

GLOBAL FINANCIAL STABILITY REPORT

Vulnerabilities in a
Maturing Credit Cycle

2019
APR



**MONETARY AND
CAPITAL MARKETS**

IMF Regional Office for Asia and the Pacific

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The Credit Cycle is Maturing

Vulnerabilities:

- Rising corporate debt
- Sovereign-financial sector nexus
- Maturity and liquidity mismatches
- House-price misalignments
- Vulnerabilities in emerging markets



Risks:

- Global growth slowdown
- An unexpected monetary policy shift
- Trade tensions
- Disorderly Brexit

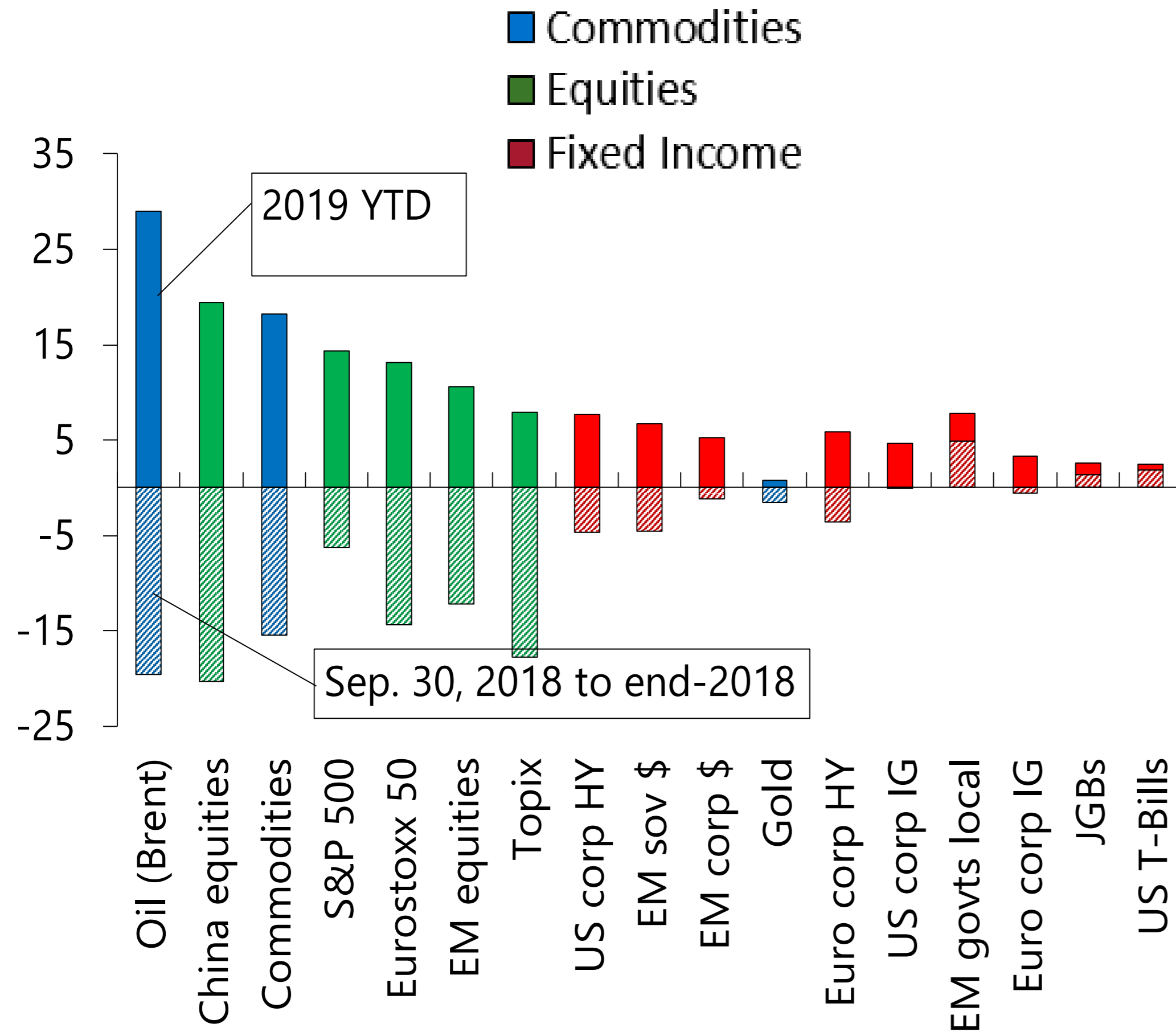
Recent Market Developments

Markets Retraced Most of the 2018 Losses

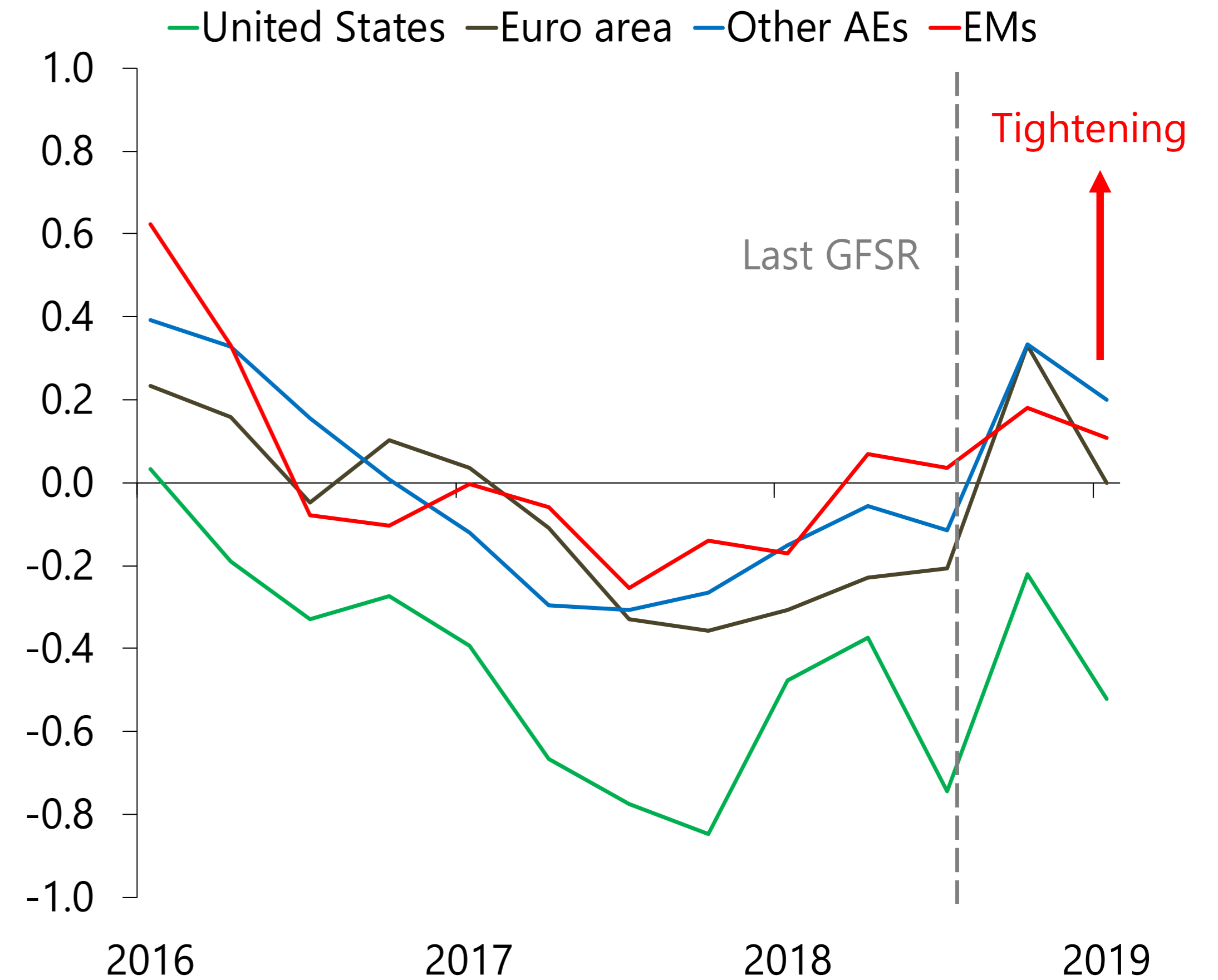
Markets sold off in 2018 on growth concerns, but have retraced most of their losses ...

...and financial conditions have eased again this year.

Returns by Asset Class
(Percent)



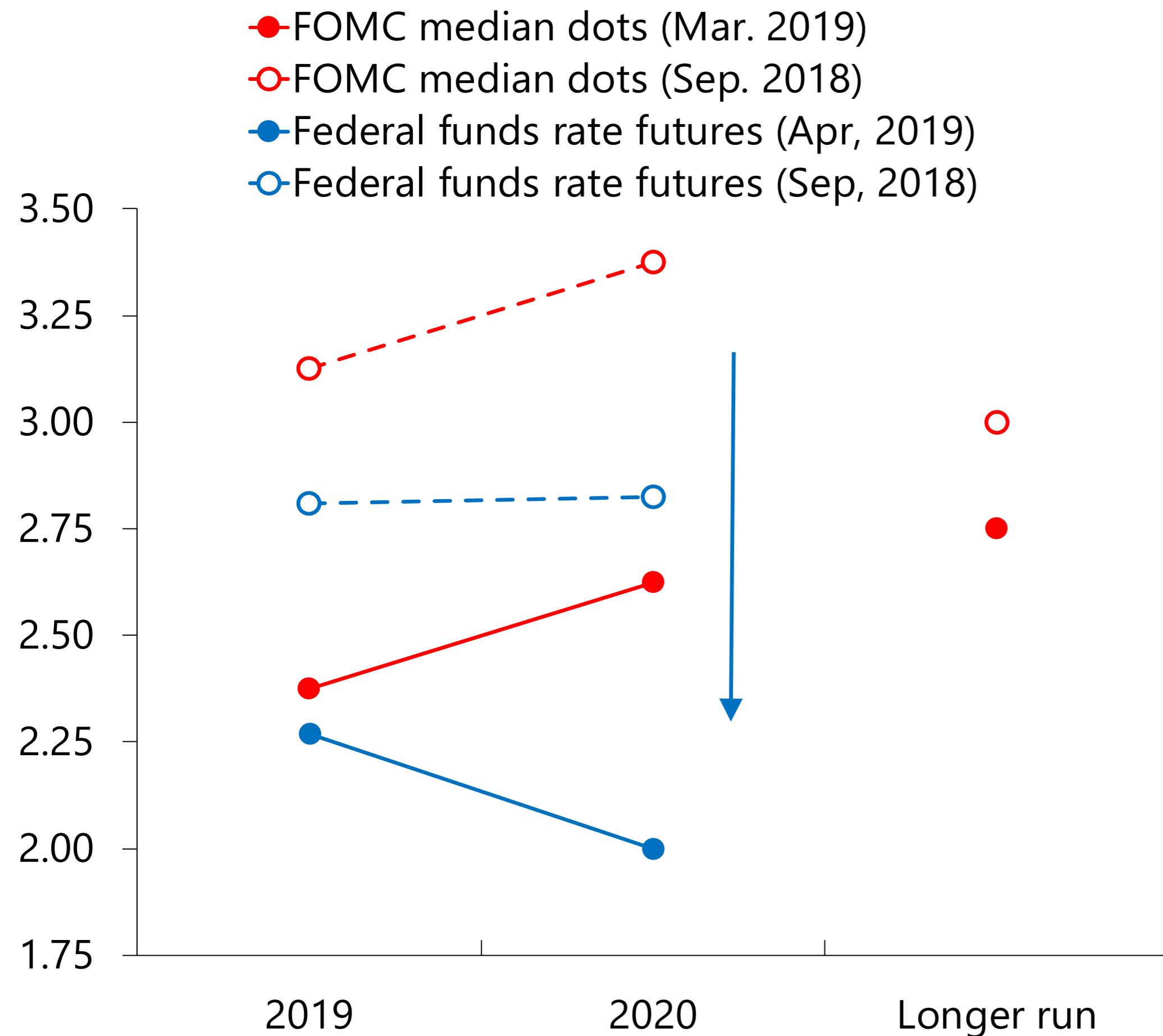
Financial Conditions Indices
(z-score since 1996)



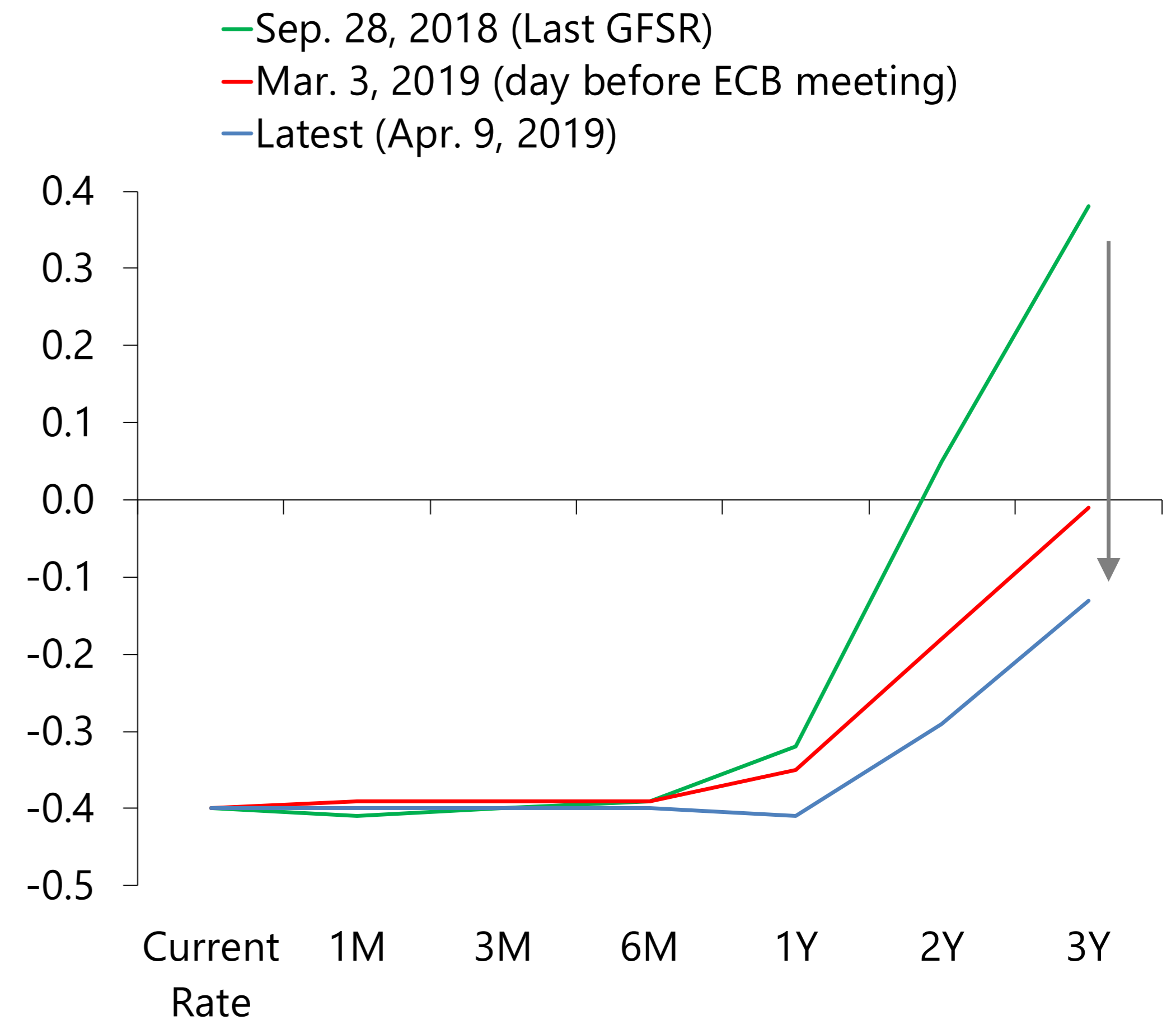
As Central Banks Have Turned More Dovish in the US, Euro Area...

