interest rate channels



- Cash flow channels (1) through adjustable-rate mortgages and/or ease of refinancing
- Expectation channel (2) / risk premia channel
- Wealth channels through house prices (3) and collateral values (4)
- Interest rate channel (5)
- Credit channels: balance sheet channel (6) and bank lending channel (7) reinforce interest-rate channel

Heterogeneity in transmission

How does monetary policy transmission depend on mortgage finance characteristics?

Data and Methodology

- **Data:** Unbalanced panel dataset covering **33 AEs and EMEs**, 1998q4 to 2023q1; quarterly frequency

- **Methods**: Instrumental variable local projections **(LP-IV**), as in Stock and Watson (2018); Jorda Schularick and Taylor (2015,2020) **augmented with interaction terms** to study heterogeneity in transmission

$$y_{c,t+h} - y_{c,t-1} = a^h + \beta_1^h \widehat{DeltaRate}_{c,t-1} + \beta_2^h (\widehat{DeltaRate}_{c,t-1} \times \boldsymbol{H_{c,t-1}}) + \beta_3^h H_{c,t-1} + \sum_{l=1}^{8} \beta_4^h X_{c,t-l} + \mu_c^h + \tau_t^h + \varepsilon_{c,t+h}$$

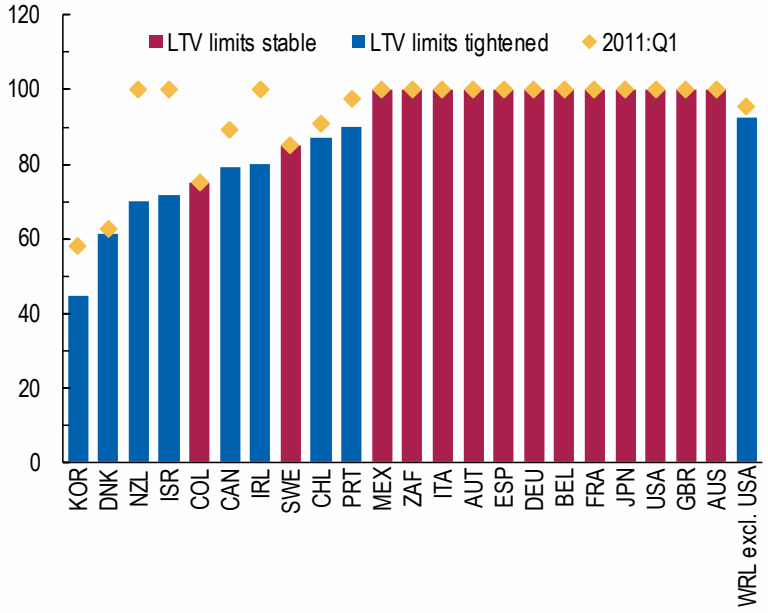
$$For\ h = 0, \dots, 8$$

- **Instrument**: $\widehat{DeltaRate}_{c,t-1}$ is instrumented with surprises around monetary policy announcements among professional forecasters, sourced from Bloomberg

- **Intuition**: β_2^h measures the **differential effect of monetary policy** depending on ex-ante housing characteristics $\boldsymbol{H_{c,t-1}^h}$ (akin to DiD)

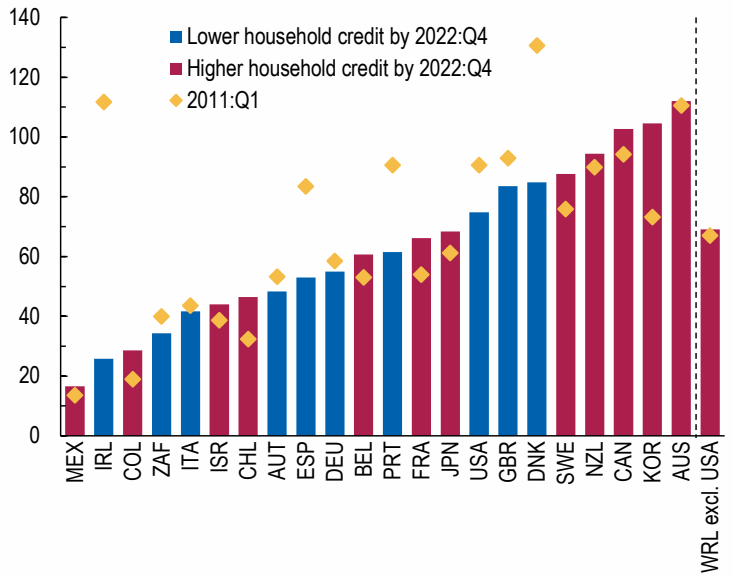
Mortgage market characteristics across countries

LTV limits



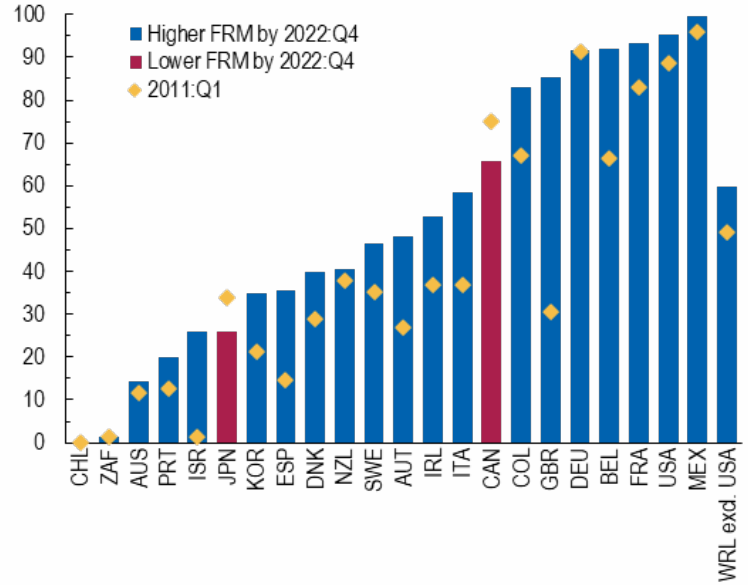
Sources: IMF integrated Macroprudential Policy (iMaPP) database; and IMF staff calculations.
Note: LTV limits = regulatory threshold for maximum loan-to-value ratio across all mortgage typologies. Diamonds denote maximum LTV limits in 2011:Q1; bars denote maximum LTV limits allowed in 2021:Q4. Grey bars denote countries in which LTV limits remain unchanged; blue bars denote countries in which limits were lowered between the two periods. Data labels use International Organization for Standardization (ISO) country codes. WRL = world; excl. = excluding.

Household debt



Sources: Bank of International Settlements; and IMF staff calculations.
Note: Diamonds denote ratios in 2011:Q1; bars denote ratios in 2022:Q4; red bars denote countries in which the share of household debt-to-GDP declined between the two period; blue bars denote countries in which the share increased. Data labels use International Organization for Standardization (ISO) country codes. WRL = world; excl. = excluding.

Fixed-rate Mortgages



Sources: European Central Bank; national authorities' data; and IMF staff calculations.
Note: Diamonds denote values at 2011:Q1 (or earliest available); bars denote values in 2022:Q4 (or latest available). Red bars denote countries for which the share of FRMs in stock decreased between 2011:Q1 and 2022:Q4; blue bars denote countries for which the share of FRMs in stock increased. For further details and definitions, see online annex table 2.2.2.. FRM = fixed-rate mortgage with residual maturity>12 months as a share of outstanding mortgages; WRL = World; ex. = excluding. Data labels in the figure use International Organization for Standardization (ISO) country codes.

