Negative effects of trade war spreading from manufacturing to services

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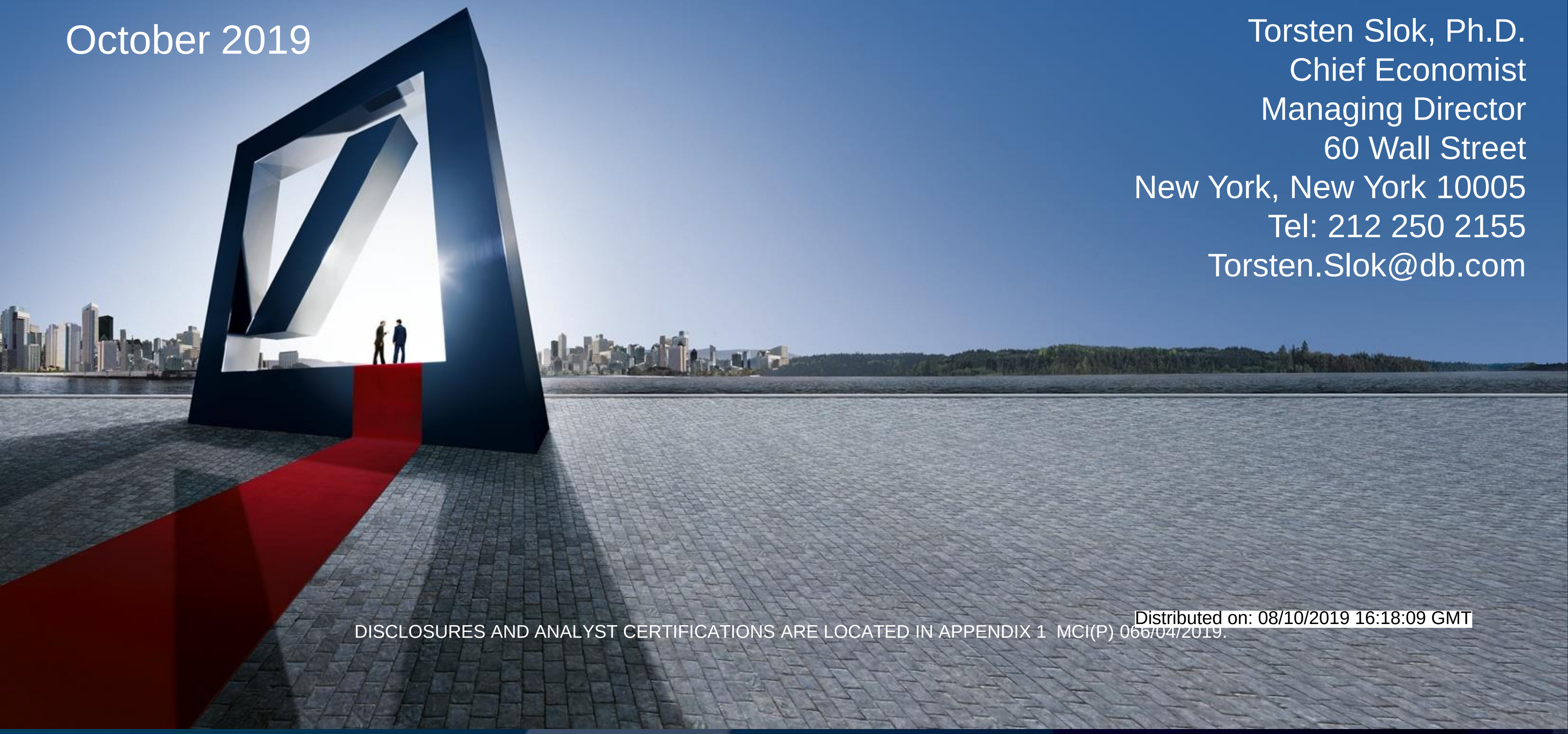


DISCLOSURES AND ANALYST CERTIFICATIONS ARE LOCATED IN APPENDIX 1 MCI(P) 066/04/2019.

US: Consensus expects 2% growth and 2% inflation over the coming 18 months

96) Chart | 97) Set as Default View | Disclaimer | Economic Forecasts

Country/Region/World: United States | Browse | Contributor: Contributor Composite | Yearly | Quarterly | Private | Official

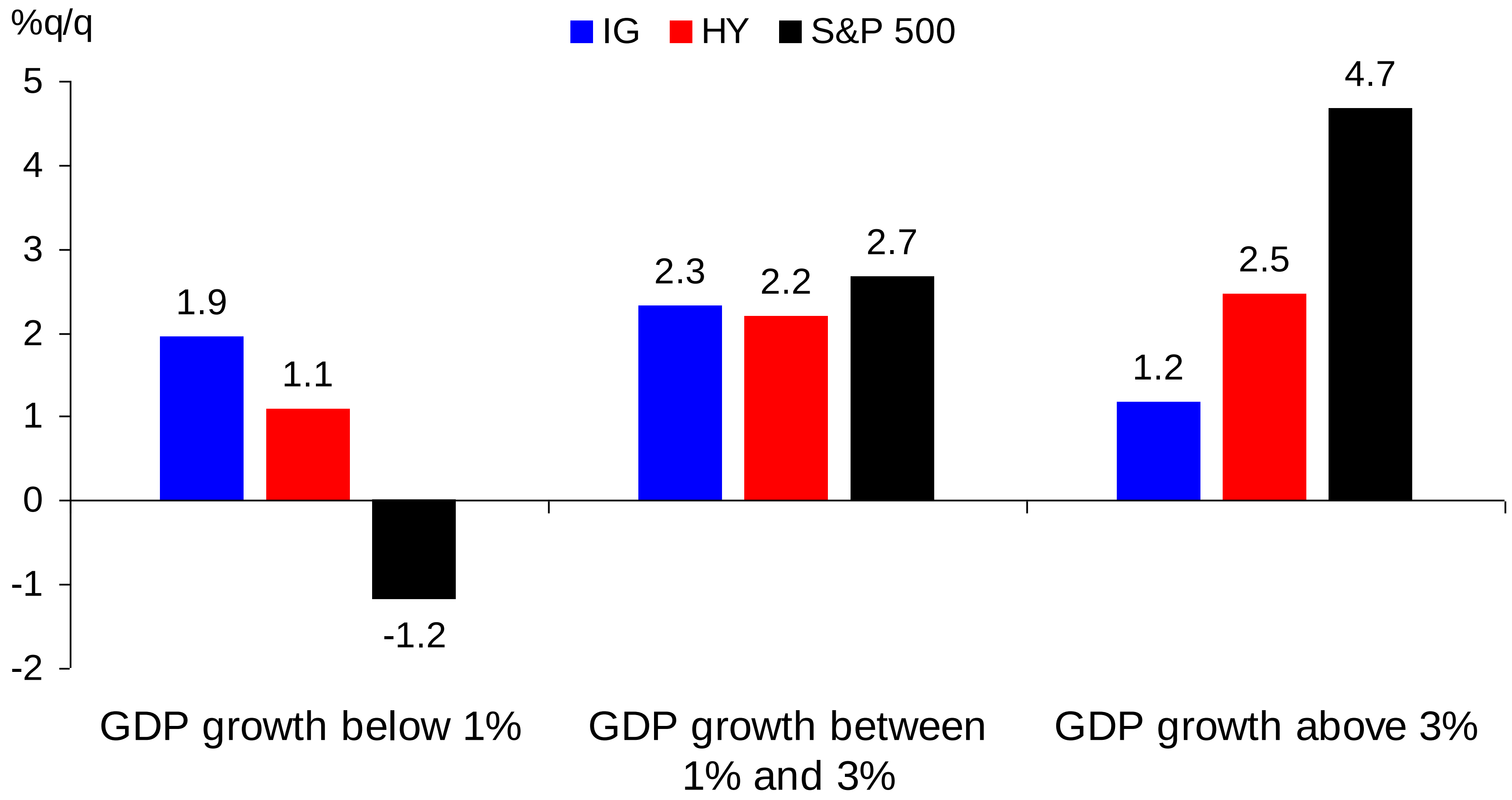
Actual / Forecasts — Probability of Recession 35.0%

Indicator	Q4 18	Q1 19	Q2 19	Q3 19	Q4 19	Q1 20	Q2 20	Q3 20	Q4 20	Q1 21
Real GDP (YoY%)	2.5	2.7	2.3	2.0	2.2	1.8	1.7	1.7	1.7	1.8
Real GDP (QoQ% SAAR)	1.1	3.1	2.0	1.9	1.7	1.7	1.8	1.8	1.8	1.9
Consumer Spending ...	1.4	1.1	4.6	2.8	2.1	2.0	2.0	2.0	2.0	2.0
Government Spendin...	-0.4	2.9	4.8	1.4	1.6	1.5	1.6	1.3	1.2	1.1
Private Investment (...	3.0	6.2	-6.3	1.1	1.4	1.5	1.8	2.1	2.3	2.5
Exports (QoQ% SAAR)	1.5	4.1	-5.7	1.5	2.0	2.0	1.8	2.0	2.2	2.5
Imports (QoQ% SAAR)	3.5	-1.5	0.0	2.5	2.0	2.0	2.1	2.5	2.5	3.0
Industrial Production (Yo...			1.5	0.2	-0.3	0.4	1.0	1.0	1.2	1.3
Price Indices										
CPI (YoY%)	2.2	1.7	1.8	1.8	2.0	2.2	2.0	2.0	2.1	2.1
PCE Price Index (YoY%)	1.9	1.4	1.4	1.5	1.6	2.0	1.9	1.9	1.9	2.0
Core PCE (yoy%)	1.9	1.6	1.6	1.7	1.8	2.0	2.0	2.0	2.0	2.0

Source: Bloomberg Finance LP, DB Global Research

Not too hot, not too cold:
2% GDP growth is goldilocks for IG

Total return for IG, HY, and S&P500 in different GDP growth ranges



Note: The bars show average quarterly total returns for each asset class. Also, for GDP yoy growth rates are used. Data starts in 1998.

Source: S&P, Bloomberg Finance LP, Haver Analytics, DB Global Research

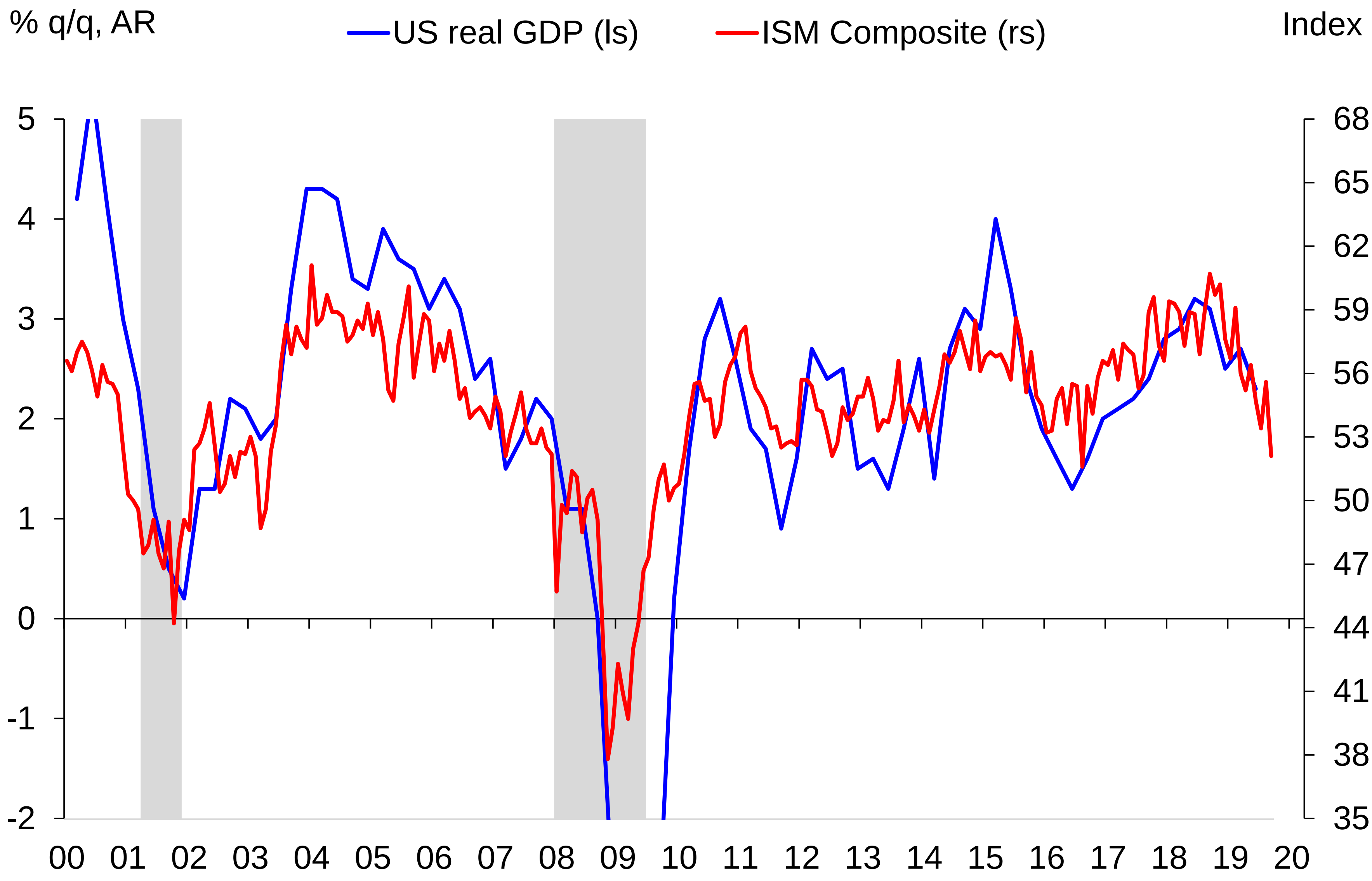
Risks to the outlook

1. Trade war
2. Weak growth in Europe, China, and Japan
3. Positive effects of corporate tax cuts fading
4. US consumer getting tired
5. Treasury issuance rising sharply
6. Inequality, populism, and markets
7. German fiscal expansion
8. Negative interest rates
9. Policy options when the next recession comes

Investment implications for rates, FX, credit, and equities

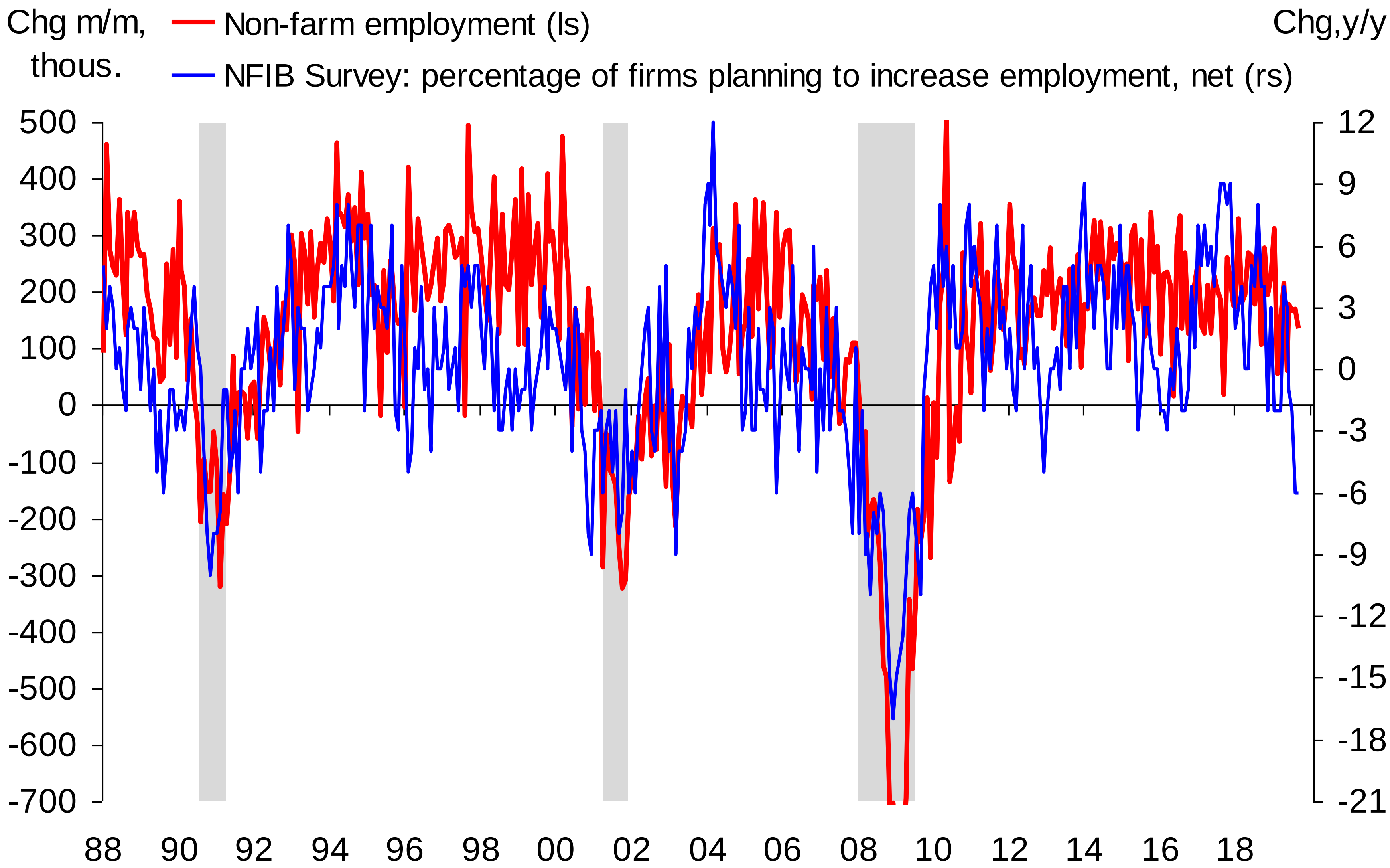
Risk #1
Quantifying the macro impact of the trade war

ISM composite pointing to sharp slowdown in September



Source: BEA, Bloomberg Finance LP, DB Global Research

Downside risks to employment



Source: BLS, NFIB, Haver Analytics, DB Global Research

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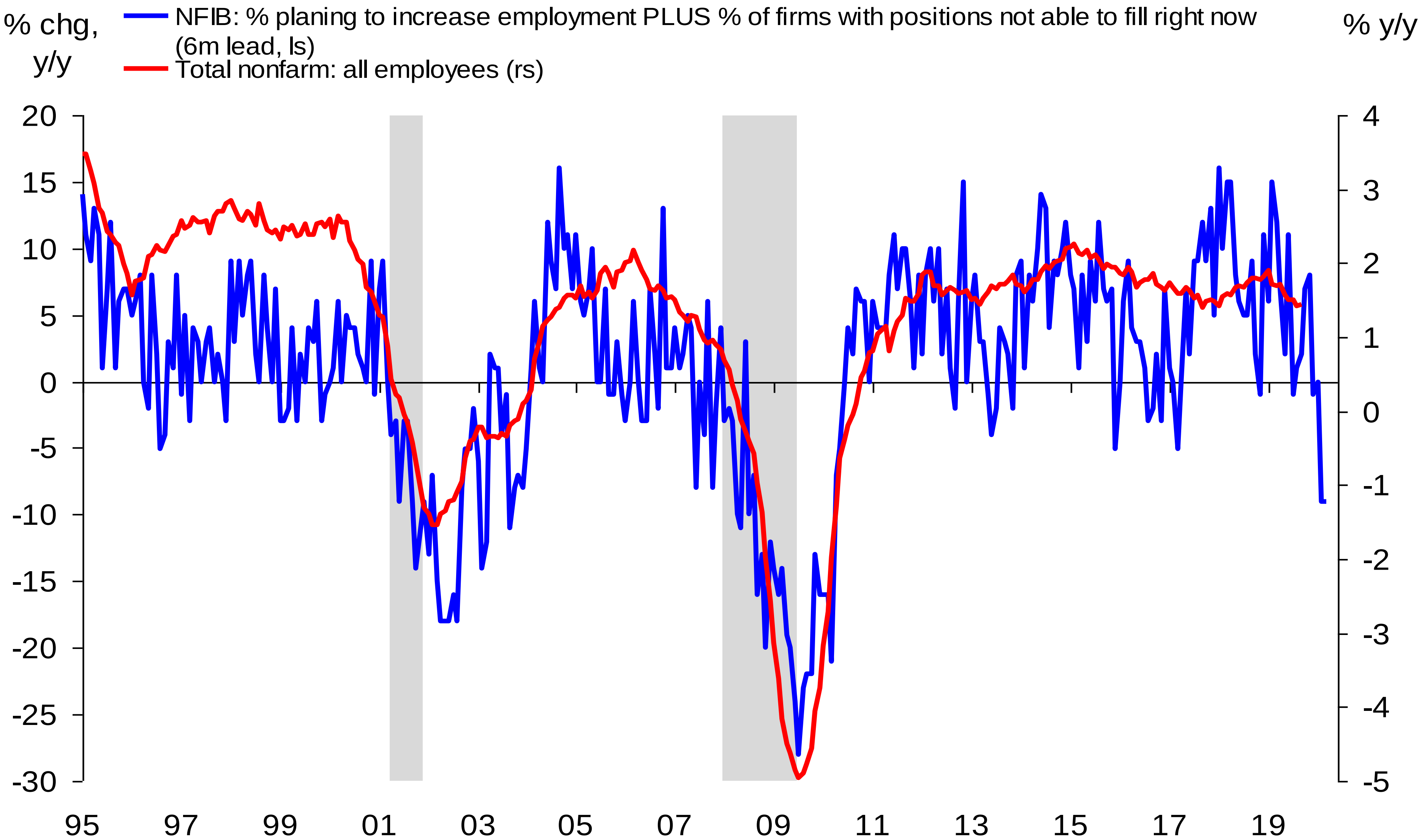
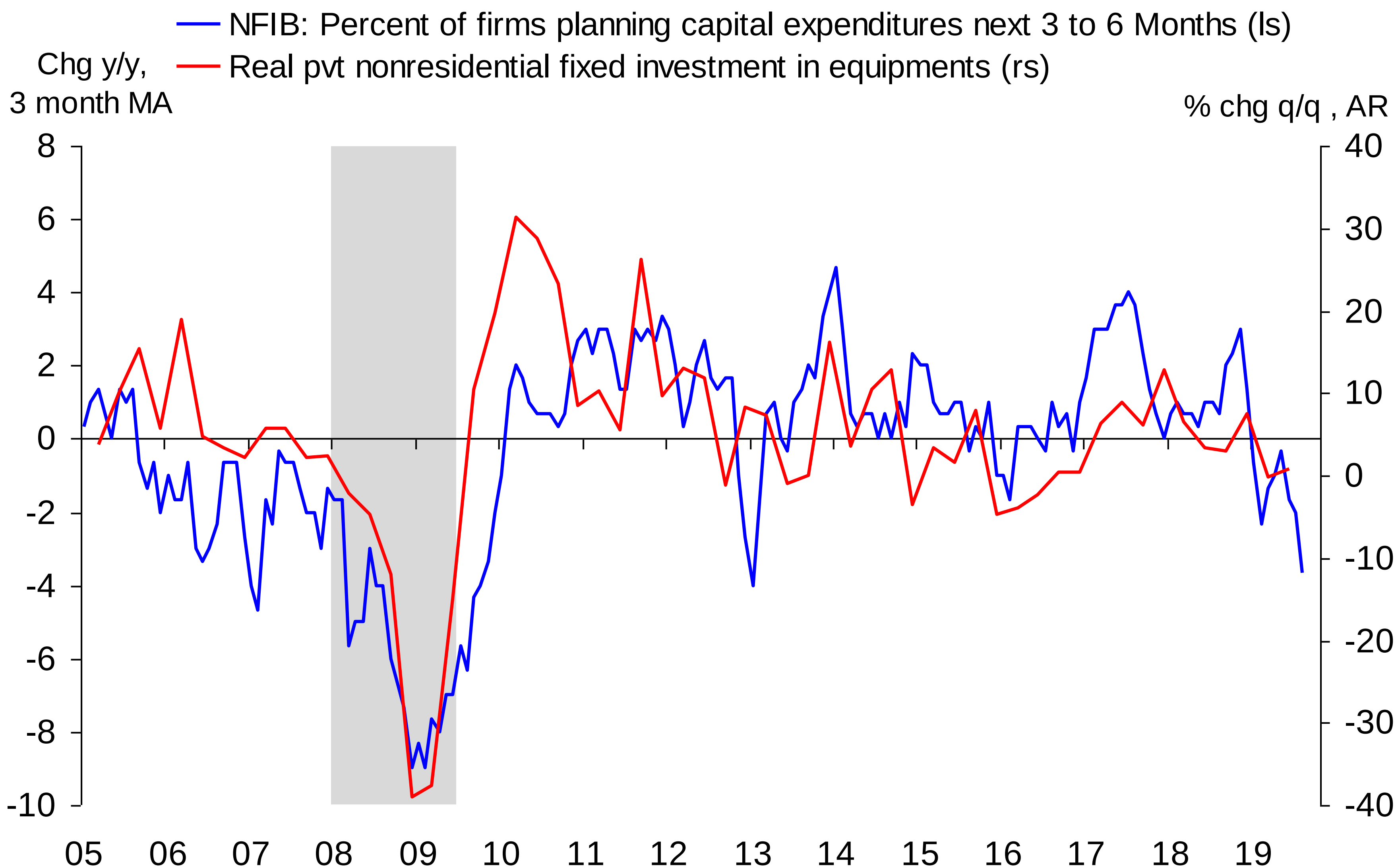
Downside risks to employment



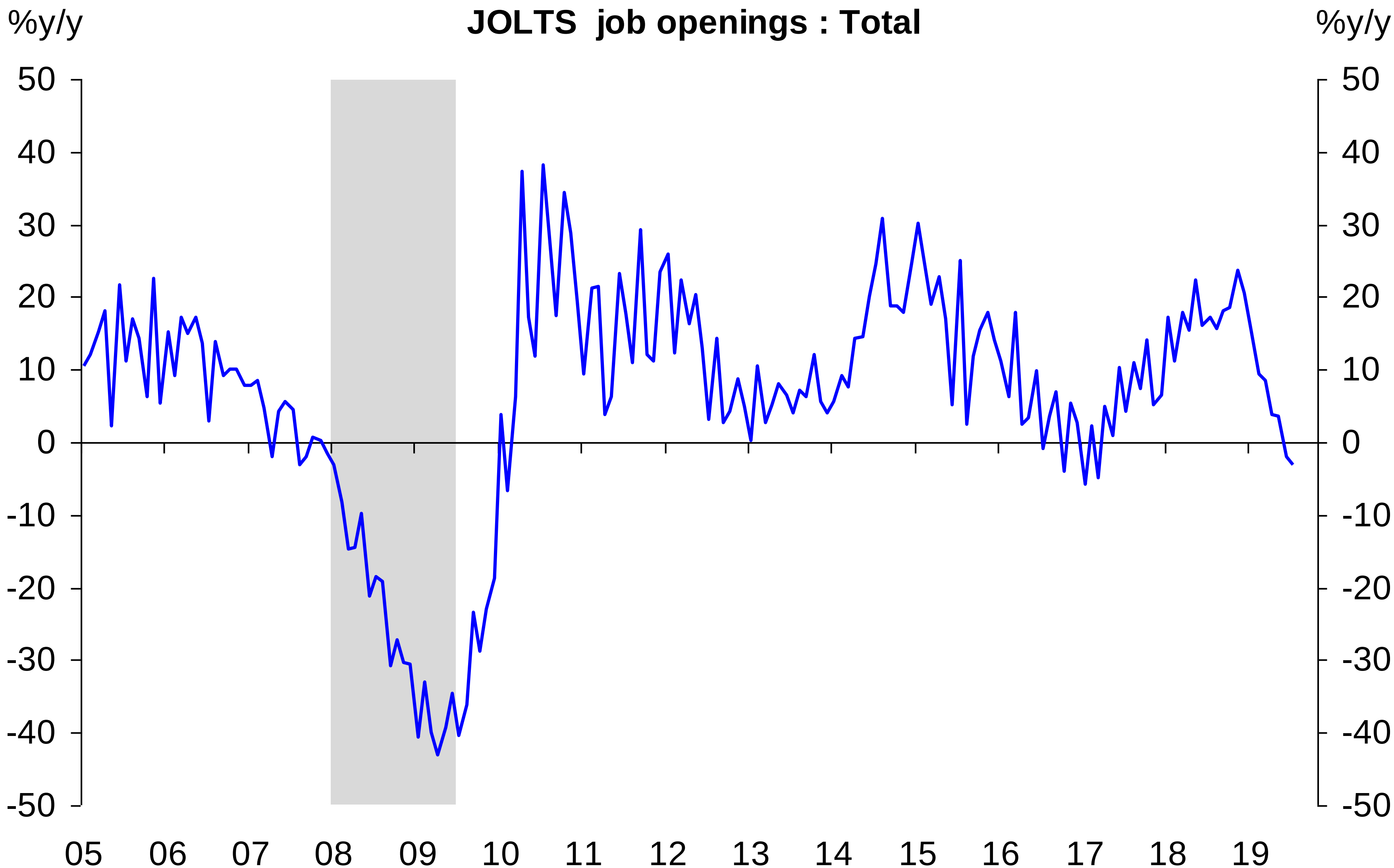
Source: NFIB, BLS, Haver Analytics, DB Global Research

