



Global Financial Stability Report



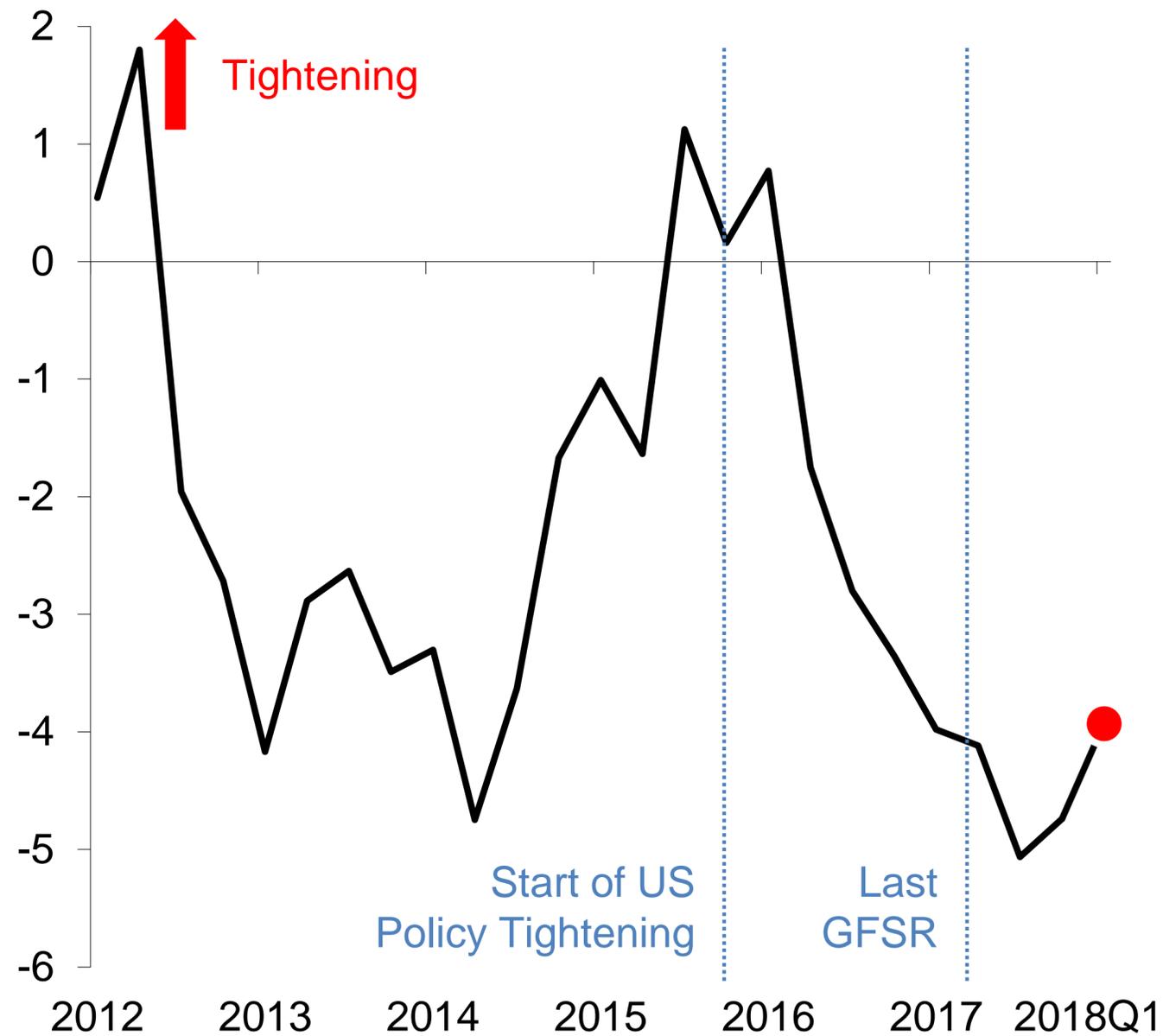
A Bumpy Road Ahead

TOBIAS ADRIAN
MONETARY AND CAPITAL MARKETS DEPARTMENT

Easy Global Financial Conditions

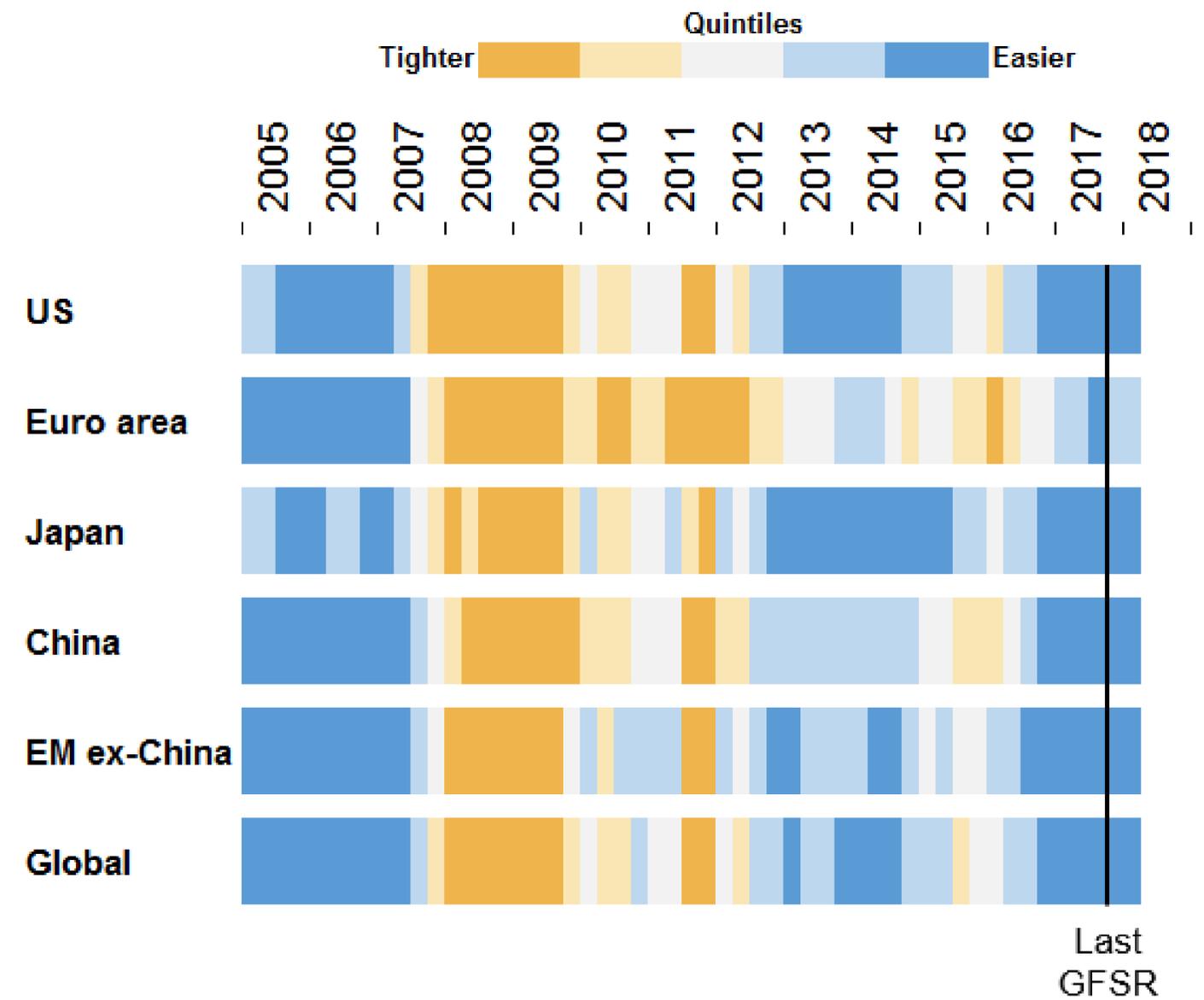
Global Financial Conditions Have Tightened Somewhat Since The Last GFSR...

(Standardized index value)



...But Remain Supportive of Near-Term Growth

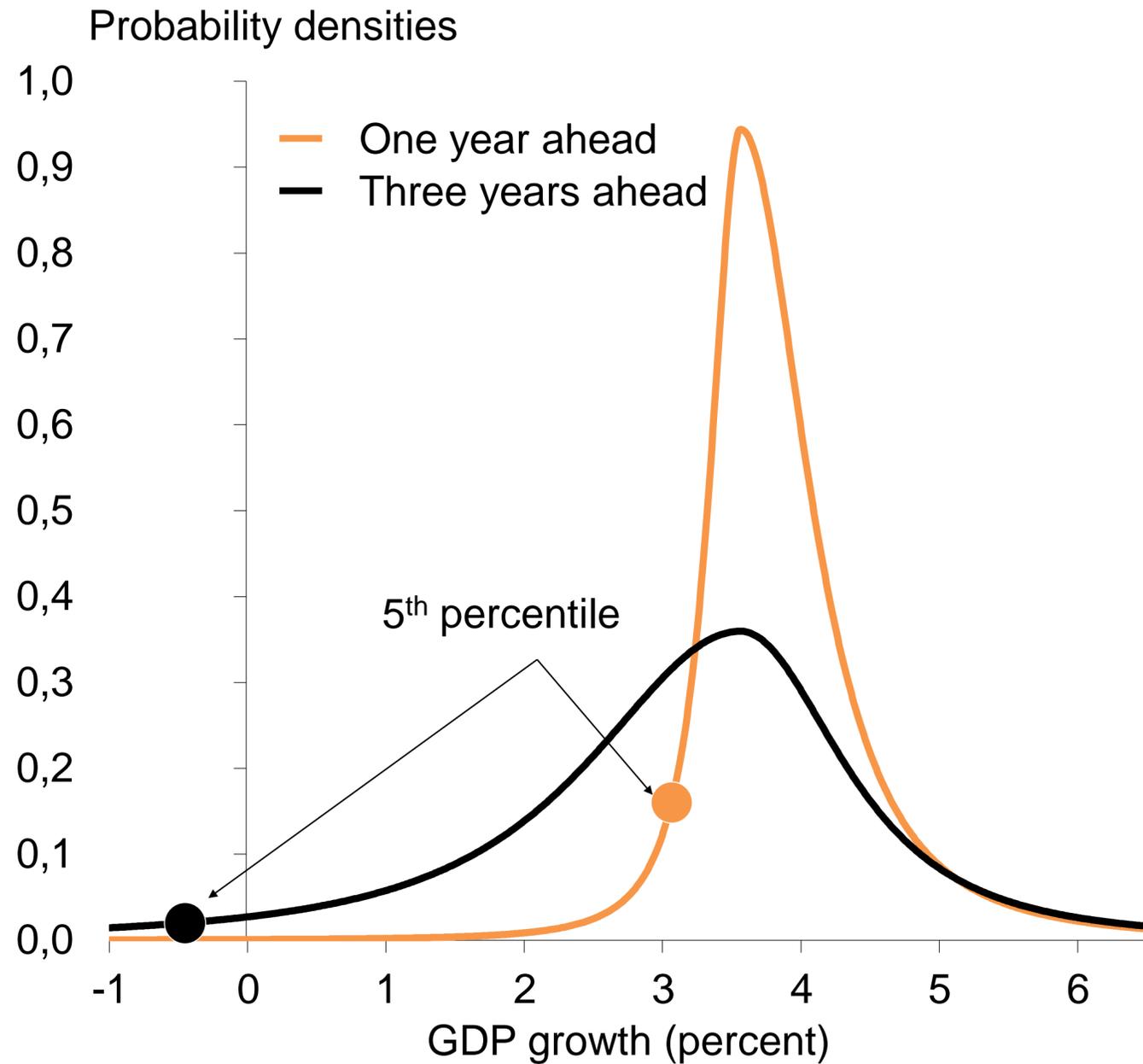
(Financial conditions index)



Rising Global Medium-Term Risks

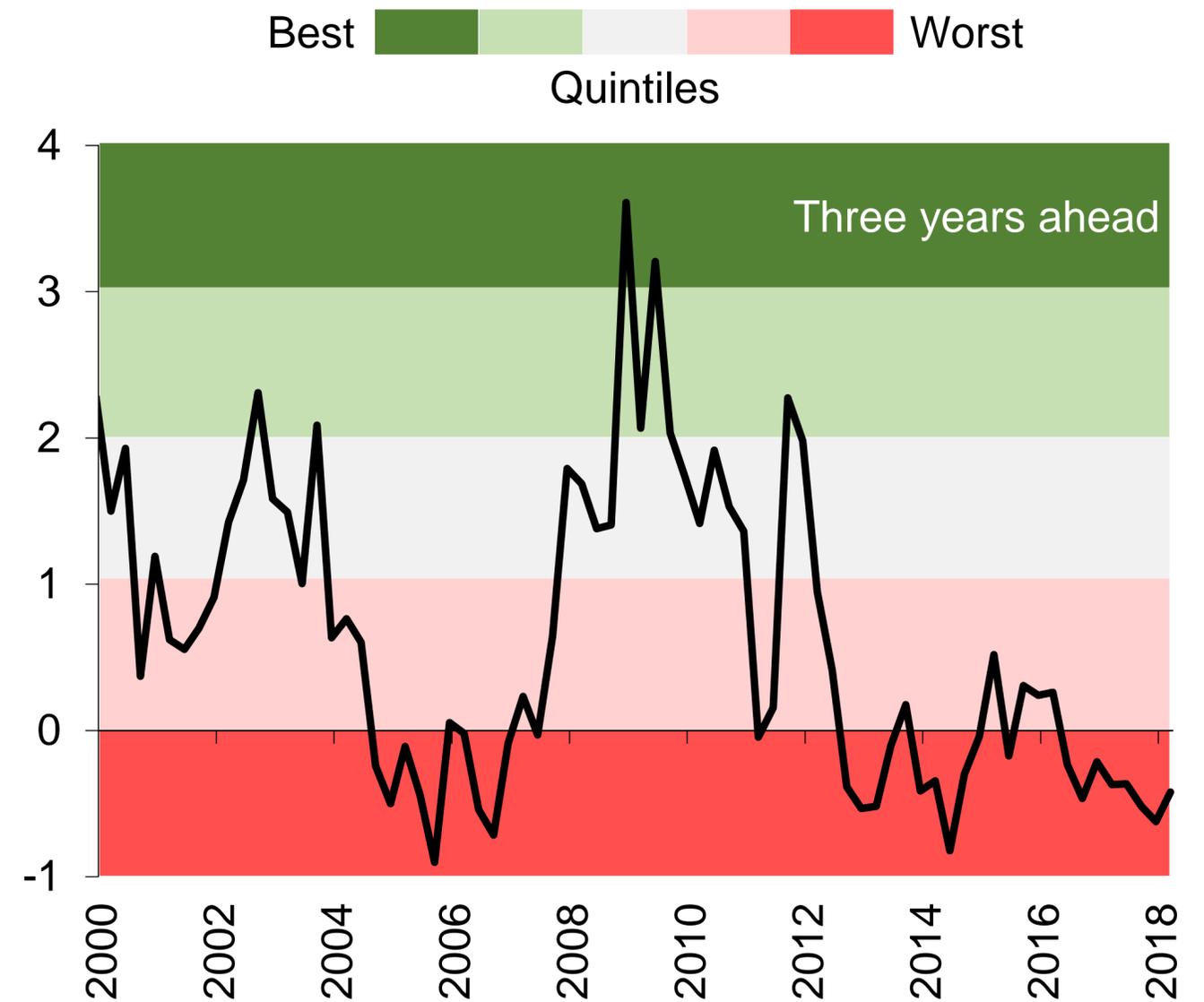
Supportive Financial Conditions Dampen Near-Term Risks...

(Global growth forecast densities, 2018Q1)



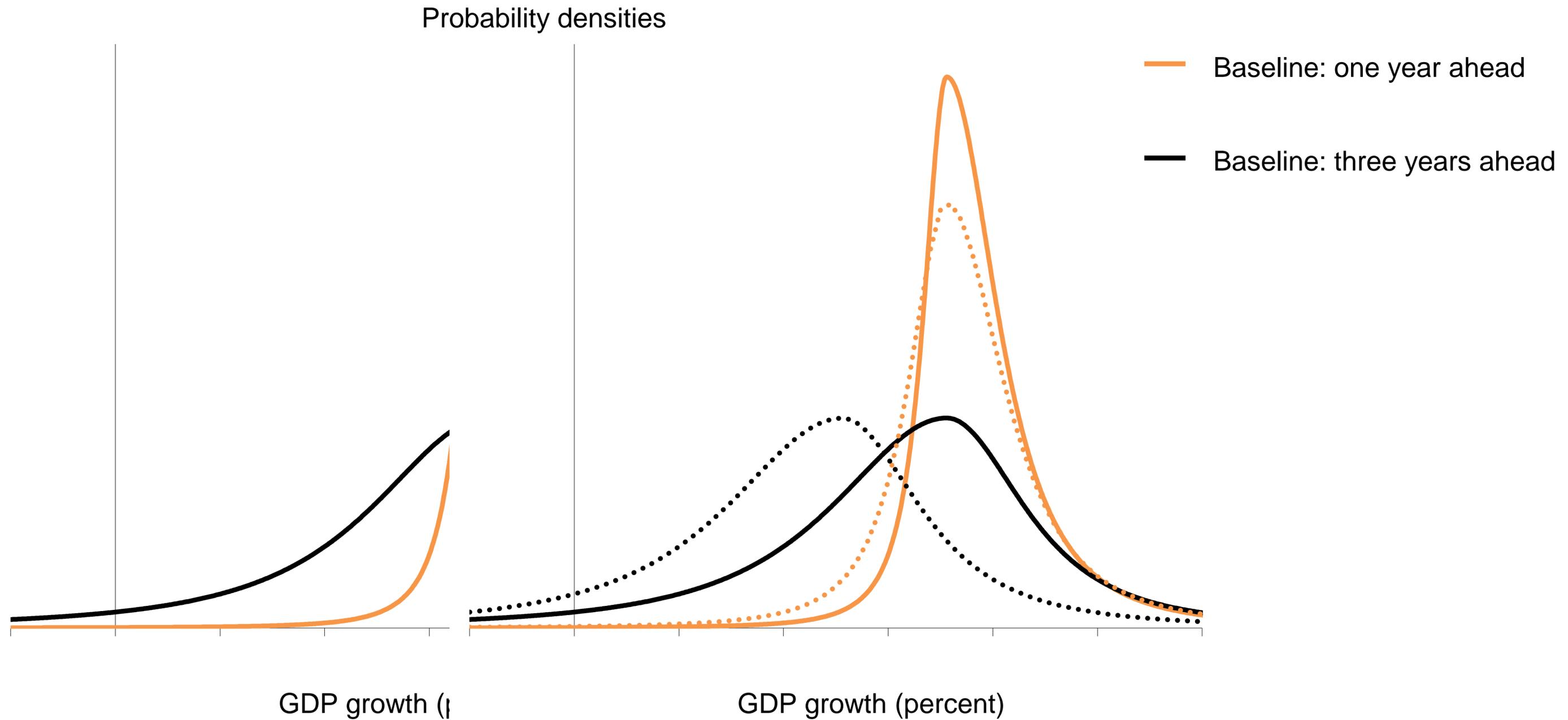
...But Raise the Odds of Adverse Global Growth Outcomes in the Medium Term

(Global Growth-at-Risk forecasts of severely adverse growth outcomes, percent)



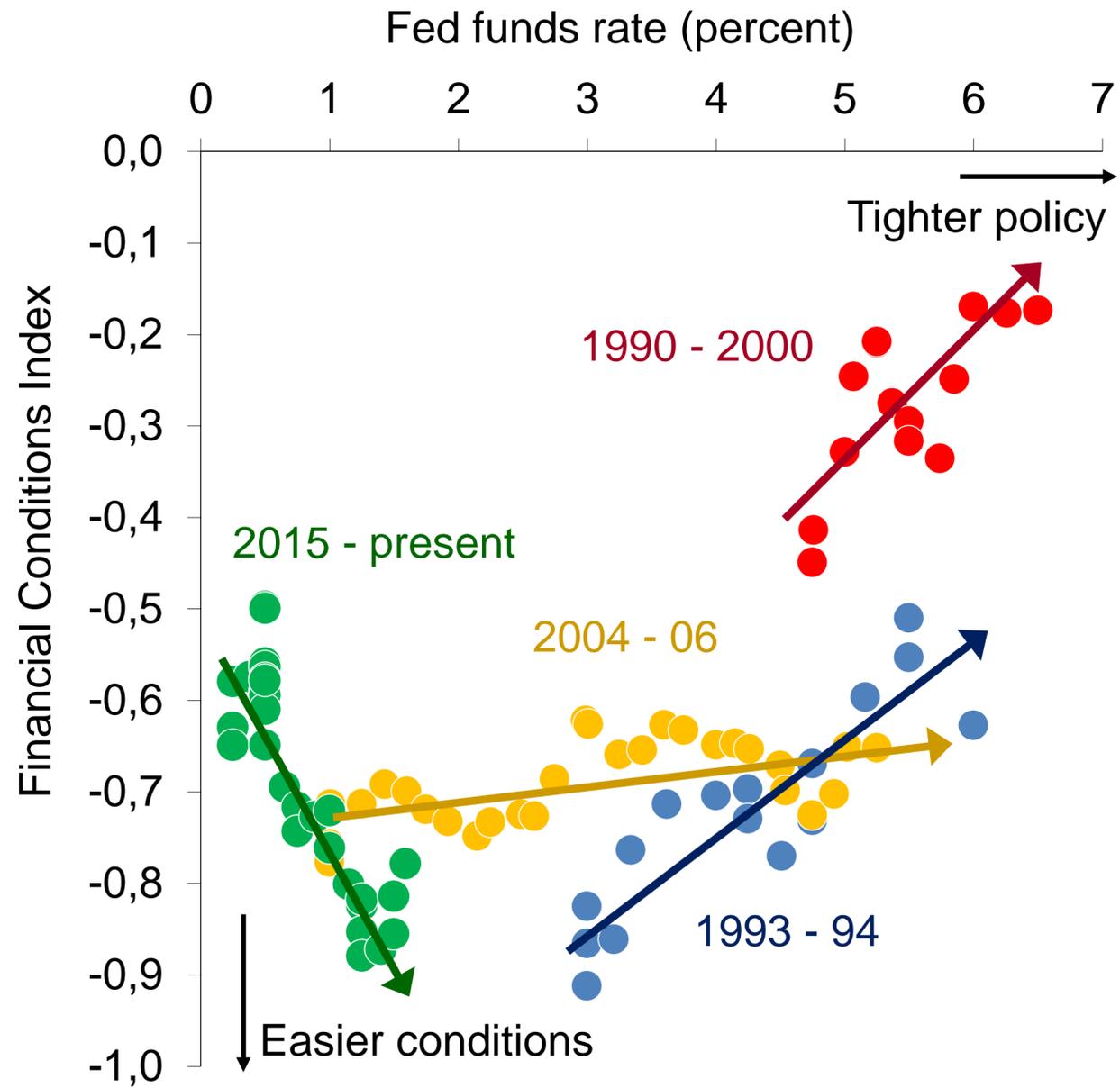
Markets Vulnerable To Rising Trade Tensions...

Trade Tensions Raise Risks to Growth (Global growth forecast densities, 2018Q1)

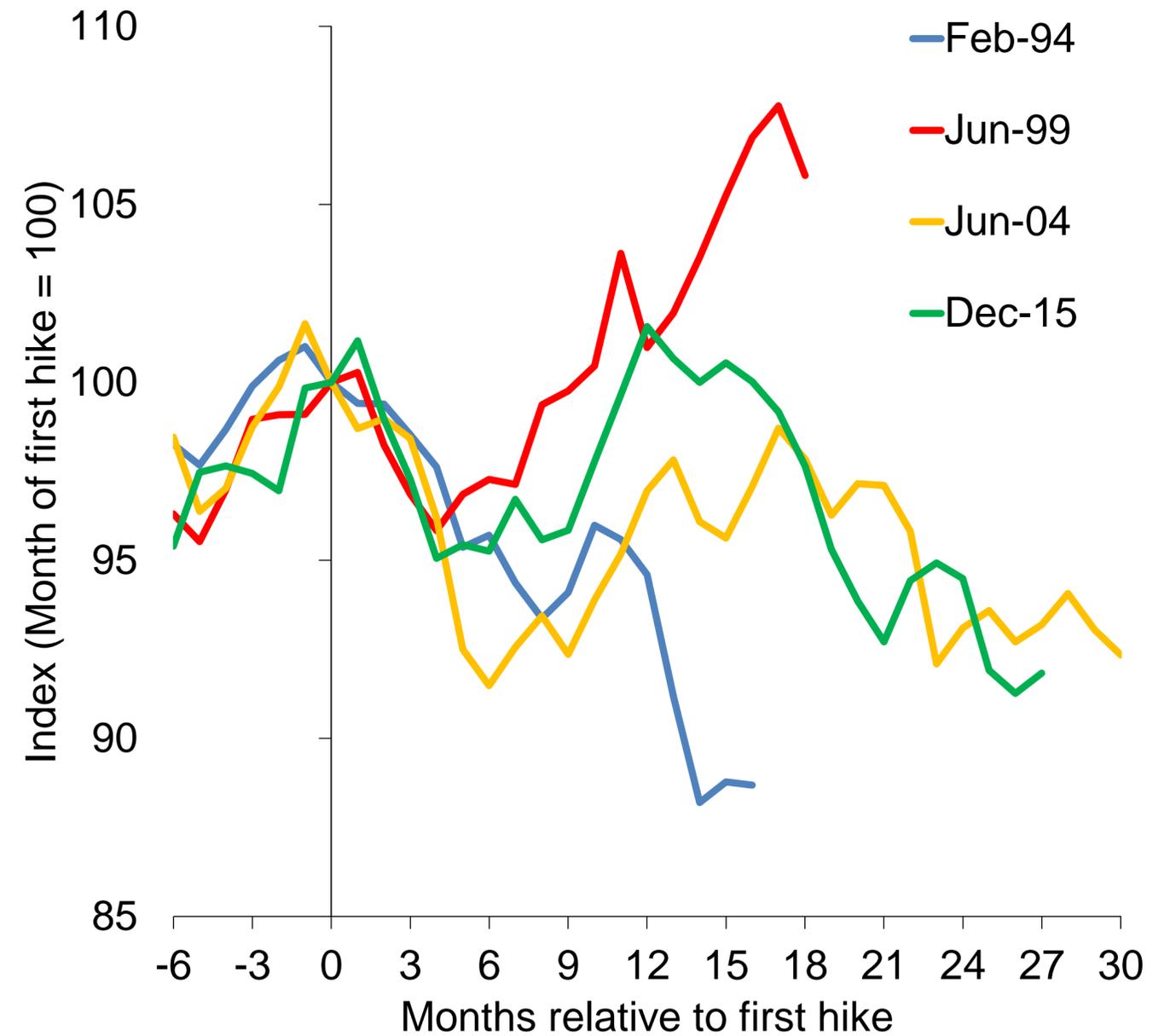


...And To Unexpected Policy Tightening

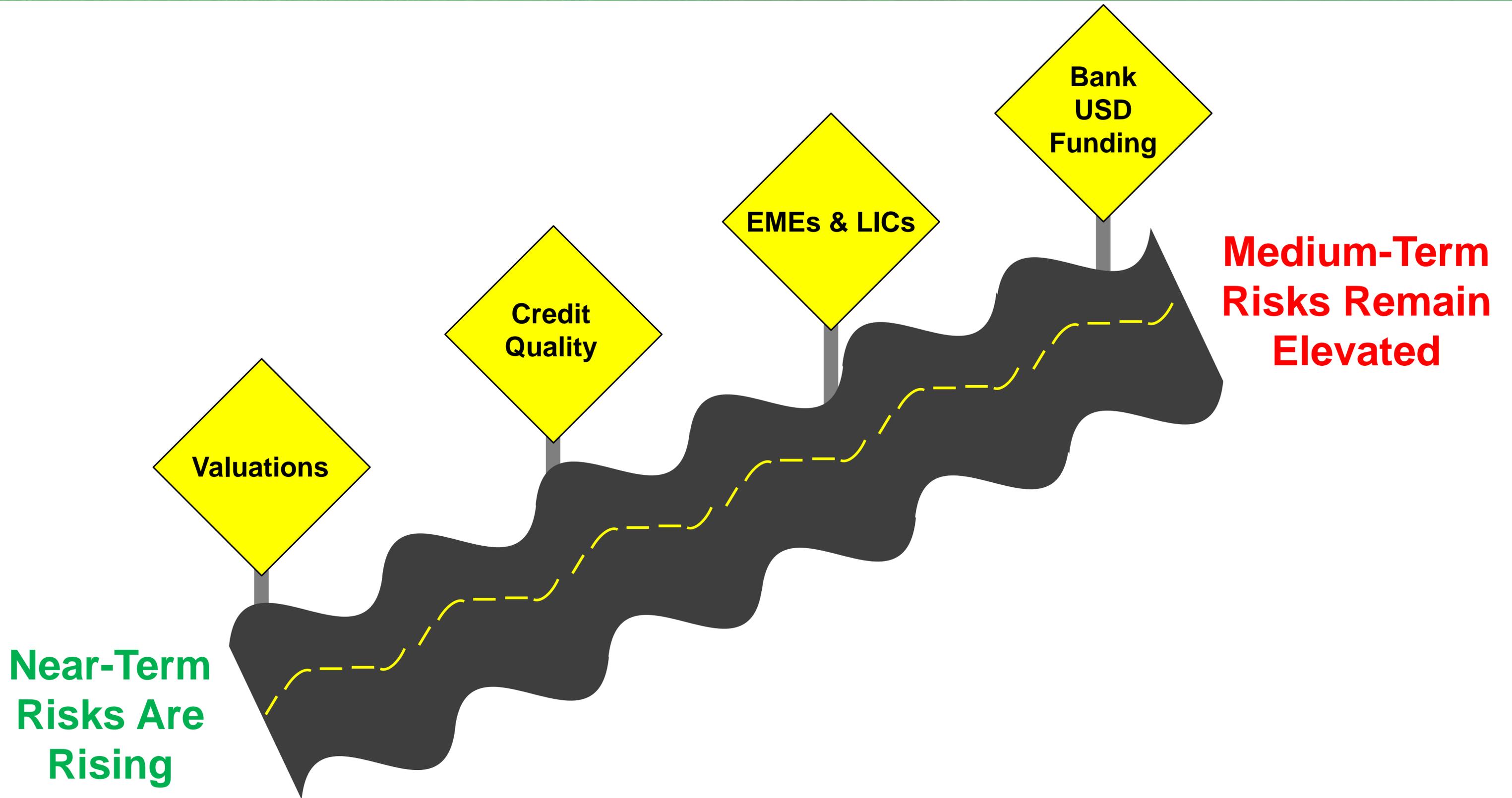
US Financial Conditions Have Eased Despite Policy Tightening