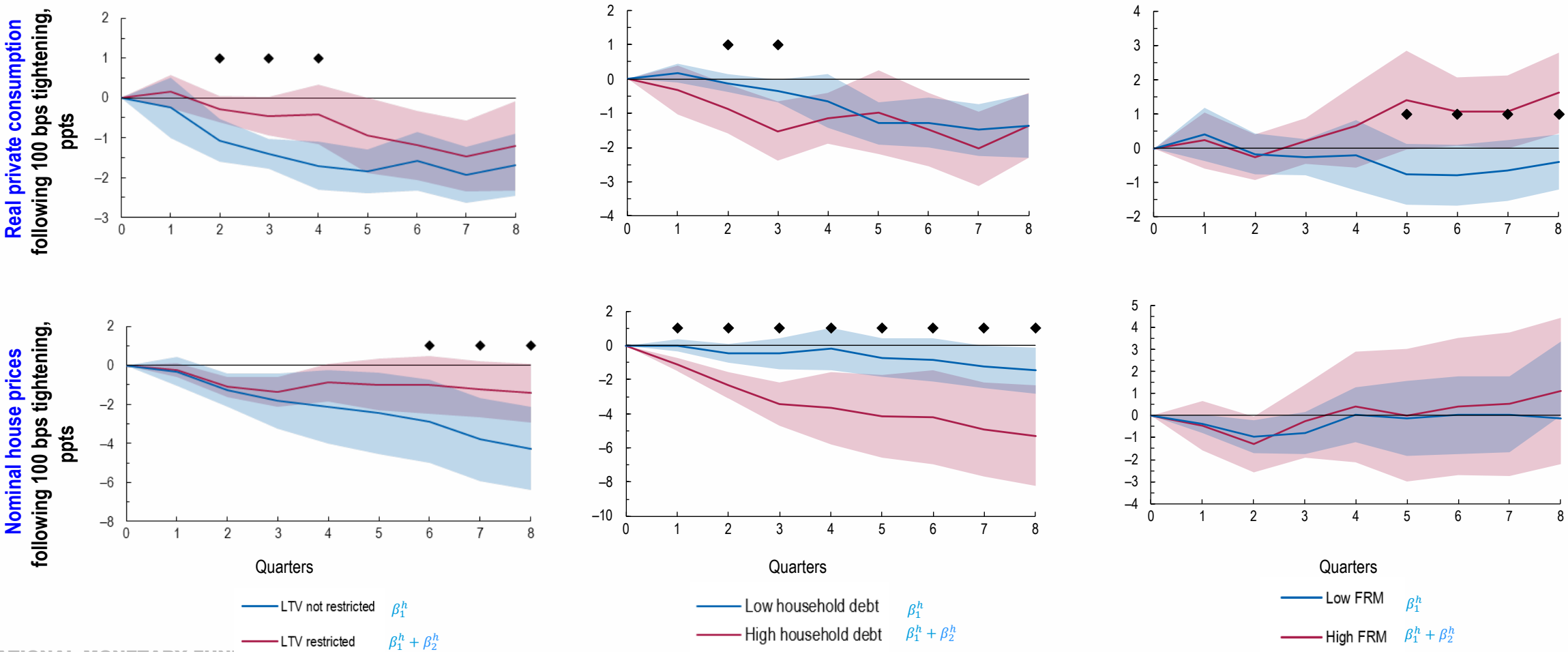
Transmission depends on mortgage finance characteristics

$$y_{c,t+h} - y_{c,t-1} = \beta_1^h \widehat{DeltaRate}_{c,t-1} + \beta_2^h \widehat{DeltaRate}_{c,t-1} \times H_{c,t-1} + \beta_3^h H_{c,t-1} + \sum_{l=1}^{8} \beta_4^h X_{cj,t-l} + \mu_c^h + \tau_{t+h}^h + \varepsilon_{c,t+h} \quad For\ h = 0, \dots, 8$$

$H_{c,t-1}$ = LTV limits

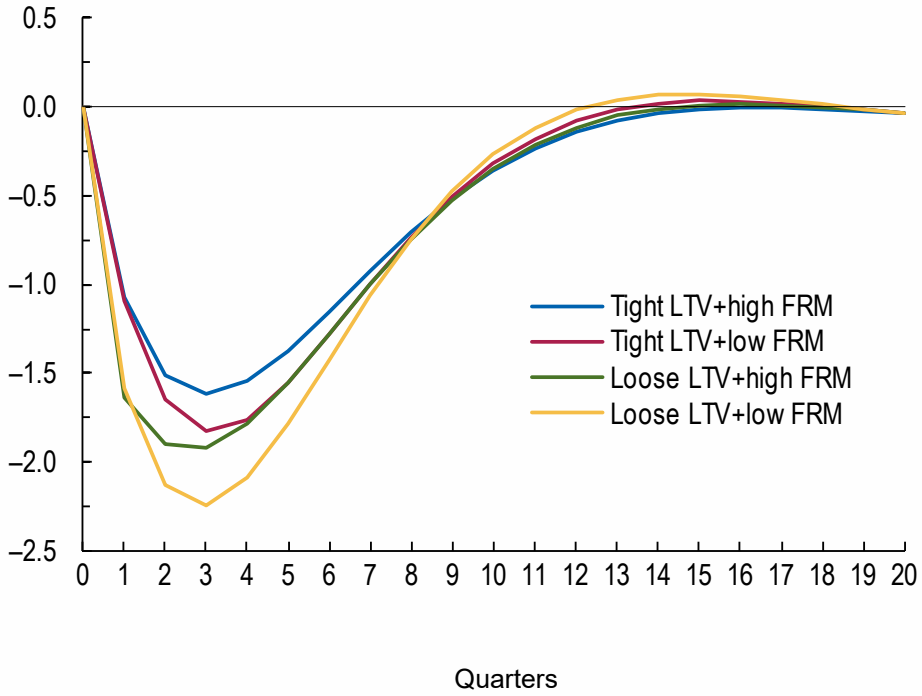
$H_{c,t-1}$ = HH debt

$H_{c,t-1}$ = Share of fixed-rate mortgages



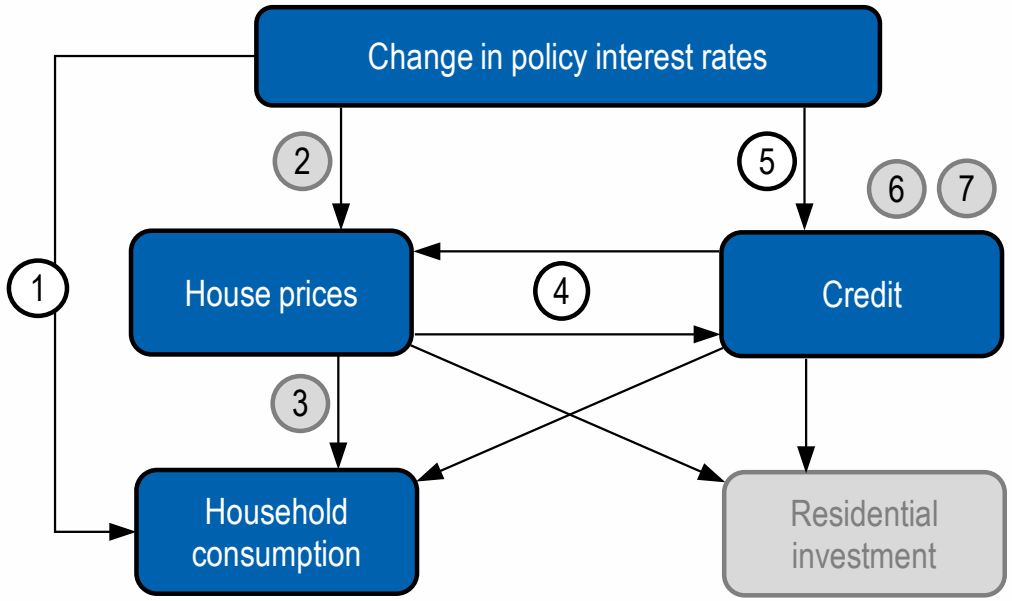
LTV limits and fixed-rate mortgages complement each other

Real private consumption following a monetary tightening of 100 basis points
(Percent of steady-state level)



Source: IMF staff calculations.
Note: Based on the model of Chen and others 2023. Numbers on the horizontal axes in the figure represent quarters. Lines reflect the response to a 100 basis point change in policy rates. Tight and loose LTV stand for LTV of 0.75 and 0.9. High and low FRM stand for a share of fixed-rate mortgages of 0.95, and 0.7, respectively. See Online Annex 2.7 for details. FRM = fixed-rate mortgage, share of the total outstanding stock; LTV = regulatory loan to value.

Heterogeneity due to mortgage market characteristics



Source: IMF staff.

Key channels operating through housing

- Cash flow channels (1) through adjustable-rate mortgages and/or ease of refinancing
- Expectation channel (2) / risk premia channel
- Wealth channels through house prices (3) and collateral values (4)
- Interest rate channel (5)
- Credit channels: balance sheet channel (6) and bank lending channel (7) reinforce interest-rate channel