Downside risks to capex



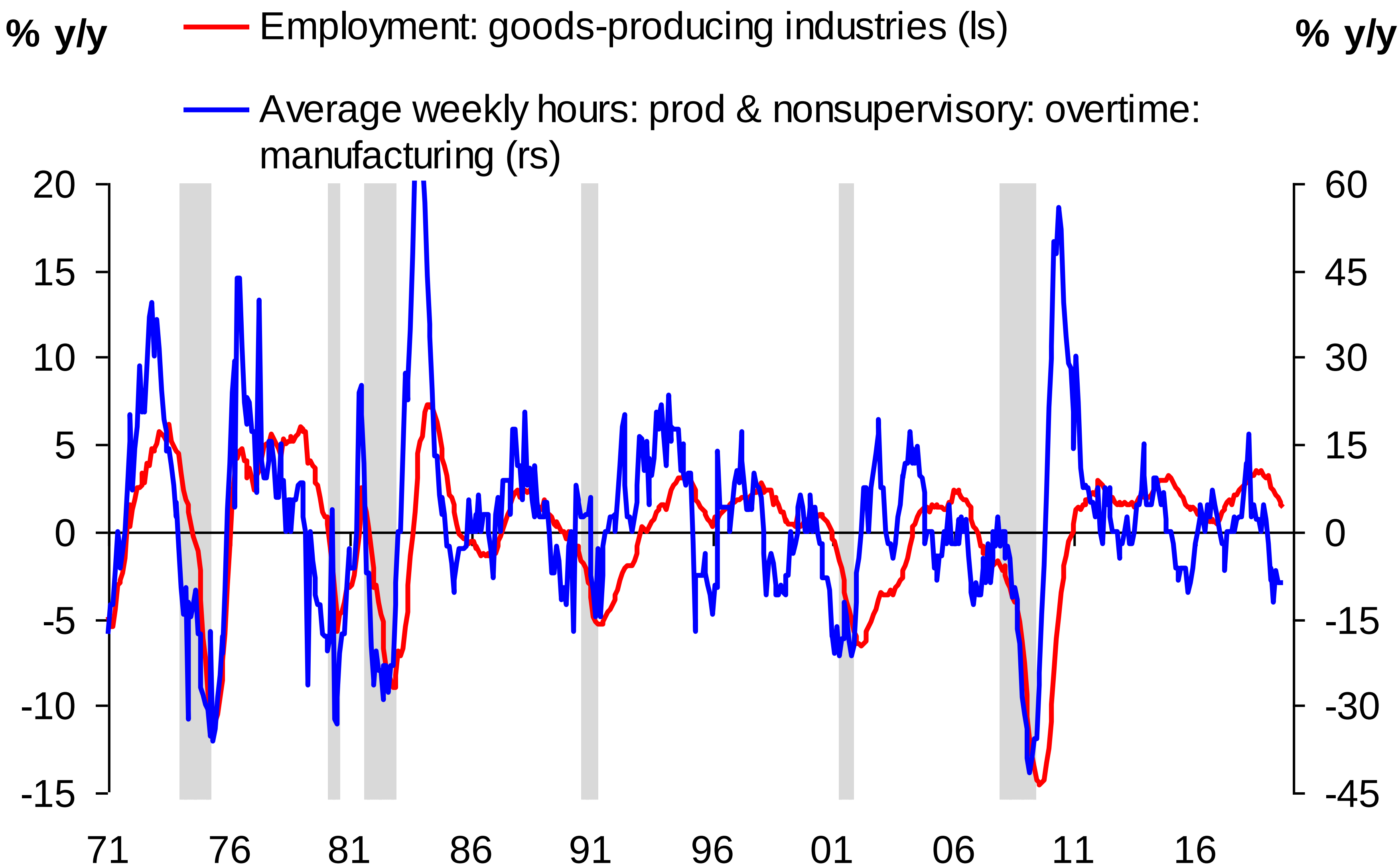
Source: NFIB, BEA, Haver Analytics, DB Global Research

Fewer job openings



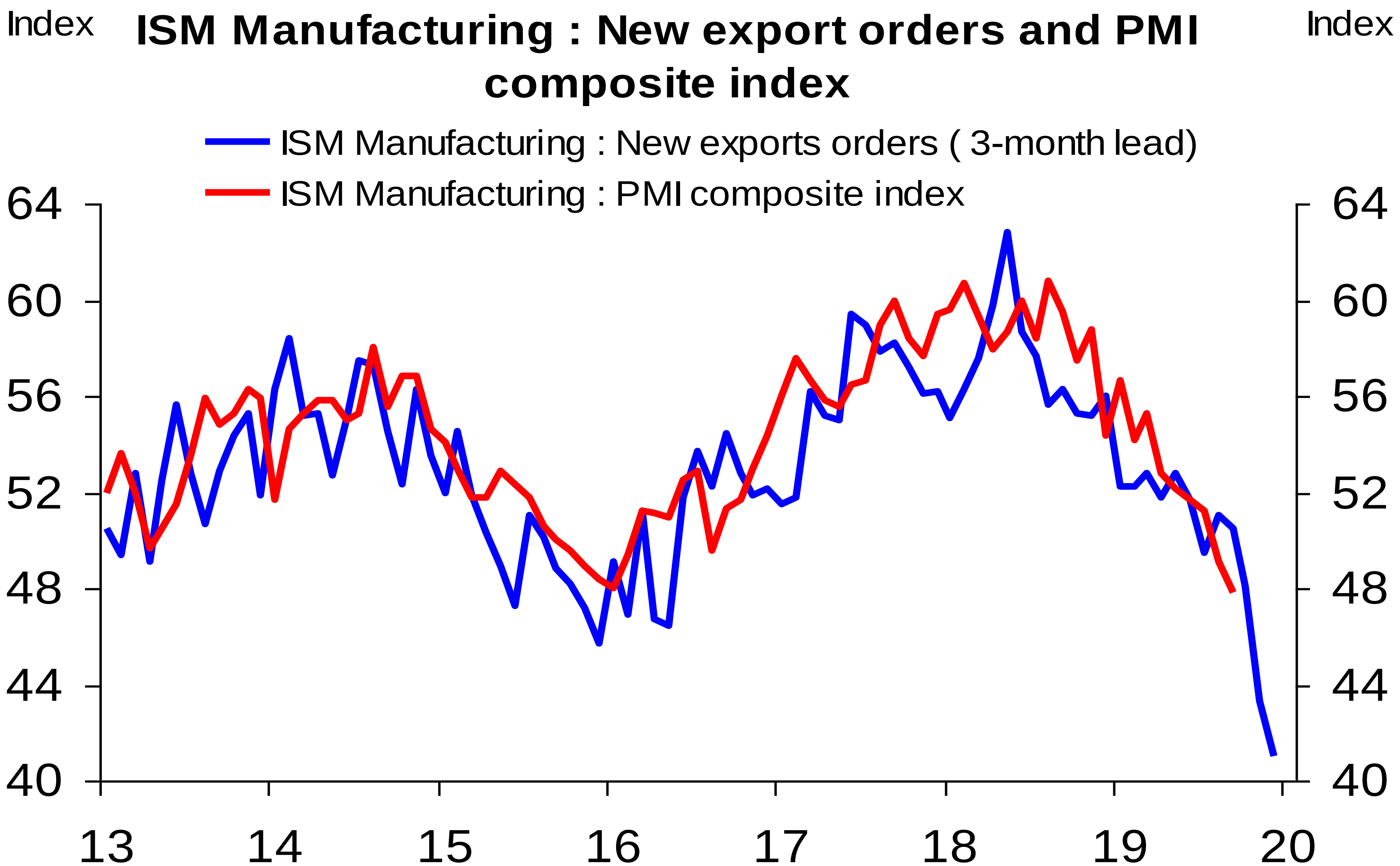
Source: JOLTS, BLS, Haver Analytics, DB Global Research

Overtime hours in manufacturing suggests sharp slowdown is underway in manufacturing



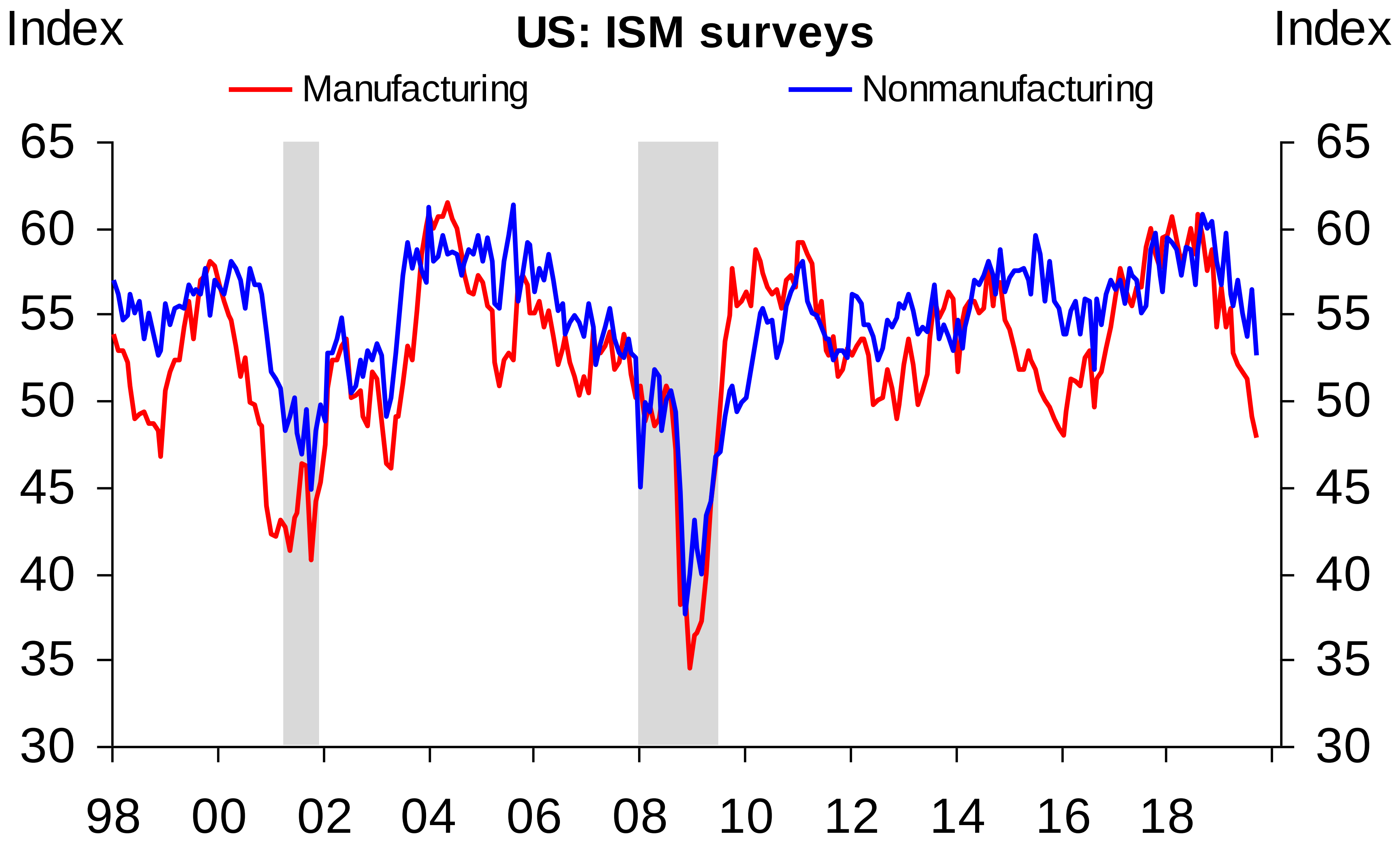
Source: BLS, Haver Analytics, DB Global Research

More downside risk to ISM in coming months



Source: ISM, Haver Analytics, DB Global Research

Trade war uncertainty also dragging down the service sector



Source: ISM, Haver Analytics, DB Global Research

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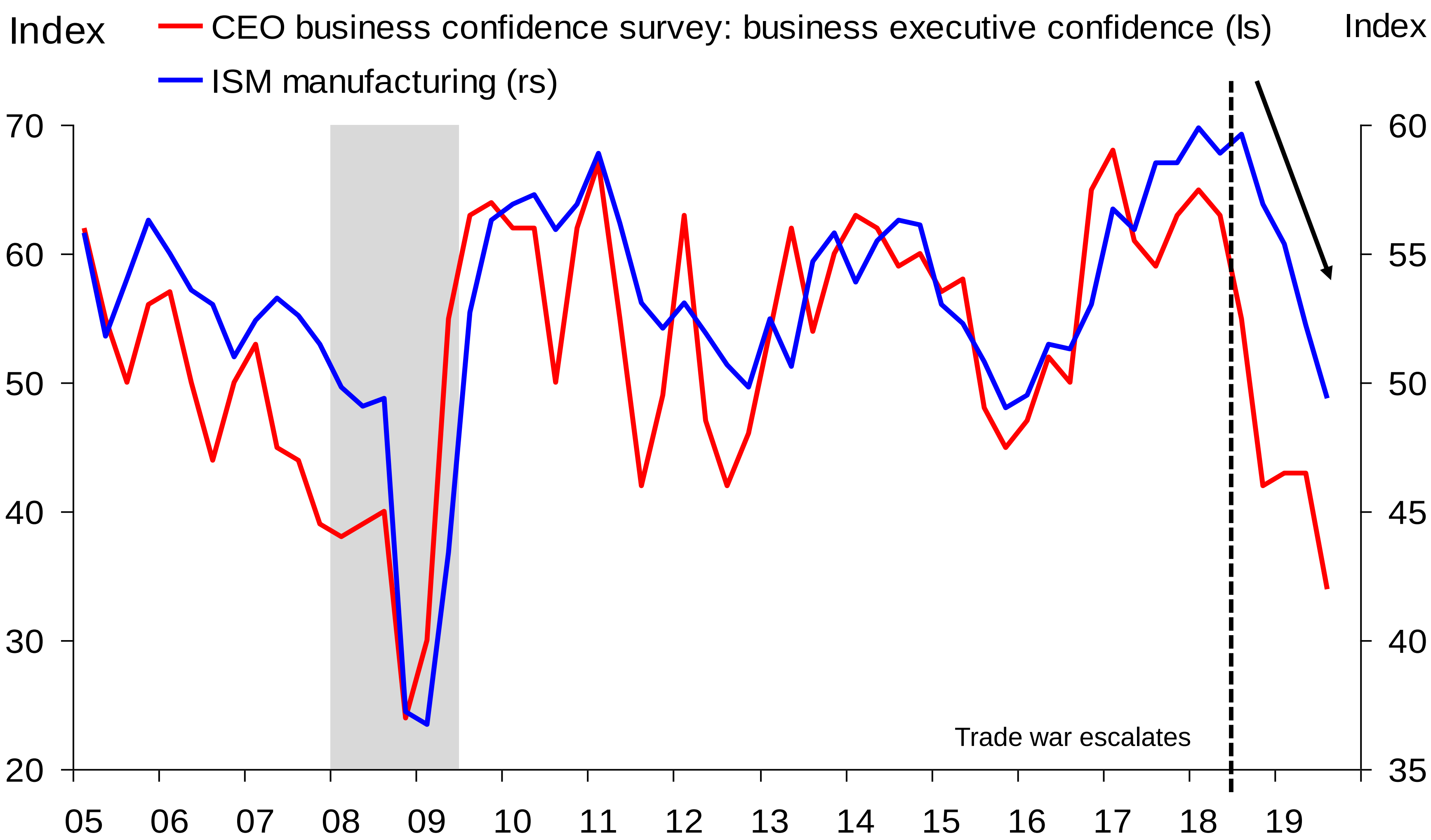
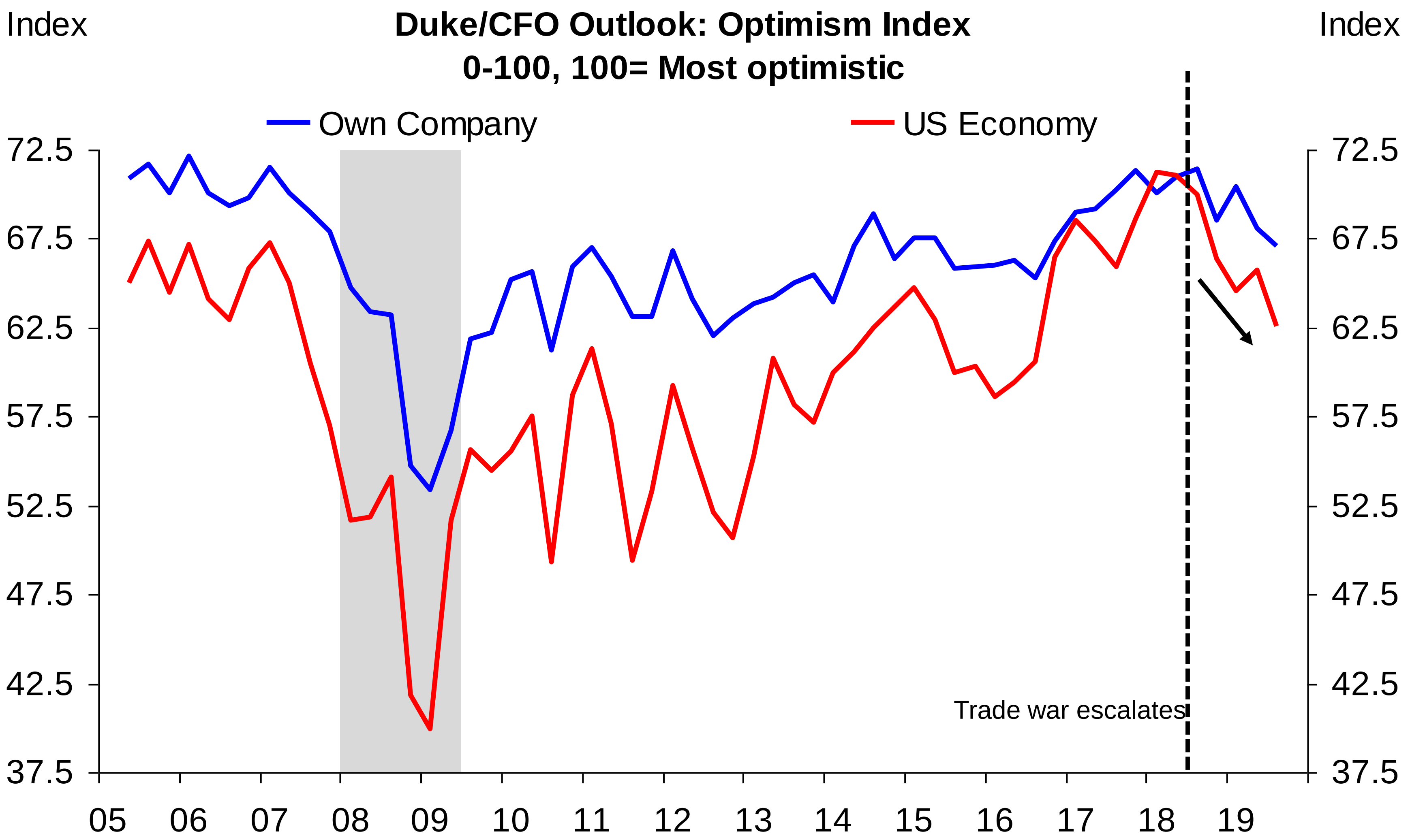
Something happened to CEO confidence and business confidence when the trade war escalated in 2018



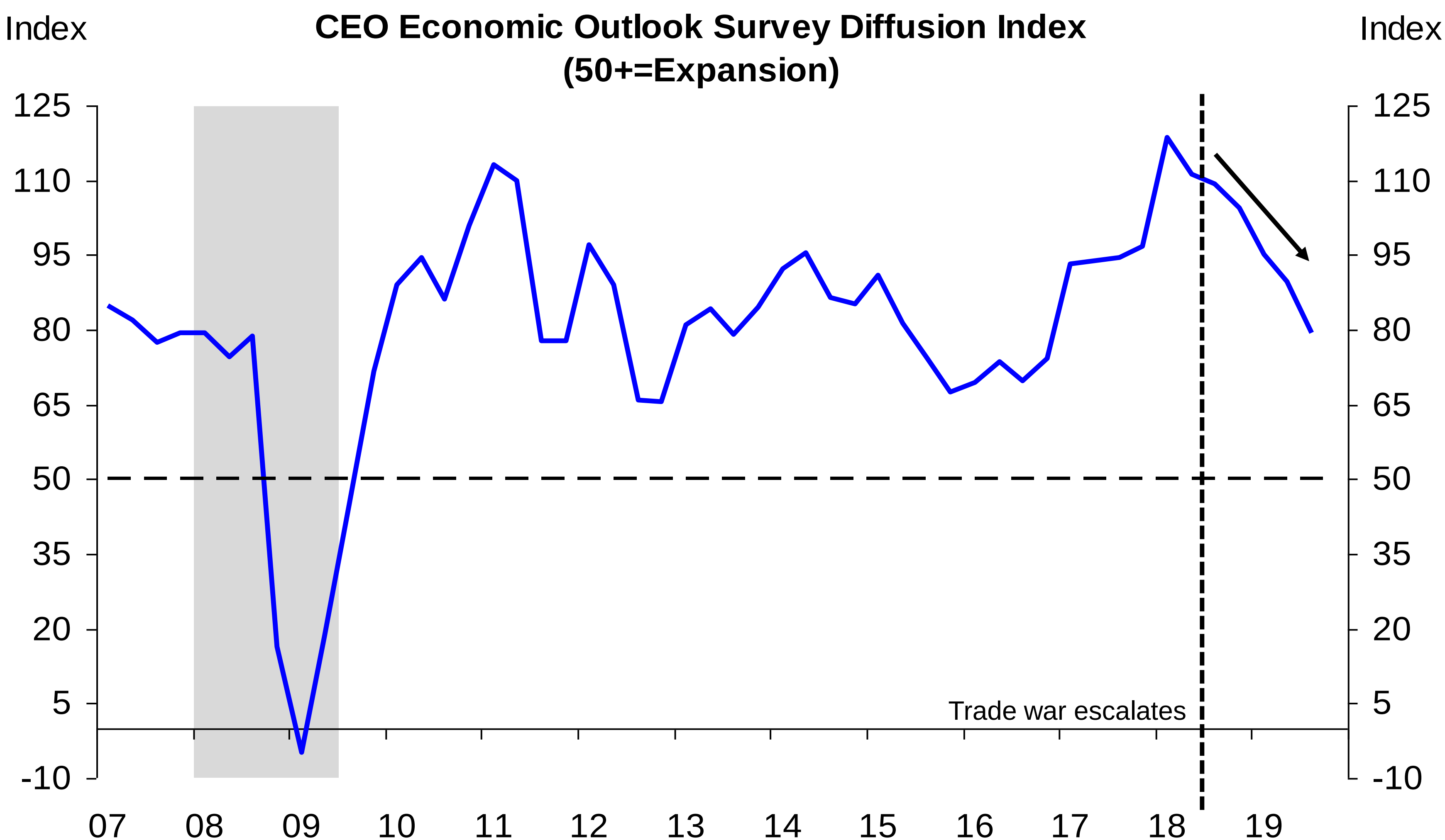
Source: The Conference Board, ISM, Haver Analytics, DB Global Research

Something happened to CFO and business optimism when the trade war escalated in 2018



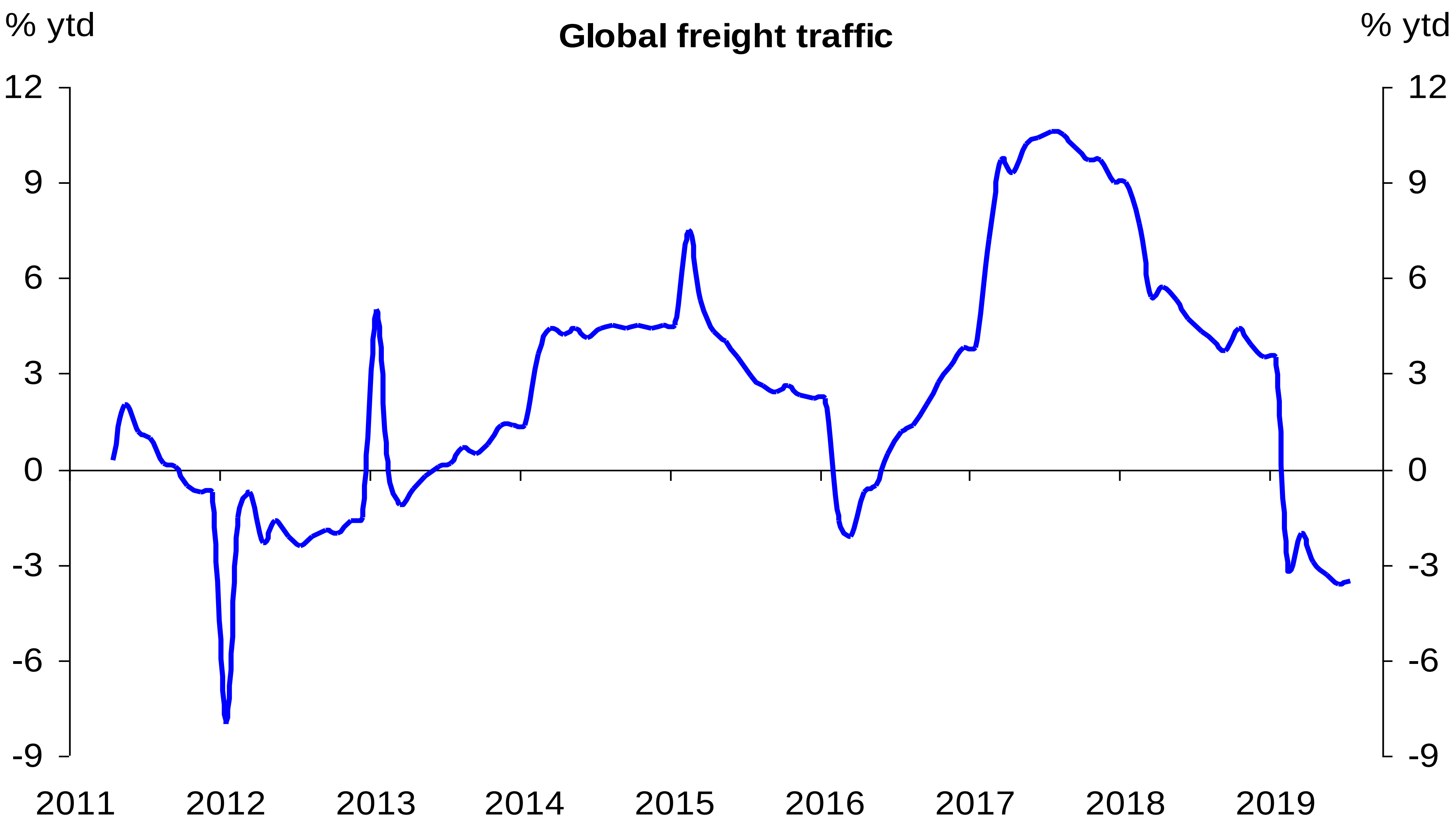
Source: DUKE/CFO, Haver Analytics, DB Global Research