... Alongside a Weakening Dollar (US real effective exchange rate)



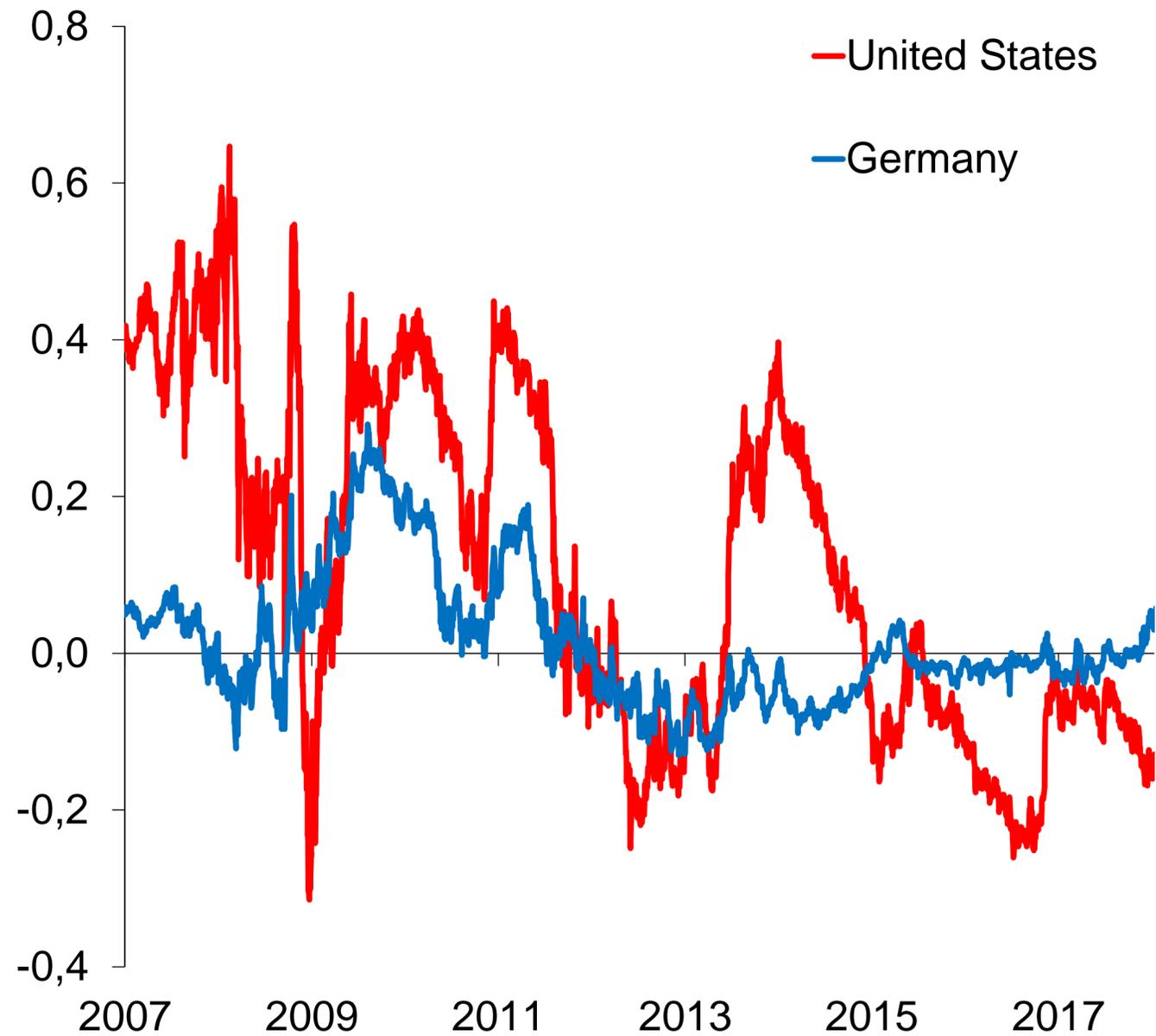
A Bumpy Road Ahead...



Markets Vulnerable To Unexpected Policy Tightening...

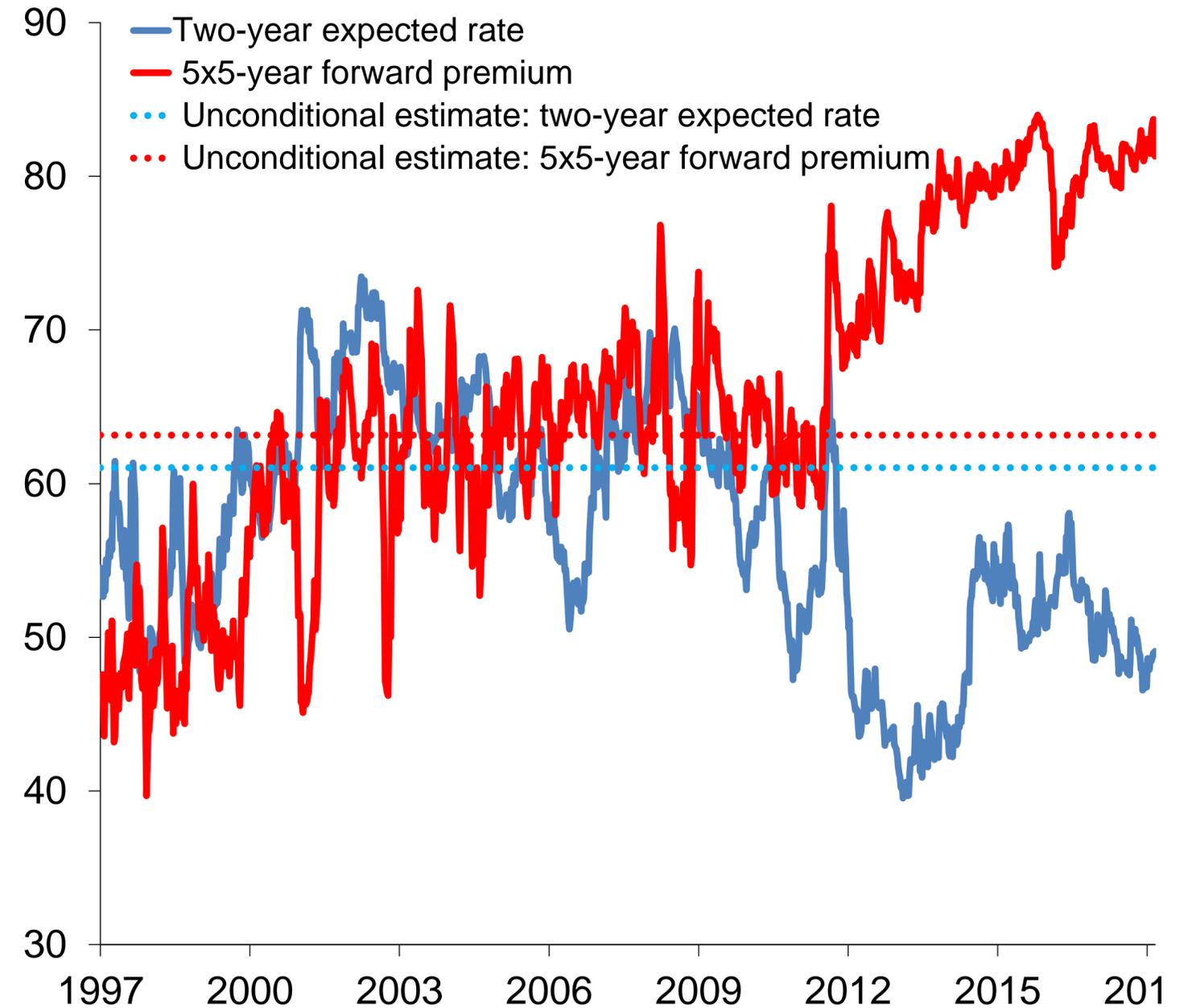
Compressed Term Premiums Persist...

(Percent)



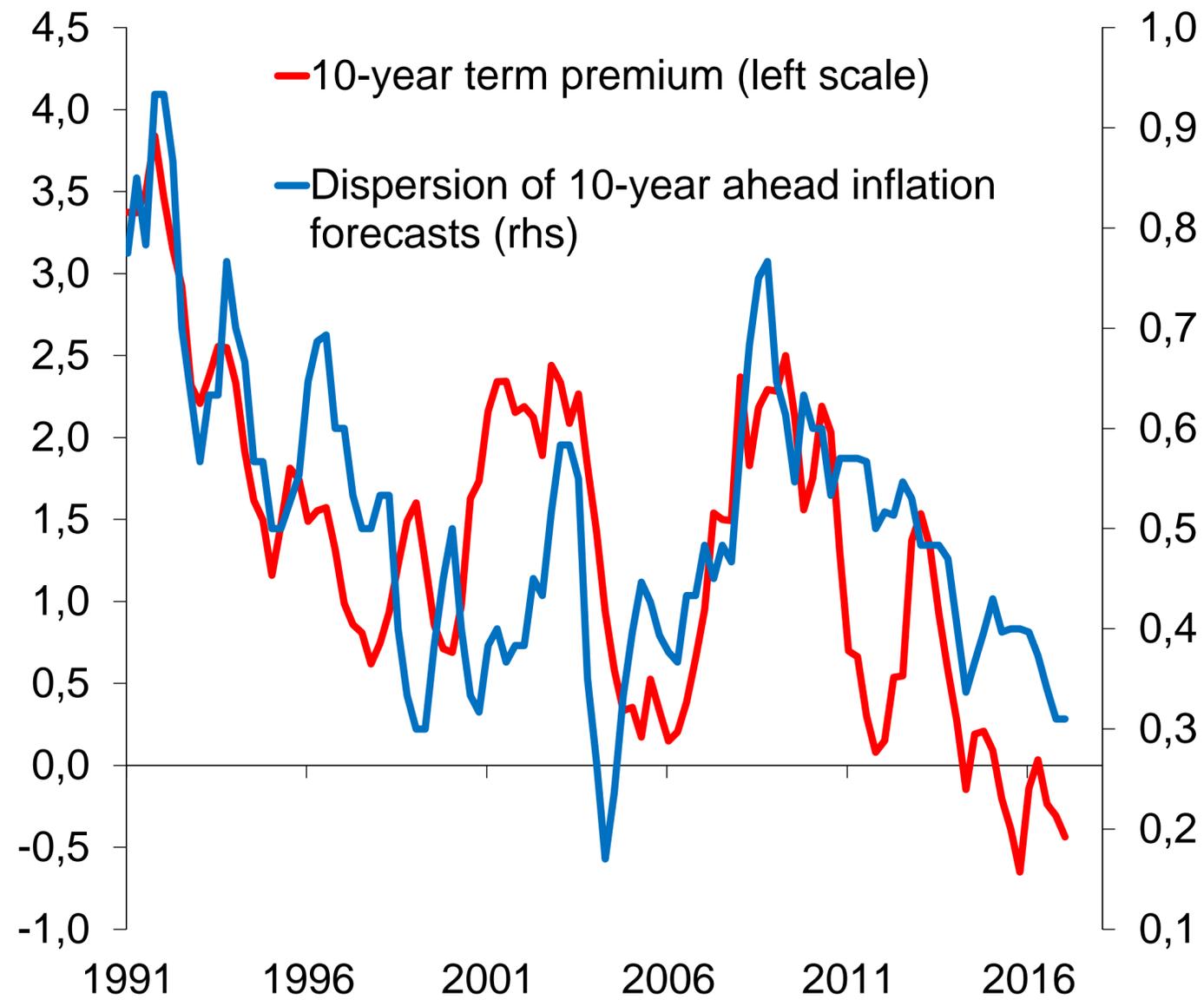
...and Have Moved Closely Together, Even as Expected Policy Paths Diverge

(Percent explained by first principal component)

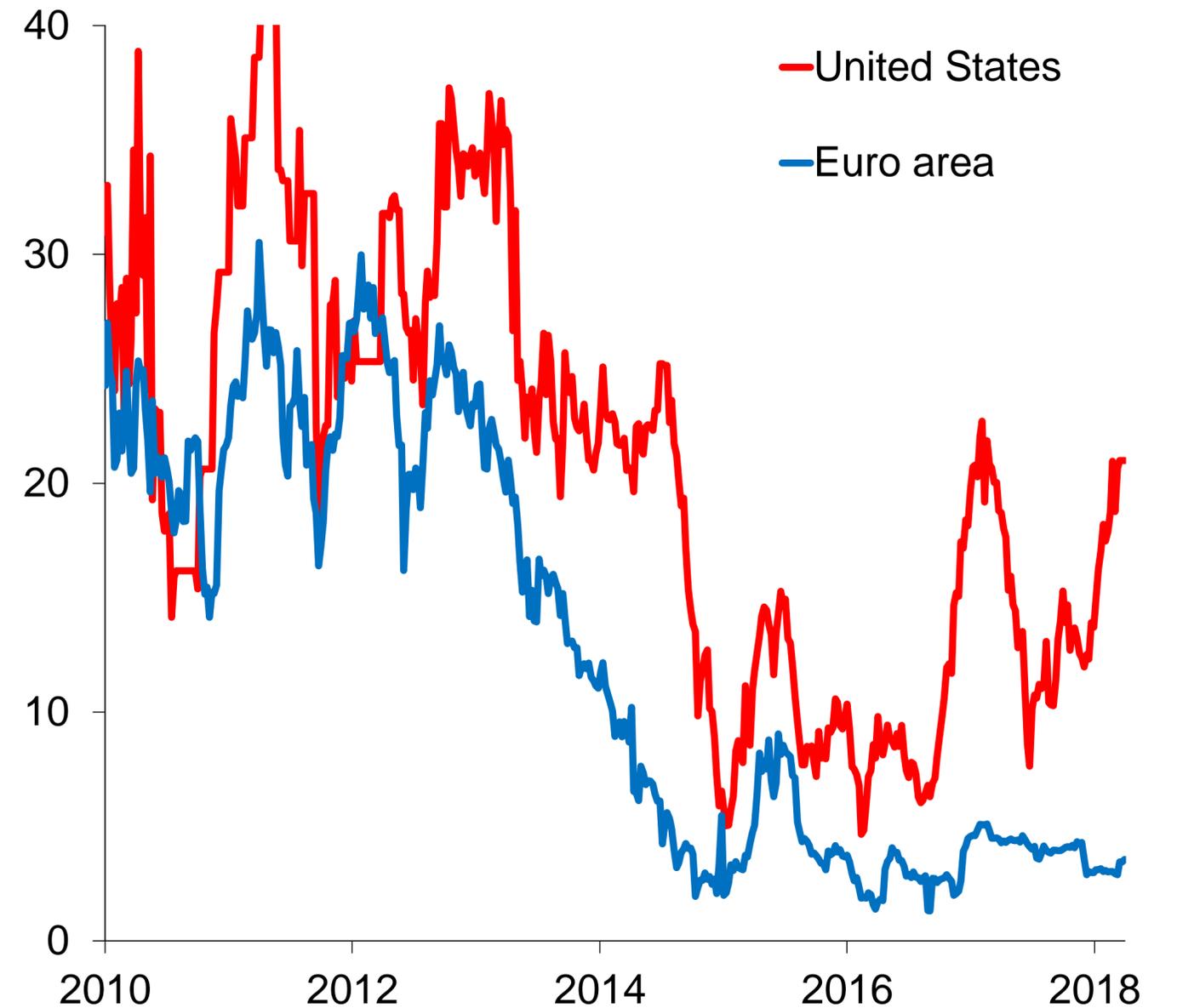


...And Inflation Surprises

Term Premiums Have Moved Lower as Uncertainty About Future Inflation Has Fallen
(Percent)



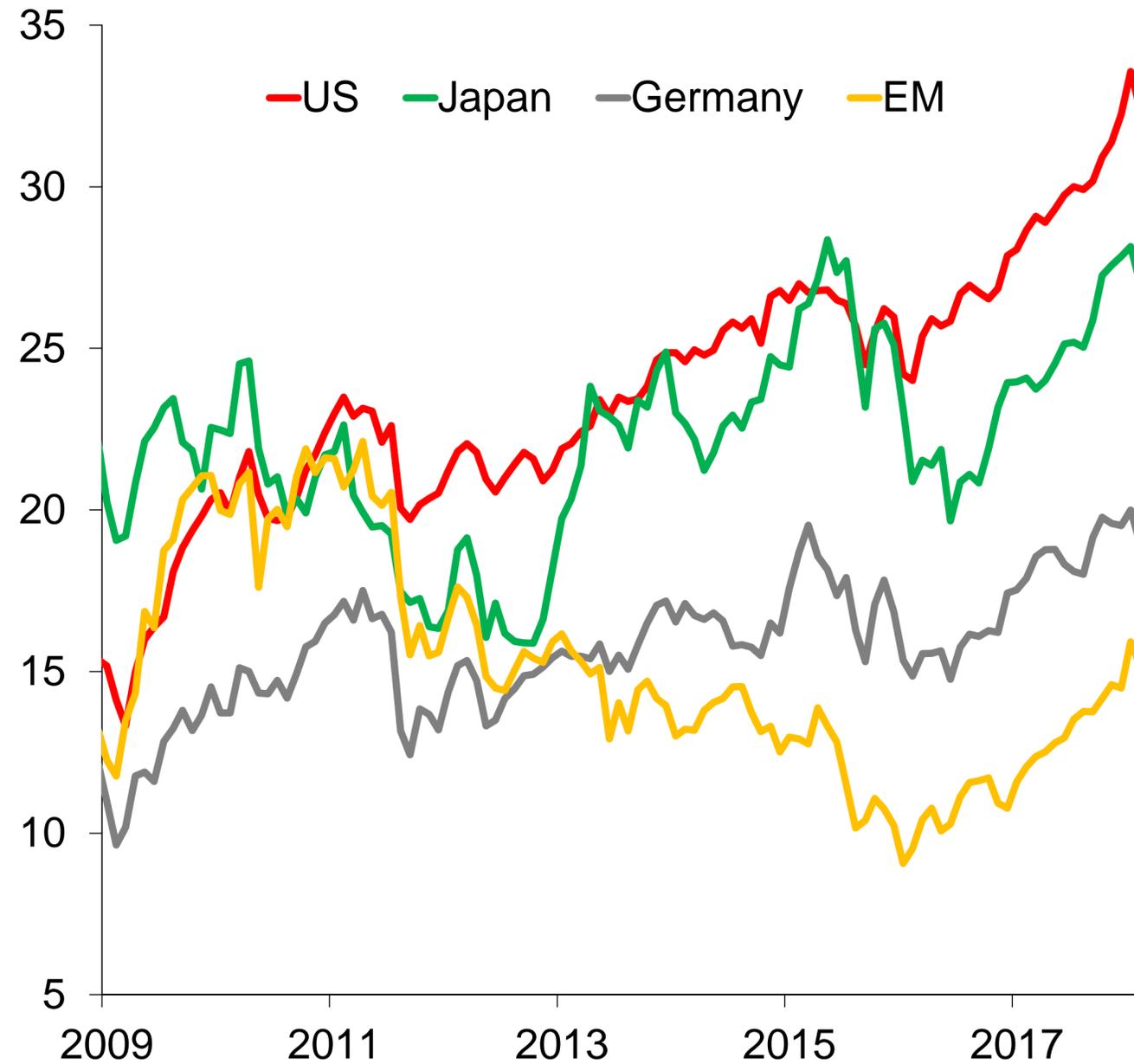
Markets Are Not Pricing in a Significant Likelihood of Sharply Higher Inflation
(Market-implied probability of CPI > 3% in five years, percent)



Stretched Equity Valuations?

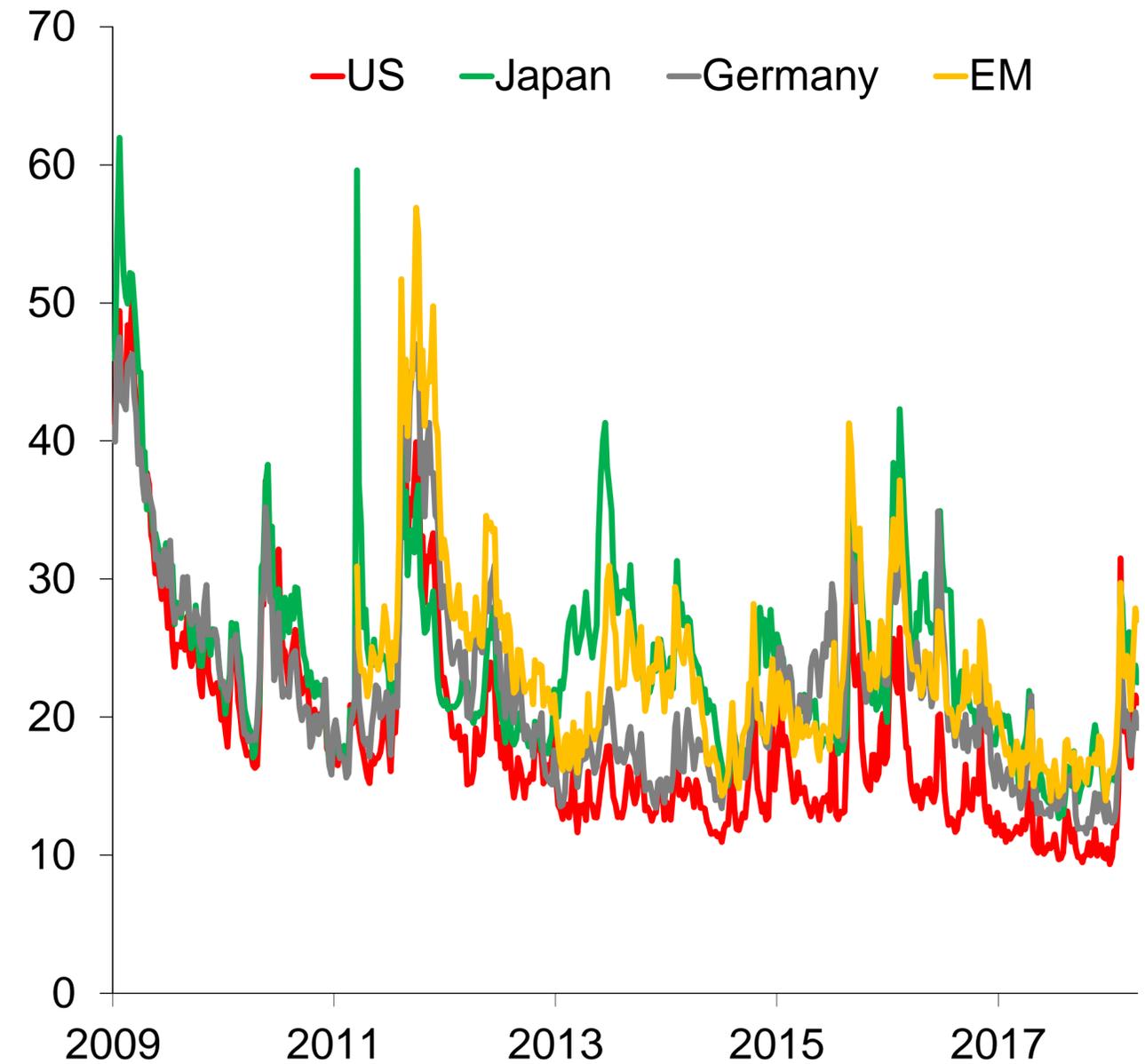
Global Equity Market Rally Has Continued to Push Valuations Higher...

