

International Monetary Fund

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Financial Stability and Markets

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Monetary and Capital Markets Department

What does the IMF do?

Who does the IMF serve? Countries

HOW MANY COUNTRIES ARE IMF MEMBERS?

700 19th St NW, Washington, DC 20431 HOW MUCH MONEY DOES THE IMF HAVE TO LEND? Most money comes from its members who contribute based on their size and economic position

HOW MANY PEOPLE WORK AT THE IMF? The United States, Japan, France, Germany, Italy, and the United Kingdom

191

member countries WHERE IS THE HEADQUARTERS OF THE IMF?

About SDR 707 billion, or around US \$1 trillion

WHERE DOES
THE IMF GET
ITS MONEY?

Approximately 3100 staff from 162 countries WHO CONTRIBUTES THE MOST TO THE IMF?

What are the IMF's goals?

What does the IMF do?

The IMF fosters international financial stability by offering:



POLICY ADVICE

Monitoring economic and financial developments and advising countries.

Bilateral surveillance: Article IV, Financial Sector Assessment Programs (FSAPs),

Multilateral surveillance: World Economic Outlook, Global Financial Stability Report, Fiscal Monitor, Regional Economic Outlook, etc.



FINANCIAL ASSISTANCE

Loans and other financial aid to member countries.

10 or so lending programs, depending on purpose and conditionality

Largest lending program is Extended Fund Facility, 20 countries with 70 billion SDRs.



CAPACITY DEVELOPMENT

Technical assistance and training to help governments to implement sound economic policies.

50 percent of the IMF's CD is spent on Low Income and Developing Countries, 25 percent on Fragile and Conflict-Affected States.

Assistance provided on Public Finance, Monetary and Financial Policies, Macro frameworks, Legal frameworks, Statistics, Climate action, etc.

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CAPACITY DEVELOPMENT

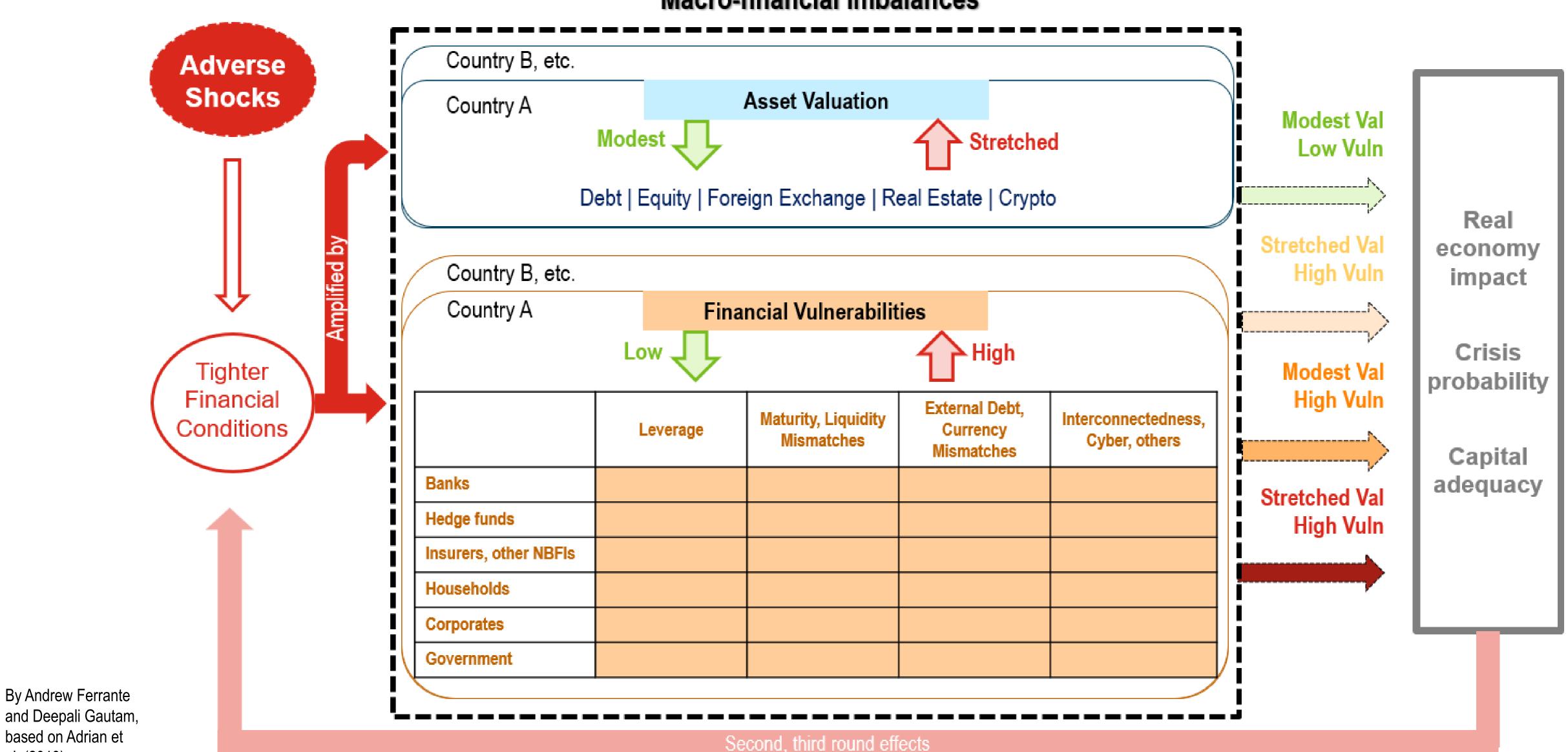
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Financial stability monitoring framework

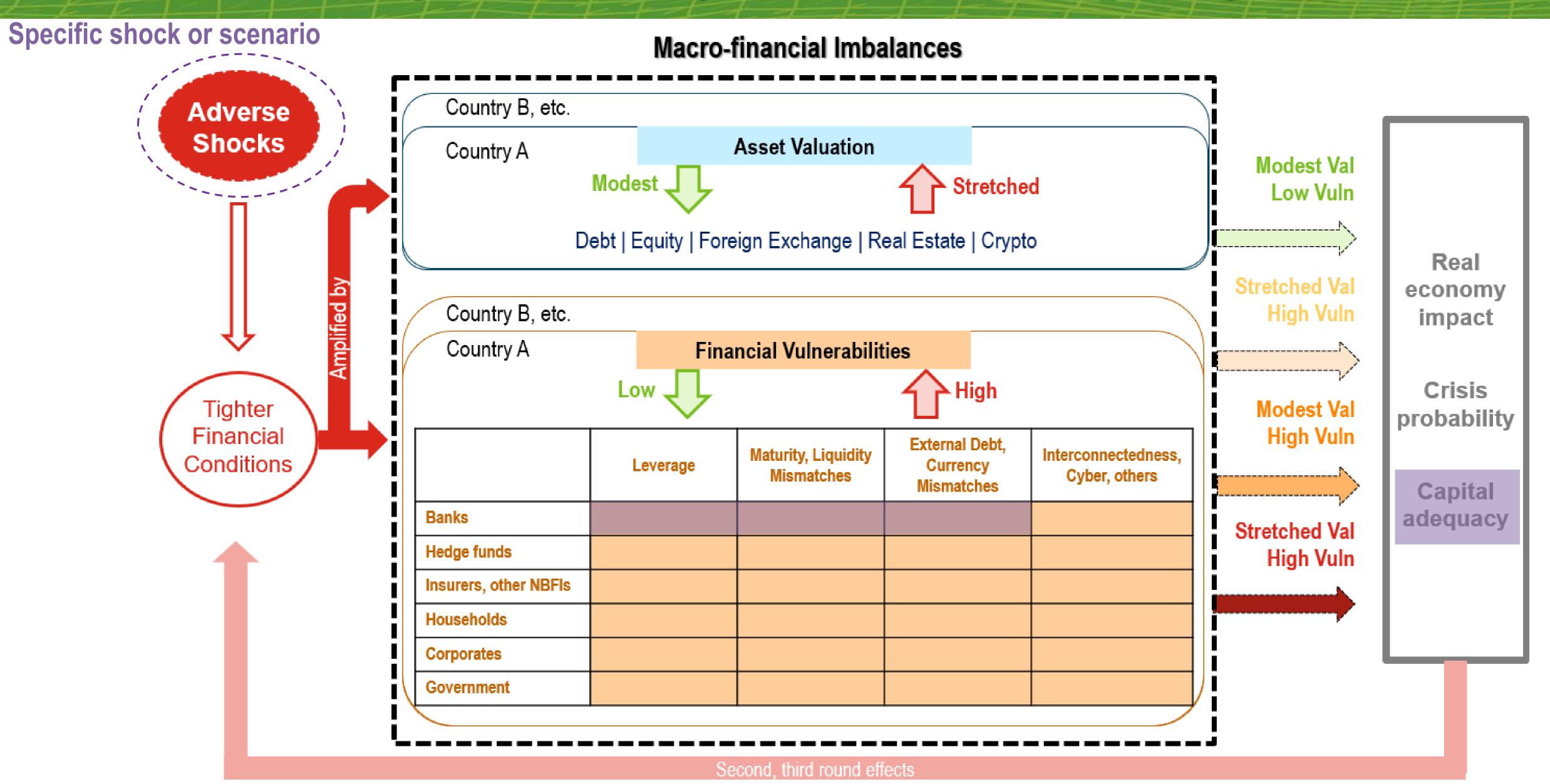
Macro-financial Imbalances



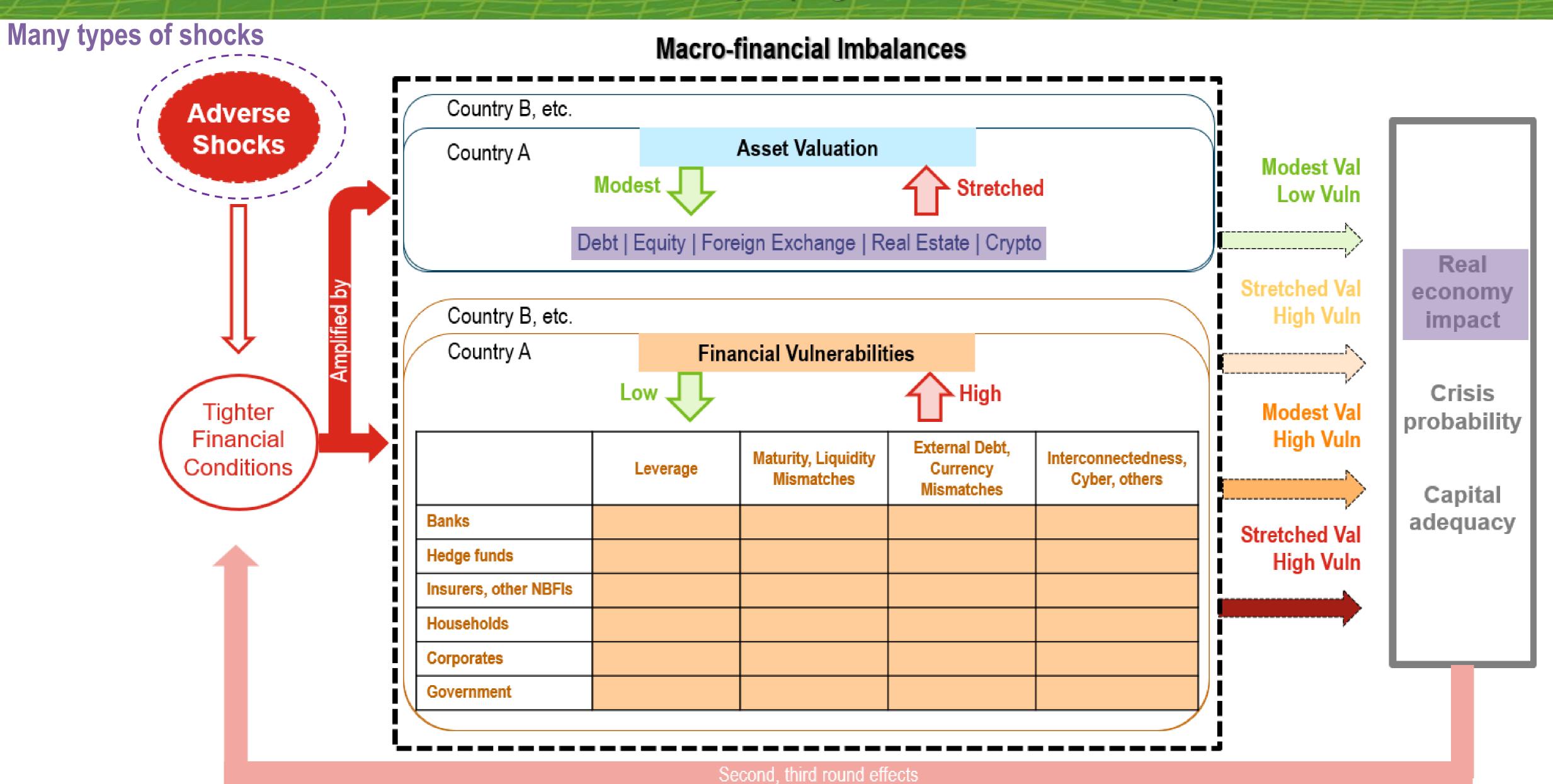
based on Adrian et

al. (2019)