Something happened to CEO confidence when the trade war escalated in 2018



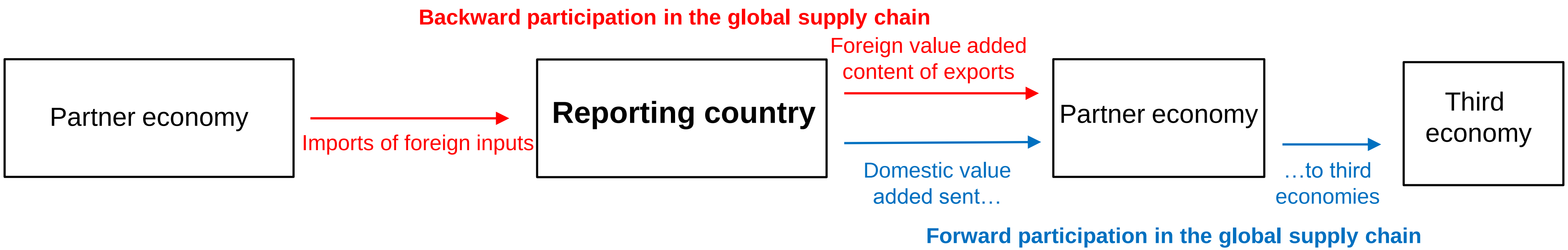
Source: Business Roundtable, Haver Analytics, DB Global Research

World trade growth moving lower



Source: IATA, DB Global Research

Definition of backward and forward participation in the global supply chain



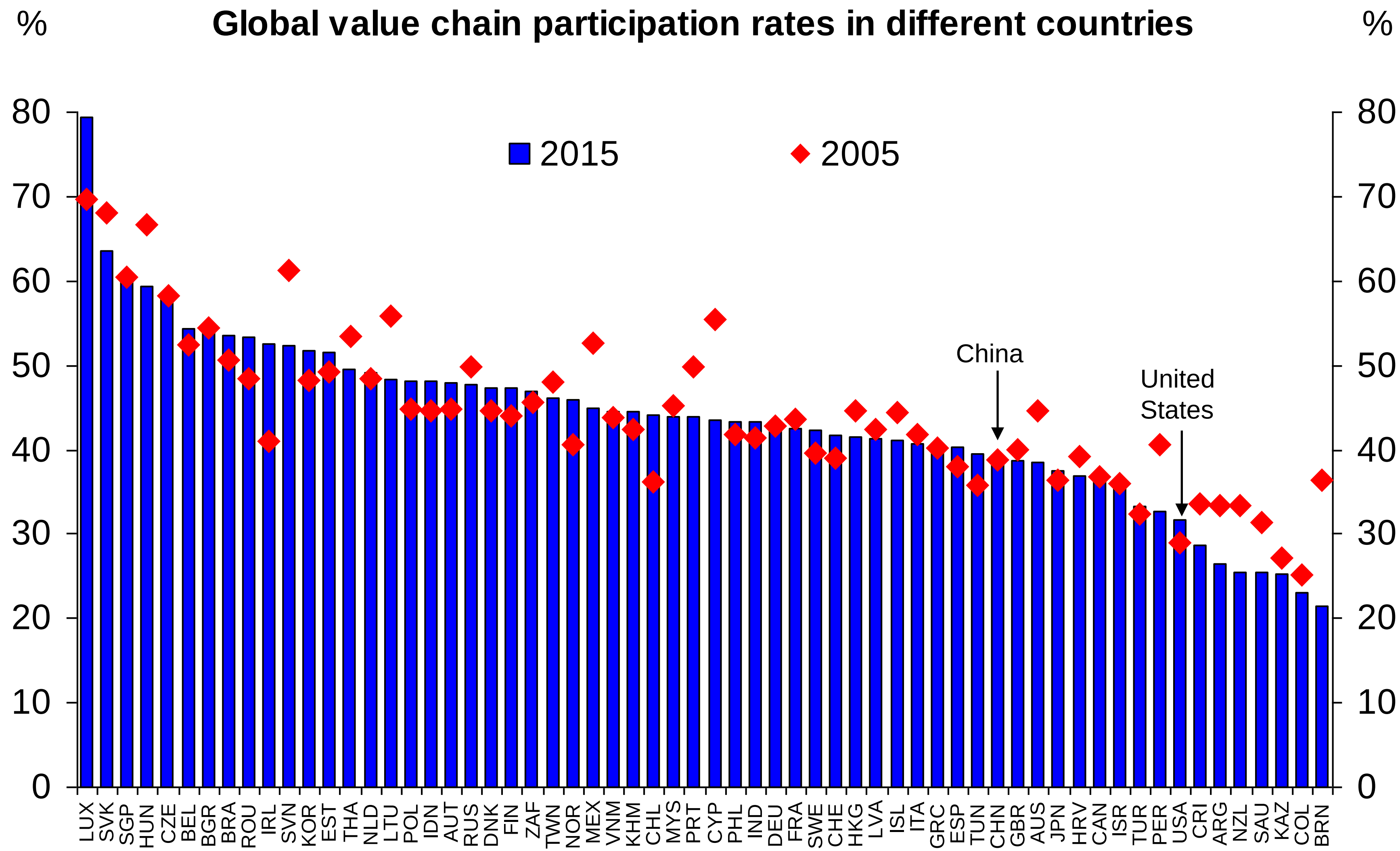
Individual economies participate in global value chains by importing foreign inputs to produce the goods and services they export (backward participation) and also by exporting domestically produced inputs to partners in charge of downstream production stages (forward participation).

Backward participation refers to the ratio of the "Foreign value added content of exports" to the economy's total gross exports. <u>This is the "Buyer" perspective or sourcing side in global supply chains, where an economy imports intermediates to produce its exports.</u>

Forward participation corresponds to the ratio of the "Domestic value added sent to third economies" to the economy's total gross exports. It captures the domestic value added contained in inputs sent to third economies for further processing and export through value chains. <u>This is the "Seller" perspective or supply side in global supply chain participation.</u>

Source: WTO, OECD, DB Global Research

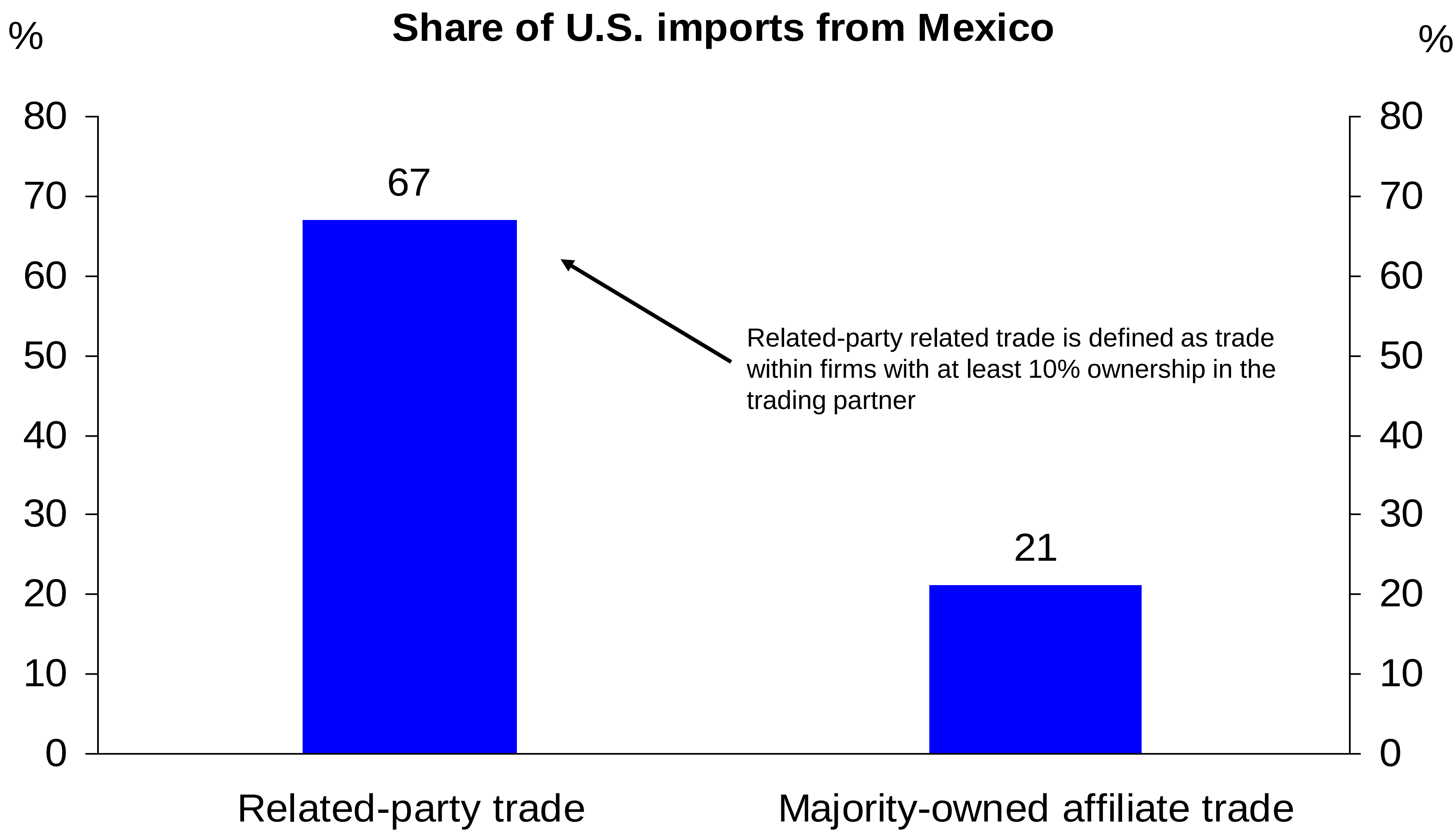
Disrupting the global supply chain has serious consequences: 30% of trade in the US is part of the global supply chain. For China it is 40%



Note: Forward participation + Backward participation rate; Forward participation is defined as the ratio of the domestic value added embodied in foreign countries' exports over gross exports and Backward participation rate is defined as the share of foreign value added in country's gross exports

Source: OECD, DB Global Research

67% of US imports from Mexico are intra-company trade



Source: Census Bureau, BEA, Mary Amiti et. Al (2017) DB Global Research

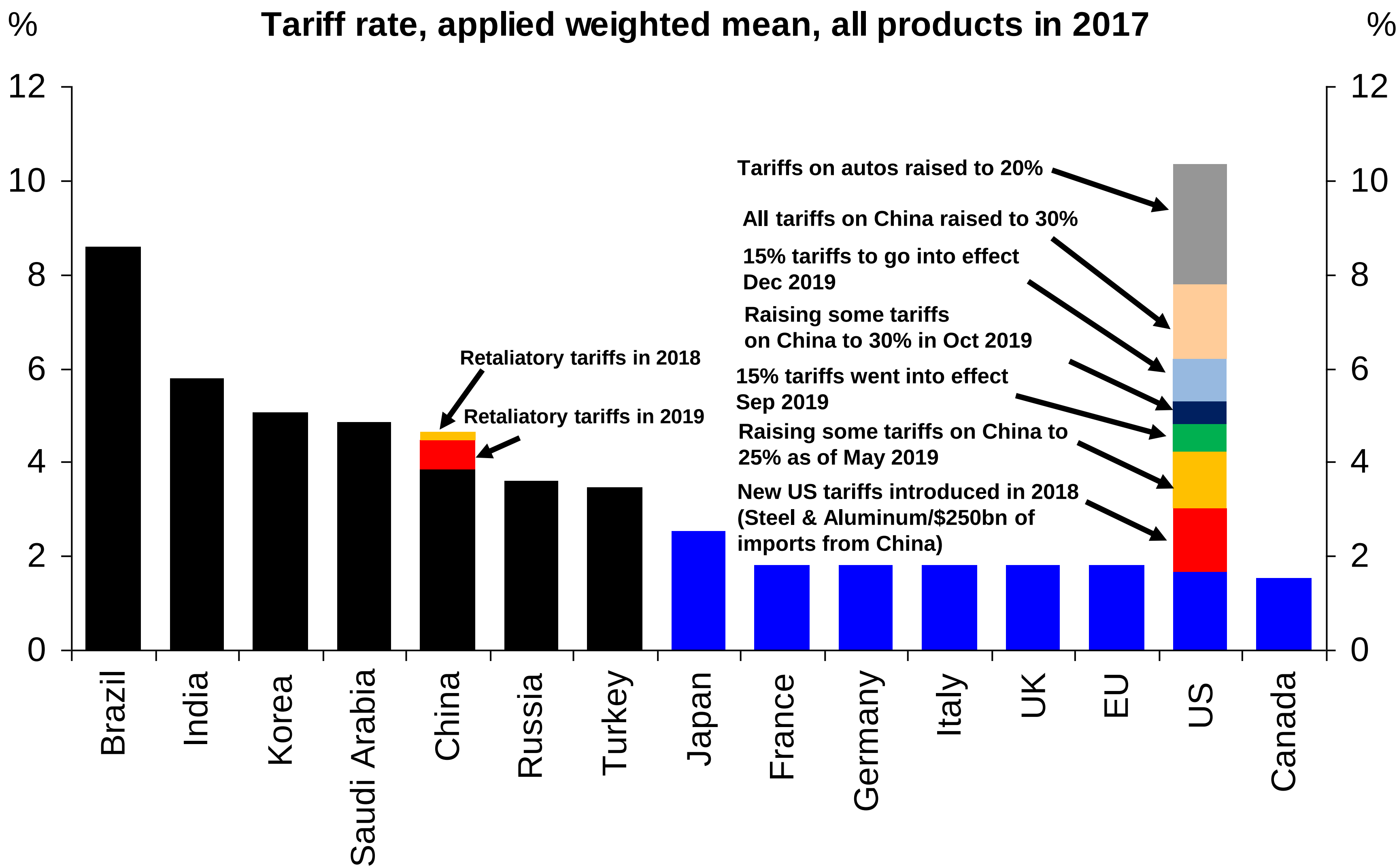
US trade with Mexico is basically all about cars

US Imports as a percent of total imports from each country by end use classification

Exporter	Most important US imports	Second most important imports	Third most important imports	Fourth most important imports
Mexico	Car parts	Cars	Trucks & buses	Computers
Germany	Cars	Pharma	Industrial machines	Car parts
Japan	Cars	Car parts	Industrial machines	Electric apparatus
Korea	Cars	Car parts	Computer access	Cell phones
Canada	Oil	Cars	Re-imports	Car parts
United Kingdom	Cars	Pharma	Re-imports	Petroleum
China	Cell phones	Computers	Telecom equip	Computer access

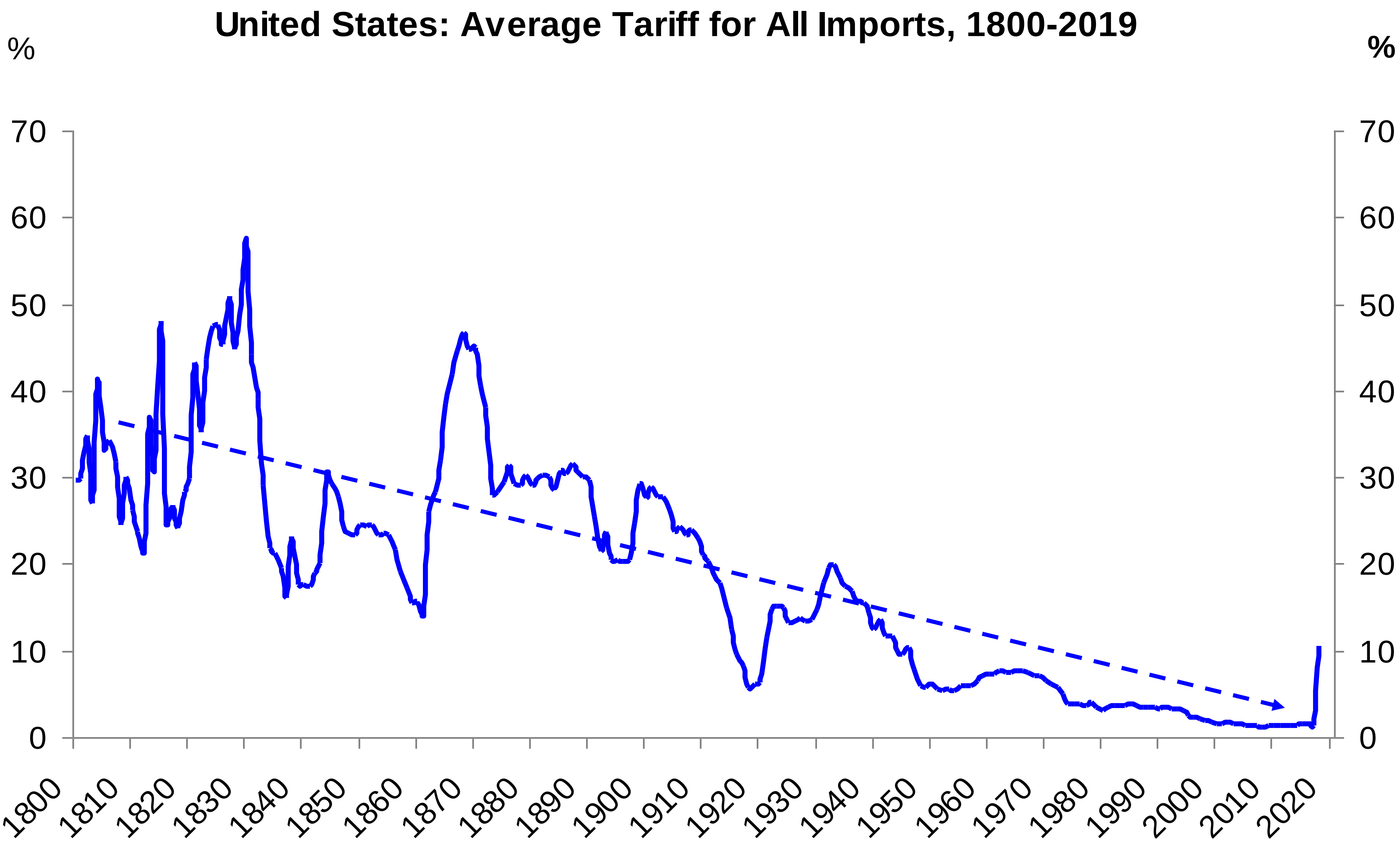
Source: Census Bureau 2018, DB Global Research

Existing and future US tariffs compared with other G7 countries and EM



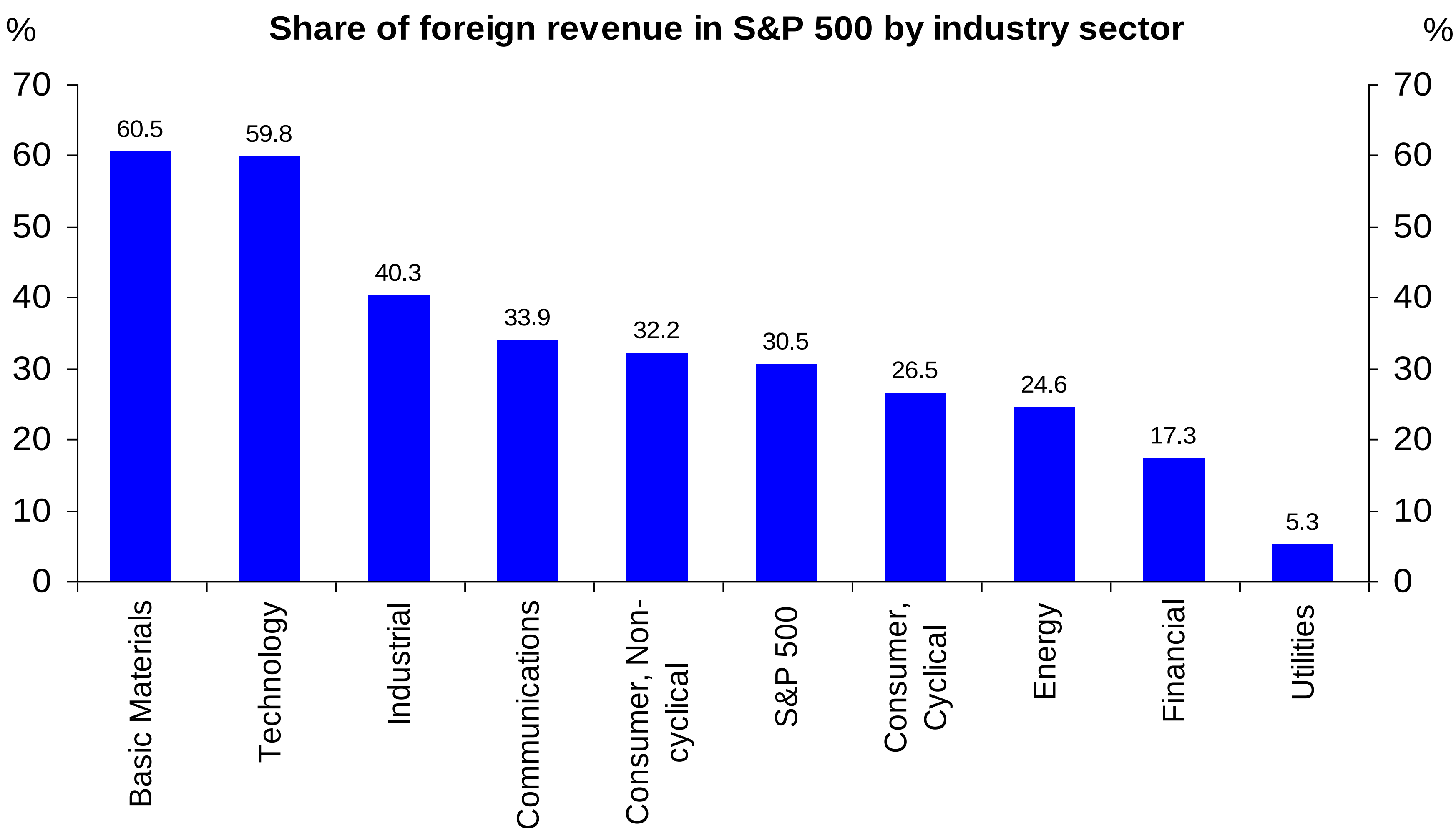
Source: World Bank, Justin Weidner, DB Global Research

Reversing the globalization trend which has been in place since 1800



Source: USITC, Historical Statistics of the United States, Justin Weidner, DB Global Research

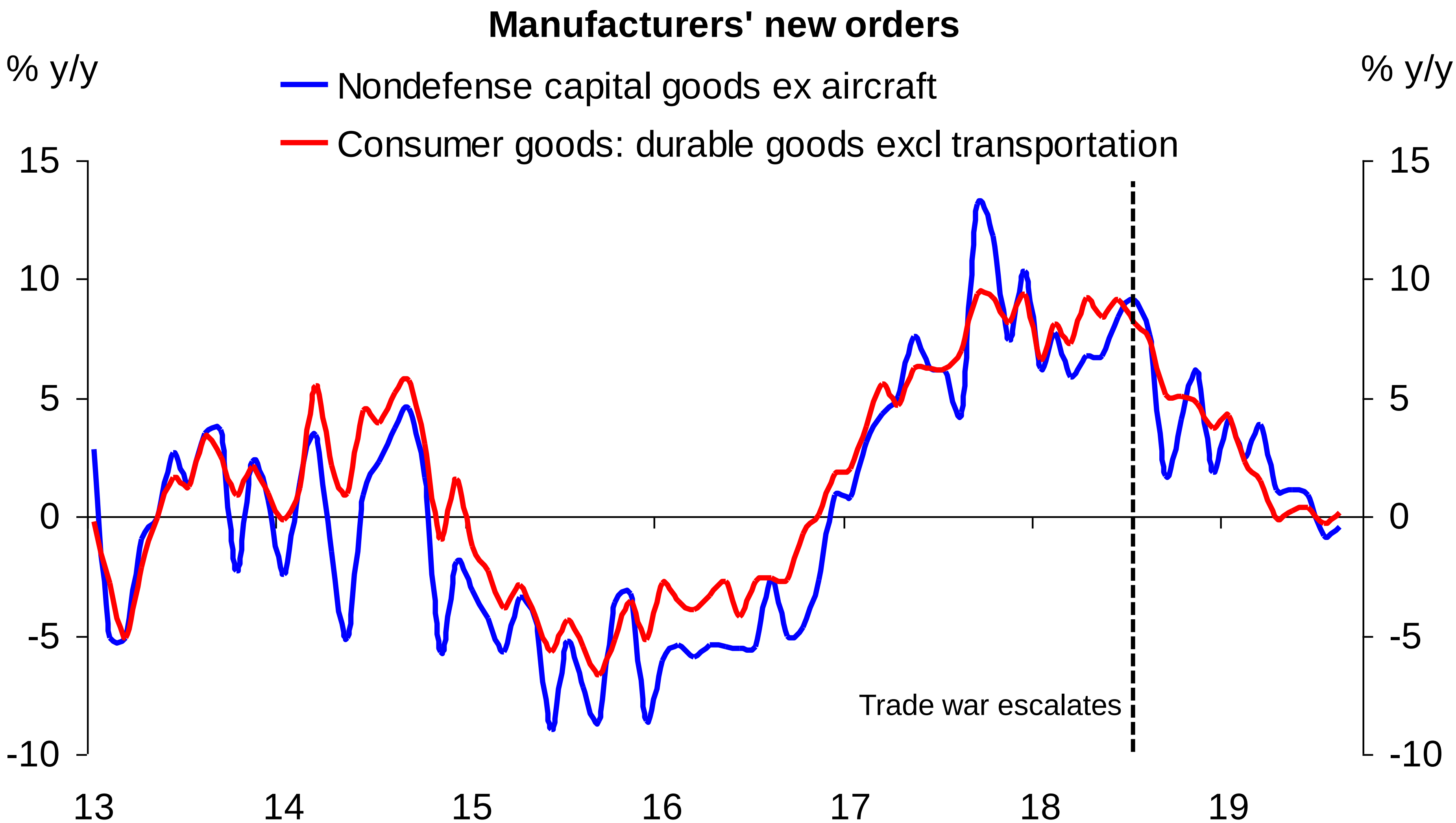
Share of revenue from abroad in different S&P500 sectors



Note: Data is the sector-wise average of revenue from foreign sources as a percentage of total revenues for companies reporting data. Revenue from foreign sources is defined as total revenue minus revenues from the country of domicile.