Most central banks are expected to deliver less tightening or more easing

US: Market Implied Fed Funds Rate versus FOMC Median Dots
(Percent)



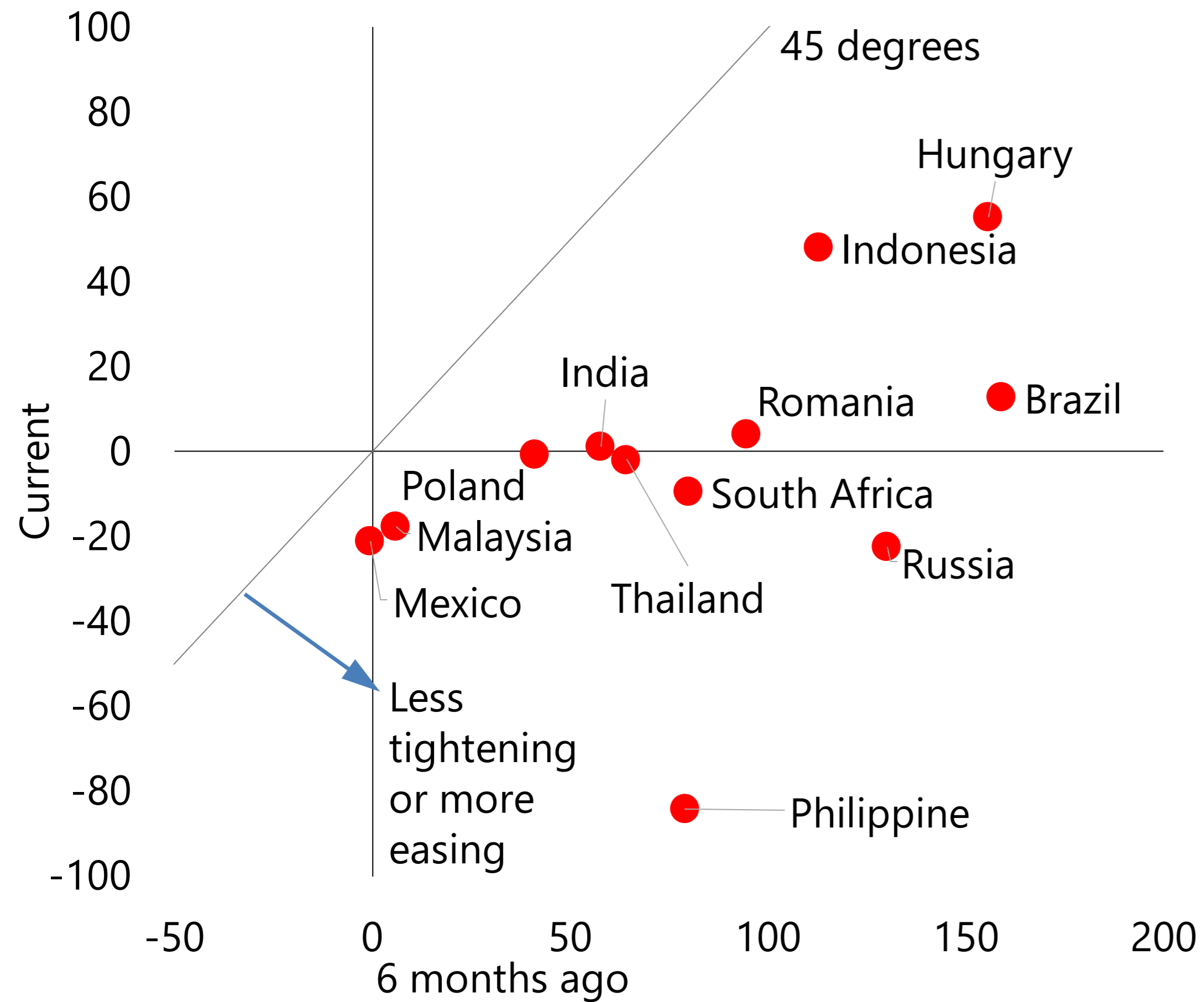
ECB: Market-Implied Policy Interest Rate
(Percent)



...and Emerging Markets

Most central banks are expected to deliver less tightening or more easing

EMs: Change in Market Implied Policy Rate, 1-year Ahead
(Basis points)



China: Interbank Interest Rate and Required Reserve Ratio
(Percent)

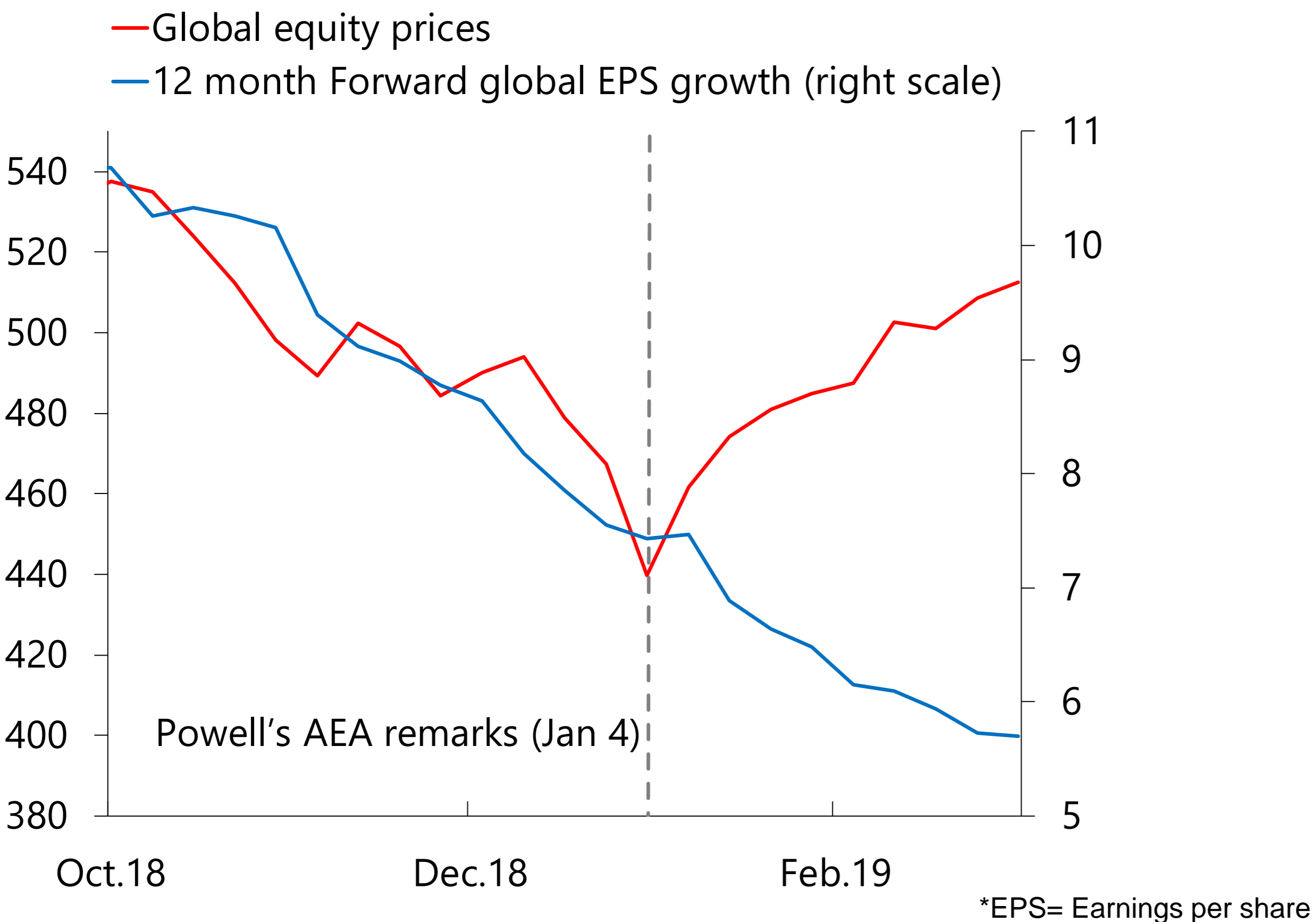


... To Counter Downside Risks to Economic Growth

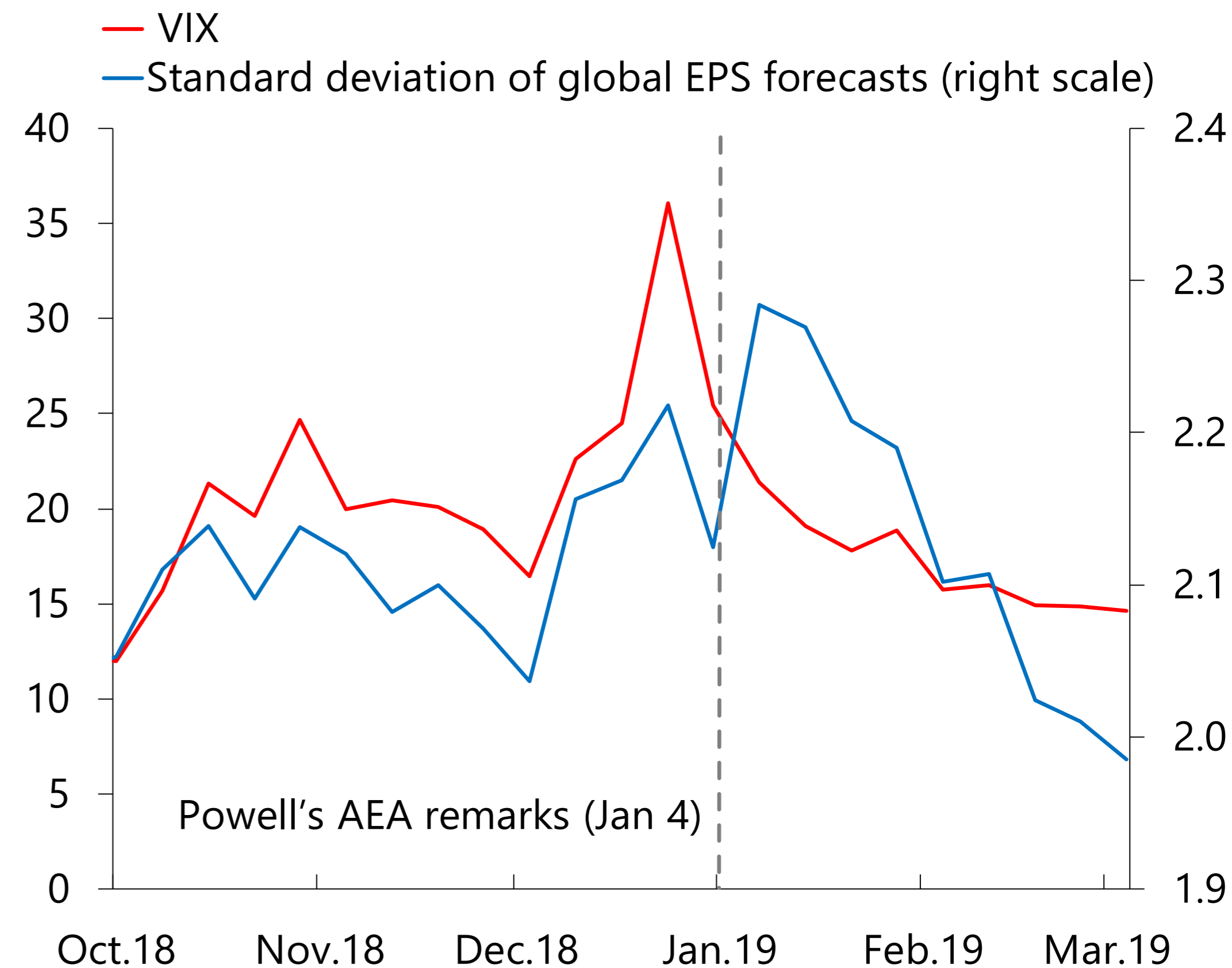
Corporate earnings growth continued to be revised down

... while more dovish monetary policy outlook has helped suppress market volatility and uncertainty

MSCI World Index vs Global Forward EPS* Forecast
(Index, y/y percent change)



VIX and Dispersion of Global Forward EPS* Forecasts
(Index, y/y percent change)

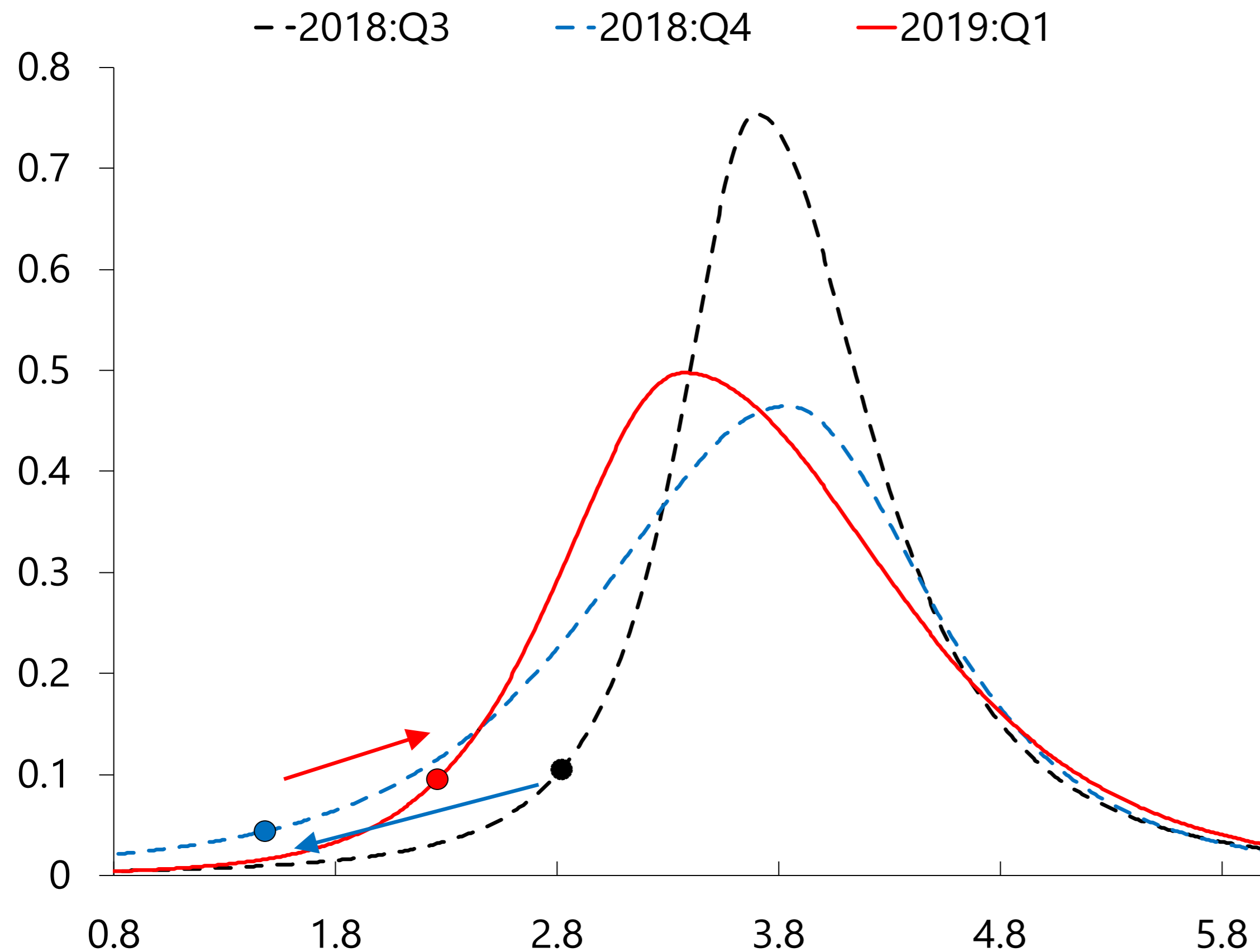


Medium-Term Financial Stability Risks Remain Elevated

Near-term downside risks are somewhat higher,...

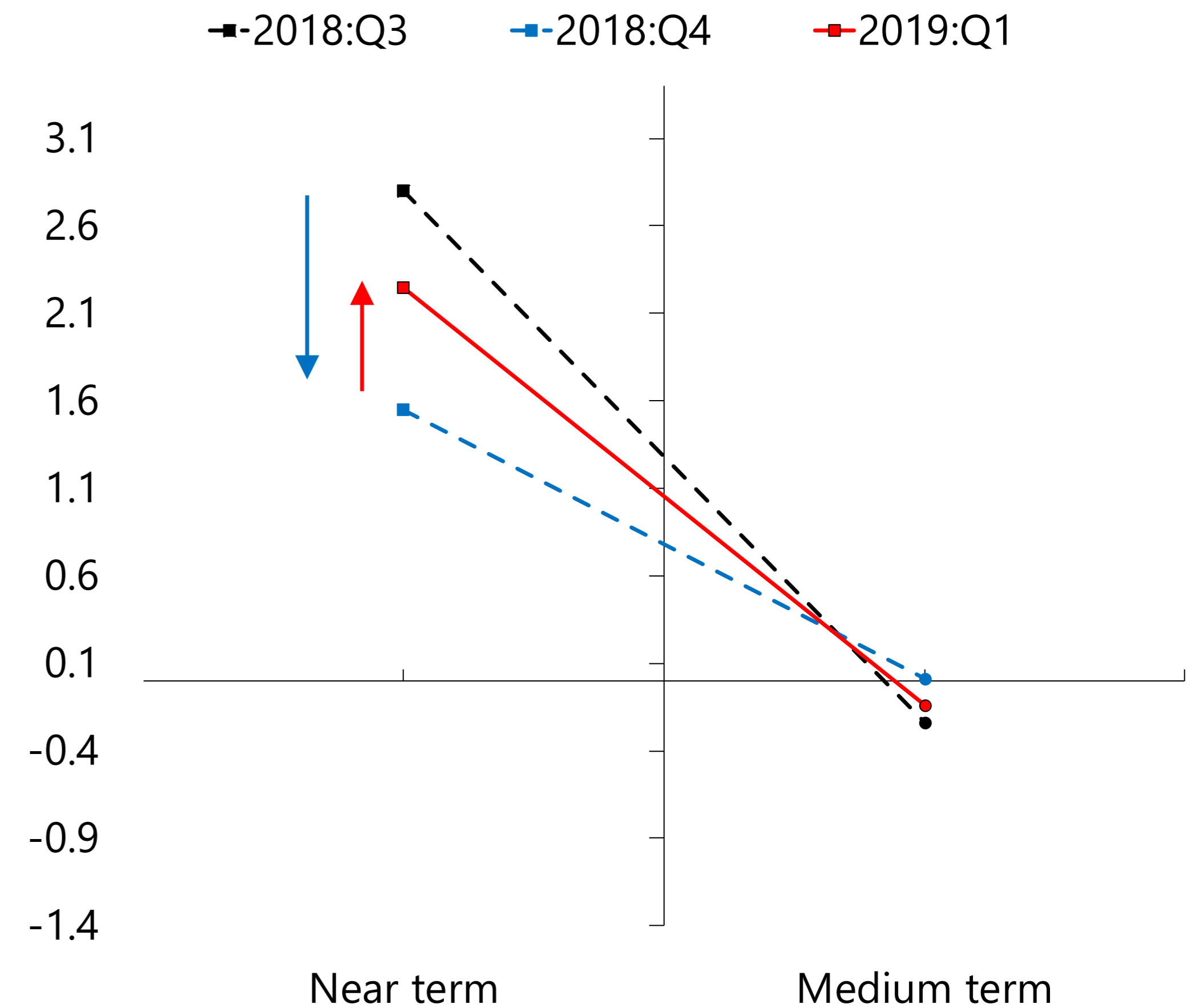
... while medium-term risks remain elevated.

Near-Term (1-year Ahead) Global Forecast Densities
(Probability density)



Note: Dots refer to 5th percentile of forecast distribution, GaR.