Banking sector solvency stress tests or scenario analysis

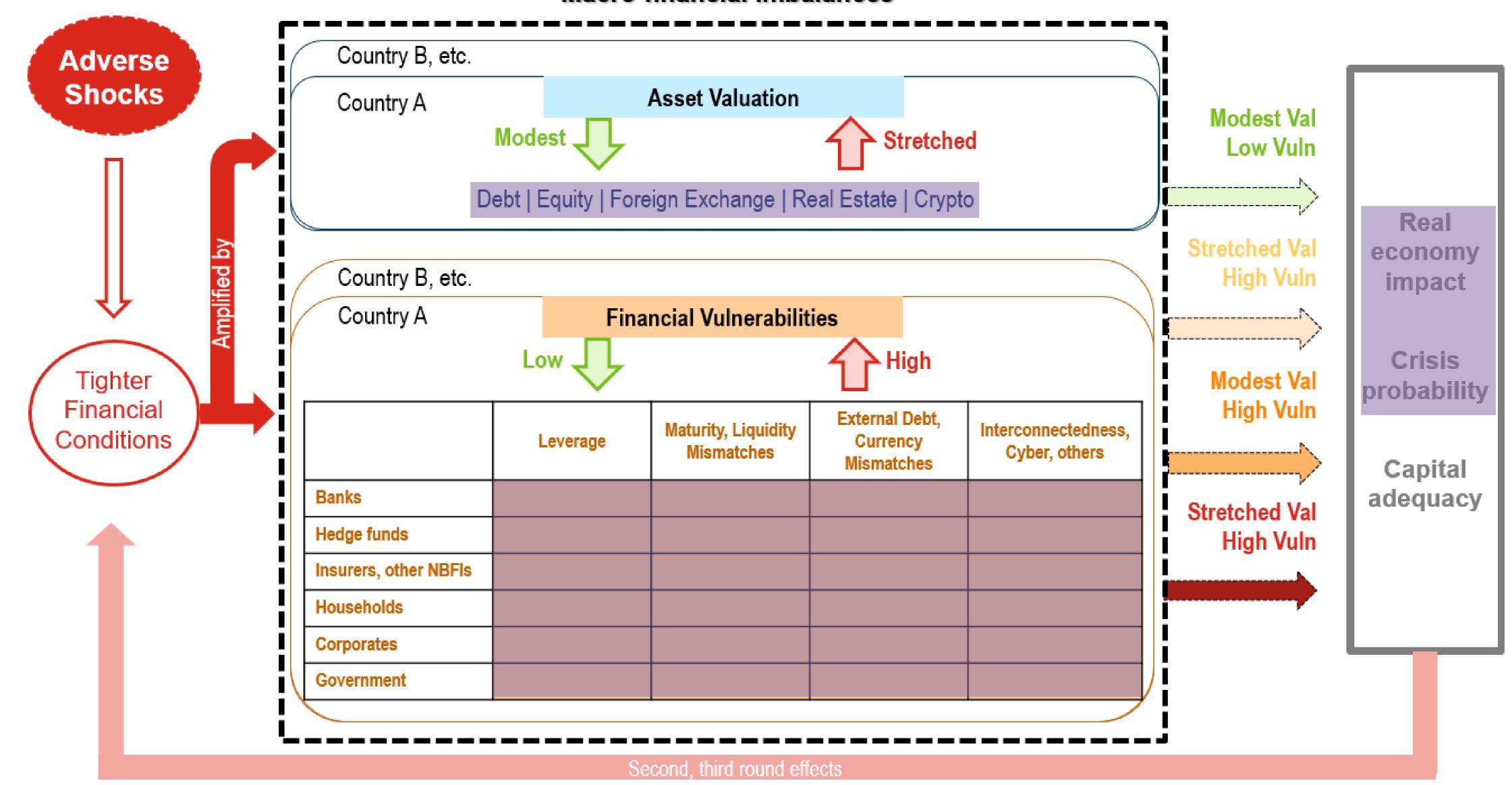


Investor risk surveys (e.g., Bank of America)

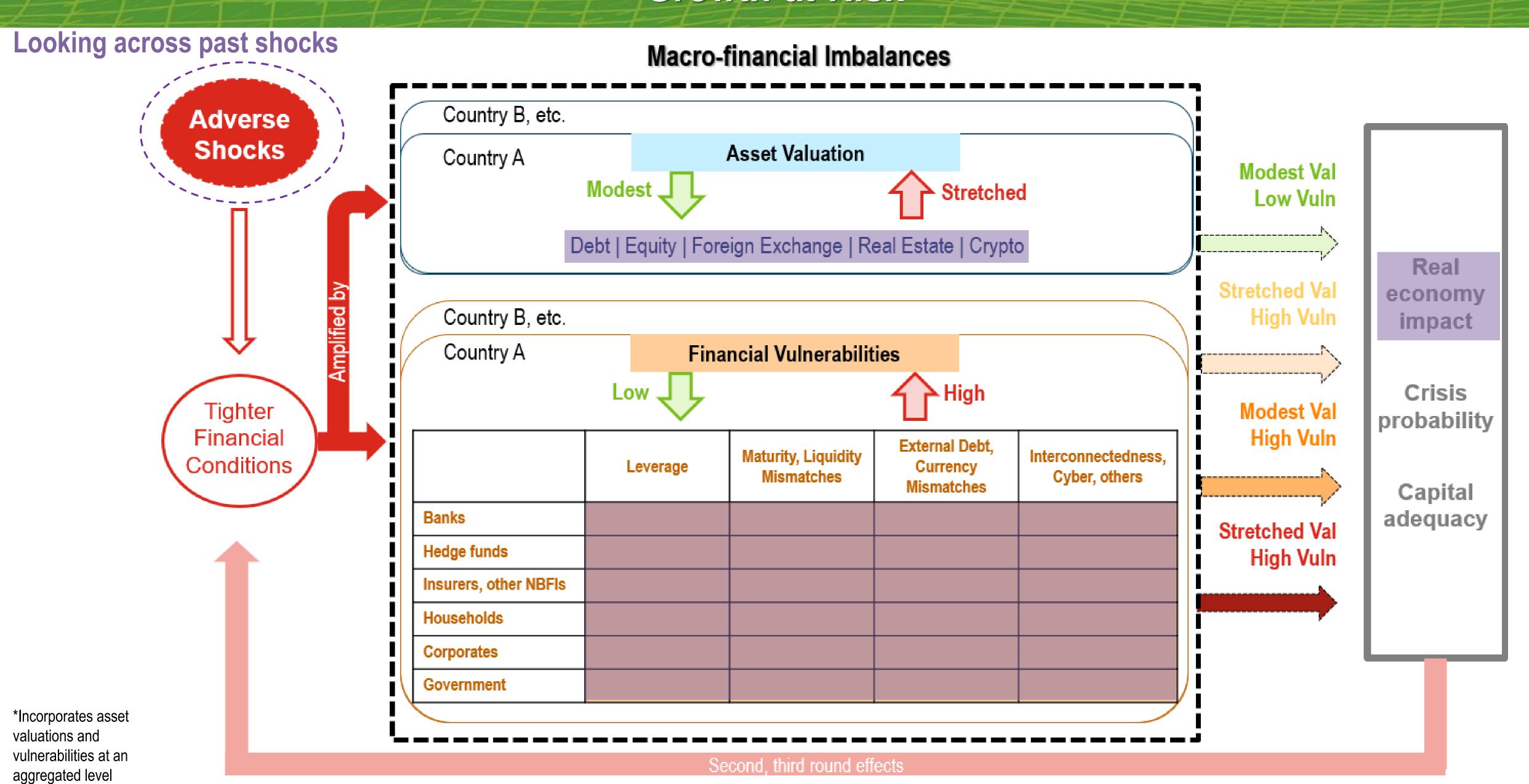


The GFSR, many central bank FSRs

Macro-financial Imbalances



Growth-at-Risk*



Examples from central banks

Euro area financial stability vulnerabilities have eased, yet the outlook remains fragile

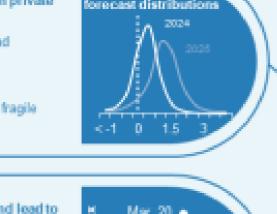
Pricing-for-perfection in financial markets and non-bank liquidity fragilities are creating the potential for outsized market reactions to adverse shocks.

A cohort of vulnerable households, corporates and sovereigns is being tested by rising debt service costs, while a property market downturn is challenging real estate firms.

Euro area banks have been a source of resilience, but low market valuations suggest that challenges remain, notably related to asset quality, funding and revenues.

Risks to the economic outlook may threaten private sector debt service

- Economic and geopolitical uncertainty ahead
- Financing conditions remain tight for firms
- . Rising share of vulnerable households
- Outlook for commercial real estate remains fragile



Low risk pricing can mask vulnerabilities and lead to excessive risk taking

- . Lower volatility supports tighter spreads
- . Total bond funding costs might rise further
- "Al rally" raises concentration risk.
- . Markets price in higher geopolitical risk

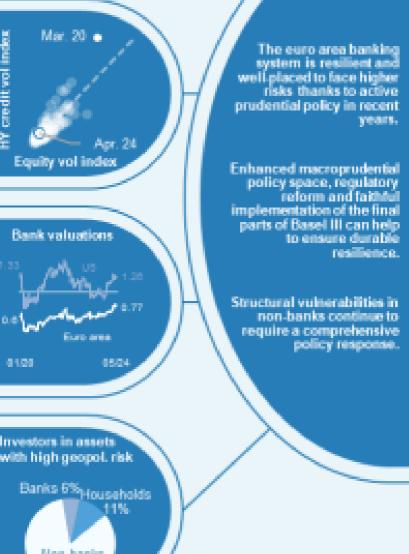
Euro area banks face headwinds from weaker asset quality, lower revenues and cost of funding

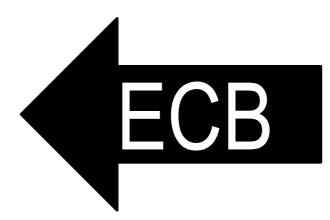
- · Market valuations of banks remain subdued
- Deteriorating commercial real estate asset quality.
- . Rollover of bank funding at higher interest rates
- . Lower income from variable-rate loans expected



Non-banks remain vulnerable to shocks amid low liquidity buffers

- Rising concentration risk in equity portfolios
- · Persistent liquidity mismatches in funds
- . Risk of losses on real estate exposures
- · Uncertain profitability outlook for insurers







Overview of financial system vulnerabilities



Asset valuations

- . Equity price-toearnings ratios moved to the upper end of their historical distributions.
- Corporate bond spreads fell to levels that are low relative to their historical averages.
- Prices of residential real estate remained high relative to fundamentals.
- Prices of commercial real estate declined amid deteriorating fundamentals.



Borrowing by businesses and households

- The ratio of total private debt to gross domestic product (GDP) declined further, approaching its historical average.
- . The business debt-to-GDP ratio remained high, but business debt continued to decline in real terms amid subdued risky debt issuance. Firms' ability to service their
- Household debt was at modest levels relative to GDP and concentrated among prime-rated borrowers.

debt remained robust.



Leverage in the financial sector



- The banking system remained sound and resilient, with risk-based capital ratios well above regulatory requirements.
- Nonetheless, some banks continued to face sizable fair value losses on some fixed-rate assets held on their balance sheets.
- Leverage increased from already elevated levels at the largest hedge funds.
- Broker-dealer leverage remained near historically low levels.

Funding risks

- Most domestic banks maintained high levels of liquid assets and stable funding.
- However, concerns over uninsured deposits and other factors continued to generate funding pressures for a subset of banks.
 - Structural vulnerabilities persisted at money market funds, some other mutual funds, and stablecoins.
 - Life insurers continued to hold a high share of illiquid and risky assets.

		CY								
		80	85	90	95	00	05	10	15	20
Financial	DI of lending attitudes of financial institutions			ш	ш	ш	-	ш	ш	ш
institutions	Growth rate of M2	- 111111	ш		ш	ш	ш	ш	ш	
Financial markets	Equityweighting in institutional investors' portfolios			ППП	ПП	ПП	ПП	ПП	ПП	\mathbf{m}
	Stock purchases on margin to sales on margin ratio			ш	шш		ШП			
Private sector	Private investment to GDP ratio									
	Total credit to GDP ratio		ПП	ш		ППП	ШП	ППП		
Household	Household investment to disposable income ratio						Ш			
	Household loans to GDP ratio				Ш					
Corporate	Business fixed investment to GDP ratio	т	Ш		ПП	ППП	ППП	ПП	ППП	Ш
	Corporate credit to GDP ratio									
Real estate	Real estate firms' investment to GDP ratio							Ш		
	Real estate loans to GDP ratio				Ш			Ш		
Asset prices	Stock prices		Ш	Ш			Ш	ш		Ш
	Land prices to GDP ratio		Ш			ППП	ПППТ	ППП		

Challenges in assessing vulnerabilities

Assessment of data gaps for nonbank financial institutions

(Chapter 2 of April 2023 GFSR)

Lack data needed to quantify certain vulnerabilities:

- Data gaps. See nonbank financial intermediation example ->
- No access to confidential supervisory data e.g., cross-border bank exposures.

Data arrives with significant lag or too backward-looking.

 E.g., Credit-to-GDP data lagged by almost one-year.

Consistent data across countries often not available; resource constraints.

Table 2.2. Regulatory Data Gaps for NBFIs

NBFI (GFA)	Financial Leverage	Liquidity	Interconnectedness	Currency Mismatches	
Investment funds (excluding money market funds and hedge funds) (\$58 trillion, 12% of GFA)					
Insurance companies (\$40 trillion, 9% of GFA)					
Pension funds (\$43 trillion, 9% of GFA)					
Money market funds (\$8.5 trillion, 2% of GFA)	N/A			N/A	
Structured finance vehicles (\$6 trillion, 1% of GFA)					
Hedge funds (\$6 trillion, 1% of GFA)					
Central counterparties (\$0.7 trillion, 0.1% of GFA)	N/A			N/A	

Source: IMF staff elaborations.

