

2020: Global Economic and Financial Outlook

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Intelligence & Analytics
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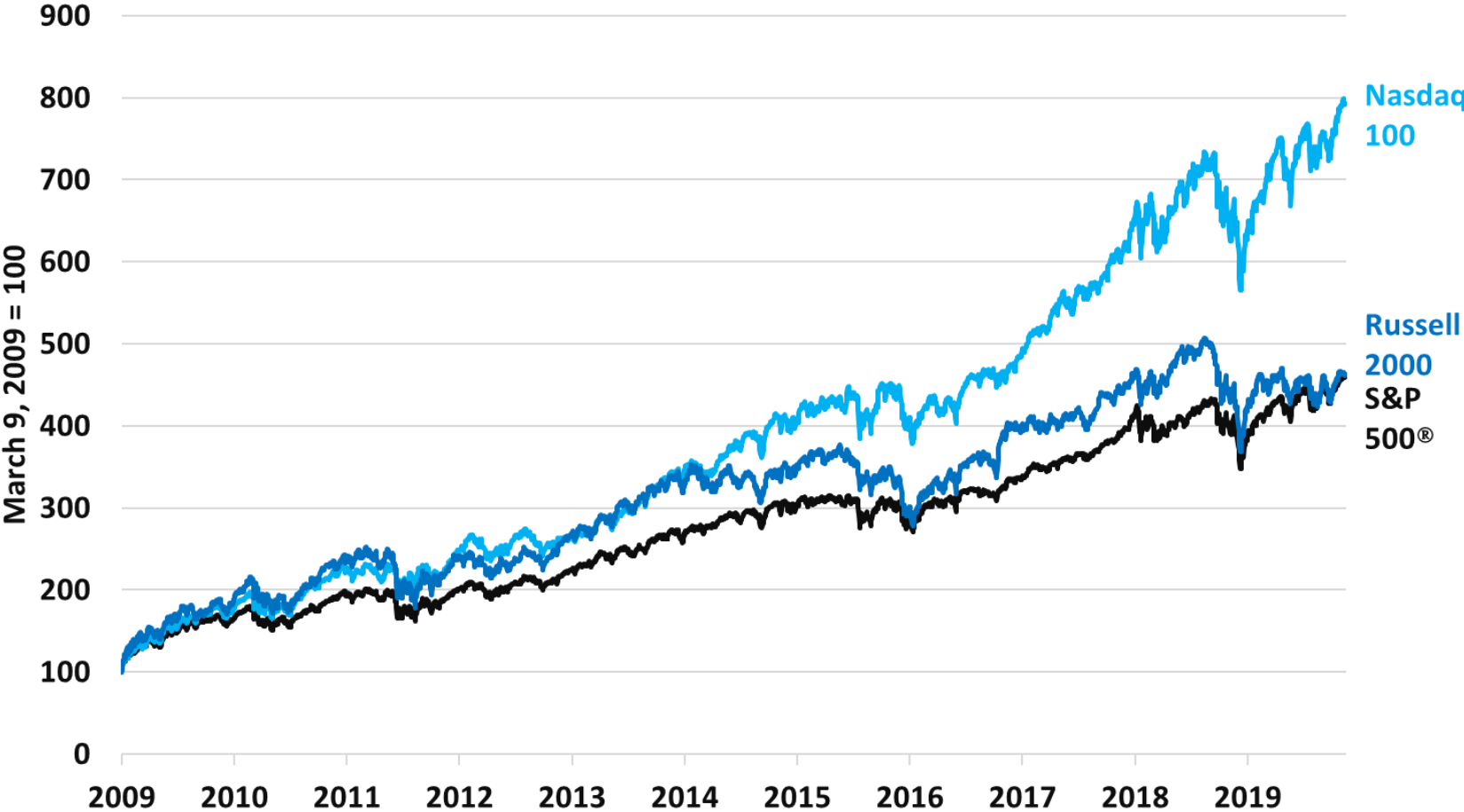
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The bull market at 10 & 1/2 years: S&P & Nasdaq at Records

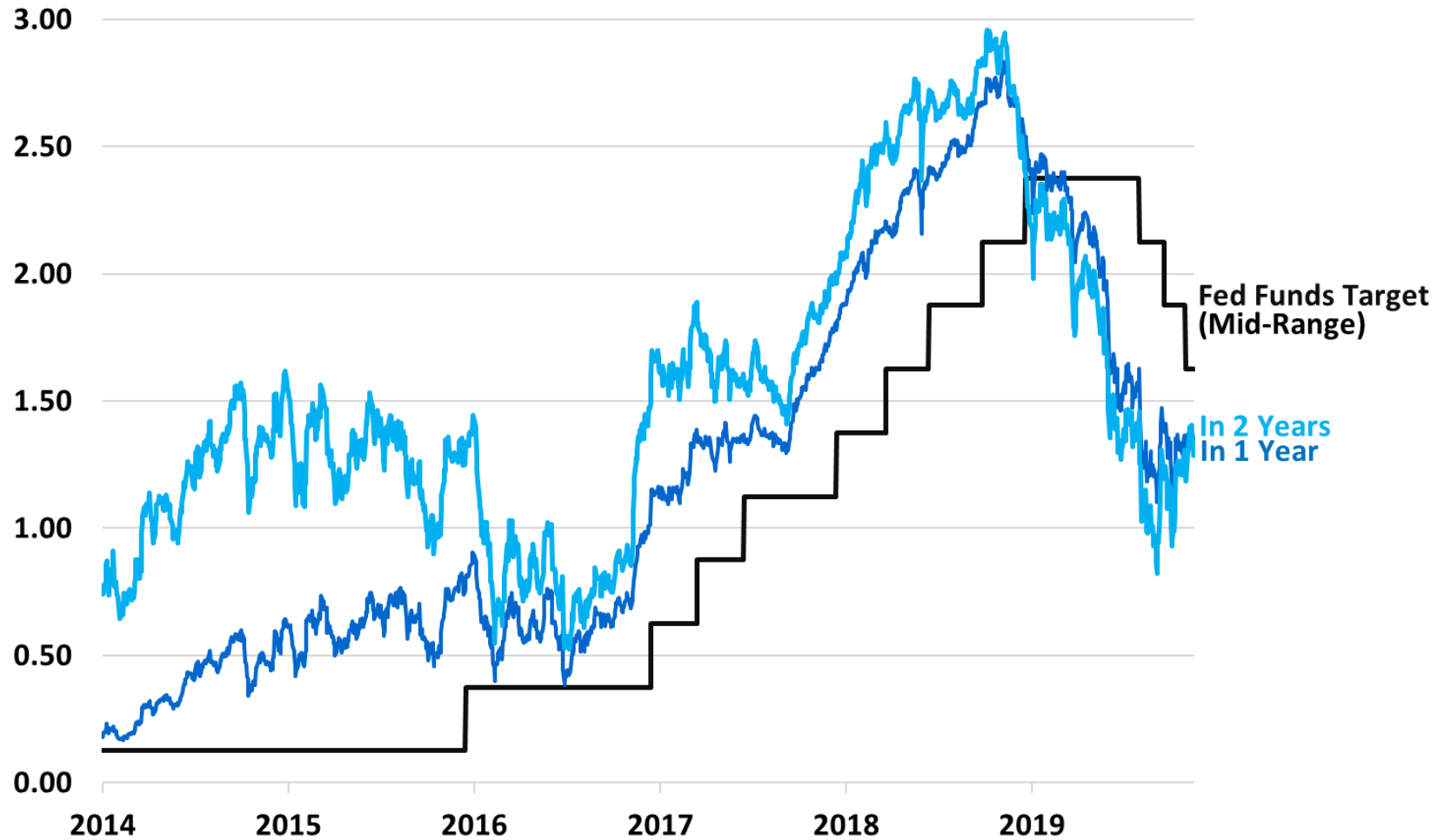
Cumulative Gains Since March 9, 2009



Source: Bloomberg Professional (SPX, NDX and RTY)

Fixed Income Markets Are Pessimistic

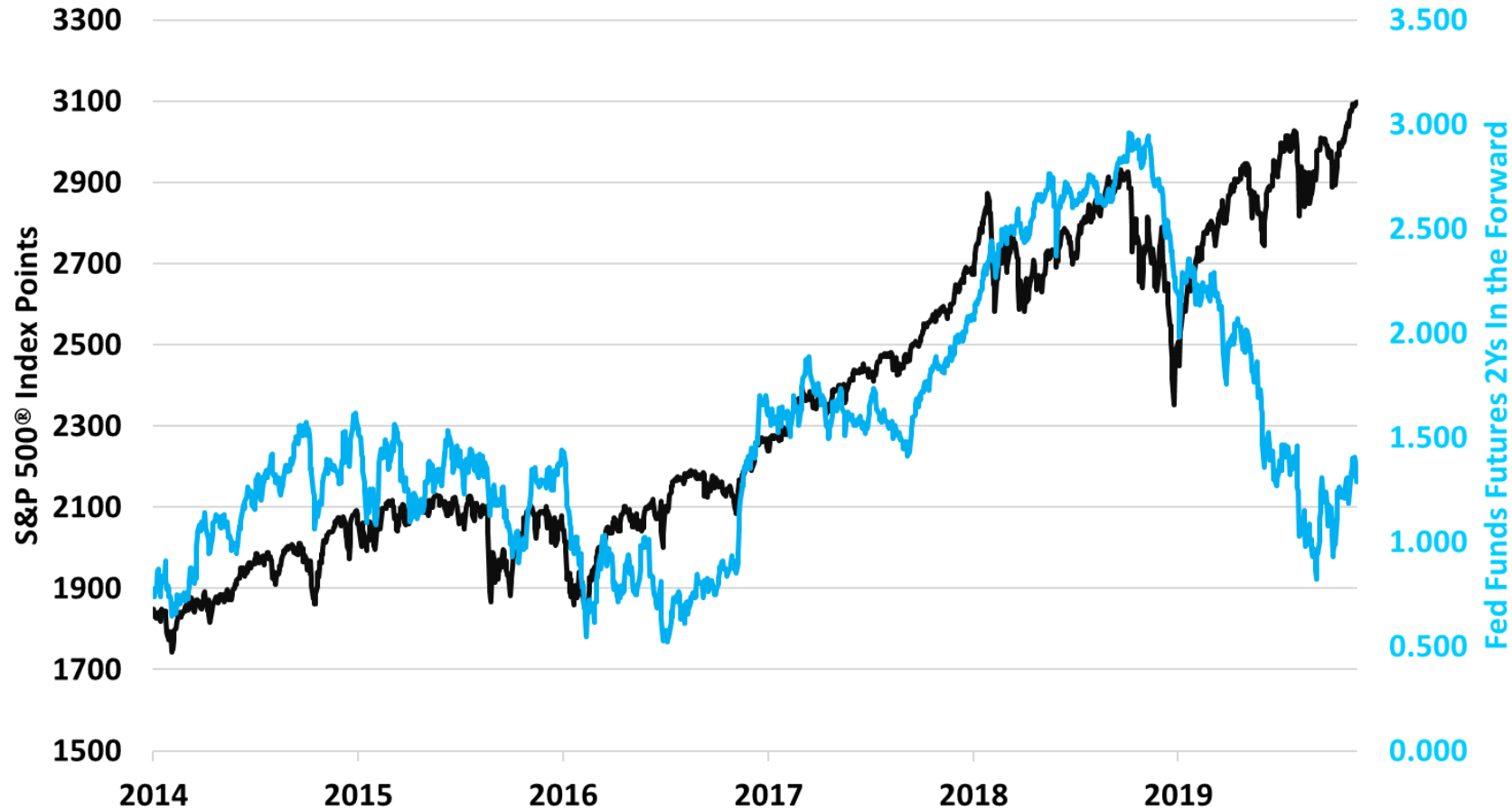
Continuous Fed Funds Futures 1Y and 2Ys Out



Source: Bloomberg Professional (FDTRMID, FFZ15, FFZ16, FFZ17, FFZ18, FFZ9, FFZ0, FFZ1), CME Economic Research Calculations

Optimistic Equity Markets vs Pessimistic Fixed Income Markets

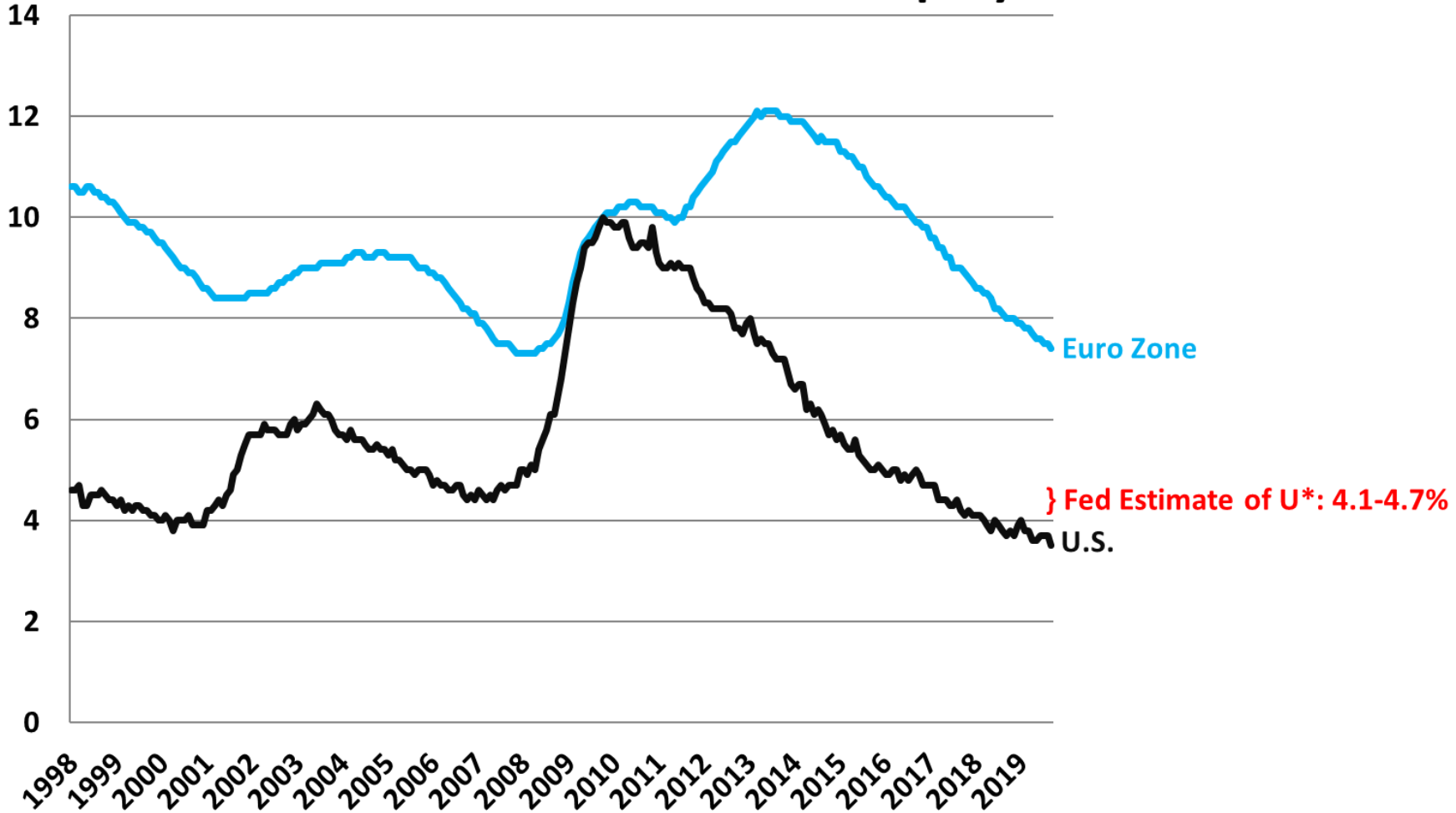
S&P 500[®] and Continuous Fed Funds 2Y Out



Bloomberg Professional (SPX & FFZ15, FFZ16, FFZ17, FFZ18, FFZ19, FFZ20, FFZ21), CME Economic Research Calculations

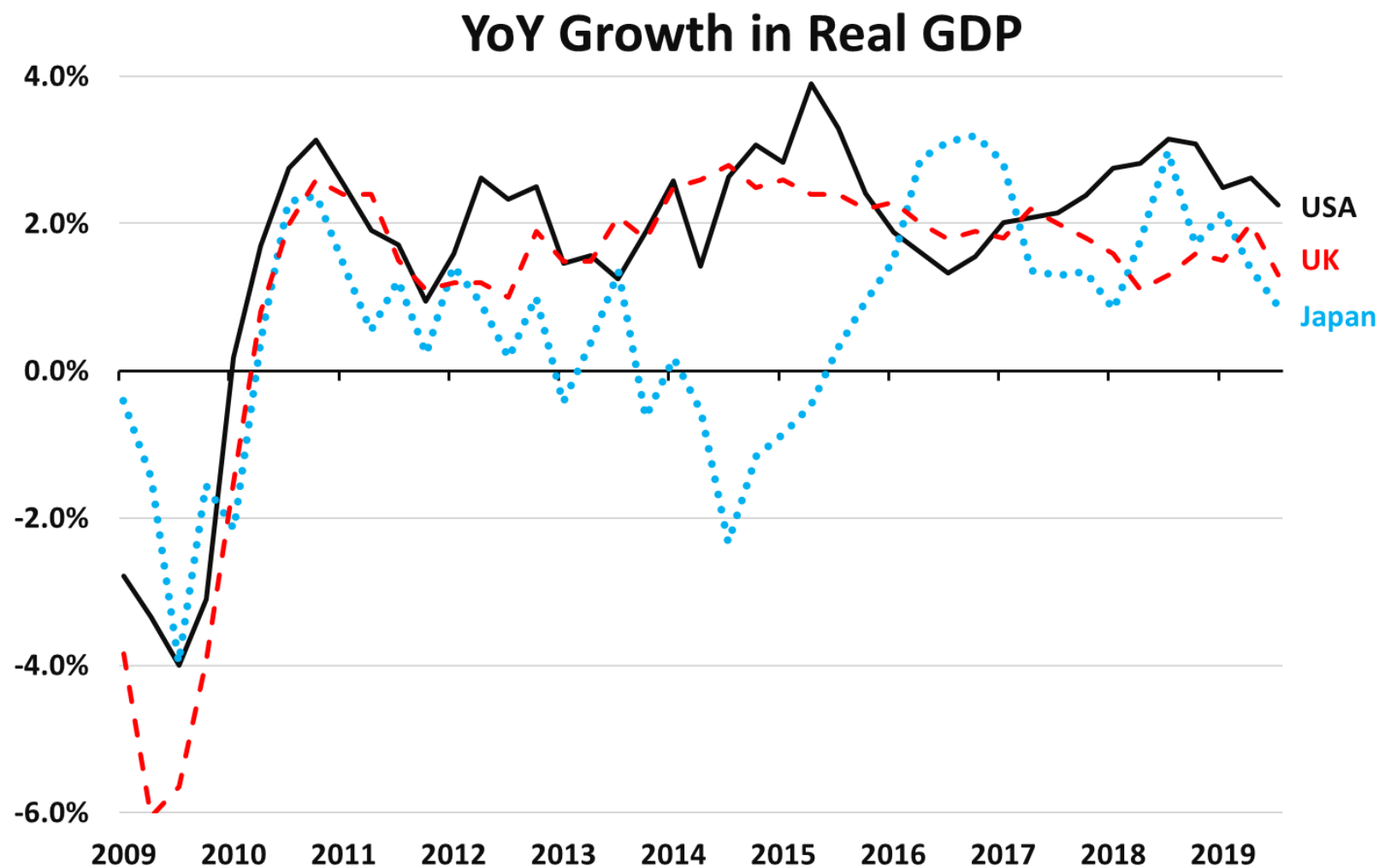
Why Did the Fed Raise Rates? They Believe in U-star...