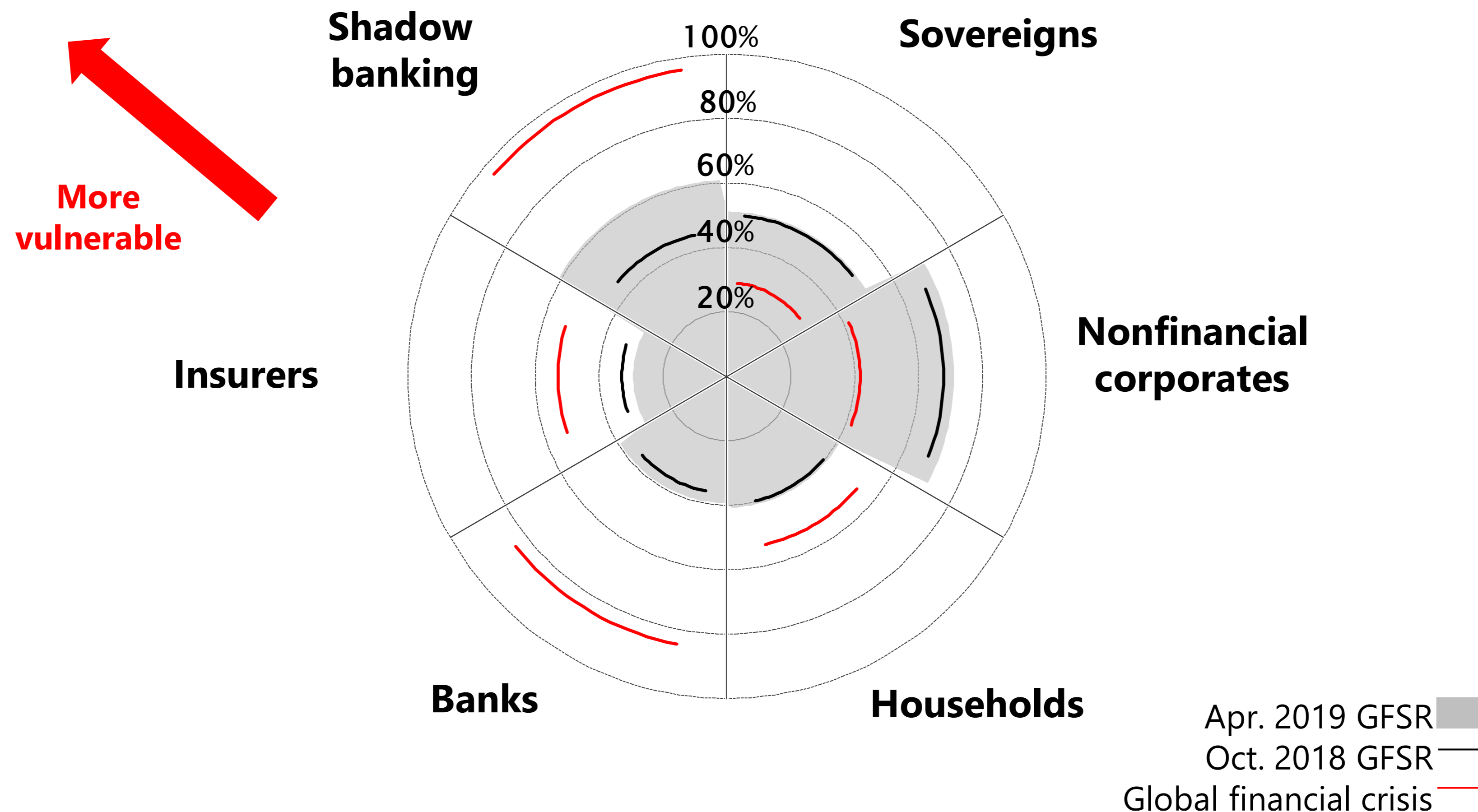
Near- and Medium-Term Risks
(GaR: Fifth percentile of forecast distribution)



Vulnerabilities Continue to Build Up in Parts of the Global Economy

Vulnerabilities in sovereign, corporate and nonbank financial sectors are elevated in systemically important economies

Proportion of GDP of Systemically Important Countries* with Elevated Vulnerabilities, by Sector
(Share of countries with high and medium-high vulnerabilities by GDP; assets for banks)

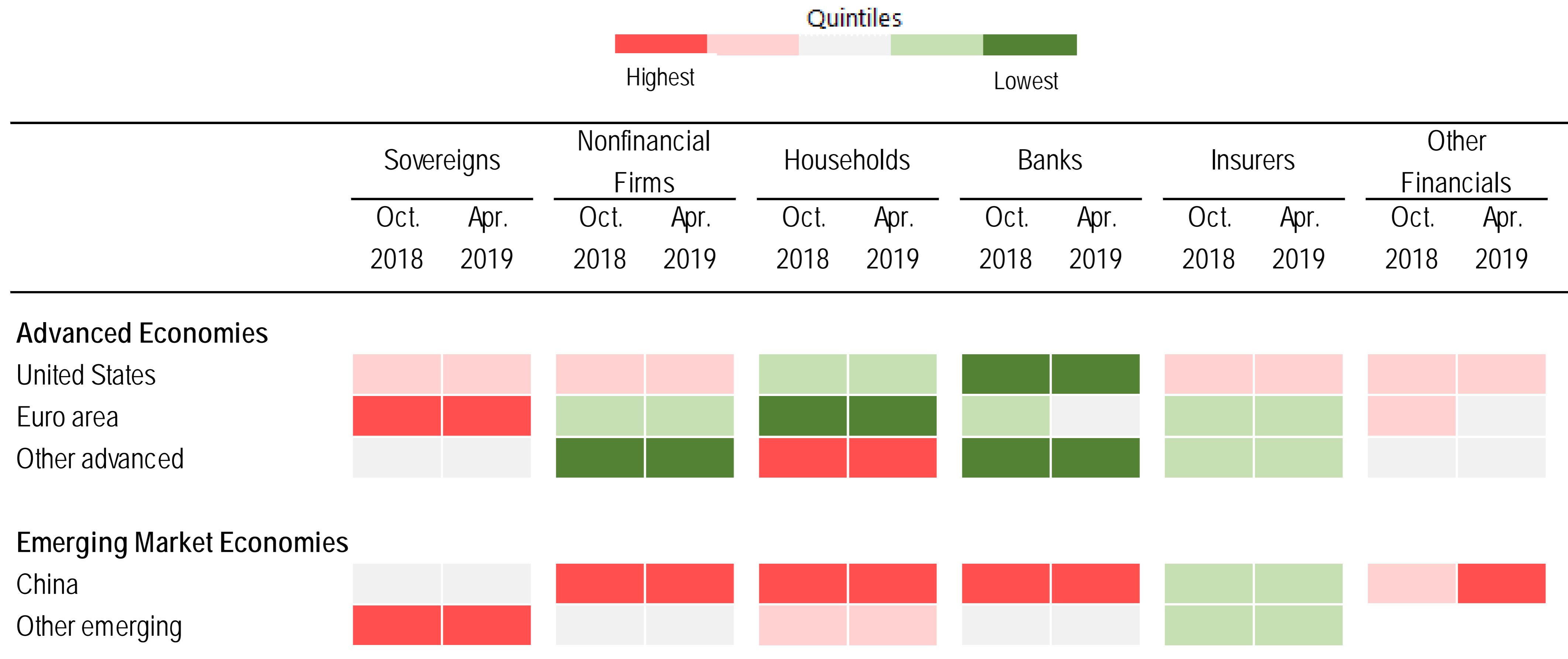


*The analysis includes 29 jurisdictions with systemically important financial sectors.

Indicator Based Framework

Vulnerabilities in the sovereign, corporate, and nonbank financial sectors are elevated by historical standards in several systemically important countries and regions

Financial Vulnerabilities by Sector and Region

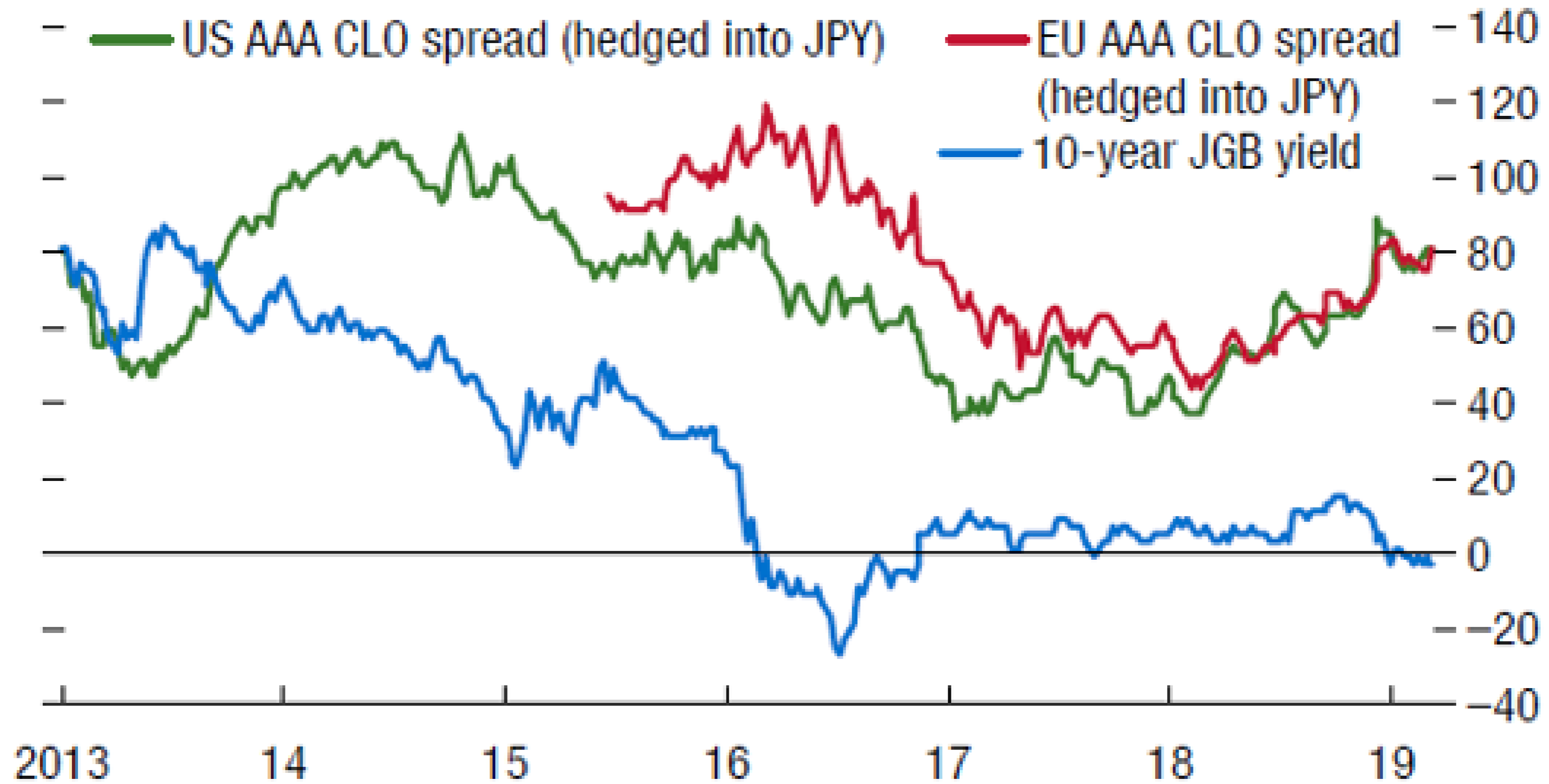


Vulnerabilities in a Maturing Credit Cycle

Rising Corporate Debt

Yields on CLOs Hedged Into Yen

6. US and EU AAA-rated CLO Spreads Hedged to the Japanese Yen (Basis points)

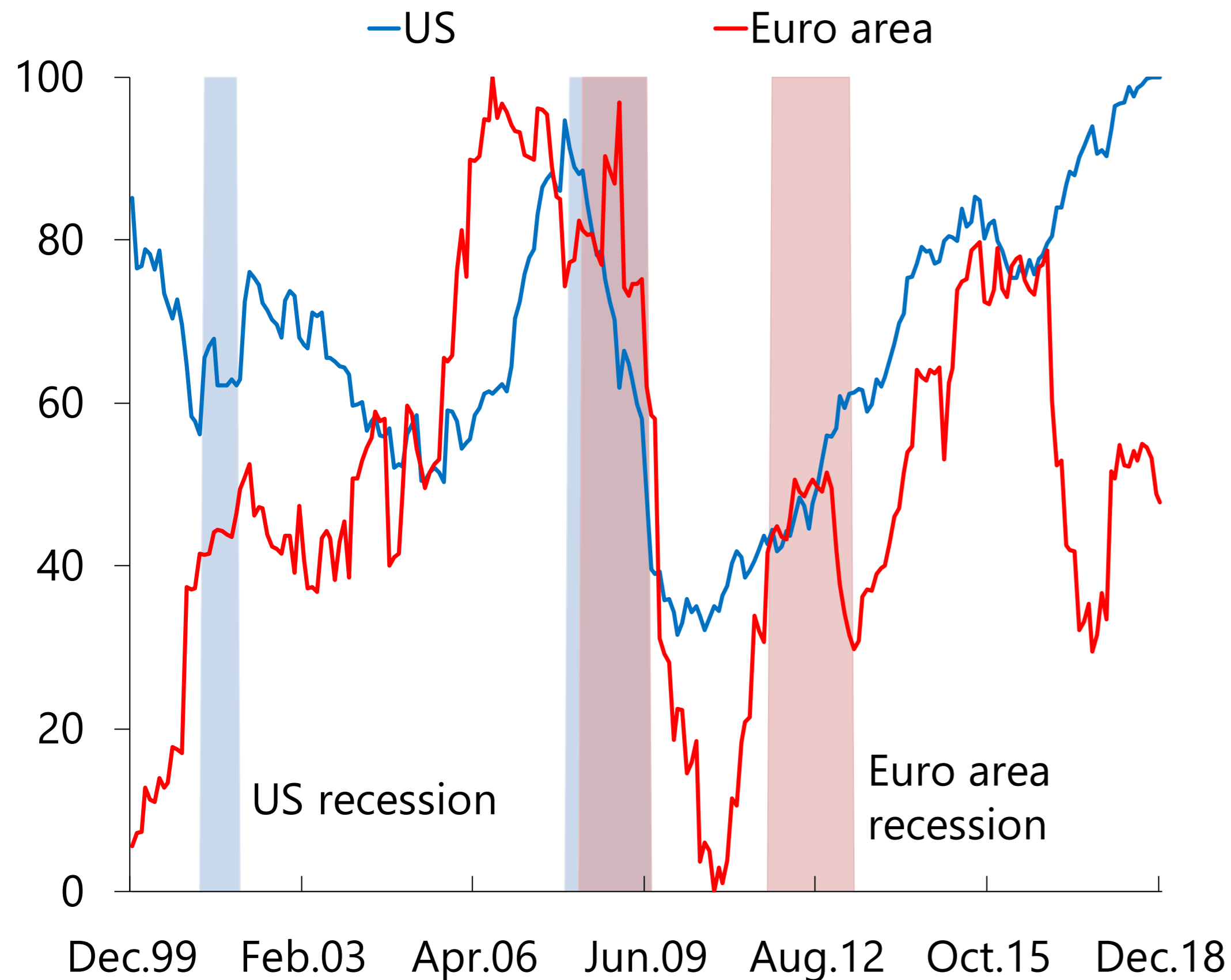


Corporate Debt Increased and Credit Quality Deteriorated

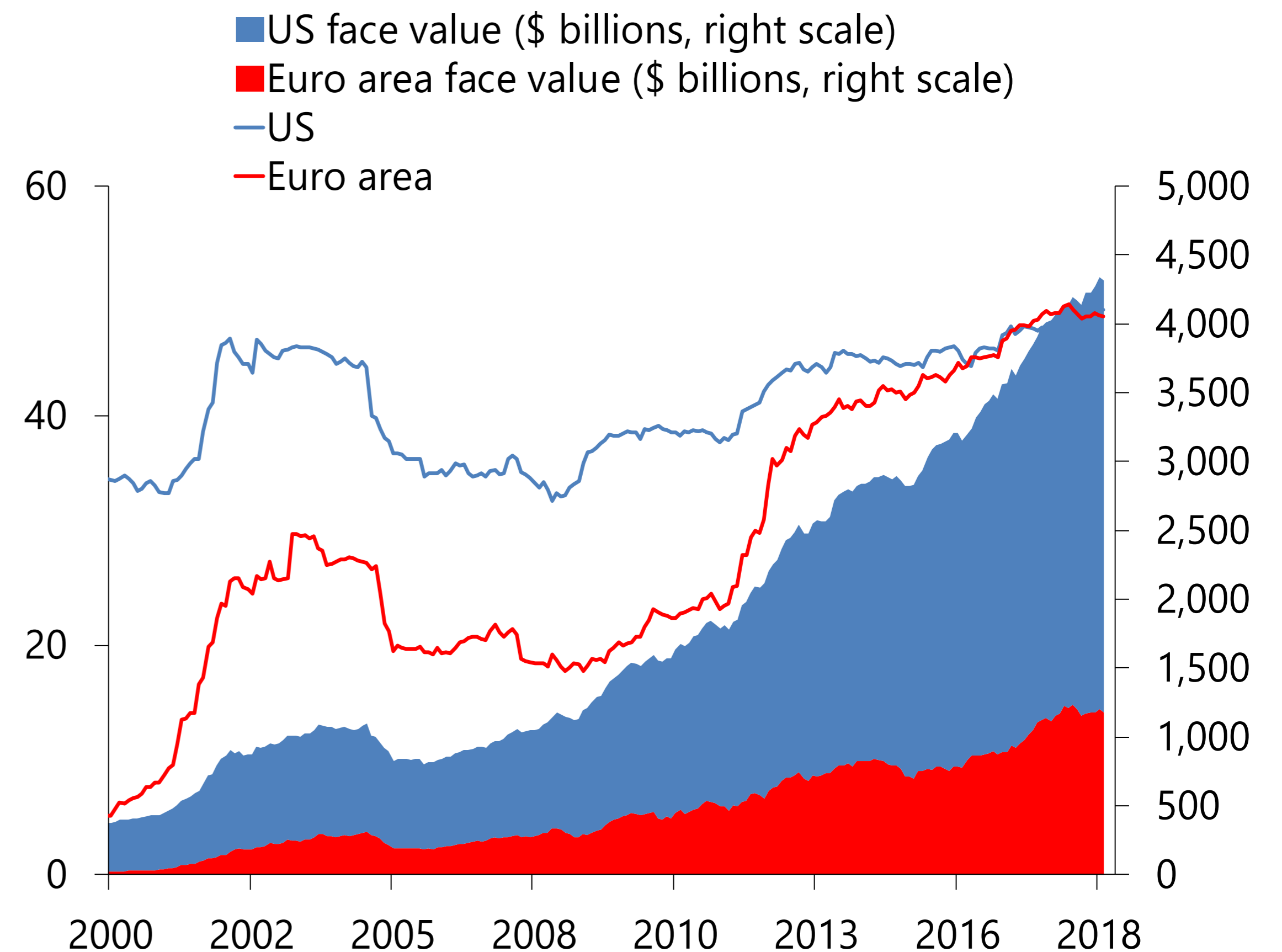
Corporate credit cycle in the US is at its highest point in recent history....

Stock of BBB corporate bonds has quadrupled since the crisis

US and Euro Area Corporate Credit Cycles*
(Percentile rank)



BBB-Rated Bonds in Investment Grade Indices
(Percent of total; billions of US dollars)



*Based on a number of indicators. The late stage of the credit cycle is characterized by deteriorating underwriting conditions, increased risk taking, easy credit conditions, strong profit, and high leverage.

The Key Features of the Current Corporate Credit Cycle

BBB issuers' debt-service capacity has improved but indebtedness has risen.