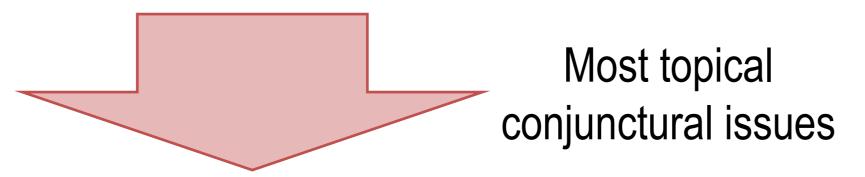
Note: This table is to be read jointly with Table 2.1 on NBFI vulnerabilities. Red denotes no/very little data in areas with high or medium/high vulnerabilities; orange denotes no/very little data in areas with low/medium vulnerabilities; yellow denotes some data in select jurisdictions in areas with high or medium/high vulnerabilities; light green denotes some data in select jurisdictions in areas with low or medium vulnerabilities; dark green denotes broadly adequate data irrespective of level of vulnerabilities. GFA = global financial assets; N/A = not applicable; NBFI = nonbank financial intermediary.

Market intelligence helps "pick and choose battles"

Market Intelligence

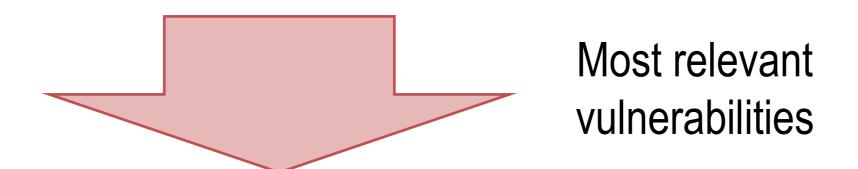
Analyst Reports
Market Data

Market
Outreach



Global Markets Monitor and Special Features

Surveillance Meetings



Global Financial Stability Report
Presentation to governors and ministers

Vulnerabilities identified via market intelligence:

- Private credit (June 2023)
- Lop-sided yen positioning (March 2024)

Fragilities missed:

- UK LDI episode (October 2022)
- US regional bank failures (March 2023)

Overcoming data challenges:

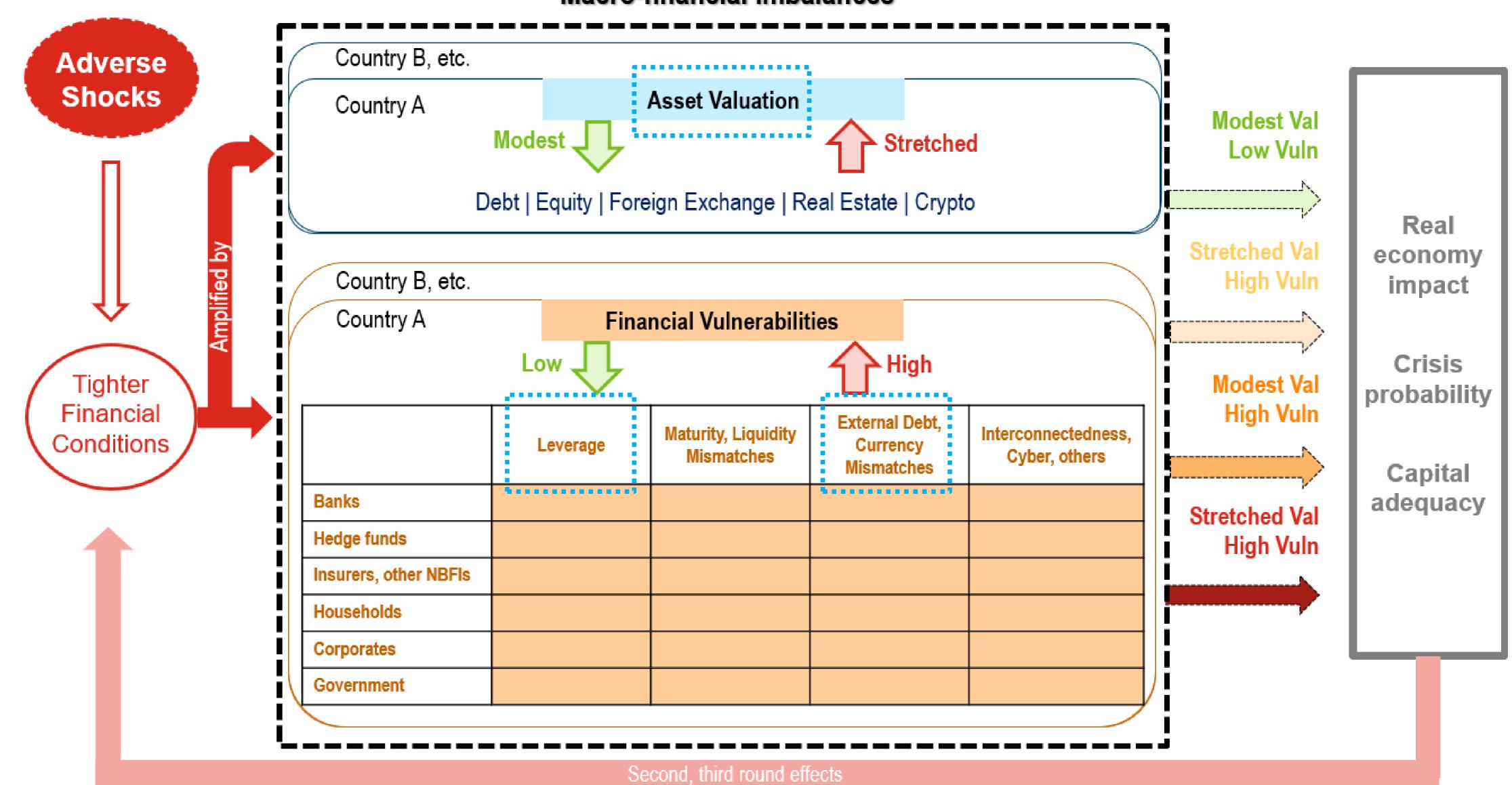
- No supervisory banking data—Key Risk Indicators using analyst forecasts (Oct 2023),
- No data on office CRE exposures—textual analysis on 10-Qs (Oct 2024).

FSAPs help identify vulnerability at the country level.

Most relevant vulnerabilities

Today's focus

Macro-financial Imbalances

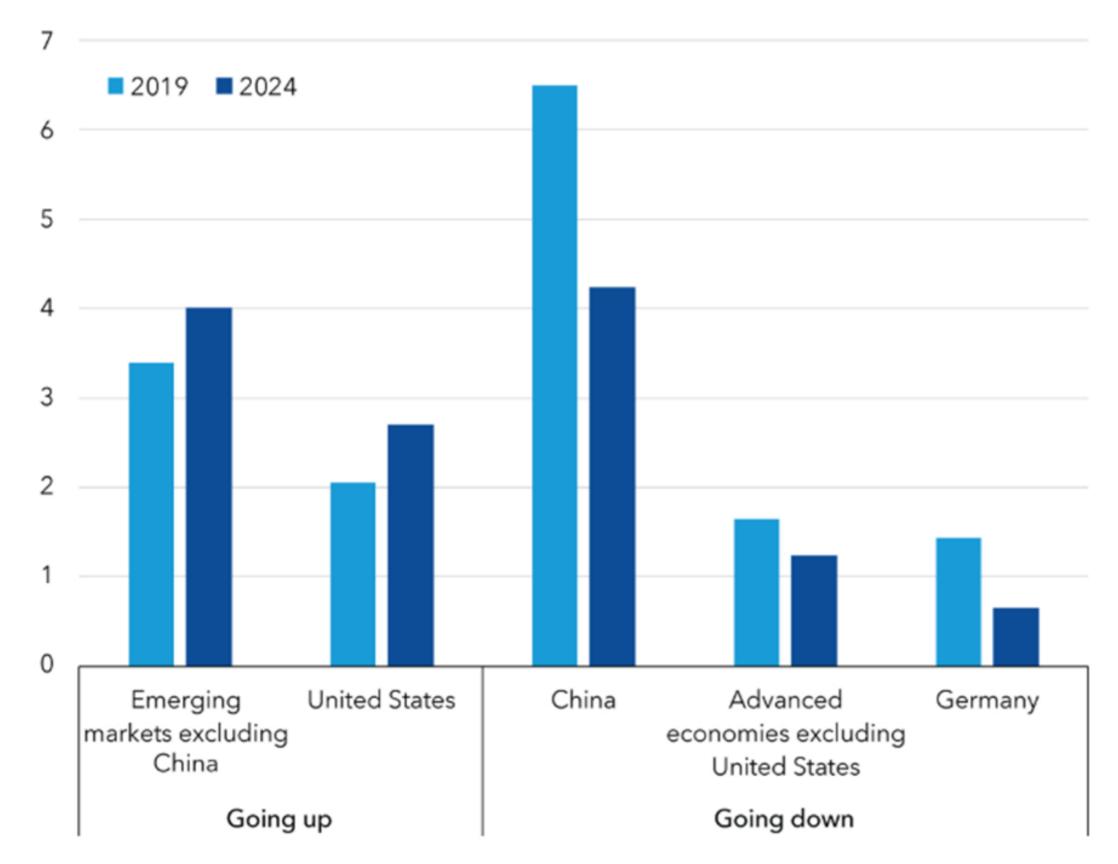


Backdrop

Global Economic and Financial Market Divergence

Potential growth is diverging across economies

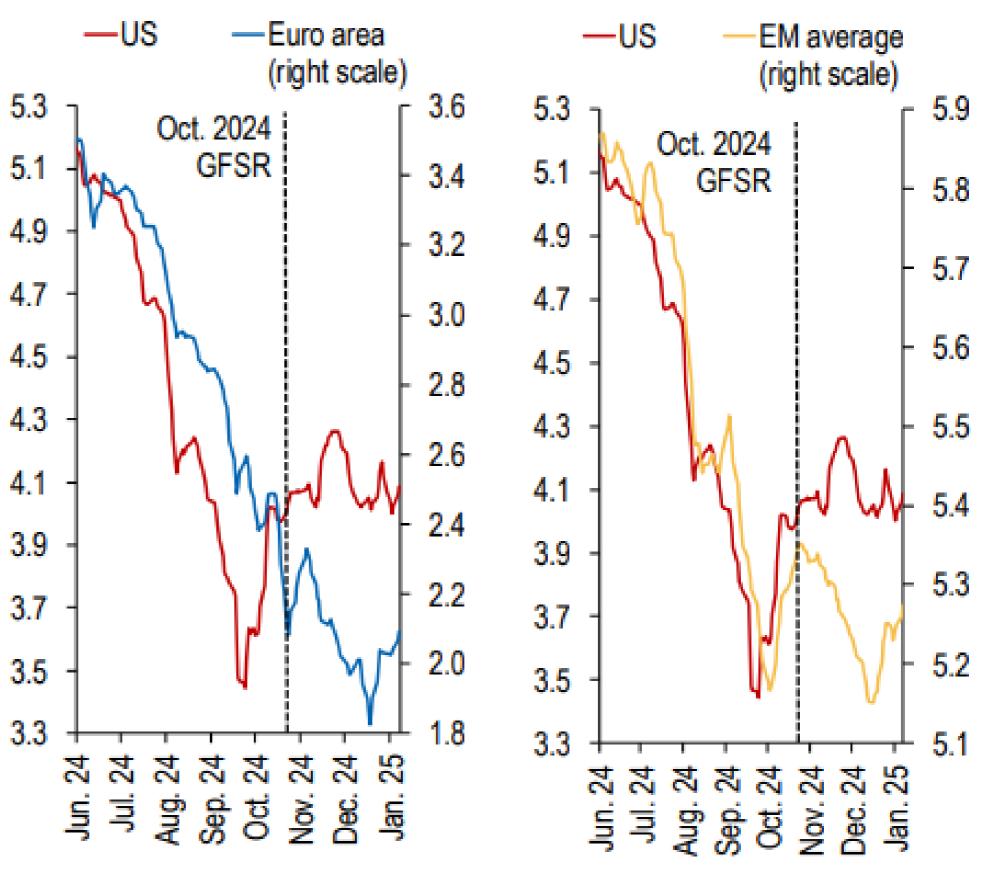
Real potential GDP, annual percent change



Sources: IMF, World Economic Outlook; and IMF staff calculations.