Transmission depends on housing market characteristics

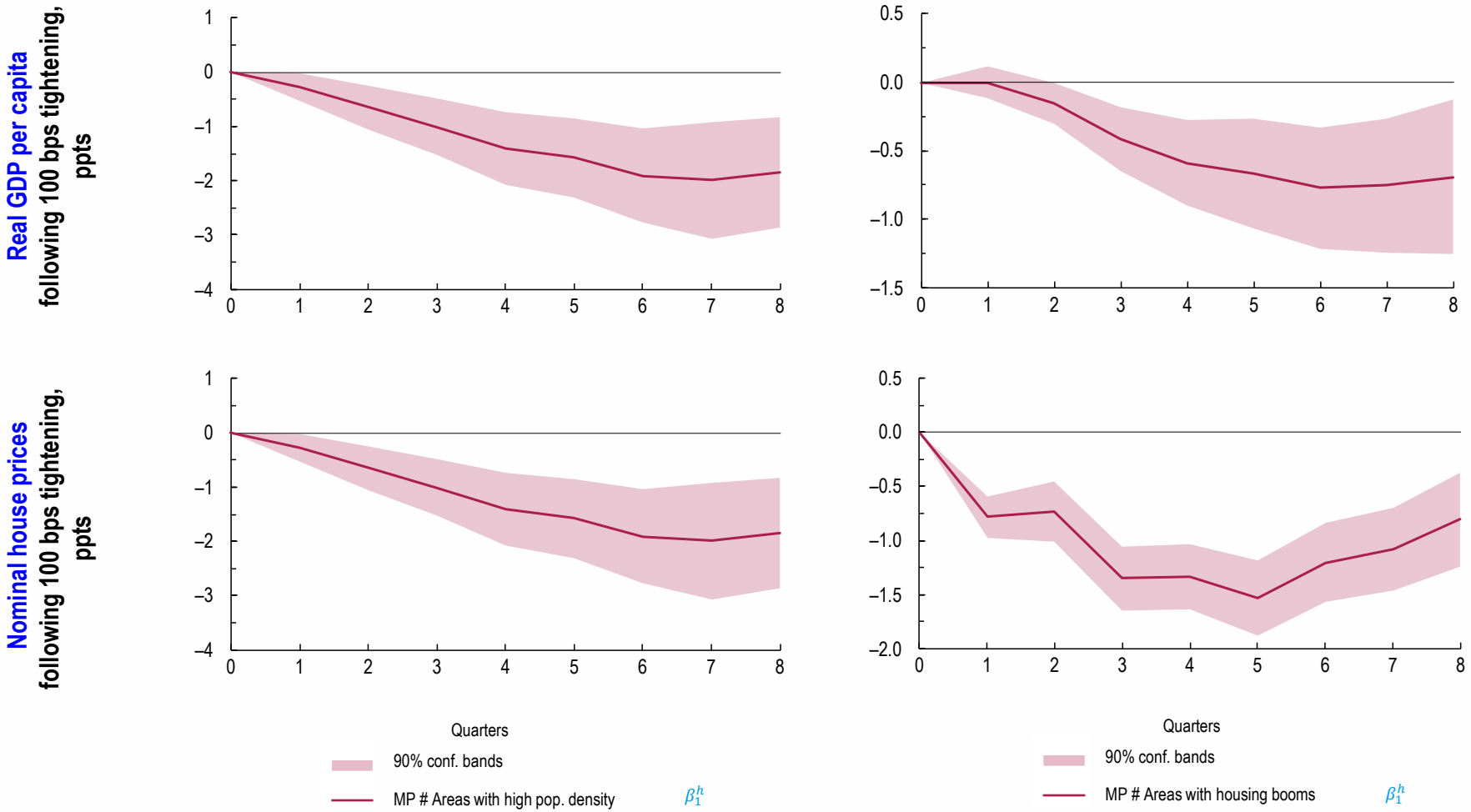
$$y_{c,j,t+h} - y_{c,j,t-1} = \beta_1^h \widehat{DeltaRate}_{c,t} \times H_{c,j,t-4} + \beta_2^h H_{c,j,t-4} + \sum_{l=1}^{12} \boldsymbol{\beta_3^h} X_{cj,t-l} + \mu_{c,j}^h + \theta_{c,t}^h + \varepsilon_{c,j,t+h},\ for\ h = 0, \dots, 8$$

$H_{c,t-1}$ = Housing Supply Constraints

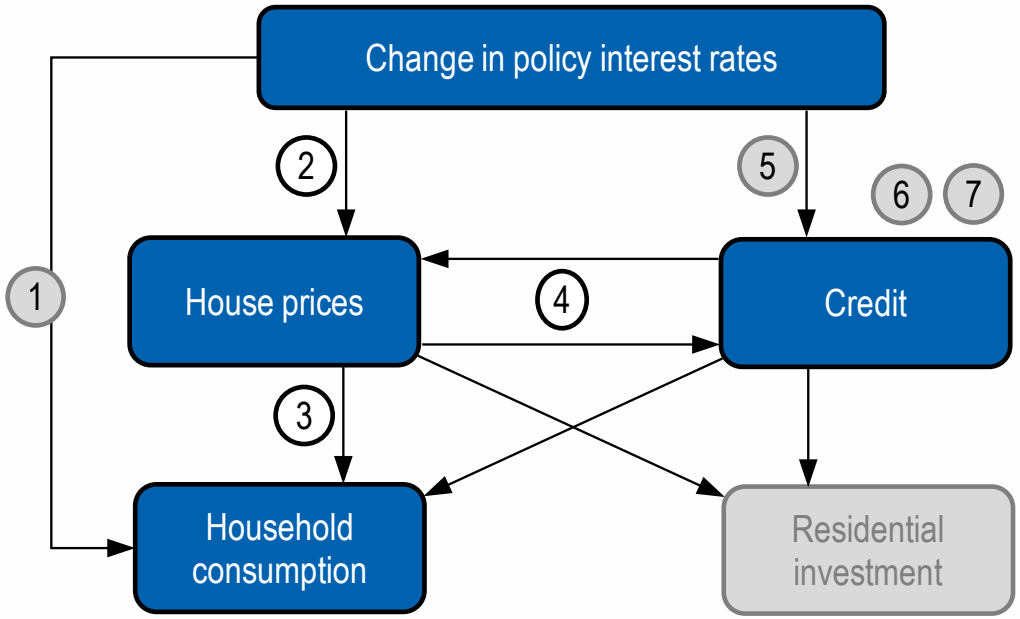
$H_{c,t-1}$ = House Price Overvaluation

Real GDP per capita following 100 bps tightening, ppts

Nominal house prices following 100 bps tightening, ppts



Heterogeneity due to housing market characteristics

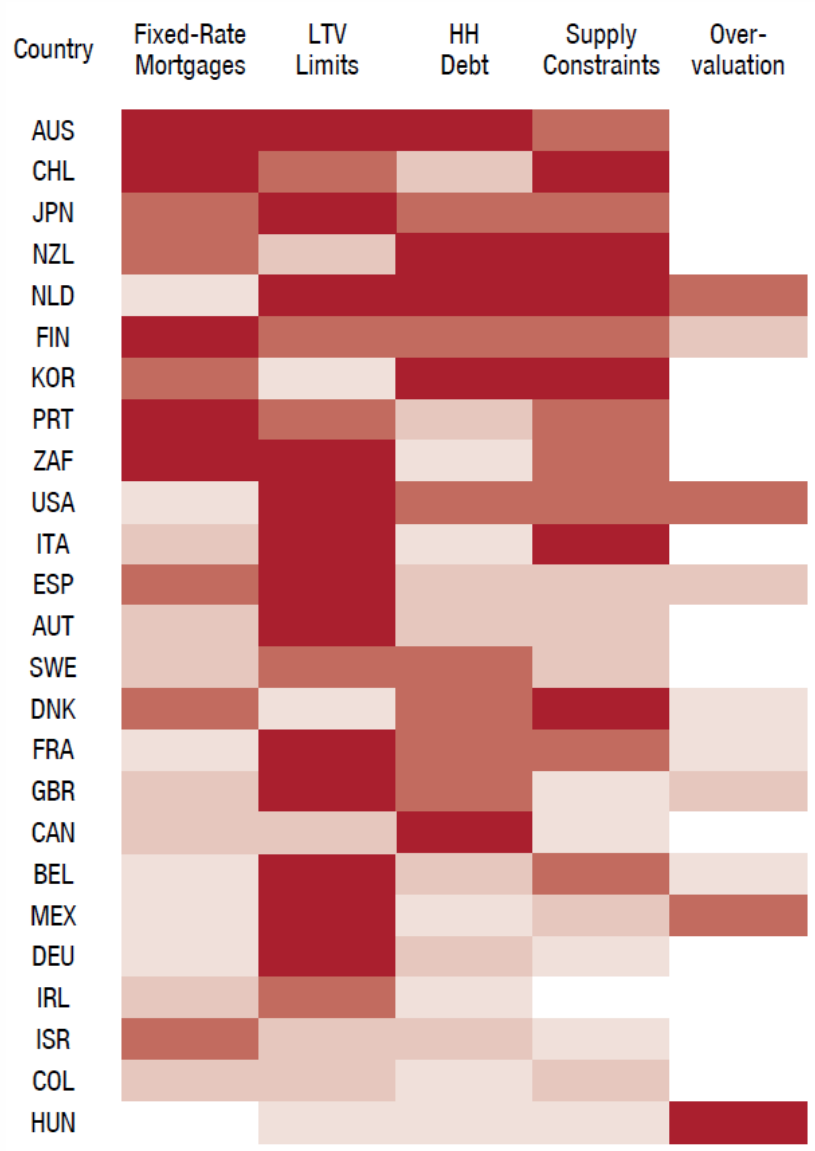


Source: IMF staff.