(Cyclically adjusted price-to-earnings ratio)



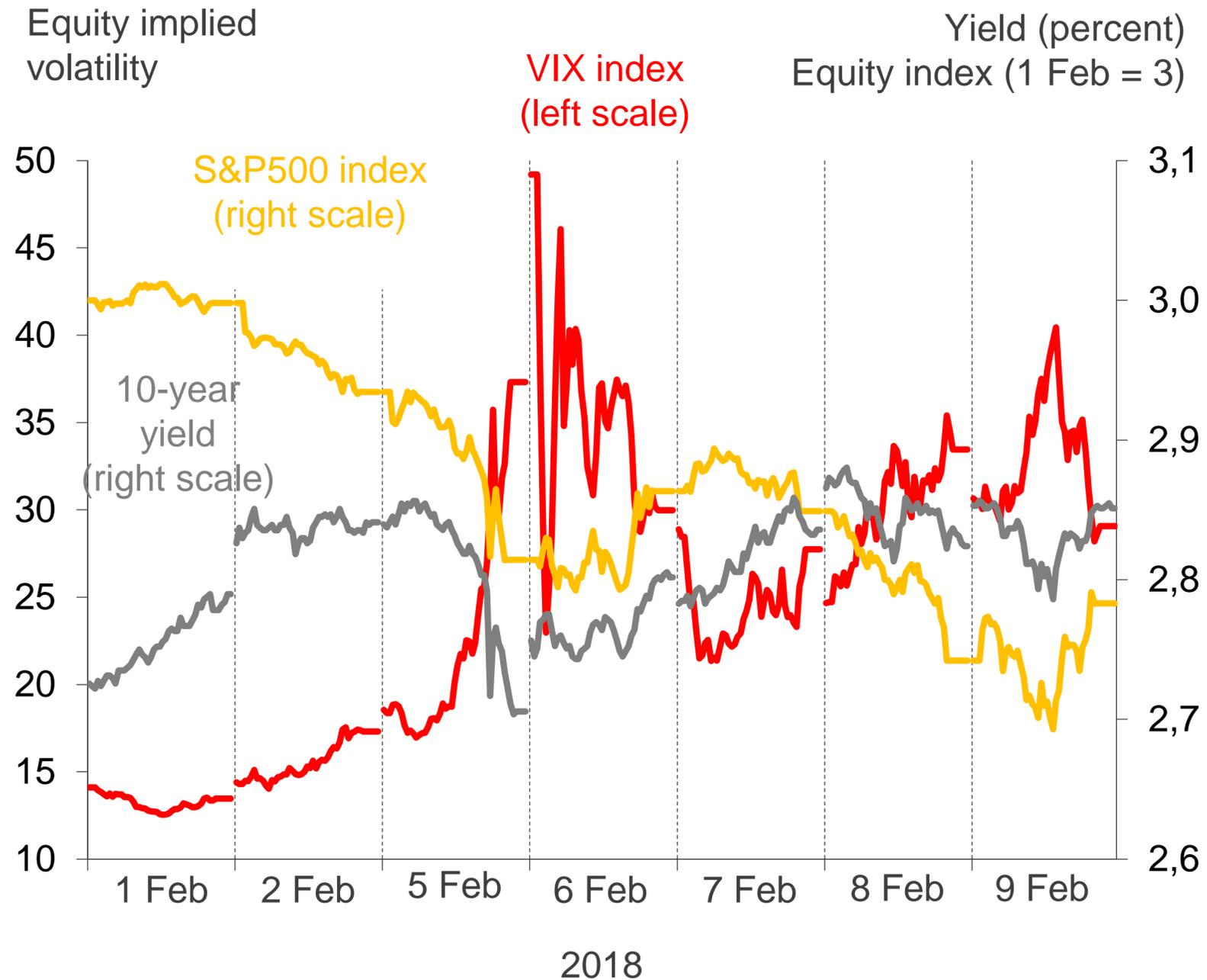
...Despite Spikes of Volatility

(Implied equity volatility indexes, percent)

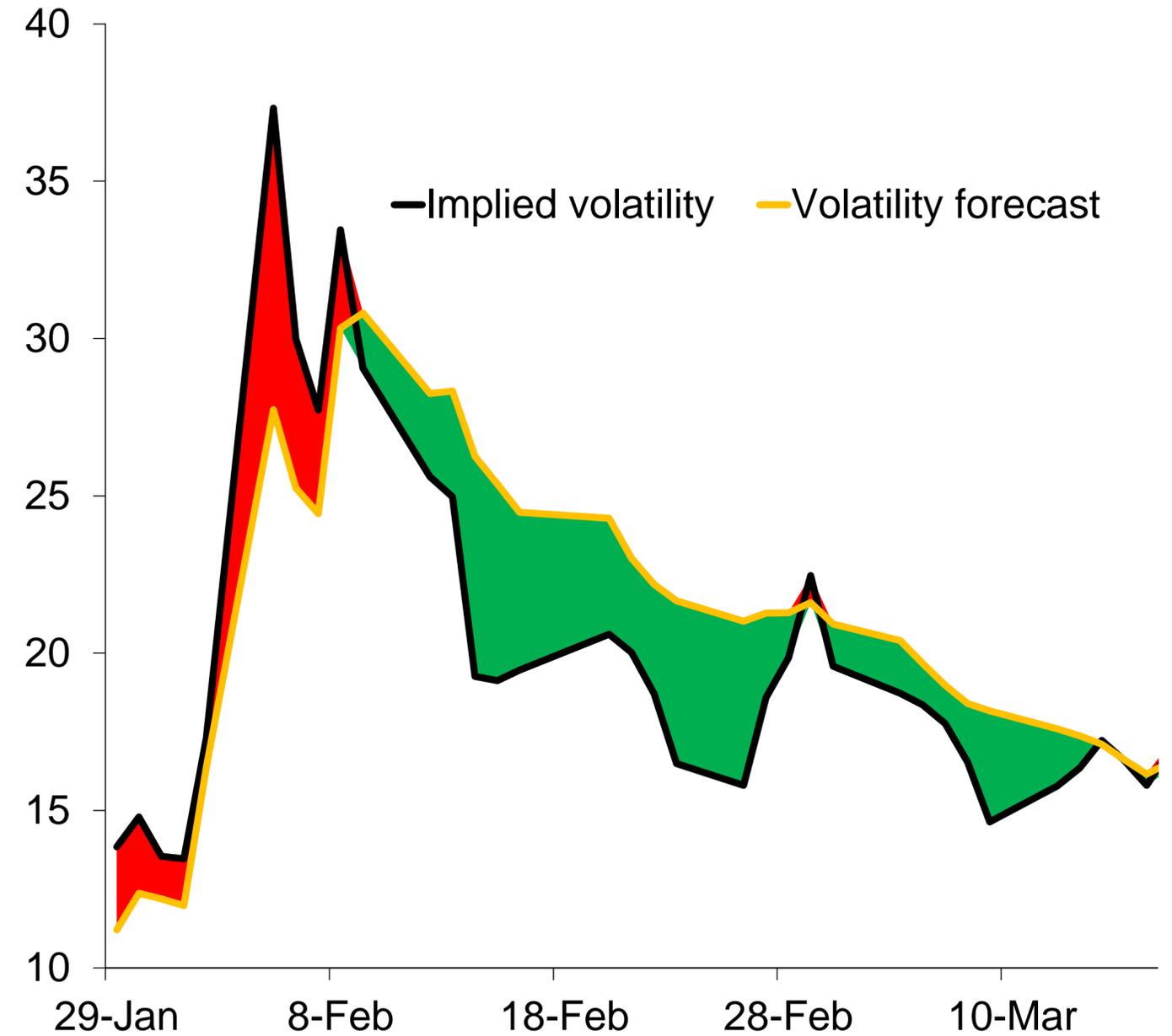


VIX Tantrum

Equity Markets Experienced a Short Spike of Volatility...



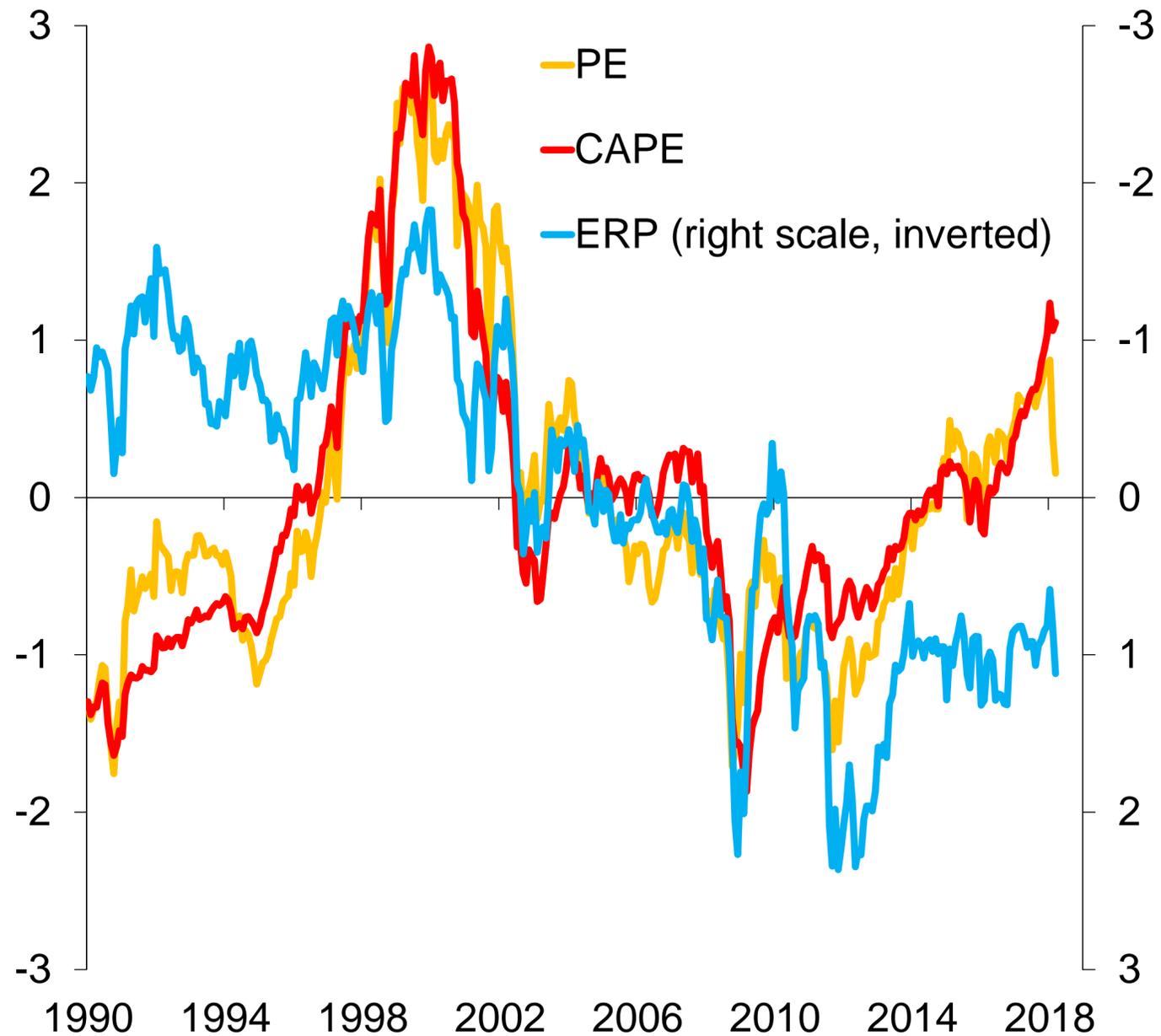
...Followed By a Renewed Compression in Volatility Risk Premium (percent)



US Equities Are Expensive By Some Measures

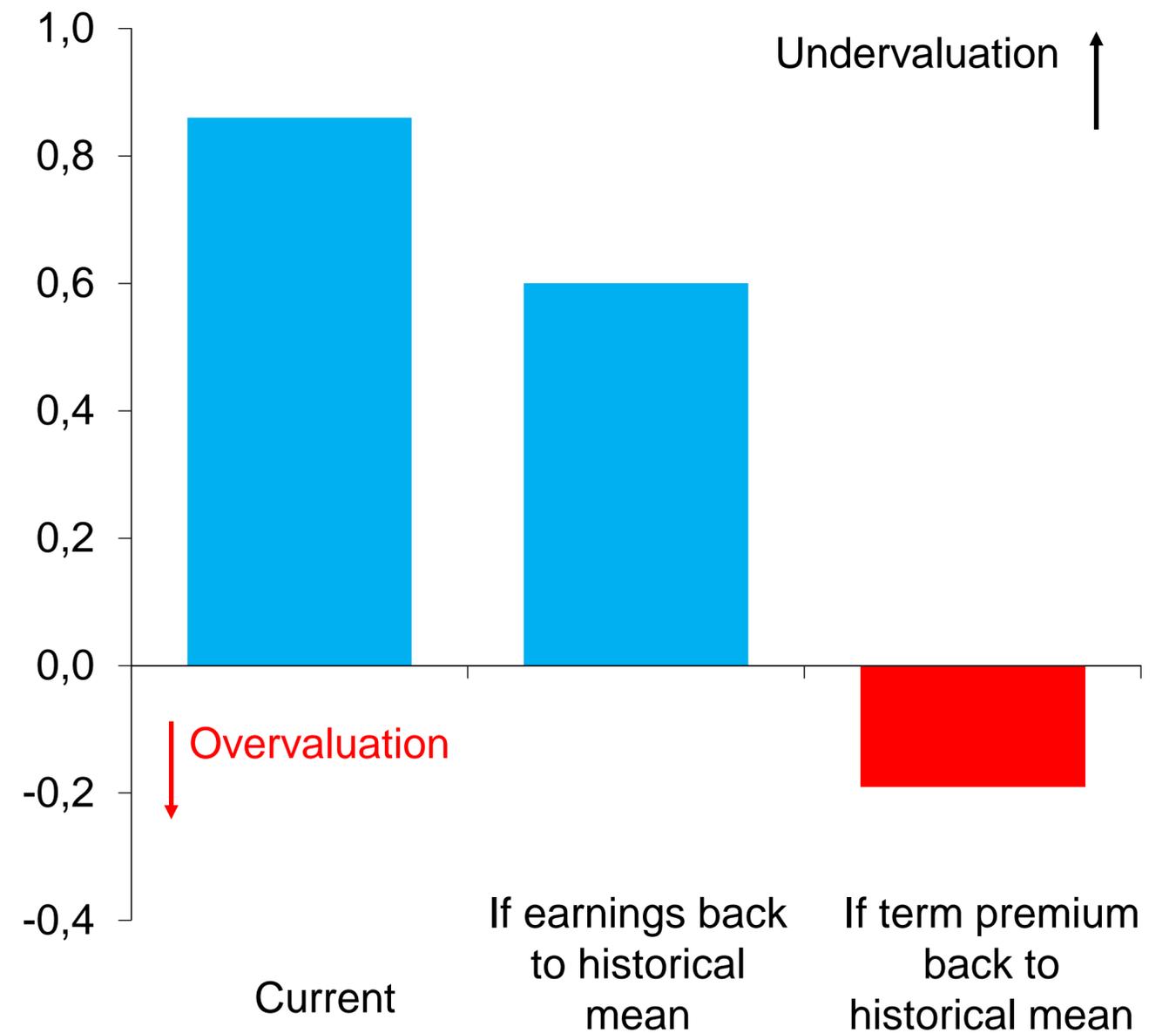
US Price-to-Earnings Measures Are High Relative to Historical Averages

(US equity valuation metrics, z-scores)



If Earnings and Term Premiums Revert, Equities Valuations Will Likely Deteriorate

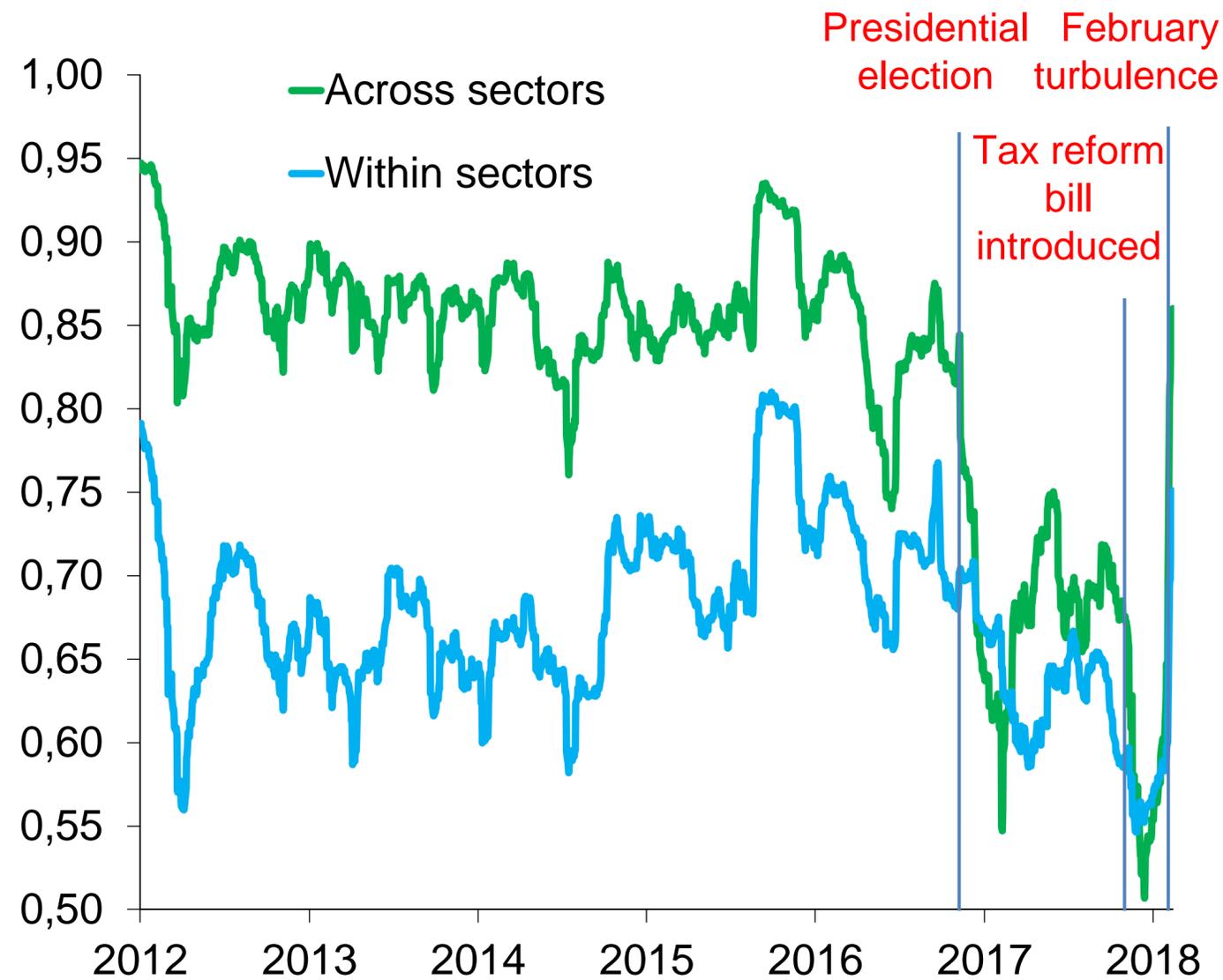
(Z-score since 1980 of US equity risk premium)



Asset Price Correlation Has Risen

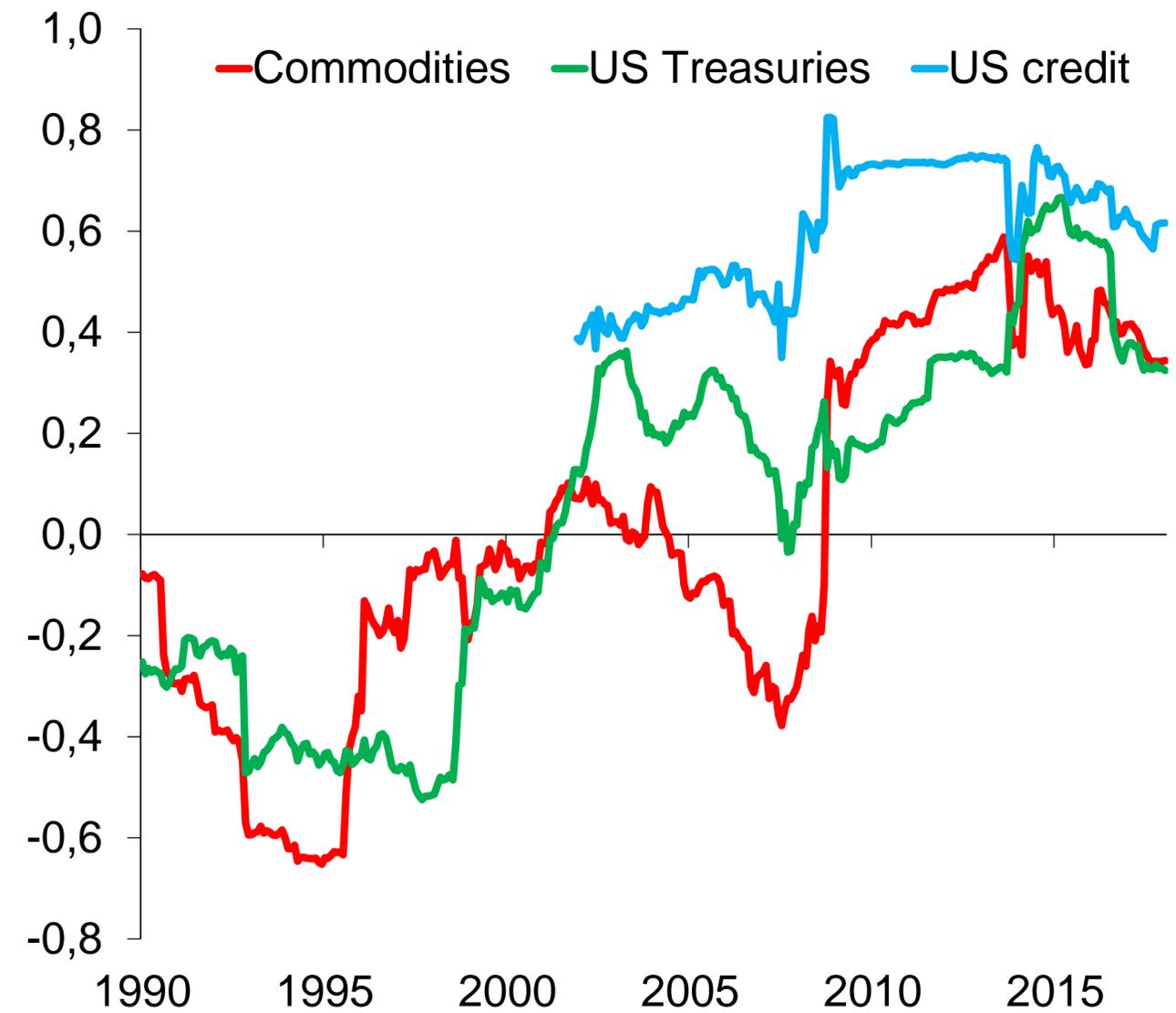
Correlations Between Individual U.S. Stocks Have Increased...

(90-day Rolling Versus S&P 500; Cap weighted)



...And Correlations Across Asset Classes Has Remained Relatively High

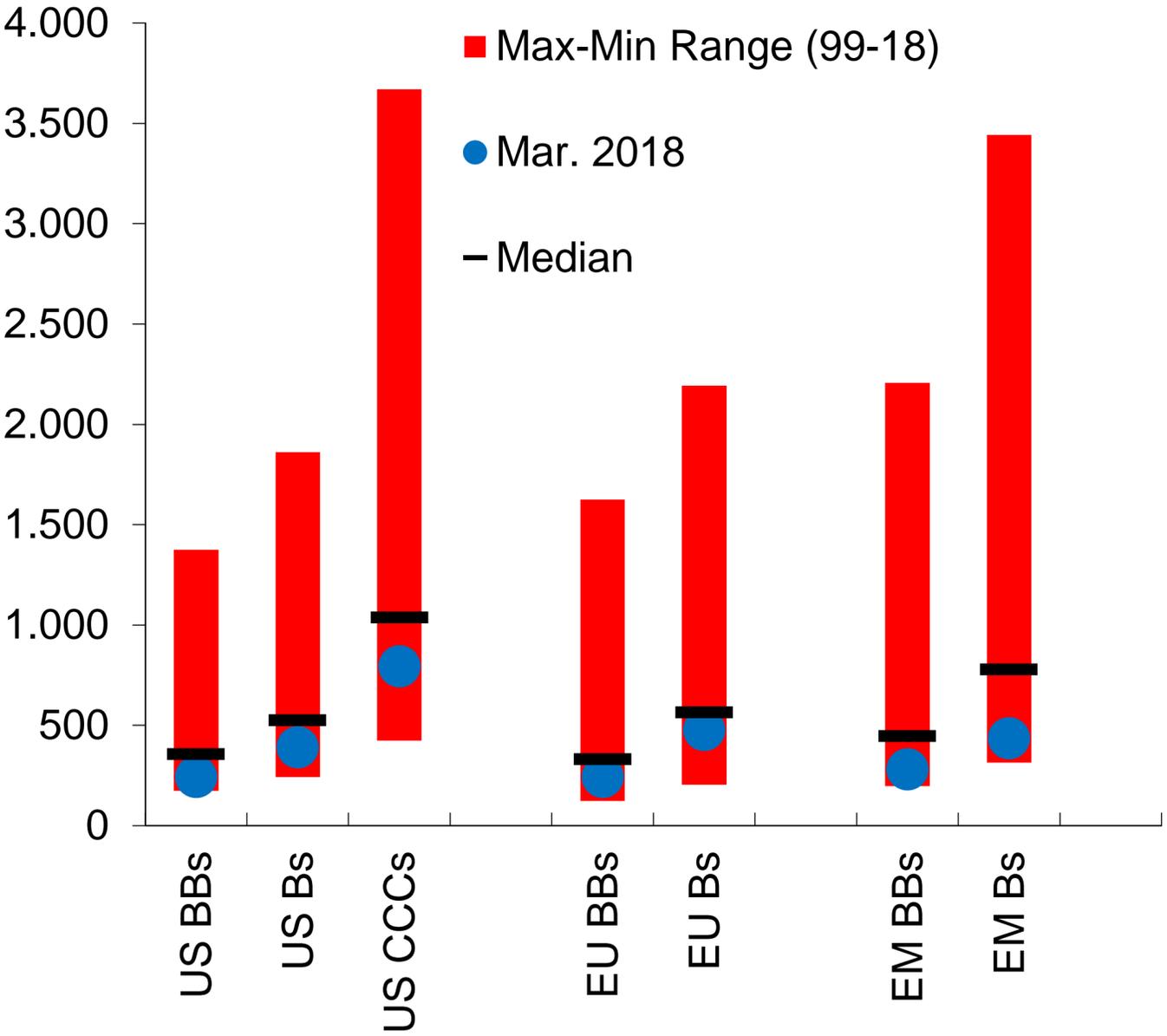
(Average Correlation With S&P 500)



Reach For Yield In Corporate Credit Markets

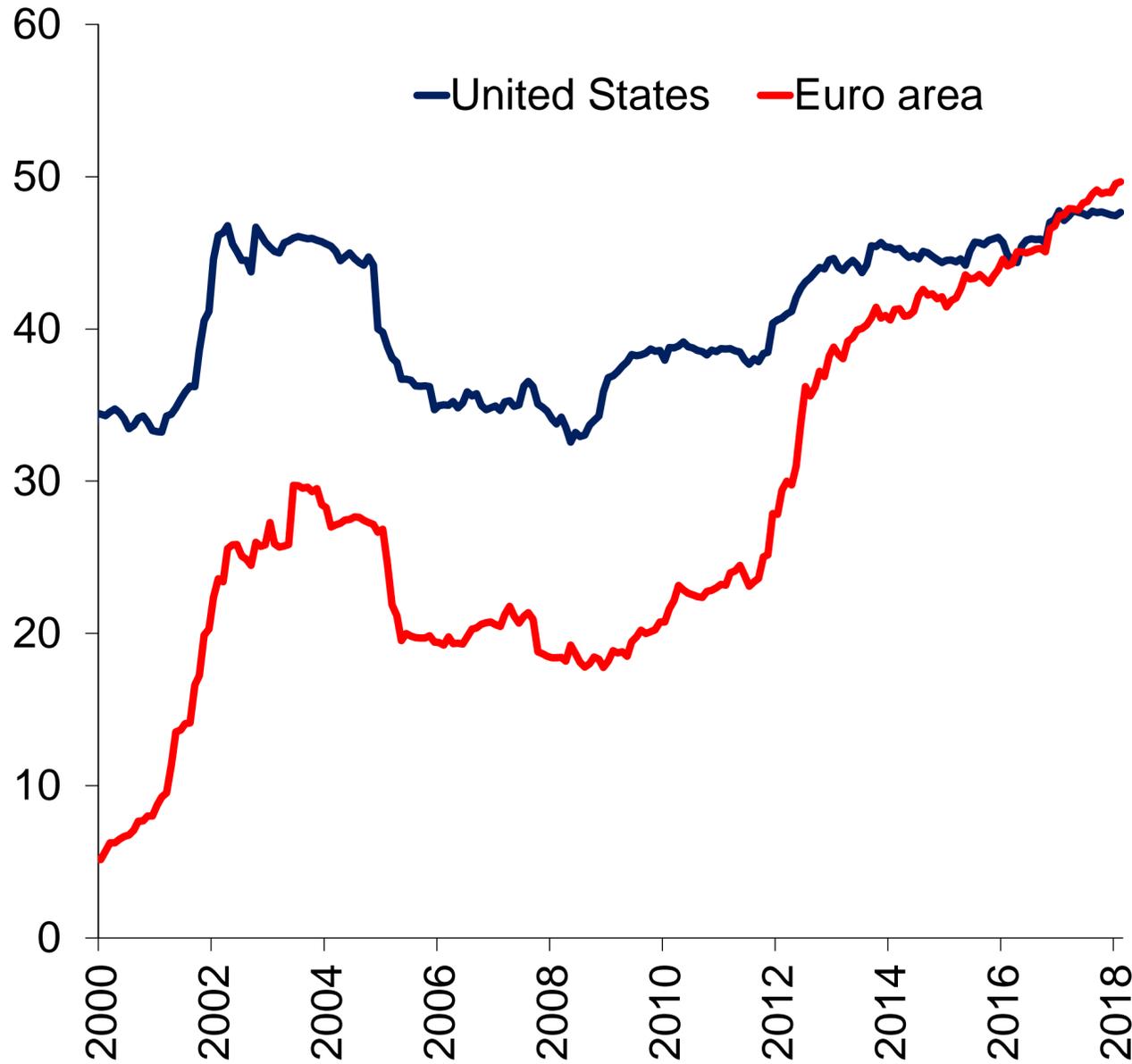
Demand for Risky Assets has Compressed Credit Spreads...