Market-Implied Six Month-Ahead Policy Rates (Percentage points)

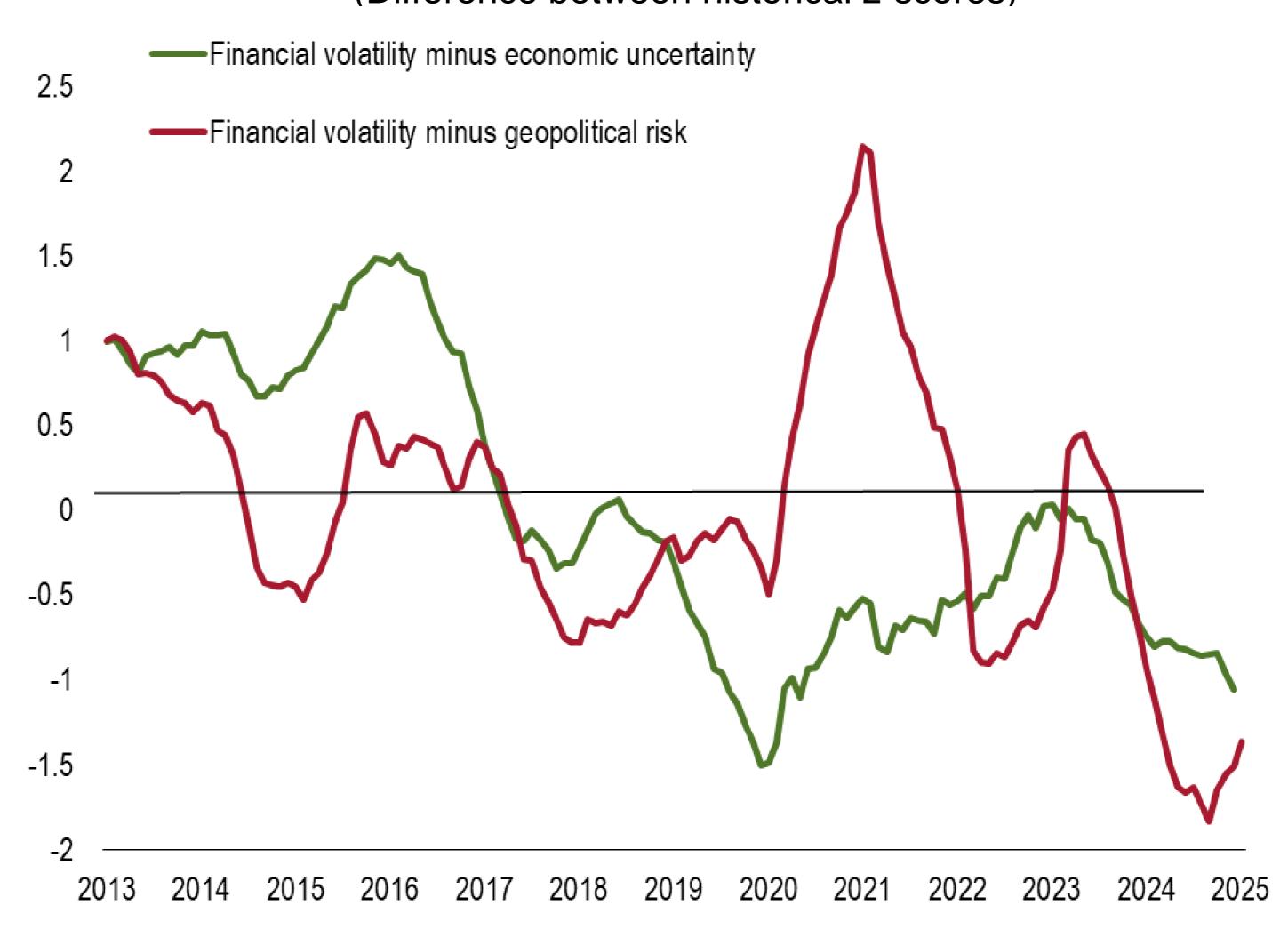


Sources: Bloomberg Finance L.P.; and IMF staff calculations.

Note: The EM group comprises Chile, China, Colombia, India, Malaysia, Mexico, Poland, South Africa, and Thailand; EM = emerging markets. GFSR = Global Financial Stability Report.

Markets Underpricing Uncertainty

Gap between financial volatility, economic uncertainty and geopolitical risk (Difference between historical z-scores)

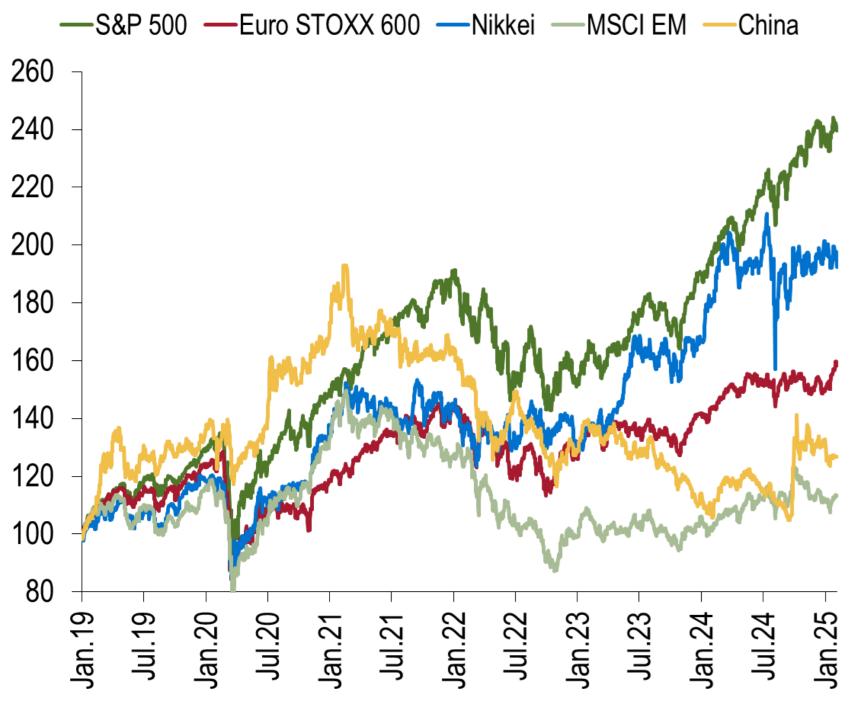


Asset valuation is lofty in major markets

Equities "Priced to Perfection" But Not Everywhere

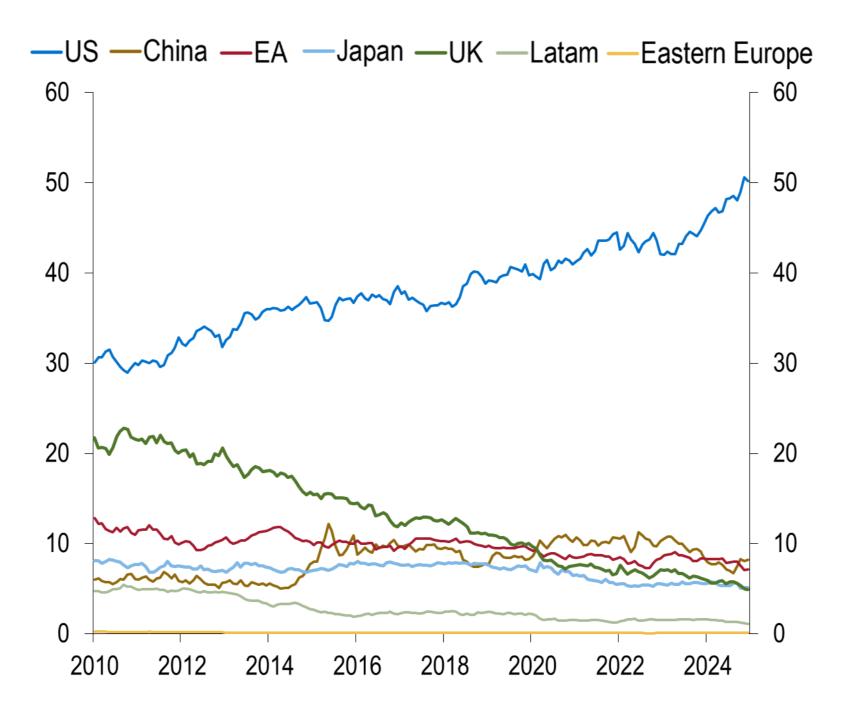
Performance of Selected Indices

(Cumulative growth indexed on December 31, 2018)



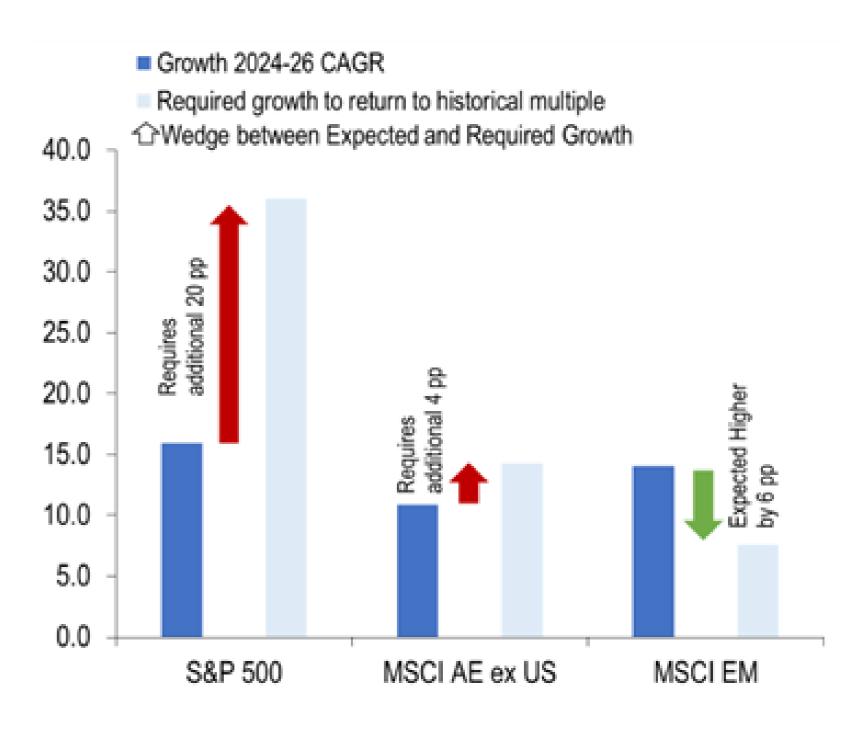
Sources: Bloomberg Finance L.P.; and IMF staff calculations.

Share of World Equity Market Cap (Percent)



Sources: Bloomberg Finance L.P.; and IMF staff calculations.

Required Earnings Growth to Return Existing Valuation to Historical Average Multiple (Percent)

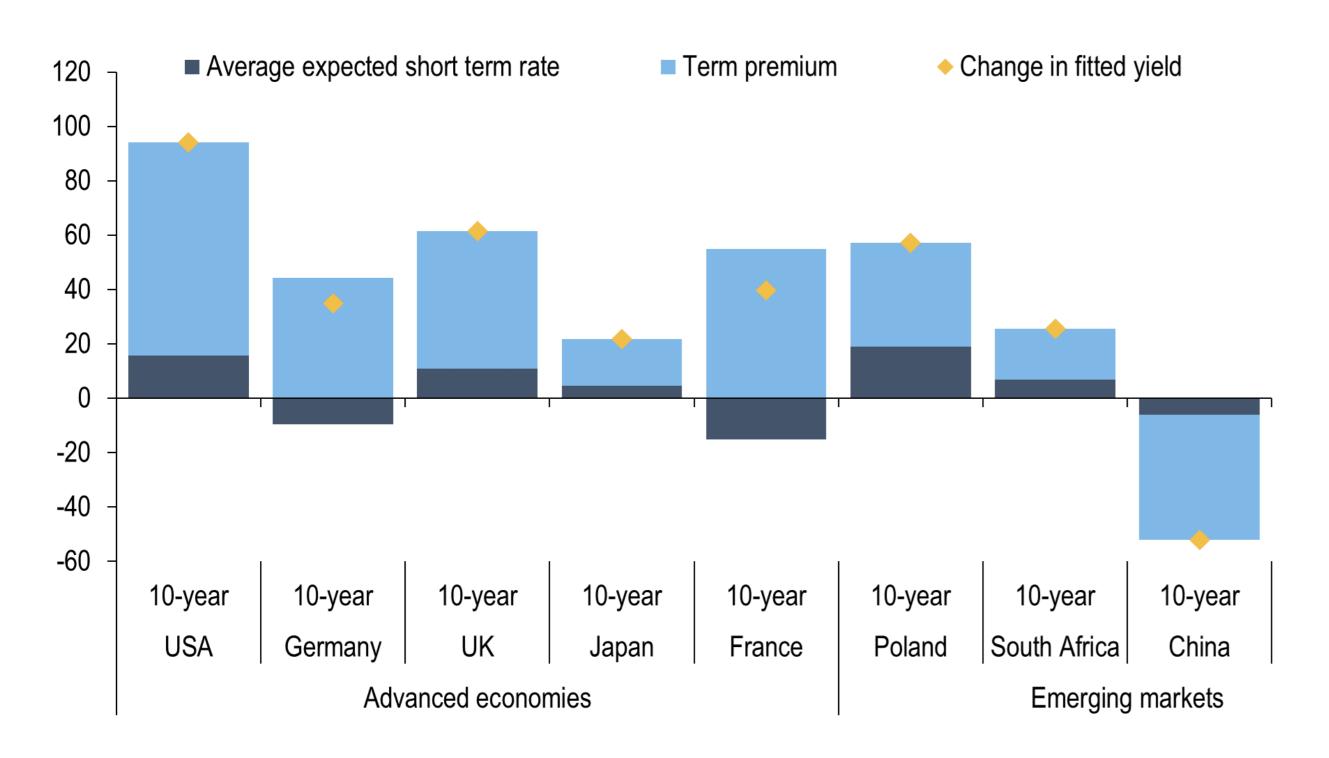


Sources: Bloomberg Finance L.P.; and IMF staff calculations.

Do Bond Yields Adequately Reflect Fiscal Concerns?