Euro Zone and U.S. Unemployment



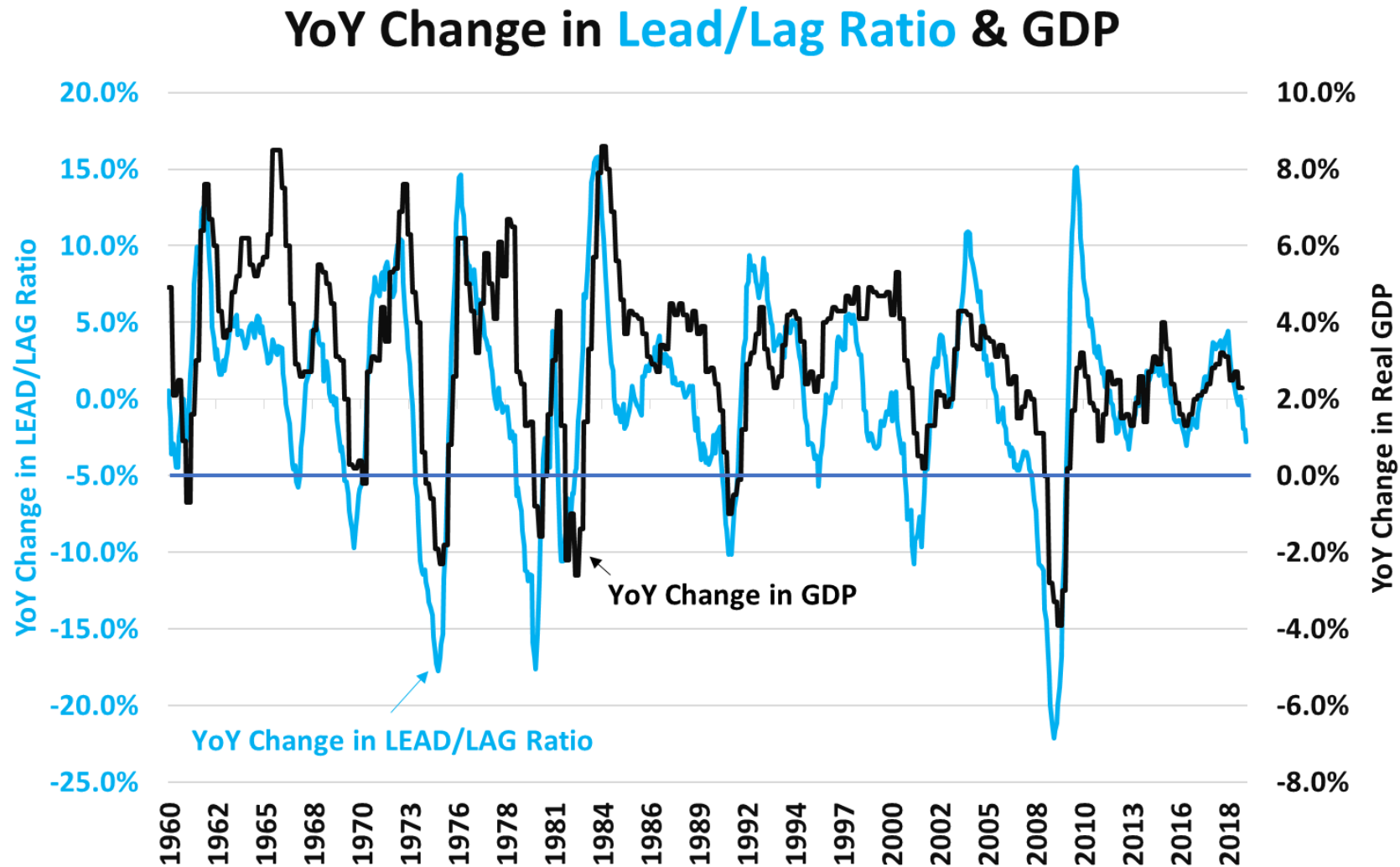
Source: Bloomberg Professional (USURTOT and UMRTEMU)

A Worldwide Slowdown in Economic Growth



Source: Bloomberg Professional (GDP CHWG, UKGRBIQ, and JGDPSCE)

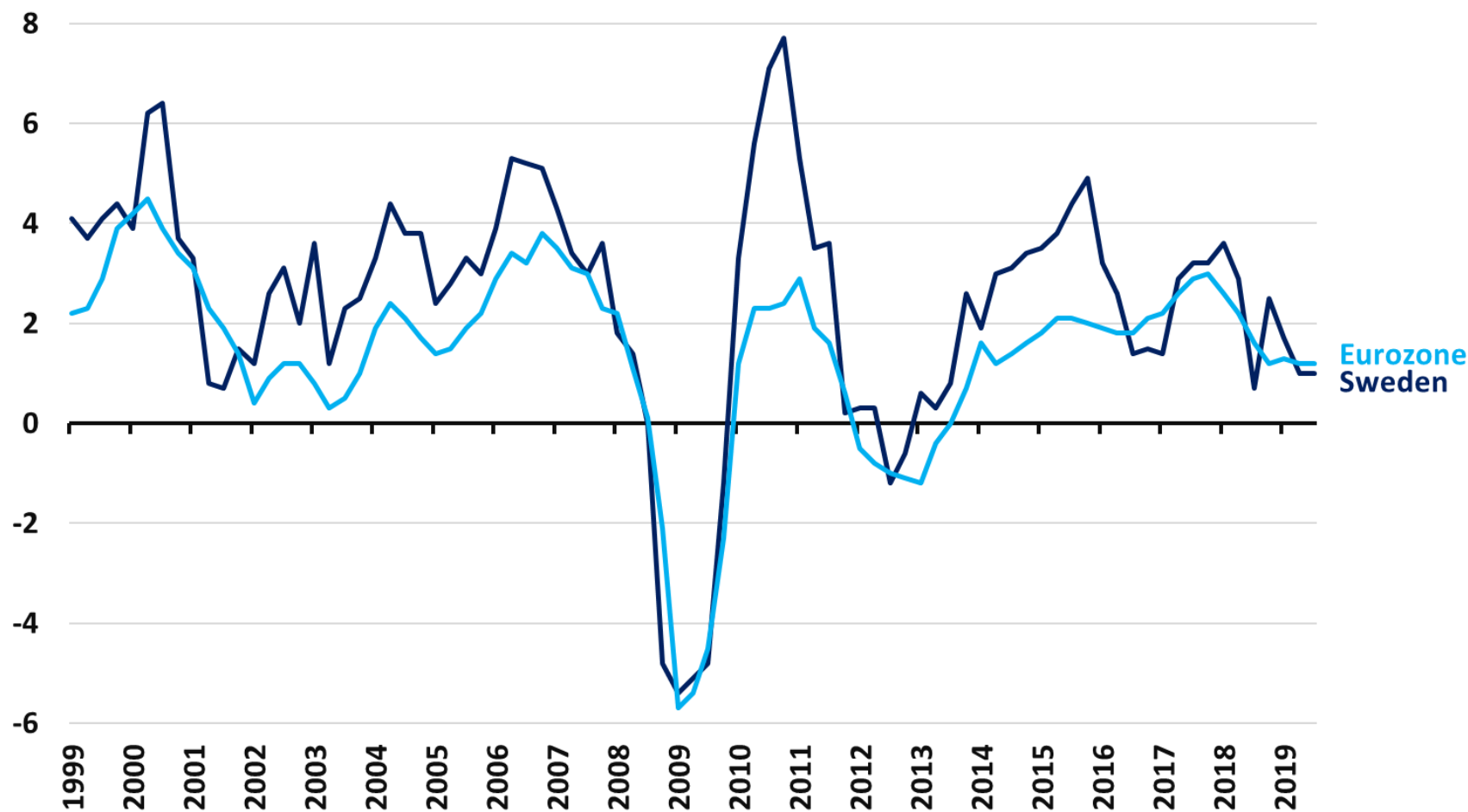
Leading/Lagging Indicator Ratios Suggest US Growth Headed to 1%



Source: Bloomberg Professional (LEI TOTL, COI TOTL and GDP CYOY)

A Worldwide Slowdown in Economic Growth

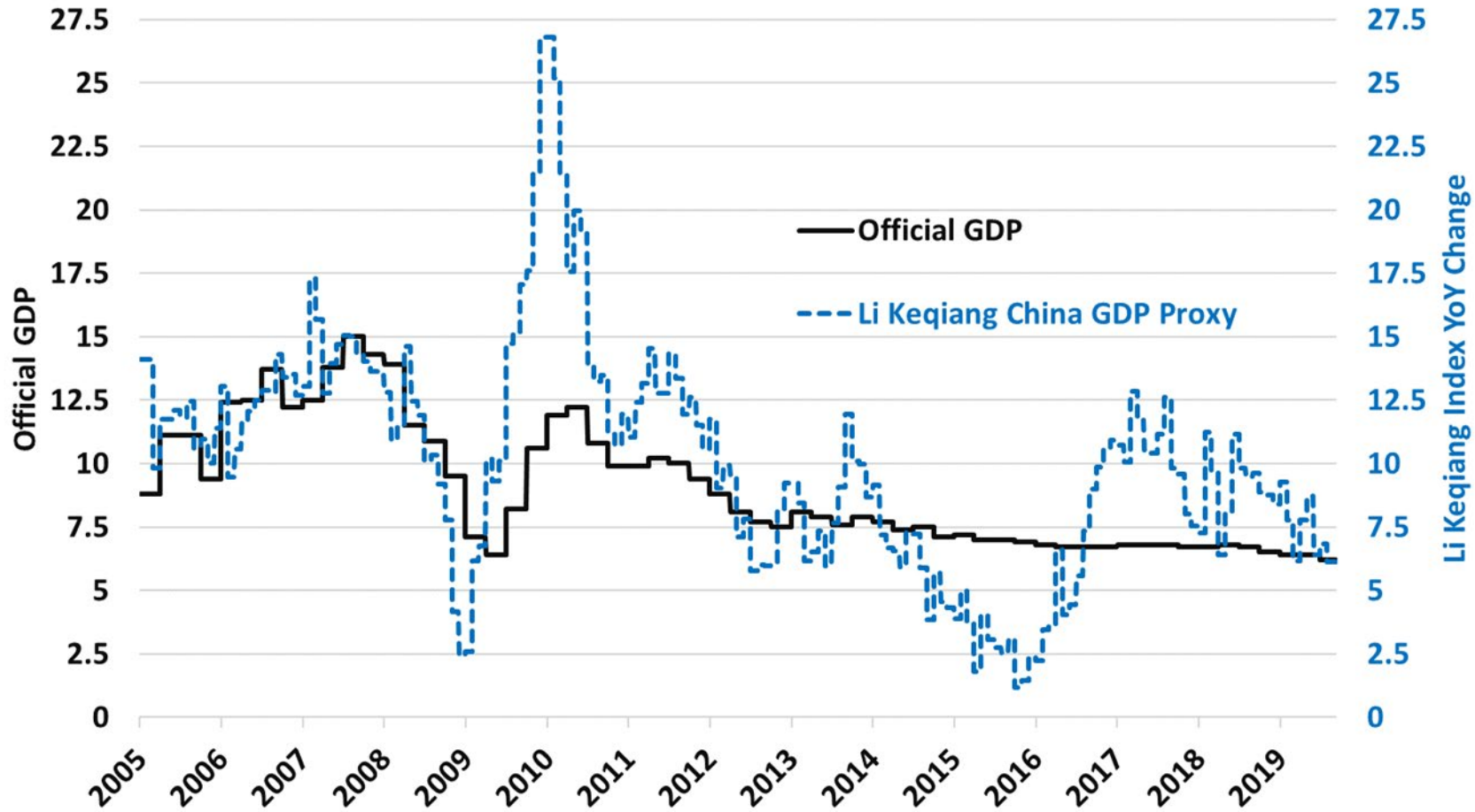
Swedish and Eurozone YoY GDP Growth



Source: Bloomberg Professional ([EUGNEMUY](#) and [SWGDPWYY](#))

How Best of Measure China's Growth

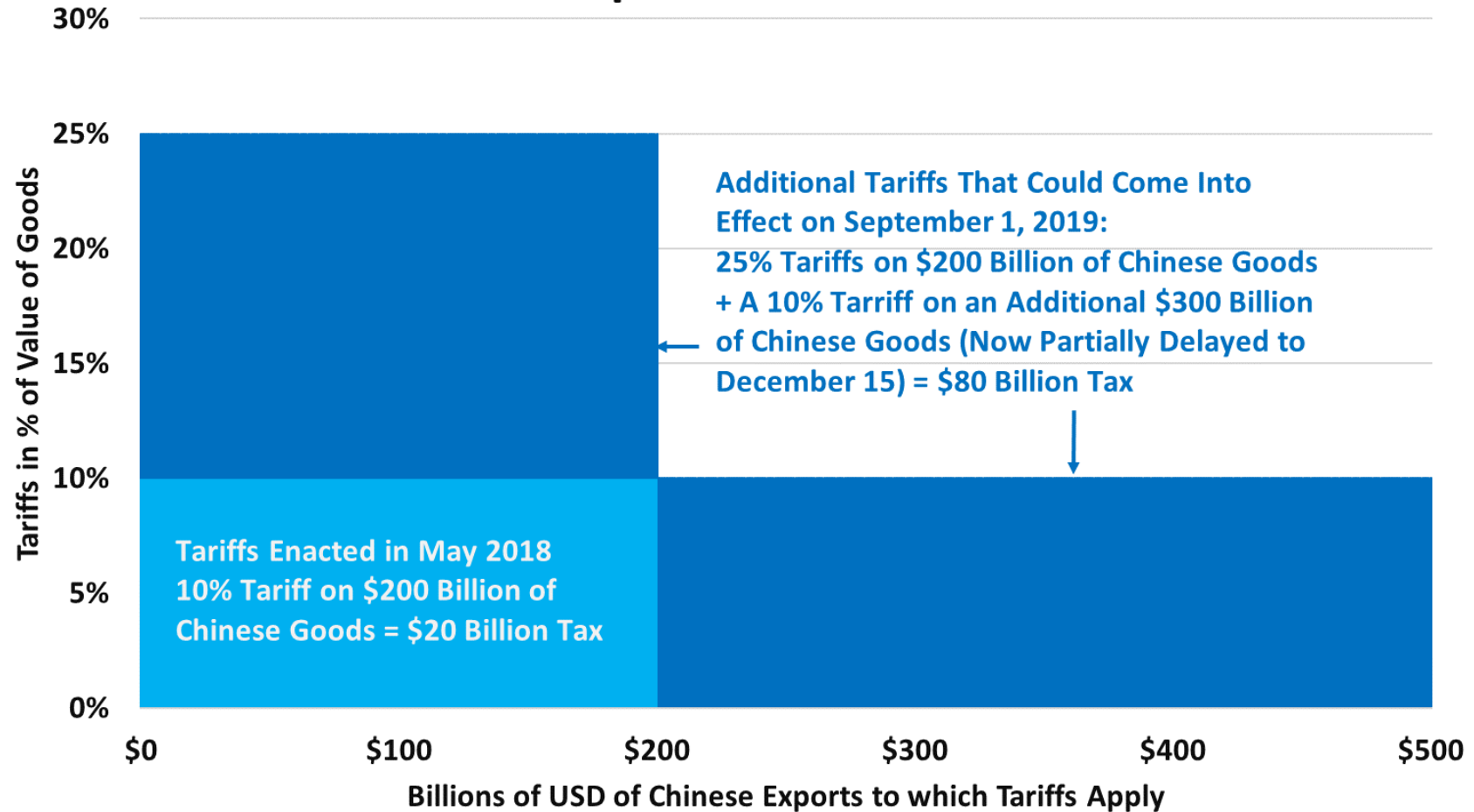
China's Official GDP and The Li Keqiang Index



Source: Bloomberg Professional (CNGDPYOY and [CLKQINDX](#))