Key channels operating through housing

- Cash flow channels ① through adjustable-rate mortgages and/or ease of refinancing
- Expectation channel ② / risk premia channel
- Wealth channels through house prices ③ and collateral values ④
- Interest rate channel ⑤
- Credit channels: balance sheet channel ⑥ and bank lending channel ⑦ reinforce interest-rate channel

Strength of housing channels varies across countries



Weaker transmission of monetary policy

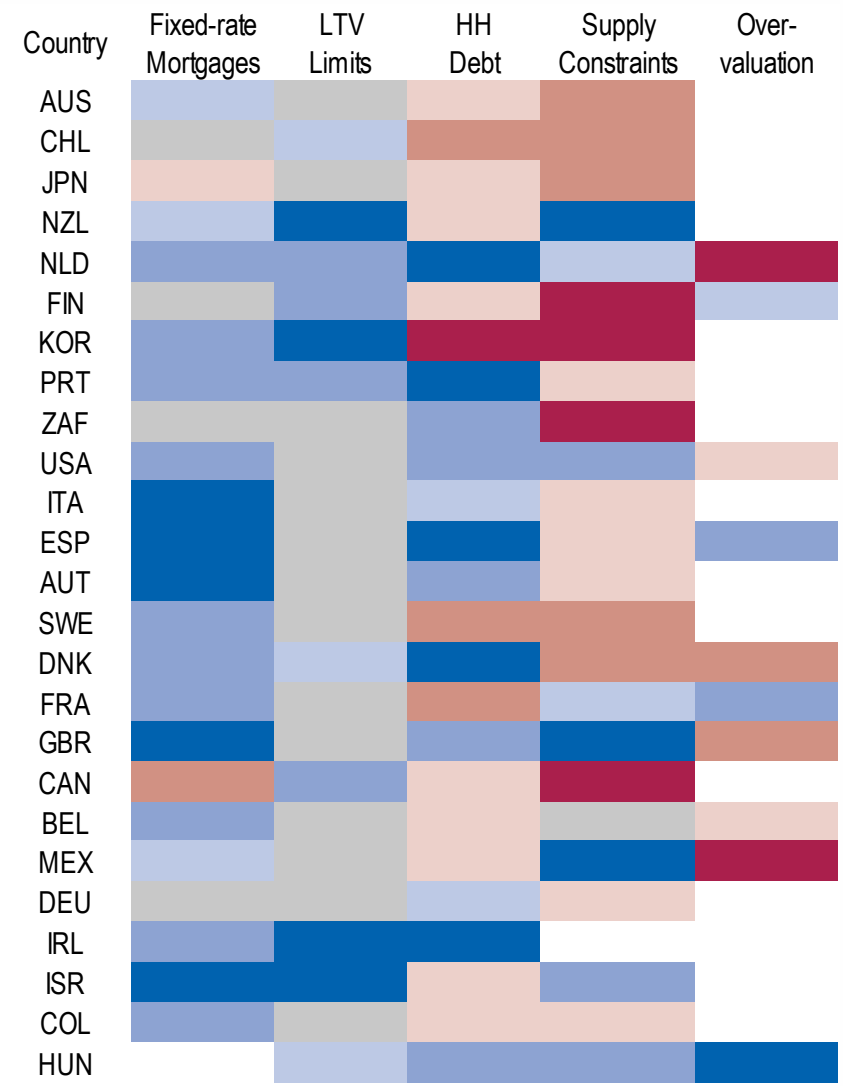
Stronger transmission of monetary policy

Sources: Bank for International Settlements; CEIC Data Company Limited; European Central Bank; Eurostat; Integrated Macroprudential Policy (iMaPP) Database; Organisation for Economic Co-operation and Development; national authorities; and IMF staff calculations.
Note: Fixed-rate mortgages are the share of the total outstanding stock, 2022:Q4 (or latest available). Fixed-rate mortgages exclude mortgages that adjust to inflation (as in Chile); LTV limits are the regulatory loan-to-value limits, averaged across all mortgage types, 2021:Q4; HH debt is the household credit-to-GDP ratio, 2022:Q4; supply constraints are the proportion of population living in areas with high population density, 2022:Q4 (or latest available). Regions above the 90th percentile of population density within each country are defined as high-population-density areas; overvaluation is the median price-to-income ratio (PIR) in overvalued areas, 2022:Q4 (or latest available). A region is defined as overvalued if its PIR is above the 75th percentile of its regional time series. For each of the five criteria, countries obtain a score between 1 and 4 reflecting their percentile in the cross-country distribution. Judgment is used for borderline cases. Countries are ranked based on their average score. White cells indicate missing data. Economy list uses International Organization for Standardization (ISO) country codes.

Transmission Over Time

What do our analyses suggest about recent changes in monetary policy transmission?

Housing channels weakened in several countries



Sources: Bank for International Settlements; CEIC Data Company Limited; European Central Bank; Eurostat; Integrated Macroprudential Policy (iMaPP) Database; Organisation for Economic Co-operation and Development; national authorities; and IMF staff calculations.
Note: Fixed-rate mortgages are the change in the share of the total outstanding stock, from 2011:Q1 (or earliest available) to 2022:Q4 (or latest available). Fixed rate mortgages exclude mortgages that adjust to inflation (as in Chile); LTV limits are the change in regulatory loan-to-value limits, averaged across all mortgage types, from 2011:Q1 to 2021:Q4; HH debt is the change in household credit-to-GDP ratio, from 2011:Q1 to 2022:Q4; supply constraints are the population growth differential between areas with high and low population density, from 2019:Q4 to 2022:Q4 (or latest available). Regions above the 90th percentile of population density within each country are defined as high-population-density areas; overvaluation is the median price-to-income ratio (PIR) growth differential between overvalued and nonovervalued areas, from 2019:Q4 to 2022:Q4 (or latest available). A region is defined as overvalued if its PIR is above the 75th percentile of its regional time series. For each of the five criteria, countries obtain a score between 1 and 3 reflecting their percentile in the cross-country distribution within positive and negative changes. Judgment is used for borderline cases. Gray cells indicate no change. Countries are ranked based on the order of Figure 2.12. White cells indicate missing data. Economy list uses International Organization for Standardization (ISO) country codes.

Main policy messages

- **Monetary policy:** Deep, country-specific understanding of the housing channels of monetary policy helps calibrate policy ex-ante and adjust stance ex-post
  - Where transmission is strong: monitoring housing markets and debt service capacity and being vigilant for early signs of effects are warranted
  - Where transmission is weak: erring on the side of too much tightening, while generally less costly, may be riskier this time around. Noteworthy:
    - Transmission where fixation periods are shorter may suddenly strengthen
    - High-for-long may generate financial stability concerns in some areas

- **Borrower-based macroprudential measures**: "free the hands of monetary policy" allowing it to focus on aggregate demand management without fear of precipitating a financial crunch

RESEARCH

Slowdown in Global Medium-Term Growth:

What Will It Take to Turn the Tide?

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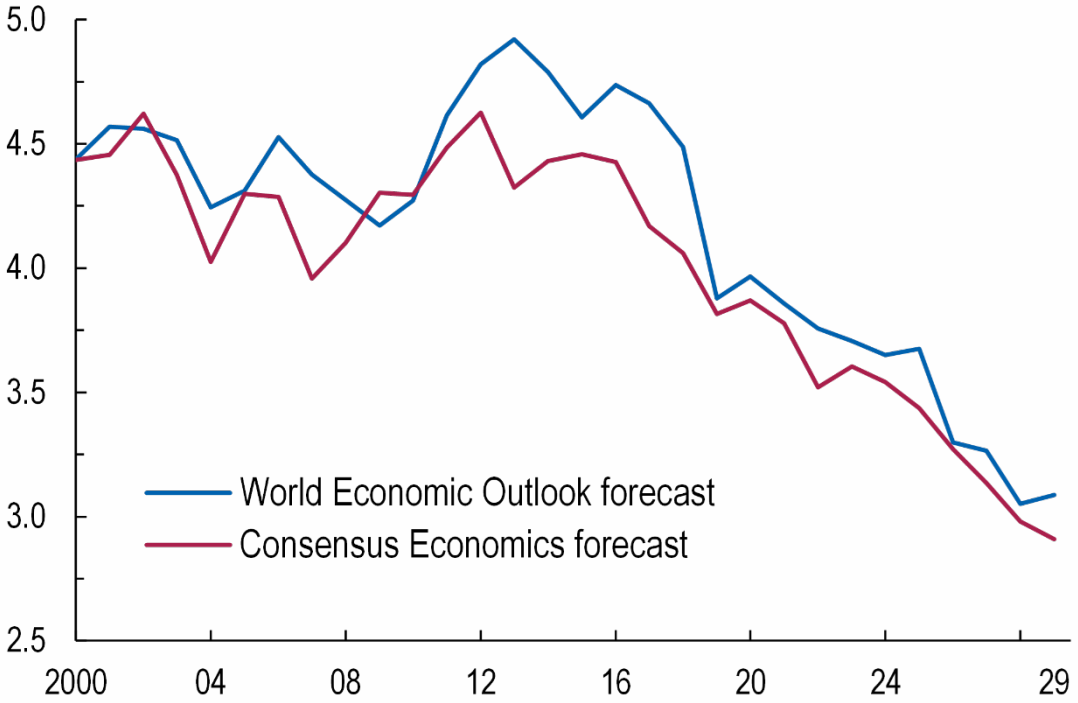
With contributions by Benjamin Carton, Sinem Kilic Celik, Gabriela Cugat, Carlos van Hombeeck, Keiko Honjo, Dirk Muir, Marina M. Tavares, and support from Shrihari Ramachandra, Pablo Vega, Yarou Xu, Dennis Zhao