Decomposition of the Change in 10-Year Government Bond Yields Since the Last GFSR

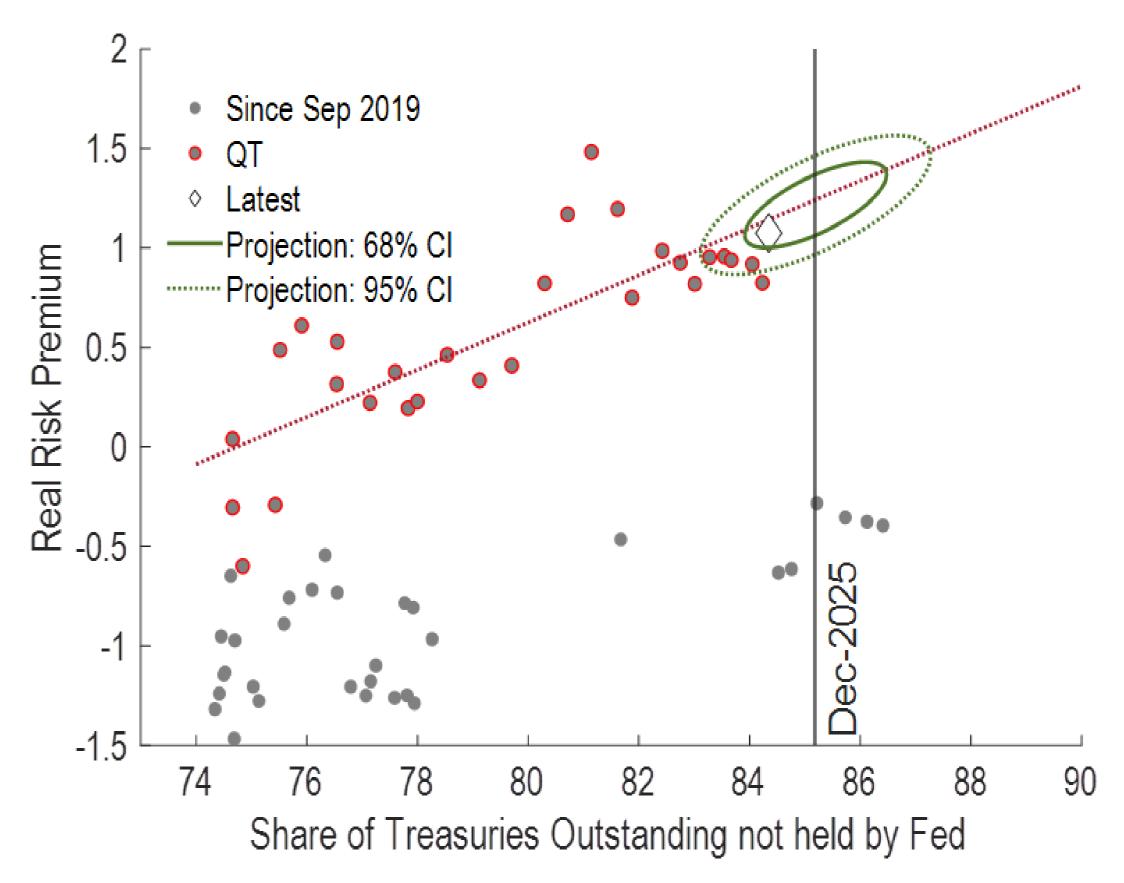
(Basis points)



Sources: Bloomberg Finance L.P.; and IMF staff calculations.

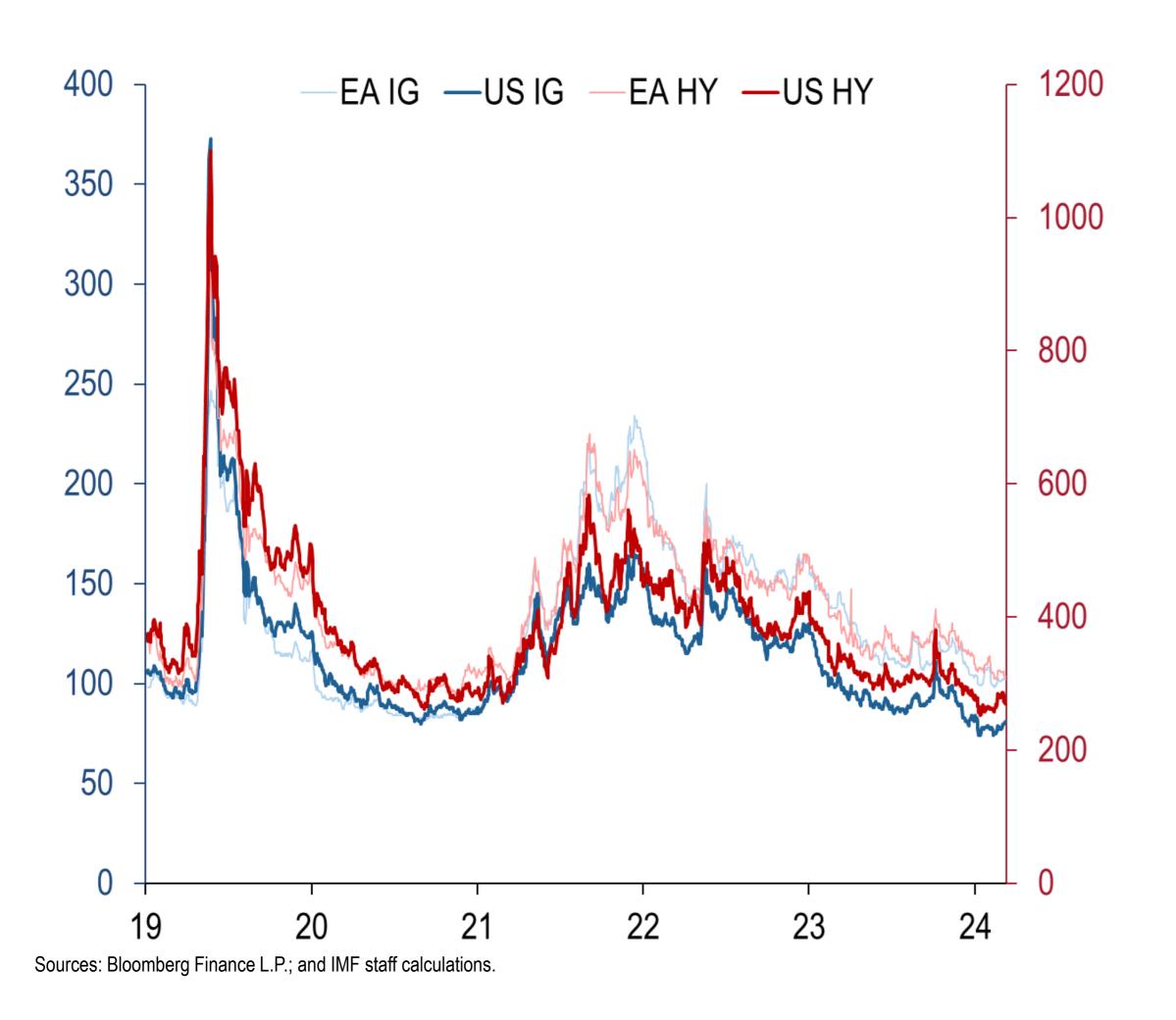
Note: Expected policy rates shown here are based on interest rate futures or swaps. Information conveyed by these markets may deviate periodically from other measures of policy rate expectations, such as those obtained from surveys of professional forecasters.

Real risk premia vs. non-Fed holdings of 10-year bonds (Percent)

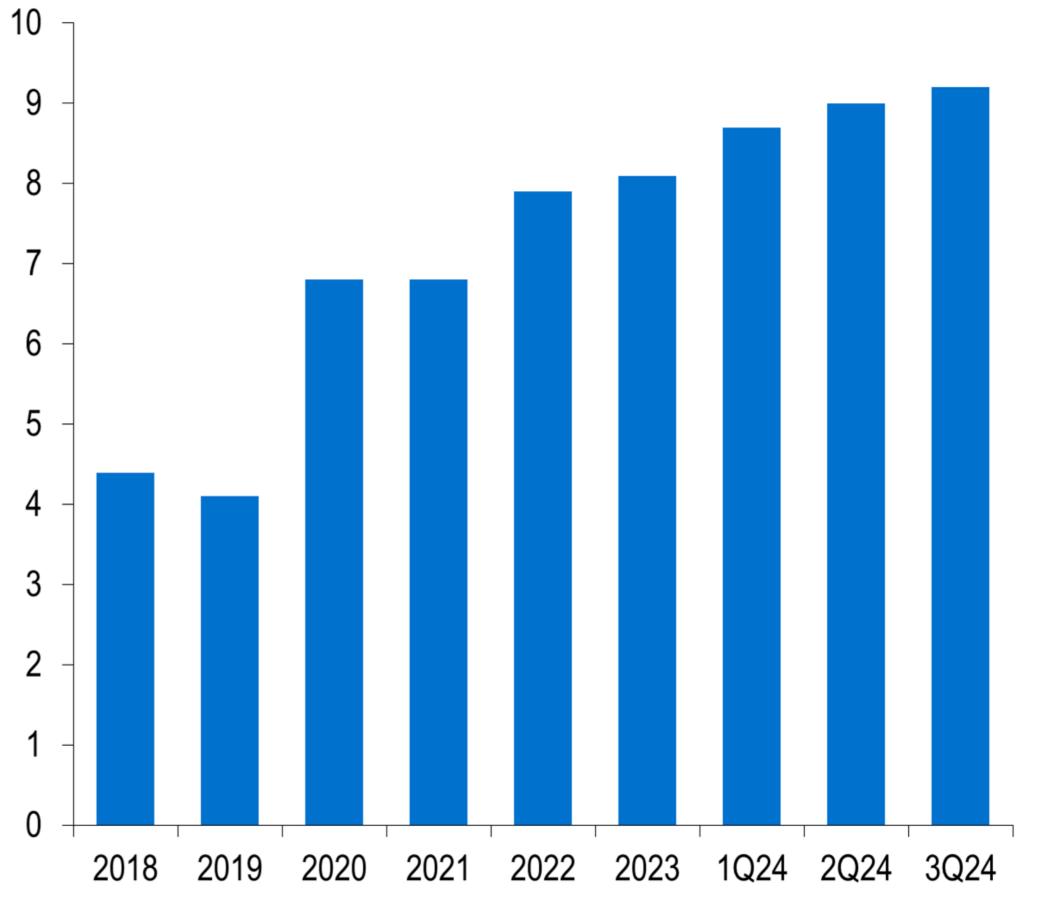


Corporates Credit Spreads Historically Tight Despite High-for-Long

High Yield and Investment Grade average option adjusted spreads (Basis points)



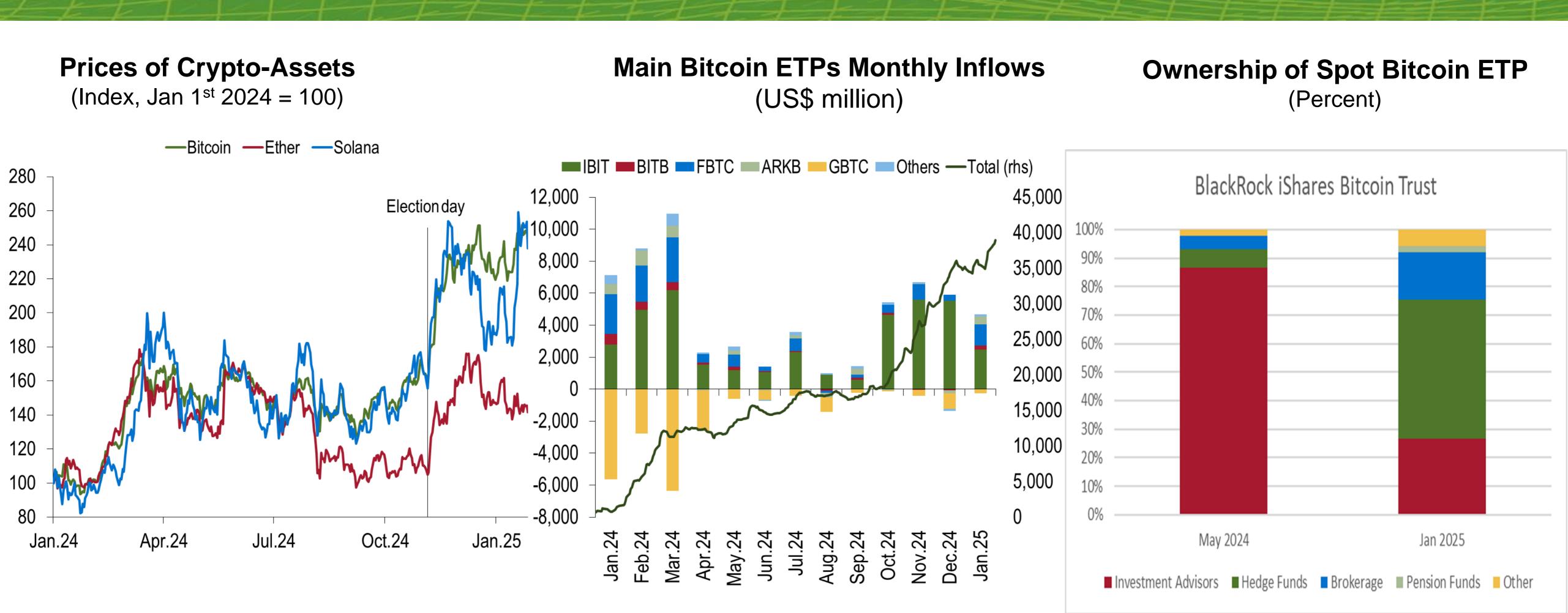
Payment-In-Kind as Share of Interest and Dividend Income of US Private Credit (Percent; Business Development Companies)



Sources: BDCs disclosures; Fitch Ratings; and IMF staff calculations.