EM Currencies: An End to the Trade War Would be Bullish

US Tariffs on Imported Goods From China



Source: US Department of Commerce

Trade War Could Shave 0.5% Off Of China's GDP

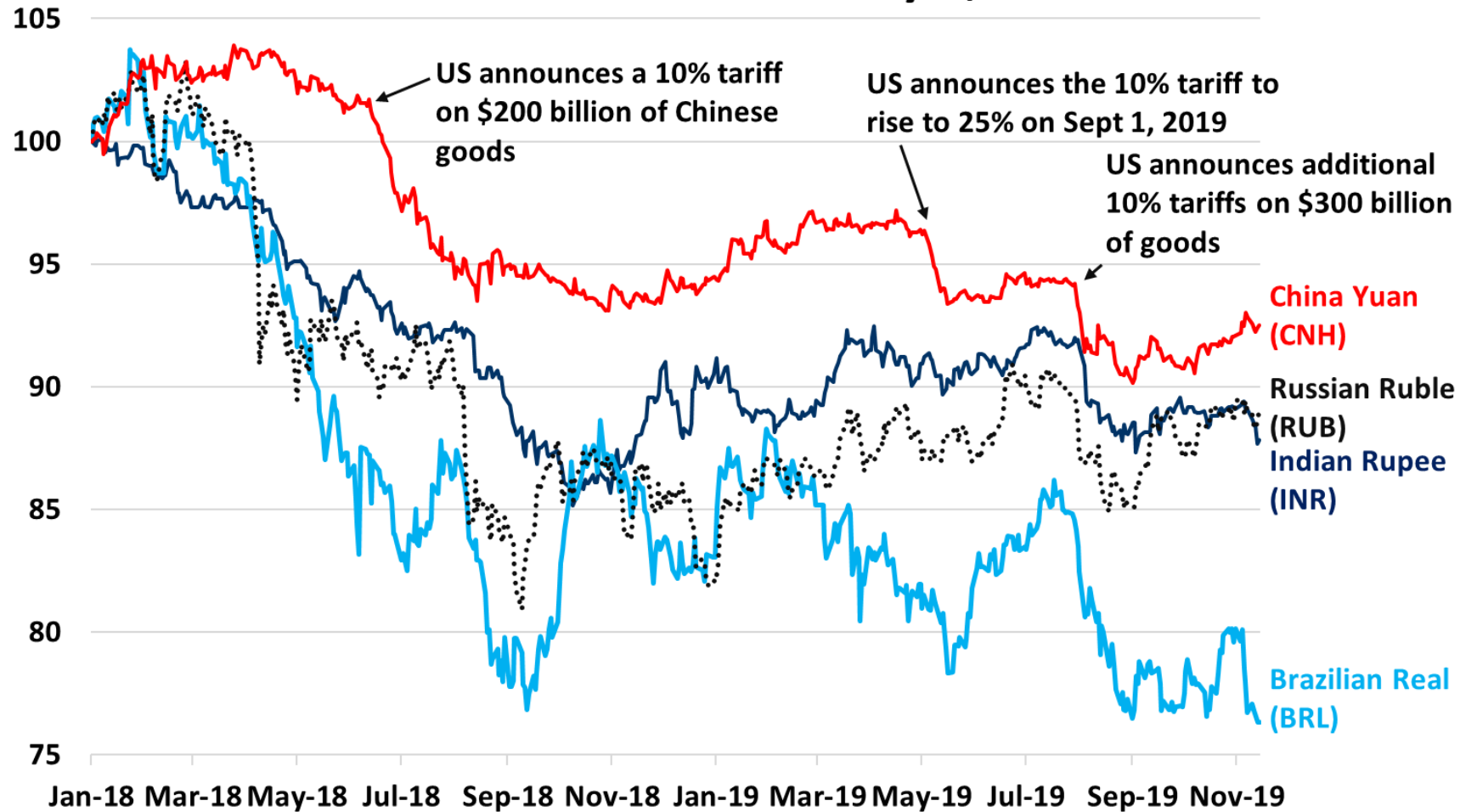
Back of the Envelope Tariff Impact Calculator

	US CPI (Probable Impact)	US Corporate Profits (Probable Impact)	Impact on China's GDP (Best Estimate)
10% Tariffs on \$200 Billion of Goods	0.05%	-0.6%	-0.13%
15% Additional Tariff on \$200 Billion of Goods	0.08%	-0.9%	-0.16%
10% Tariffs on \$300 Billion of Goods	0.08%	-0.9%	-0.19%
Total Impact Before Offsetting Measures/Compounding Effects	0.20%	-2.35%	-0.48%

Source: GDP Estimates from CIA World Fact Book 2019, CME Economic Research Calculations

EM Currencies: An End to the Trade War Would be Bullish

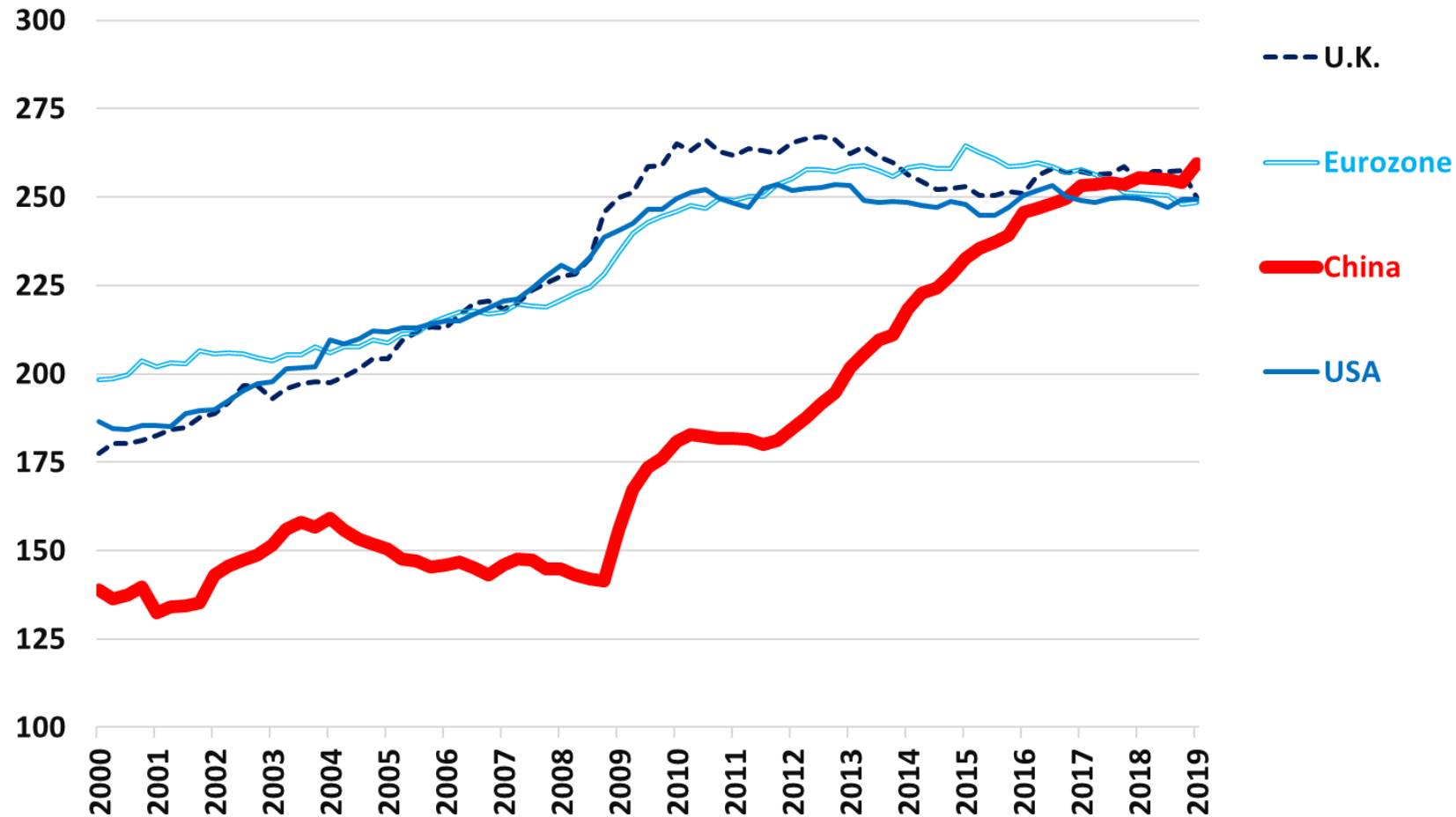
Performance vs. USD: January 1, 2018 = 100



Bloomberg Professional (INR, BRL, CNH, RUB and TRY)

Debt Ratios Soared Worldwide, Making it Harder to Stimulate Growth

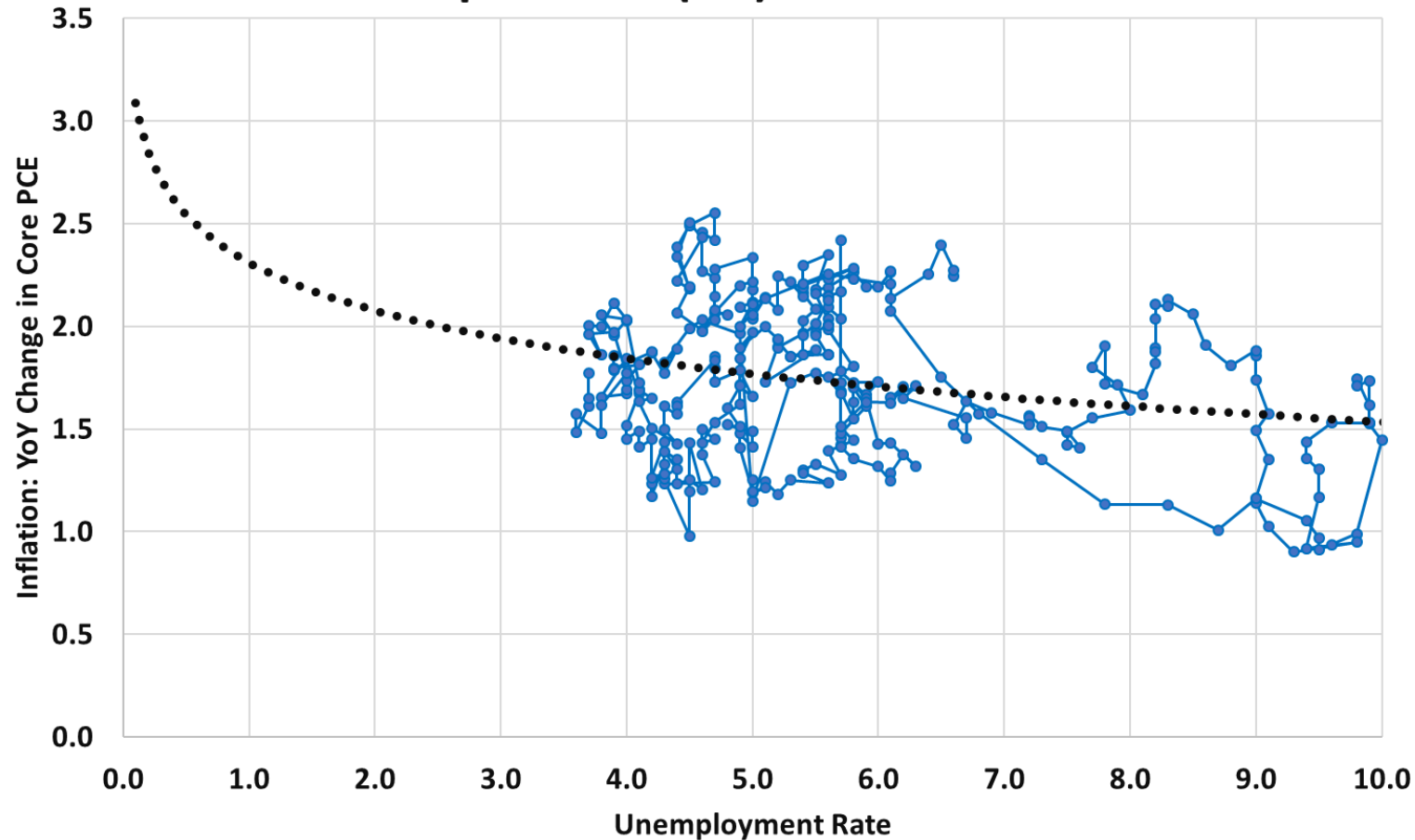
Public + Private Sector Debt to GDP Ratio



Source: Bank for International Settlements (BIS), <http://www.bis.org/statistics/totcredit.htm>

Stuck in the 1970s, the Fed Doesn't Get That Low Unemployment Doesn't Cause Inflation: Rising Inequality Flattened The Phillips Curve

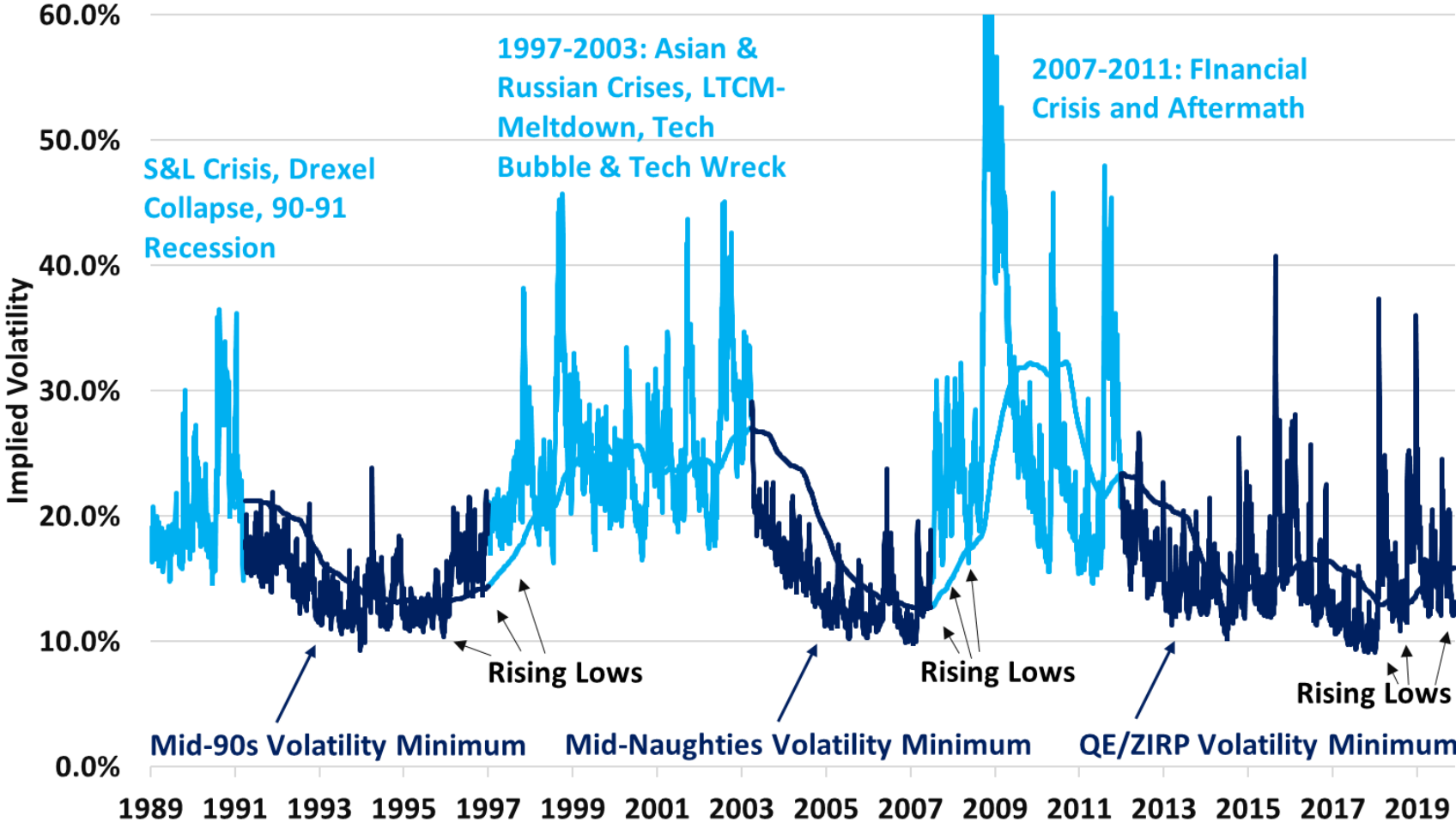
Phillips Curve (US): 1994-2019



Source: Bloomberg Professional (USURTOT and PCE CYOY)

Volatility Remains Historically Low

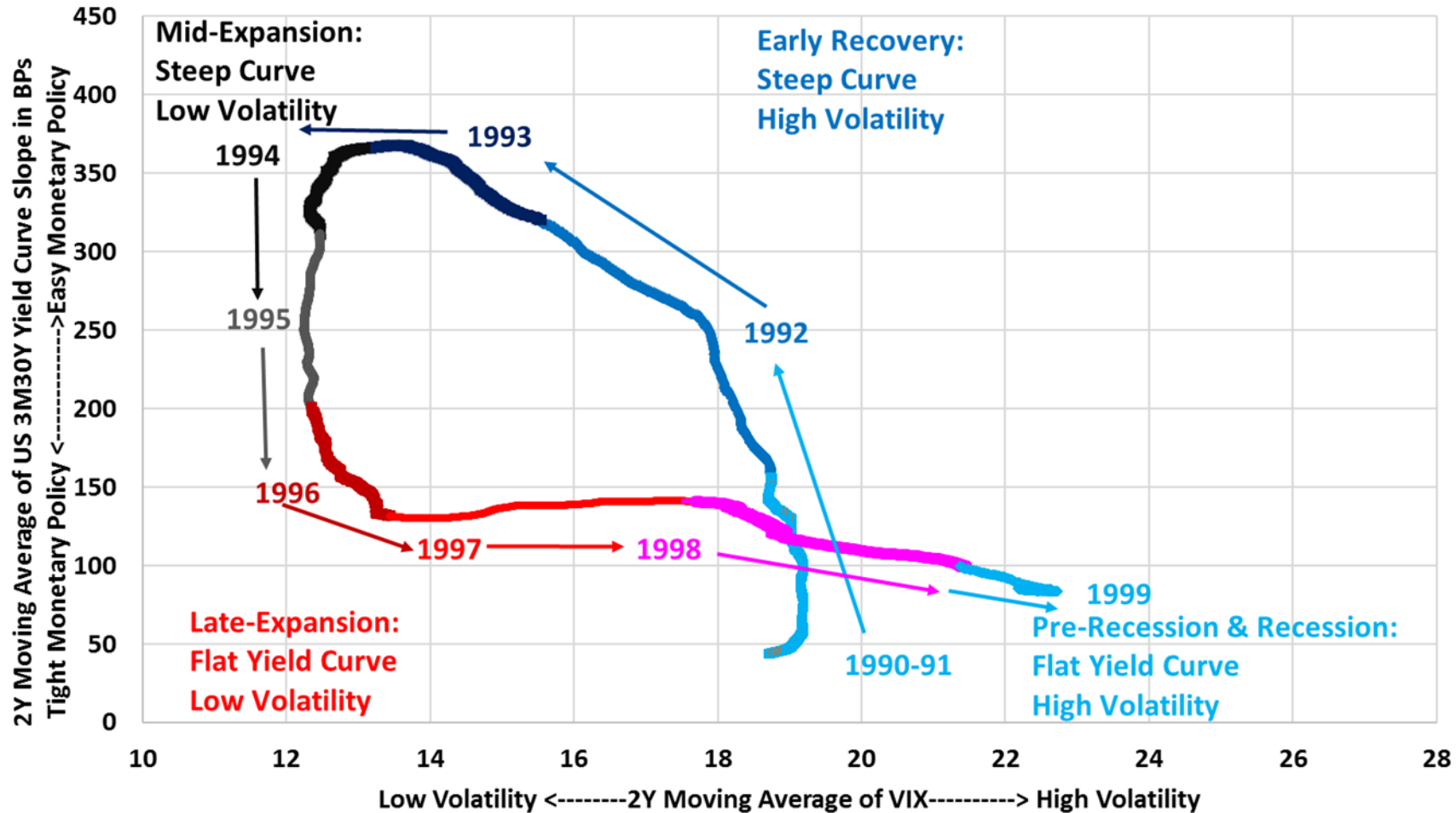
S&P 500® Options Implied Volatility



Source: Quikstrike (ES_30), pre-2007: Bloomberg Professional (VIX and, pre-1993, VXO)