1. Why the focus on growth?

Growth prospects are dimming, almost everywhere

Five-Year-Ahead Real GDP Growth Projections

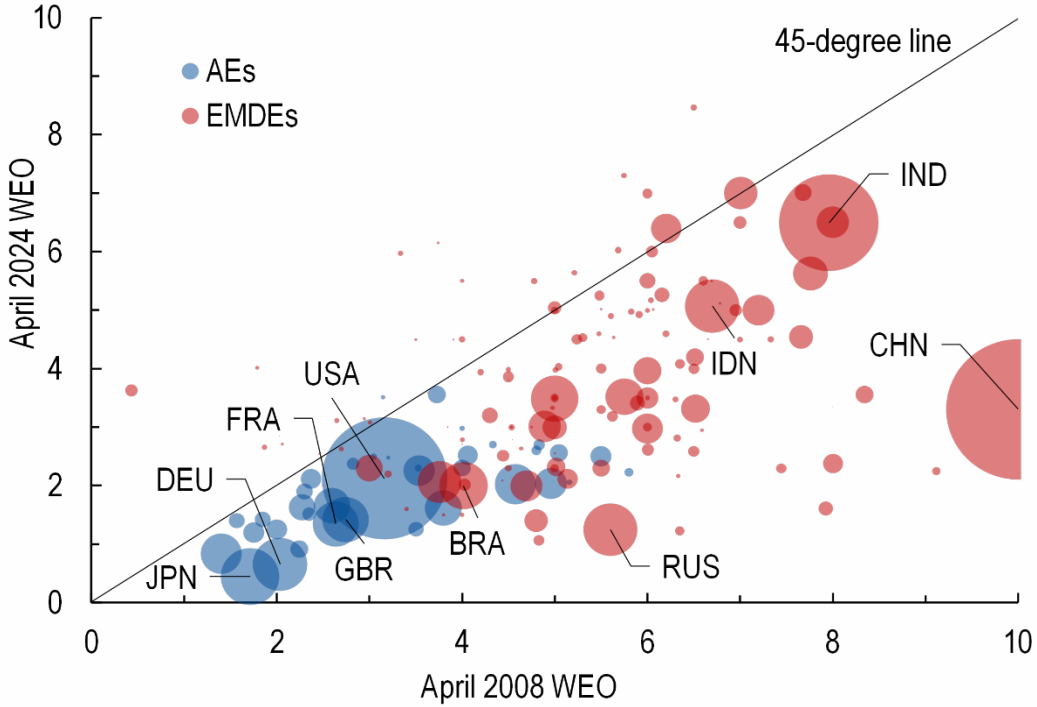
(World growth, percent)



Sources: Consensus Economics; and IMF staff calculations.
Note: *World Economic Outlook* (WEO) sample comprises 196 economies and Consensus Economics sample comprises 88 economies. Global real GDP growth projections are calculated using GDP in purchasing power parity in international dollar weights. The years on the horizontal axis refer to the year for which a forecast is made, using the April WEO from five years earlier. For example, the 2029 forecast is based on the April 2024 WEO, and so on. The red line depicts the mean of the Consensus Economics forecasts.

Five-Year-Ahead Real GDP Forecast by Country: April 2008 vs. April 2024

(Percent)



Sources: IMF staff calculations.
Note: The figure compares five-year-ahead real GDP forecasts from the April 2024 and April 2008 *World Economic Outlook* (WEO). Bubble size reflects size of the economy using April 2024 GDP in purchasing-power-parity international dollars. Data labels in the figure use International Organization for Standardization (ISO) country codes. AEs = advanced economies; EMDEs = emerging market and developing economies.

Key findings

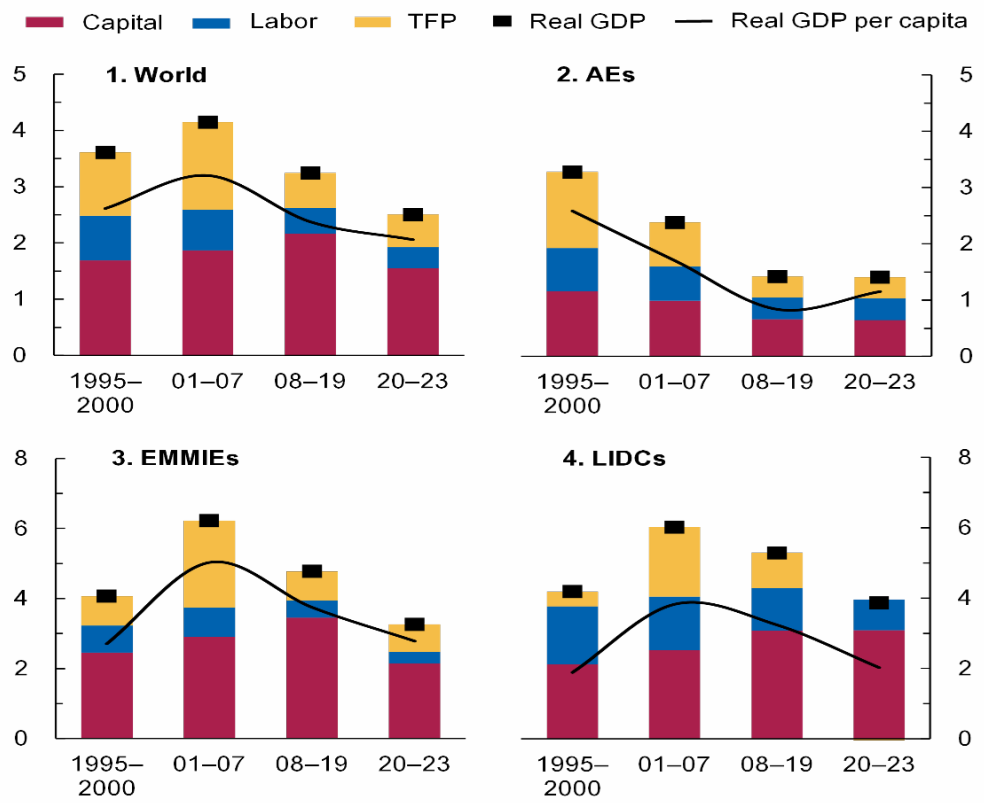
- Dimming growth prospects reflect secular forces.
- The growth of labor, capital and TFP have all declined, but **TFP accounts for the bulk of the decline in growth**.
- Among other factors, TFP growth has been held back by a **rise in capital and labor misallocation** between firms.
- **Demographic pressures** in major economies have weighed on labor growth; **weak business investment** has stunted capital formation.
- Assuming no major policy change or shocks, by the end of the decade global growth could **fall by 1 pp** below its pre-pandemic average of 3.8 percent.
- There is hope for **policy reforms and emerging technologies** to revive growth prospects.

2. How did we get here?

Historical growth decline primarily reflects TFP slowdown

- **Global growth** peaked prior to the GFC, and has declined since, with all components contributing.
  - AEs: All components declined since early 2000s.
  - EMDEs: Acceleration in the early 2000s, followed by slowdown.
- **Convergence** dynamics only explained about 1/4 of the decline from pre-GFC growth rate.

Contribution of Components of GDP Growth
(Percent)



Sources: ILO; PWT 10.01; UN World Population Prospects; and IMF staff calculations.
Note: AEs = advanced economies; EMMIEs = emerging market and middle-income economies; LIDCs = low-income developing countries; TFP = total factor productivity.

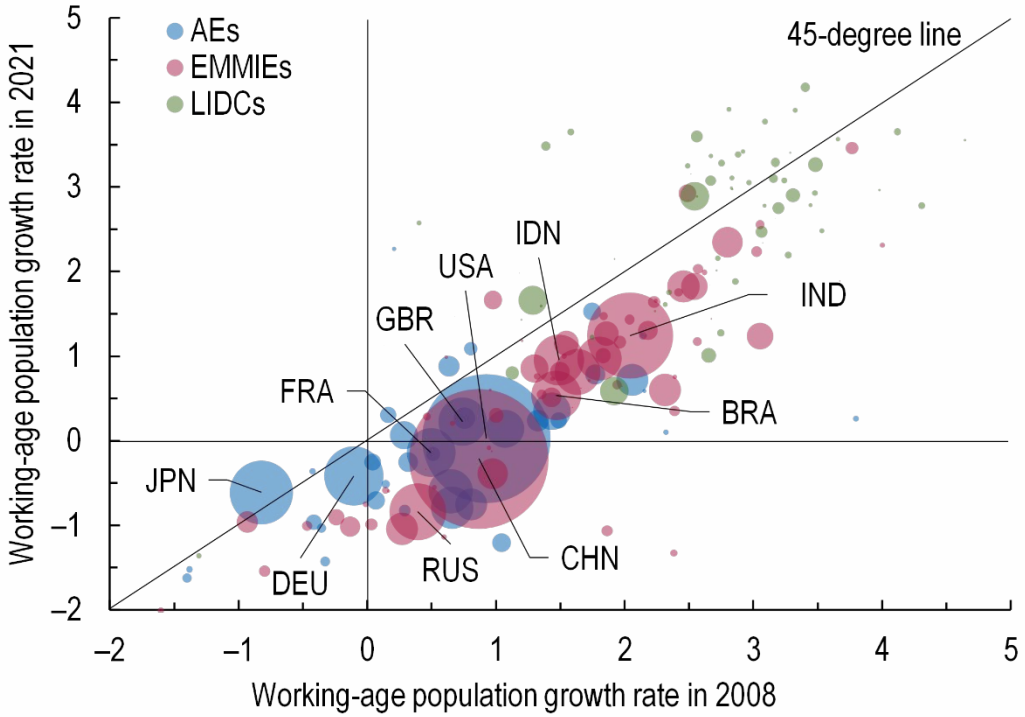
2. How did we get here?