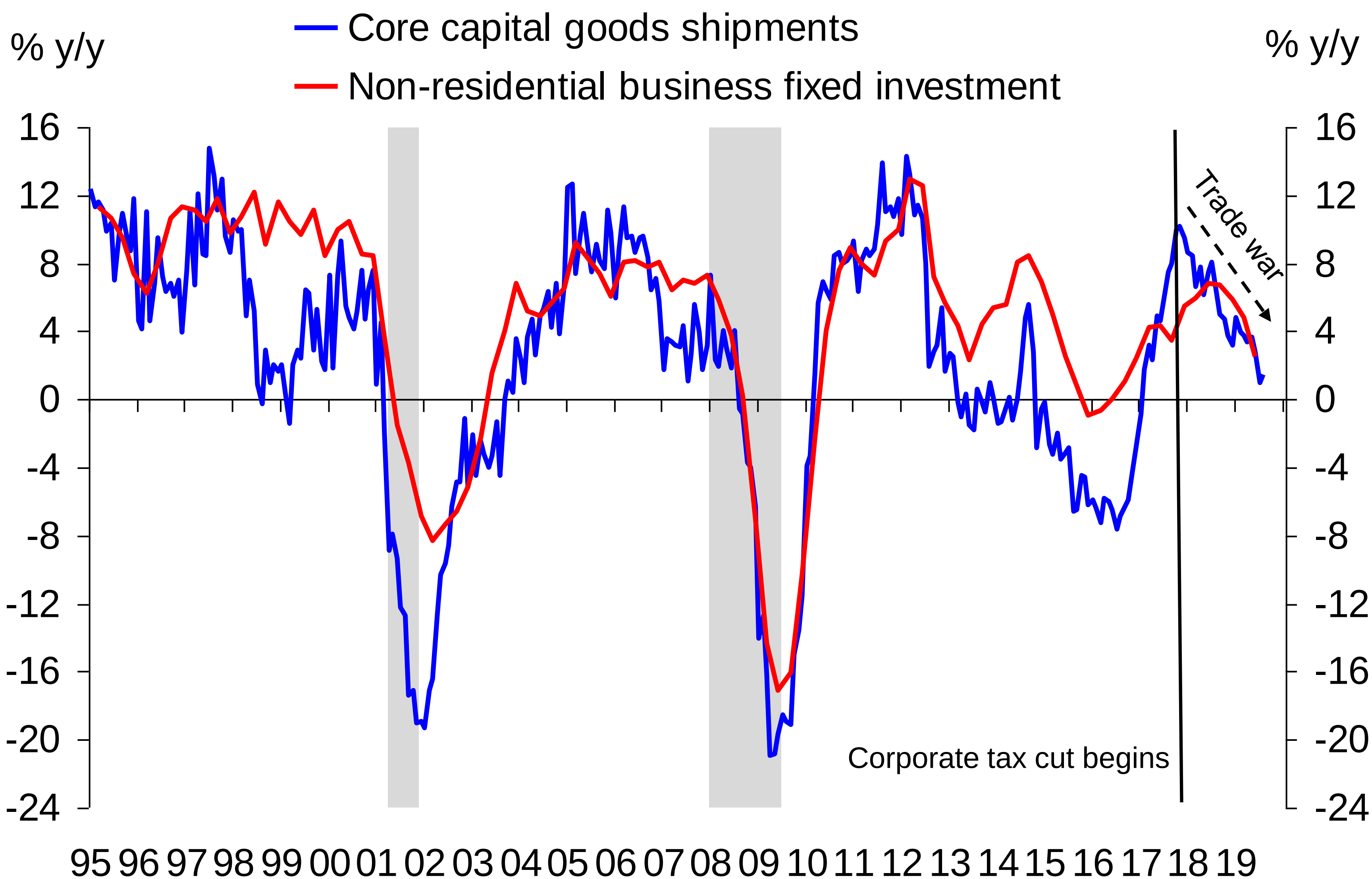
Source: Bloomberg Finance LP, DB Global Research

Capex started slowing down in 2018H2



Source: Census Bureau, Haver Analytics, DB Global Research

Positive effects of corporate tax cut offset by negative effects of trade war

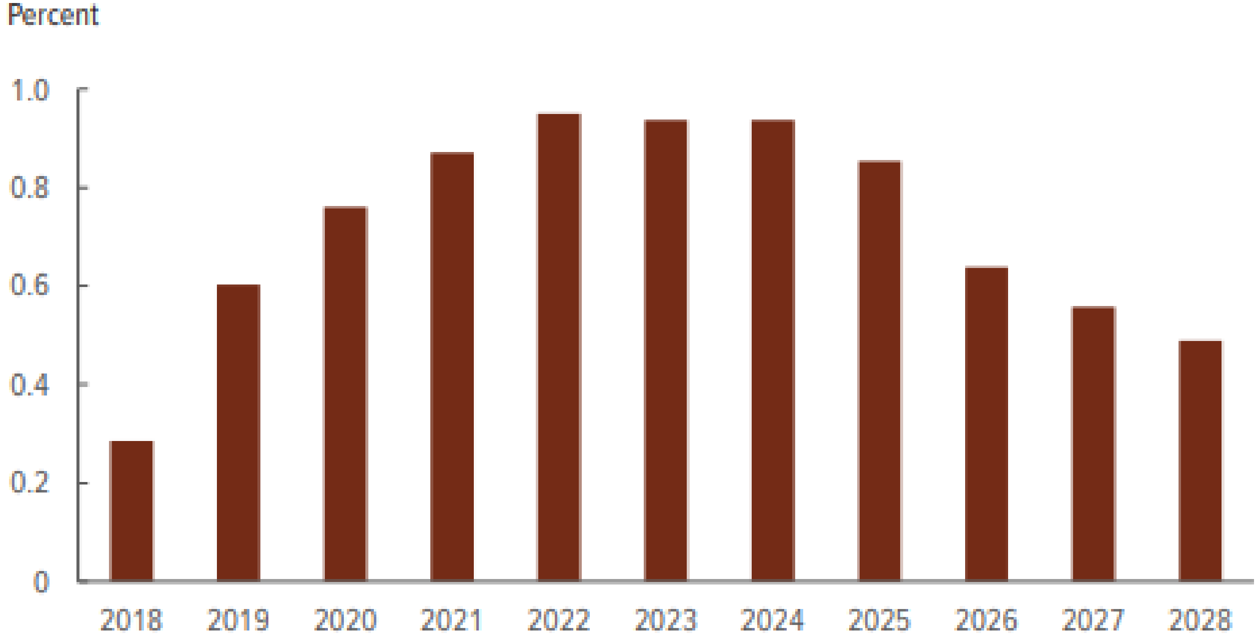


Source: Census, BEA, Haver Analytics, DB Global Research

CBO estimated the 2017 corporate tax cut would have lifted GDP by 0.7% on average in 2019 and 2020

Figure 1-3.

Economic Effects of the 2017 Tax Act on Real GDP



In CBO's projections, the effect of the 2017 tax act is an **increase in the level of real GDP** by 0.7 percent, on average, over the 2018–2028 period. Later in the period, the effects are tempered as some tax provisions expire and as increased borrowing crowds out private investment.

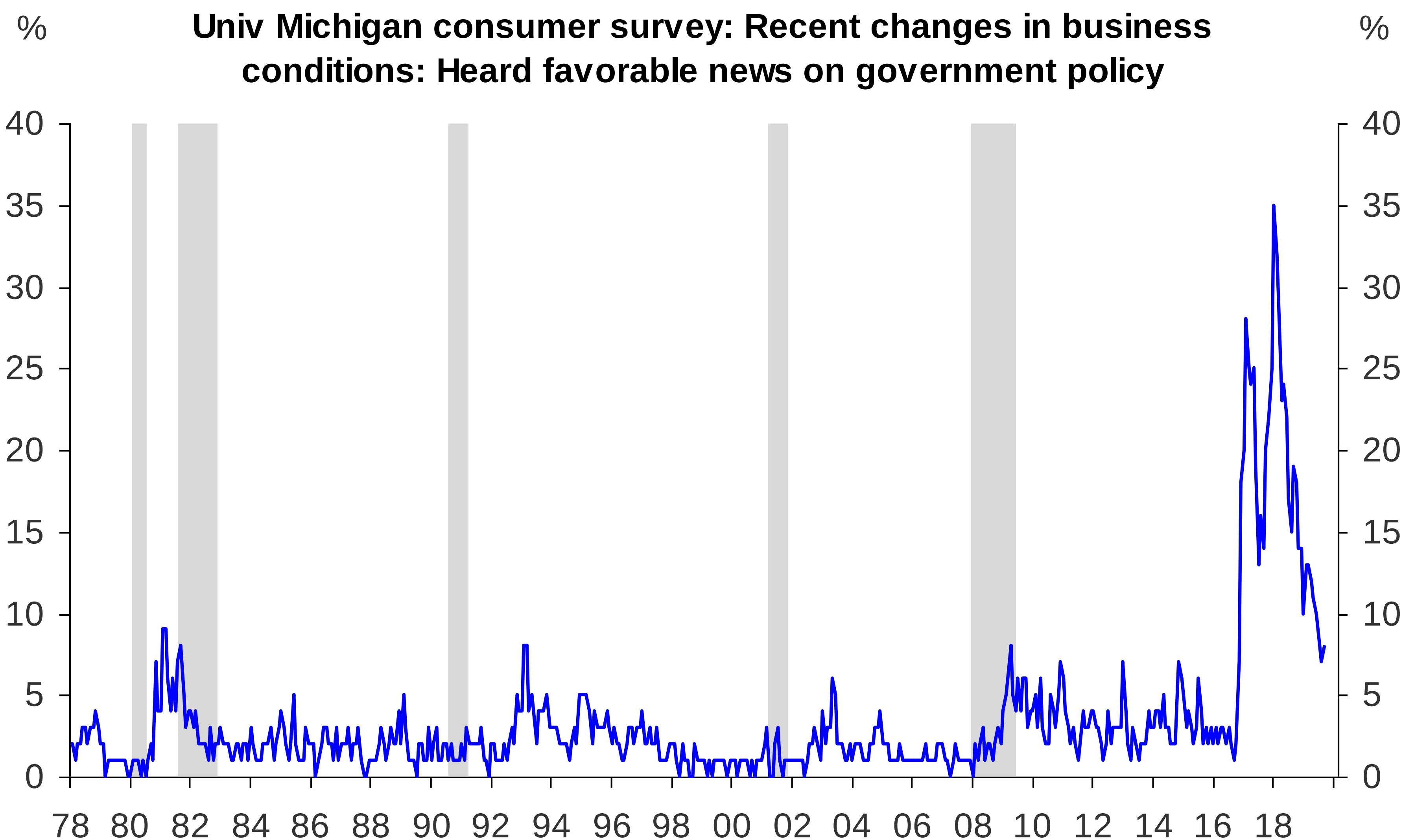
Source: Congressional Budget Office.

Real values are nominal values that have been adjusted to remove the effects of inflation. Percentage differences are calculated using calendar year values.

GDP = gross domestic product.

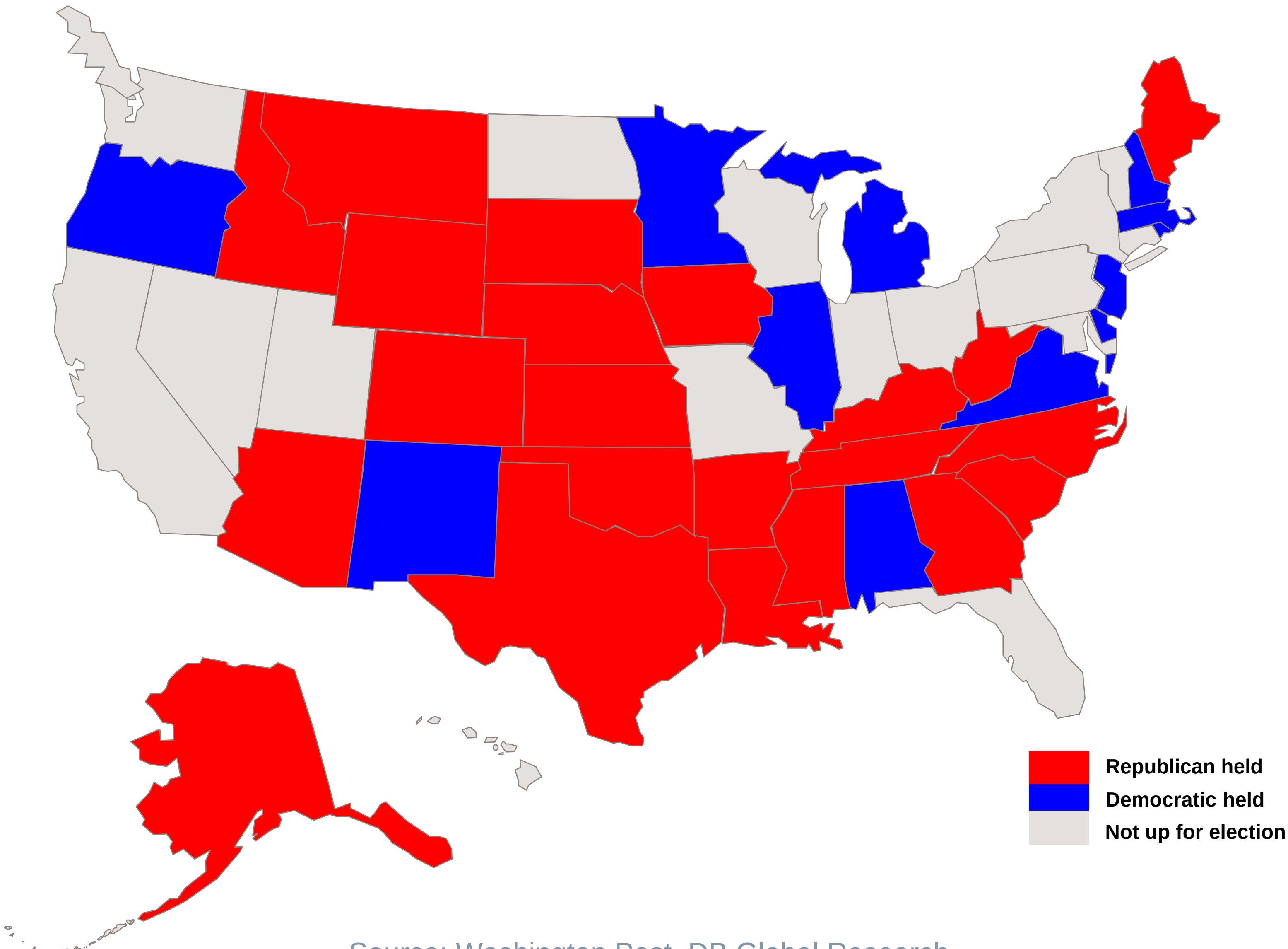
Source: CBO, BEA, Haver Analytics, DB Global Research

Big U-turn in consumer attitudes toward government policies



Source: University of Michigan, Haver Analytics, DB Global Research

States with election for Senate in 2020

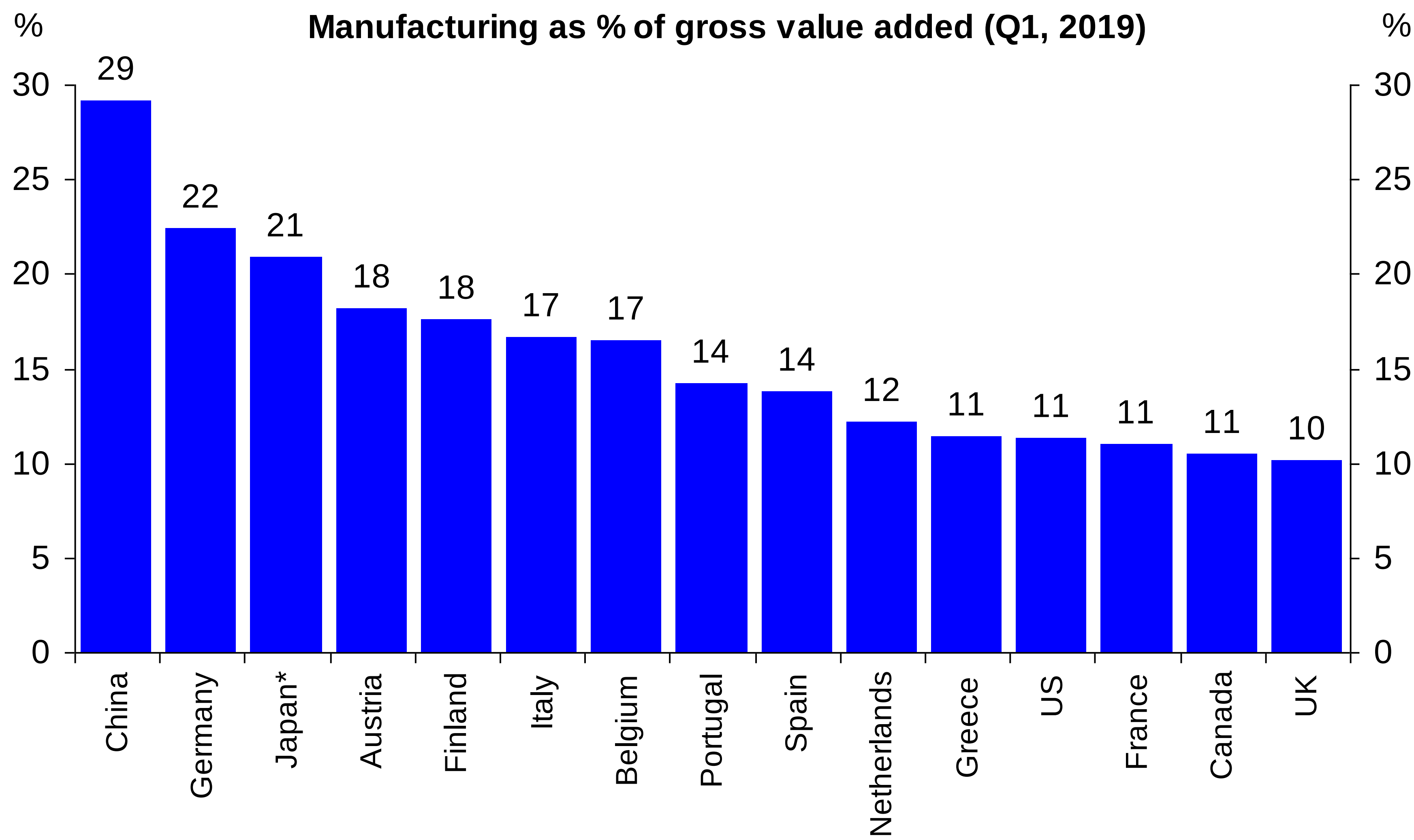


Source: Washington Post, DB Global Research

Risk #2:

Growth is weak in Europe, China, and Japan

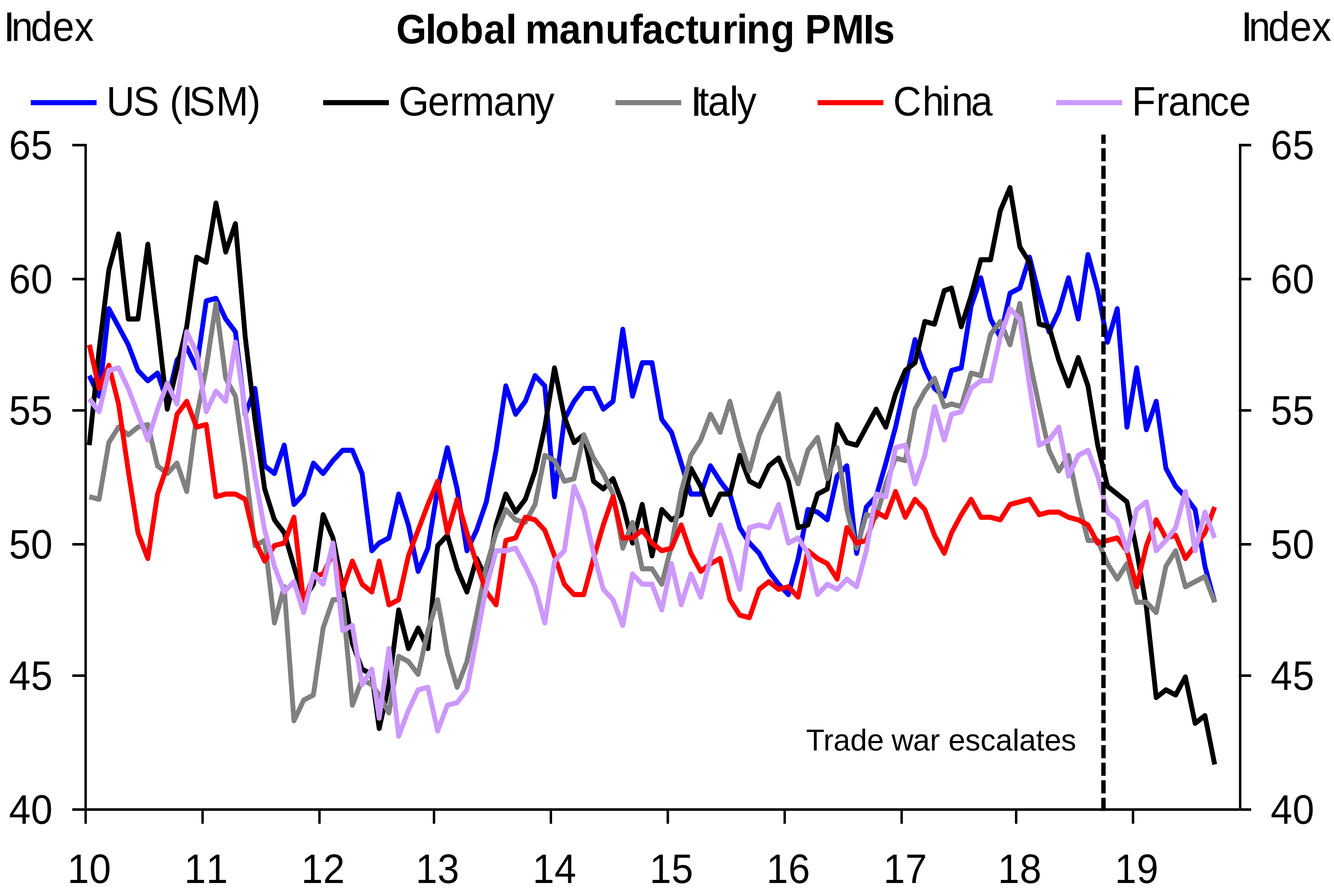
China, Germany and Japan more vulnerable to a slowdown in global trade than the United States



Note: Japan data is as of 2017.*

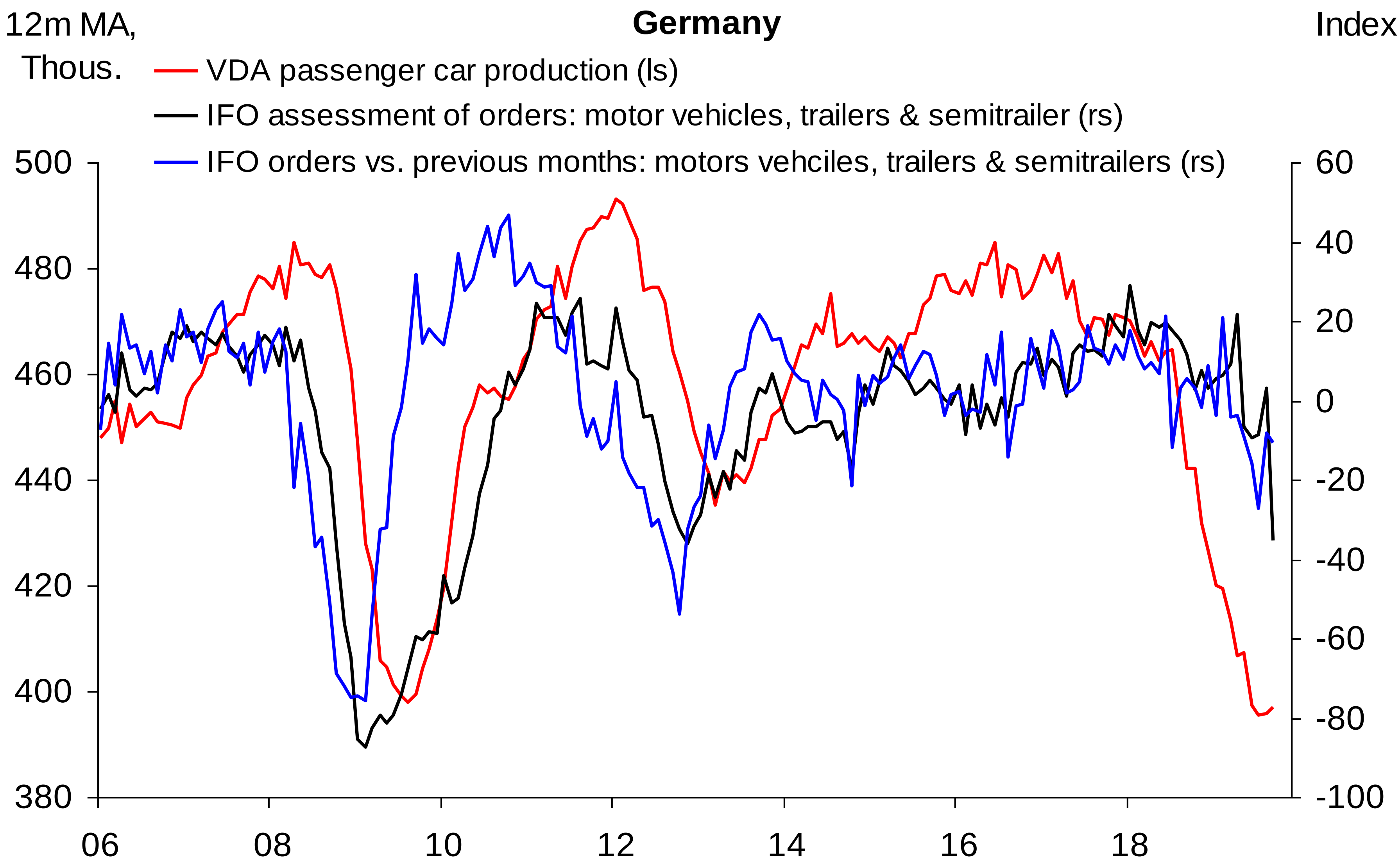
Source: National Sources, Haver Analytics, DB Global Research

Germany particularly weak



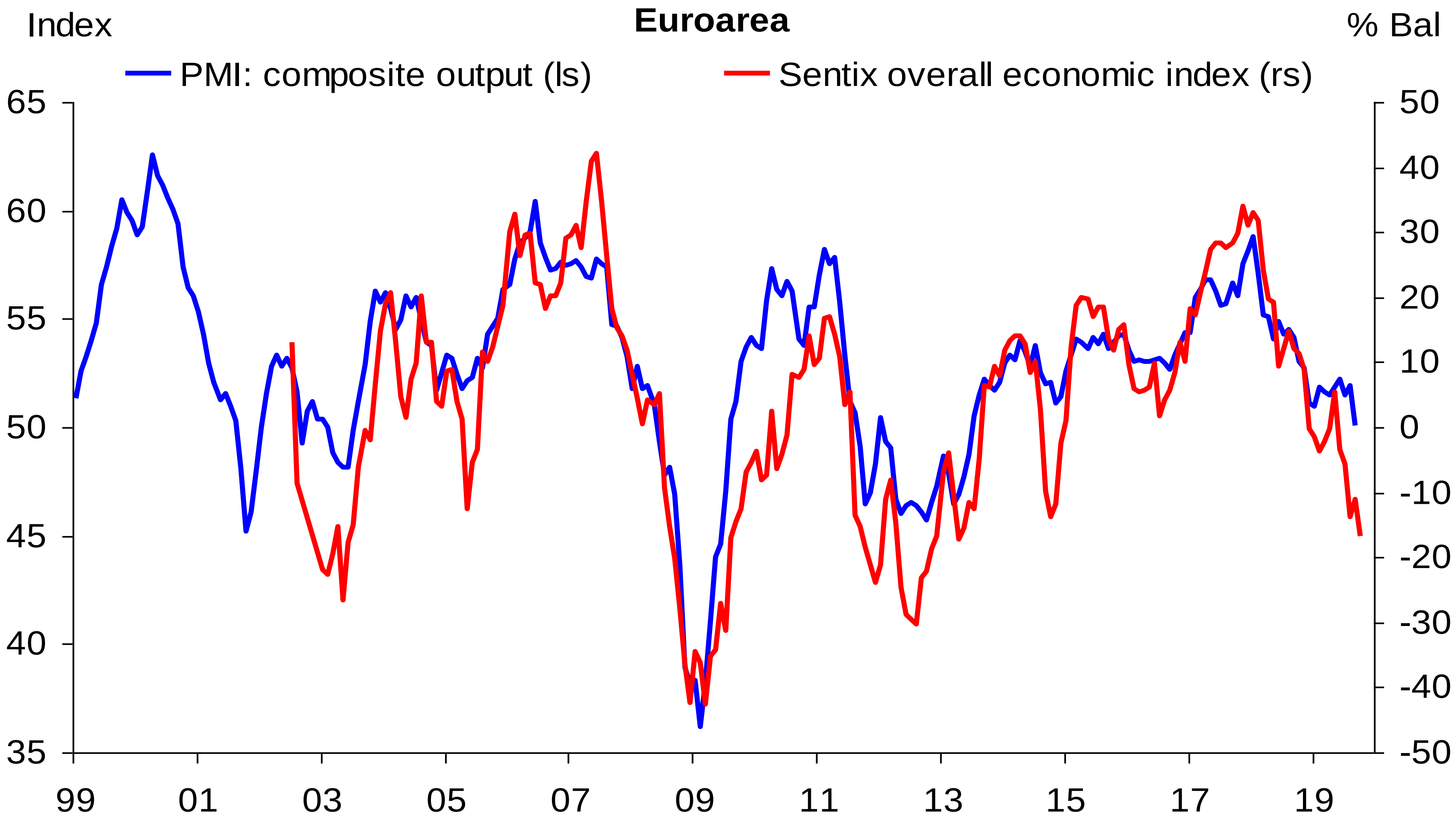
Source: ISM, Markit, Haver Analytics, DB Global Research