The Monetary Policy-Volatility Cycle

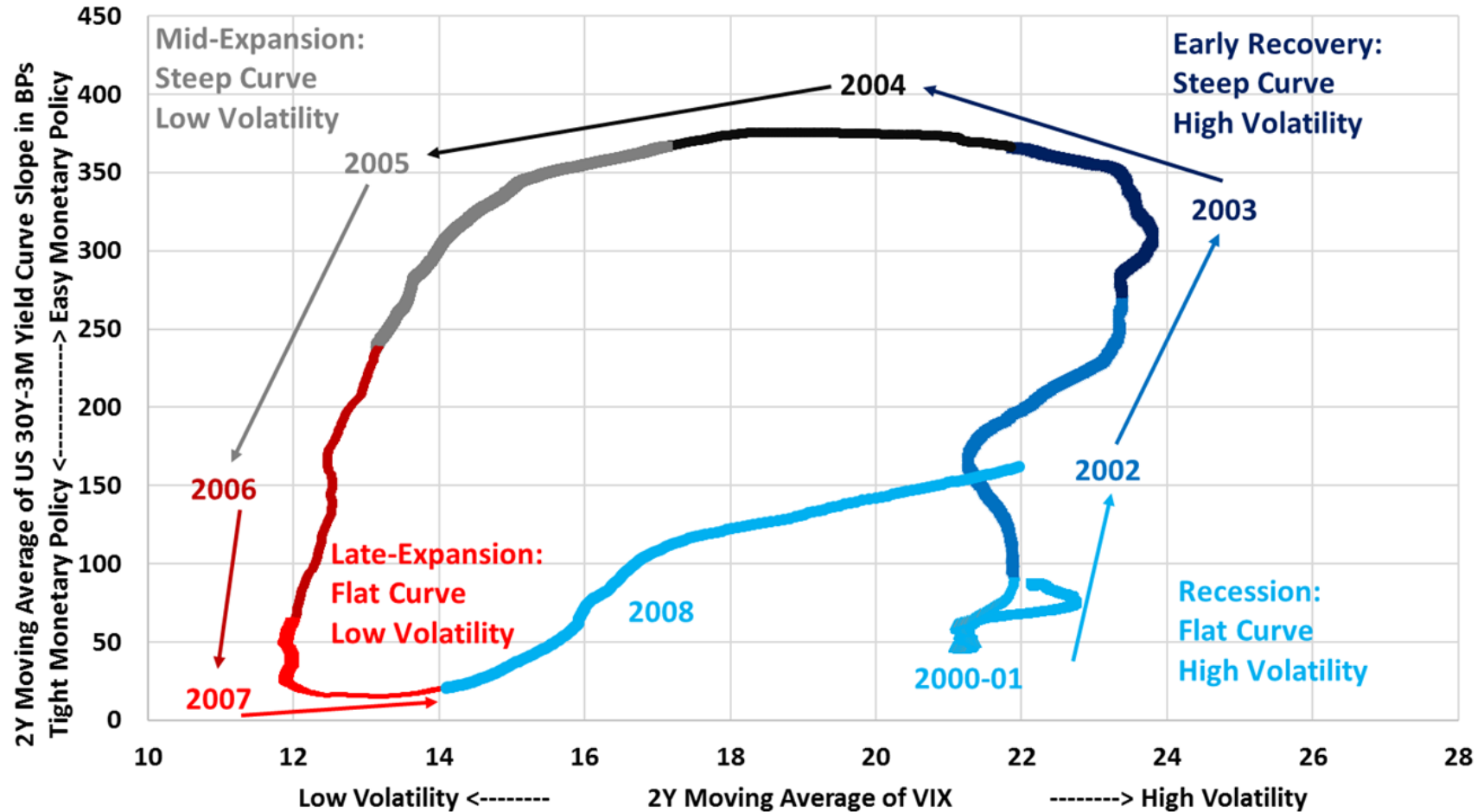
S&P 500® Options Volatility-Yield Curve Cycle



Source: Bloomberg Professional (GB3, USGG30YR and VIX), CME Economic Research Calculations

The Monetary Policy-Volatility Cycle

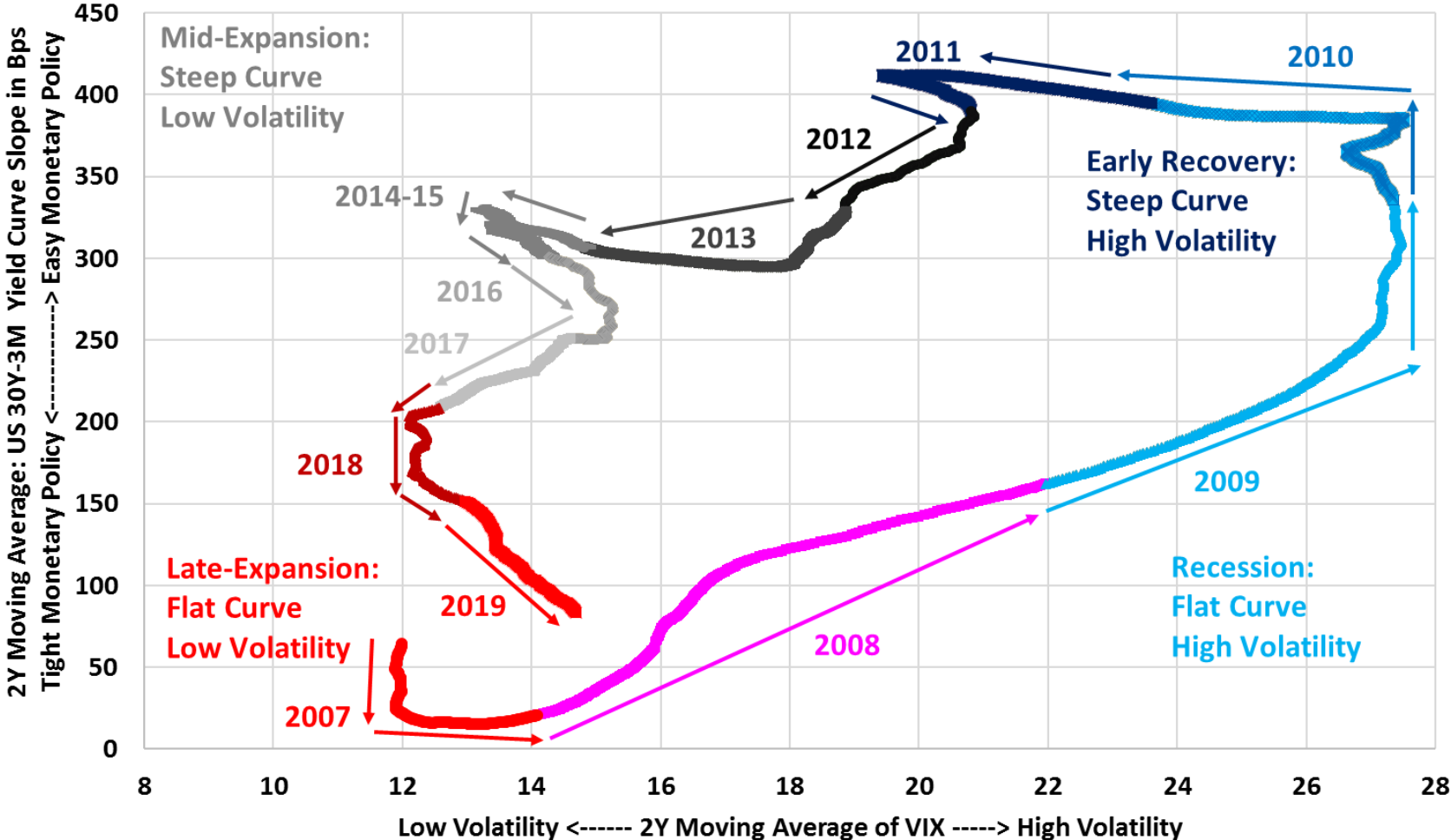
S&P 500® Option Volatility-Yield Curve Cycle



Source: Bloomberg Professional (GB3, USGG30YR and VIX), CME Economic Research Calculations

The Monetary Policy-Volatility Cycle

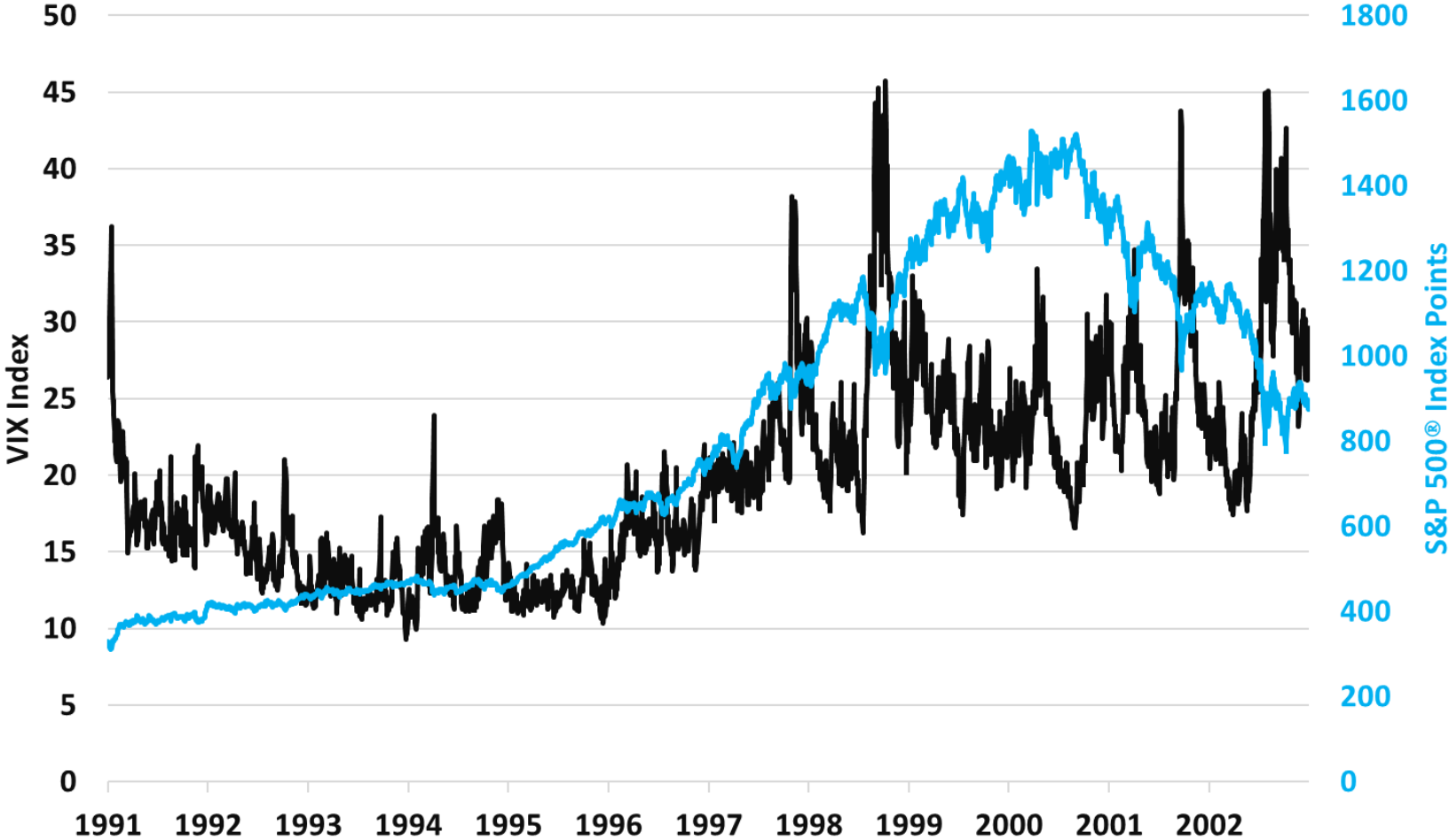
S&P 500® Option-Yield Curve Cycle



Source: Bloomberg Professional (GB3, USGG30YR and VIX), CME Economic Research Calculations

Volatility and Equity Bull Markets

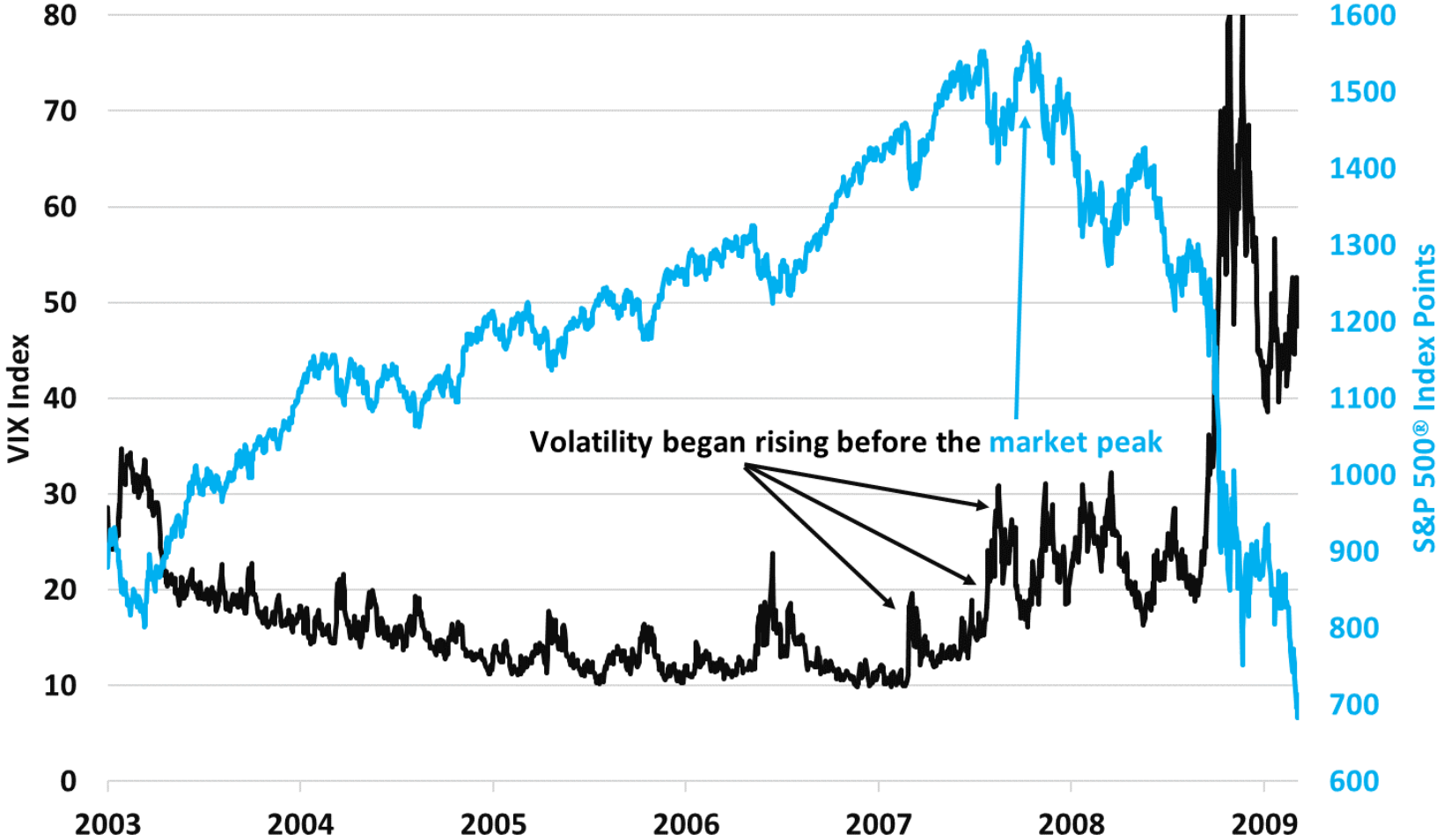
S&P 500® and Implied Volatility 1991-2002



Source: Bloomberg Professional (SPX and LF98OAS)