(By Ratings Buckets, Basis Points)



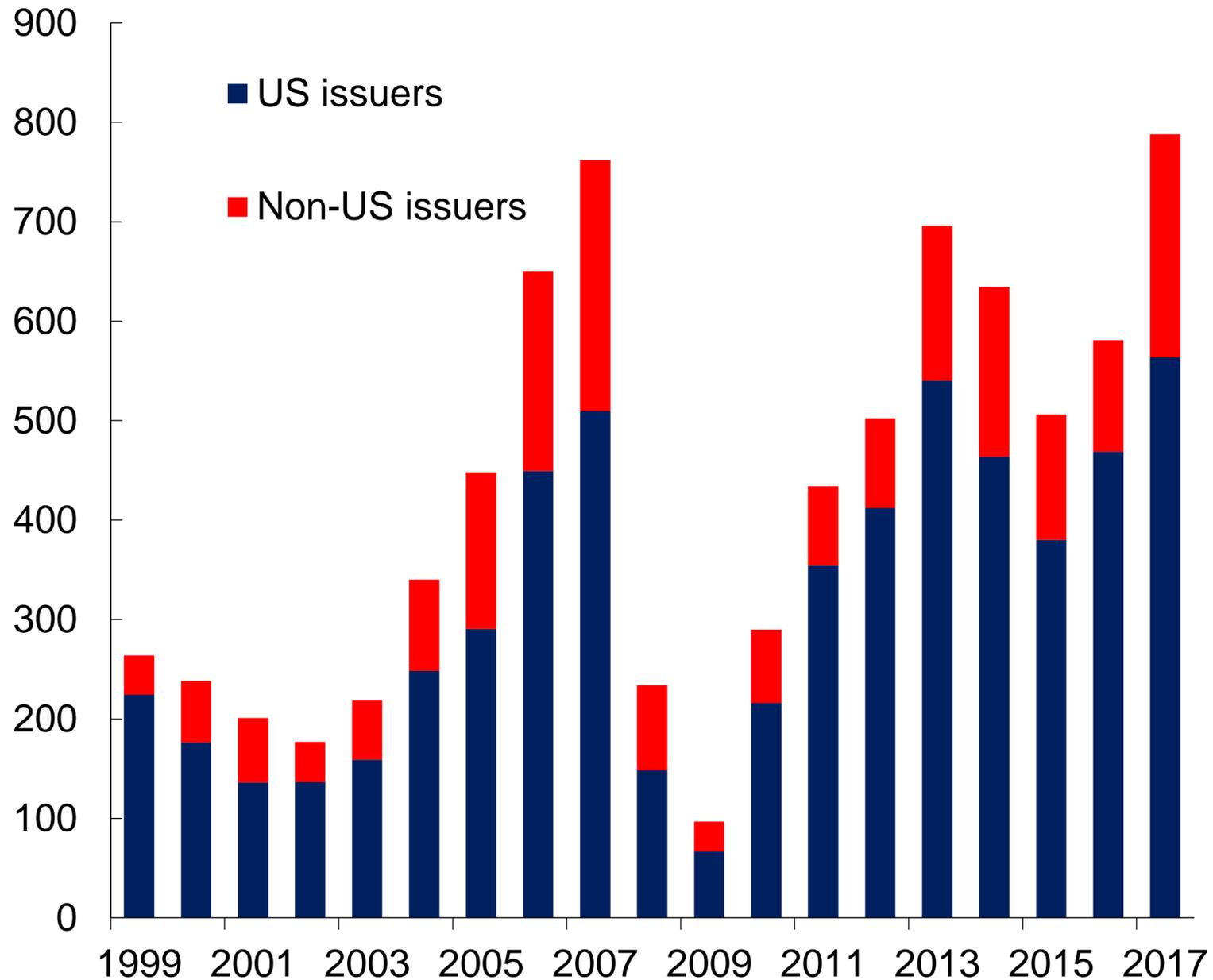
...And Driven Deteriorating Credit Quality in Corporate Bond Markets

(Percent of investment grade index with BBB rating)

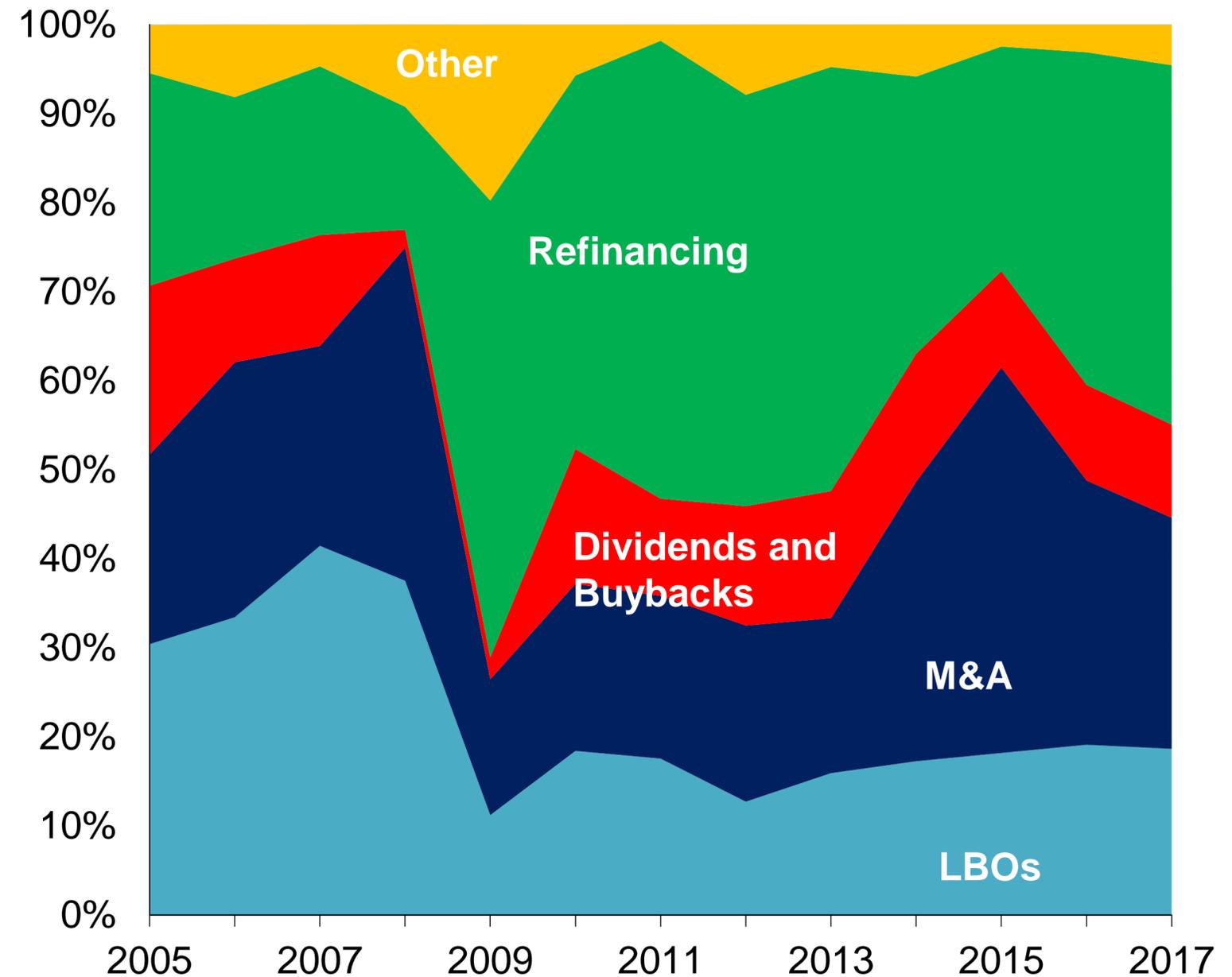


Record Global Leveraged Loan Issuance

Global Leveraged Loan Issuance Reached Record Highs...
(Billions of US dollars)



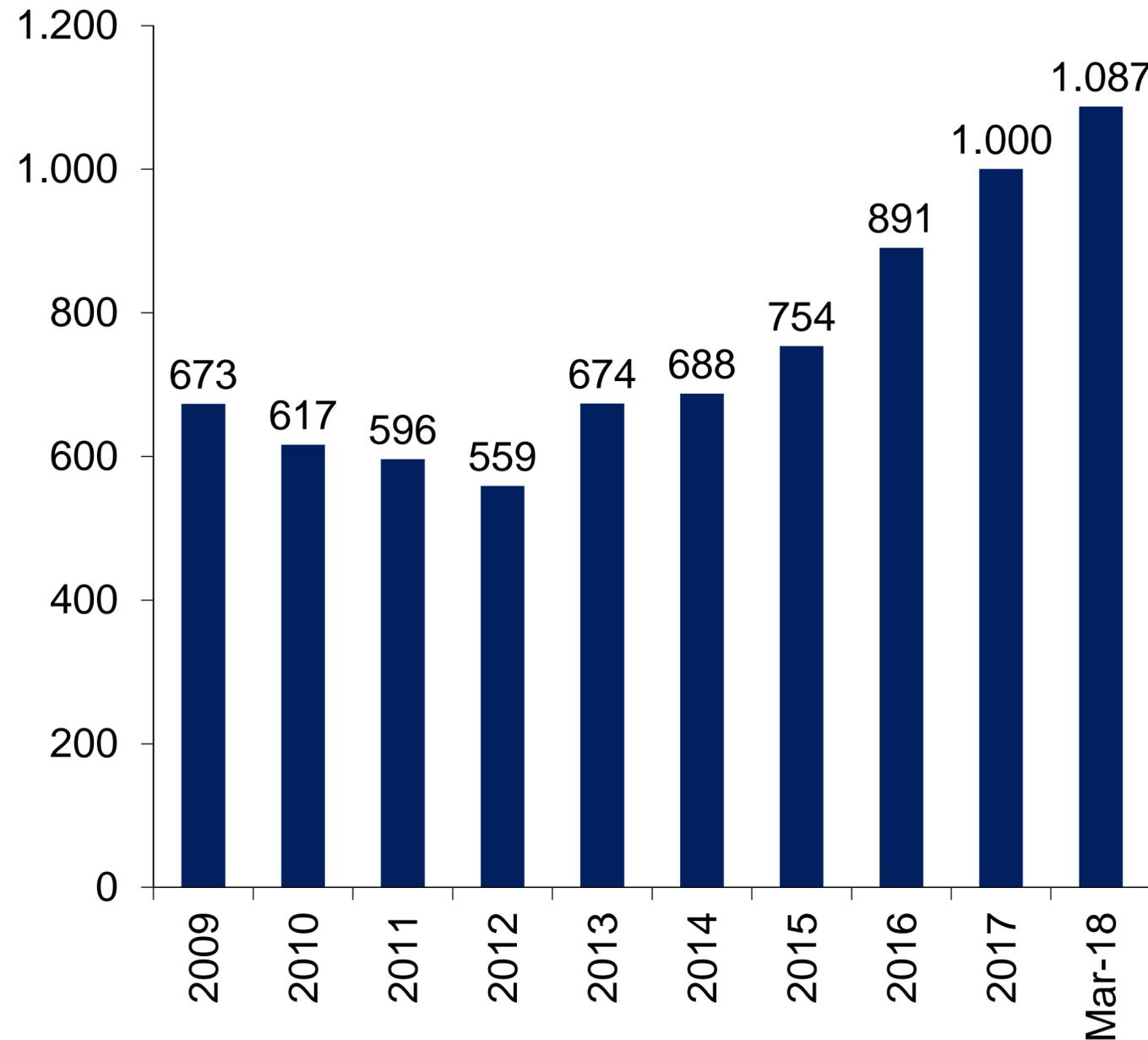
...With the Share of Proceeds Used to Fund Acquisitions and Shareholder Enhancements Still Large
(Global Leveraged Loan Issuance by Use of Proceeds)



Growing Momentum Of Private Equity Funds

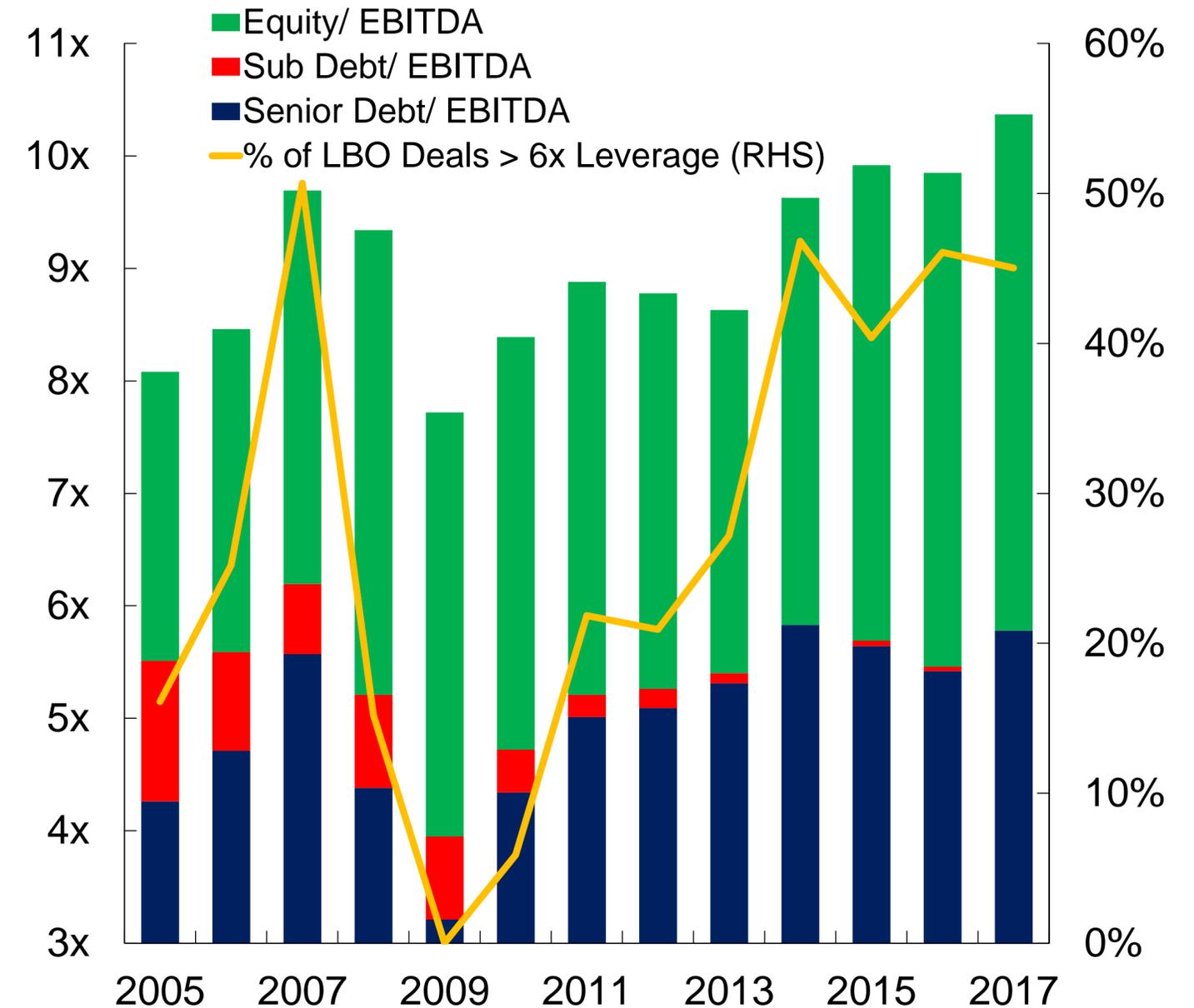
The Global Reach For Yield Has Driven Investor Flows to Private Equity Funds...

(Private Equity Dry Powder, Billions of US Dollars)



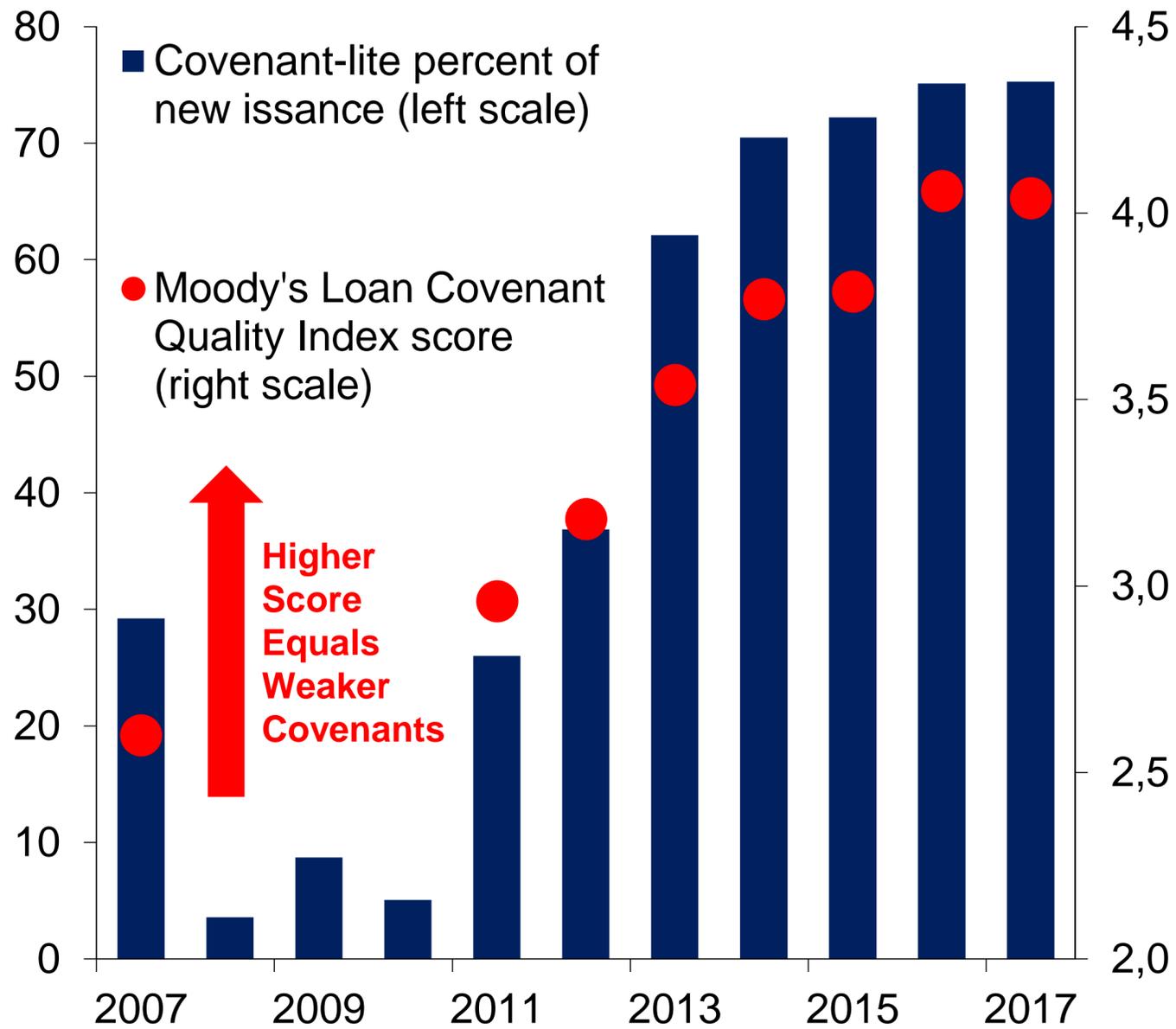
... And Increased Competition Has Pushed LBO Purchase Prices to Historical Highs

(Average Purchase Price Multiples for LBOs)

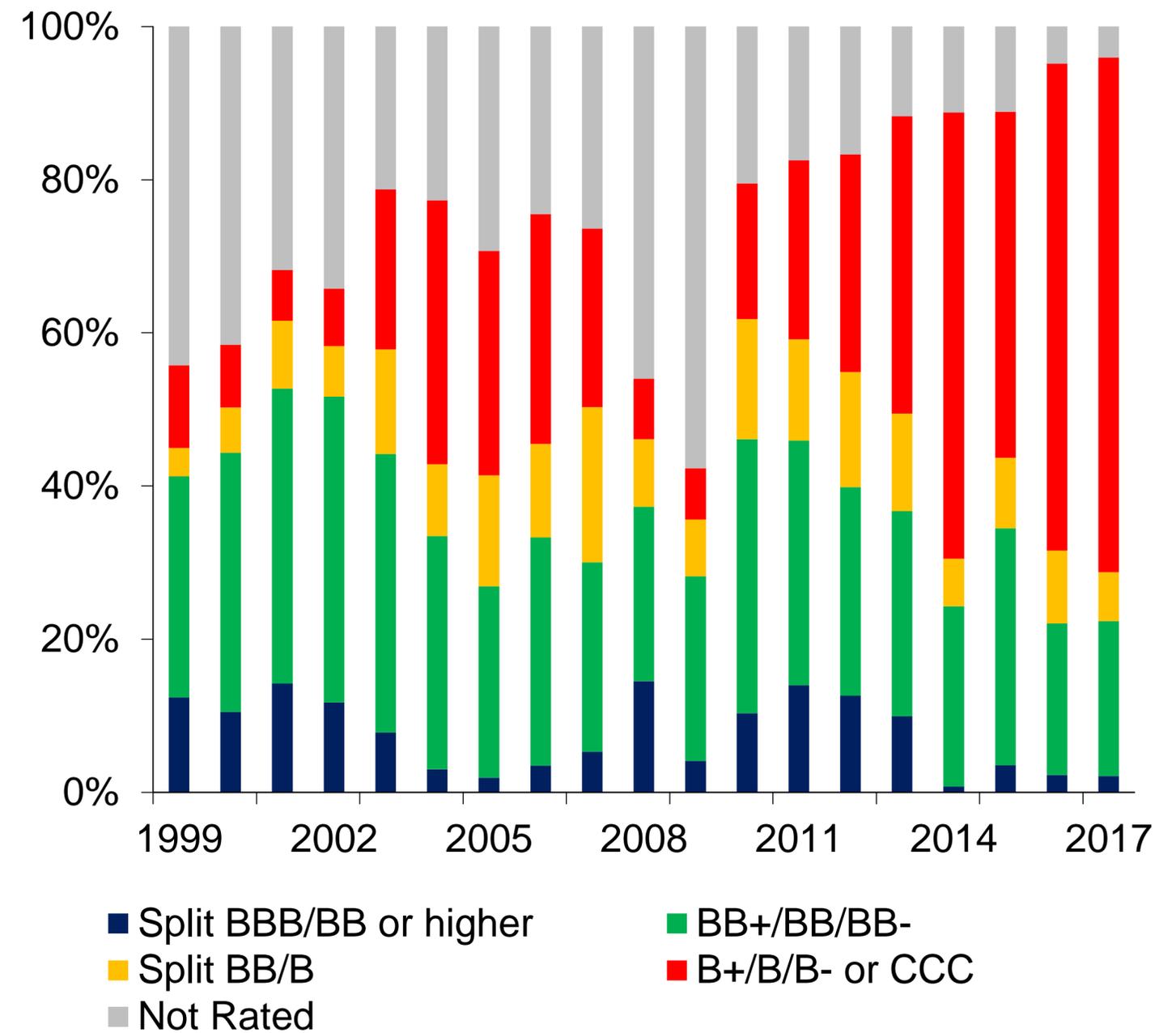


Credit Quality Is Weakening

Covenant Protections Continue to Deteriorate...
(US Leveraged Loans)

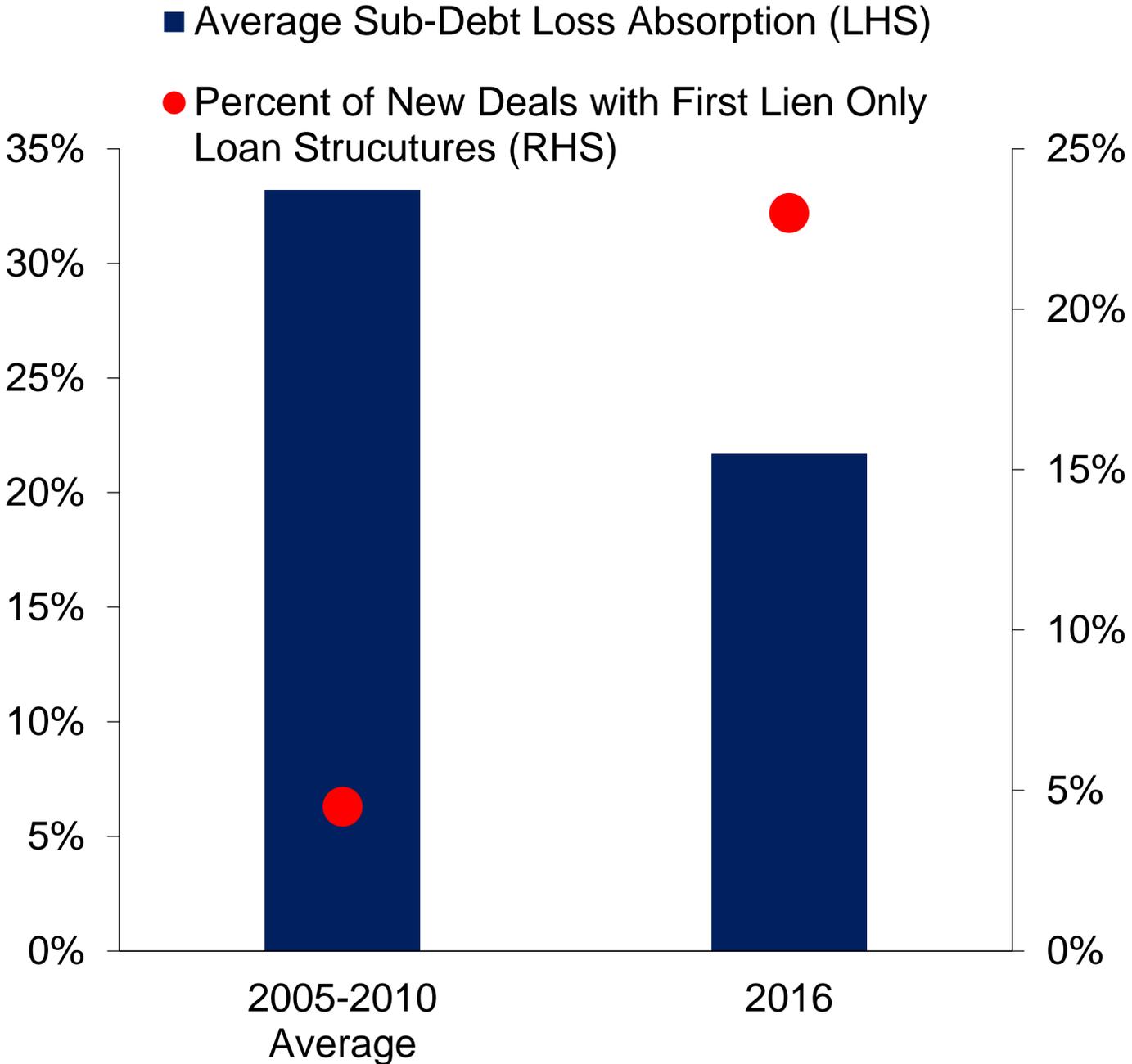


... And New Issue Loan Ratings Continue to Weaken
(US Leveraged Loan Issuance by Ratings)