Note: When interest is paid in kind, no cash flow occurs. Instead, the interest coupon is added—usually at an extra cost—to the loan's principal. BDC = business development company

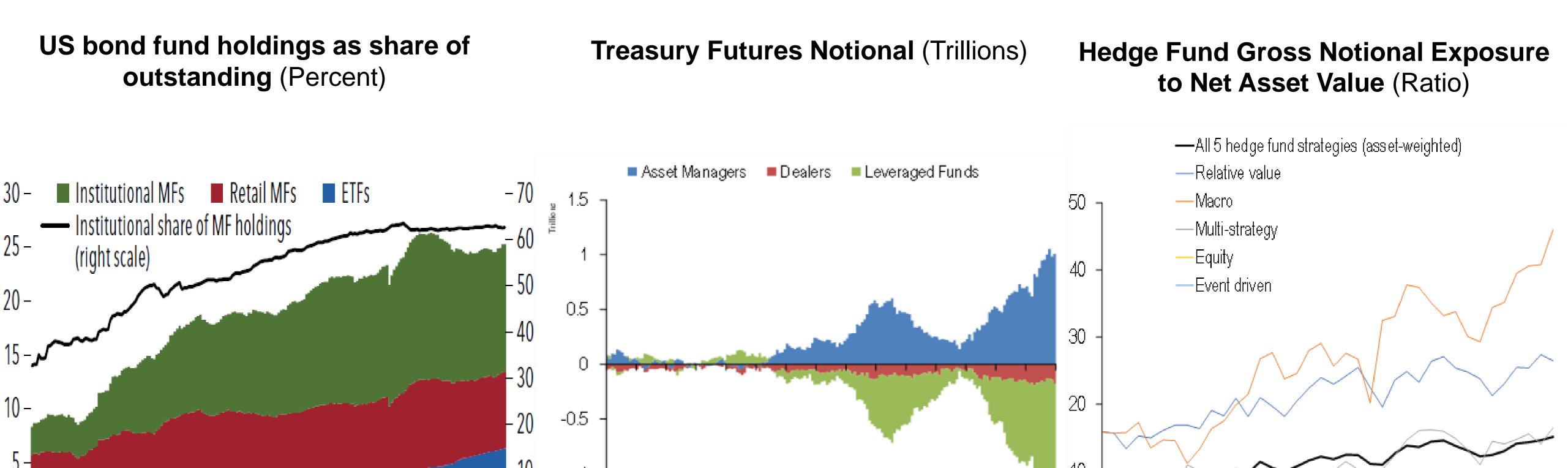
Mainstreaming of Digital Assets



Source: Bloomberg and CoinGecko

Leverage is growing, especially among nonbanks

Leverage is Rising Among Nonbanks

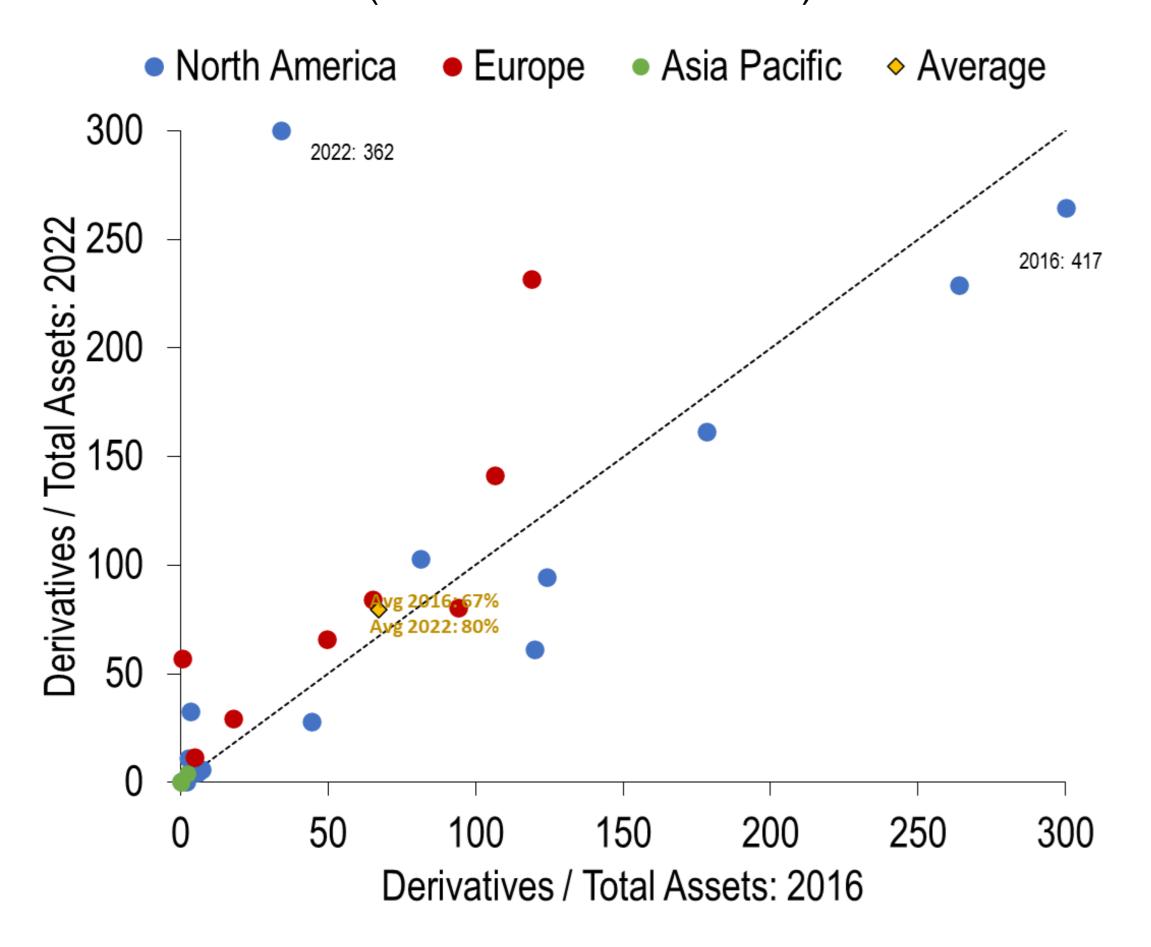


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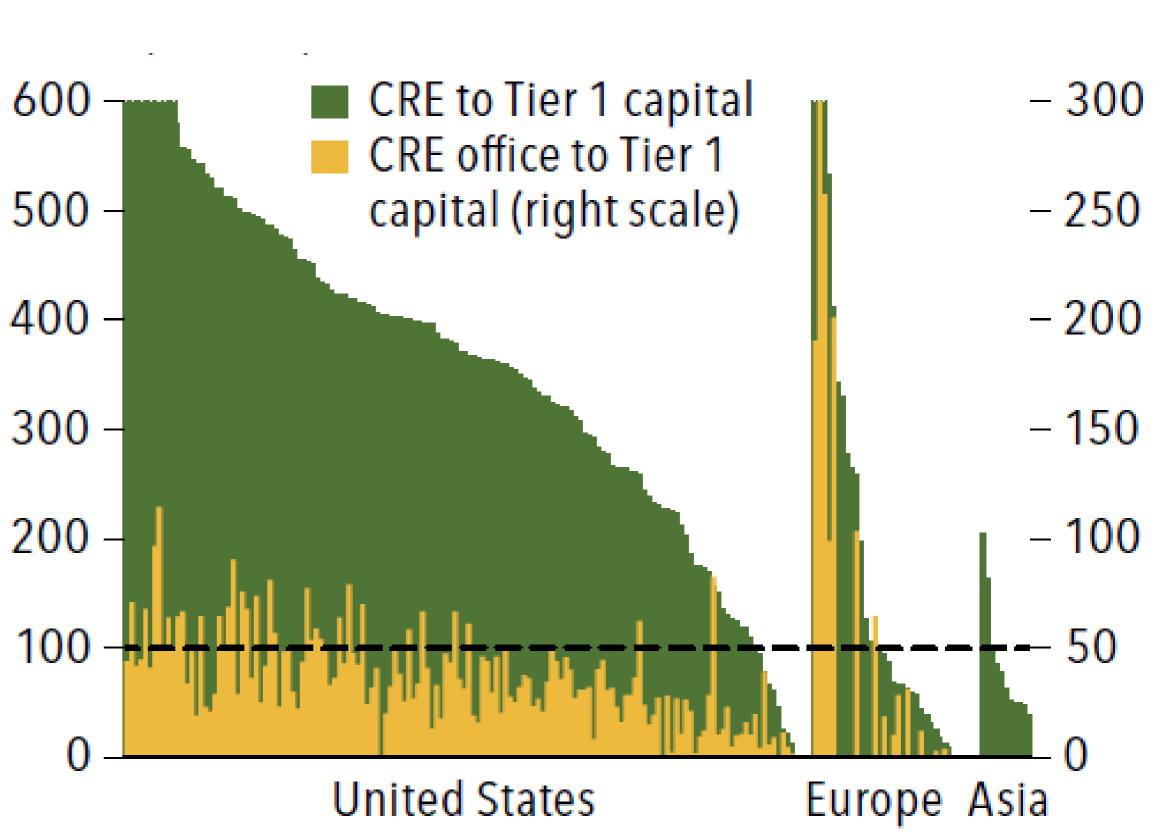
-1.5

....Even for Some Longer-Term Investors

Gross Notional of Derivatives used by pension funds (Percent of total assets)