Volatility and Equity Bull Markets

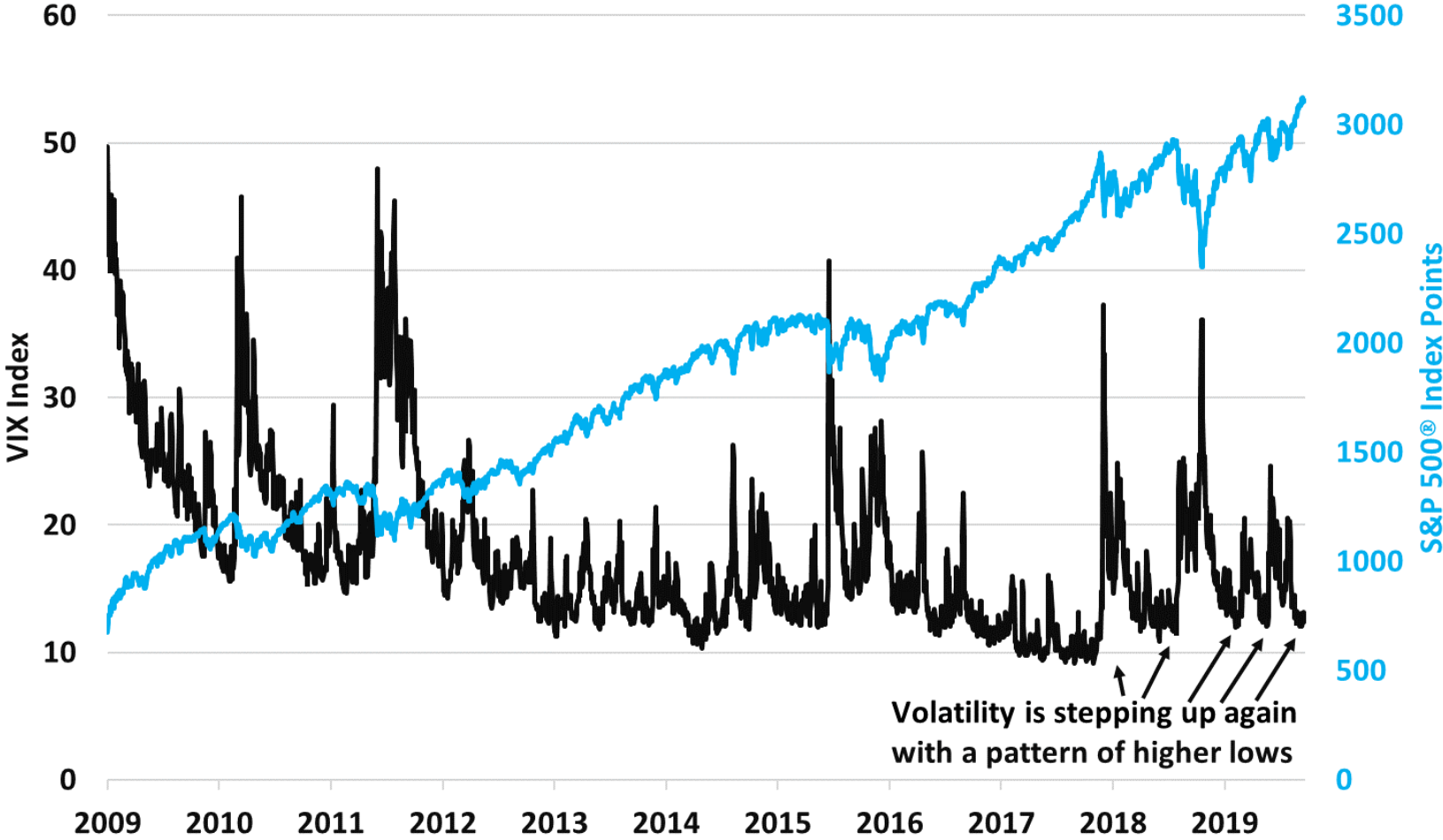
S&P 500® and Implied Volatility 2003-2009



Source: Bloomberg Professional (SPX and LF98OAS)

Volatility and Equity Bull Markets

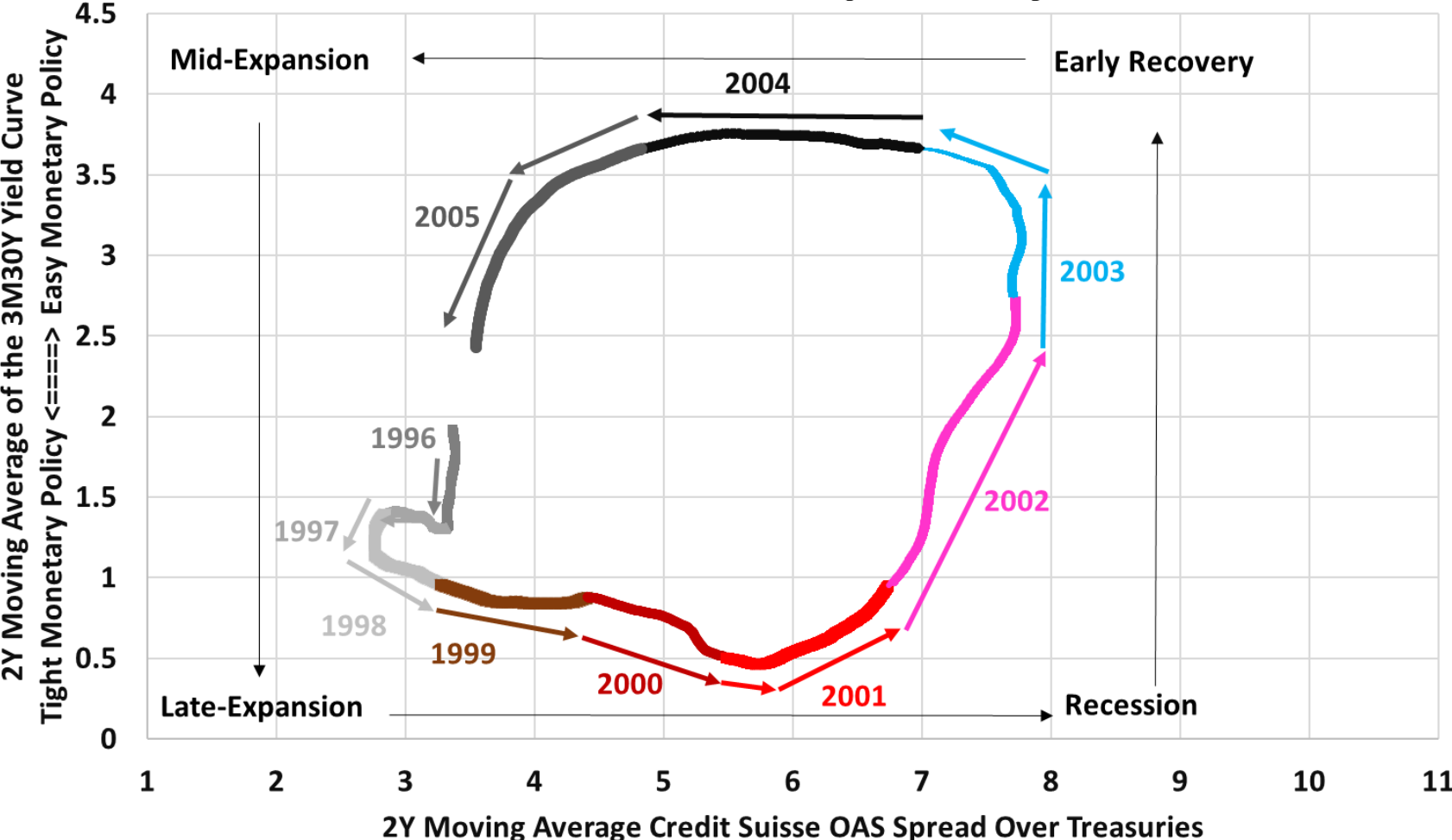
S&P 500® and Implied Volatility 2009-



Source: Bloomberg Professional (SPX and LF98OAS)

The Monetary Policy-Volatility Feedback Loop

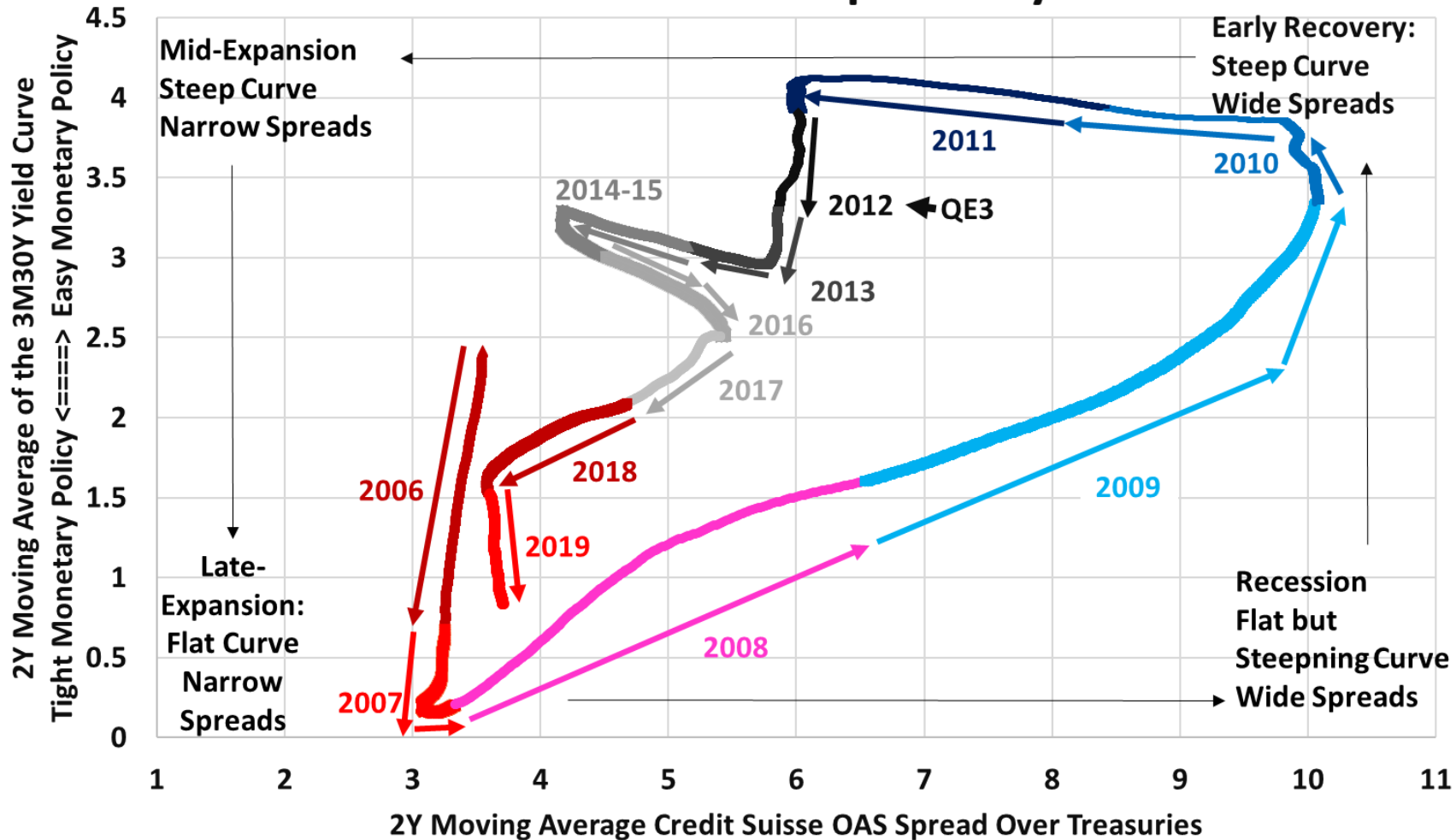
Yield Curve - Credit Spread Cycle



Source: Bloomberg Professional (GB3, USGG30YR, LF98OAS), CME Economics Research Calculations

The Monetary Policy-Volatility Feedback Loop

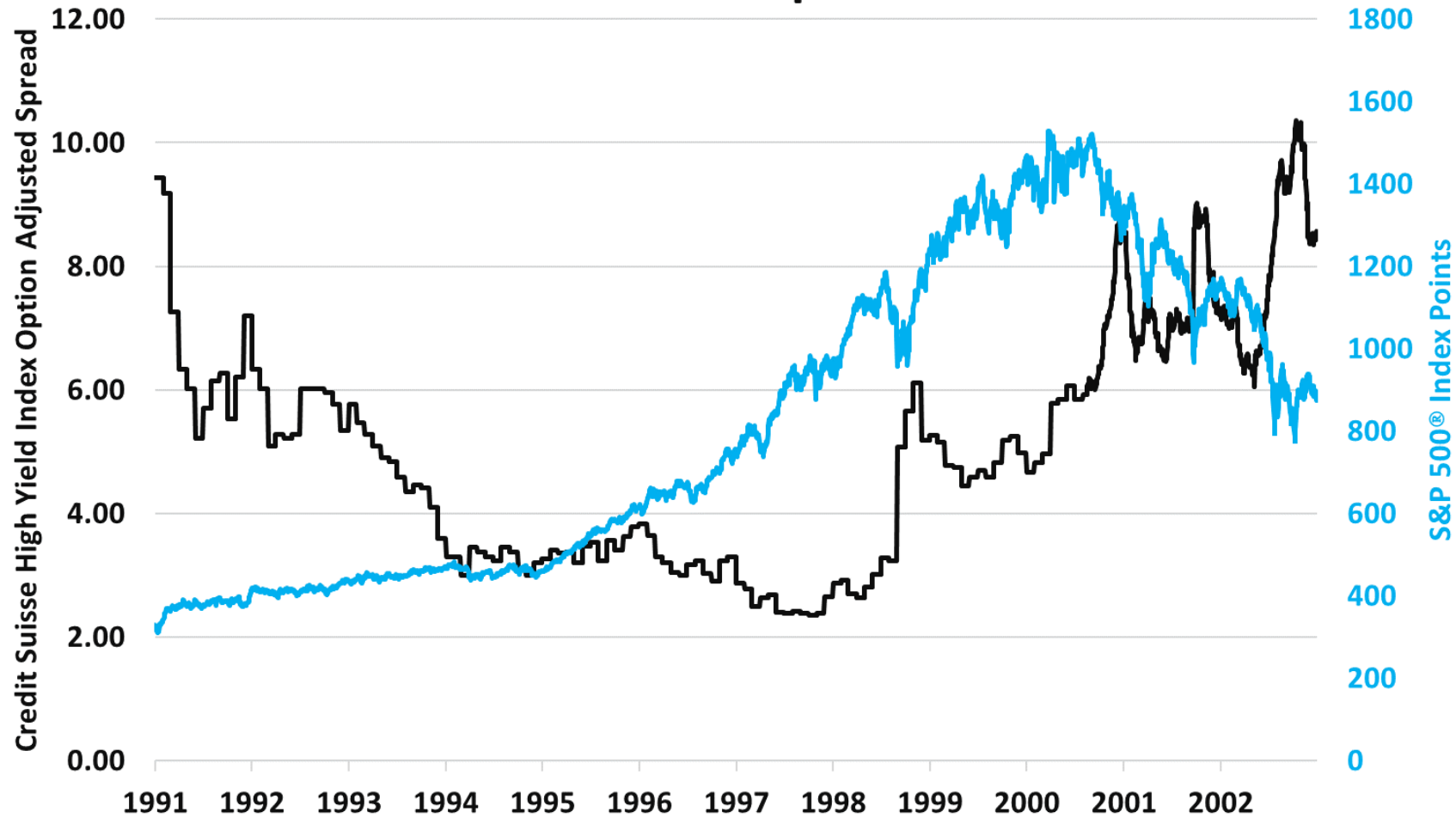
Yield Curve - Credit Spread Cycle



Source: Bloomberg Professional (GB3, USGG30YR, LF98OAS)

Credit Spreads and Equity Bull Markets

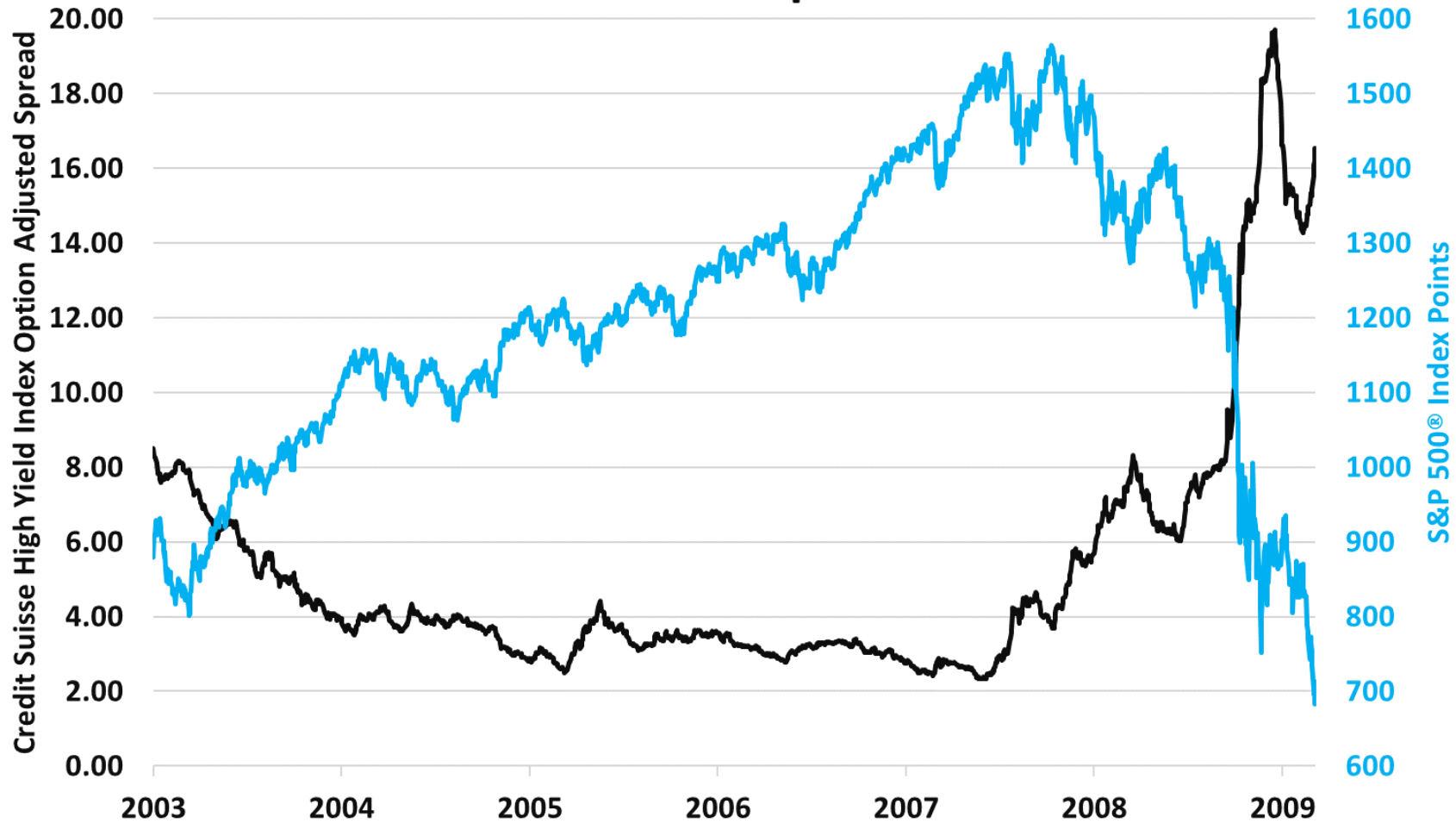
S&P 500® and Credit Spreads 1991-2002



Source: Bloomberg Professional (SPX and LF98OAS)