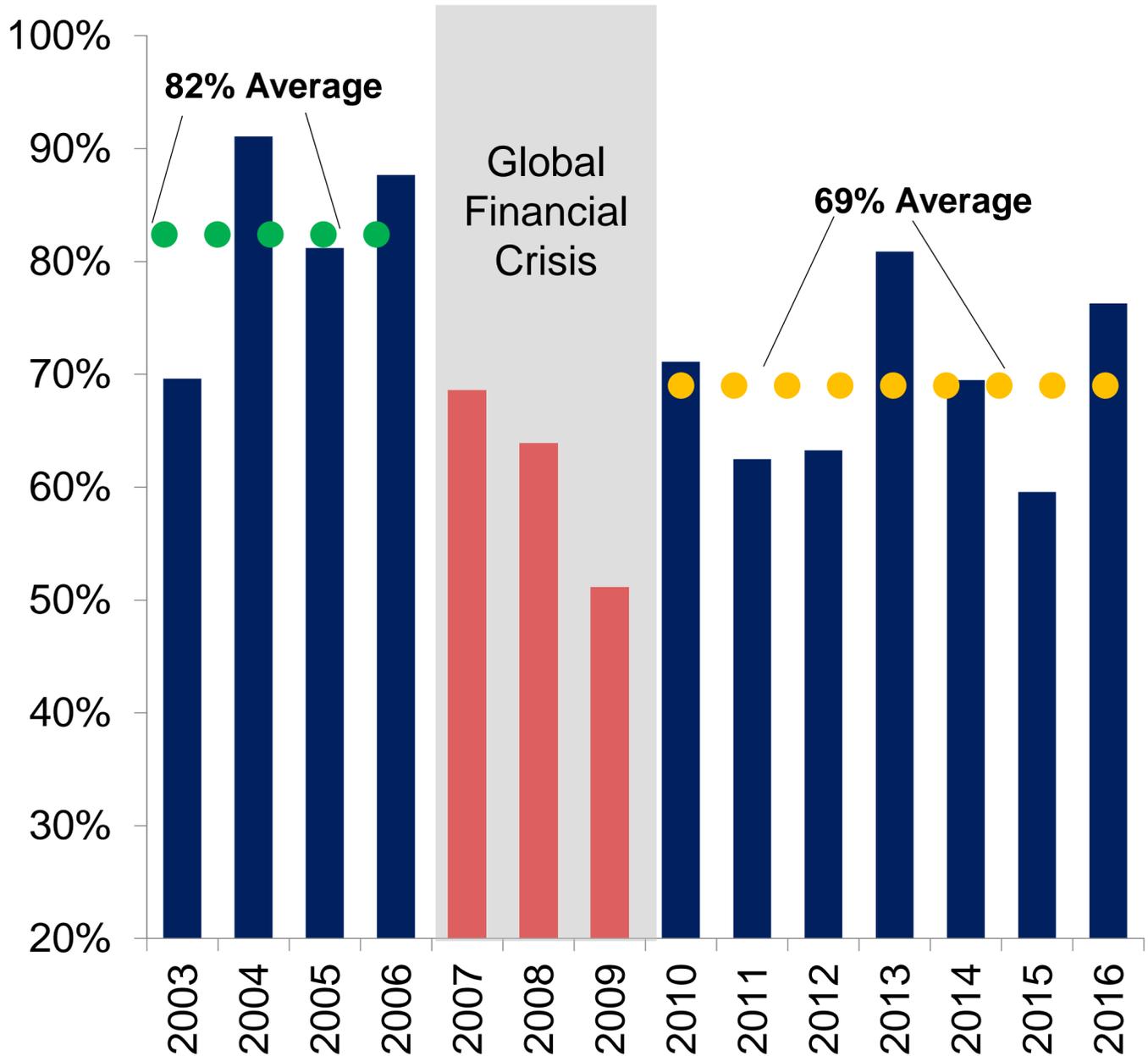
Eroding Loss Absorption Capacity

Debt Cushions For Covenant-Lite Loans Has Shrunk...
(US Covenant-Lite Leveraged Loans)



...Leading to Potentially Lower Recovery Rates in the Next Default Cycle

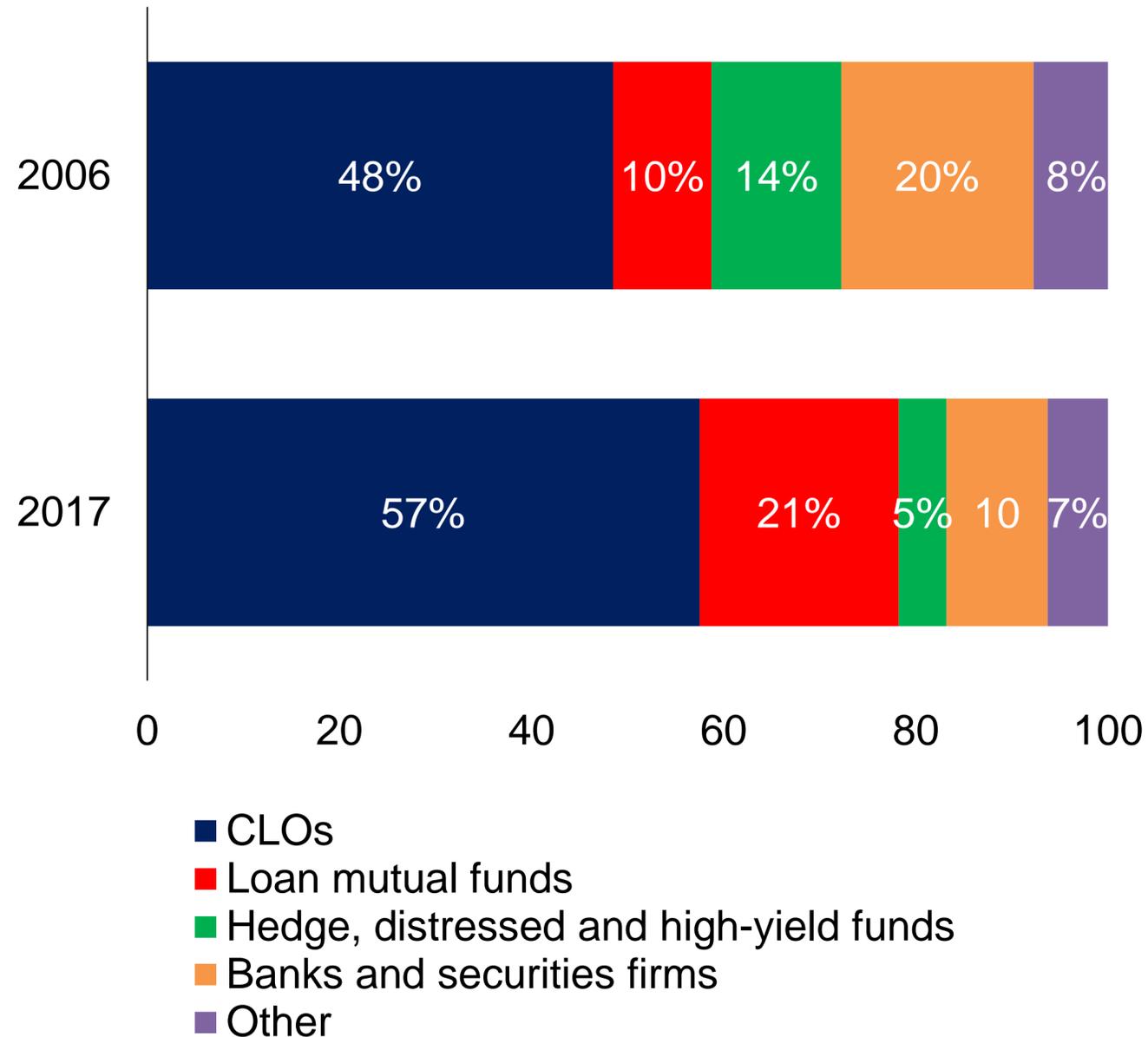
(Average Annual First Lien US Loan Implied Recovery Rates)



Growing Nonbank Investor Base

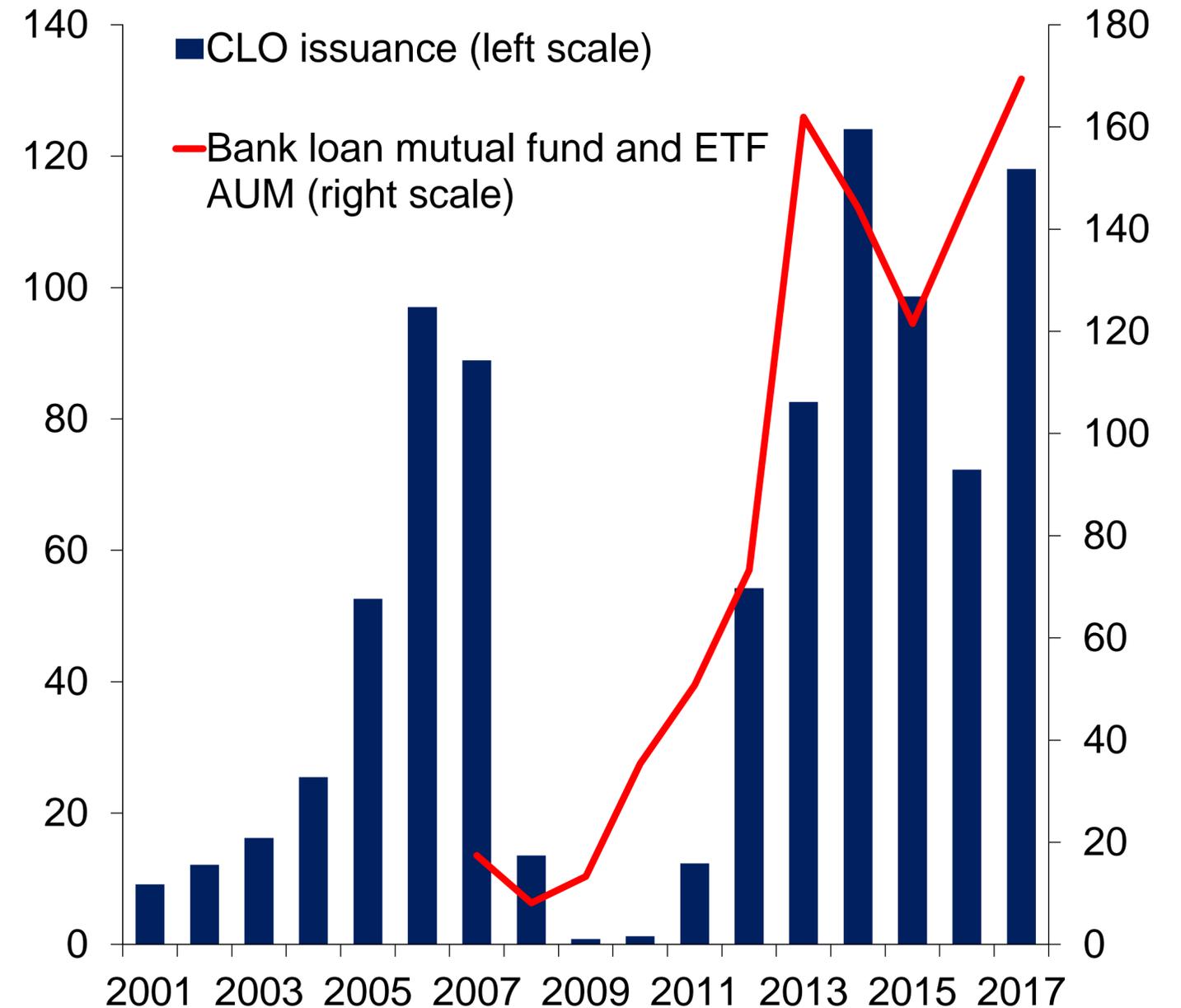
Nonbanks Have Increased Their Exposure in the Leveraged Loan Market...

(US Leveraged Loan Investor Base, Percent of New Issuance)



...Alongside Robust CLO Formation and Loan Fund Growth

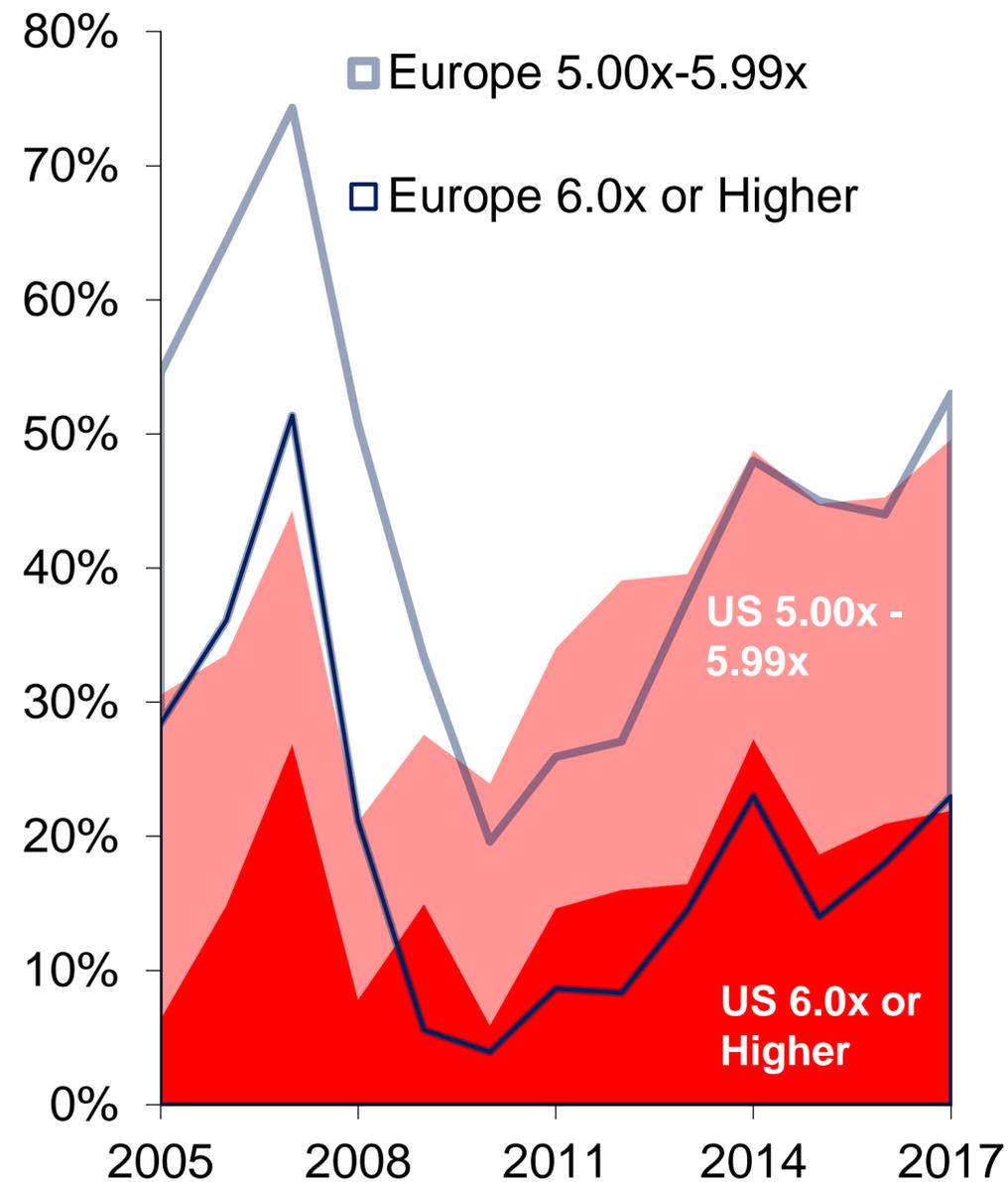
(Billions of US Dollars)



Effectiveness Of Supervisory Guidance

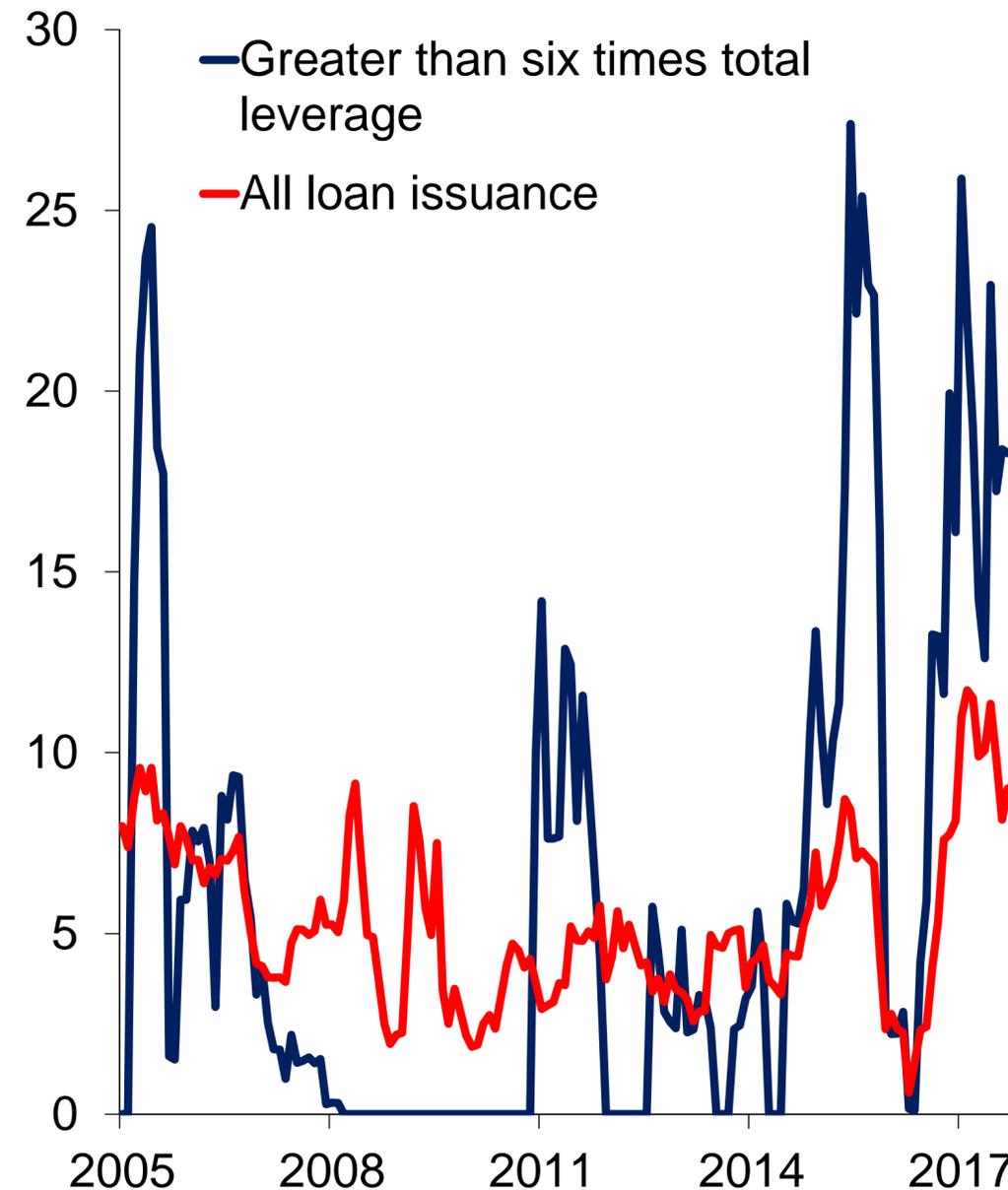
Leveraged Loans Above the Supervisory Metric Have Risen...

(US and Europe large corporate loan issuance by leverage)



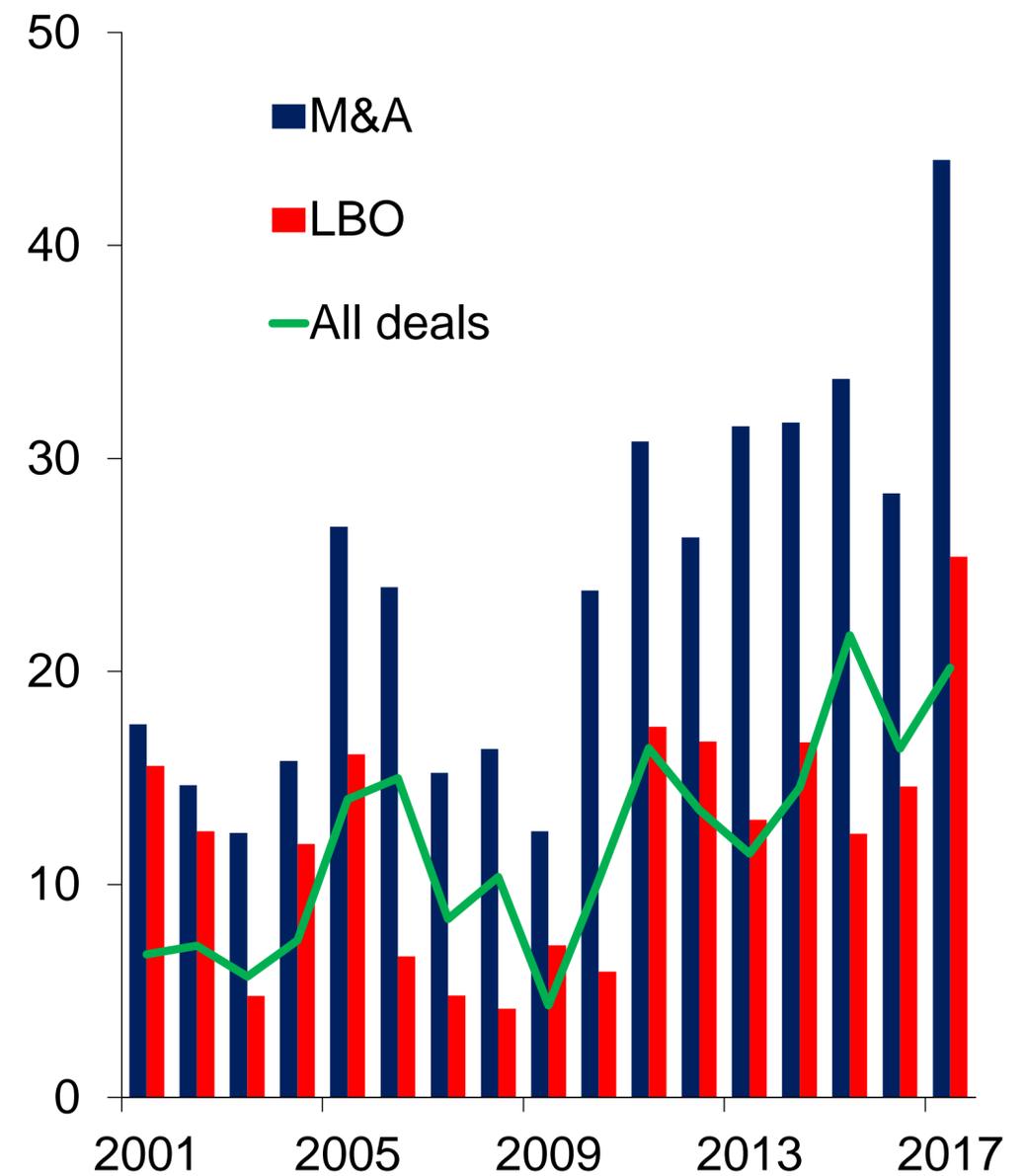
...With Highly Leveraged Deals Increasingly Arranged by Nonbanks...

(Fraction of US deals with a nonbank entity as lead agent, percent)



...And Earnings Adjustments Improving Leverage Forecasts

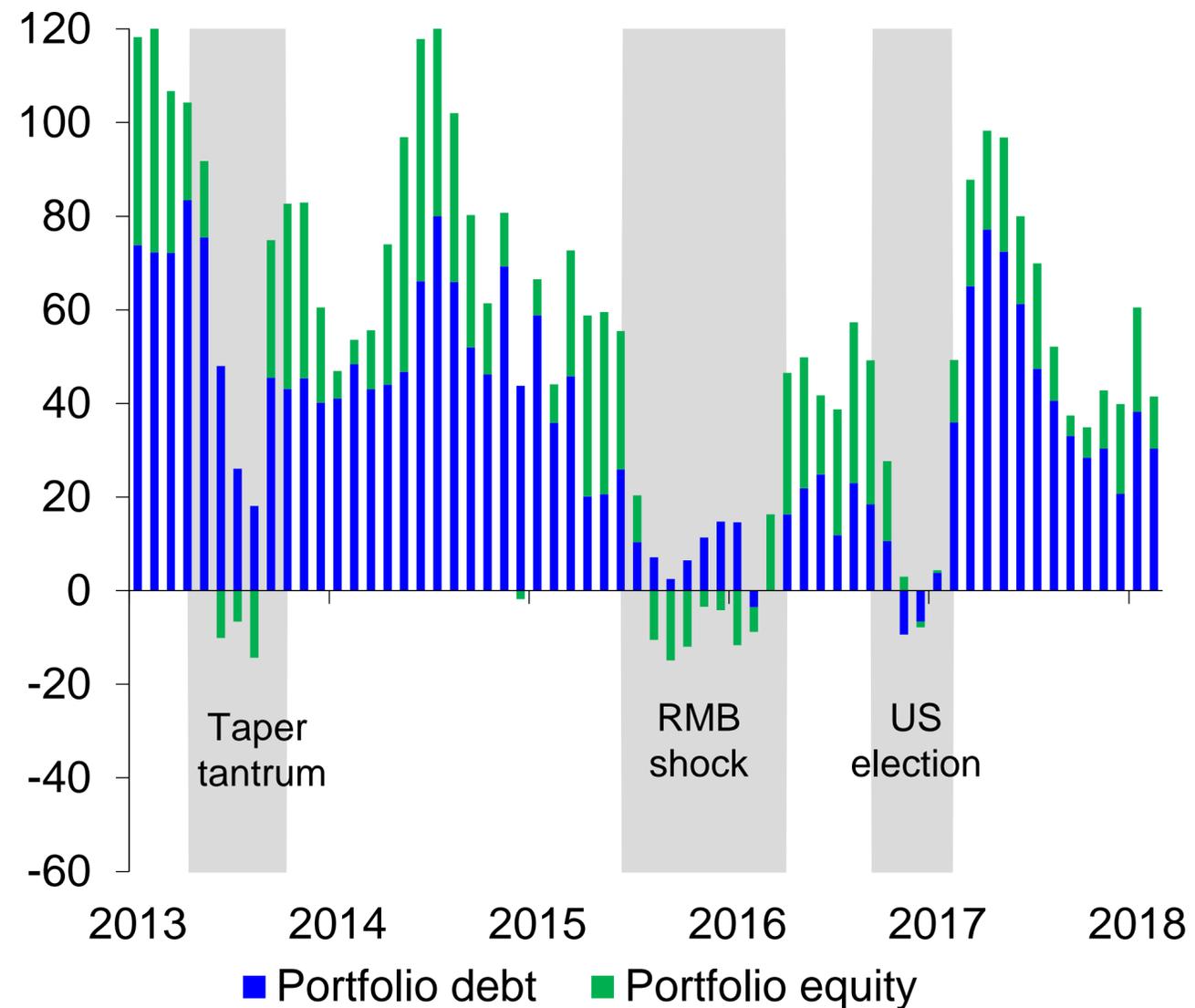
(Percent of US deals with EBITDA adjustments)



EME Sensitivity to Global Liquidity

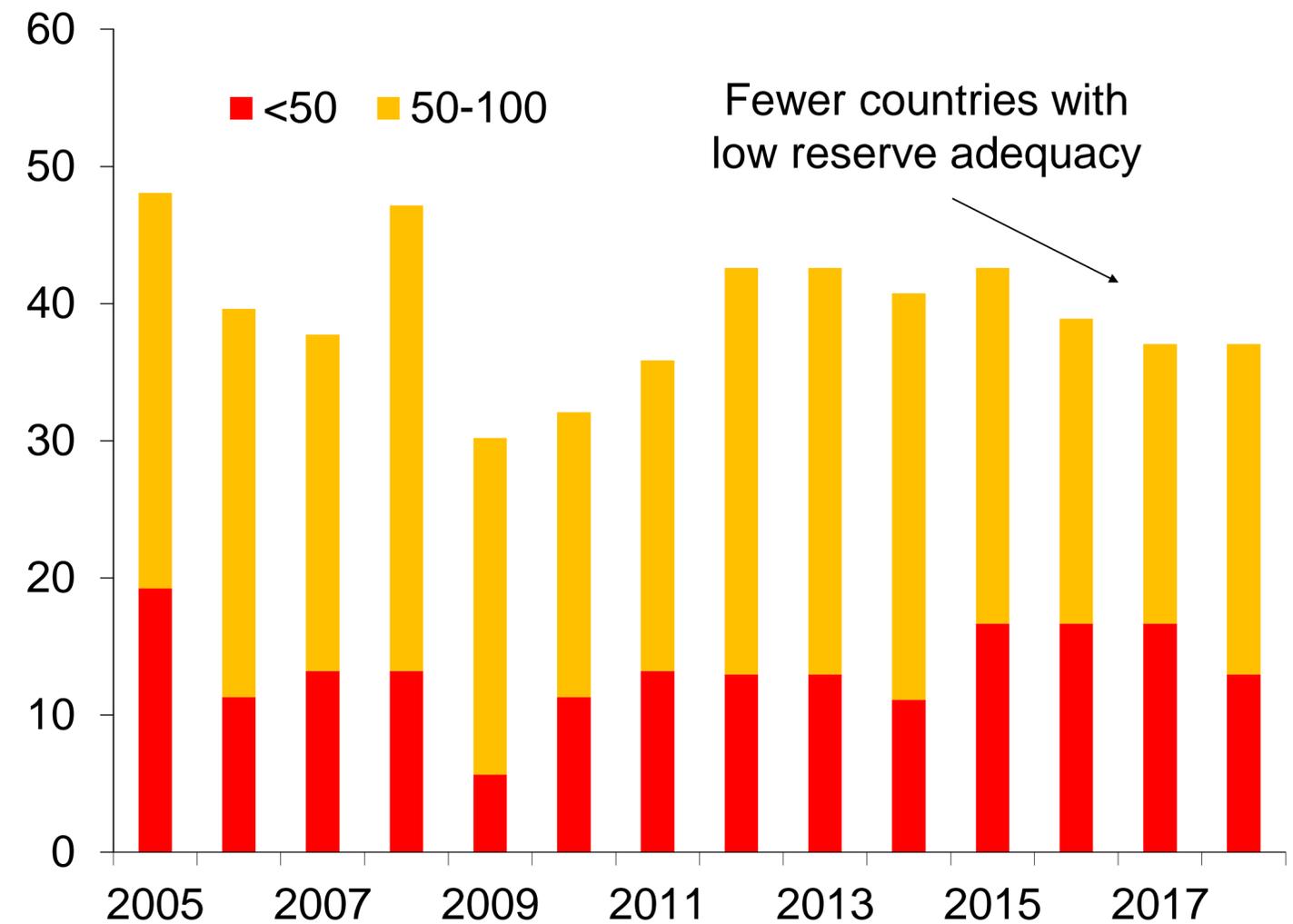
Portfolio Flows Have Been Robust...