5. US Credit Fundamentals of BBBs: 2018 versus 2007 (Percent/ratio/basis points/number/percentile rank)

Credit Fundamentals	Level		Percentile Signal	
	2007	2018	2007	2018
Size (as a percentage of IG outstanding)	34.6	49.3	●	●
Gross Leverage (times)	2.4	3.0	●	●
Net Leverage (times)	2.1	2.6	●	●
Share of Companies with > 4× Leverage (percent)	16	23	●	●
Interest Coverage (times)*	7.3	7.9	●	●
EBITDA Margin (percent)*	19	21	●	●
Gross Margin (percent)*	35	40	●	●
Spread (basis points)	198	121	●	●

* = Icons are reversed

● ● ● ●
0% 100%

The loan market has doubled in size, but investor protections and credit quality have deteriorated.

6. US Leveraged Loan Characteristics: 2018 versus 2007

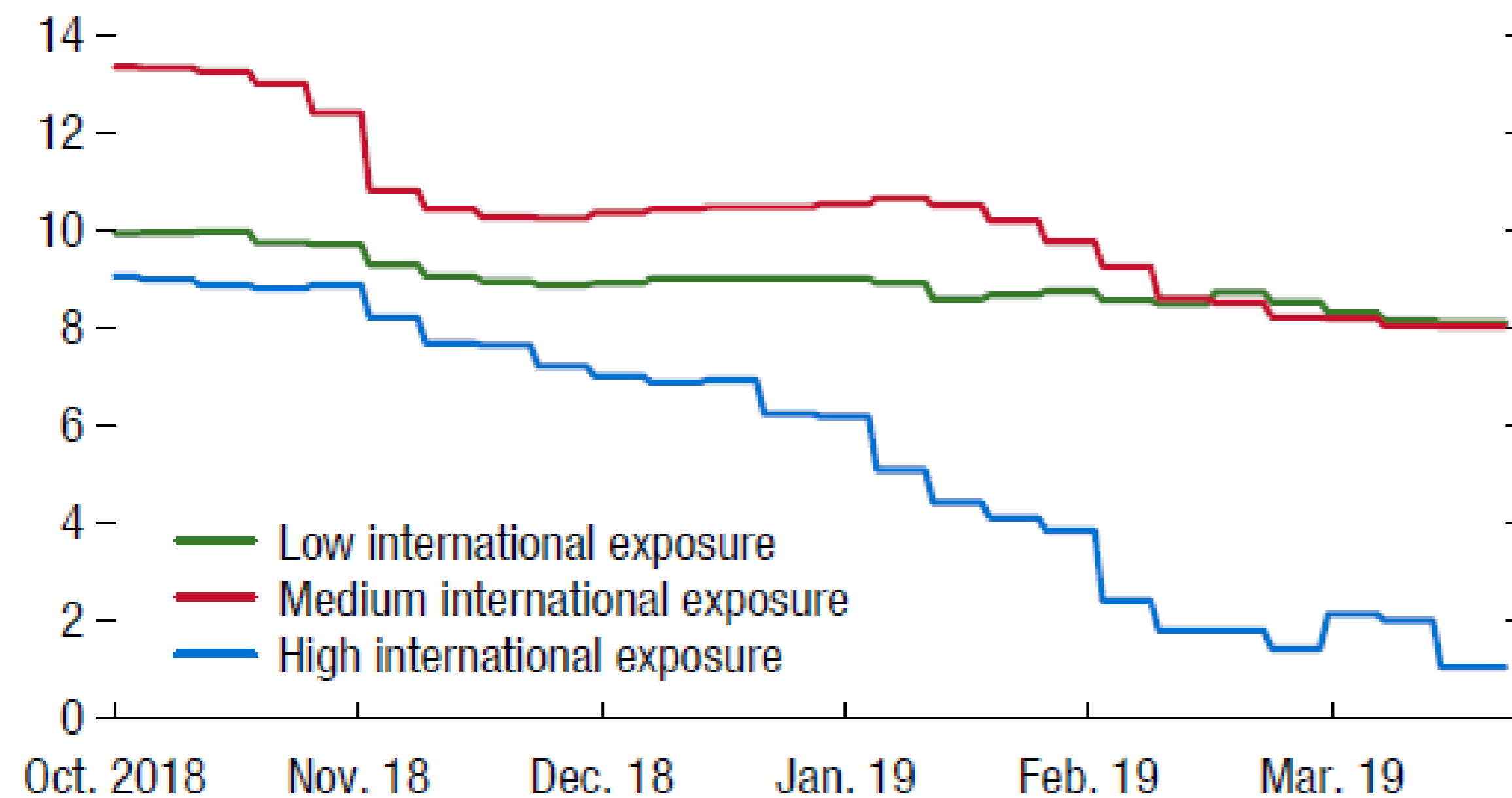
US Leveraged Loan Market Characteristics	Level		Percentile Signal	
	2007	2018	2007	2018
Outstanding Leveraged Loans (\$ billions)	554	1,147	●	●
US Issuance (percent of global issuance)	66.9	75.8	●	●
Covenant Quality Index	2.6	4.1	●	●
Covenant-Lite Share (percent of new issuance)	29.2	84.7	●	●
B-Rated (percent of new issuance)	22.6	58.0	●	●
Total Debt/EBITDA (times)	4.9	5.3	●	●
First Lien Debt/EBITDA (times)	3.5	4.3	●	●
Other Debt/EBITDA (times)	1.4	1.0	●	●
Deals with EBITDA Add-Backs (percent of new issuance)	8.4	27.1	●	●

● ● ● ●
0% 100%

Corporate Earnings Growth May Have Peaked

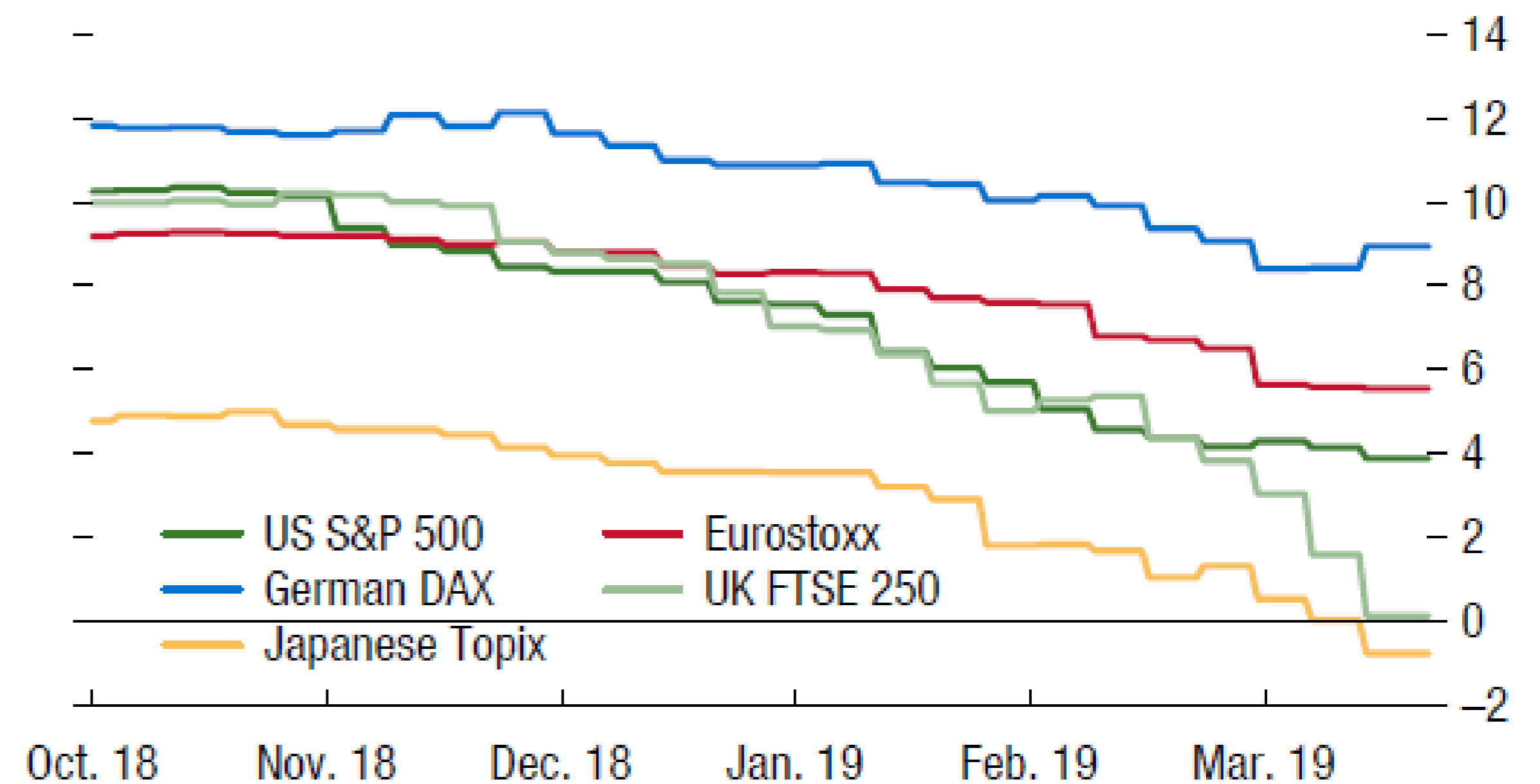
US corporate profit forecasts have been revised down, particularly at firms with significant international exposures.

**5. US S&P 500 Sectors: Expected EPS Growth, 2019
(Year-over-year percent change)**



Expected earnings growth has been revised down in other regions because of weaker economic data.

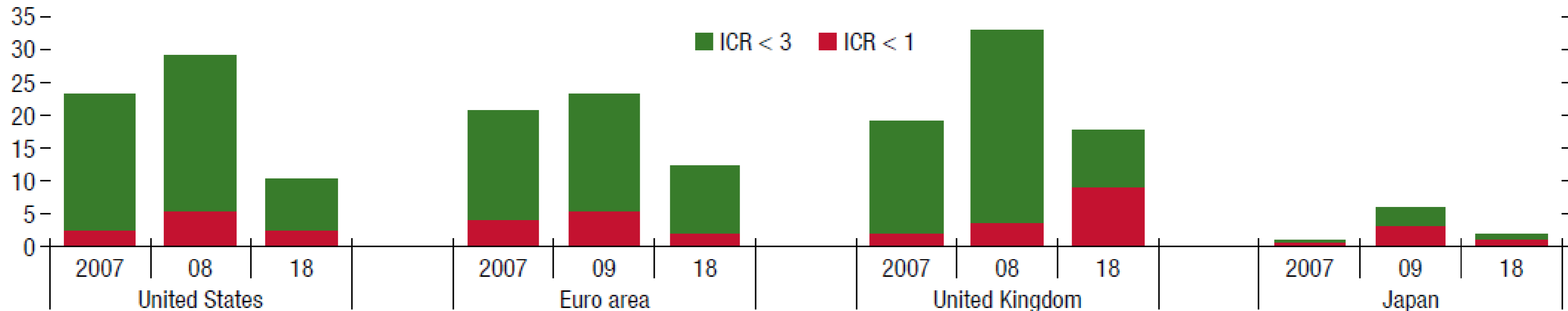
**6. Global Equity Markets: Expected EPS Growth, 2019
(Year-over-year percent change)**



Indebted Firms Could Come Under Strain in a Downturn

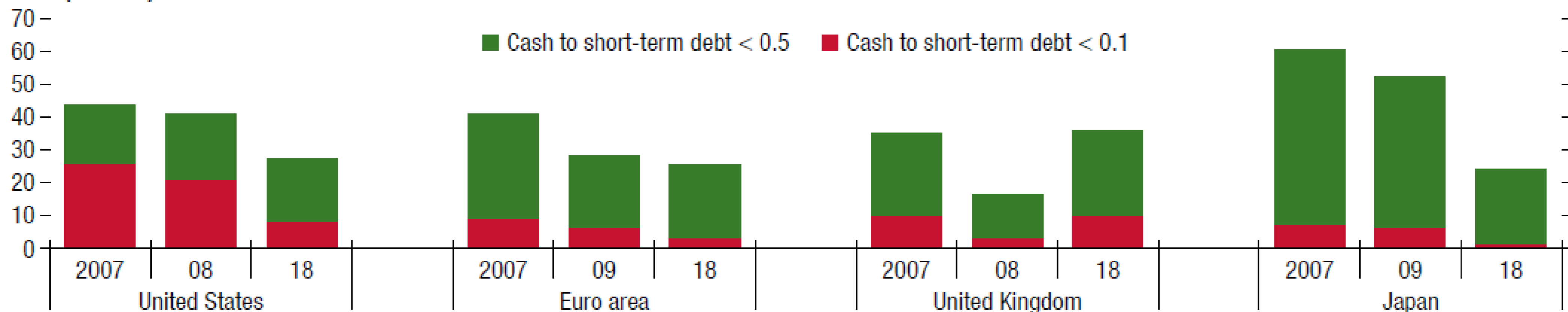
Extraordinary monetary accommodation has supported the corporate sector ...

1. Share of Corporate Debt Owed by Firms with Low (below 1) and Subpar (between 1 and 3) EBITDA-to-Interest Expense Ratios (Percent)



... and favorable financing terms have allowed firms to extend maturities and reduce rollover risks.

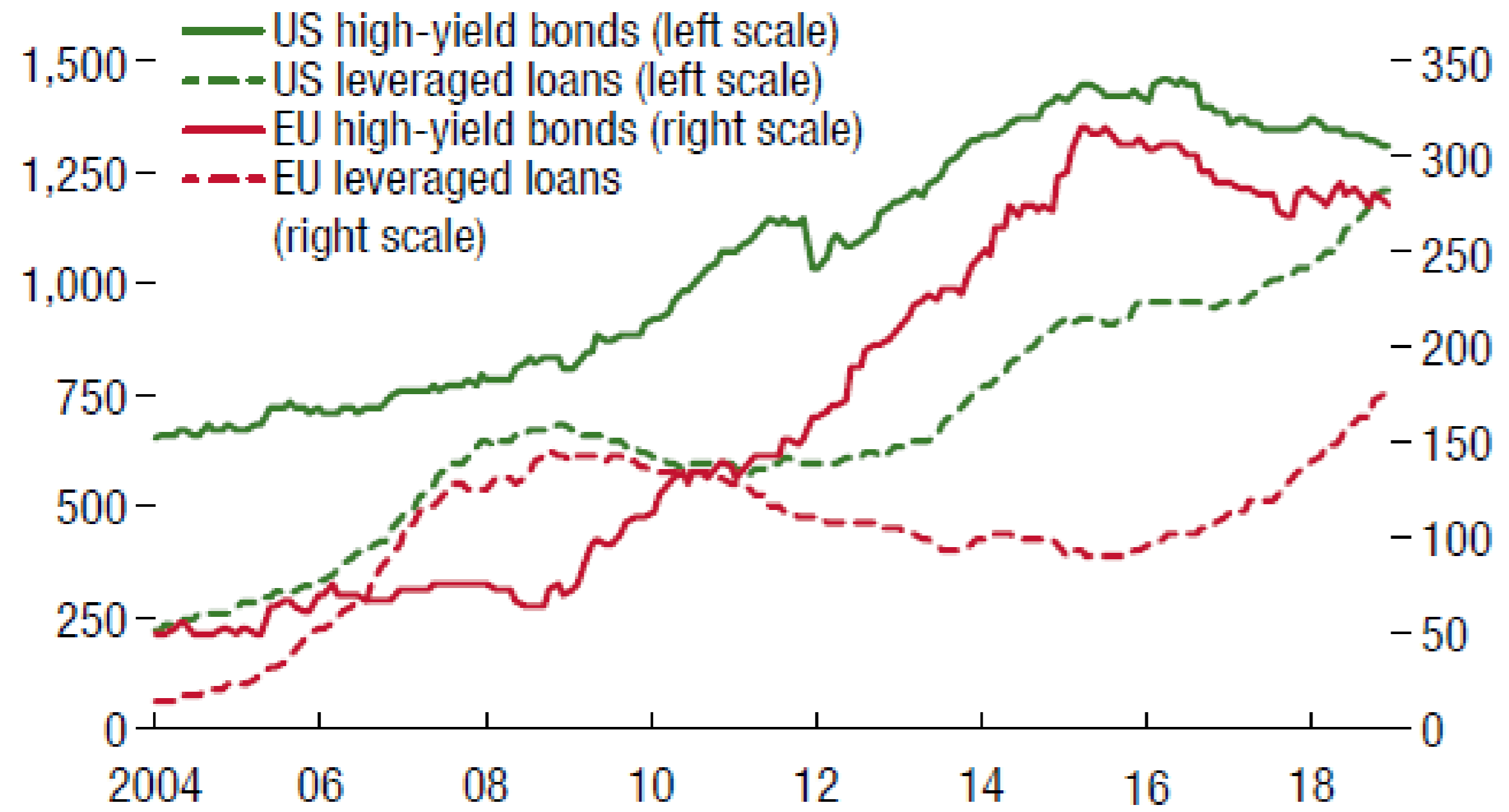
2. Share of Corporate Debt Owed by Firms with Low (below 10 Percent) and Subpar (between 10 Percent and 50 Percent) Cash-to-Short-Term-Debt Ratios (Percent)



Risks Have Risen in the Leveraged Loan Market

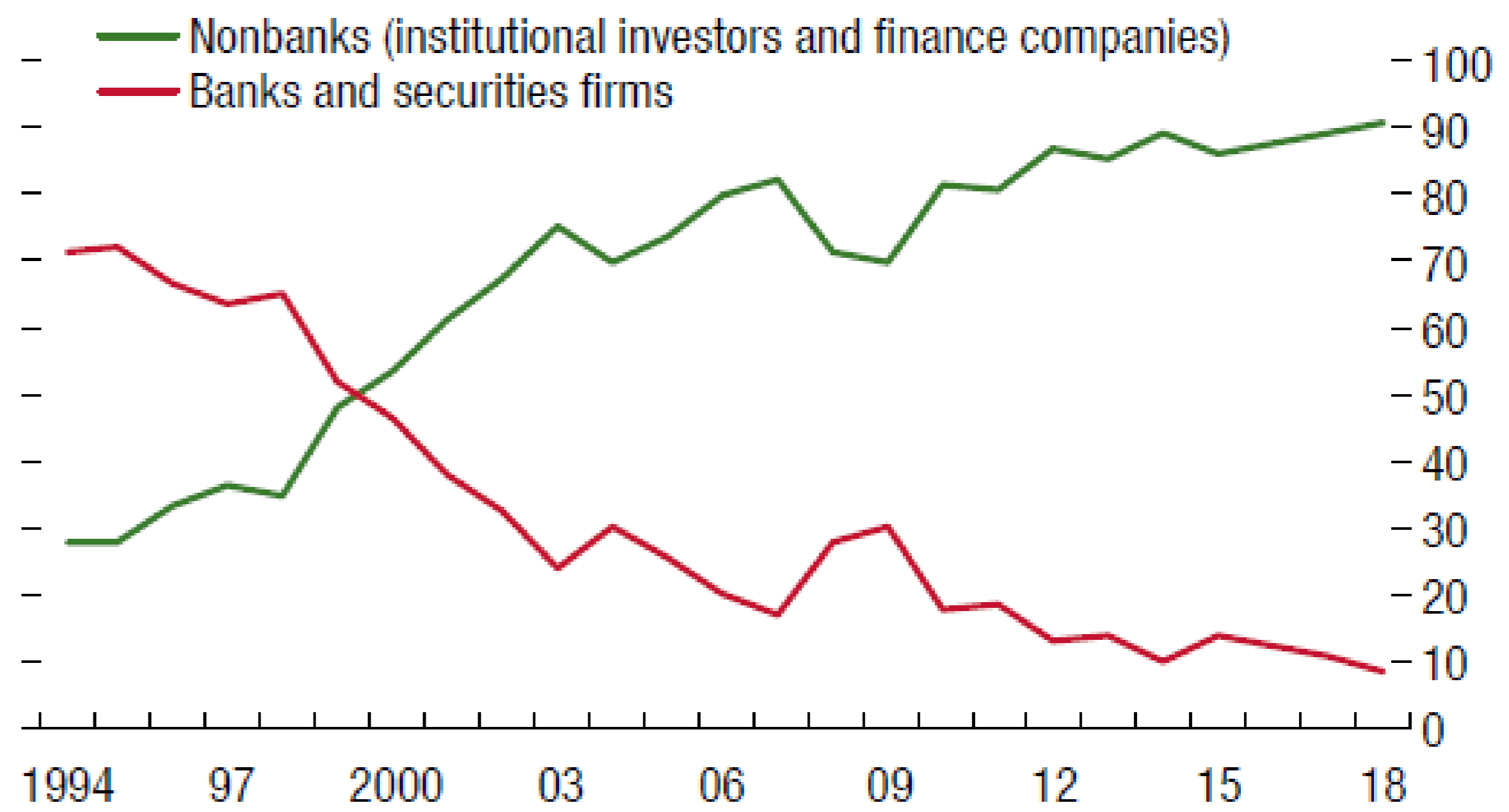
The amount of leveraged loans is almost as large as that of high-yield bonds.