Credit Spreads and Equity Bull Markets

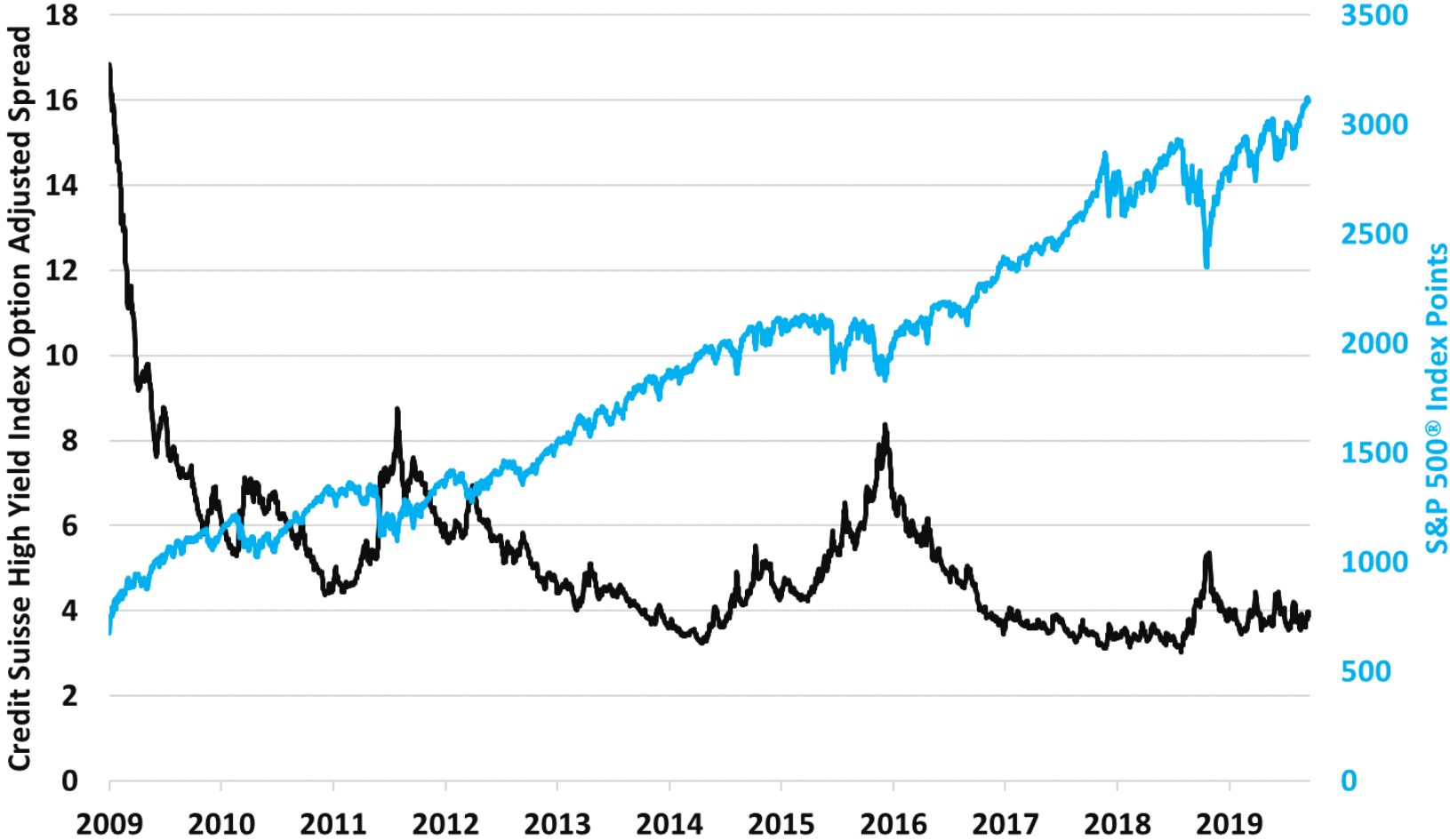
S&P 500® and Credit Spreads 2003-2009



Source: Bloomberg Professional (SPX and LF98OAS)

Credit Spreads and Equity Bull Markets

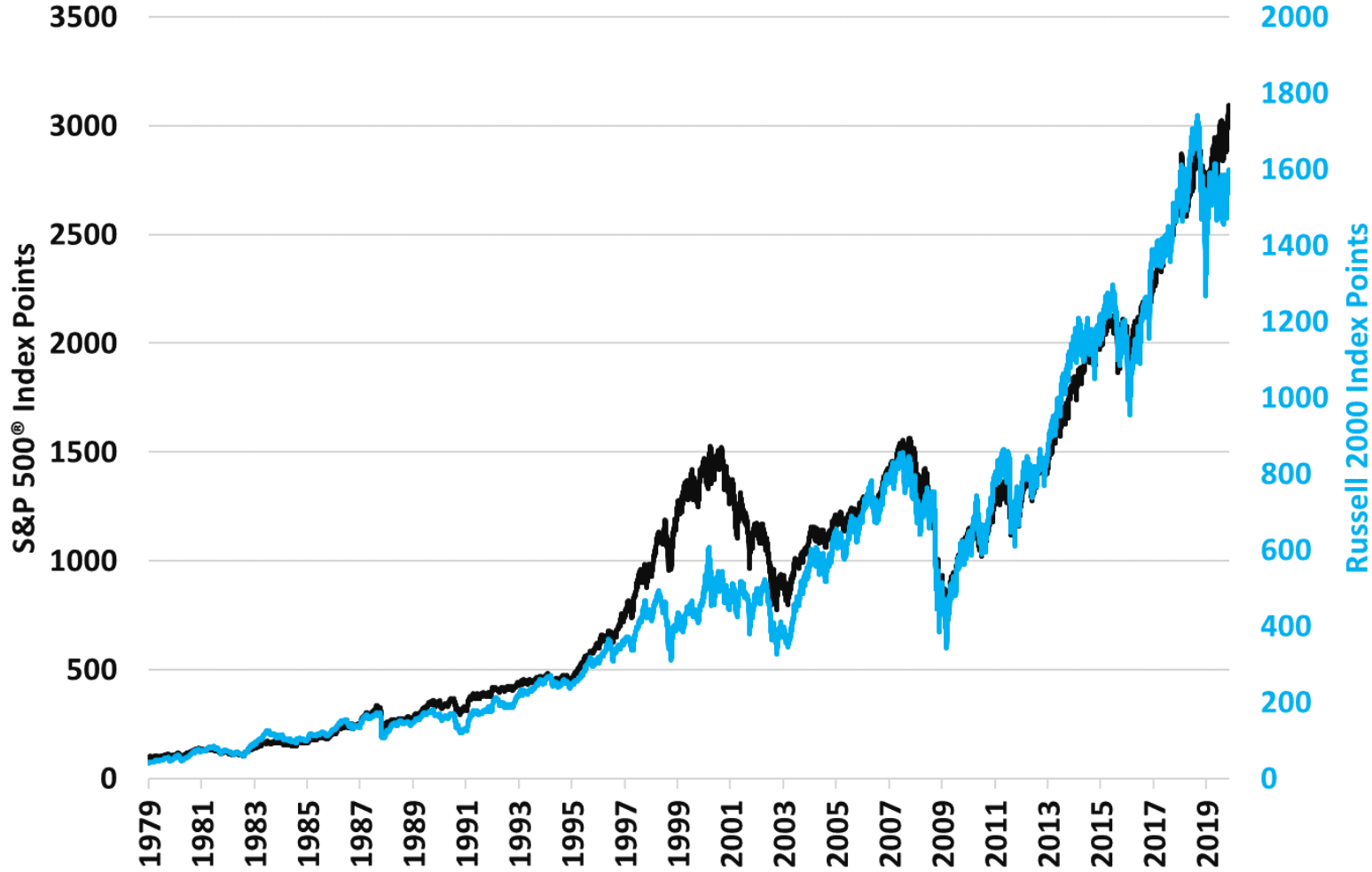
S&P 500® and Credit Spreads 2009-



Source: Bloomberg Professional (SPX and LF98OAS)

Small Caps Versus Large Caps in the US...

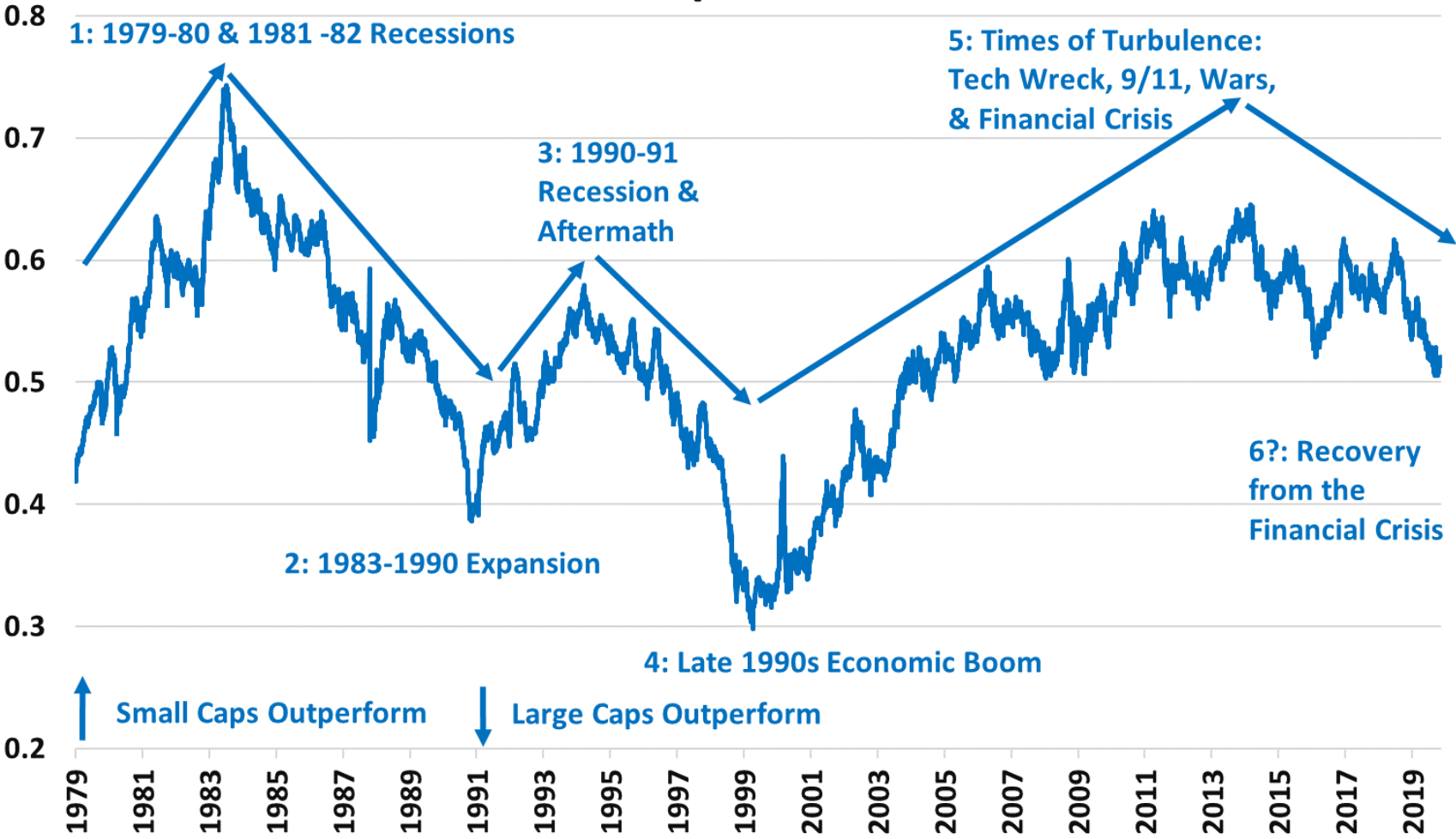
S&P 500[®] and Russell 2000



Source: Bloomberg Professional (SPX and RTY)

What Small Cap/Large Cap Ratios Tell Us About the Economy

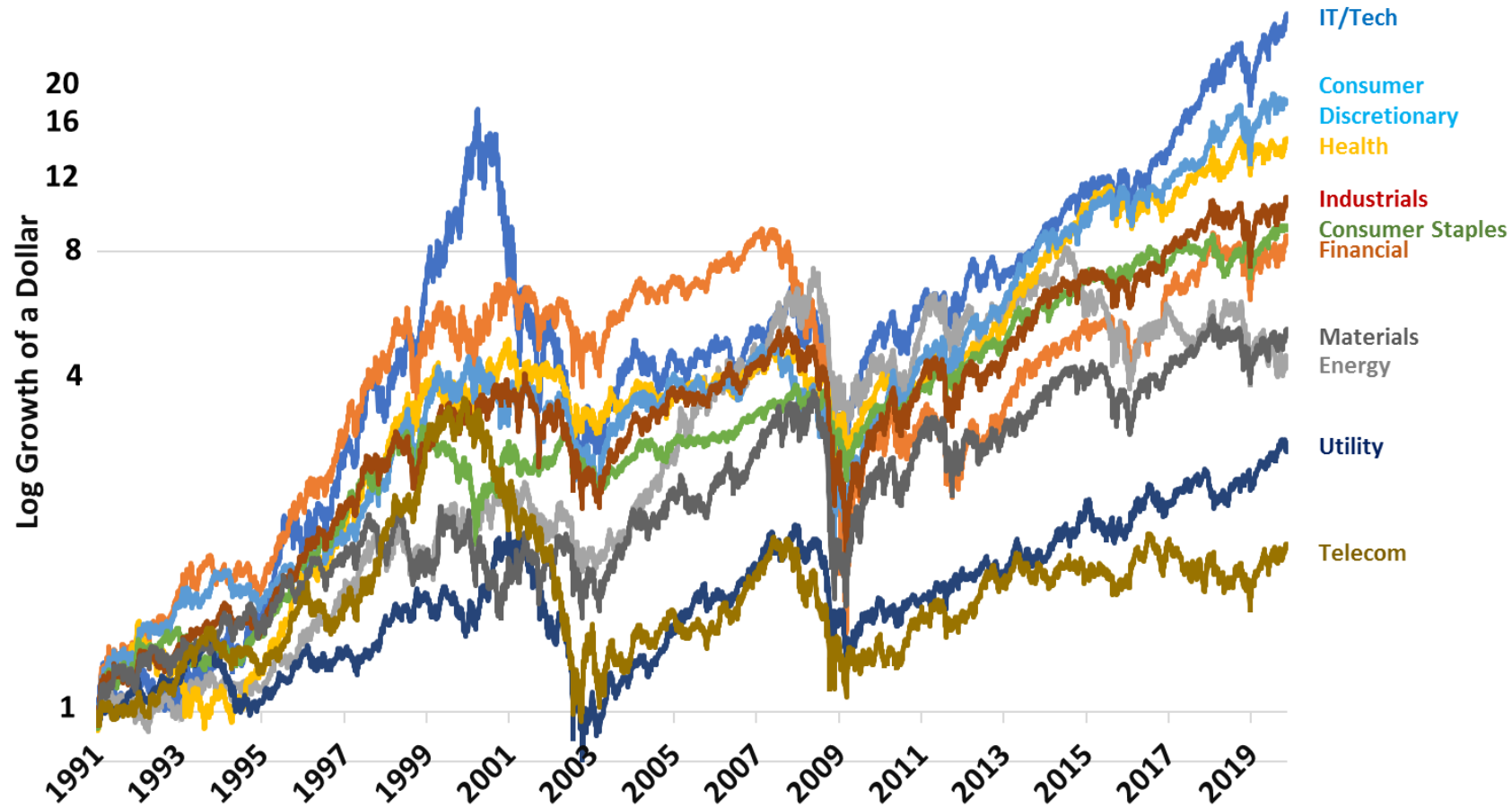
Russell 2000 / S&P 500[®] Ratio



Source: Bloomberg Professional (SPX and RUY)