(Nonresident Portfolio Flows to EMs, Three-Month Rolling Sum, \$ Billions)



...And Reserve Coverage Has Improved, but a Tail of Weak Countries Remains

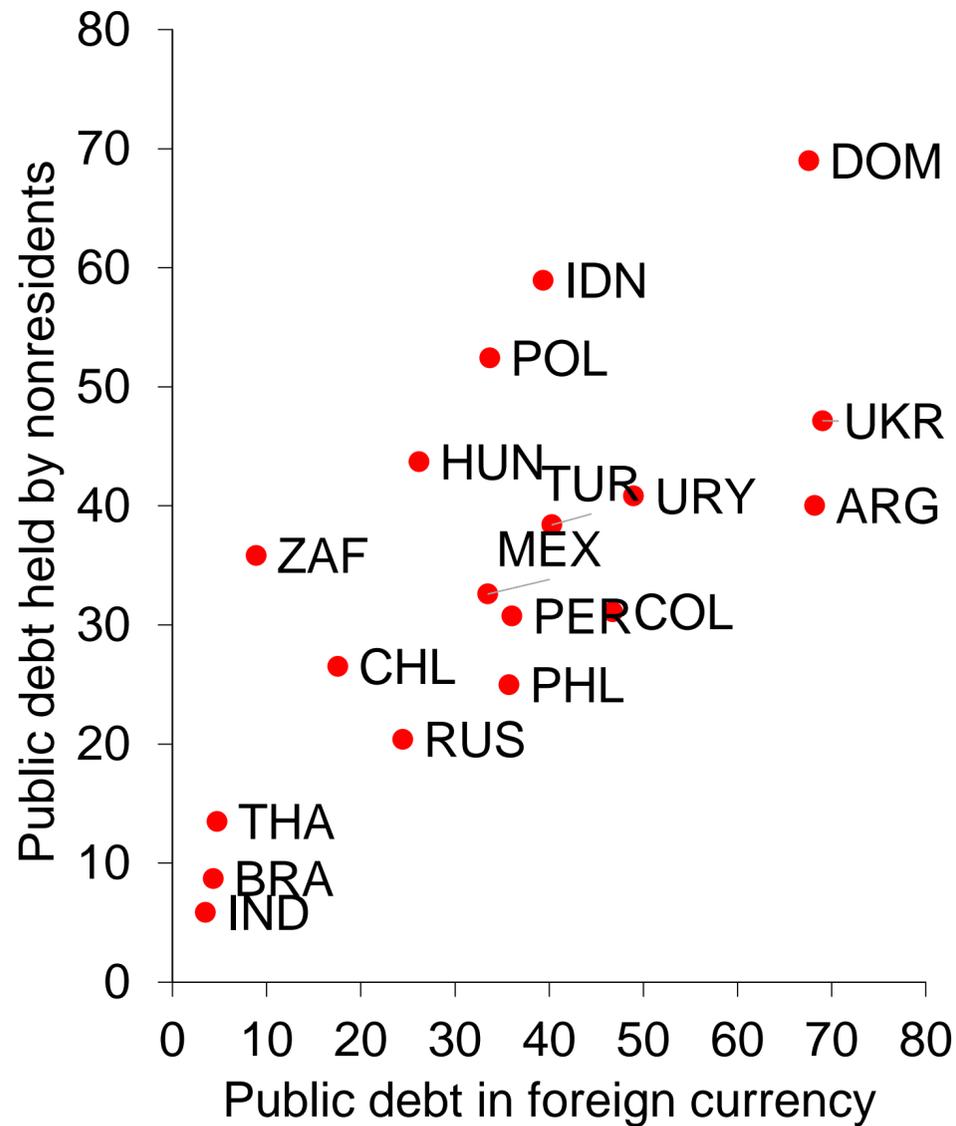
(Reserves as a Share of External Financing Needs, Share of Countries in Percent)



EME Sensitivity to Global Liquidity

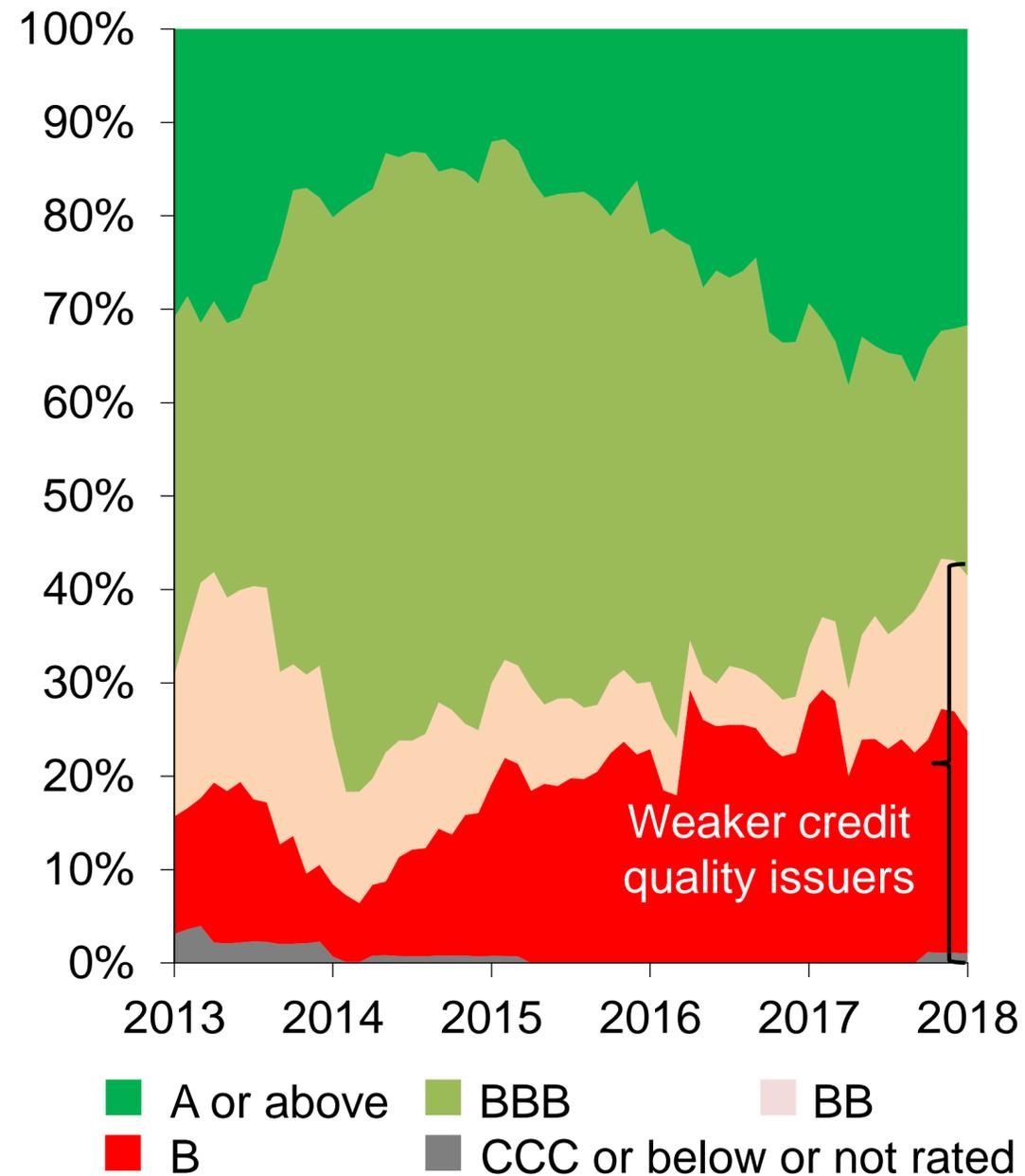
External Vulnerabilities in Public Debt Structures Remain...

(EM Public Debt Held by Nonresidents and Denominated in Foreign Currency, Share of Total)



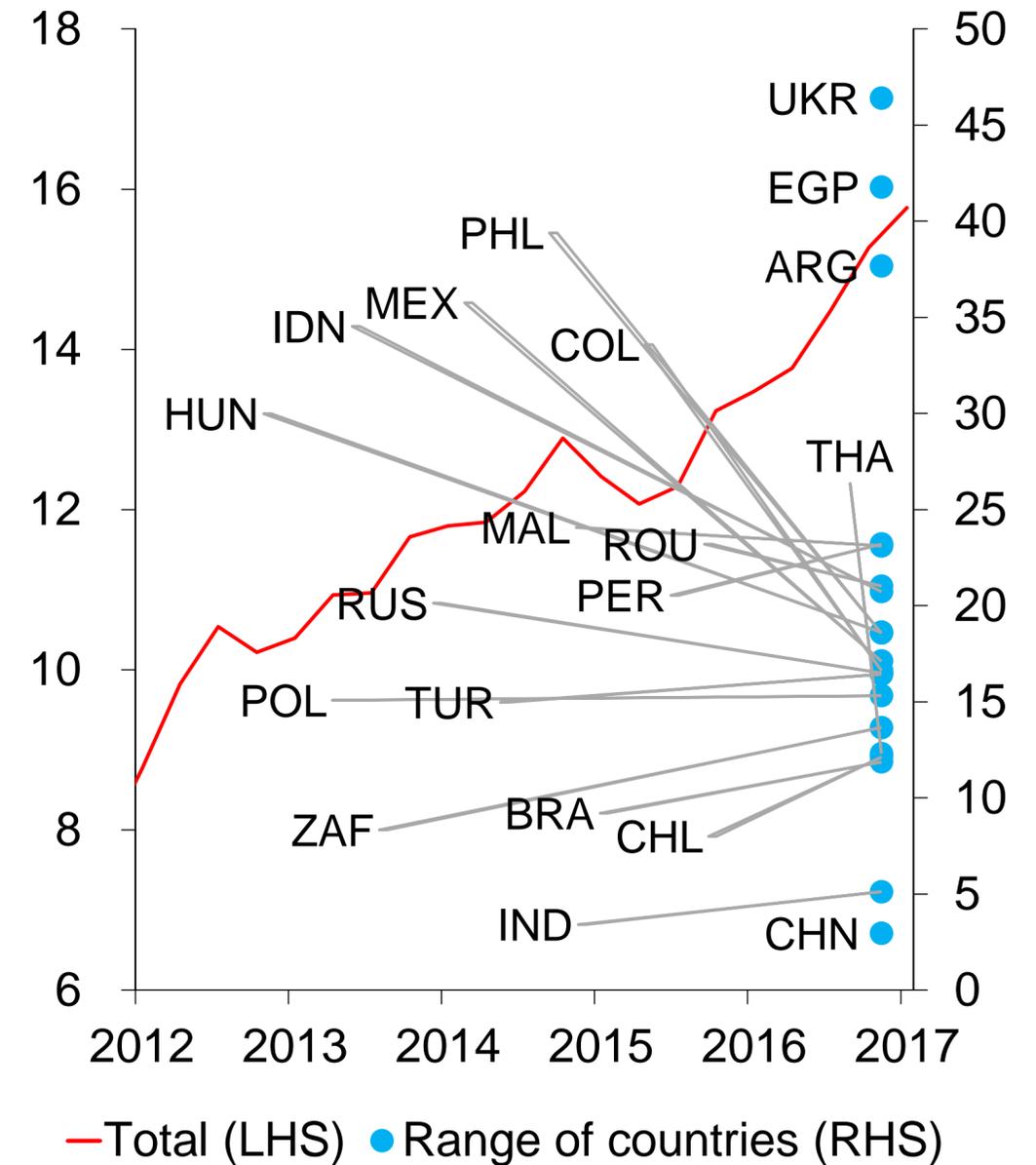
...And the Credit Quality of External Issuers is Deteriorating

(Sovereign Issuance of International Bonds by Rating, Share of Total)



...With a Growing Participation of Investment Funds

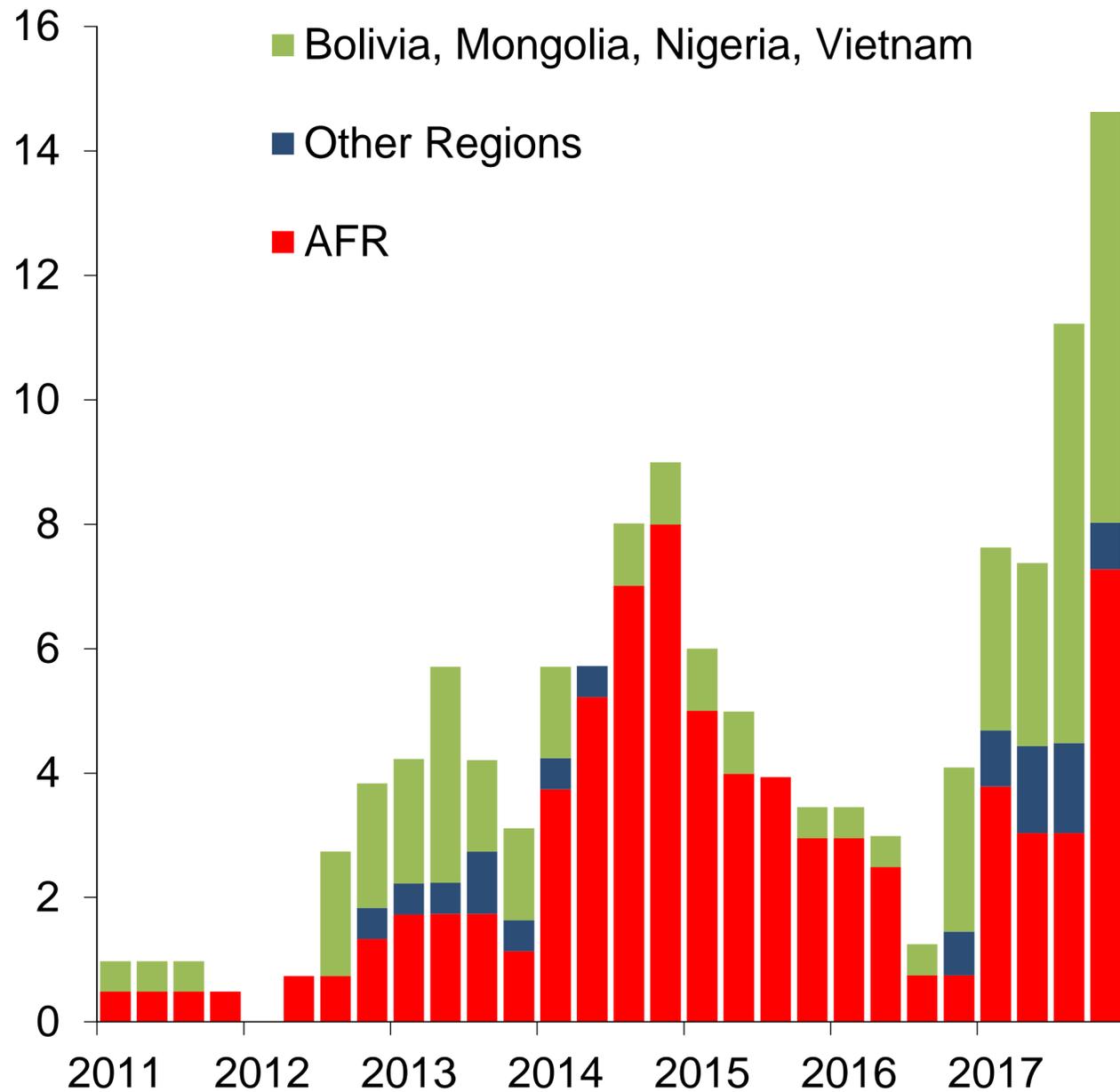
(Share of bonds in EM benchmark indices owned by investment funds, percent)



Rising Public Debt Vulnerabilities in LICs

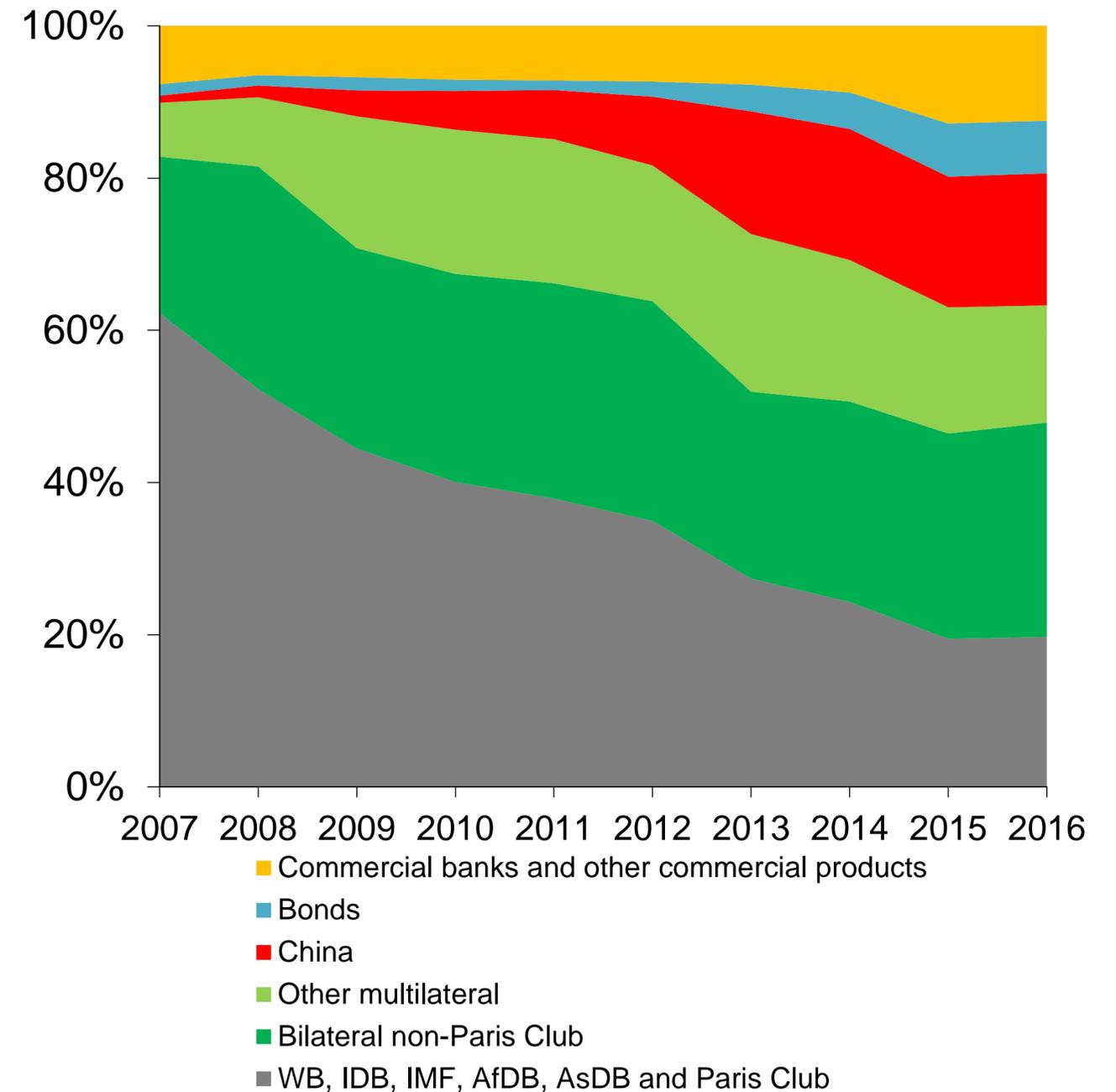
LIC International Bond Issuance is Hitting New Highs...

(Four-quarter rolling sum, \$ bn)



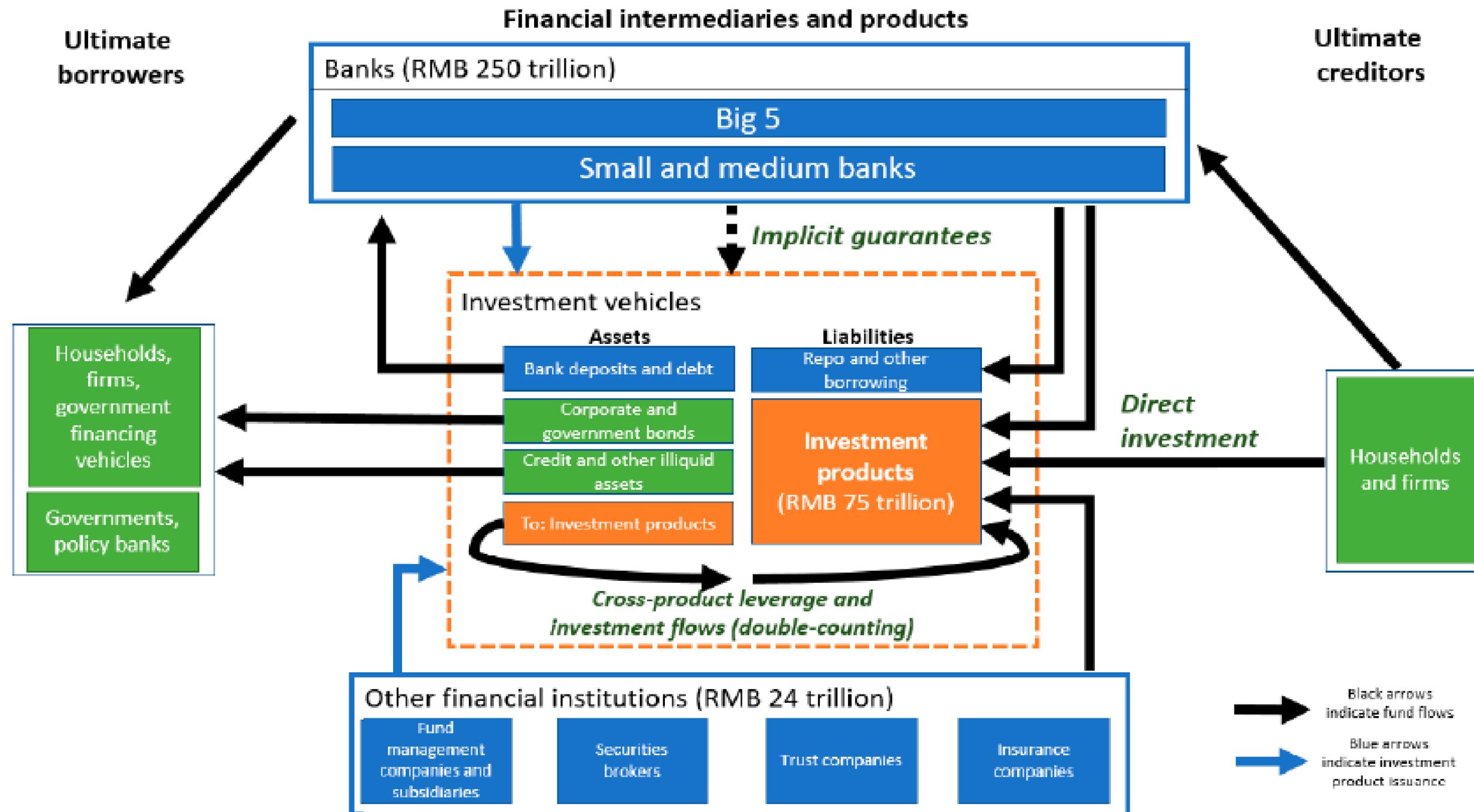
...Amid Increasing Complexity in the Creditor Base

(Percent of Public and Publicly Guaranteed External Debt)



Chinese Banks and Shadow Banks Remain Highly Interlinked

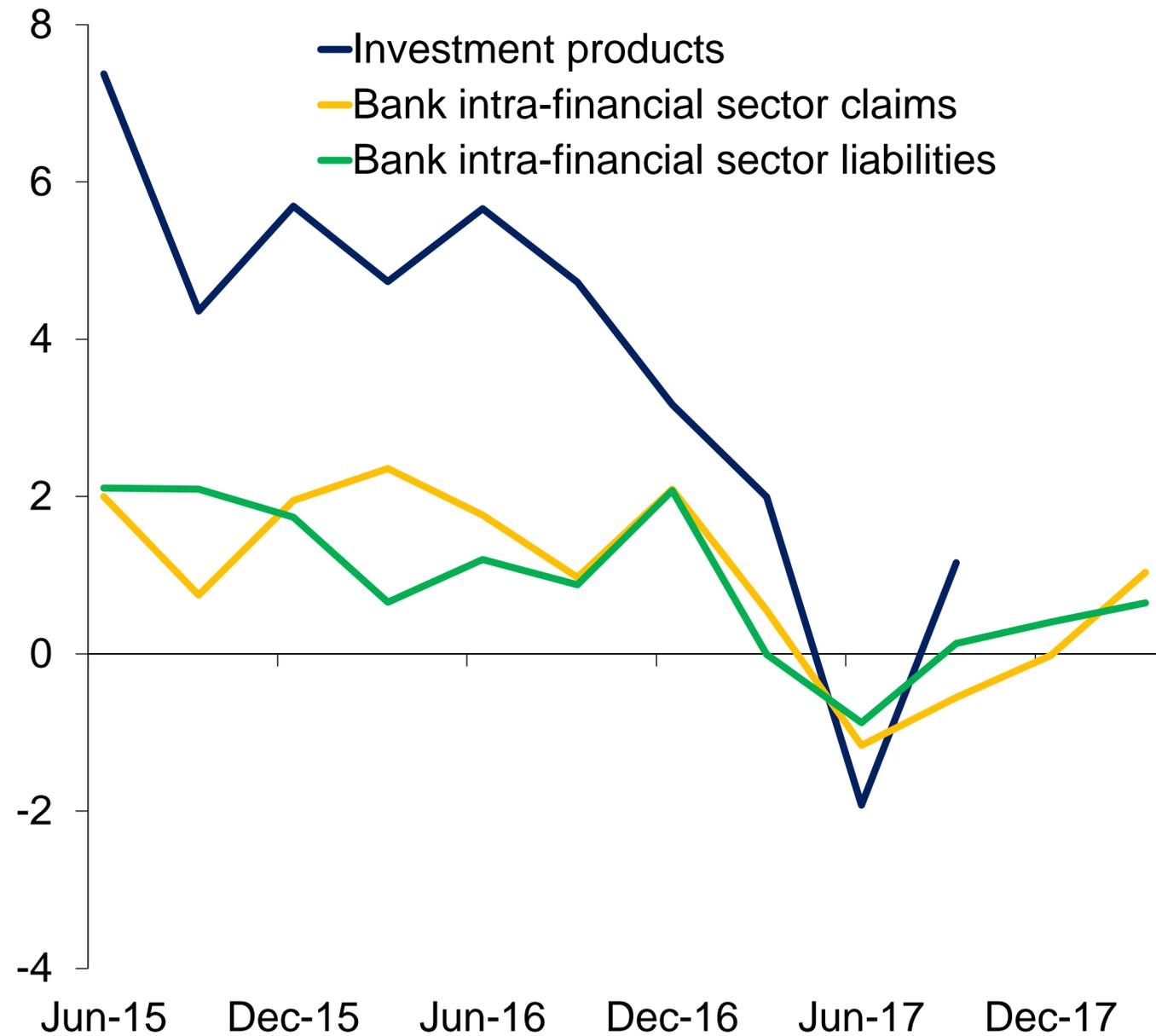
Stylized Map of Financial Linkages



China's Banks De-leverage But Risks Endure

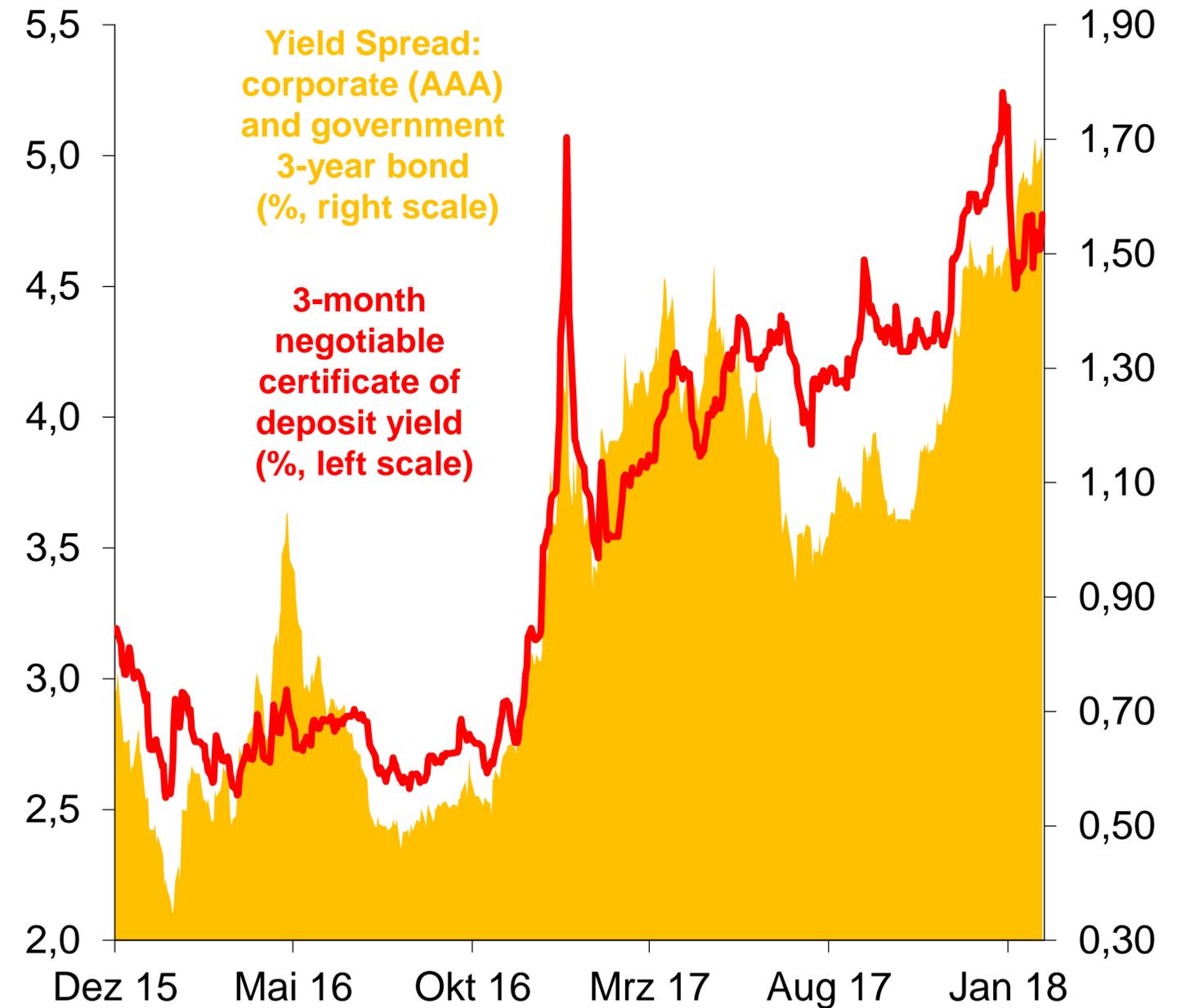
Regulatory Tightening Has Slowed Build-Up in Risks...