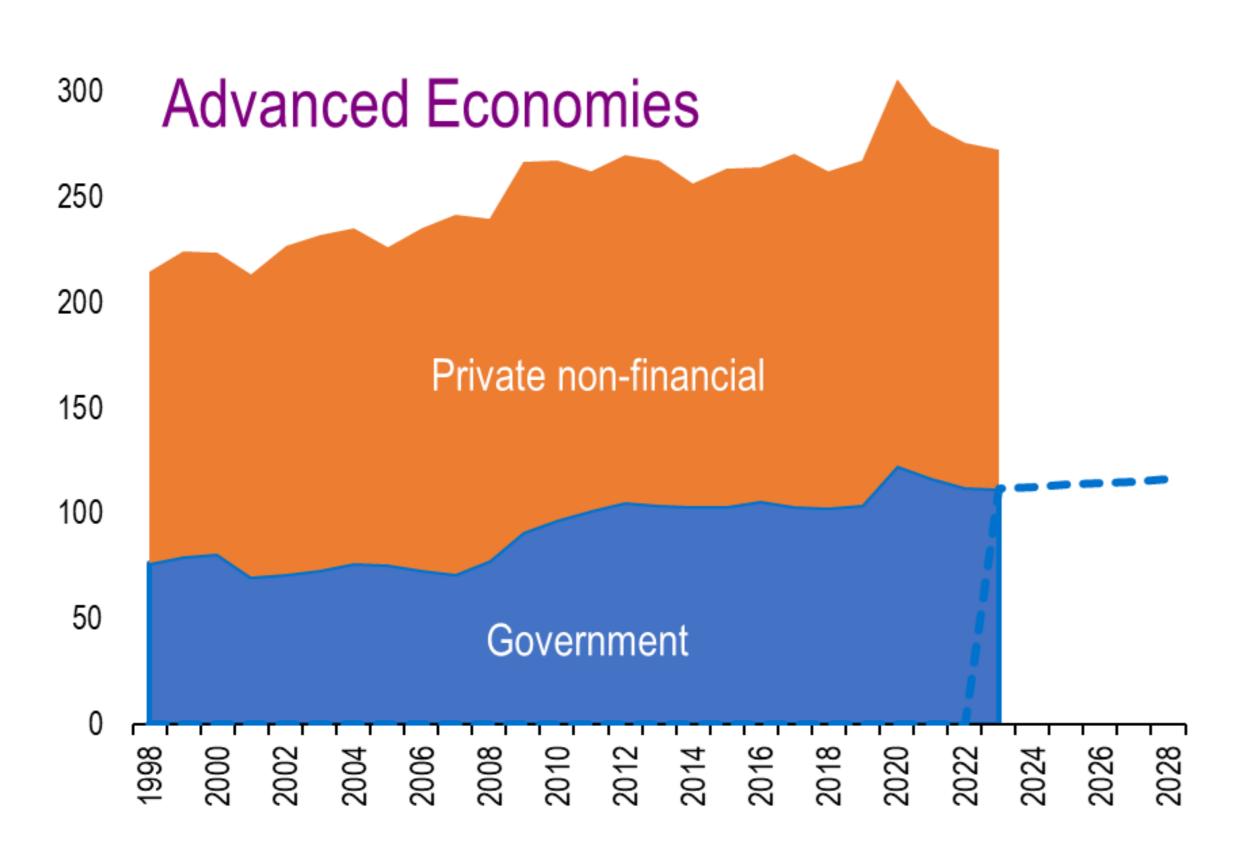


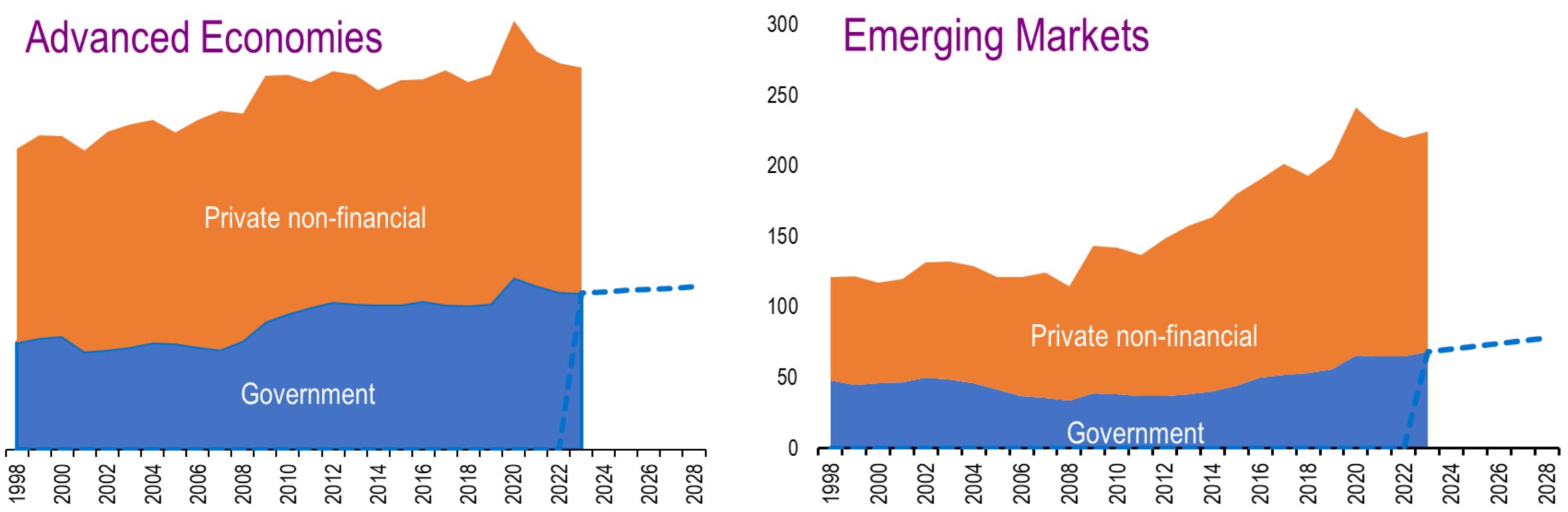


Leverage is Also Rising in the Non-Financial Sector

Government and Private Non-Financial Sector Credit

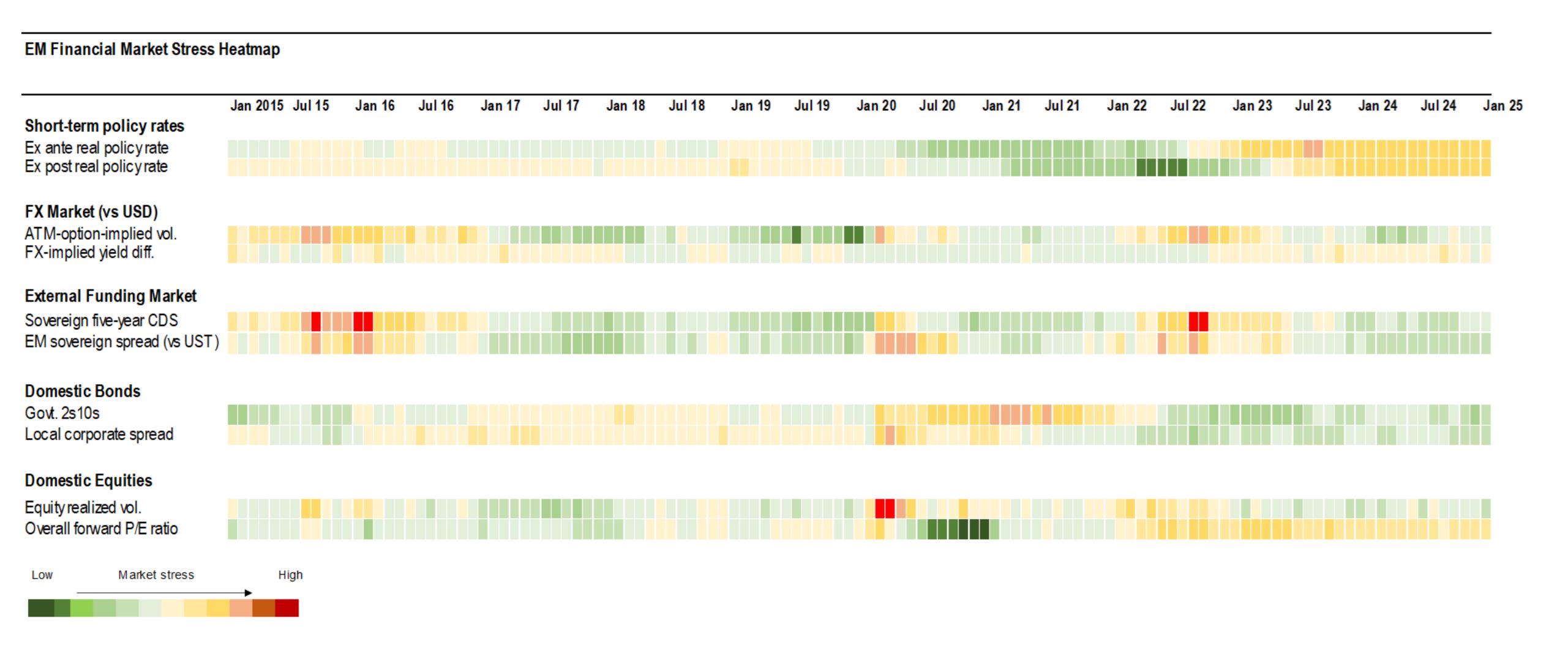
(Percent of PPP-adjusted GDP)





External vulnerabilities facing Emerging Markets

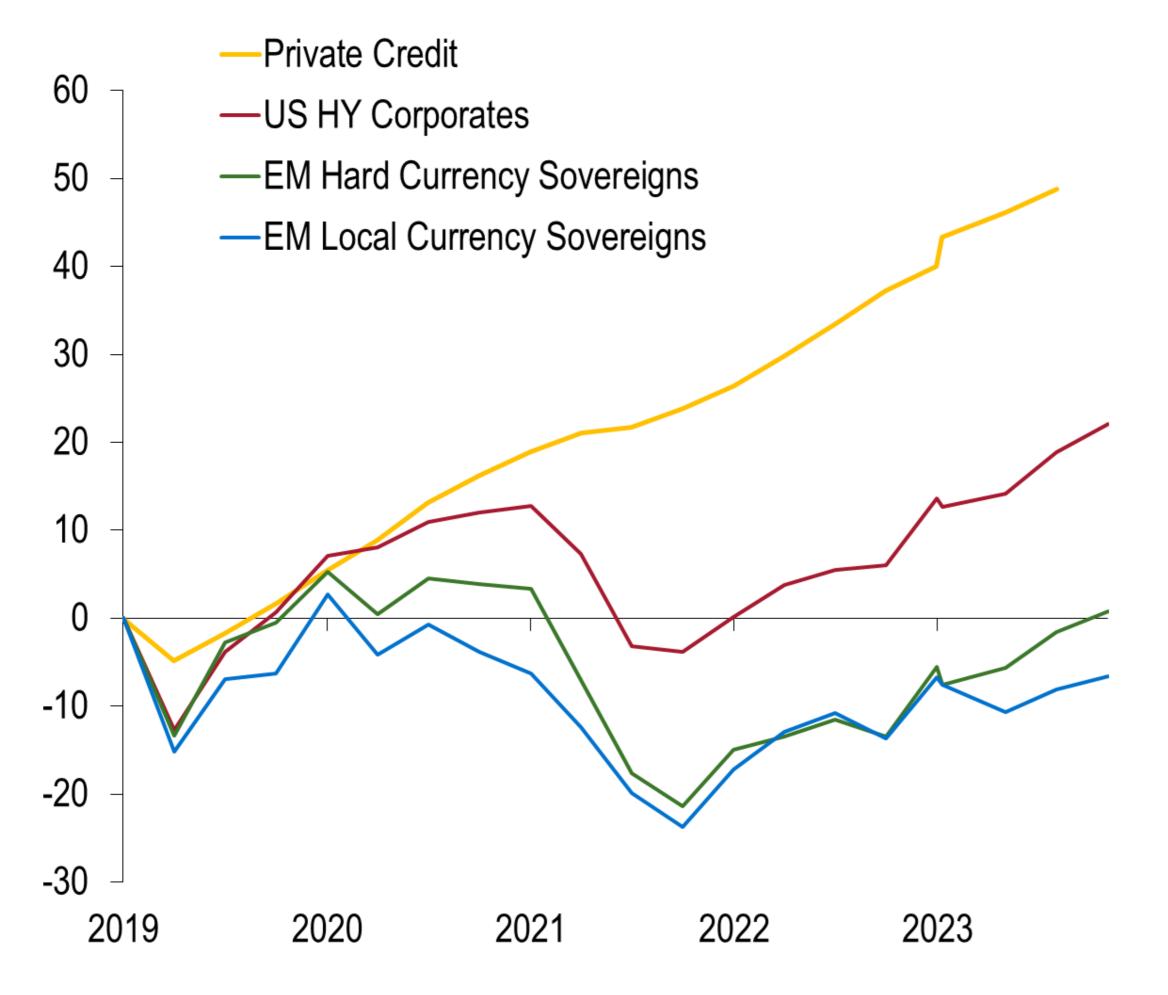
Major emerging markets have been resilient...



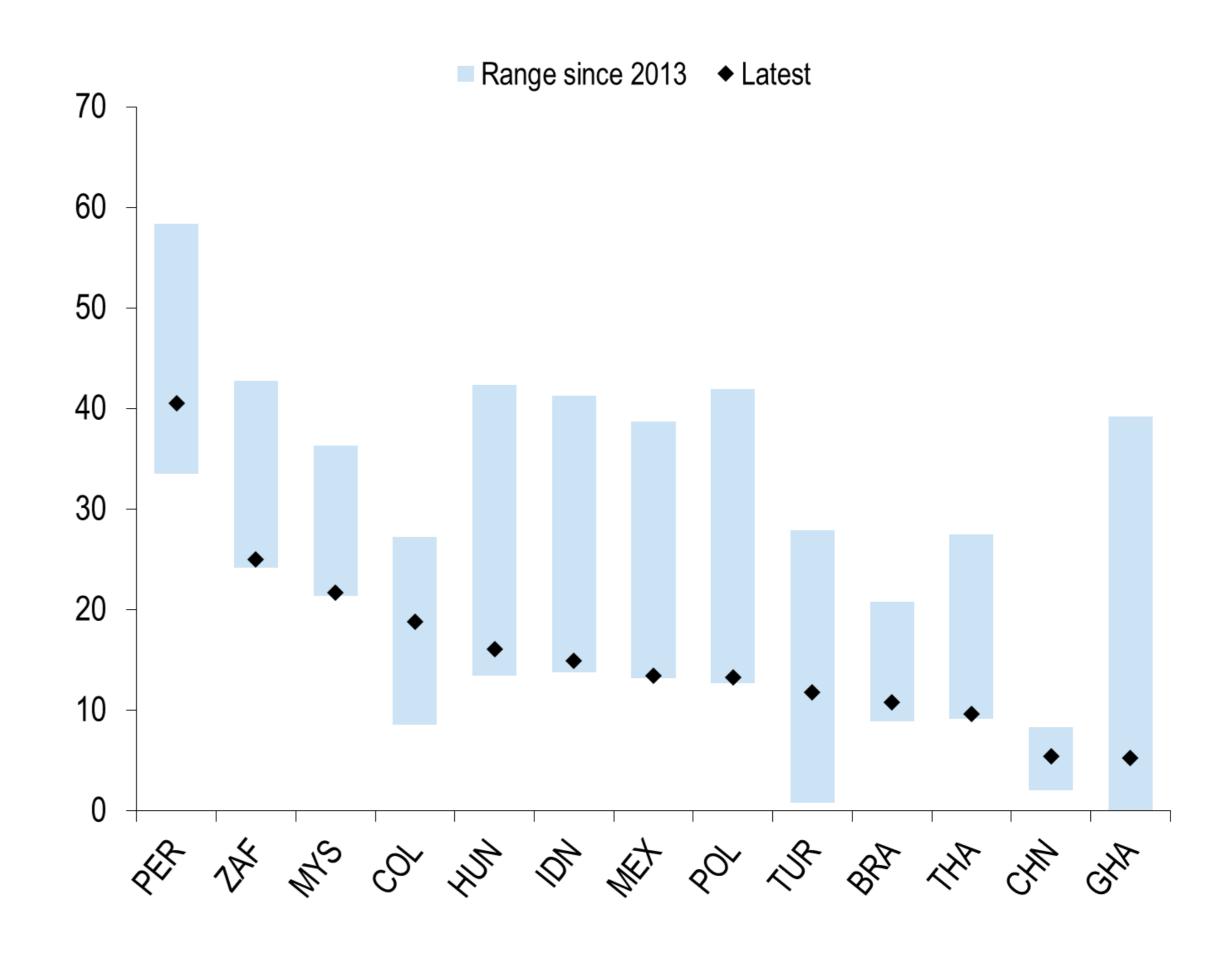
Sources: Bloomberg Finance L.P.; EUROPACE AG/Haver Analytics; JPMorgan; MSCI; and IMF staff calculations

...Although External Environment is Challenging

EMDE Sovereign Bond Returns Compared to alternatives (Percent)



Holdings by Foreign Investors as a Share of Outstanding Local Government Bonds (Percent)