Germany auto industry



Source: VDA, IFO, Haver Analytics, DB Global Research

Leading indicator for Europe trending lower

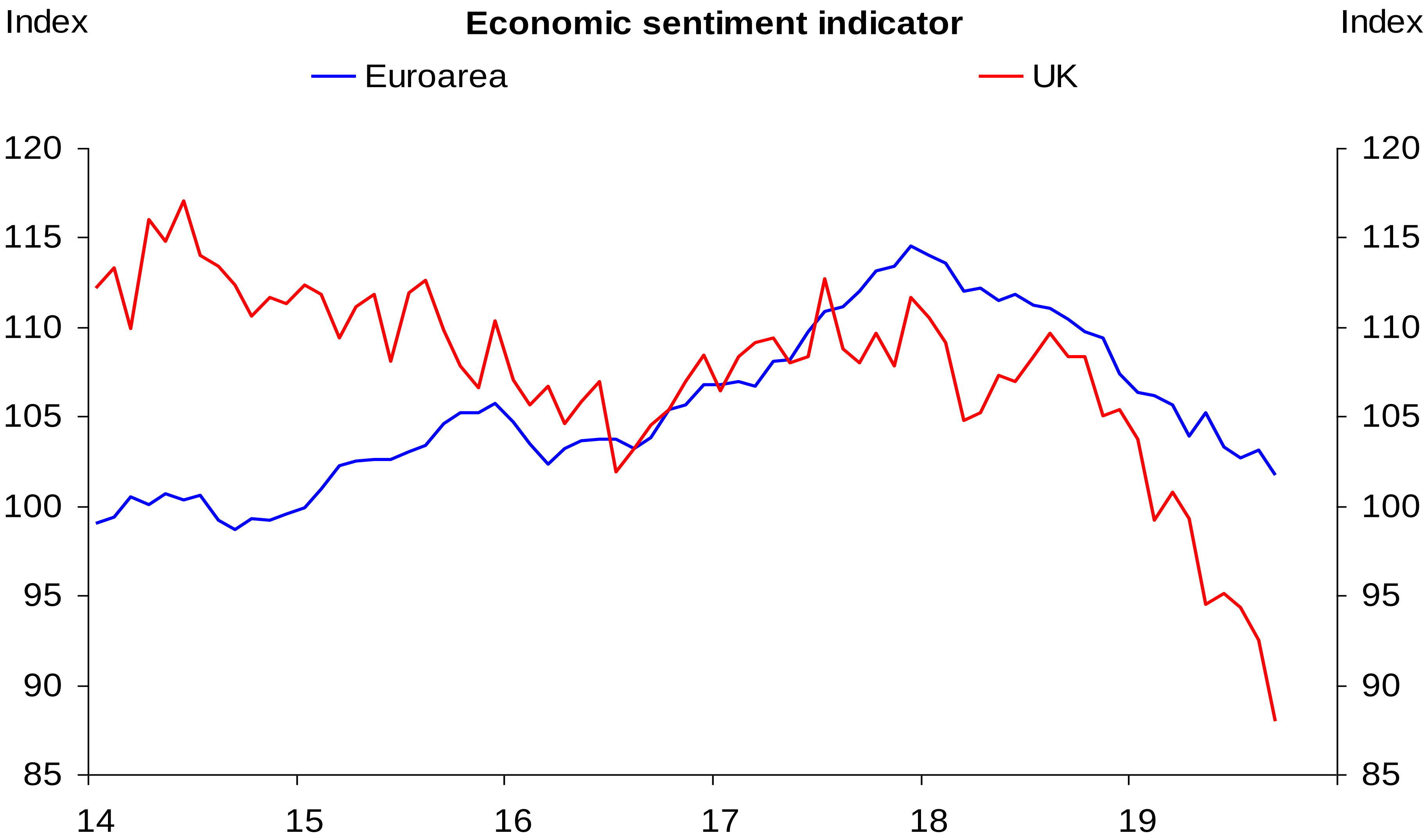


Source: IHS Markit, Sentix GmbH, Haver Analytics, DB Global Research

Leading indicator for Japan trending lower

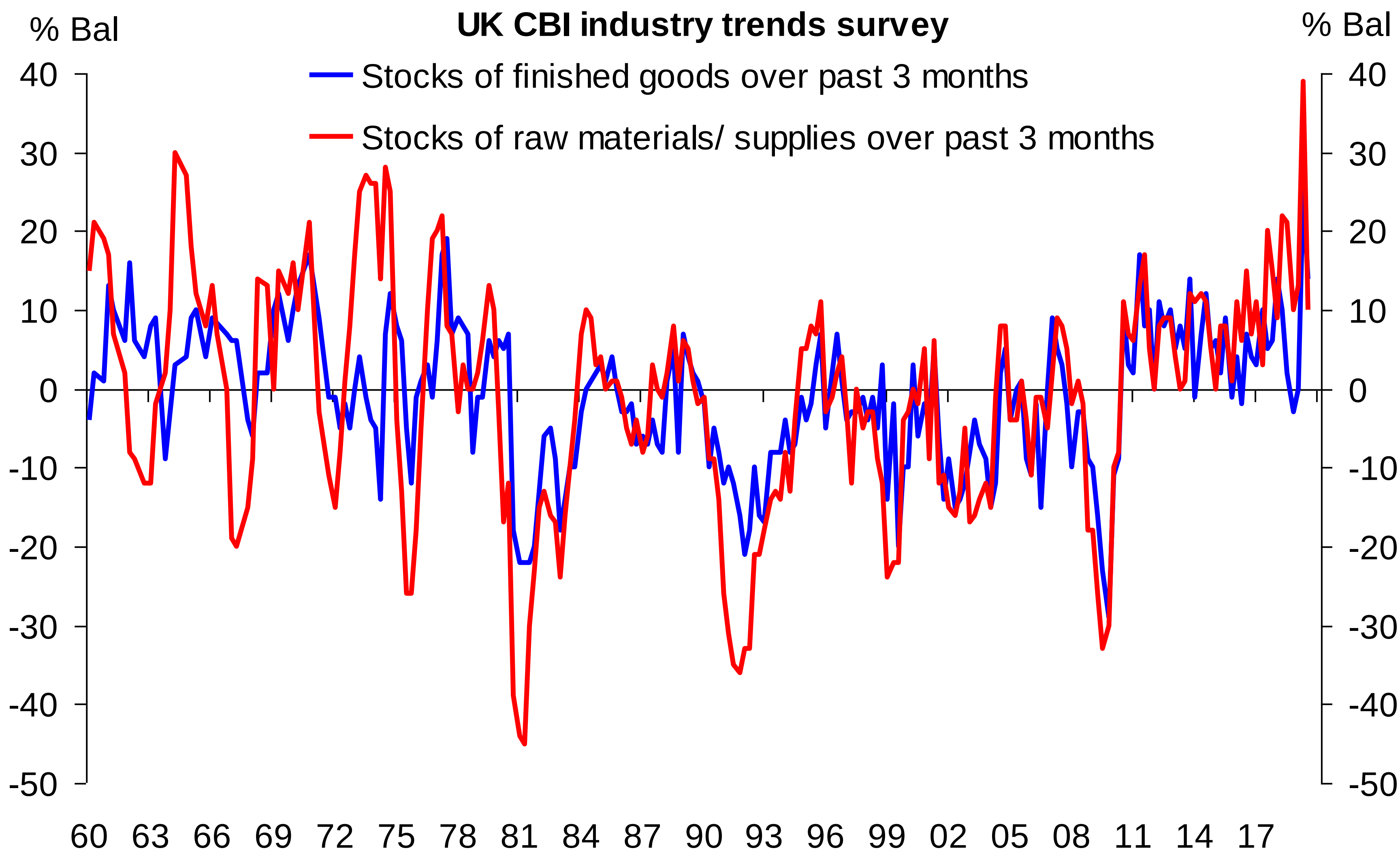
Source: Cabinet Office of Japan, Haver Analytics, DB Global Research

Economic uncertainty: Europe is bad but UK is worse



Source: European Commission, Haver Analytics, DB Global Research

UK inventories rising because of Brexit uncertainty



Source: CBI, Haver Analytics, DB Global Research

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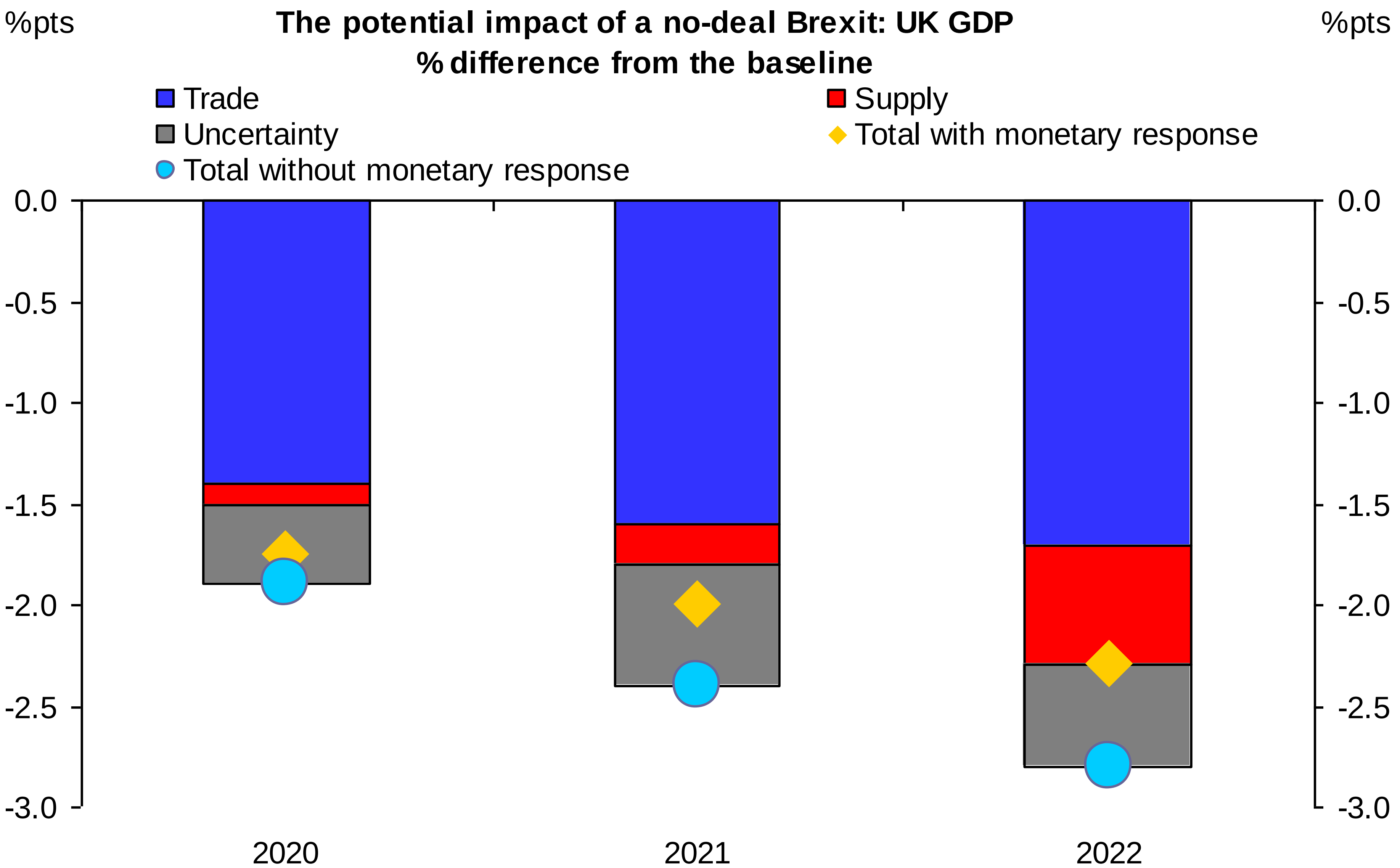
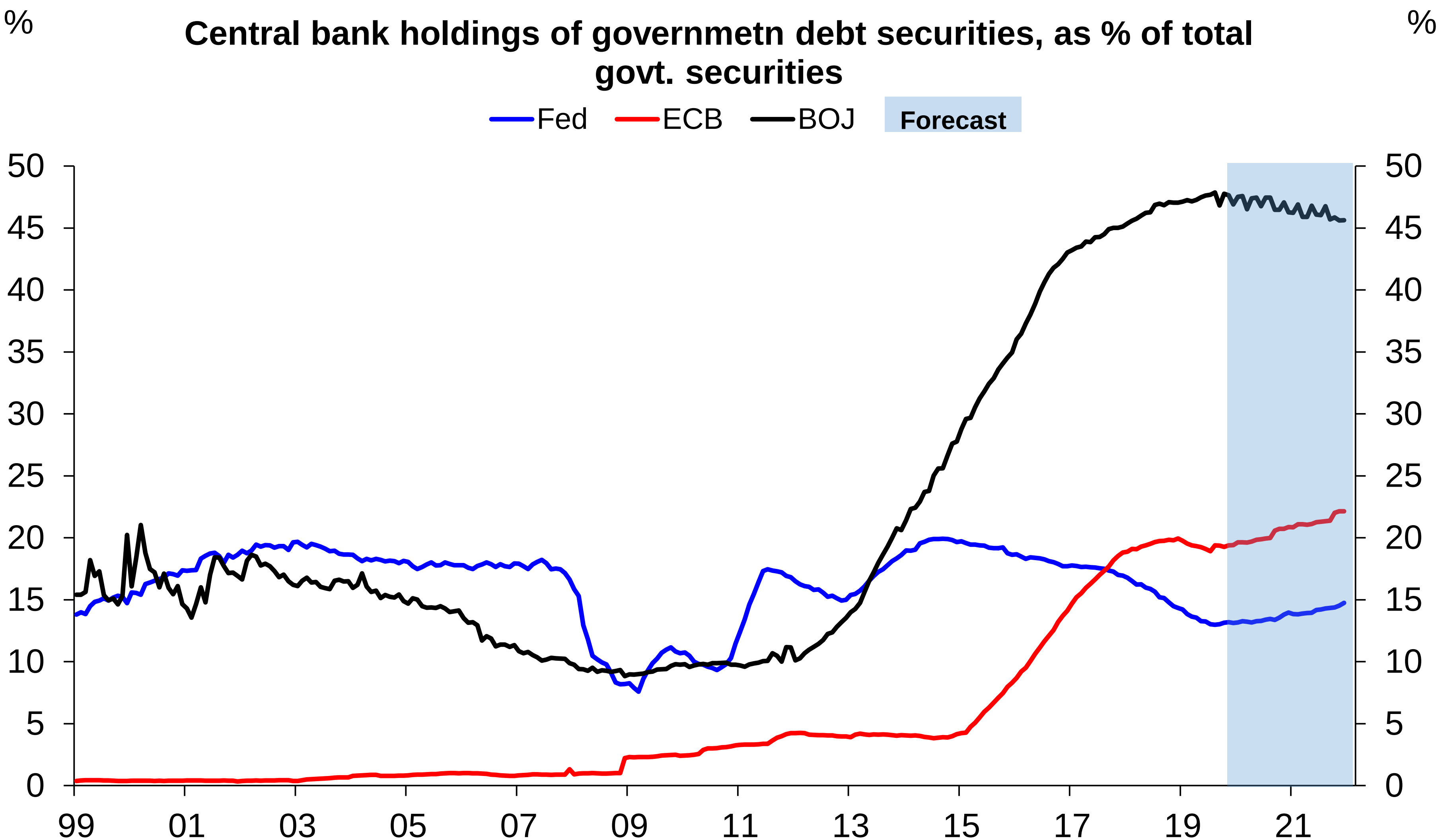
OECD: Impact on UK GDP of no-deal Brexit



Source: OECD, DB Global Research

BoJ holds almost 50% of all JGBs outstanding



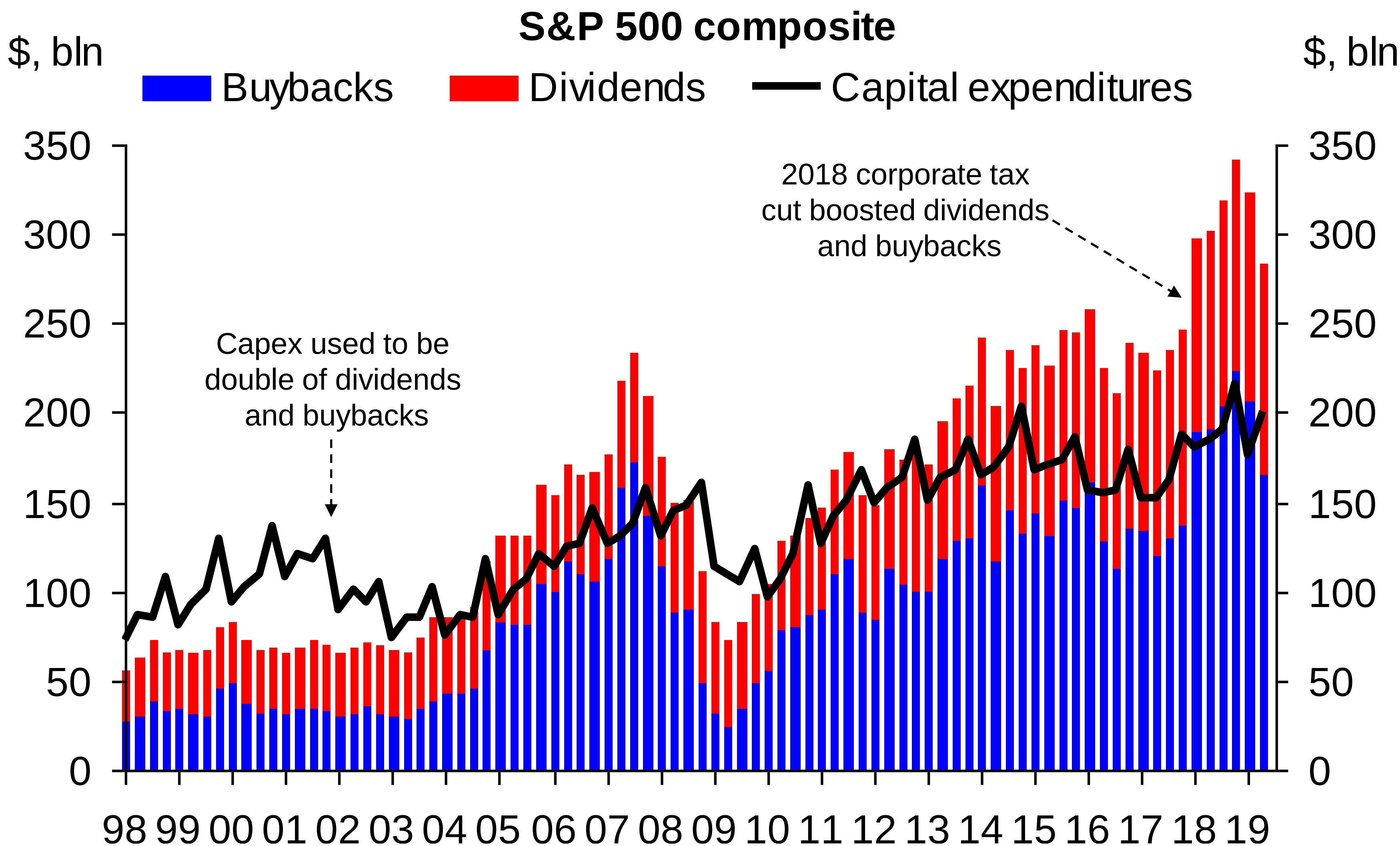
Assumptions: *SOMA treasuries are reinvested in full beginning August 2019 & MBS payments are reinvested into treasuries beginning in August 2019. Starting from November 2019, ECB purchases EUR 20 bn government securities & that year on year growth of BoJ's holdings of JGBs would slow linearly to zero by the end of 2020*

Source: BoJ, FRB, ECB, Treasury, JSDA, Haver Analytics, DB Global Research

Risk #3:

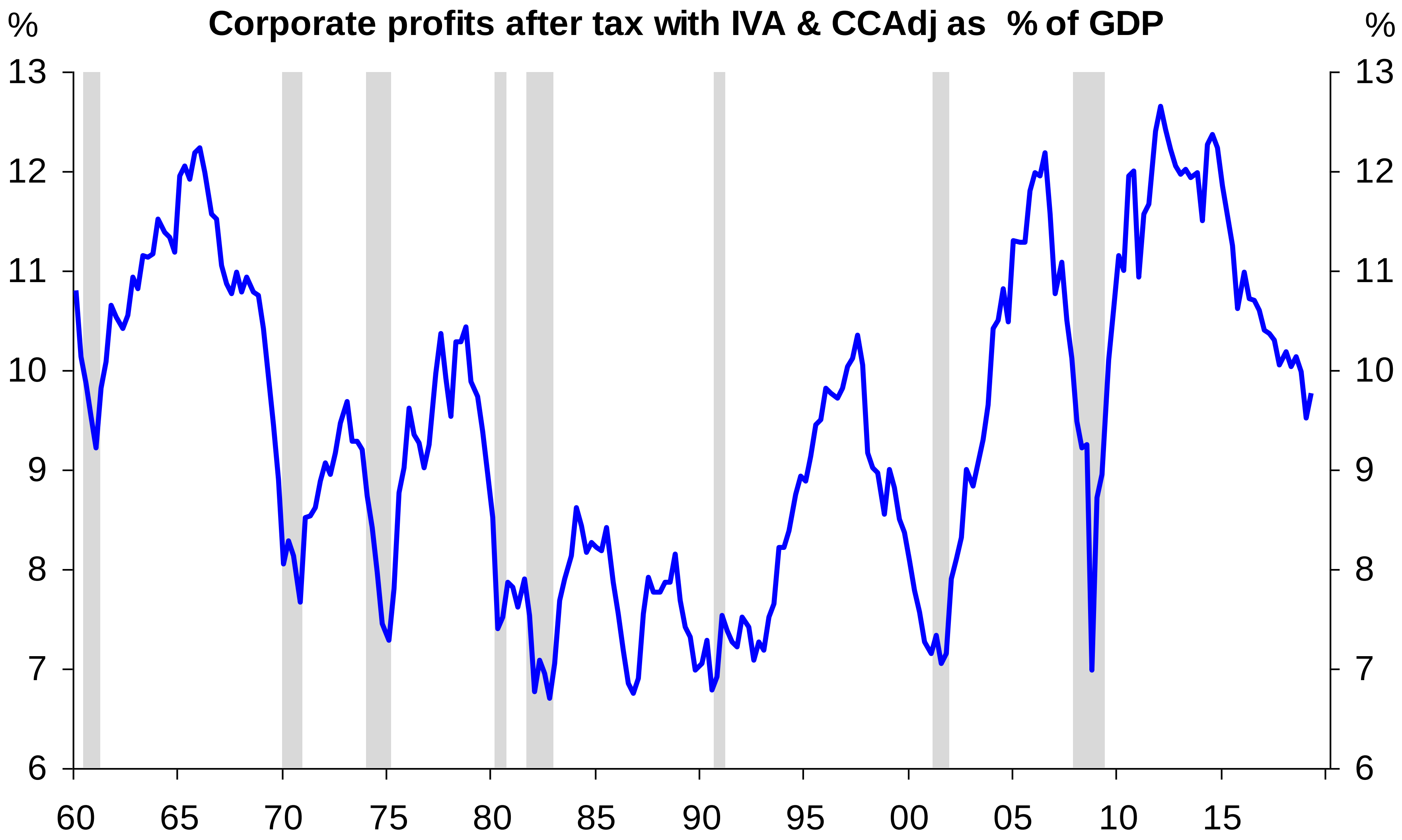
Positive effects of corporate tax cuts beginning to fade

Capex used to be much higher than dividends and buybacks



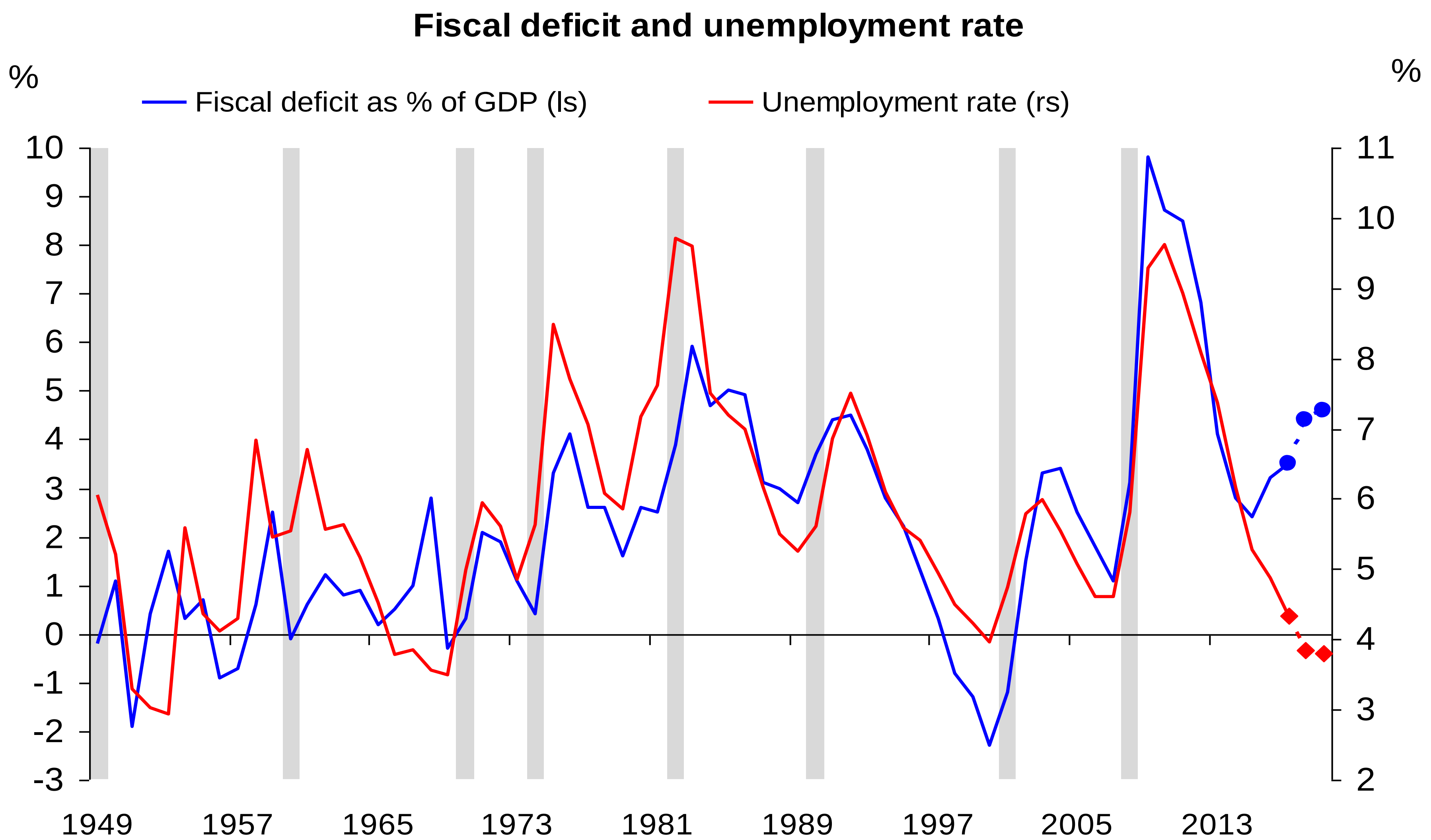
Source: S&P, Bloomberg Finance LP, Haver Analytics, DB Global Research

Late-cycle worries:
Corporate profits coming down as a share of GDP



Source: BEA, Haver Analytics, DB Global Research

Very expansive fiscal policy is highly unusual at this point in the business cycle

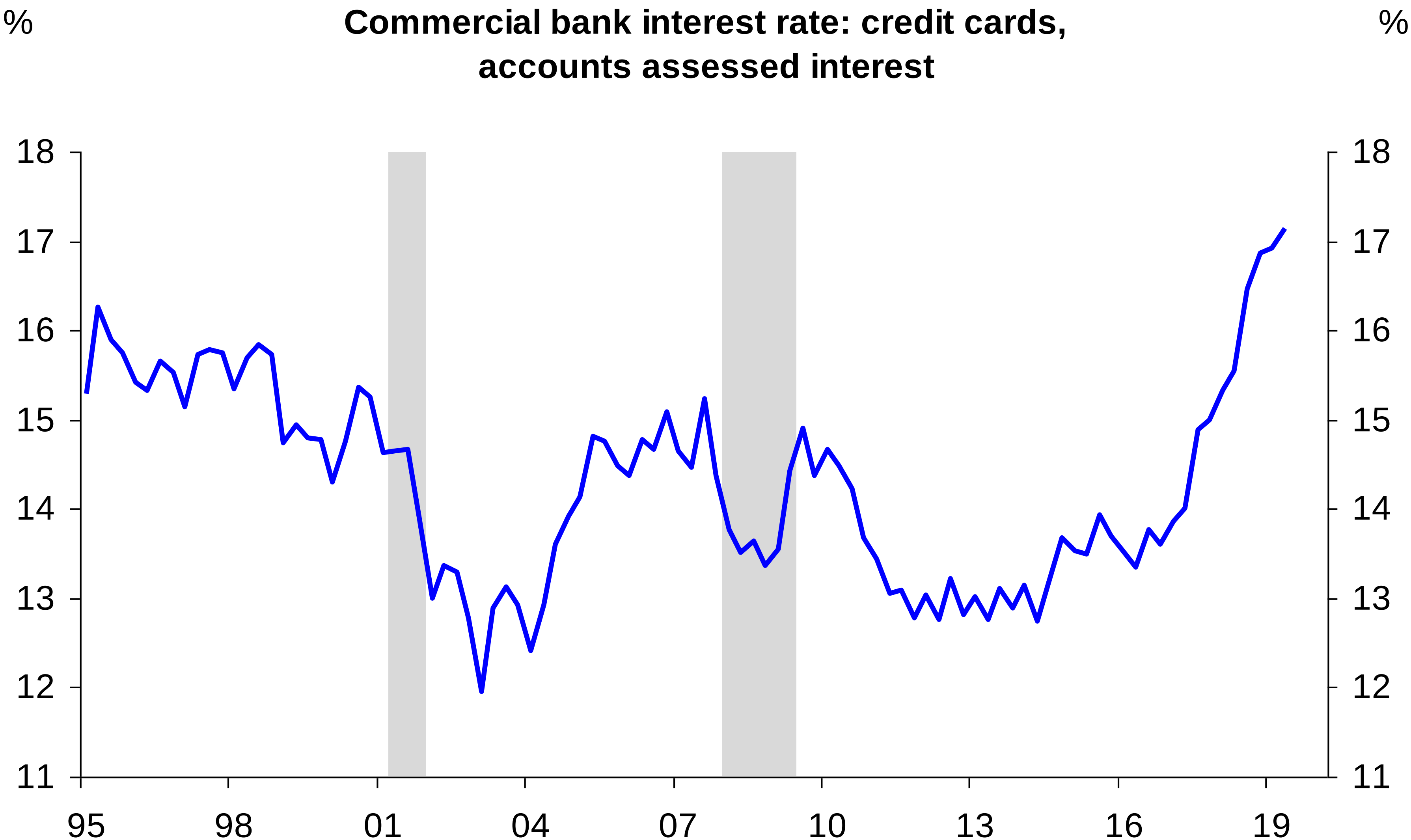


Source: OMB, BLS, FRB, Haver Analytics, DB Global Research

Risk #4:

Is the US consumer getting tired?