(3-Month Change in Investment Products Outstanding and Small/Medium Banks' Sector Claims, Trillions of RMB)



...But Vulnerabilities Remain as Financial Conditions Tighten

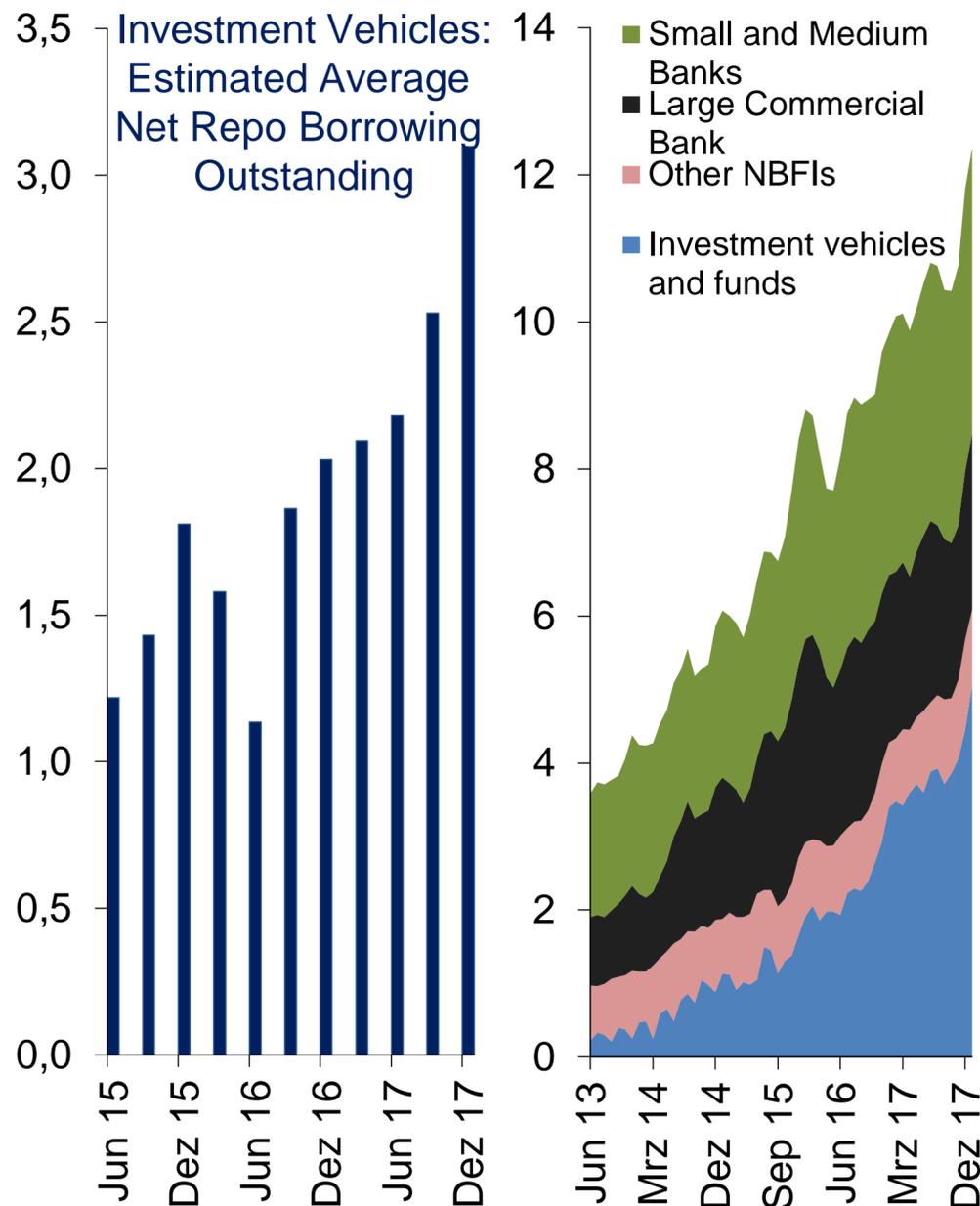
(Chinese Corporate Credit Spreads and Short-Term Unsecured Bank Funding Costs)



Lingering Risks In Chinese Investment Products

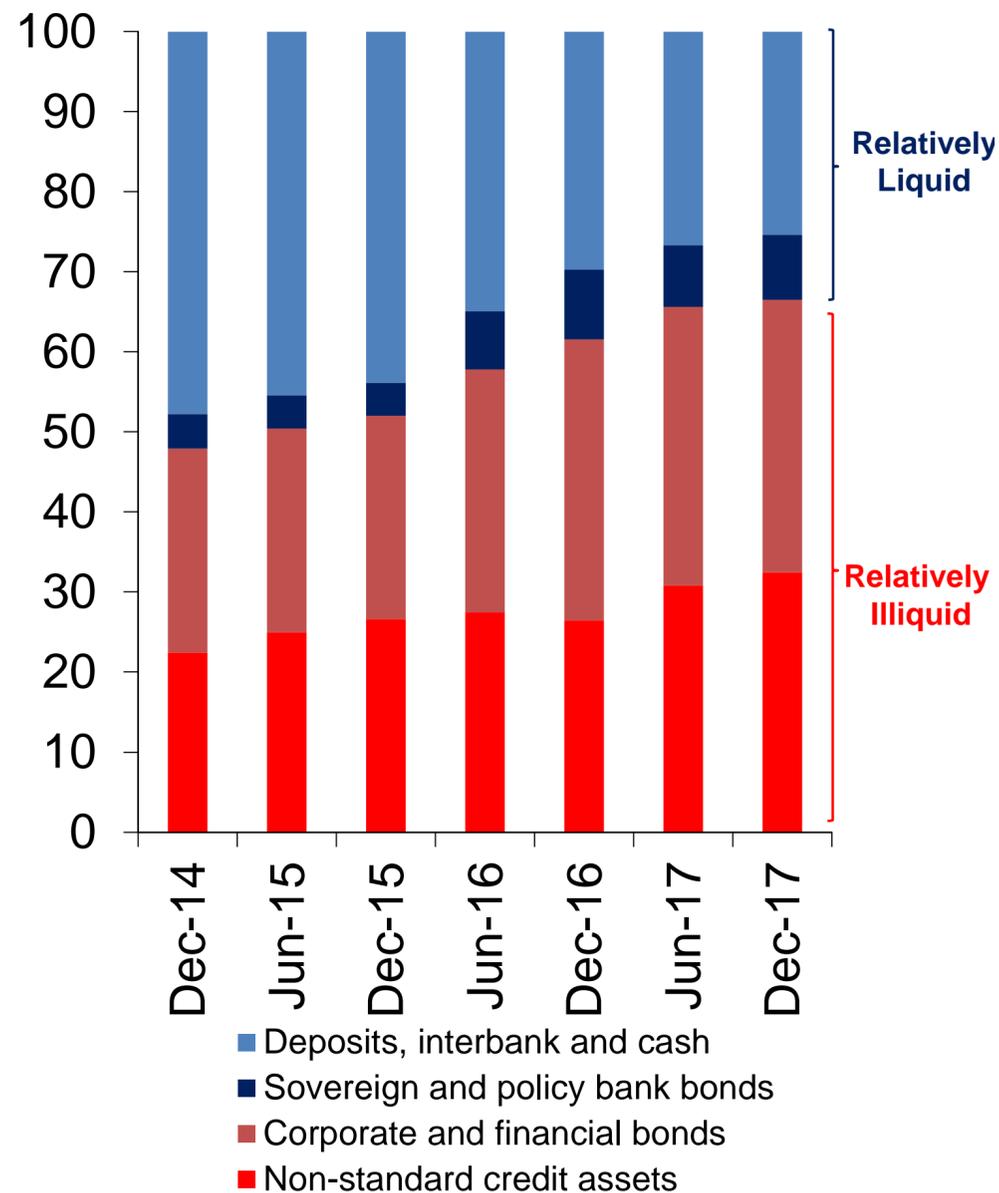
Investment Vehicles Are Borrowing More...

(Estimated net repo borrowing and interbank gross repo position, trillions of RMB)



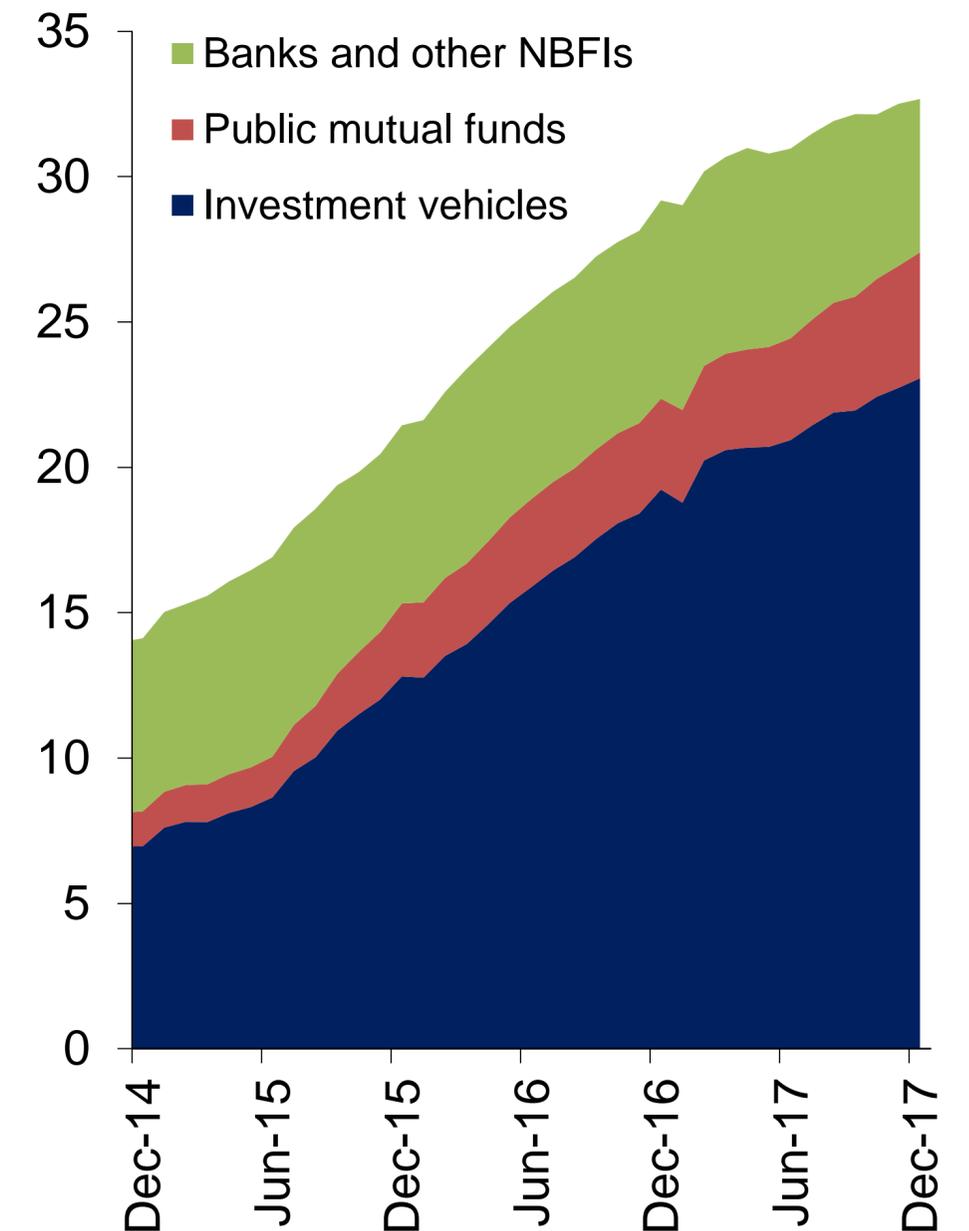
...And Holding More Illiquid Assets

(Chinese Investment Vehicles: Bank-Issued Product Portfolio Allocation)



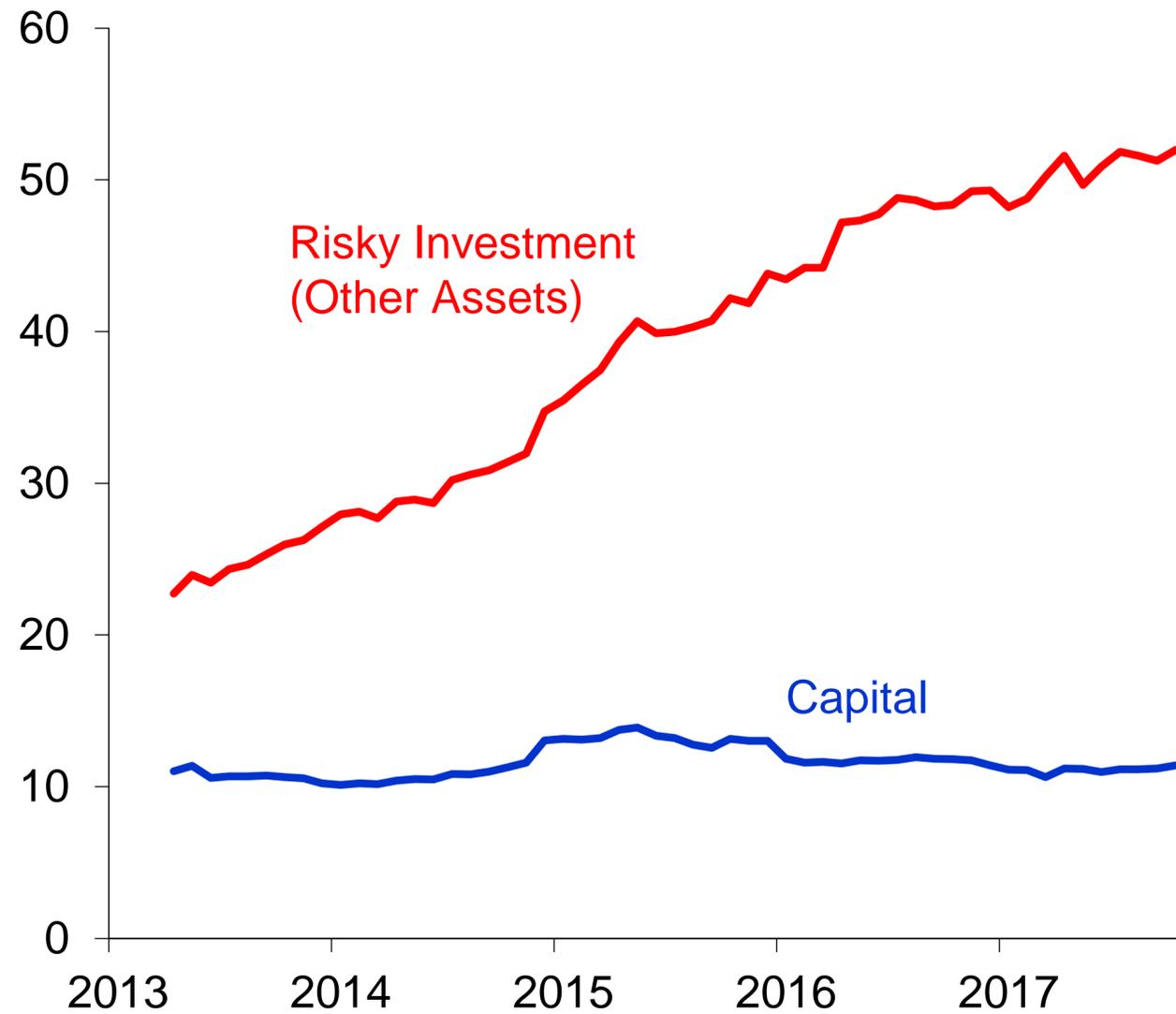
Demand For Bond Issuance Remains Robust

(Corporate and non-policy-bank financial bonds outstanding by holder, trillions of RMB)



Risky Exposures of Chinese Insurers

Chinese Insurers Have Increased Investments in Higher Risk Assets Without Additional Capital Buffers...
(Non-Fixed Income Assets and Capital, Percent of Total Assets)



...And Have Become More Interlinked With the Shadow Banking Sector
(Percentage Decomposition of “Other Assets”, as of 2016)

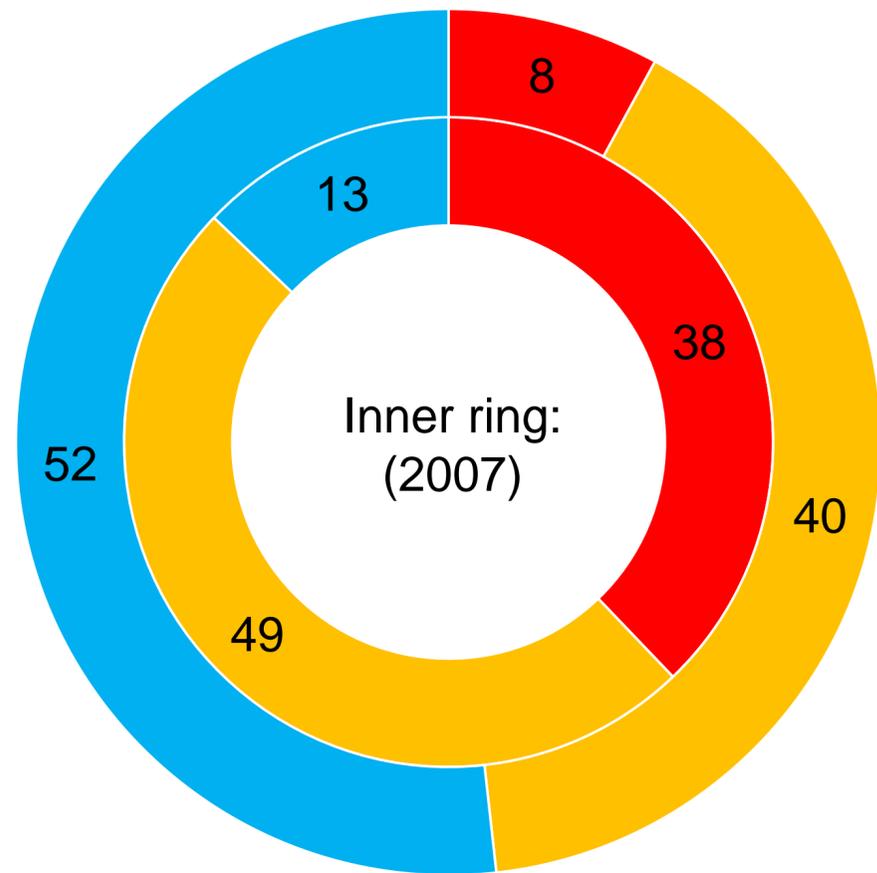


Advanced Economy Bank Health

Bank Balance Sheet Metrics Have Improved...

(Percent of Sample Bank Assets)

Outer ring:
(2017)



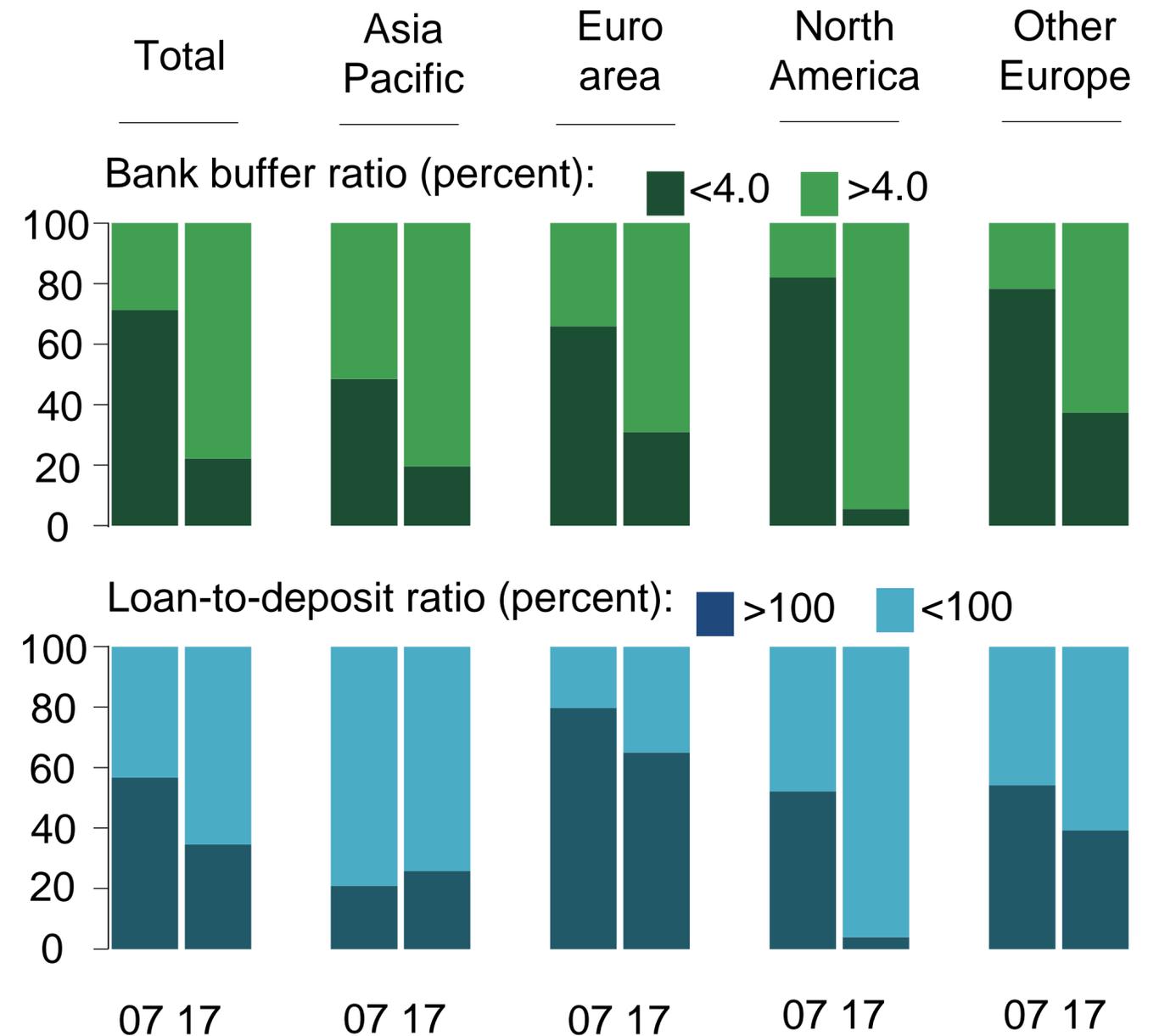
Buffer and
loan-to-deposit
ratios
above target?