Sector Performance Dispersion & Bull Market Health

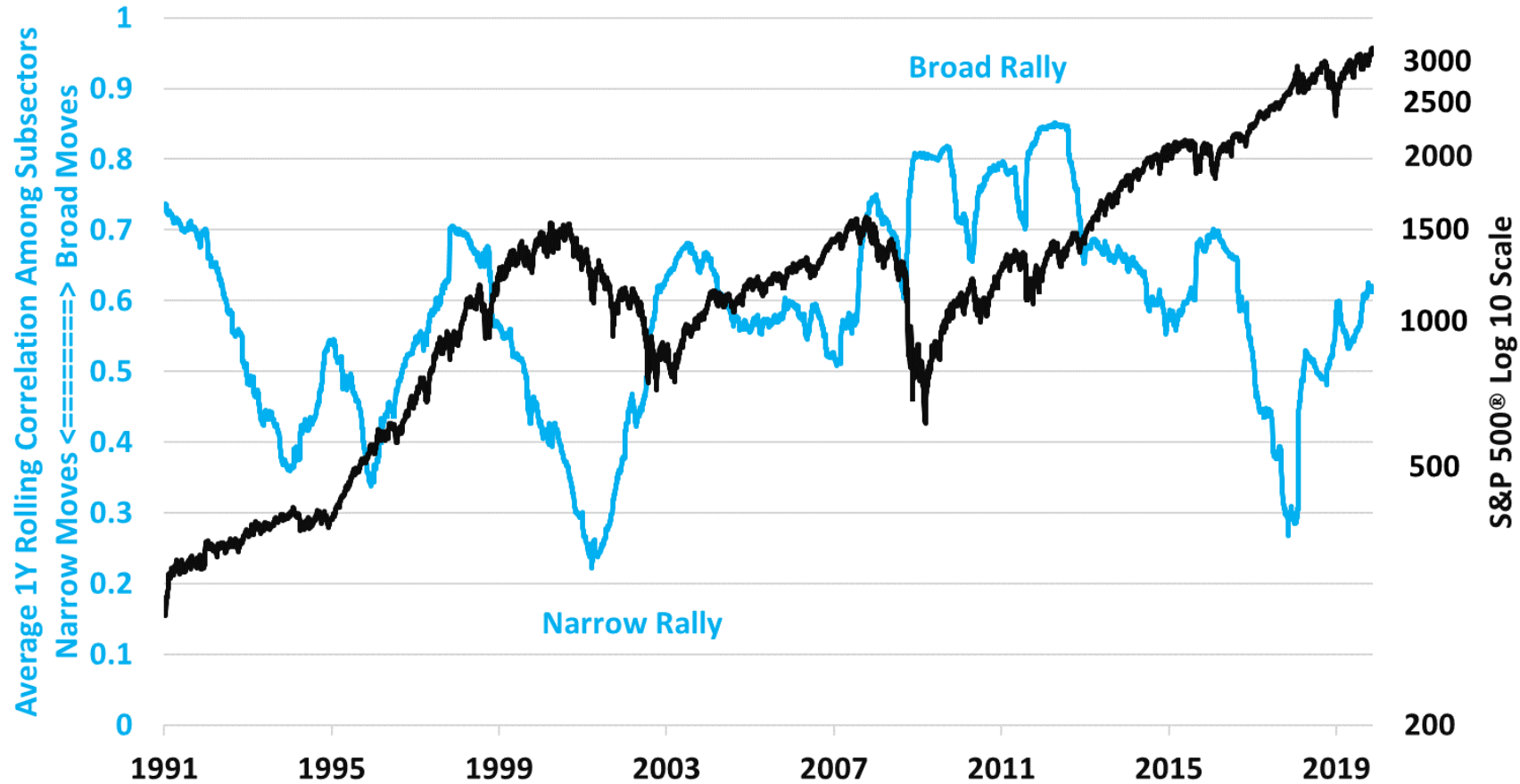
Cumulative Price Return of S&P 500® Sector Indices



Source: Bloomberg Professional (S5INFT, S5CONS, S5COND, S5FINL, S5UTIL, S5MATR, S5ENER, S5INDU, S5HLTH)

Sector Performance Dispersion & Bull Market Health

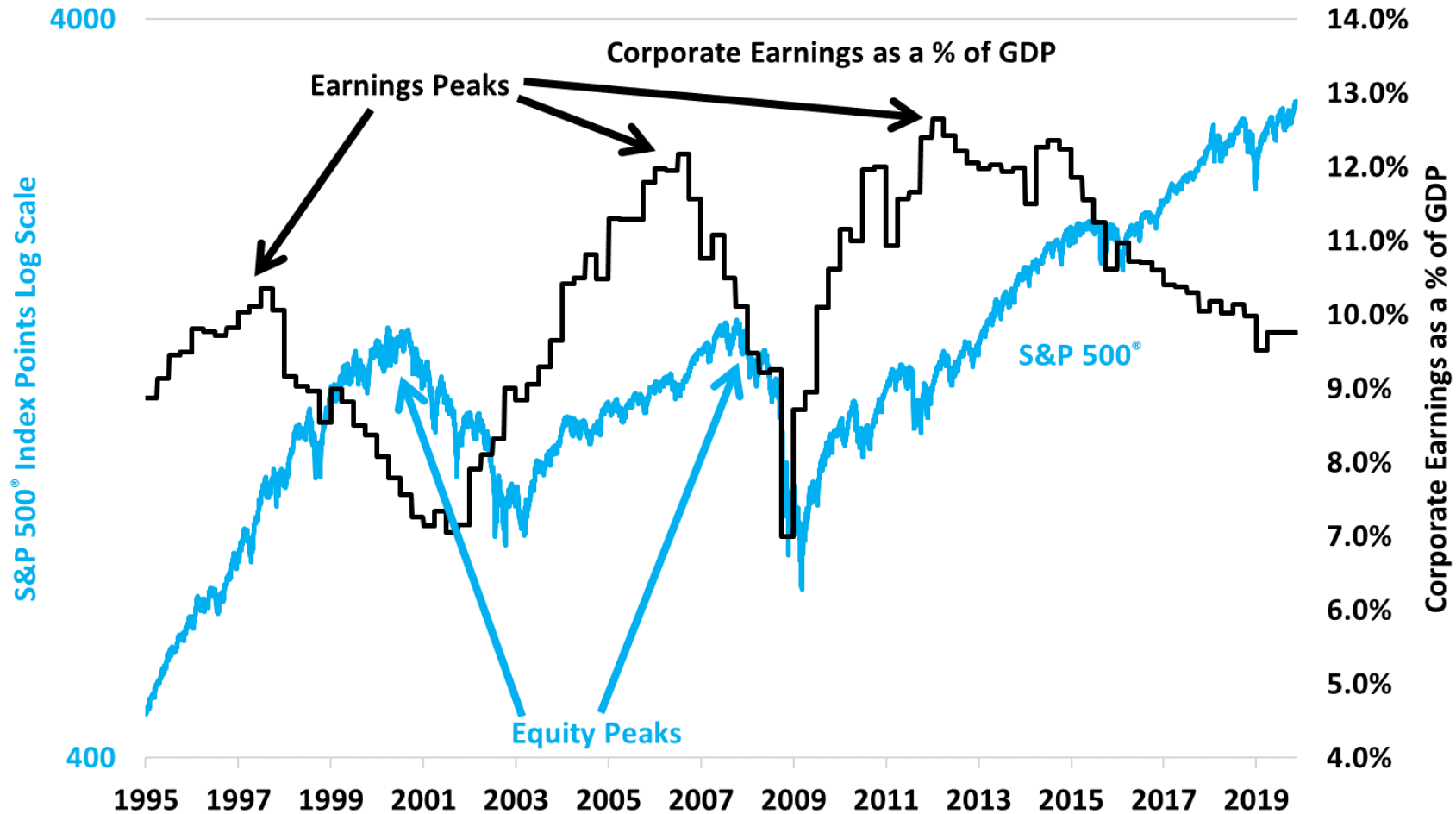
S&P 500® Index vs. Subsector Correlation



Source: Bloomberg Professional (SPX, S5INFT, S5FINL, S5ENRS, S5HLTH, S5COND, S5CONS, S5UTIL, S5MATR, S5TELS, S5INDU)

Sector Performance Dispersion & Bull Market Health

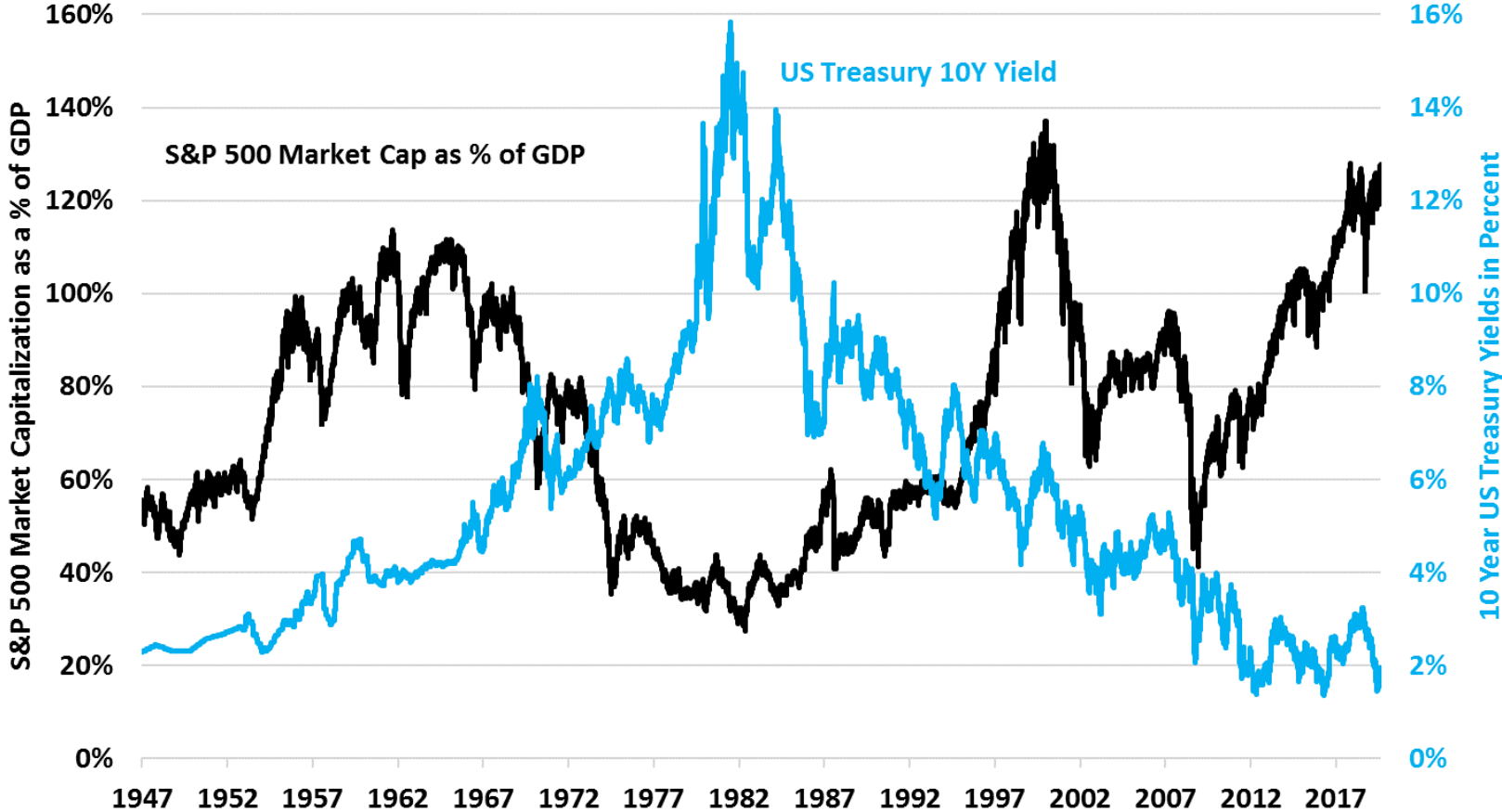
S&P 500[®] & Corporate Earnings as a % of GDP



Source: Bloomberg Professional (SPX, GDP CUR\$, CPFTTOT)

Are Equities Overvalued?

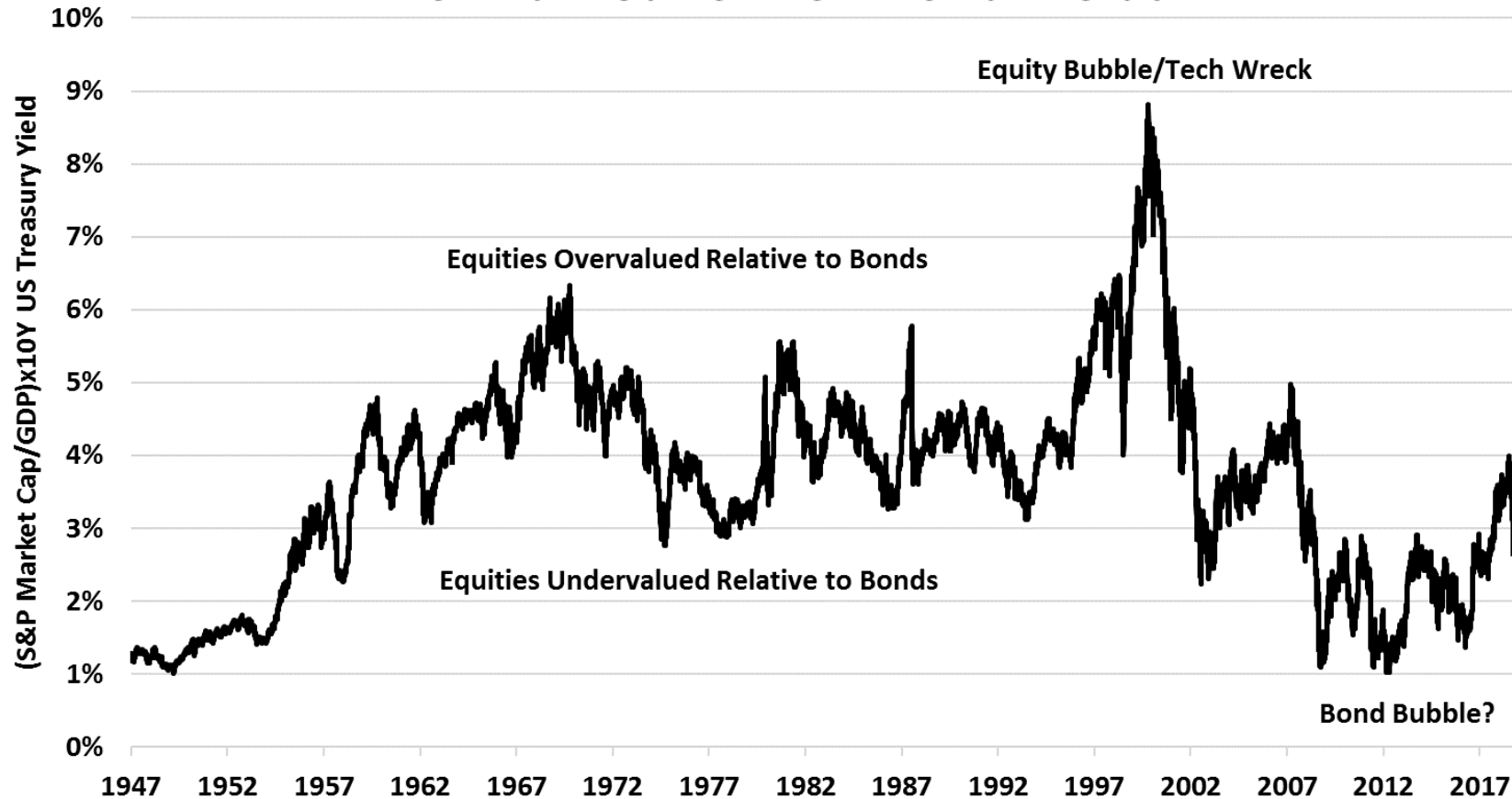
S&P 500[®] Market Cap / Nominal US GDP versus 10Y Treasuries



Source: Bloomberg Professional (SPX, GDP CUR\$, USGG10YR), www.multipl.com for bond yields pre-1962.

Or Are Bonds Overvalued?

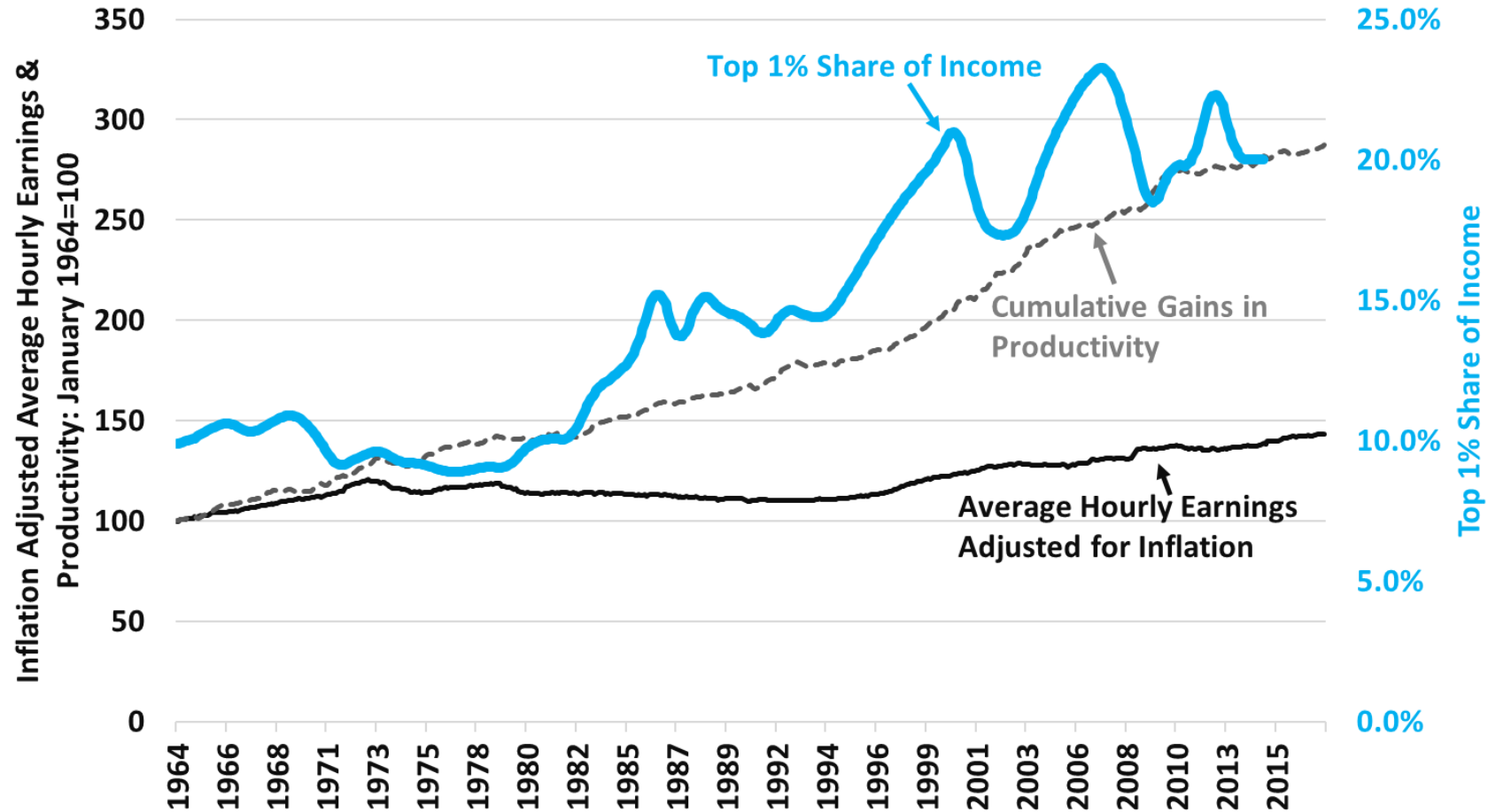
S&P Market Cap as % of GDP Normalized for 10Y Bond Yields



Source: Bloomberg Professional (SPX, GDP CUR\$ and USGG10YR), with www.multipl.com for pre-1962 bonds.