1. High-Yield Bond versus Leveraged Loan Debt Outstanding
(Billions of US dollars; billions of euros)



Nonbanks have taken a larger role in financing highly indebted firms.

2. US Leveraged Loan Investor Base: Banks versus Nonbanks
(Percent of primary market issuance)

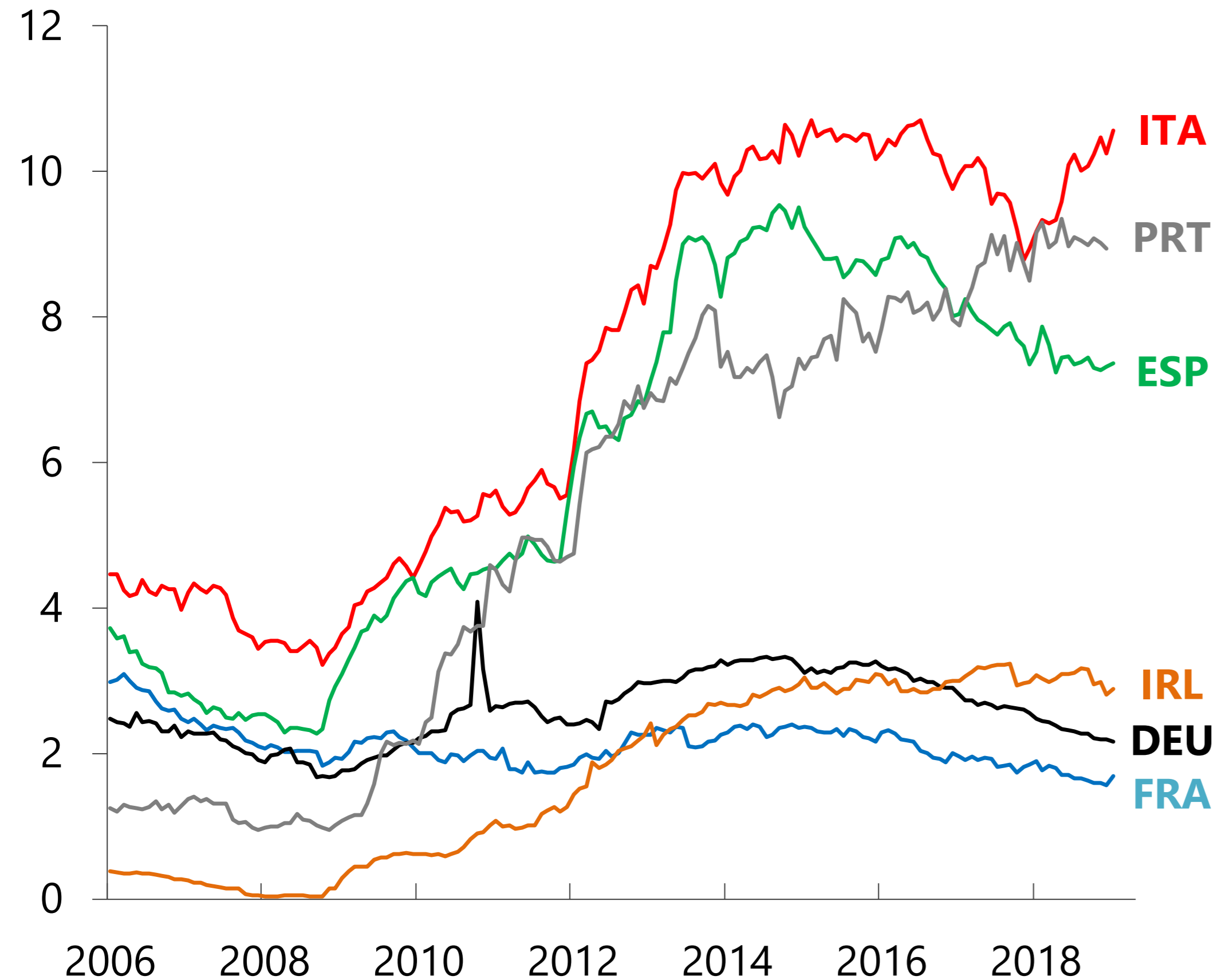


Euro Area Sovereign-Financial Sector Nexus

The Sovereign-Financial Sector Nexus Could Reemerge

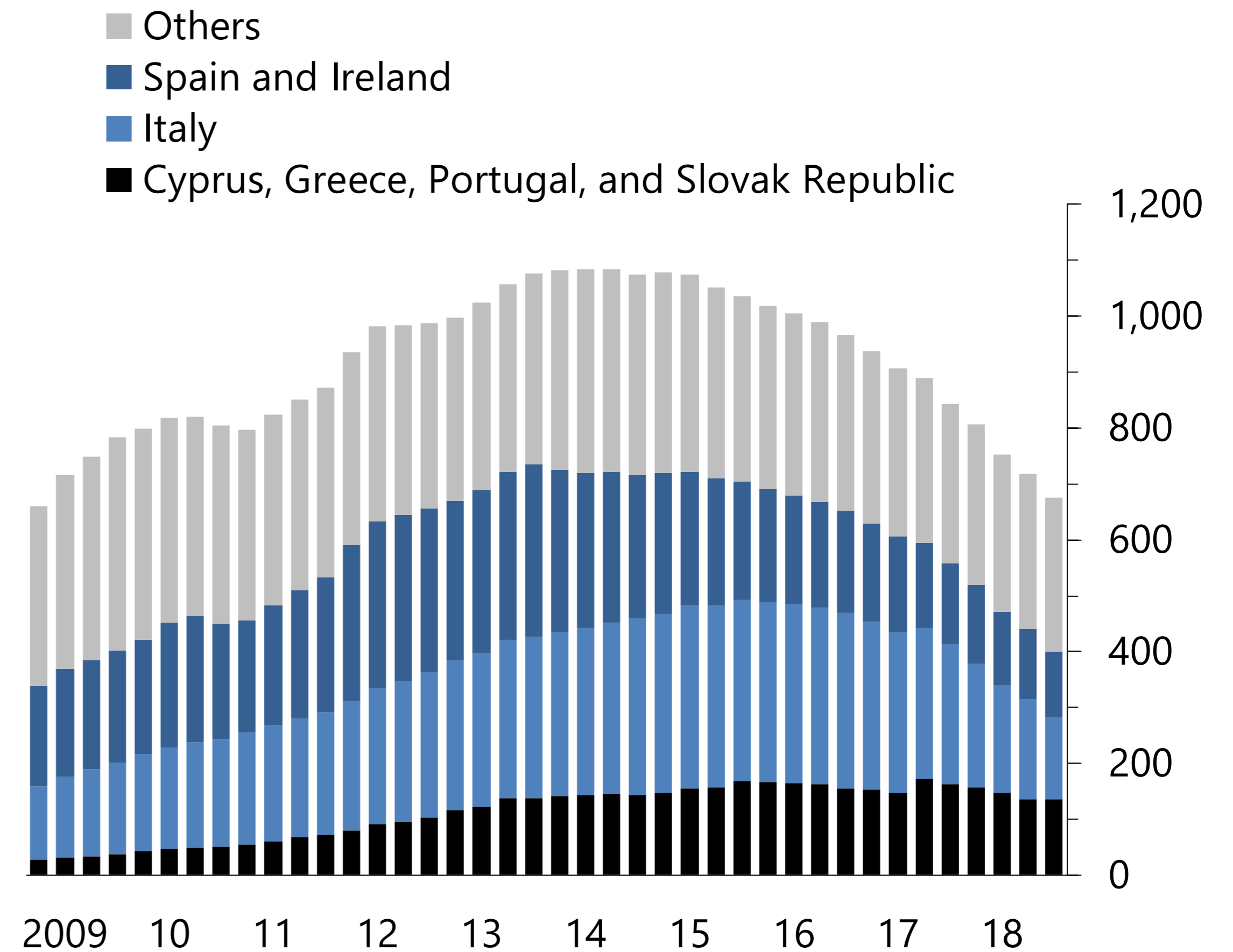
Bank holdings of domestic government debt have increased in some countries...

Banking System's Holdings of Domestic Government Bonds
(Percent of assets)



...but the stock of nonperforming loans has continued to fall

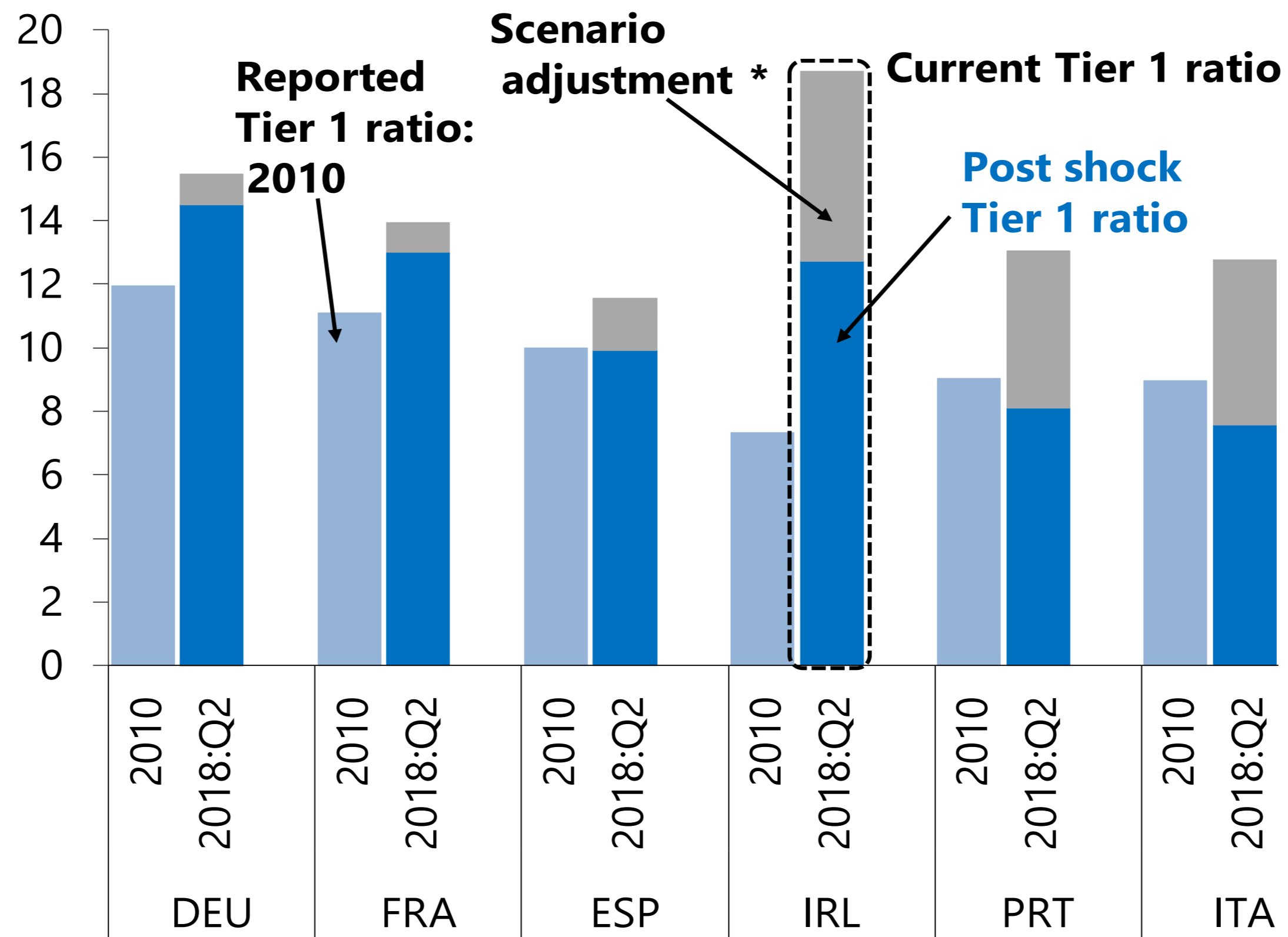
Stock of Nonperforming Loans in the Euro Area
(Billions of euros)



Euro Area Bank Capital Buffers are Mostly Stronger

Bank capital ratios could come under pressure if the sovereign-financial sector nexus were to resurface

**Estimated Impact on Tier 1 Capital Ratios:
Adverse Downside Scenario
(Percent)**

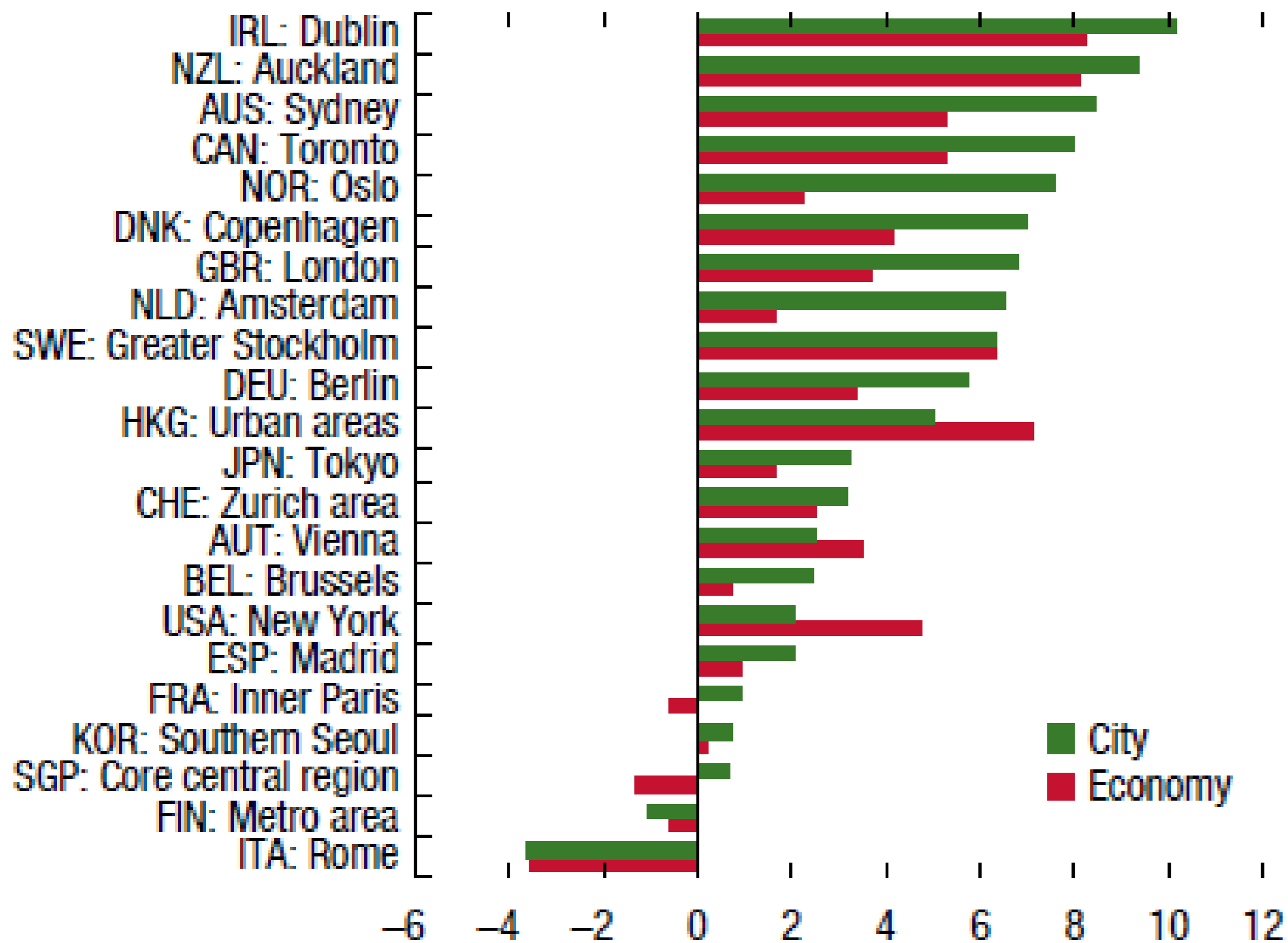


* **Scenario adjustment** = impact of mark-to-market change in government bond values + adjustment for potential loan losses on NPLs