- Neither
- One
- Both

Targets (percent): Buffer ratio = 4.0 ; loan-to-deposit ratio = 100

...Including Capital Buffers and Funding Profiles

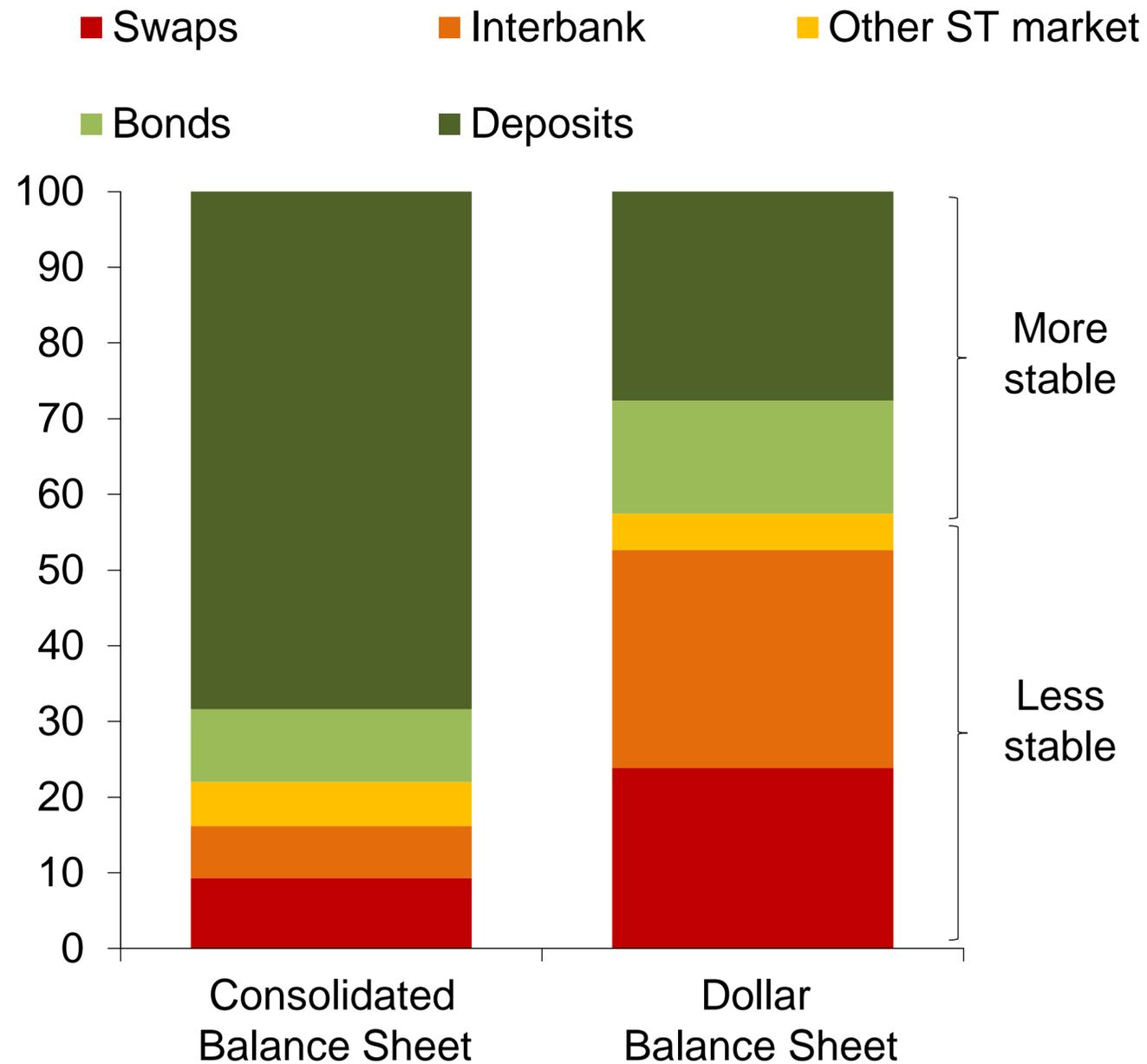
(Percent of Sample Bank Assets)



Banks' Dollar Liquidity Mismatches

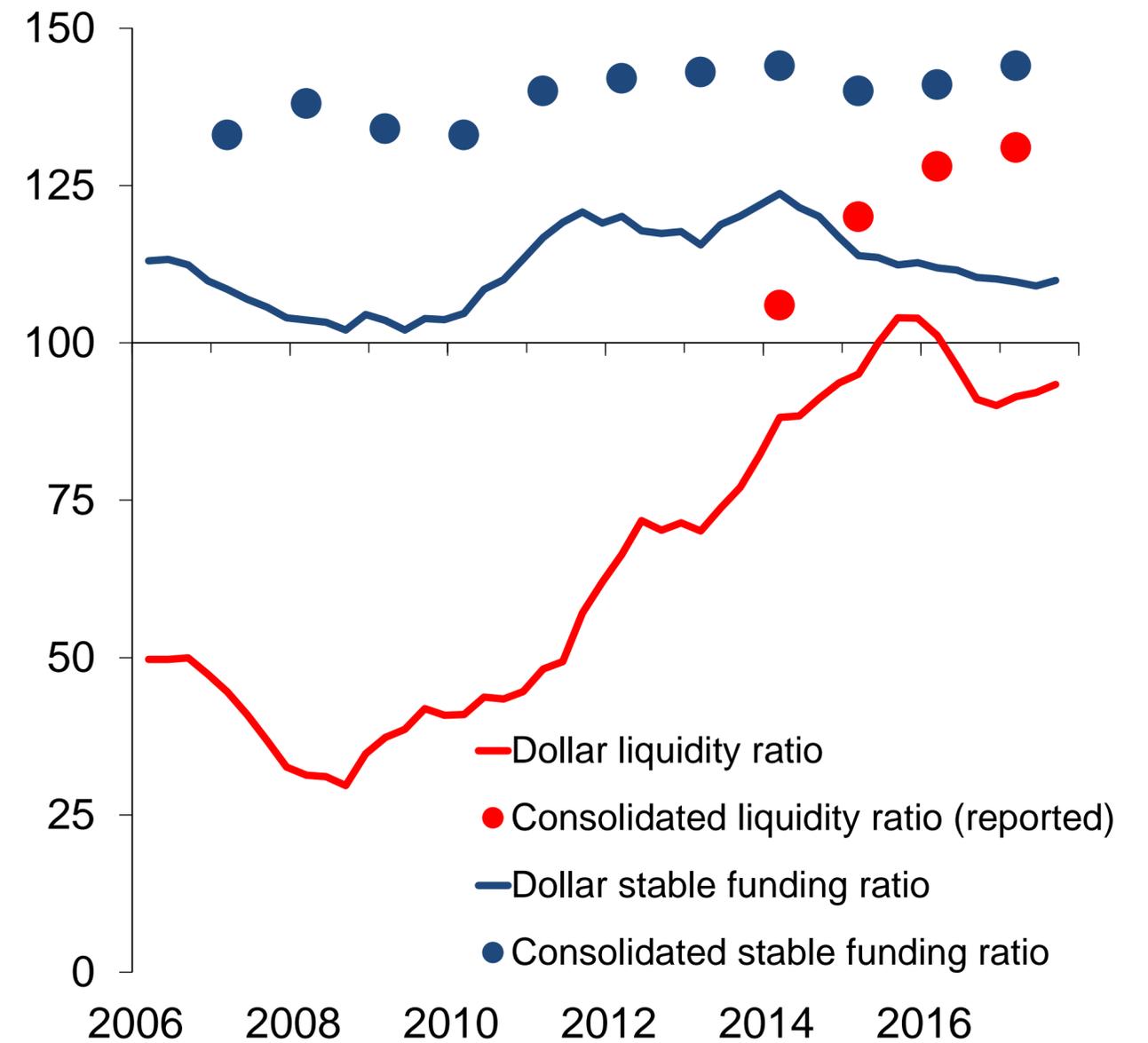
Non-US Banks Rely More on Wholesale Funding...

(Percent of funding mix, Q4 2016)



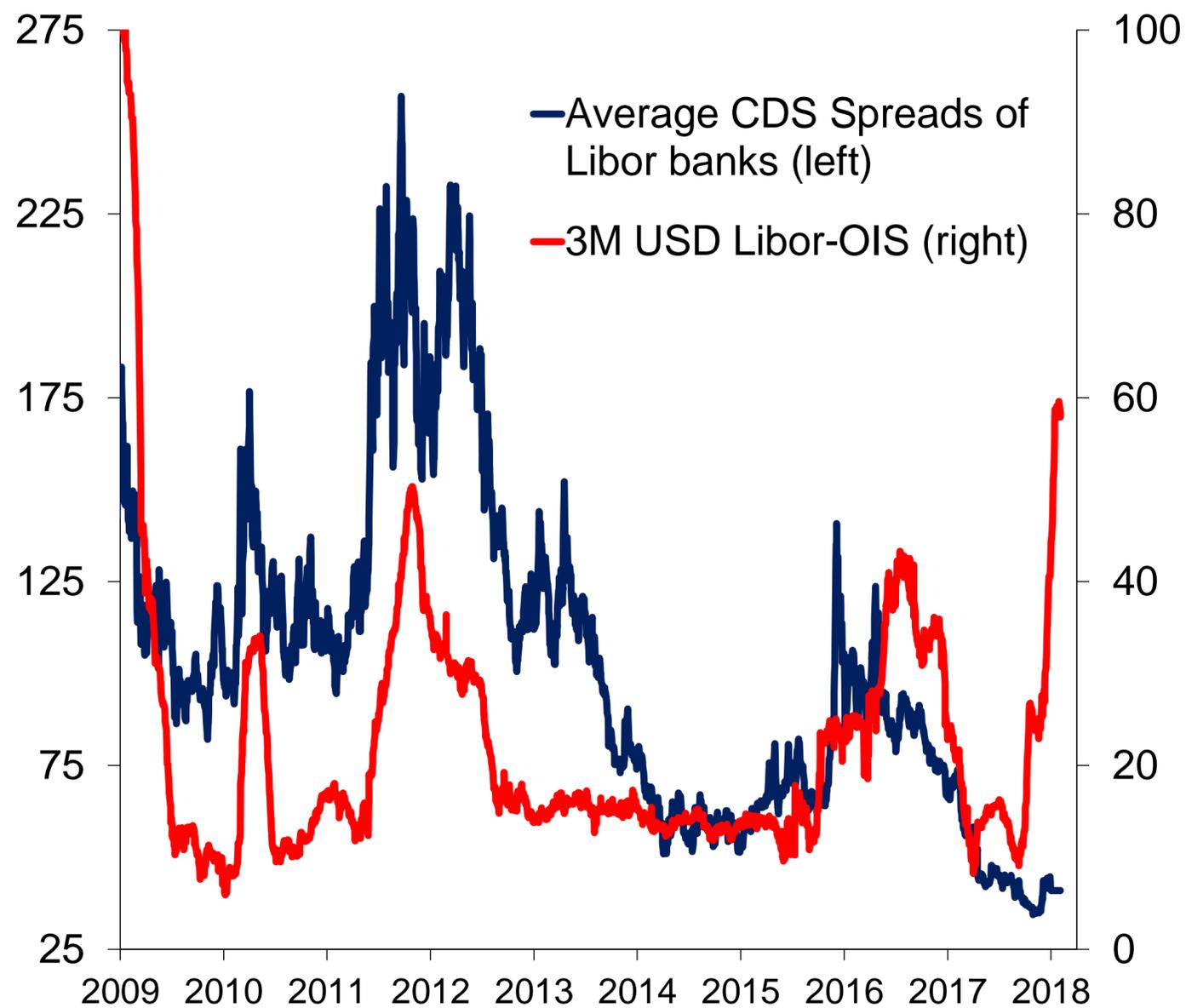
...Leaving USD Liquidity Weaker Than Overall Positions at Non-US Banks

(Percent)

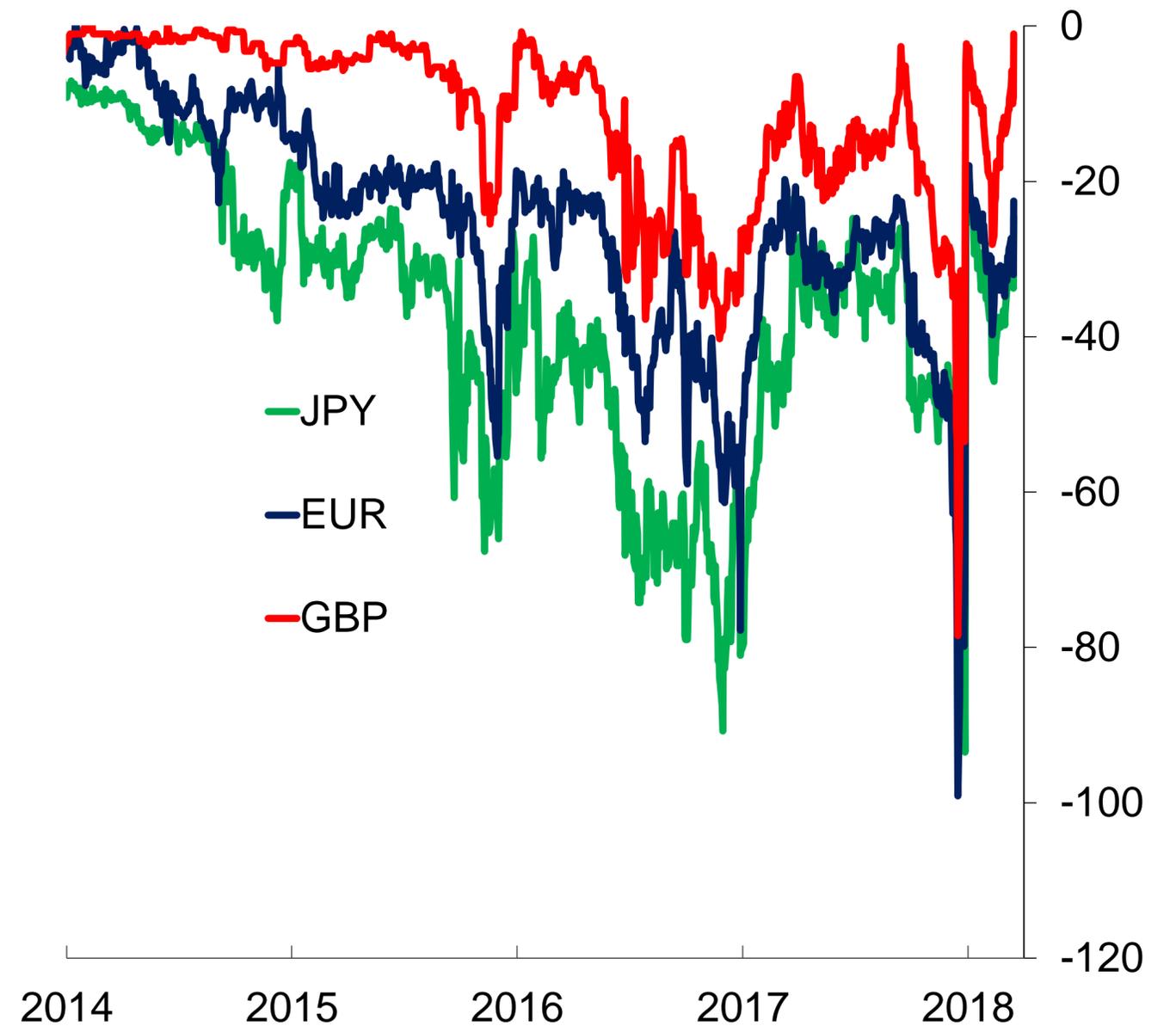


Tighter US Dollar Funding Conditions

US Dollar Interbank Funding Markets Have Tightened
(Basis points)

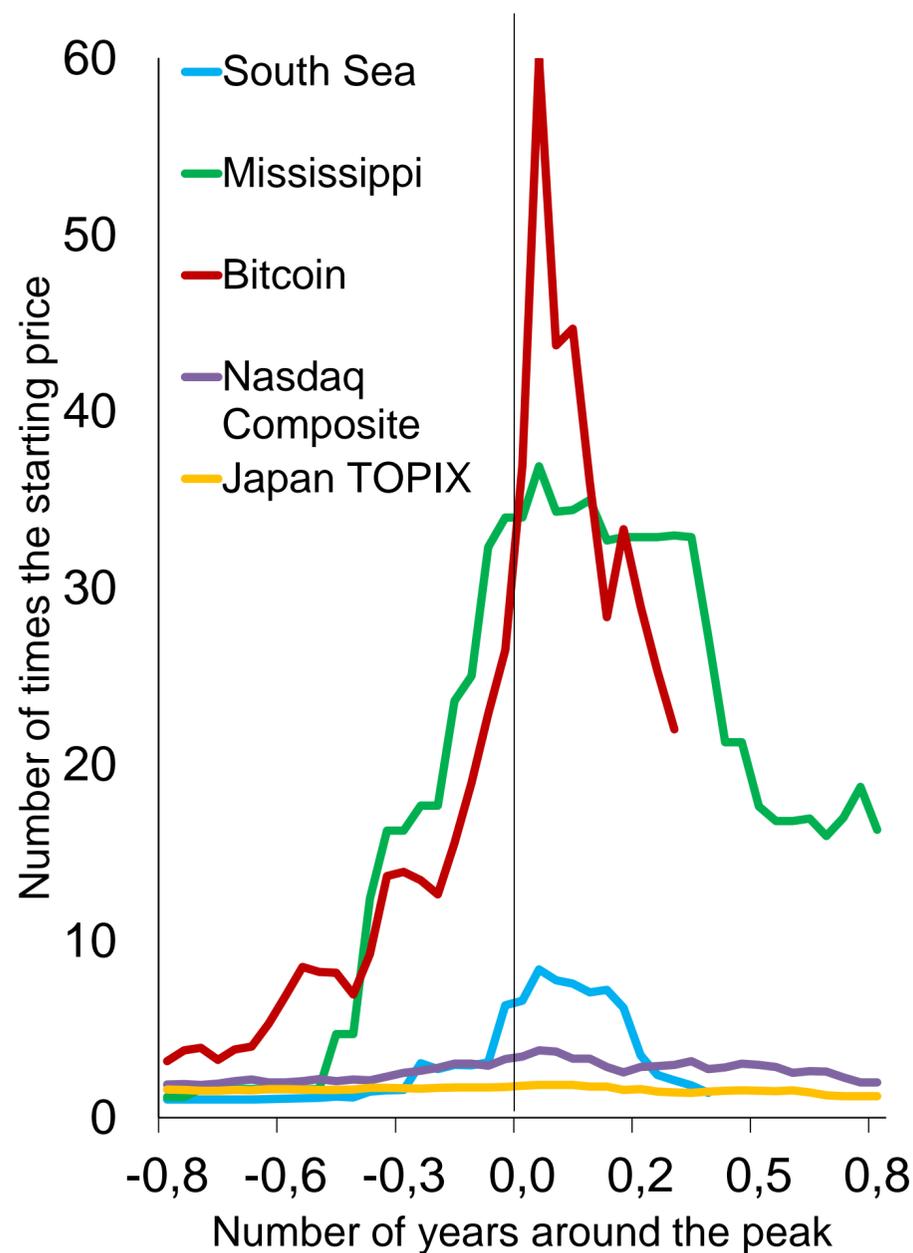


FX Swap Markets May Not be a Reliable Funding Source
(Three month cross currency basis swaps, basis points)

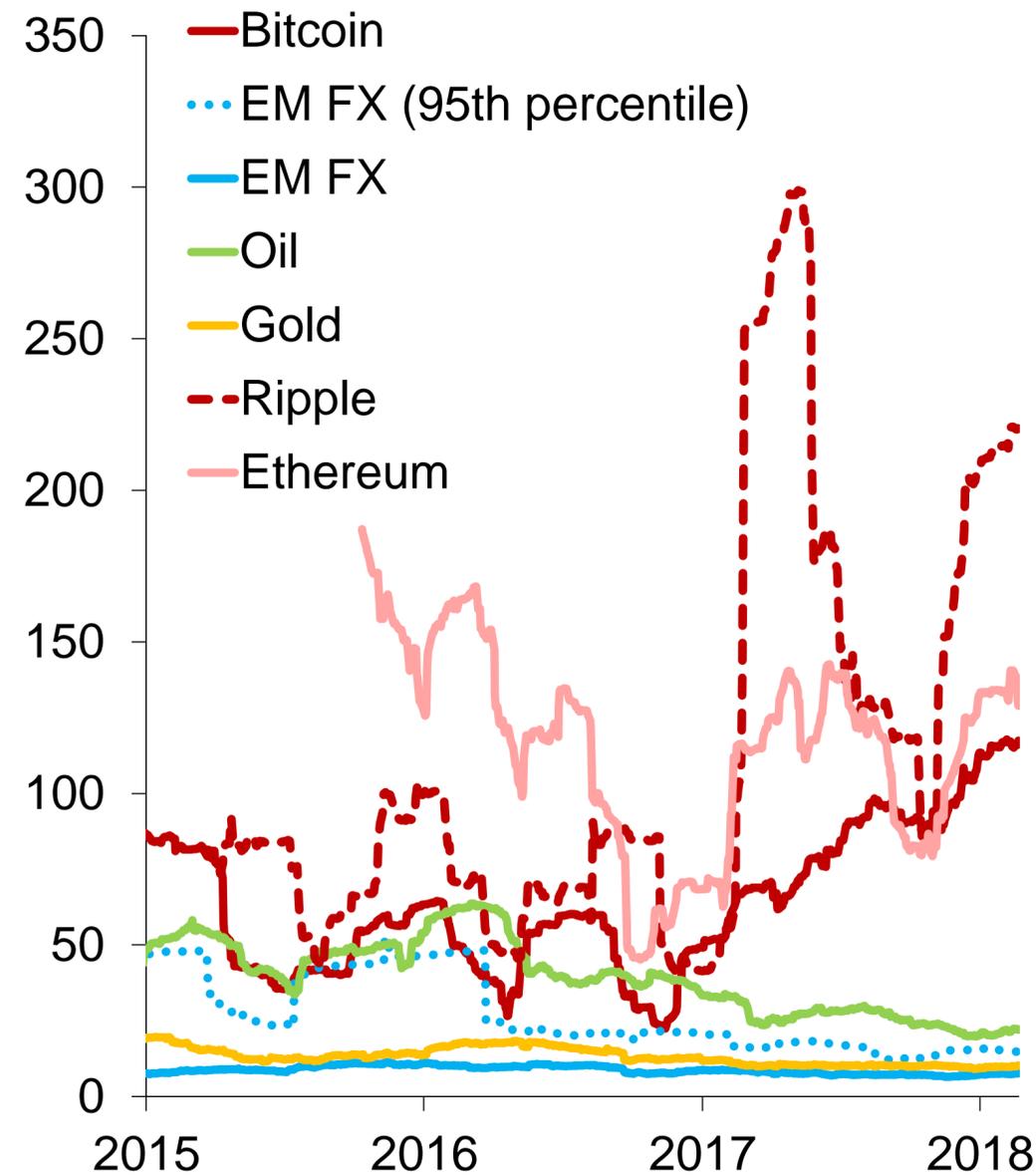


Elevated Price And Volatility Of Crypto Assets

Too Early to Tell If Crypto Assets Are a Financial Bubble
(Price Changes)

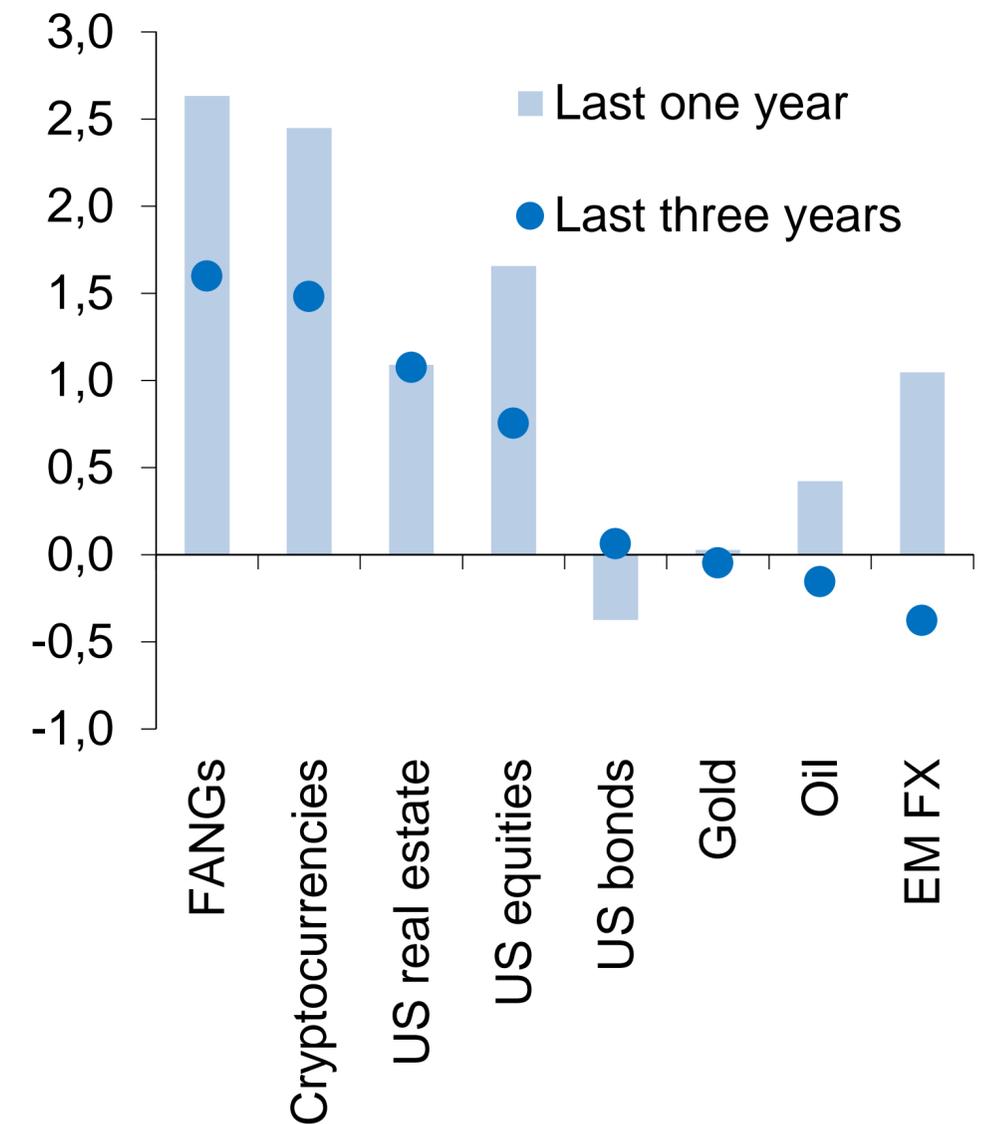


Realized Volatility Has Exceeded Other Asset Classes...
(Percent)



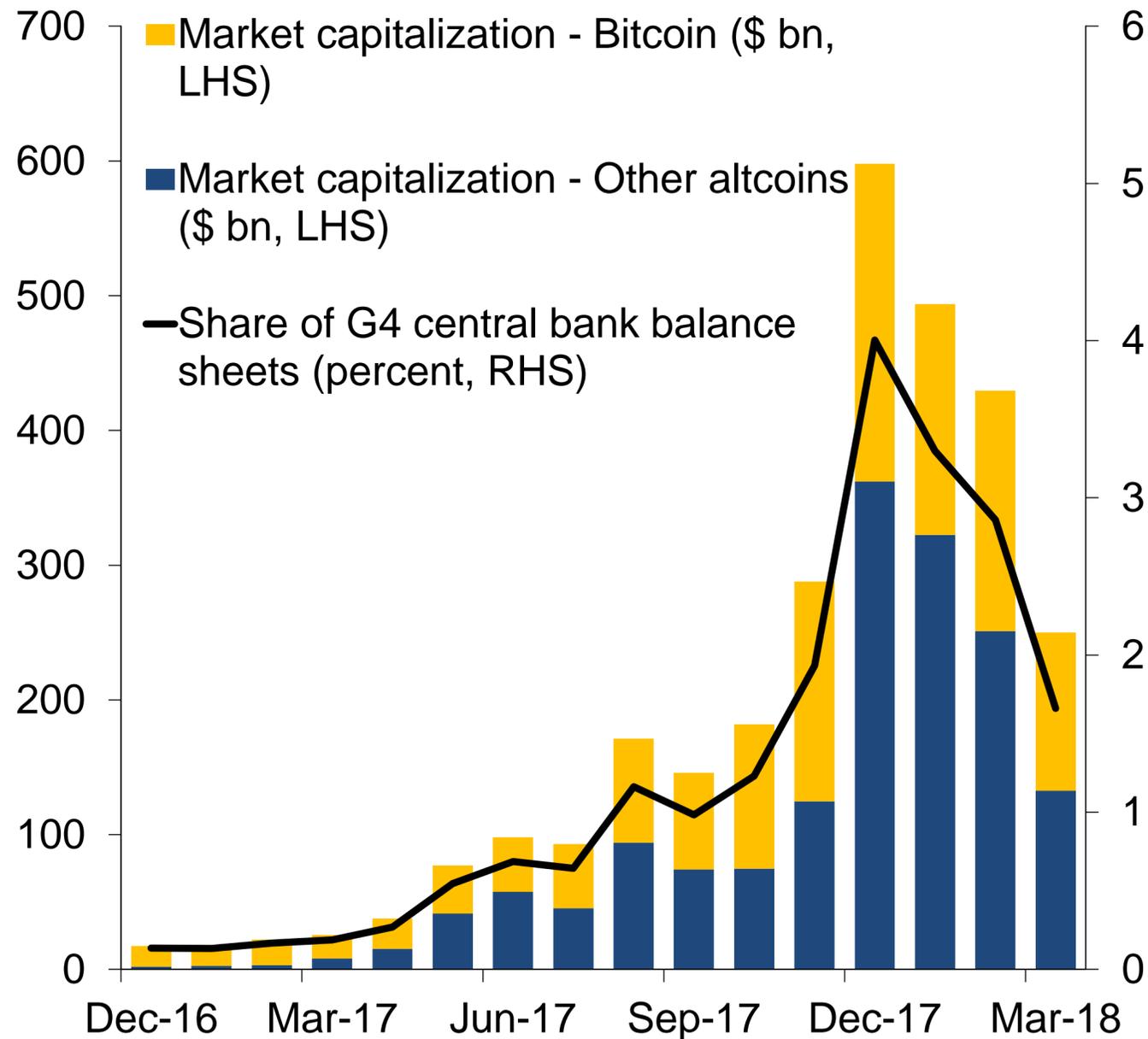
...Leading to Risk-Adjusted Returns Similar to Tech-Oriented Stocks

(Annualized Sharpe Ratio by Asset Class; FANGs = Facebook, Apple, Amazon, NetFlix, and Google)



Crypto Asset Risks

Market Capitalization of Crypto Assets Has Declined Following a Sharp Rally...



...And Regulators Have Warned About Crypto Asset Fraud and Illicit Activities
(Bitcoin reported volumes by fiat currency)