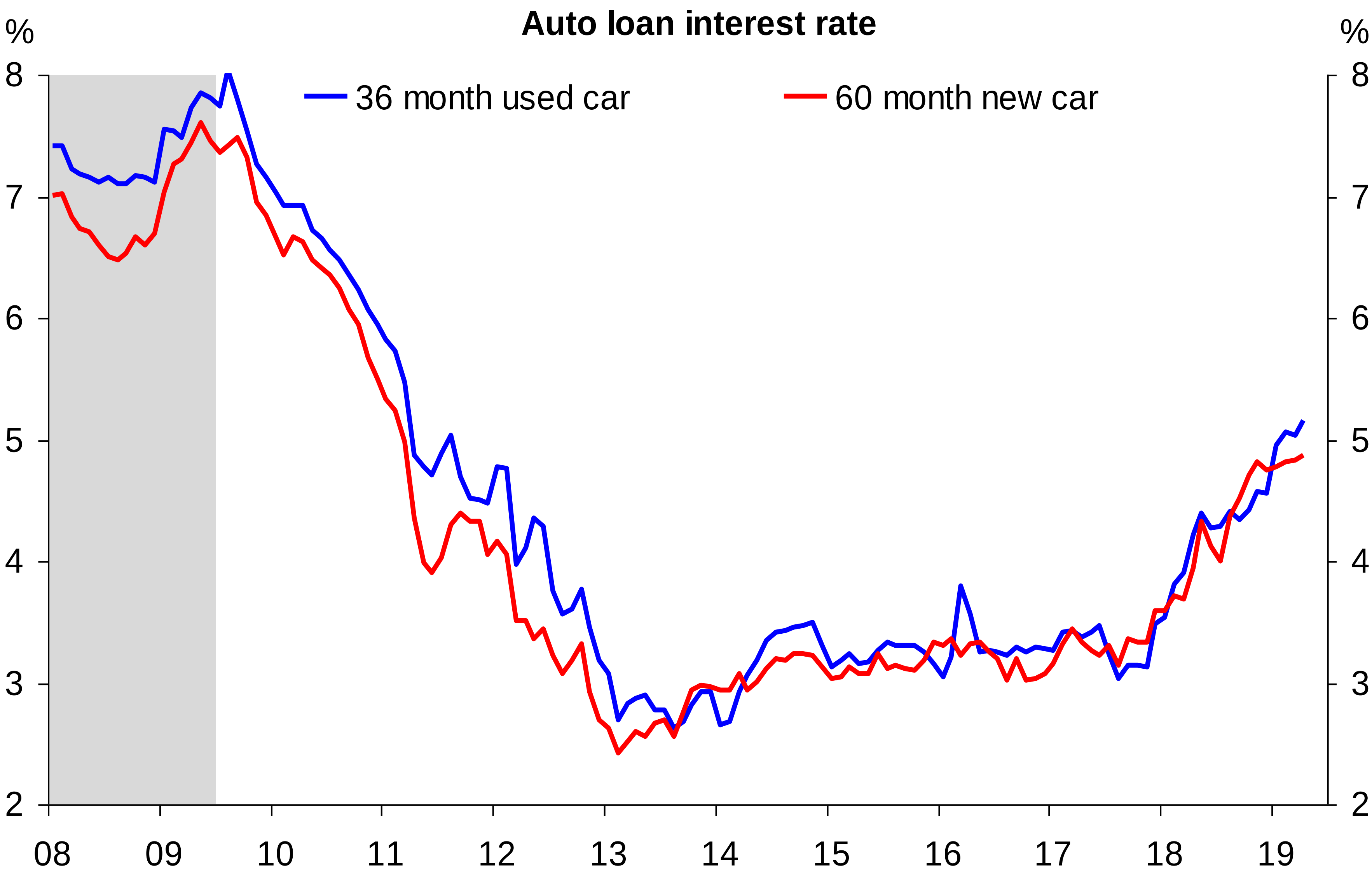
Credit card interest rate at highest level in decades



Note: This rate is the annualized ratio of total finance charges at all reporting banks to the total average daily balances against which the finance charges were assessed

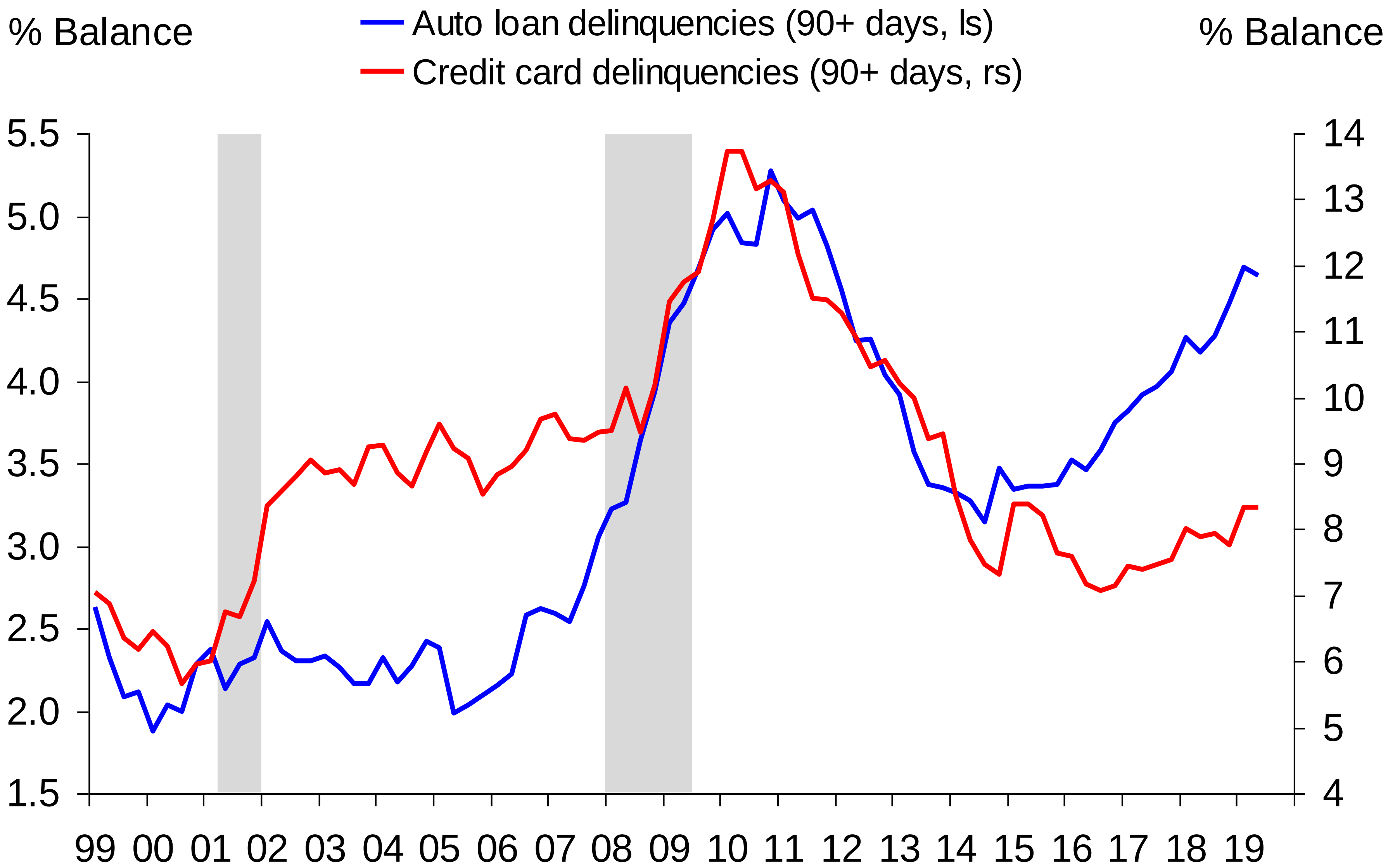
Source: Federal Reserve Board, Haver Analytics, DB Global Research

Auto loan interest rates increased by 2%-points in 2018



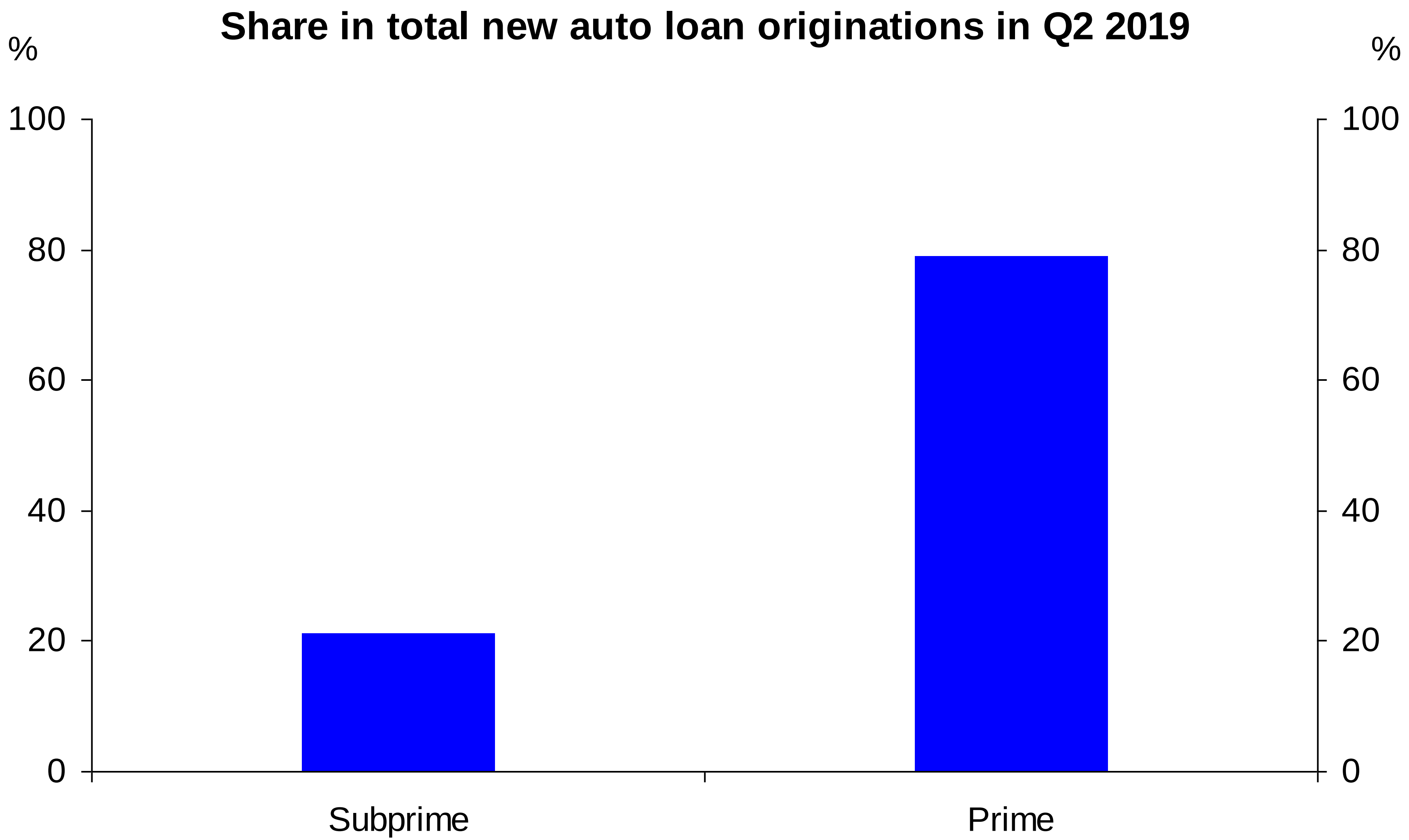
Source: FRB, Haver Analytics, DB Global Research

Delinquency rates moving up for consumers



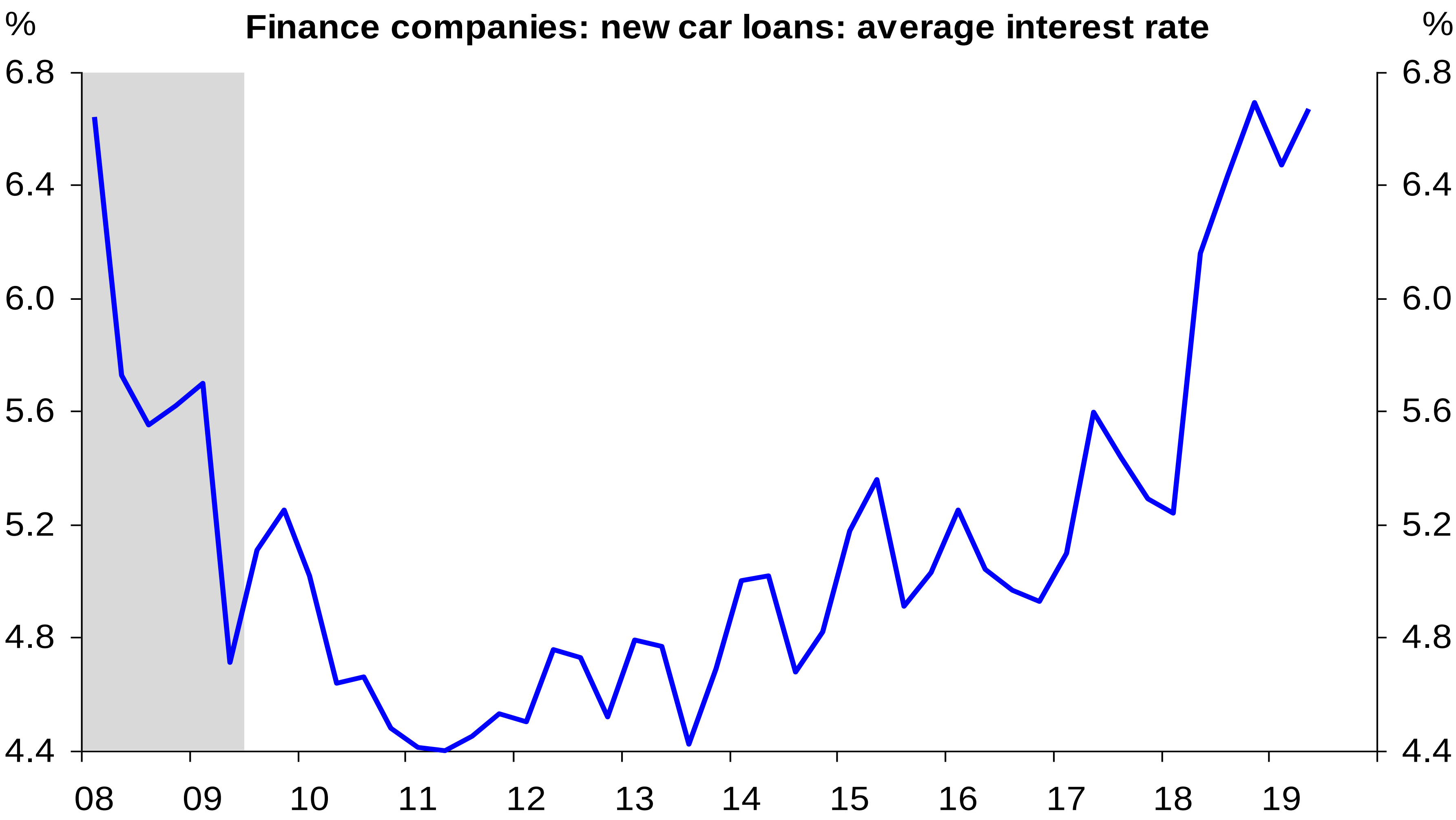
Source: FRB, Haver Analytics, DB Global Research

85% of new cars sold are financed. And 20% of new car sales are subprime



Source: New York Fed Consumer Credit Panel/Equifax, DB Global Research

Interest rate on car loans at finance companies going up



Source: FRB, Haver Analytics, DB Global Research

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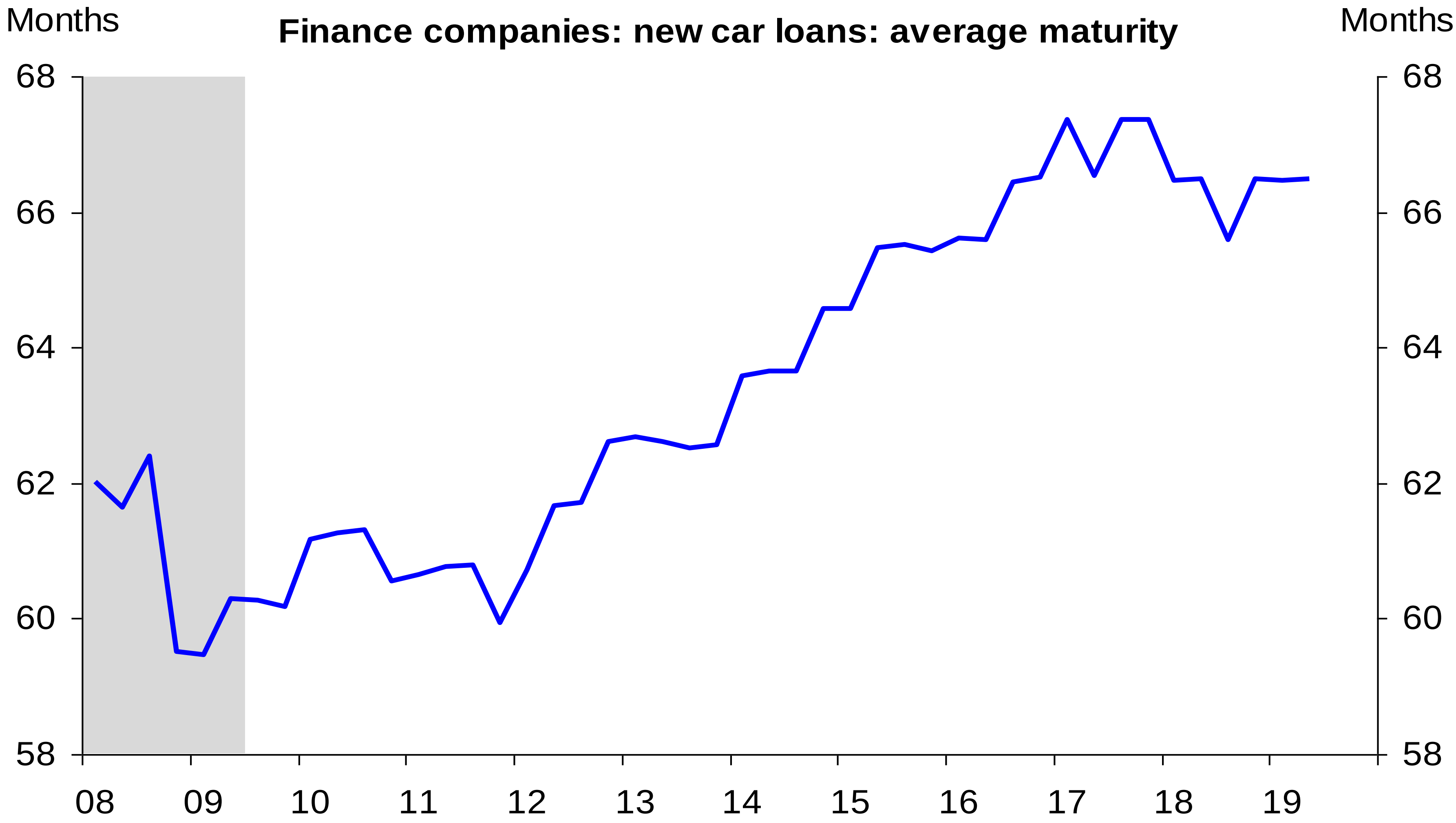
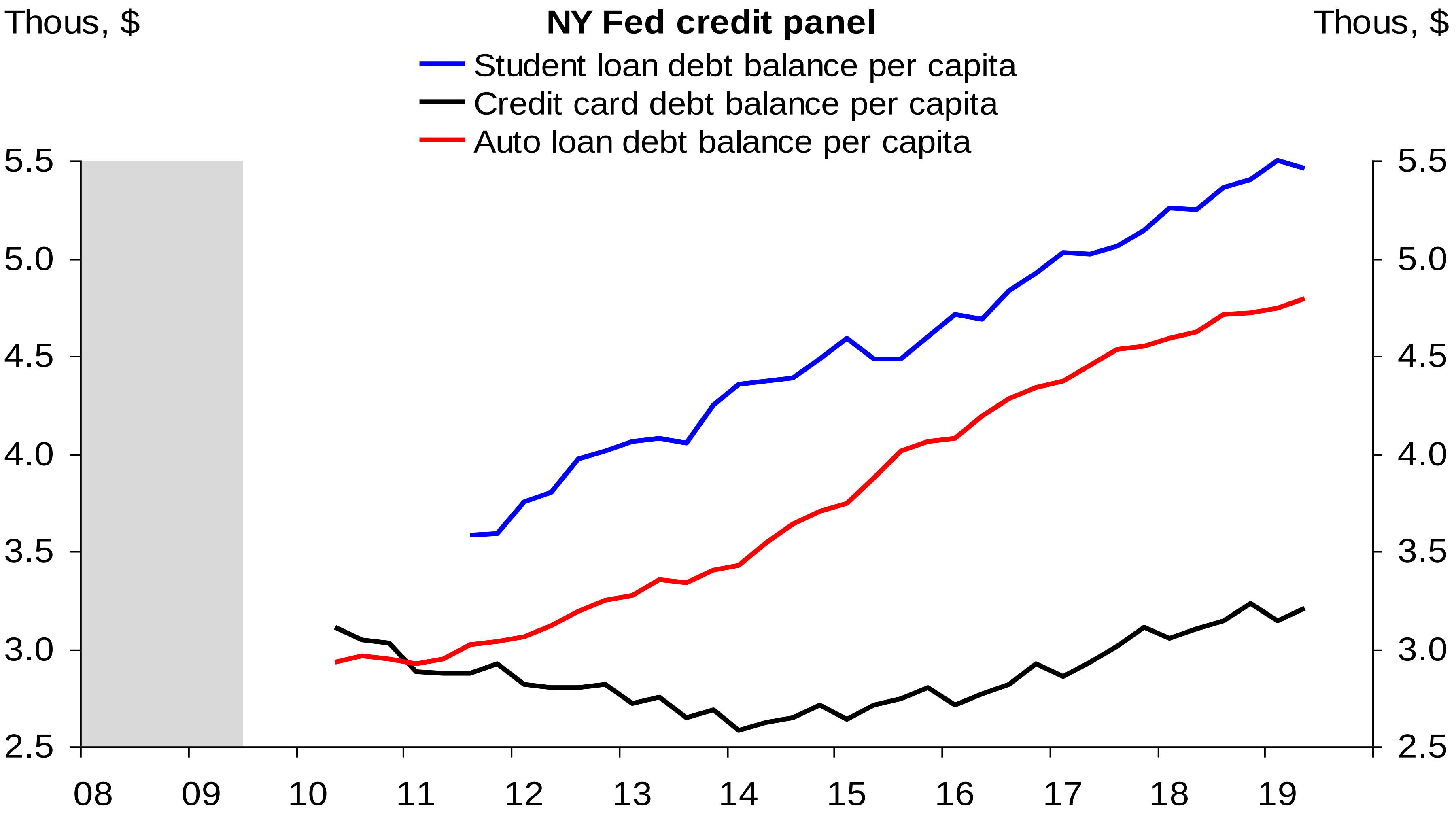
Average maturity of auto loans going up



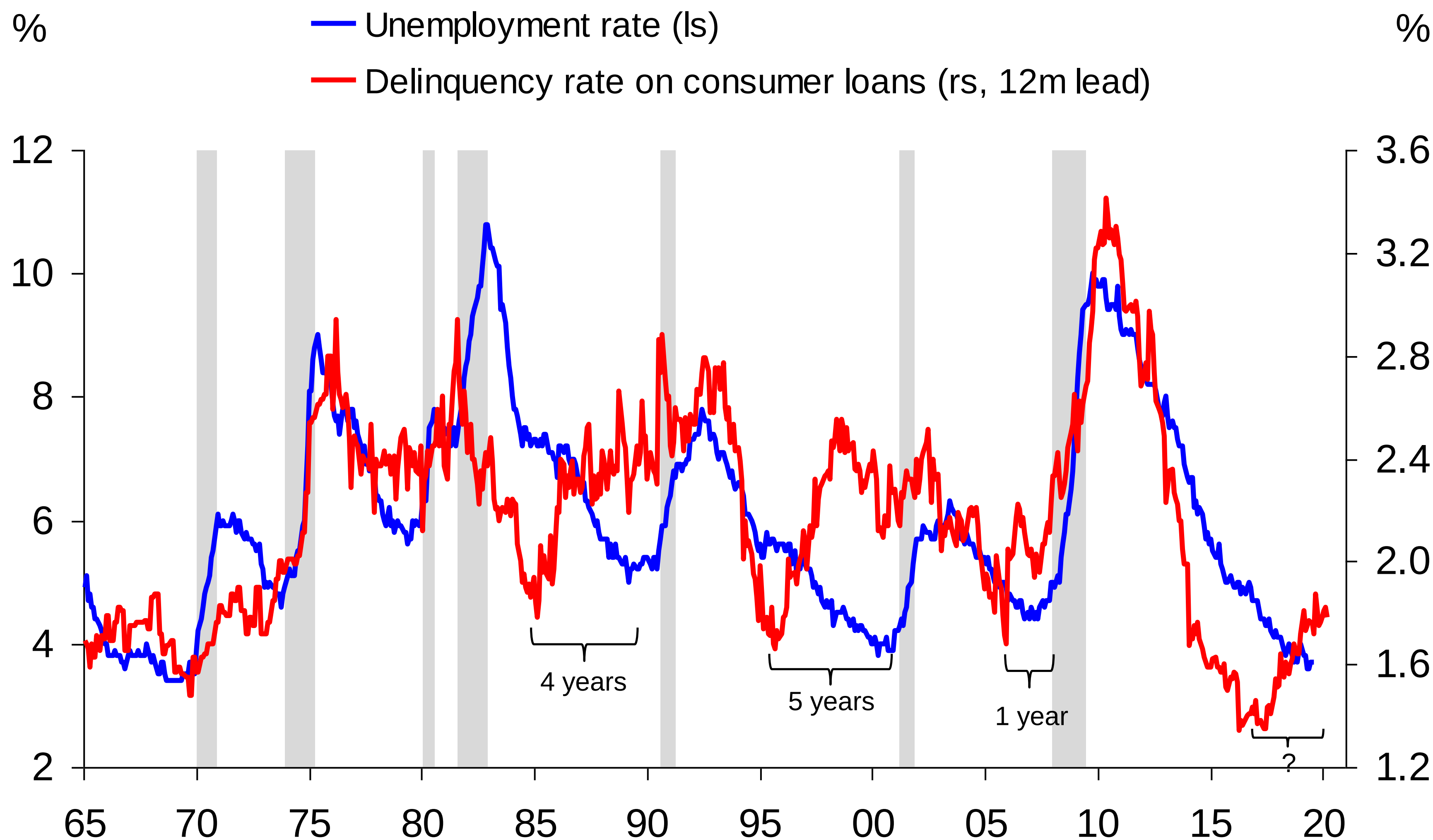
Source: FRB, Haver Analytics, DB Global Research