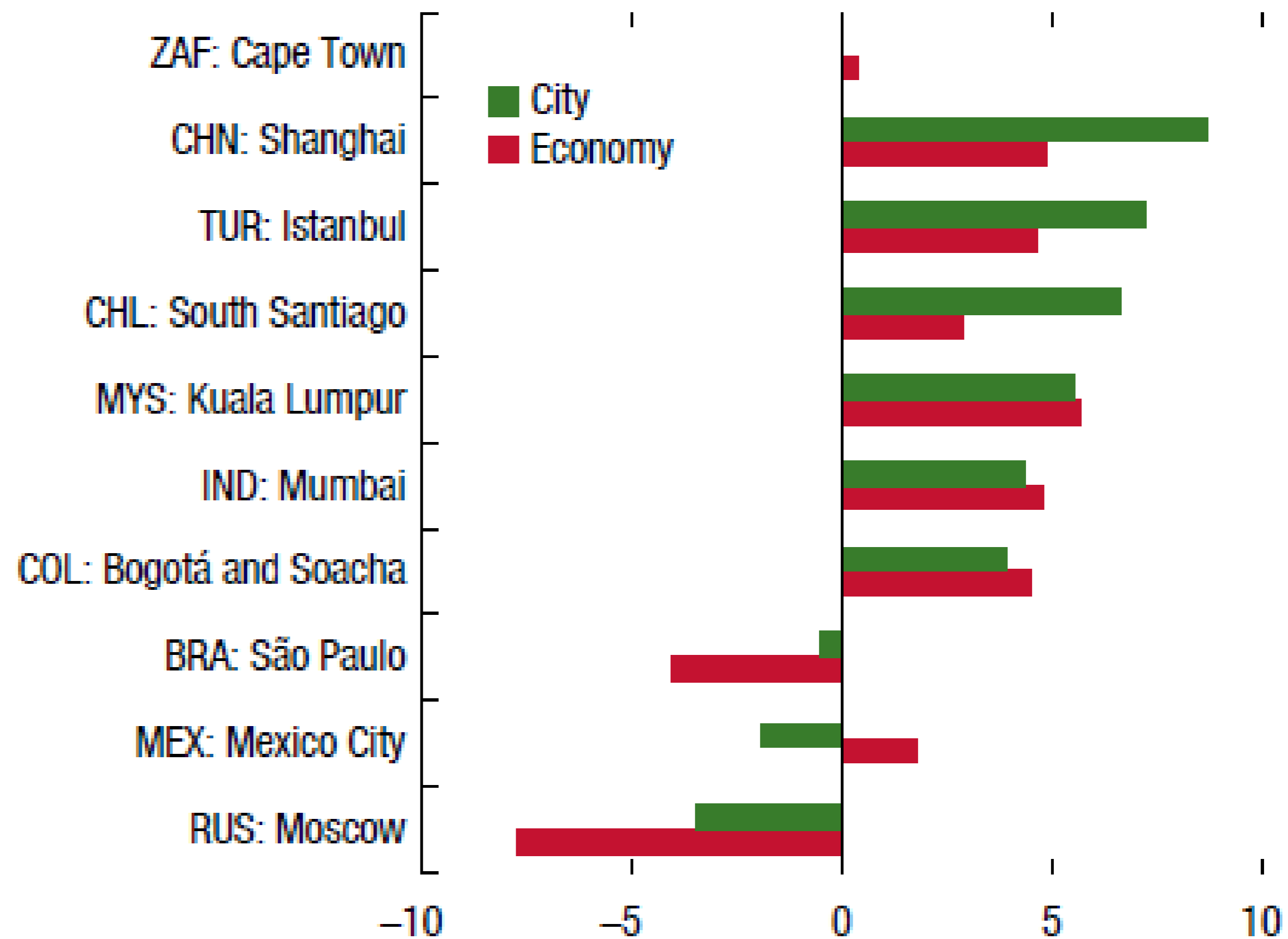
House Price Misalignments

In Most Economies House Prices Have Increased Considerably since 2013

3. Advanced Economies: Average Annual Real House Price Growth in Selected Economies and Cities (Percent; 2013–18:Q2)

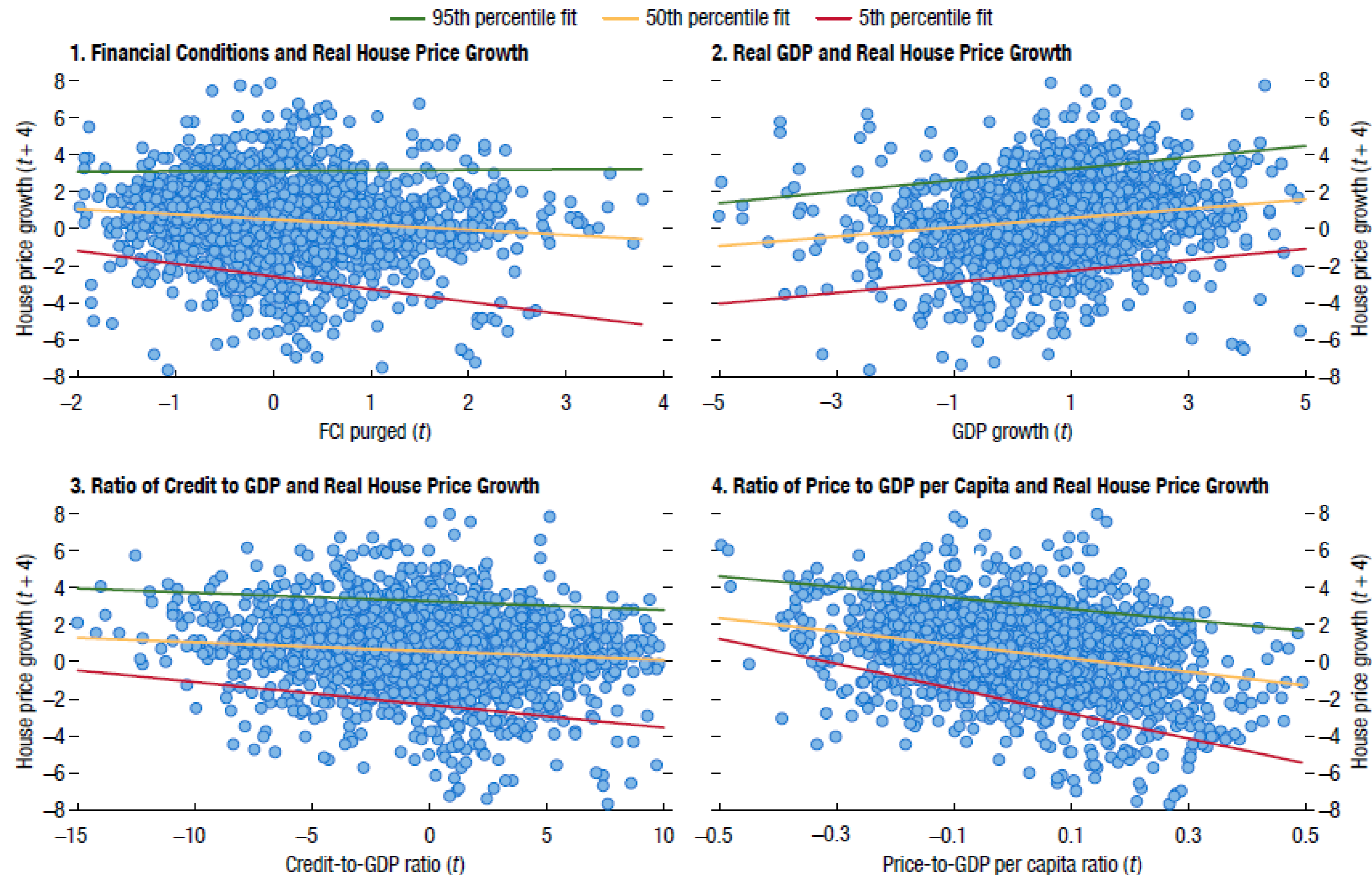


4. Emerging Market Economies: Average Annual Real House Price Growth in Selected Economies and Cities (Percent; 2013–18:Q2)



Determinants of Real House Prices

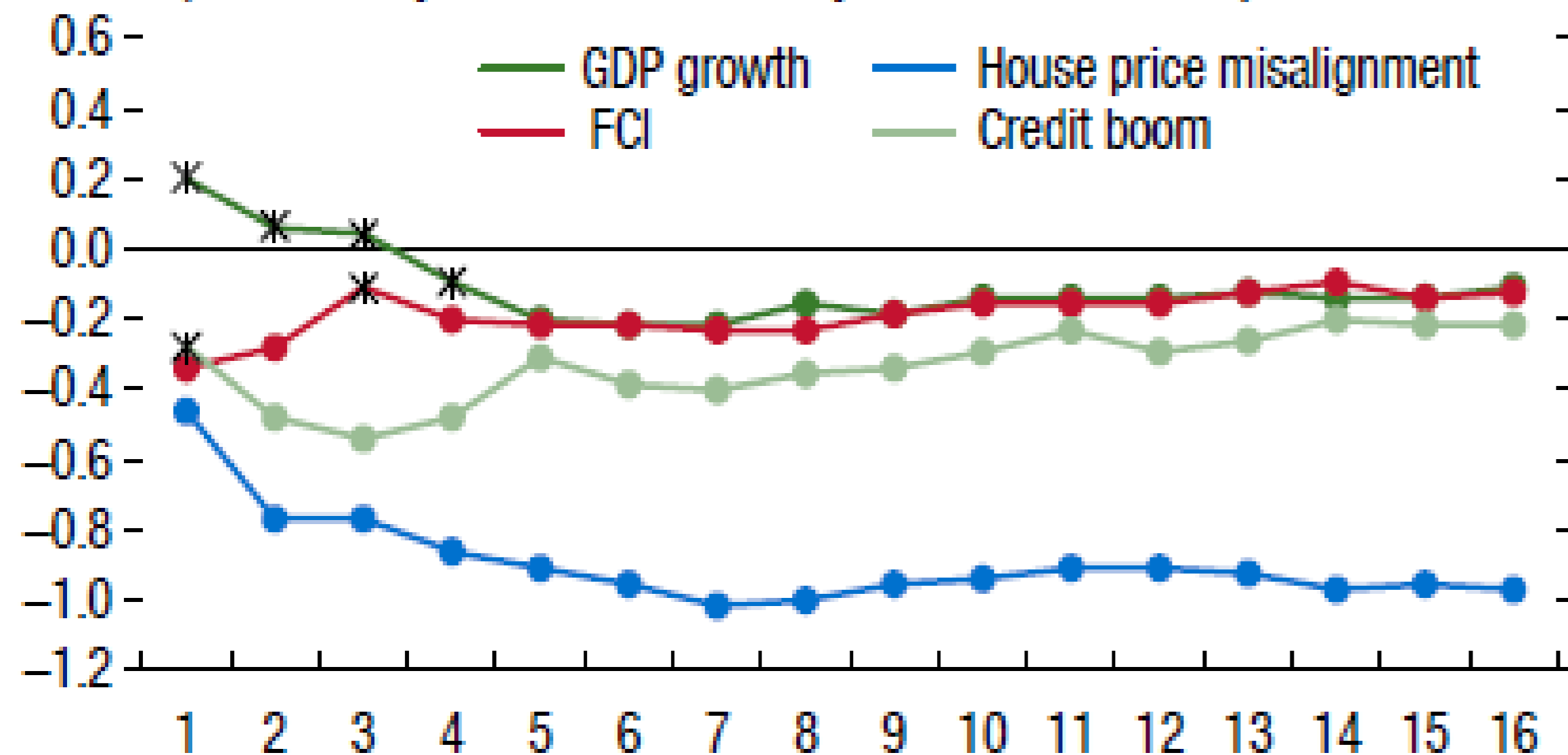
Future real house prices are related to financial conditions, real GDP growth, household leverage, and overvaluation.



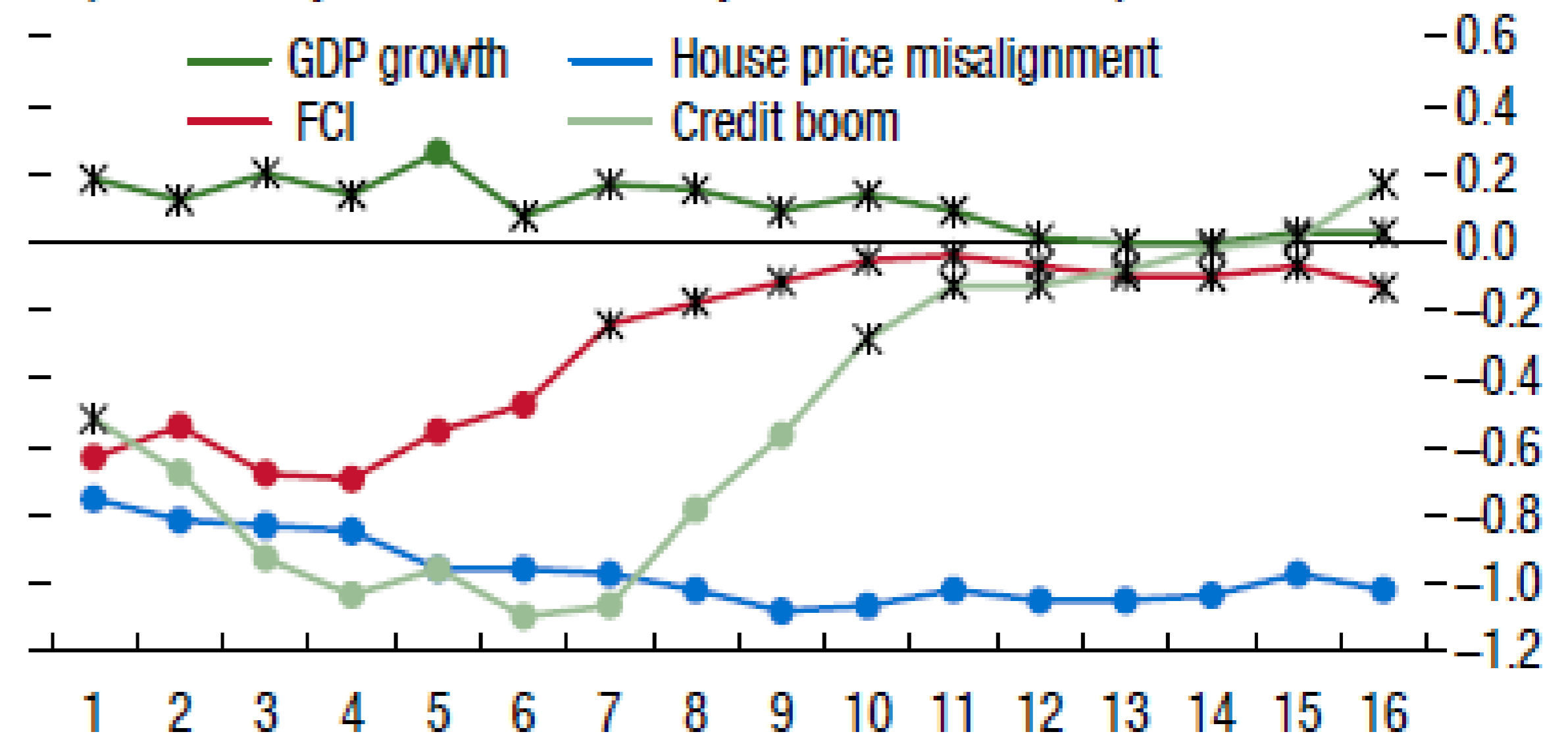
House Prices and Fundamentals: Quantile Regression Results

The relationship between declines in real house prices and variables related to financial conditions, real GDP growth, household leverage, and overvaluation is generally stronger in the lower tail than elsewhere.

1. Advanced Economies: Impact of Four Factors on Real House Price Growth
(One to 16 quarters ahead, 5th quantile coefficients)

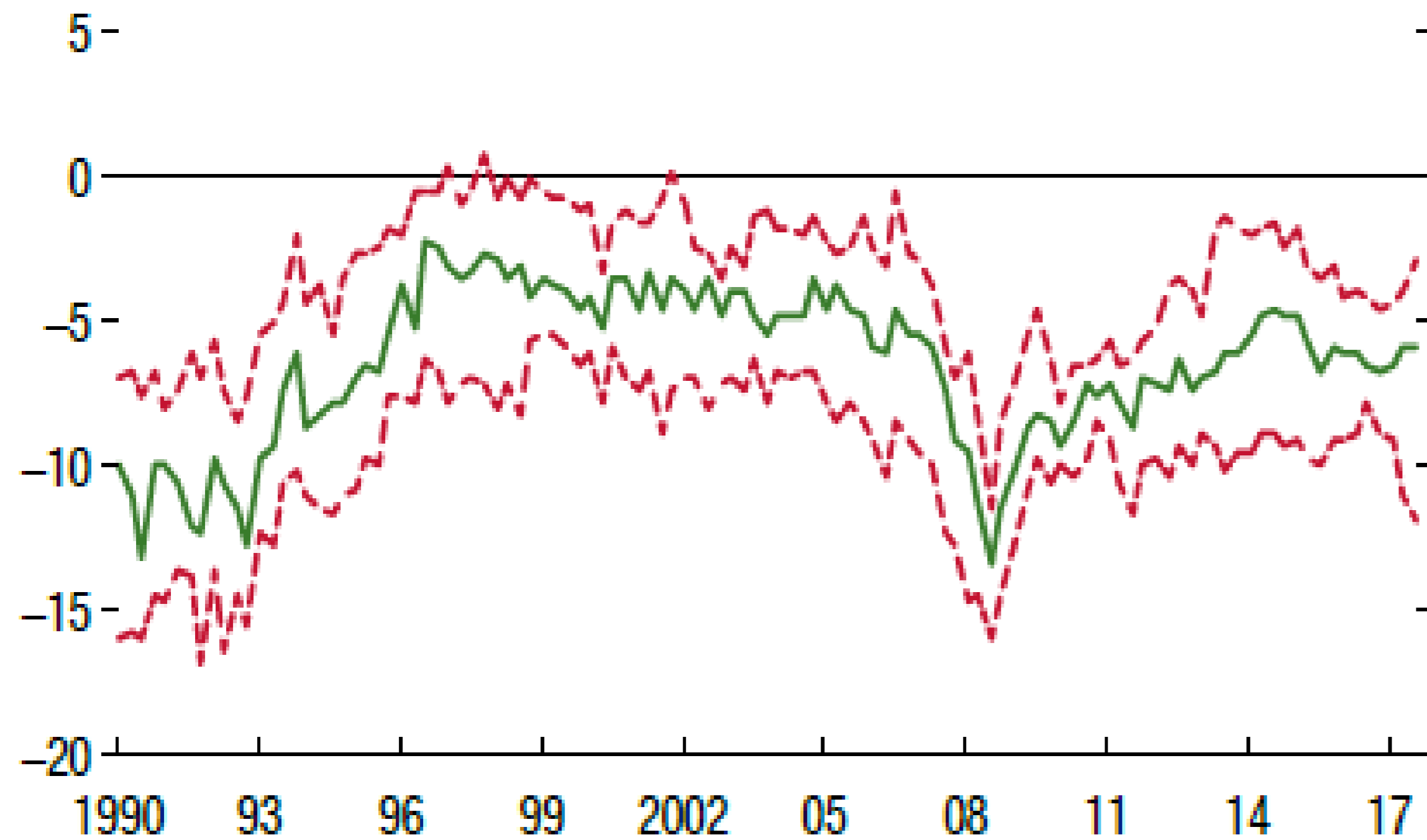


2. Emerging Market Economies: Impact of Four Factors on Real House Price Growth
(One to 16 quarters ahead, 5th quantile coefficients)