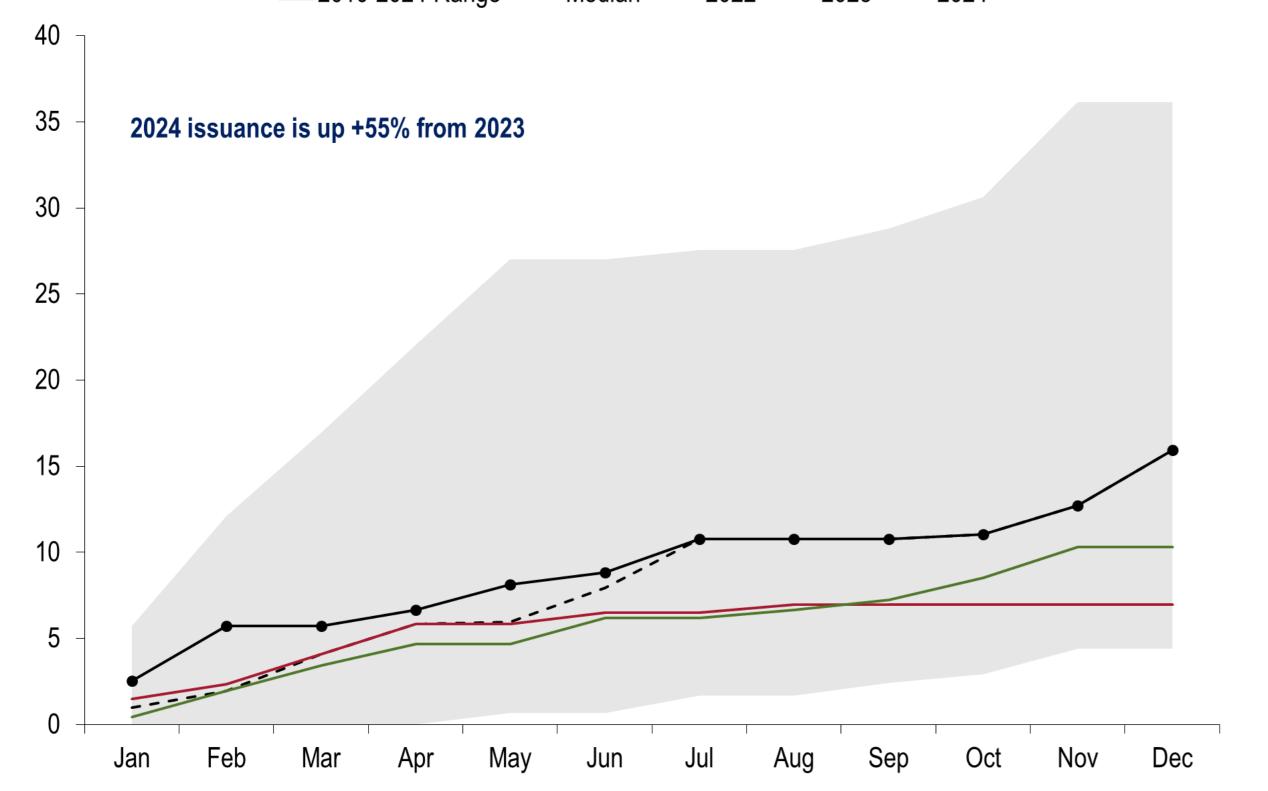


Dollar Strength Pressures Frontier Markets

Frontier Countries' External Bond Issuances

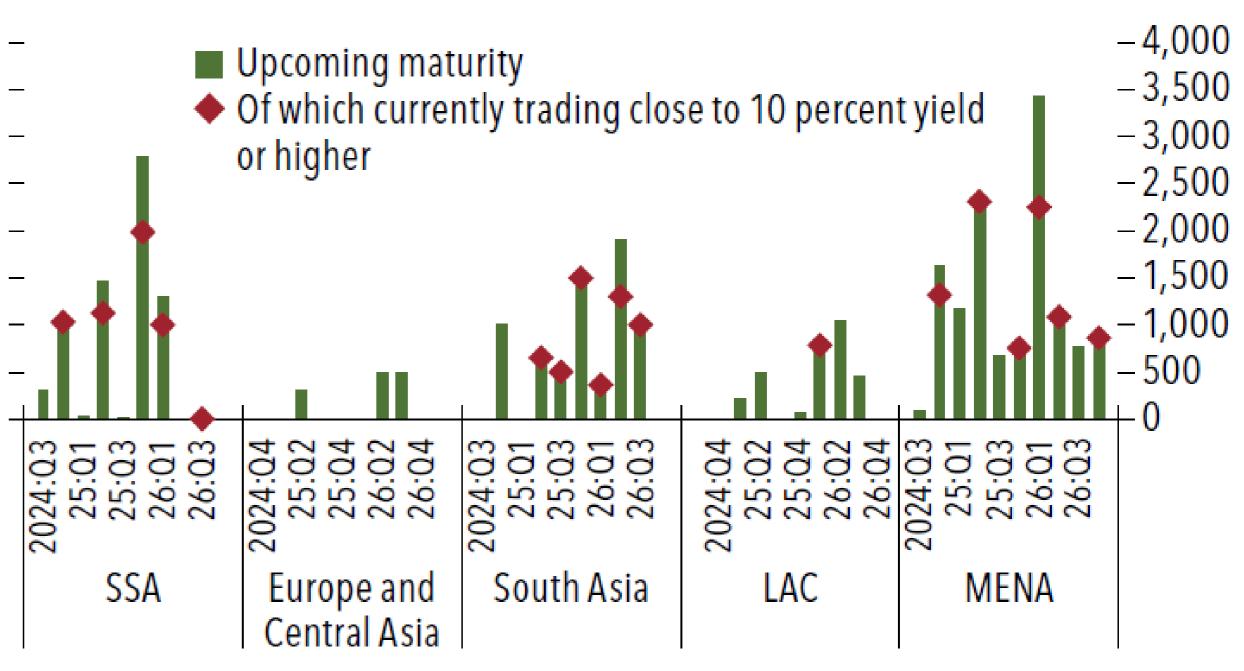
(USD billion)

2010-2024 Range -- Median —2022 —2023 —2024



(Millions of US dollars)

Maturing Frontier and low-income sovereign Eurobonds



Sources: Bloomberg Finance L.P.; Bondradar; and IMF staff calculations. Note: Data includes frontier countries' sovereign issuances only.

Sources: Bloomberg Finance L.P.; EUROPACE AG/Haver Analytics; JPMorgan; and IMF staff calculations

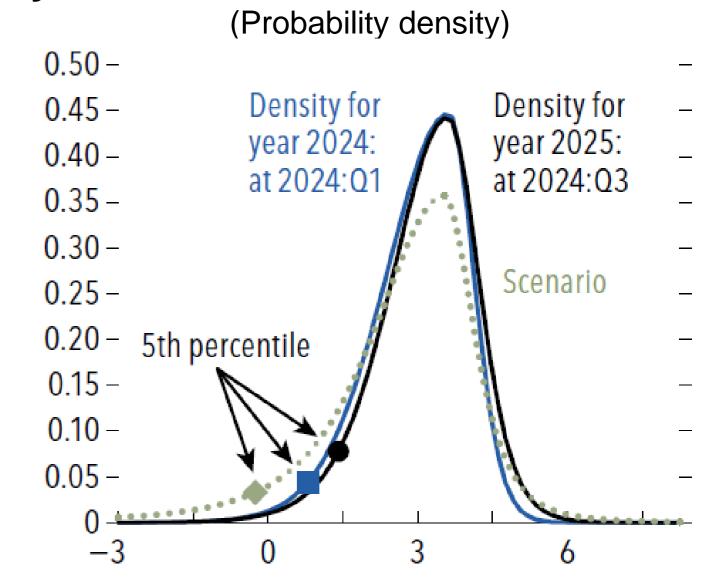
Financial stability assessment using Growth-at-Risk

GFSR uses *h*-year-ahead, Growth-at-Risk model of Adrian et al. (2019) for overall financial stability assessment:

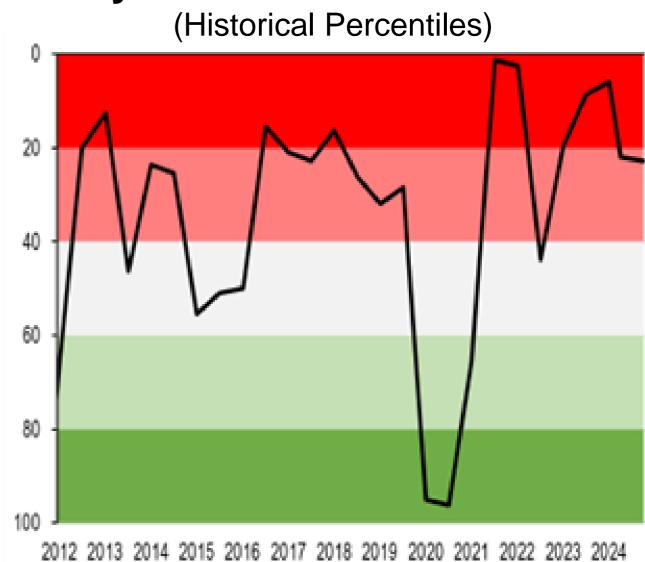
Global real GDP growth_{t+h}, with 5% probability

- = $f(financial\ conditions_t, credit\ growth_t, uncertainty_t)$
- A sudden tightening of financial conditions (asset repricing scenario)
 would exacerbate downside risk.
- Intertemporal trade-off: GaR modest at t + 1, but elevated at t + 3

One-year-ahead Growth Forecast Densities



Three-year-ahead GaR Time Series



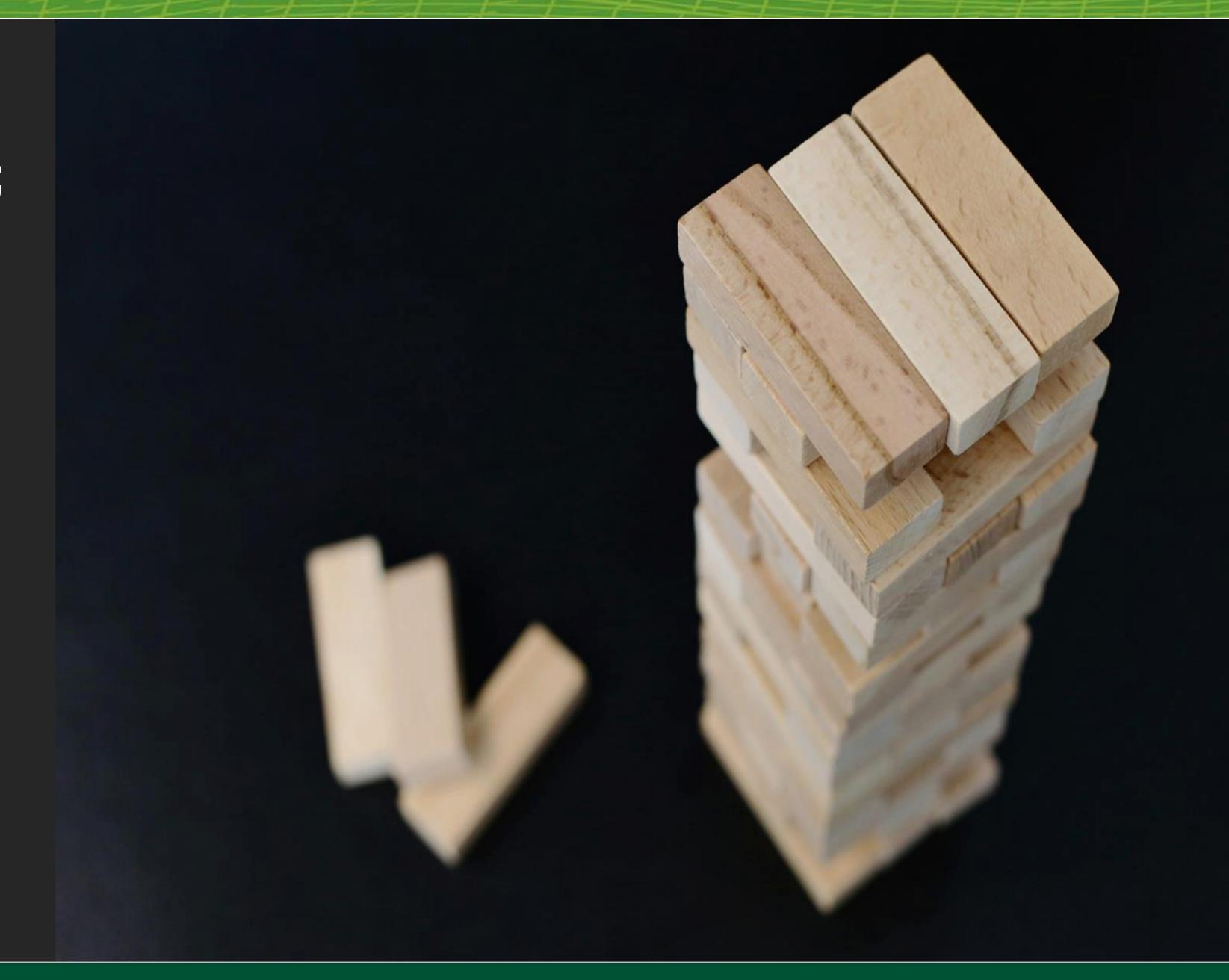
Source: Bank for International Settlements; Bloomberg Finance L.P.; International Financial Statistics; IMF staff calculations.

Where Does This Leave Us?

- Near-term: Growth uneven around the world but still solid; financial conditions easy

 → financial stability risks moderate.
- Medium-term: Vulnerabilities mounts & uncertainty-volatility disconnect
 - inancial stability risks elevated.

Financial Stability Policies?



INTERNATIONAL MONETARY FUND

GLOBAL FINANCIAL STABILITY REPORT

Steadying the Course: Uncertainty, Artificial Intelligence, and Financial Stability

2024 OCT