- ***Demographic drag on the labor supply***
- ***Anemic private capital formation***
- ***Productivity drag due to resource misallocation***

The world's largest economies face demographic headwinds

Growth of Working-Age Population, 2008 vs. 2021

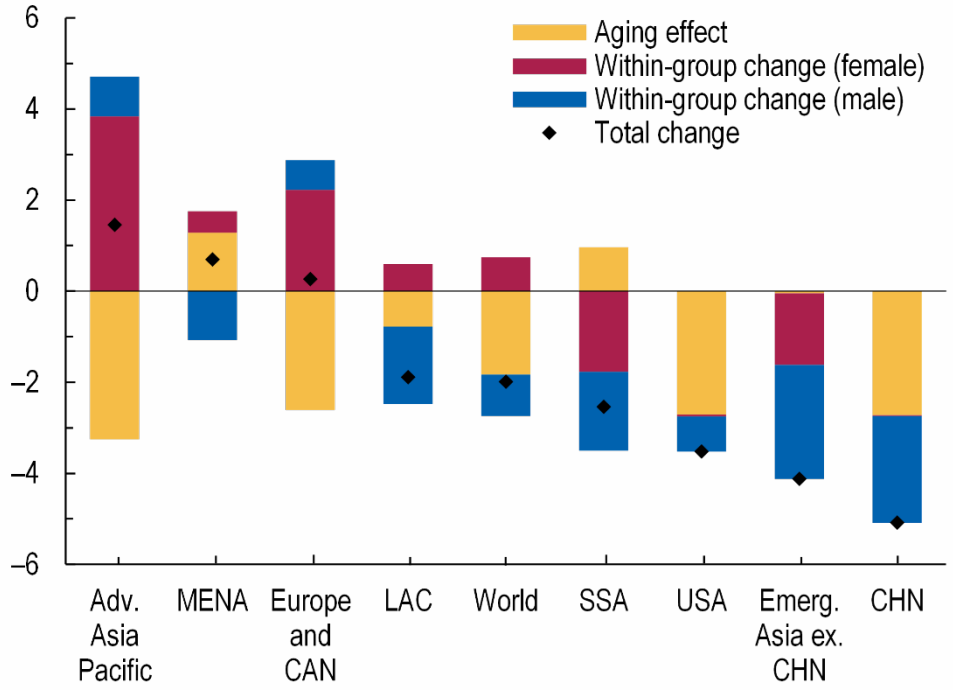
(Percent)



Sources: UN World Population Prospects; and IMF staff calculations.
Note: Working-age population is defined as people ages 15 to 64. AEs = advanced economies; EMMIEs = emerging market and middle-income economies; LIDCs = low-income developing countries.

Breakdown of Change in Labor Force Participation Rate, 2008–21

(Percent)

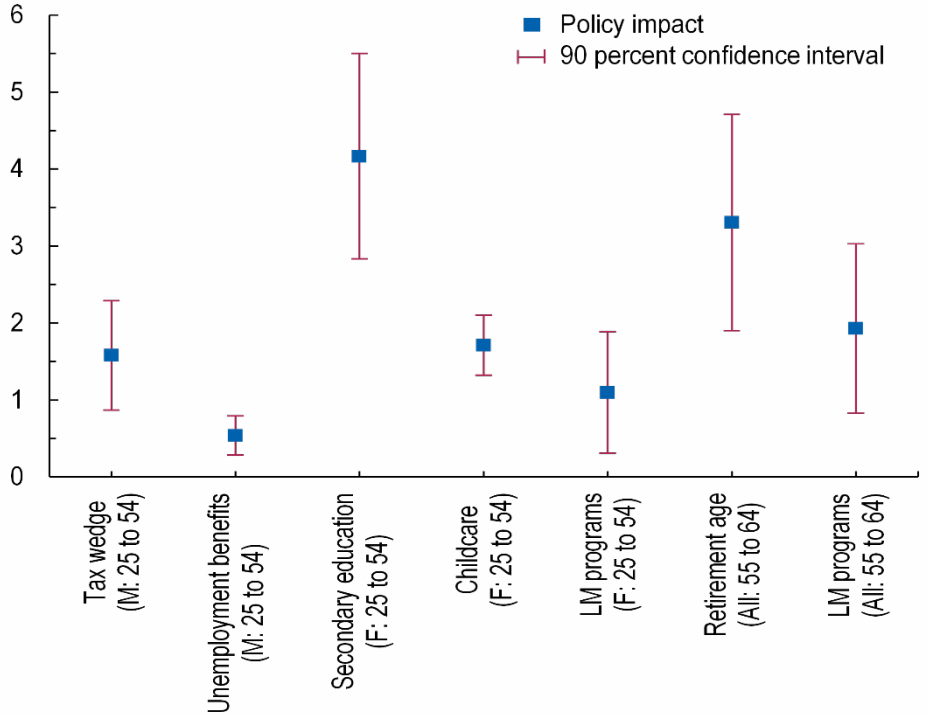


Sources: ILO; and IMF staff calculations.
Note: Adv. Asia = advanced Asia; CAN = Canada; CHN = China; Emerg. Asia = emerging Asia; ex. = excluding; LAC = Latin America and the Caribbean; MENA = Middle East and North Africa; SSA = sub-Saharan Africa; USA = United States.

Policies can support higher labor force participation

- **Males in prime working age**: Lowering the labor tax wedge and unemployment benefits.
- **Females in prime working age**: Expansion in secondary education, active labor market programs and childcare support.
- **Older workers**: Retirement age reforms and active labor market programs.

Impact of policies on participation, by age and gender
(Change in labor force participation, percentage points)



Sources: ILO; OECD; and IMF staff calculations.
Note: The estimated policy impact is due to a change in the policy variable from the 75th to the 25th percentile within the distribution of policy variation in the sample, and where the change is aimed at enhancing labor force participation. The sample comprises 26 advanced economies and 3 emerging market economies. F = female; LM programs = labor market programs; M = male.

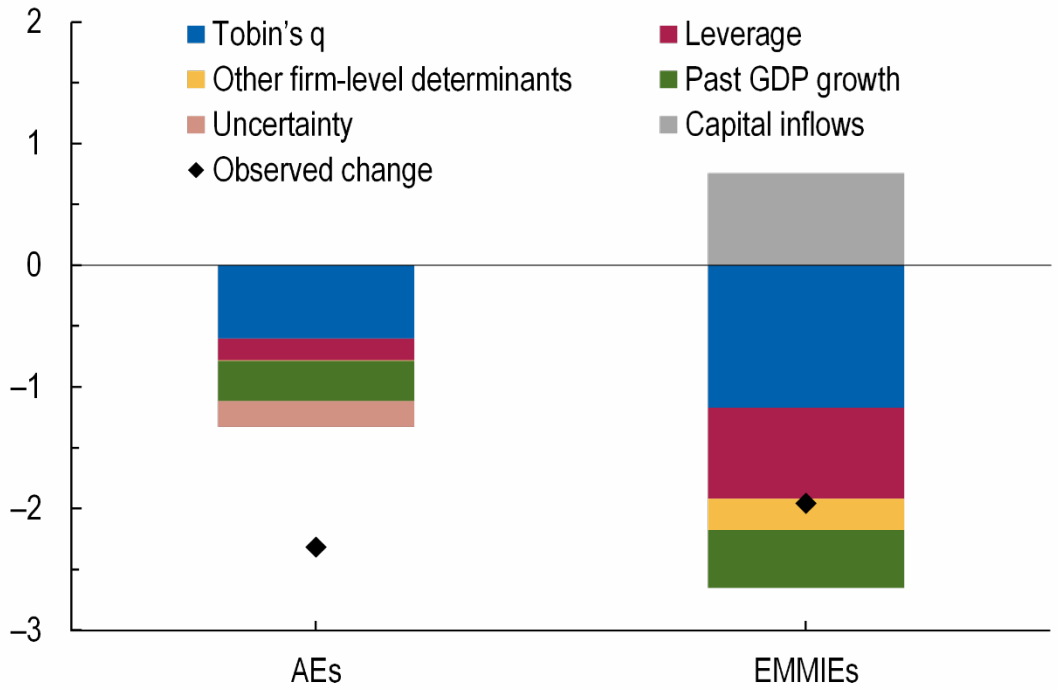
2. How did we get here?