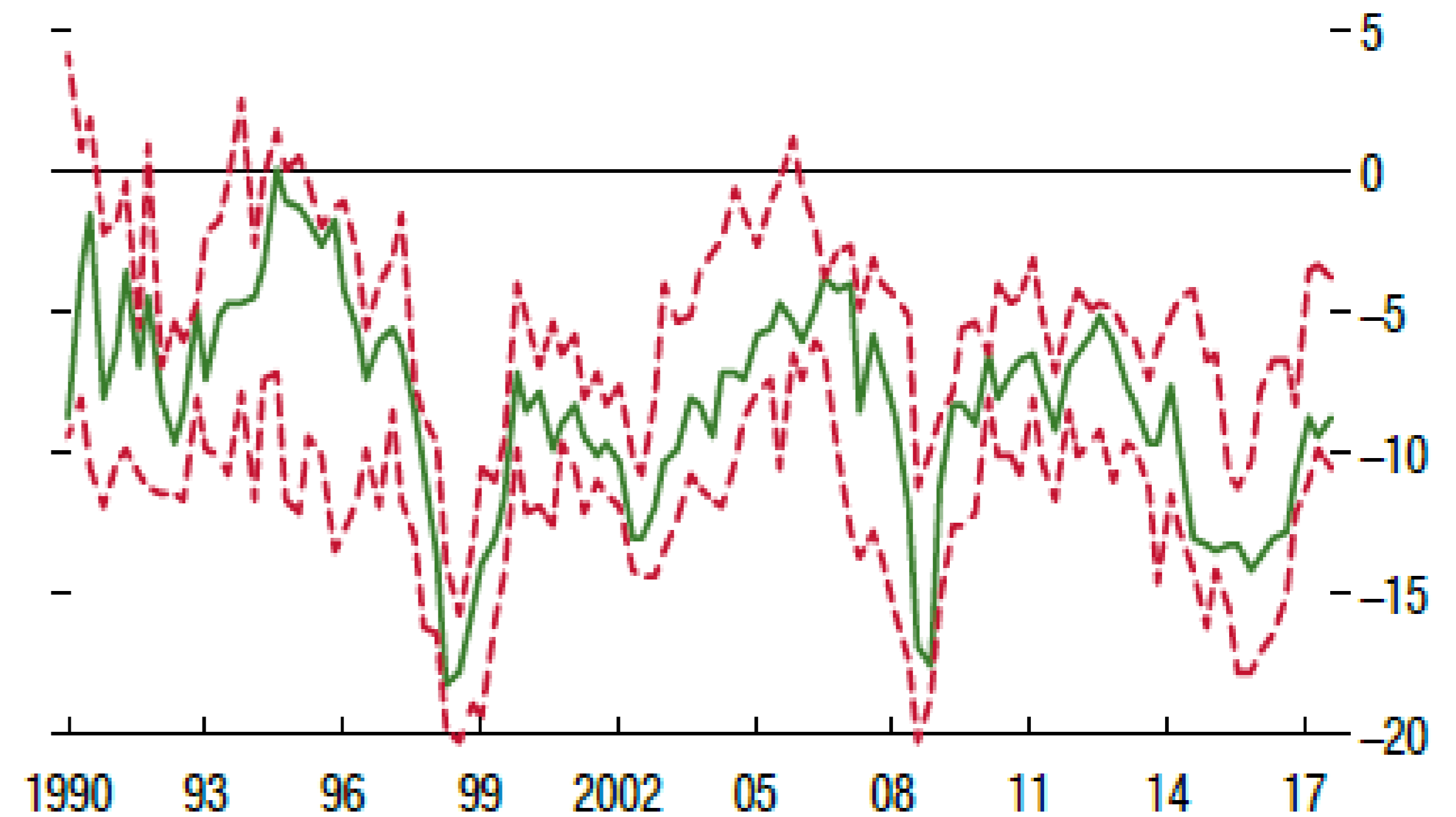


Evolution of House Prices at Risk and Shifts in Riskiness

1. Advanced Economies: One-Year-Ahead HaR
(Cross-country interquartile dispersion)



2. Emerging Market Economies: One-Year-Ahead HaR
(Cross-country interquartile dispersion)



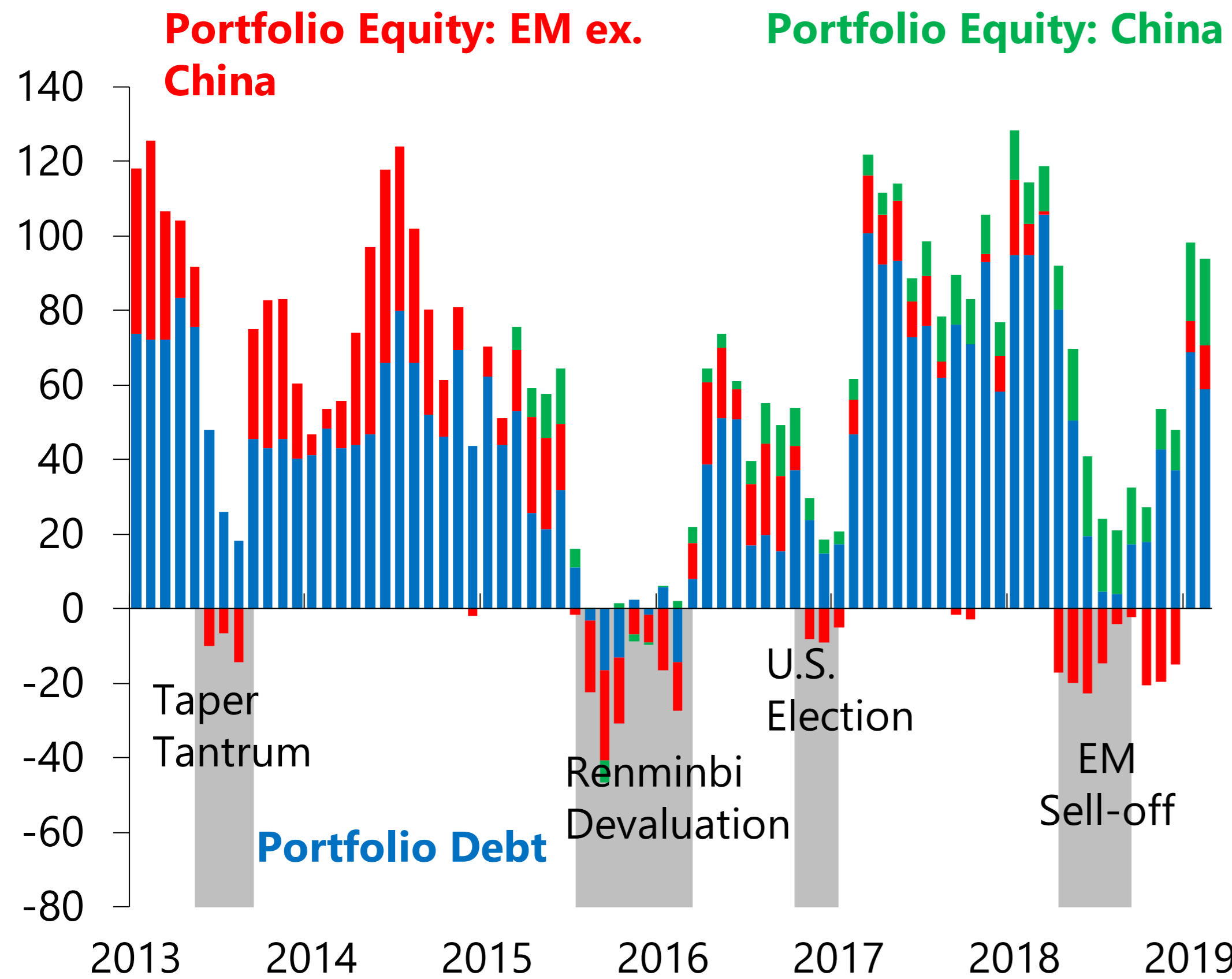
Vulnerabilities in Emerging and Frontier Markets

Emerging Markets Have Been Generally Resilient

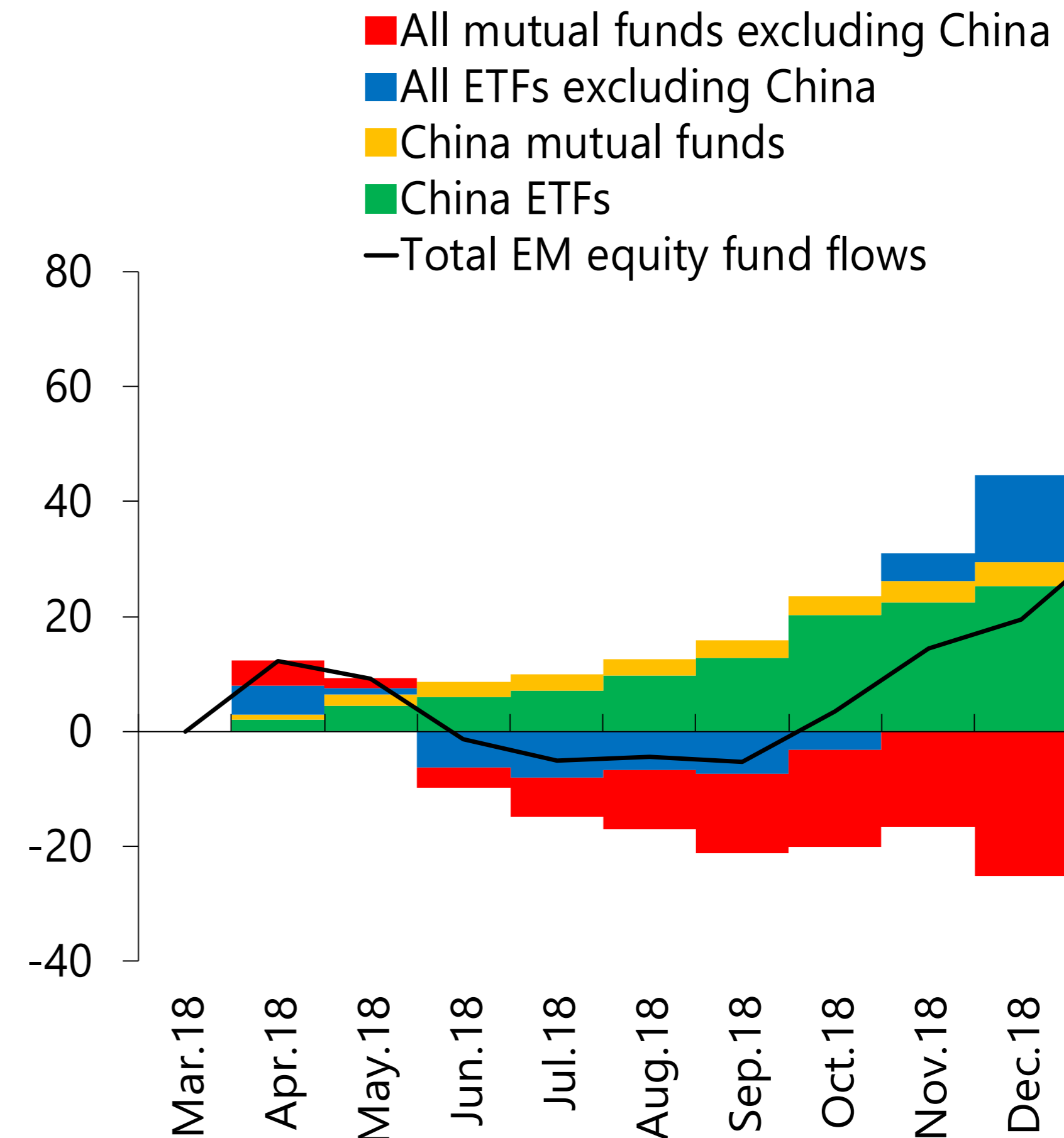
Portfolio flows have rebounded in recent months...

...especially as flows to Chinese equities remained strong

Nonresident Portfolio Flows to EMs*
(Billions of US dollars, three-Month Moving Sum)



Cumulative Emerging Market Equity Fund Flows
(Billions of US dollars)



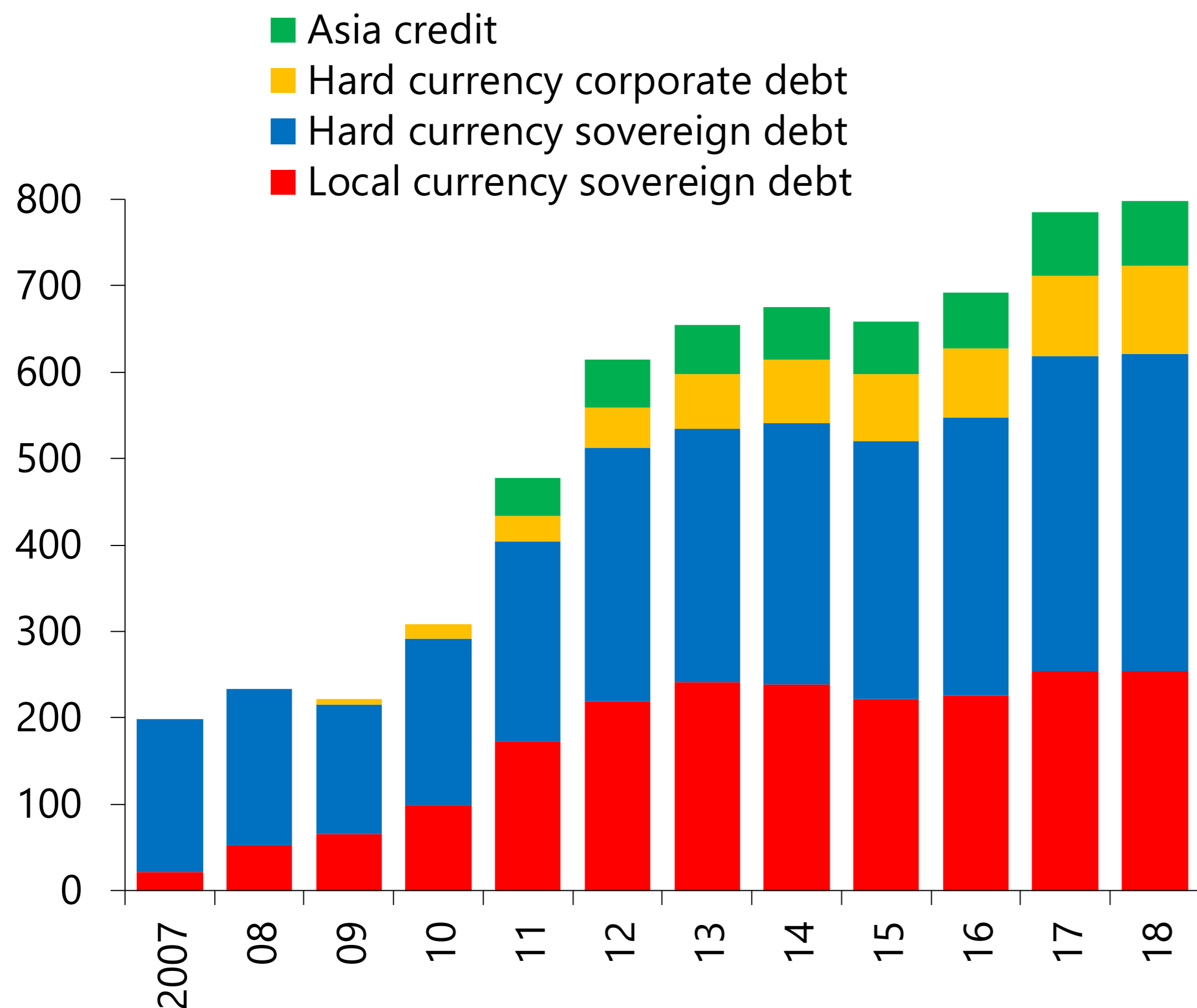
* Last 3 months are estimates based on higher frequency data from the IIF

Sensitivity of EM Portfolio Flows to Global Factors is Rising

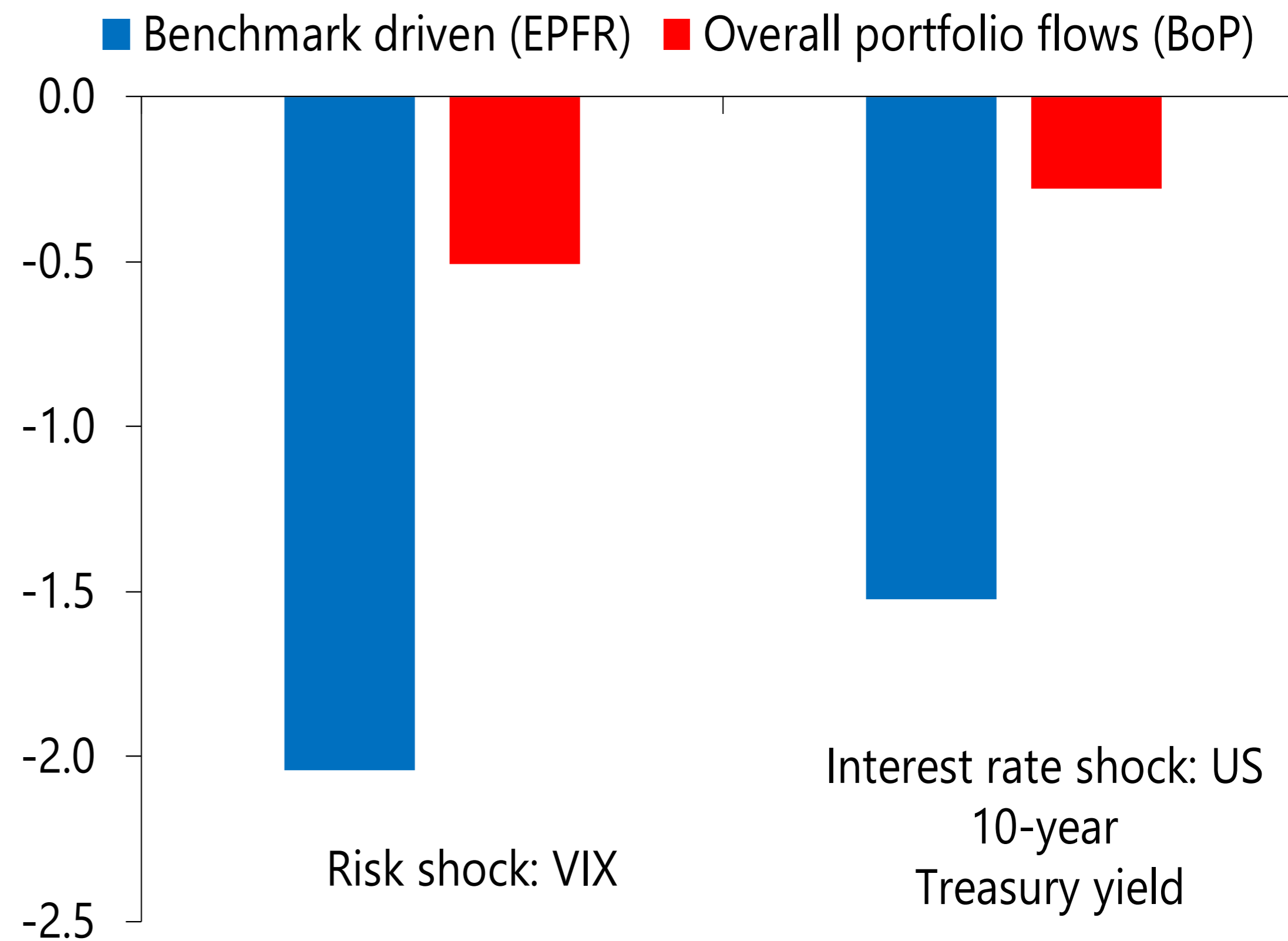
More fund managers are tracking emerging market-dedicated fixed income benchmark indices