Rising Debt Relates to the Wage-Productivity Gap & Rising Inequality

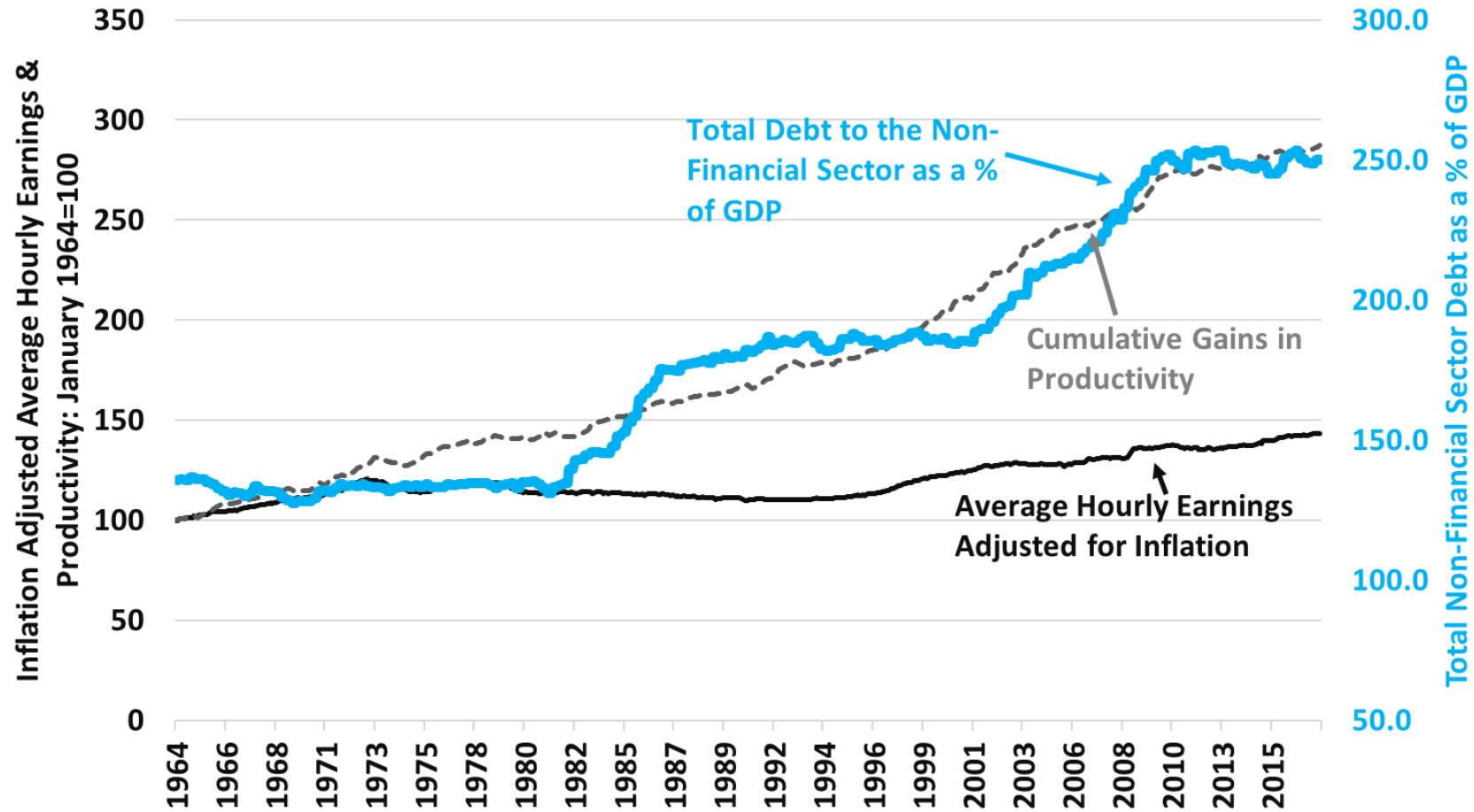
Earnings, Productivity & Inequality



Source: Federal Reserve Bank of St. Louis (AHE TPI) & Bloomberg Professional (PCE DEF, PRODNFR%), Piketty and Saez 2015

Rising Debt Relates to the Wage-Productivity Gap & Rising Inequality

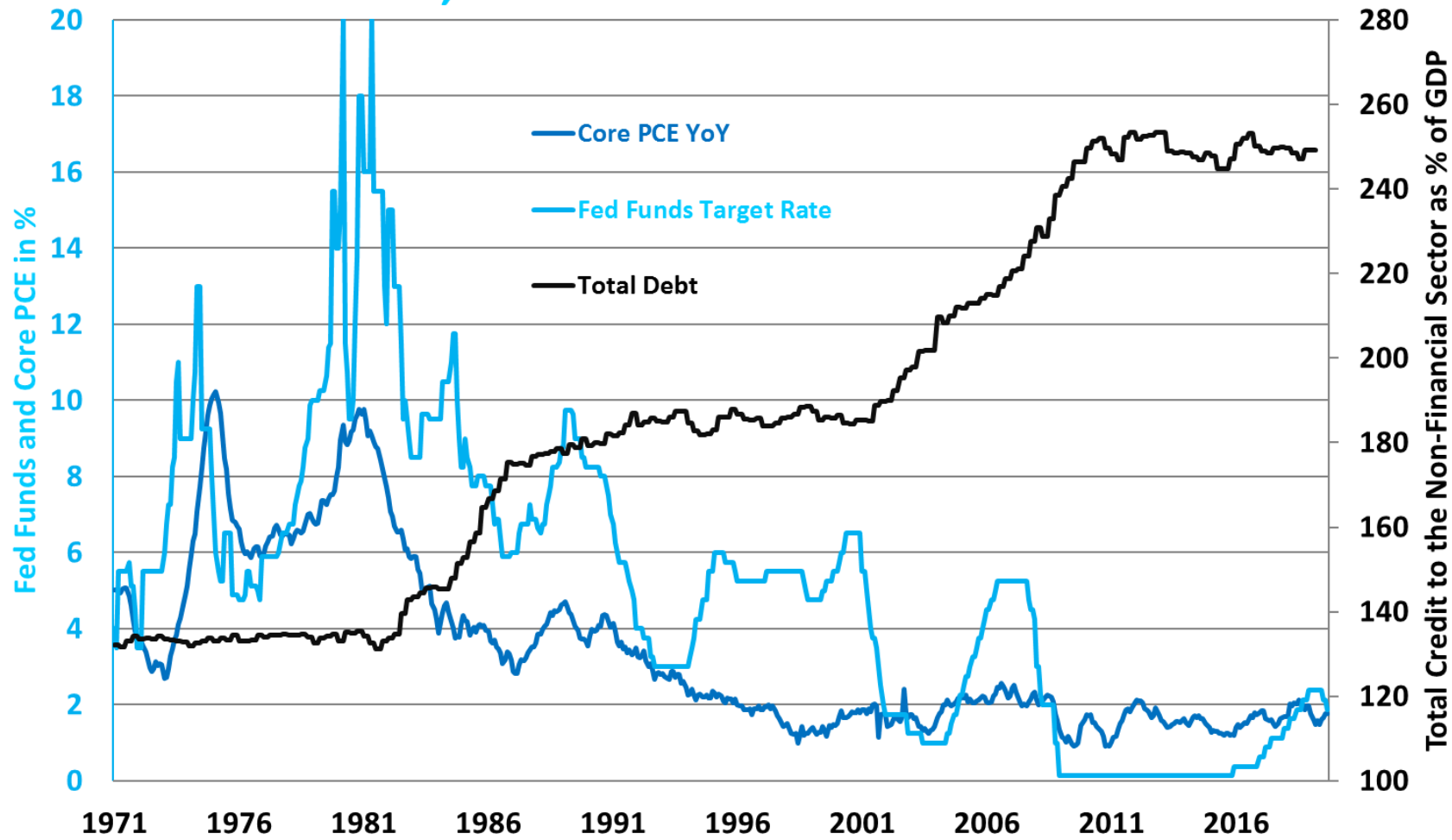
Earnings, Productivity & Debt



Source: Federal Reserve Bank of St. Louis (AHE TPI) & Bloomberg Professional (PCE DEF, PRODNFR%), Bank for International Settlements, Total Debt to the Non-Financial Sector, Q4 2018

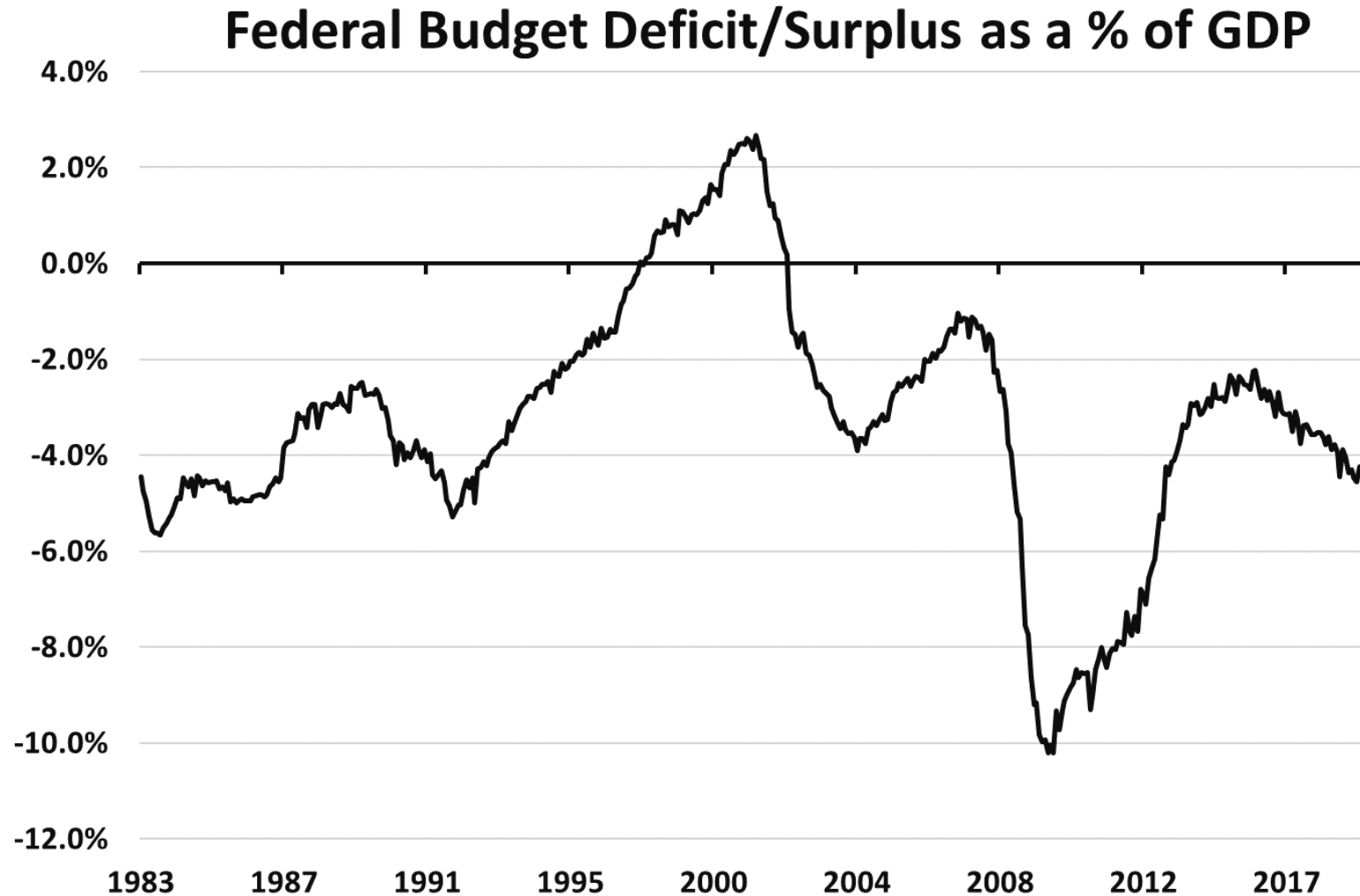
Soaring Debt Levels Have Forced Interest Rates Towards Zero

Fed Funds, Core PCE Inflation and Total Debt



Source: Bloomberg Professional (PCE CYOY and FDTRMID), BIS Total Credit to the Non-Financial Sector

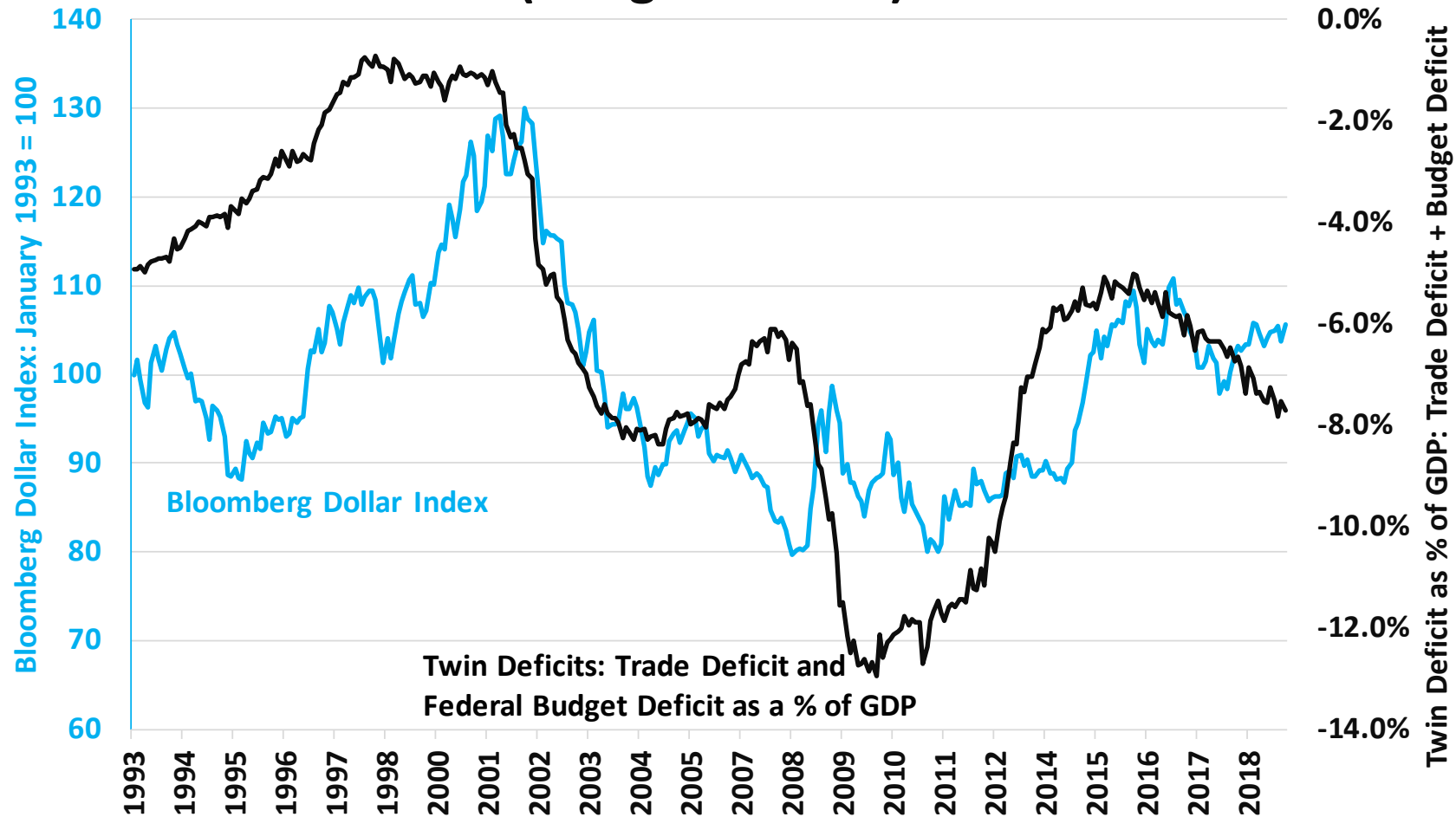
Large Deficits/High Debt Will Make a Carbon Tax a Harder Sell



Source: Bloomberg Professional (FDDSSD and GDP CUR\$)

Is the US dollar about to sink? If so, which currencies benefit?

Twin Deficits (Budget + Trade) & Dollar Index



Source: Bloomberg Professional (USTBTOT, FDDSSD, GDP CUR\$, BBDXY and, before 2005, DXY)

Thank You

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YouTube https://www.youtube.com/playlist?list=PLkJQh4MWIJKvieKJYbn-J-3iIWE_yk0V