- ***Demographic drag on the labor supply***
- ***Anemic private capital formation***
- ***Productivity drag due to resource misallocation***

Business investment has been held back by various macro and firm-specific factors

- Decline in growth has reduced net investment rates.
- Key firm-specific drivers:
  - Tobin's Q.
  - Leverage.
- **Increased capital flows to EMMIEs** have supported investment rates.

Determinants of post-2008 investment rate change
(Percentage points)



Sources: Ahir et al. (2022); Worldscope; and IMF staff calculations.
Note: Sample comprises 32 AEs and 13 EMMIEs. Decomposition based on firm-level regressions. Each bar layer represents the average change in the corresponding regressor multiplied by its estimated coefficients. Only regressors with significant coefficients are included. Changes are aggregated to the country level using capital weights, and across countries using PPP GDP weights. AEs = advanced economies; EMMIEs = emerging market and middle-income economies.

2. How did we get here?

- ***Demographic drag on the labor supply***
- ***Anemic private capital formation***
- ***Productivity drag due to resource misallocation***

Allocative efficiency has declined for major economies, exerting a drag on TFP growth

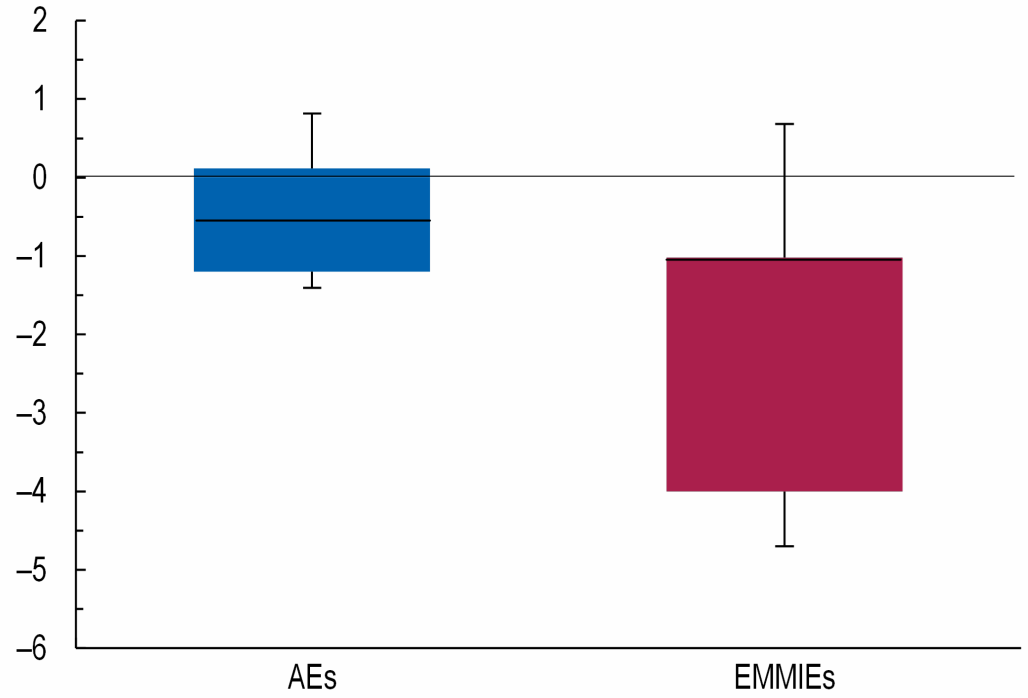
- **Change in allocative efficiency (AL)** component of TFP:

$$\Delta \ln TFP = \underbrace{\Delta \ln IN}_{Innovation} + \underbrace{\Delta \ln AL}_{\substack{Allocative \\ efficiency}}$$

- Compute AL at sector-level as in Hsieh and Klenow (2009) and Bils et al. (2021) for all market sectors, and aggregate using sectors' GDP shares.

- Find **large annual TFP growth drag** from declining AL for most sample economies.

Contribution of AL to Annual TFP Growth, 2000–19
(Percentage points)



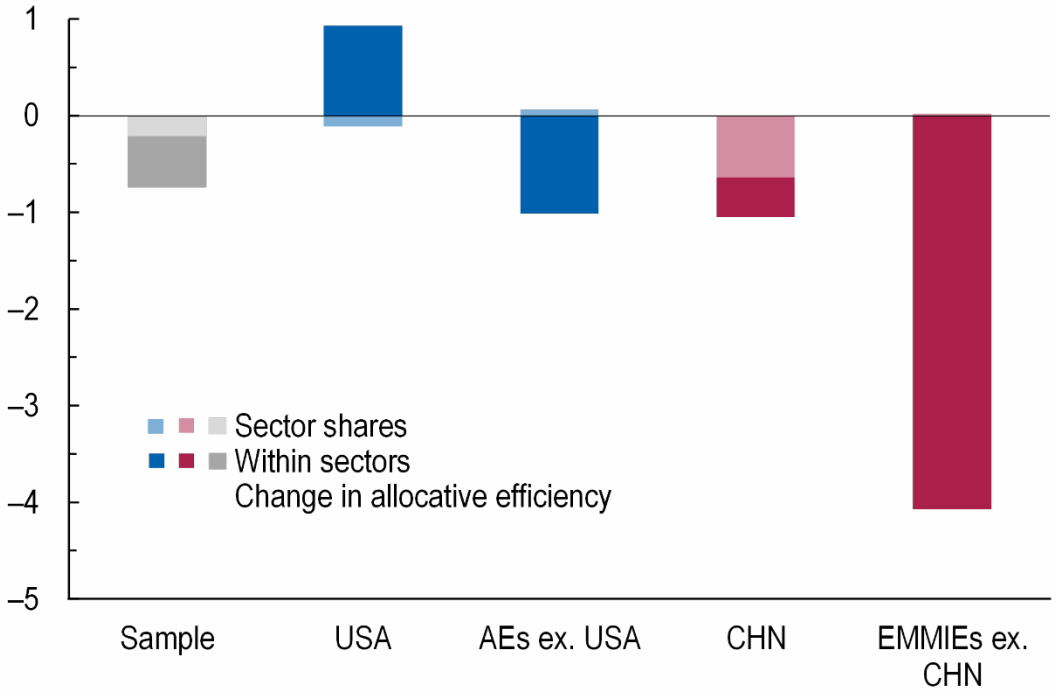
Sources: Orbis; EU KLEMS; OECD TiVA; and IMF staff calculations.
Note: Sample comprises 13 goods and 6 services sectors and 20 economies: AUT, BEL, BGR, CHE, CHN, CZE, DEU, ESP, EST, FRA, ITA, JPN, KOR, POL, PRT, ROU, RUS, SVK, SVN, and USA. AEs = advanced economies; EMMIEs = emerging market and middle-income economies.

A rise of within-sector misallocation accounts for most of the change in allocative efficiency

- Full sample AL decline:
  - 70 percent within-sector.
  - 30 percent from sector shares.

- Changing sector GDP shares matter for aggregate misallocation because **service sectors have lower AL than manufacturing**.
  - Important for some countries (due to structural transformation).

Contribution of AL to Annual TFP Growth, 2000–19
(Percentage points, decomposed)