Student debt per capita: $5460
Auto loan debt per capita: $4790
Credit card balance per capita: $3210



Source: FRBNY Consumer Credit Panel, Equifax, Haver Analytics, DB Global Research

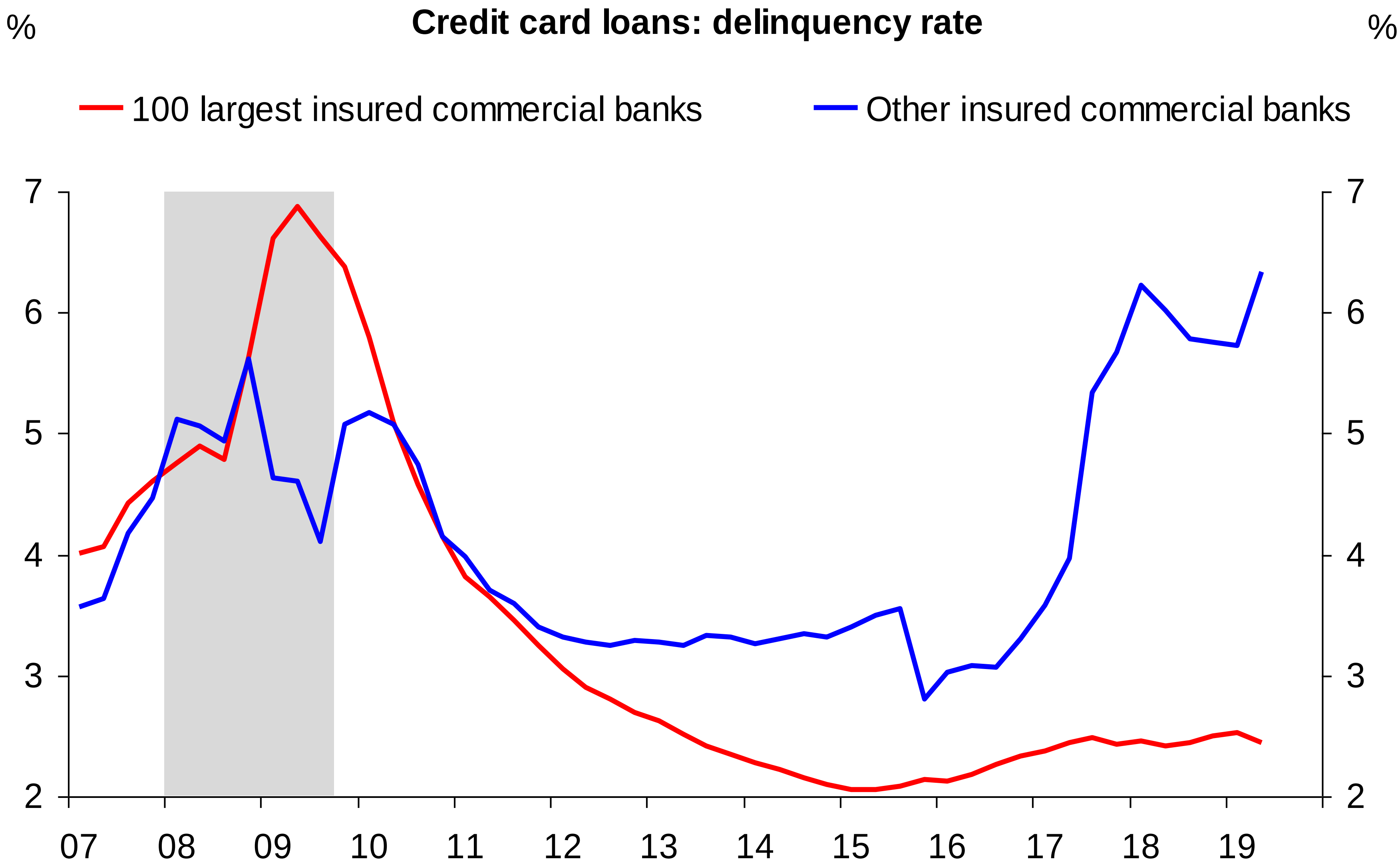
Late-cycle worries: Delinquency rates moving higher



Note: Composite consumer loans consists of eight loan types: personal, automobile direct & indirect, mobile homes, recreational vehicles, marine financing loans, property improvement and home equity and second mortgage loans.

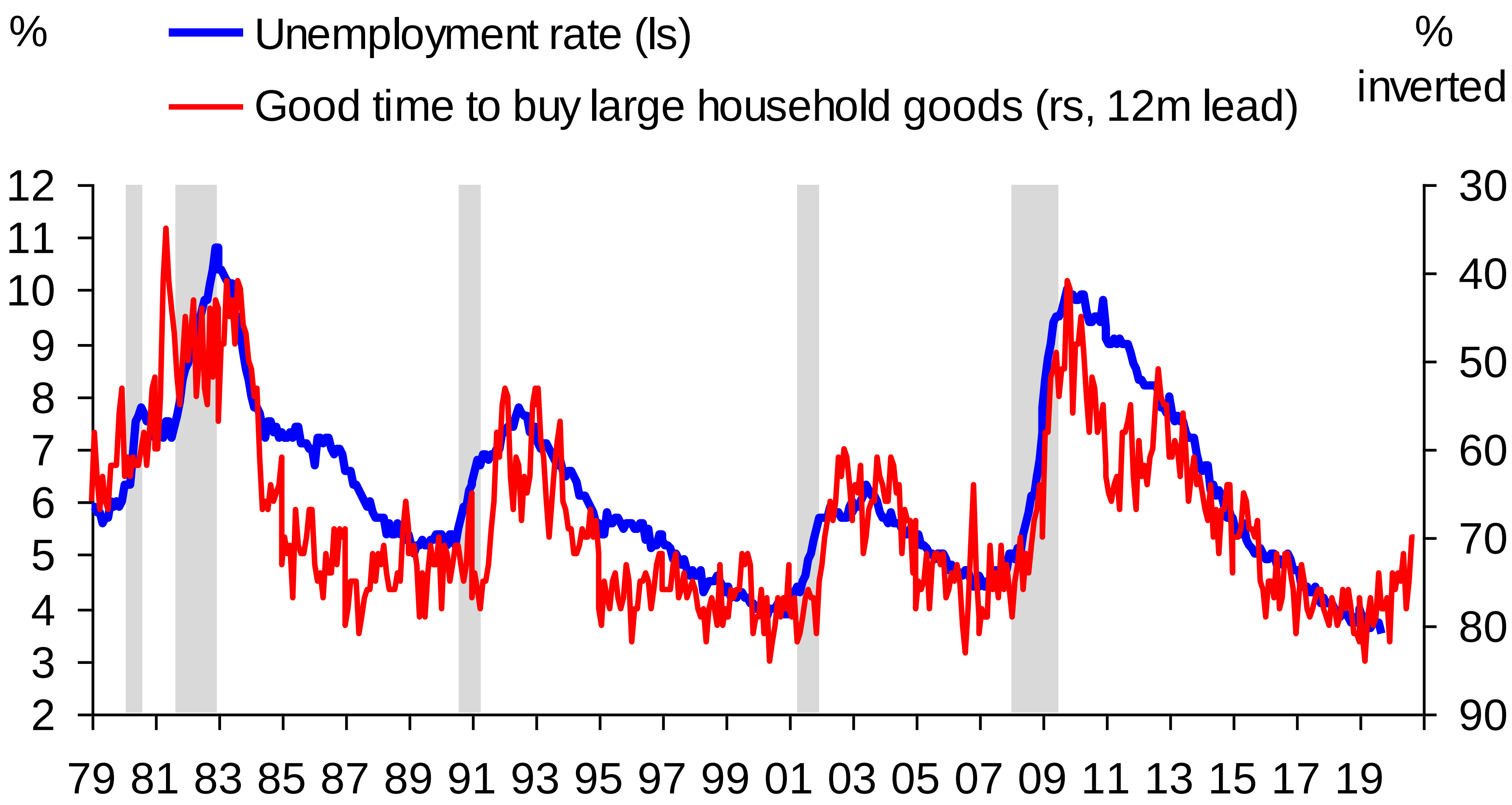
Source: BLS, ABA, Haver Analytics, DB Global Research

Credit card delinquencies above 2008 levels for smaller lenders



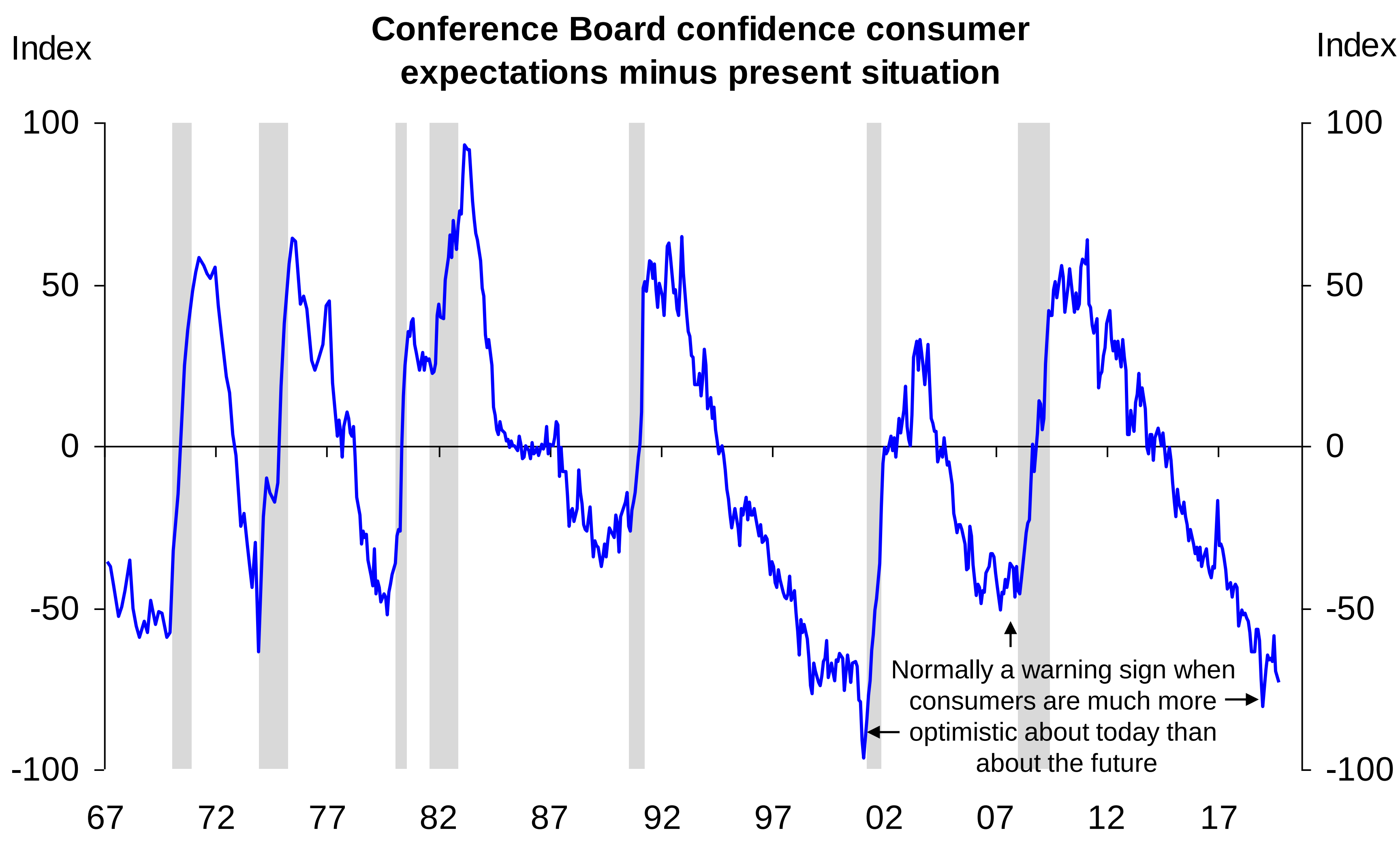
Source: Federal Reserve Board, Haver Analytics, DB Global Research

Consumers have less appetite for buying durable goods
This is a classic sign that we are late cycle



Source: BLS, UMichigan, Haver Analytics, DB Global Research

Late-cycle worries:
Consumers more optimistic about today than about the future

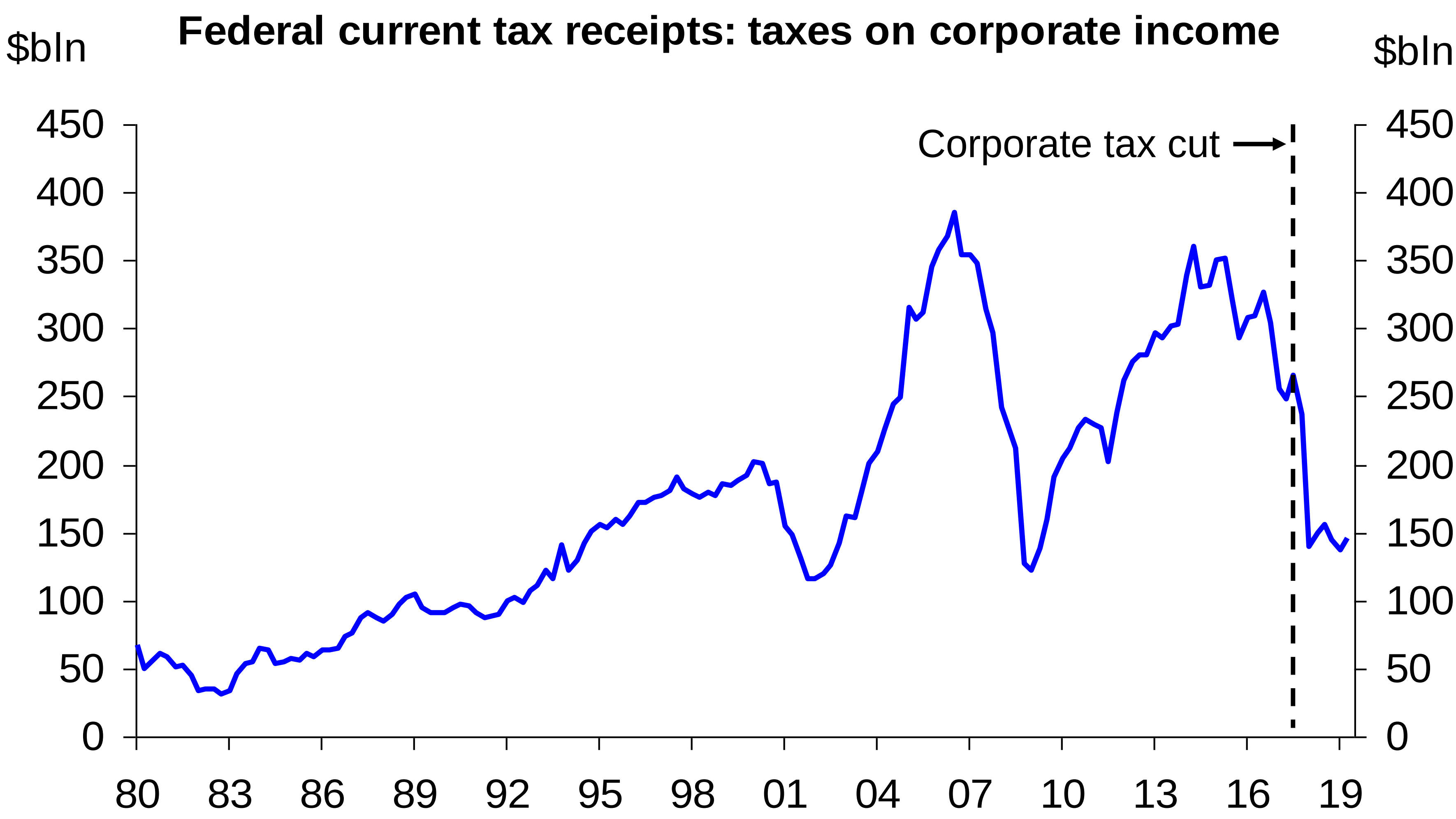


Source: Conference Board, Haver Analytics, DB Global Research

Risk #5

Treasury issuance rising sharply

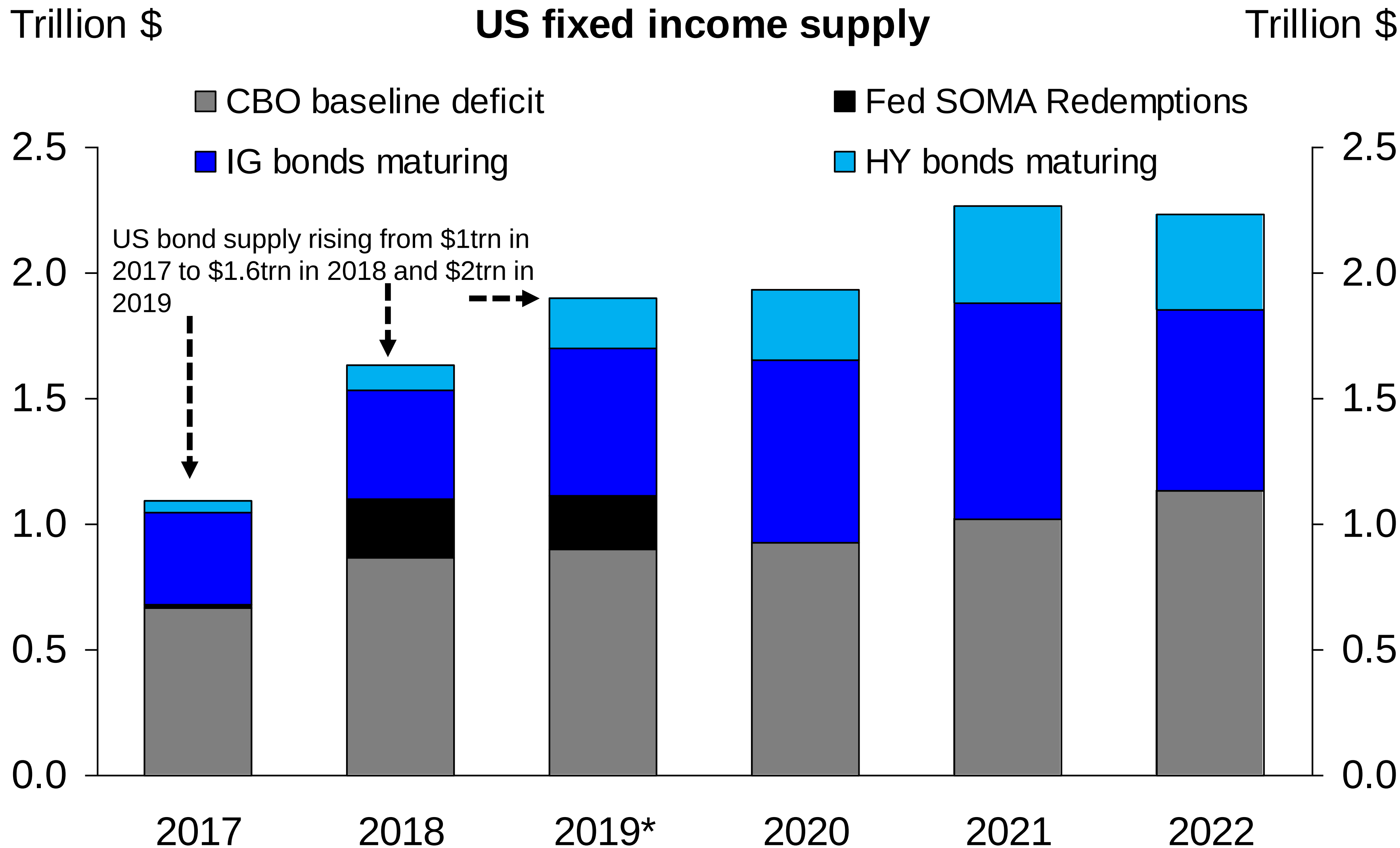
Corporate tax revenue down significantly



Source: FRED, https://fred.stlouisfed.org/series/B075RC1Q027SBEA, DB Global Research

Stock of risk-free assets growing dramatically:

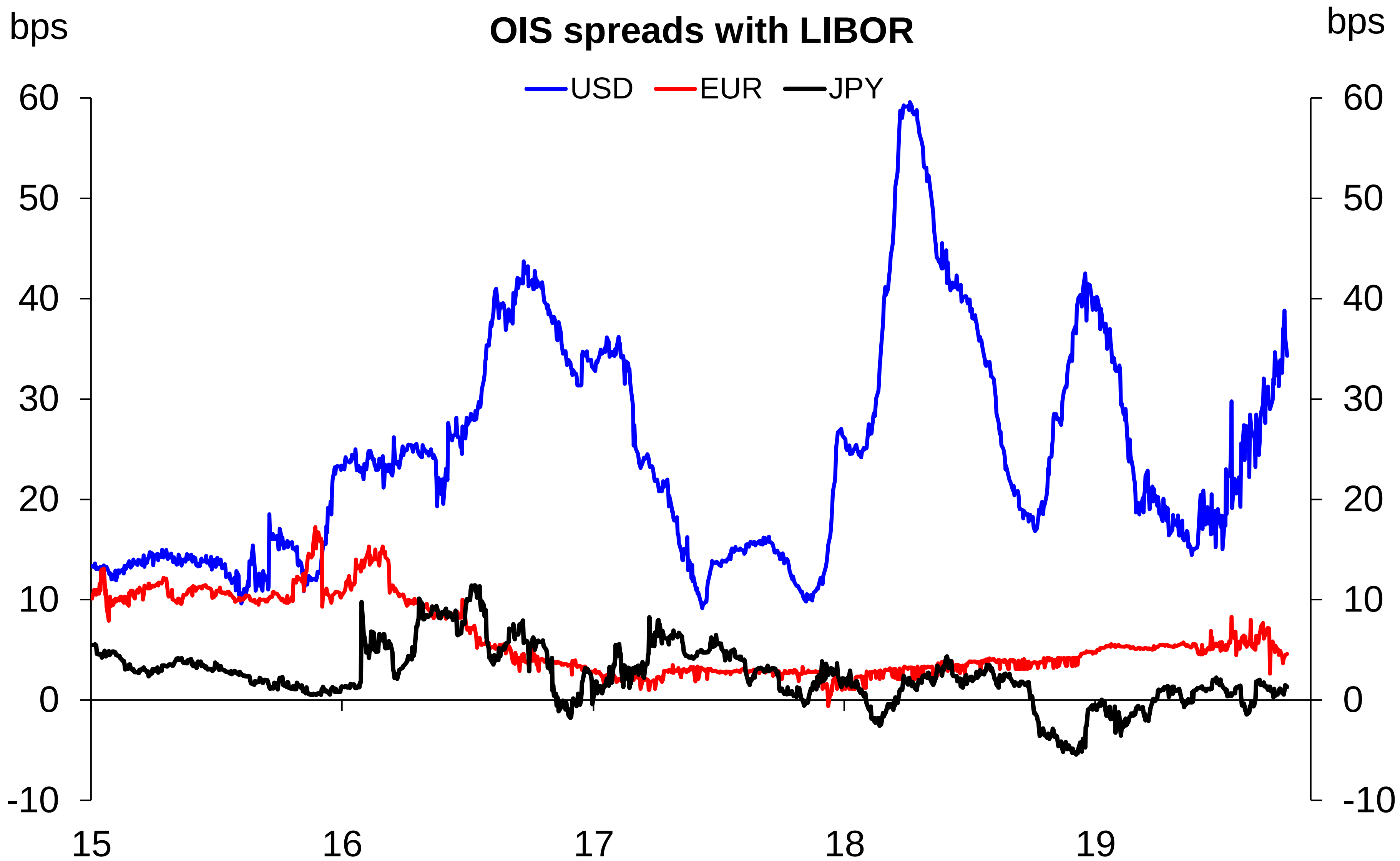
Explosion in US Treasury supply from tax cuts and Fed balance sheet rundown will crowd out investments in IG, HY, and equities



Notes: Deficit projections based on the January 2019 CBO Outlook and are adjusted from fiscal year basis to calendar year basis.
**If the Fed stops the runoff in October 2019*

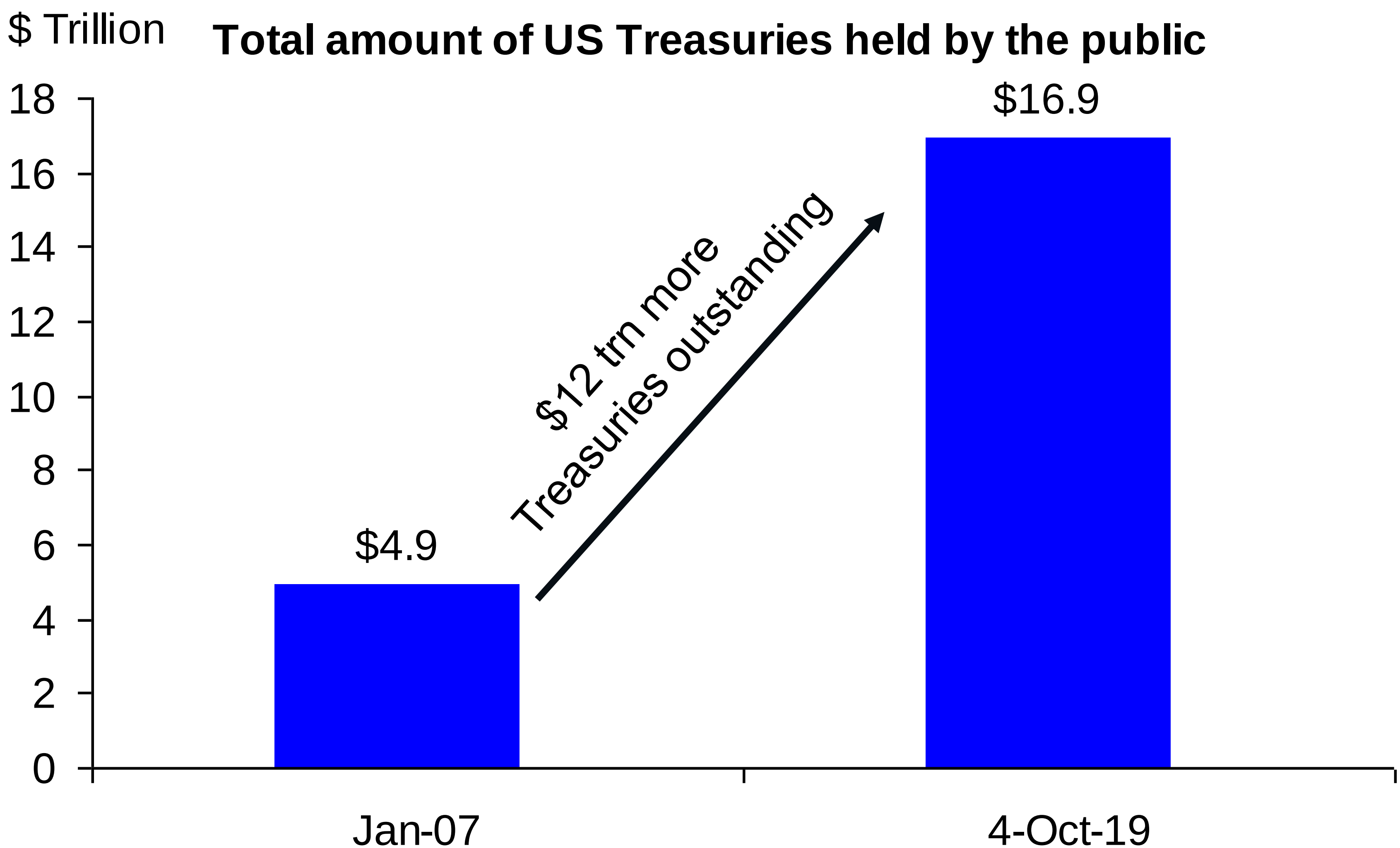
Source: Steven Zeng, Michal Jezek, Standard & Poor's Financial Services LLC, DB Global Research