Benchmark-driven flows are highly sensitive to external factors, such as global risk appetite and US interest rates

Assets Benchmarked against JPMorgan Emerging Market Indices



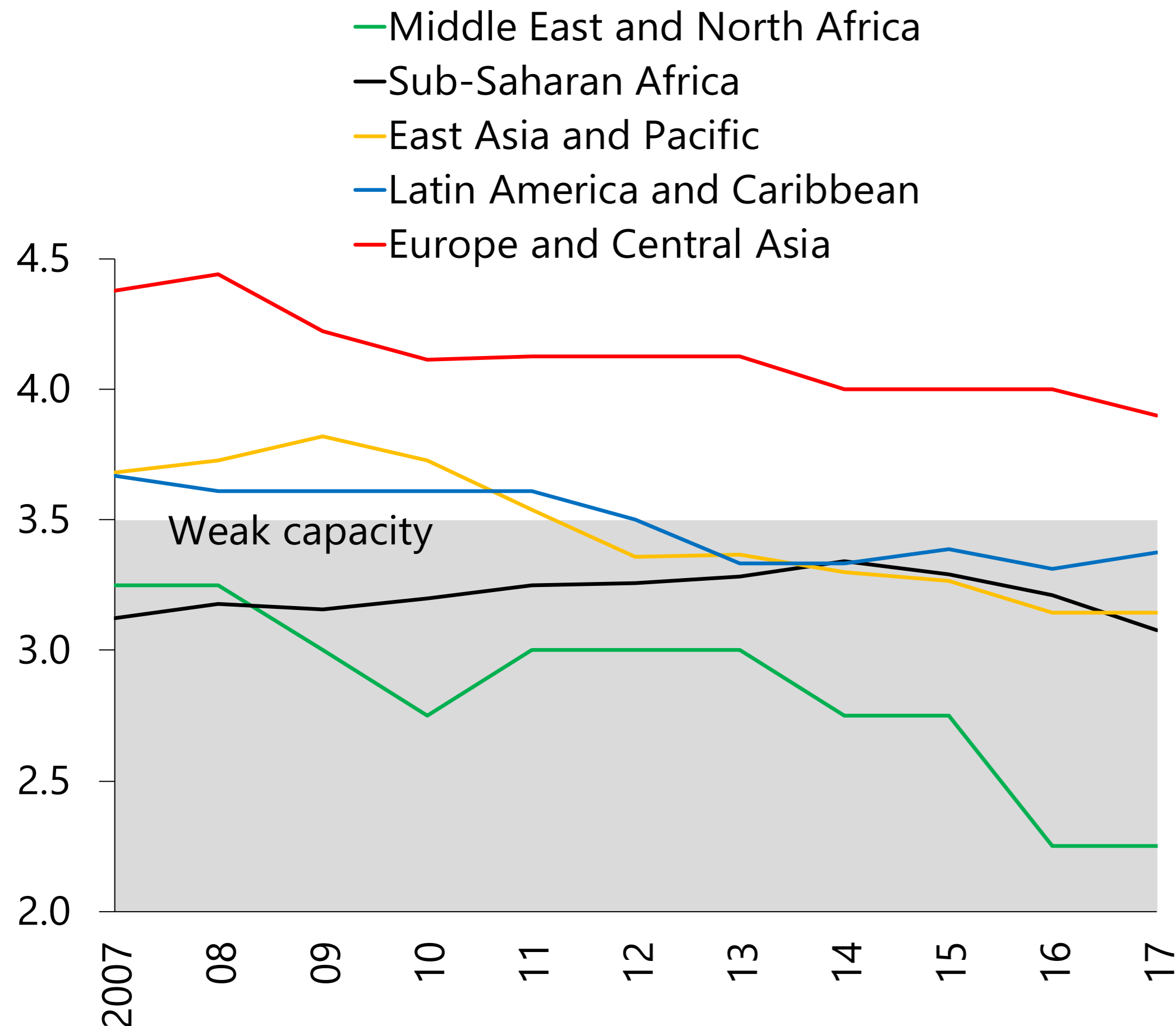
Sensitivity of Debt Flows to External Shocks
(Percent of invested assets)



Frontier Markets Tend to Face More Market Pressures

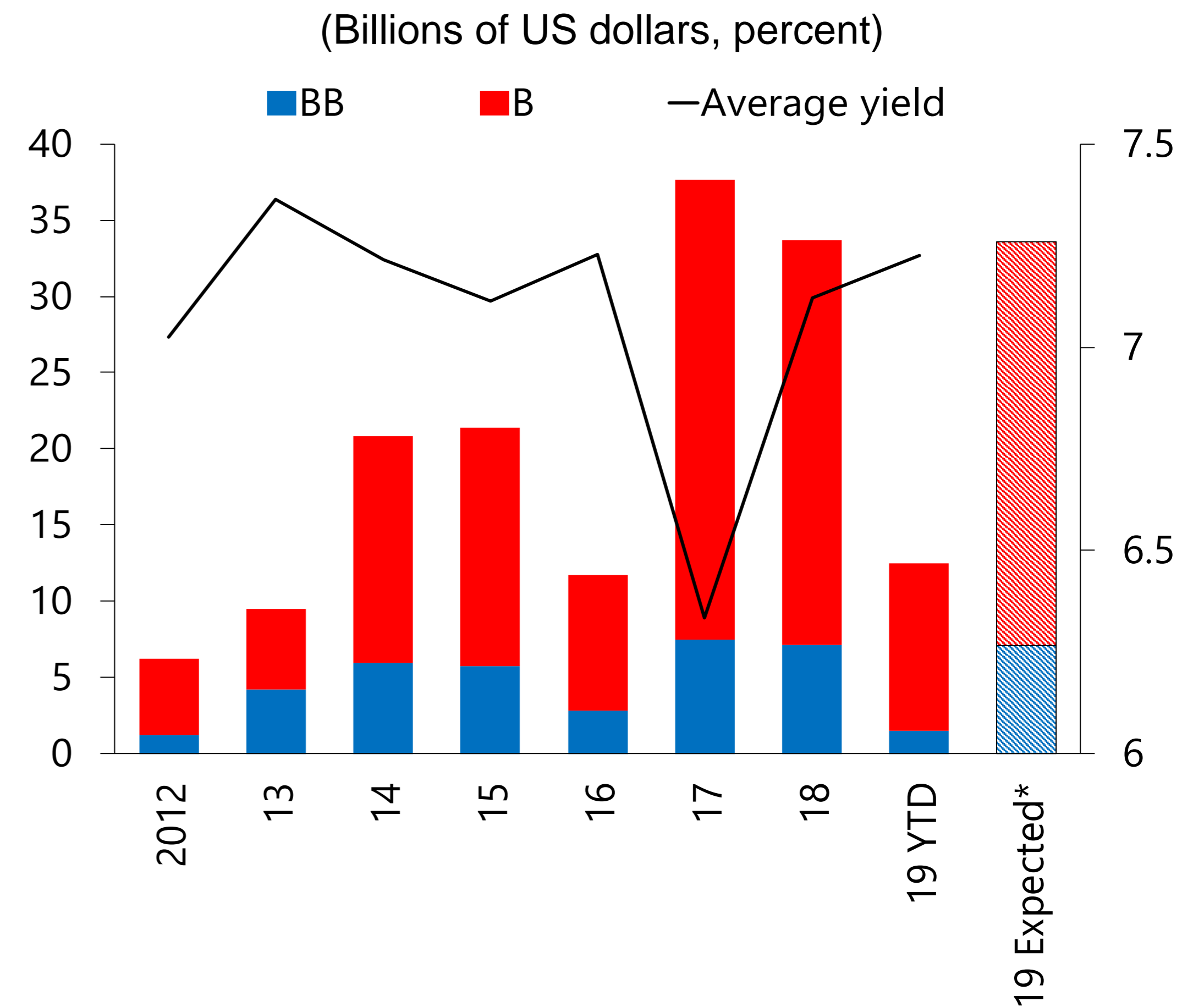
Debt-management capacity has not kept up with increasing reliance on international debt

CPIA Debt-Management Capacity Score
(Billions of US dollars, three-Month Moving Sum)



Refinancing needs of frontier economies are high in 2019

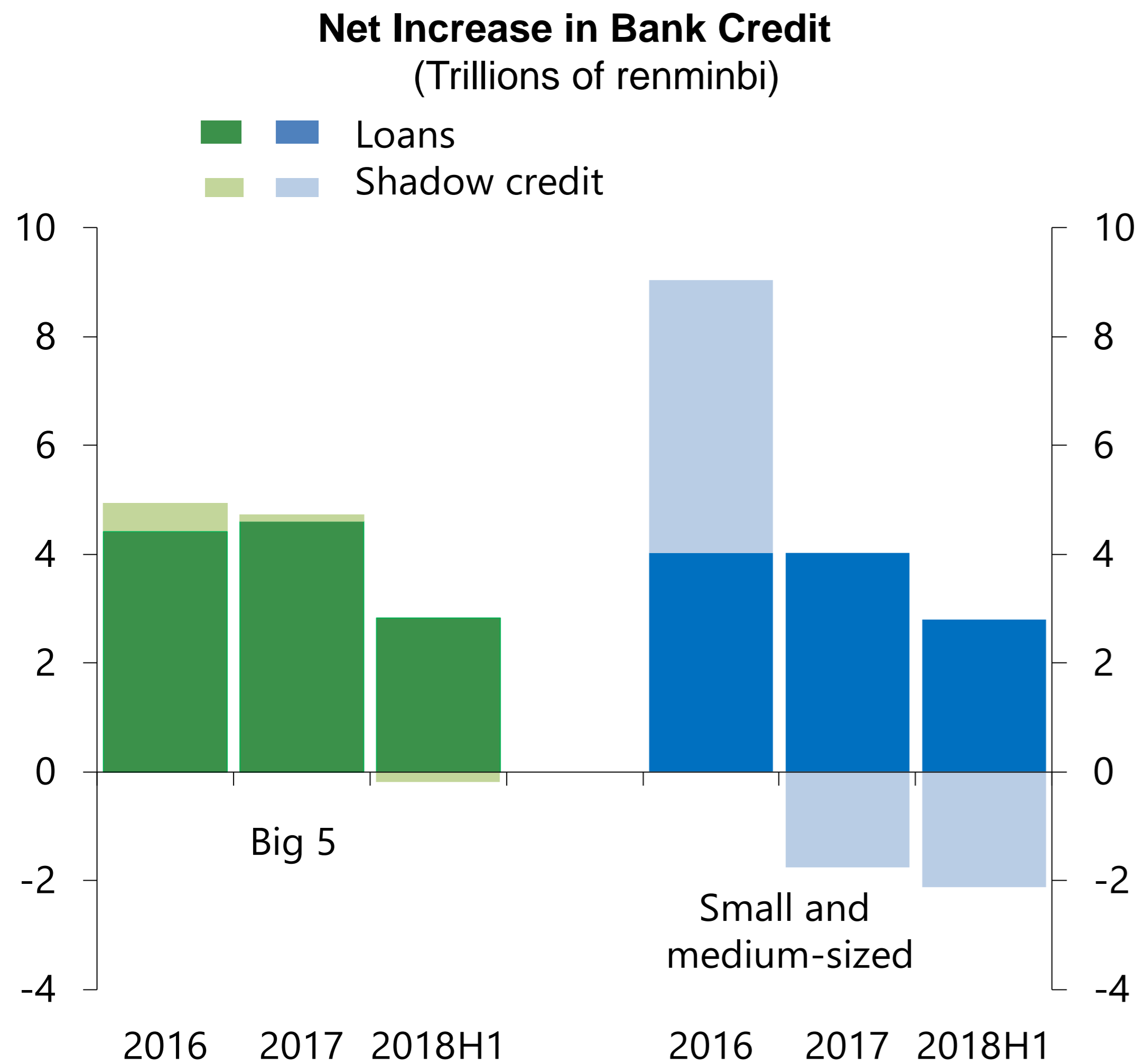
Frontier Markets: Sovereign International Bond Issuance in 2019
(Billions of US dollars, percent)



* JP Morgan and IMF staff estimates

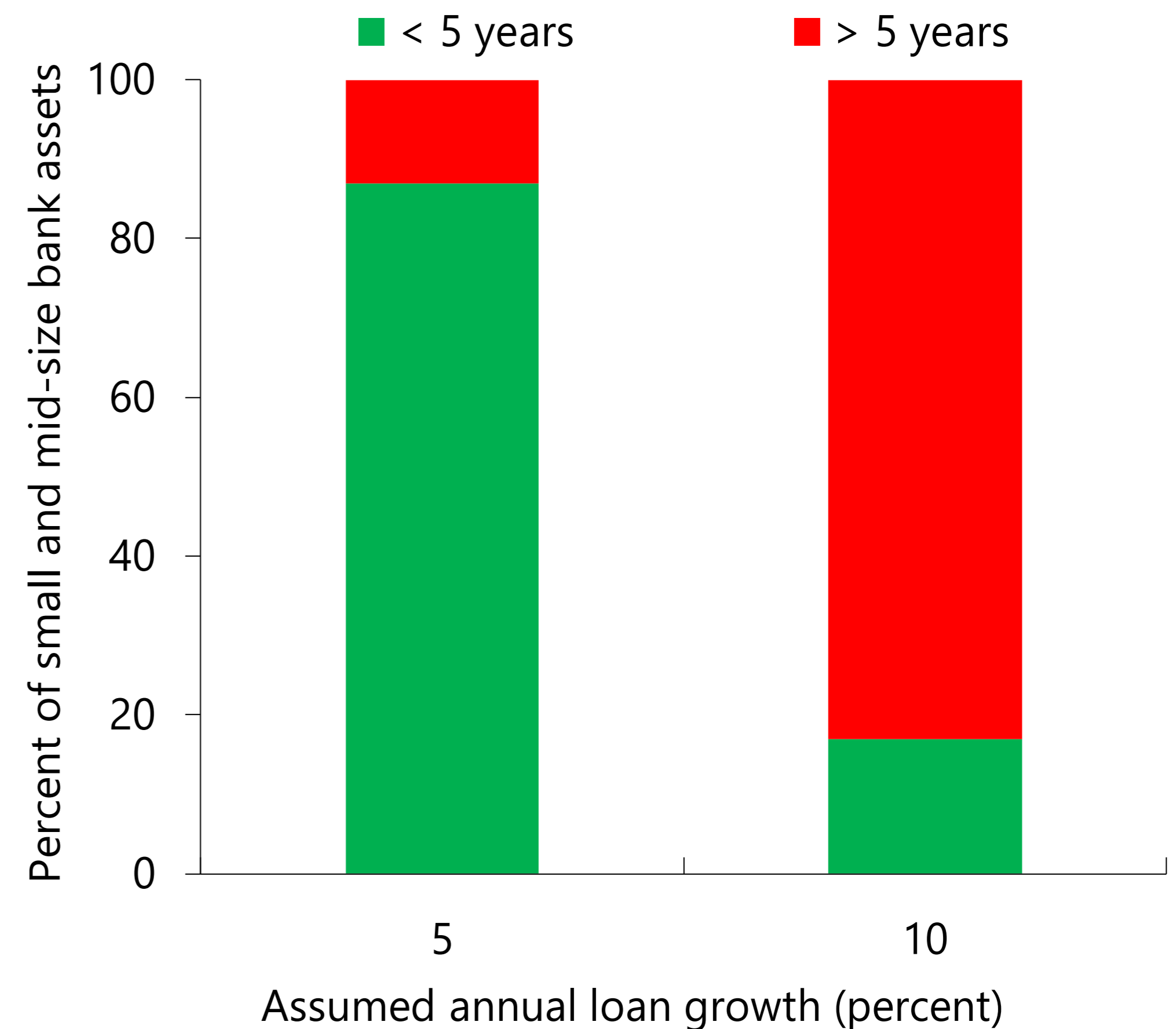
Vulnerabilities in China Remain High, Especially Outside Big 5 Banks

...while regulatory tightening has succeeded in curbing shadow credit



Faster credit growth may delay bank balance sheet repair

Share of Small and Mid-size Banks by Assets and Time Needed to Repair Balance Sheets



Policy Recommendations

Policy recommendations

Avoid policy missteps, enhance resilience, and raise sustainable, inclusive growth prospects

- **AEs: Data dependent and well-communicated monetary policy to avoid market overreactions, prevent further growth deceleration or entrenchment of below-target inflation expectations**
- **In a more severe and protracted downturn, more accommodative fiscal policies, where feasible, should complement monetary easing**
- **EMDEs: Reduce vulnerabilities, ensure strong policy frameworks to raise resilience**
- **Ensure central bank independence for effective monetary policy**
- **Implement structural and fiscal reforms to ensure sustainable, inclusive growth**

Safeguard financial stability

- **Deploy broad-based macroprudential tools (countercyclical capital buffers) where financial vulnerabilities are building**
- **Develop macroprudential tools for addressing vulnerabilities outside the banking sector, including for rising corporate sector debt**
- **EMDEs: Reduce financial and external vulnerabilities, including through prudent debt management. Flexible exchange rates can serve as buffers. If disorderly market conditions emerge, FX interventions may be appropriate as long as reserves remain adequate**

Seek globally cooperative solutions

- **Preserve and modernize an open rule-based multilateral trading system**
- **Complete and implement the financial regulatory reform agenda, while avoiding backtracking**
- **Cooperate on other global public-good problems (e.g., global imbalances, international taxation, climate, refugees, cybersecurity, tackling corruption)**