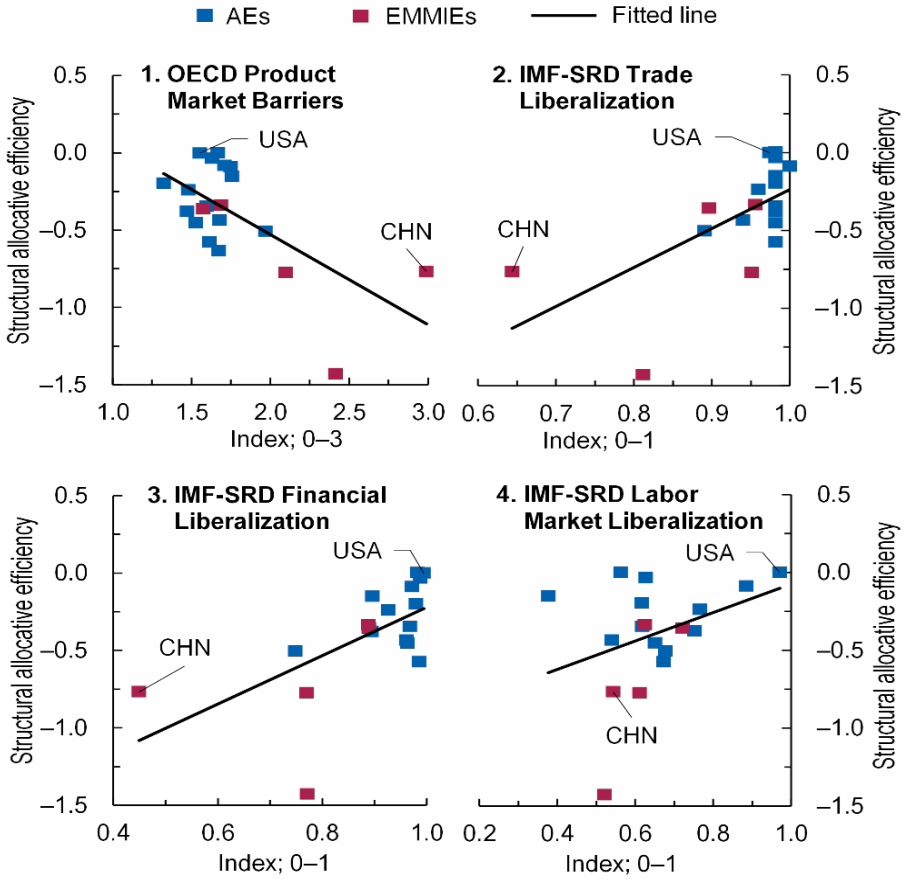


Sources: Orbis; EU KLEMS; OECD TiVA; and IMF staff calculations.
Note: Sample comprises 13 goods and 6 services sectors and 20 economies: AUT, BEL, BGR, CHE, CHN, CZE, DEU, ESP, EST, FRA, ITA, JPN, KOR, POL, PRT, ROU, RUS, SVK, SVN, and USA. AEs = advanced economies; EMMIEs = emerging market and middle-income economies.

Policy can support TFP growth over the medium by addressing root causes of misallocation

- Roughly 1/3 of measured misallocation is transitory; 2/3 “structural”.
- Large cross-country variation in structural component of misallocation.
- High AL associated with lower product market barriers, more trade and financial openness, more frictionless labor markets.
- Low-AL countries closing policy gap with USA could substantially support medium-term growth.

Structural Allocative Efficiency and Policies
(Log points, USA = 0)



Sources: Orbis; EU KLEMS; OECD TiVA; and IMF staff calculations.

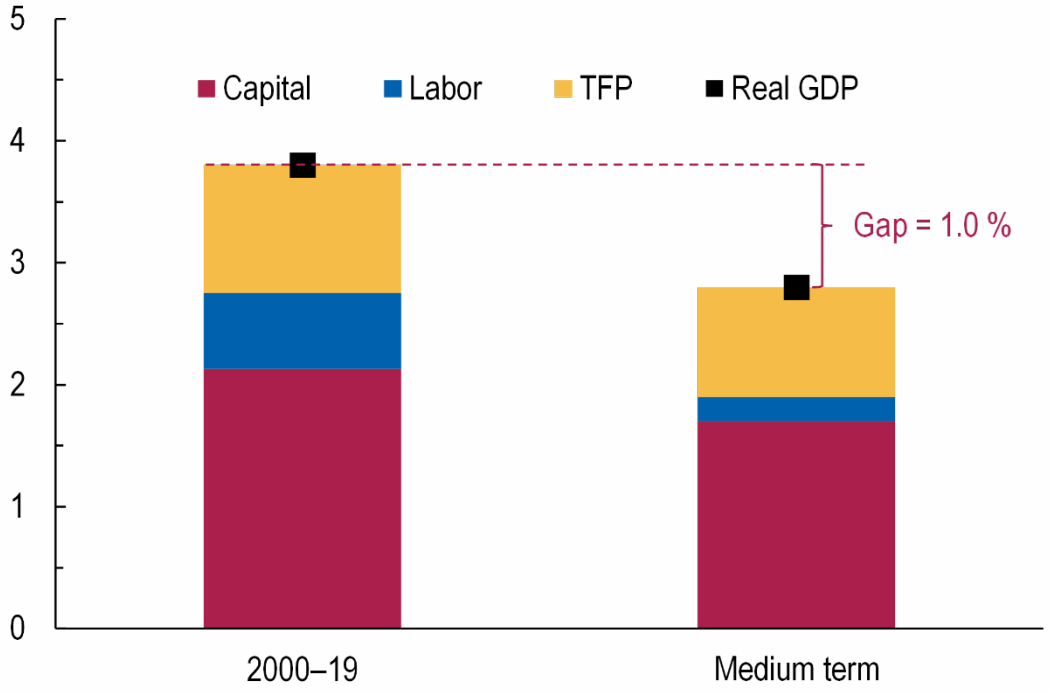
3. Where is growth heading?

On current path, global medium-term growth is likely to be well below historic average

- In the medium term (2030):
  - **TFP growth:** 0.9 percent *(2000-19: 1.0 percent)*
  - **Labor growth:** 0.2 percent. *(2000-19: 0.7 percent)*
  - **Capital growth:** 1.7 percent. *(2000-19: 2.1 percent)*

- Putting this together, **shortfall of 1 percentage point** compared to pre-pandemic average.

World real GDP growth
(Percent)



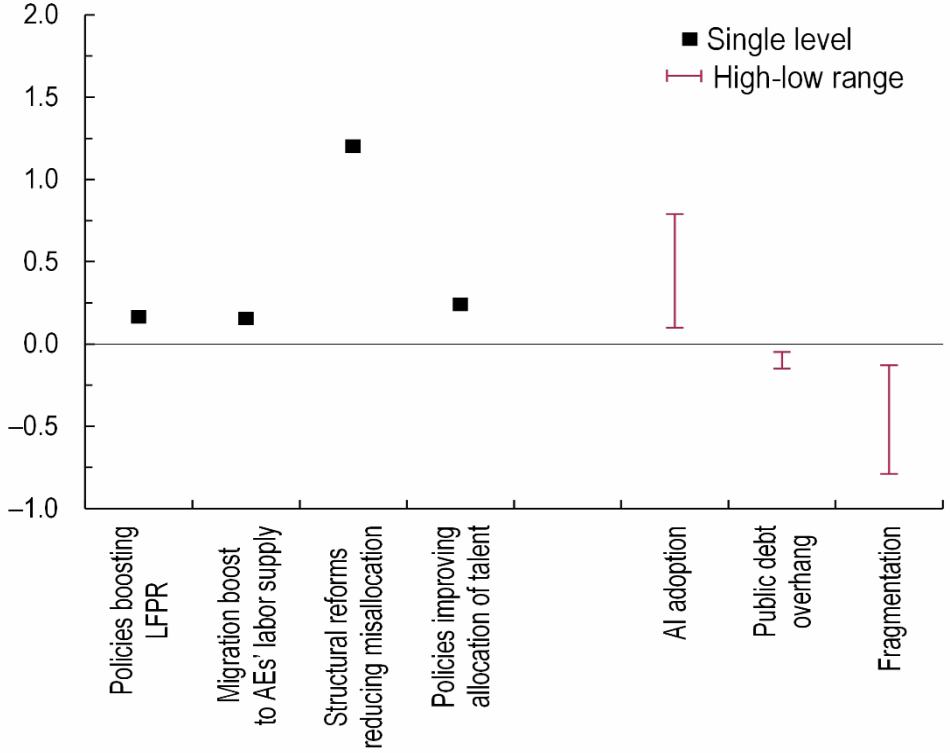
Sources: ILO; PWT 10.01; Orbis; OECD; UN WPP; and IMF staff calculations.
Note: Medium-term projection details in Chapter 3 Online Annex.

Scenarios: Policies, emerging technologies and headwinds

- **Policy scenarios**
  - Boosting labor force participation
  - Migration boost in AEs
  - Reforms tackling misallocation
  - Improving talent allocation in EMDEs
- **Emerging technologies**
  - Artificial intelligence (AI)
- **Headwinds**
  - Legacy of high public debt
  - Geoeconomic fragmentation

Impact of various factors on medium-term growth

(Relative to baseline, percentage points)



Sources: IMF staff calculations.

Note: Estimated impact on medium-term growth is presented relative to the baseline projection. The scenarios include policy interventions—aiming at increasing labor force participation, supporting AEs' labor supply through migration, reducing misallocation, and improving talent allocation in emerging market and developing economies—and scenarios in which artificial intelligence is widely adopted, there is a persistent public debt overhang, and geopolitical blocs are emerging ("fragmentation").

4. Conclusions and policy recommendations

Conclusions and Policy Recommendations

- **Widespread decline** in MT growth projections, reflecting secular forces.
- Looking back, actual growth has similarly declined, largely due to **slowing TFP growth**.
  - A broad-based **increase in misallocation** between firms has exerted a drag on TFP growth.
  - **Reduced private capital formation** post-GFC, driven by weakness in economic activity and firm fundamentals, also contributed to growth decline.
- Looking ahead,
  - **Demographic pressures** weighing on labor supply are expected to intensify in the medium term.
  - Global MT growth is likely to be **1 percentage point below** historical average. Reviving growth prospects requires strong policy action and harnessing the potential of emerging technologies.
- **Policies can help**, including structural reforms to reduce misallocation, facilitating merit-based talent allocation, supporting labor market participation, and avoiding further geoeconomic fragmentation.

World Economic Outlook
April 2024

THANK YOU!