LIBOR OIS widening is a US phenomenon



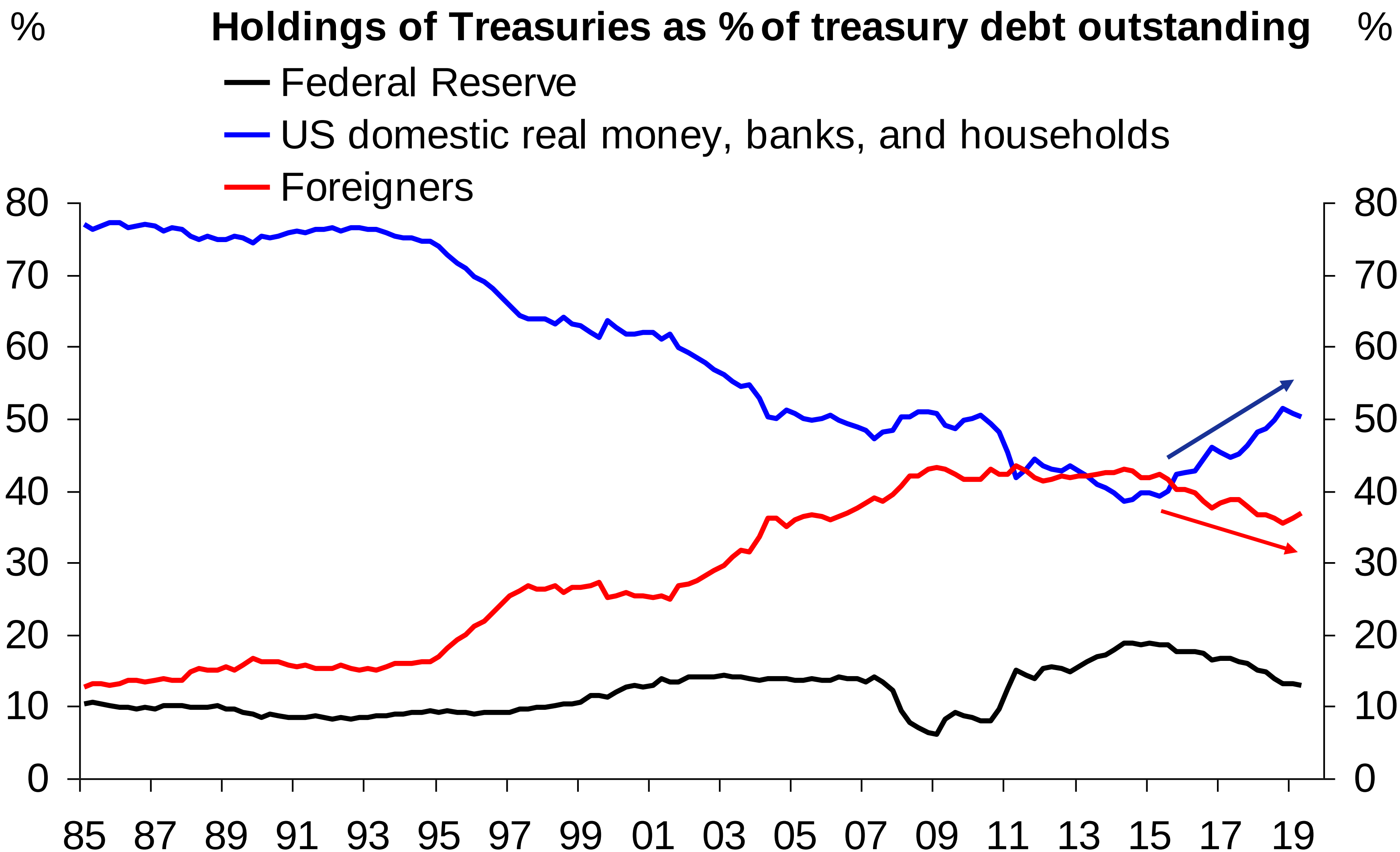
Source: Bloomberg Finance LP, DB Global Research

The amount of risk-free assets outstanding is growing dramatically



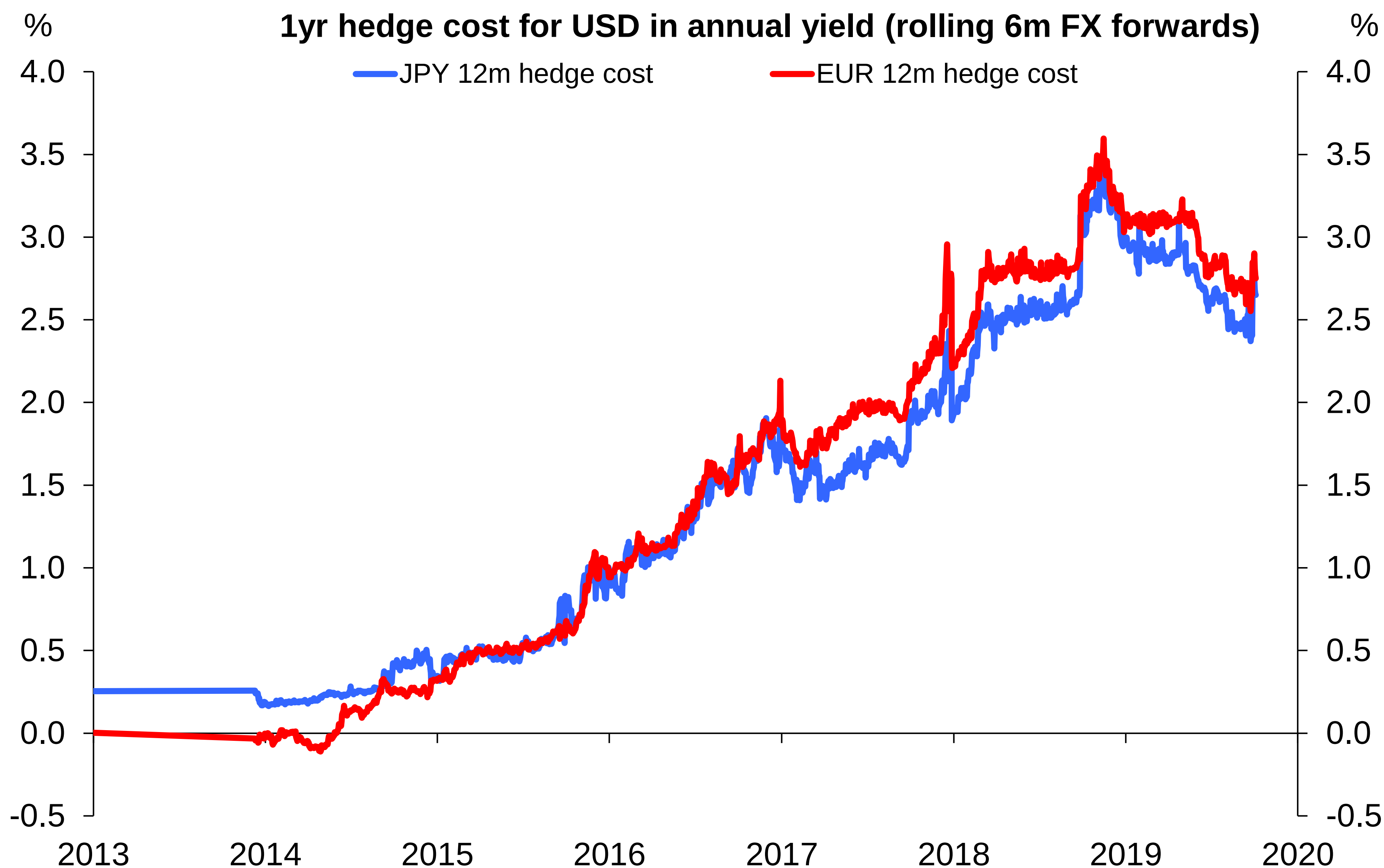
Source: U.S. Treasury, Haver Analytics, DB Global Markets Research

US domestic investors buying a lot of Treasuries



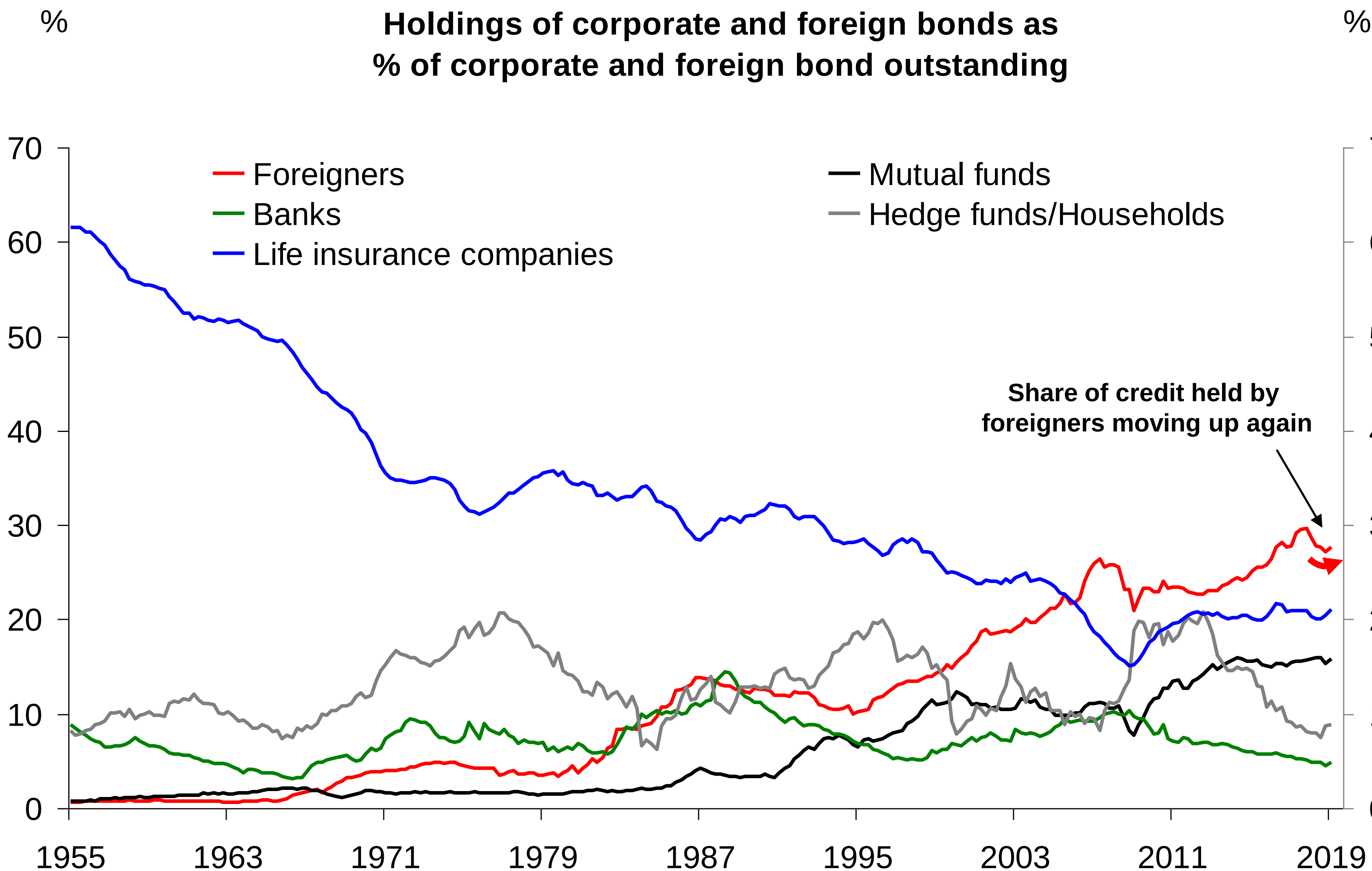
Source: FRB, Haver Analytics, DB Global Markets Research

Hedging costs coming down for European and Japanese investors who want to buy US fixed income



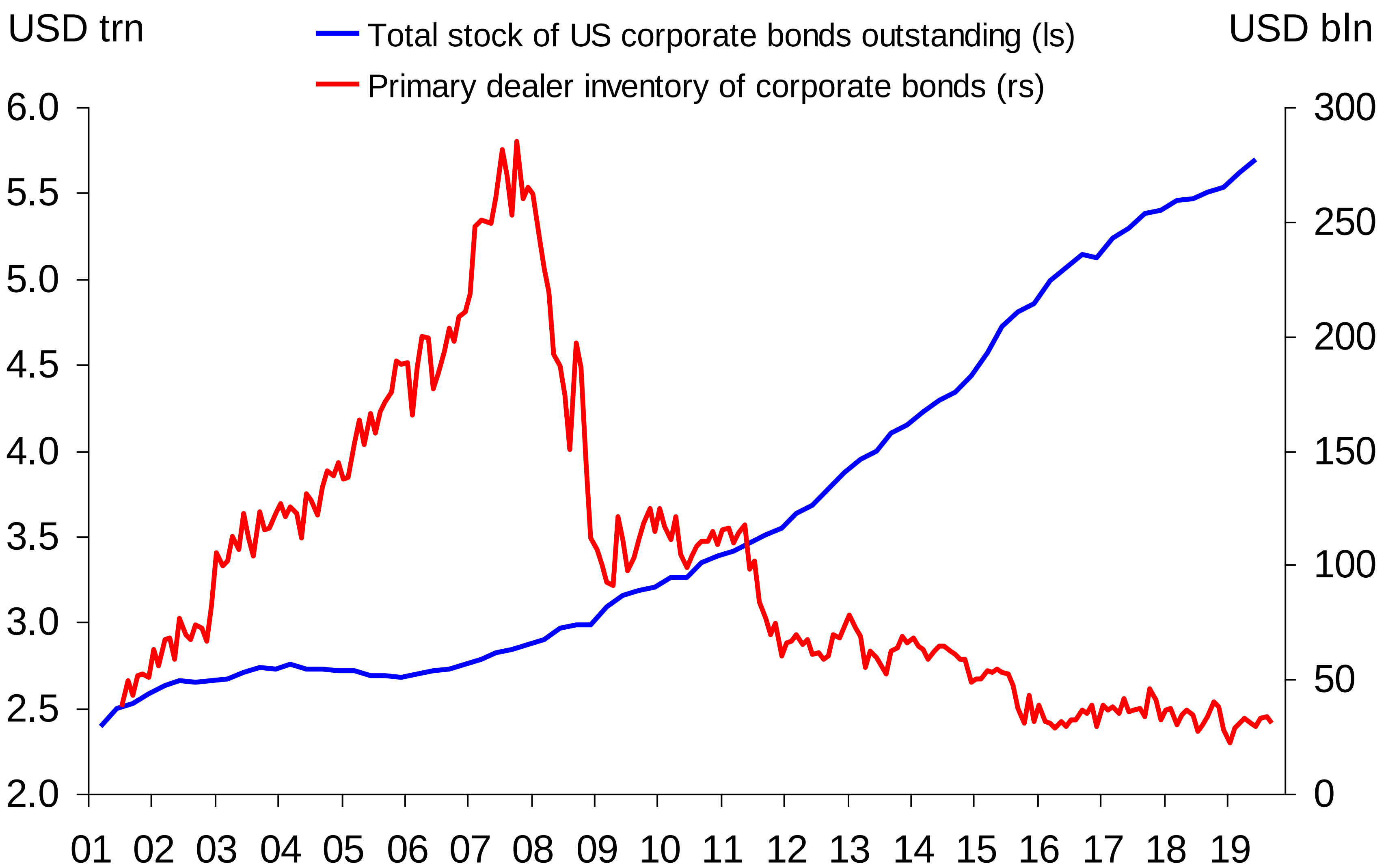
Source: Steven Zeng, Bloomberg Finance LP, DB Global Research

Foreign appetite for US IG and HY



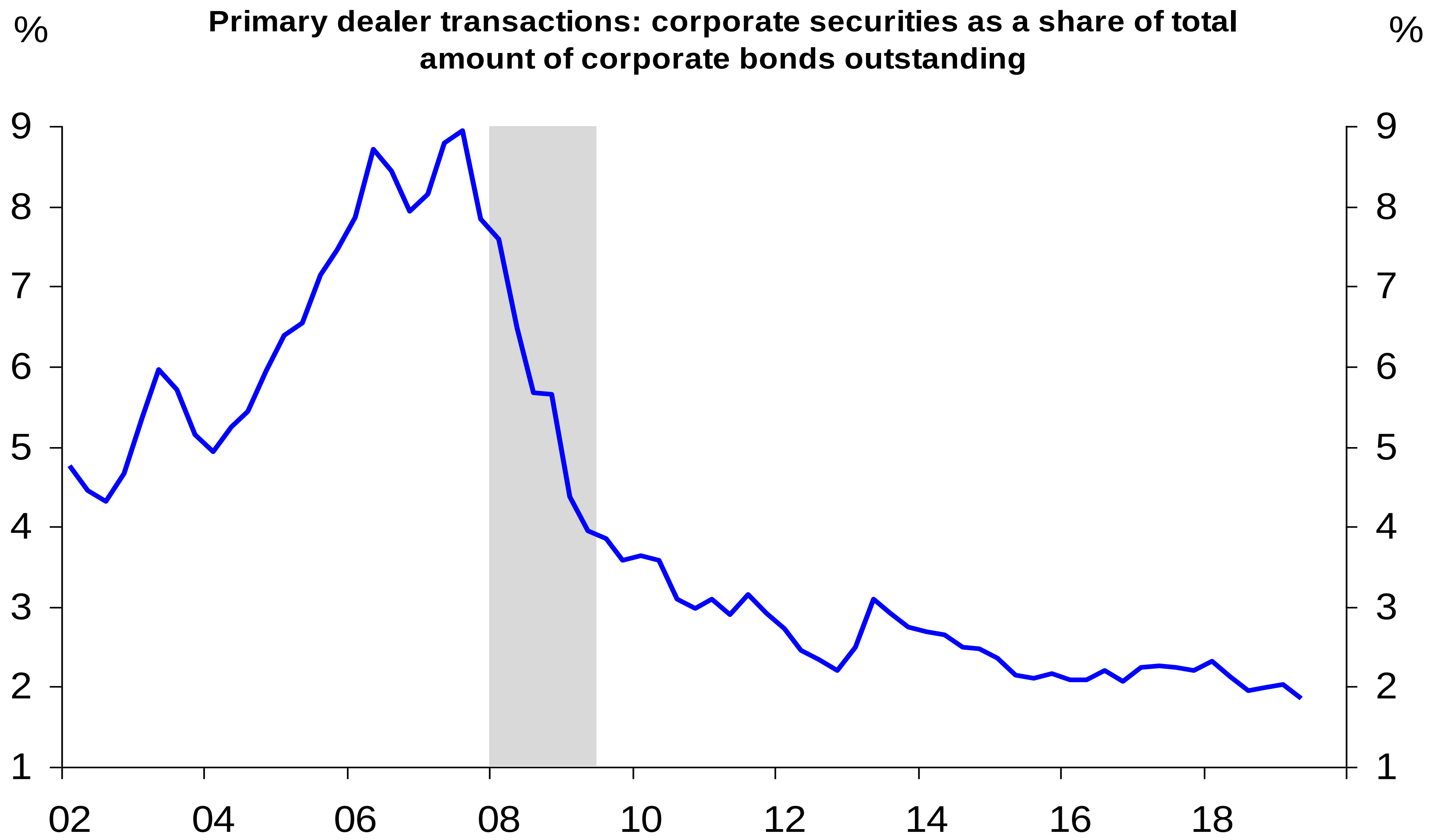
Source: FRB, Haver Analytics, DB Global Research

Low primary dealer inventory of corporate bonds relative to the outstanding stock of IG and HY outstanding



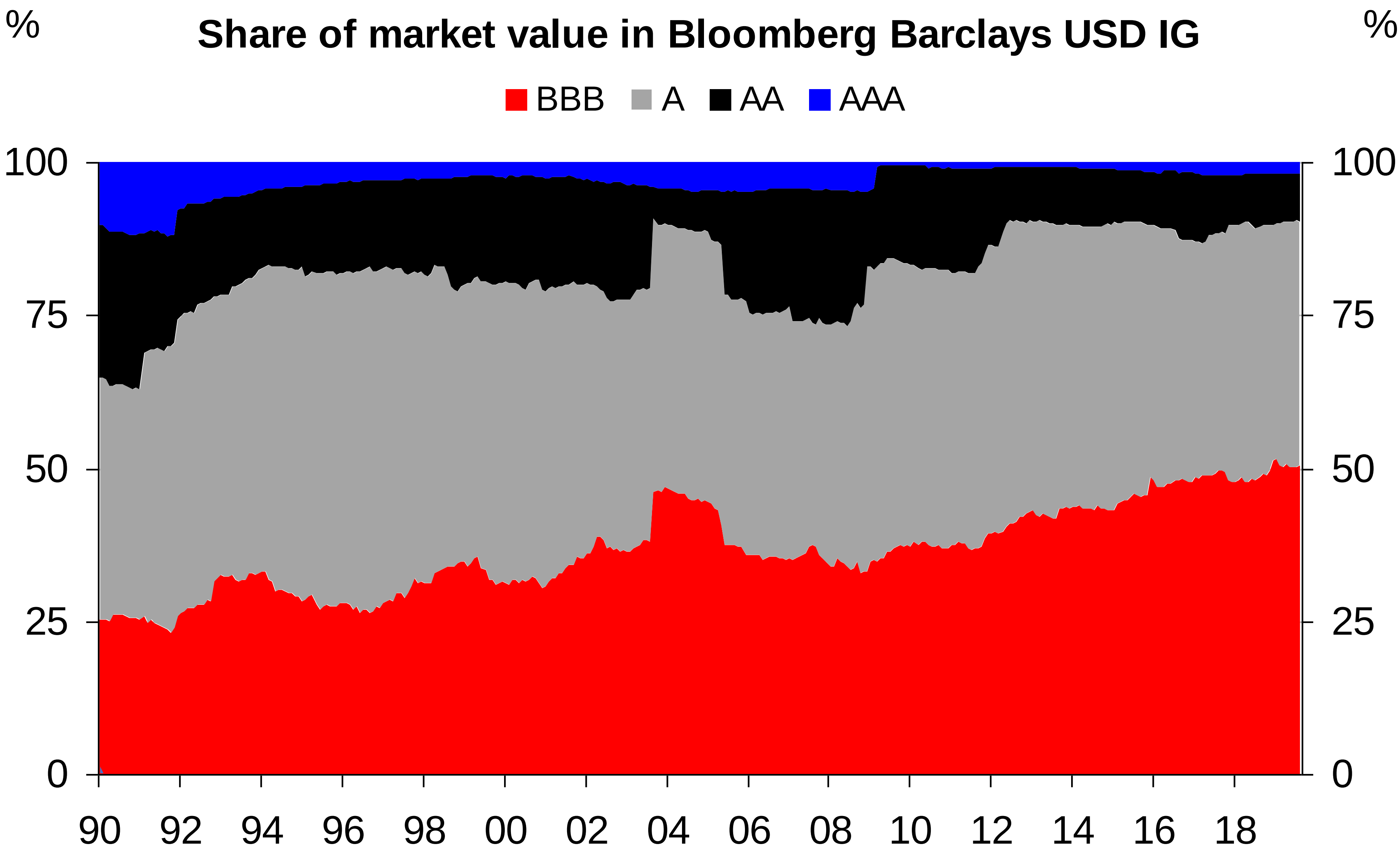
Source: FRB-NY, FRB, Haver Analytics, DB Global Research

Primary dealer trading volumes as a share of the total corporate bond market



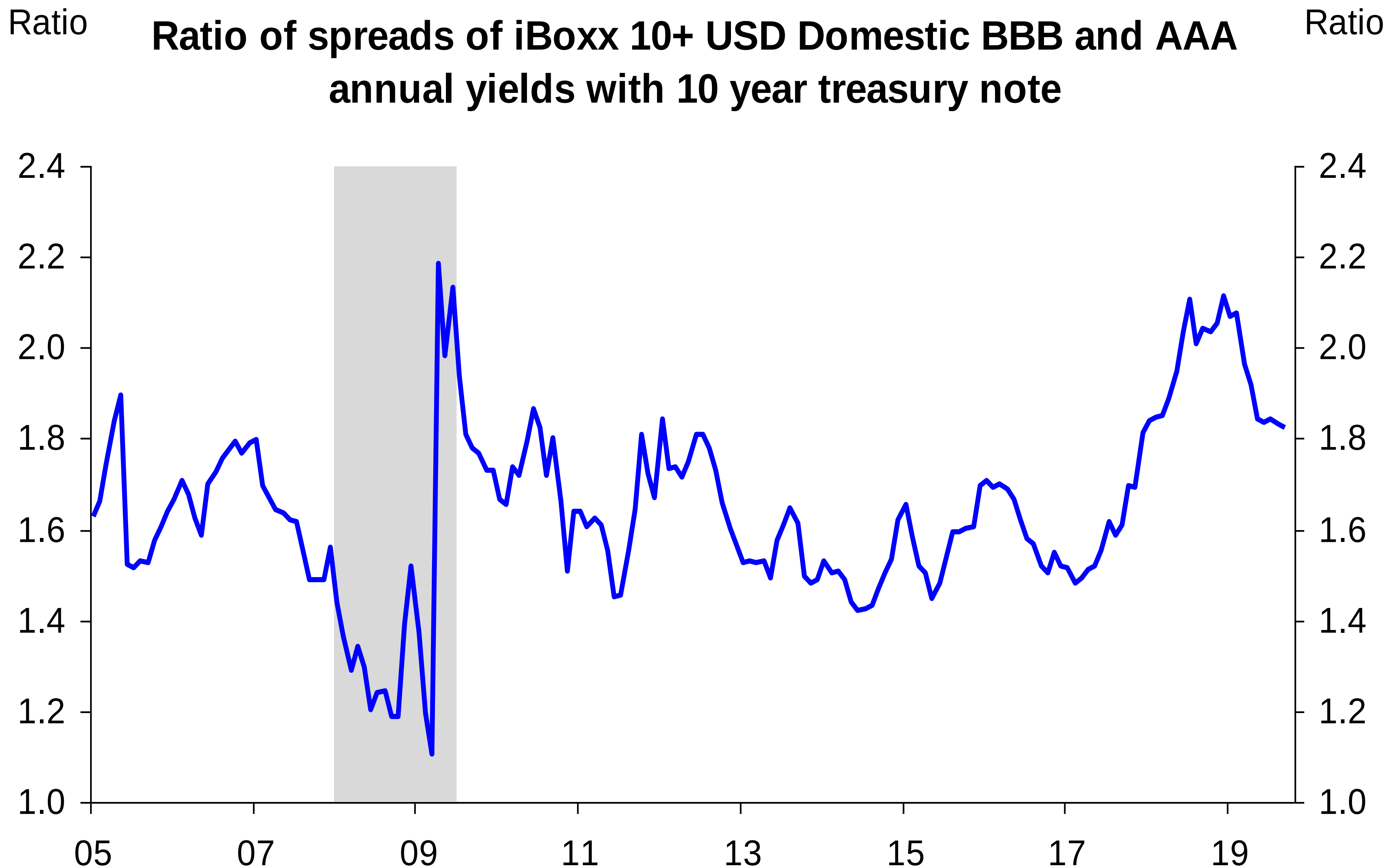
Source: FRBNY, FRB, Haver Analytics, DB Global Research

50% of the IG index is BBB



Source: Bloomberg Finance LP, DB Global Research

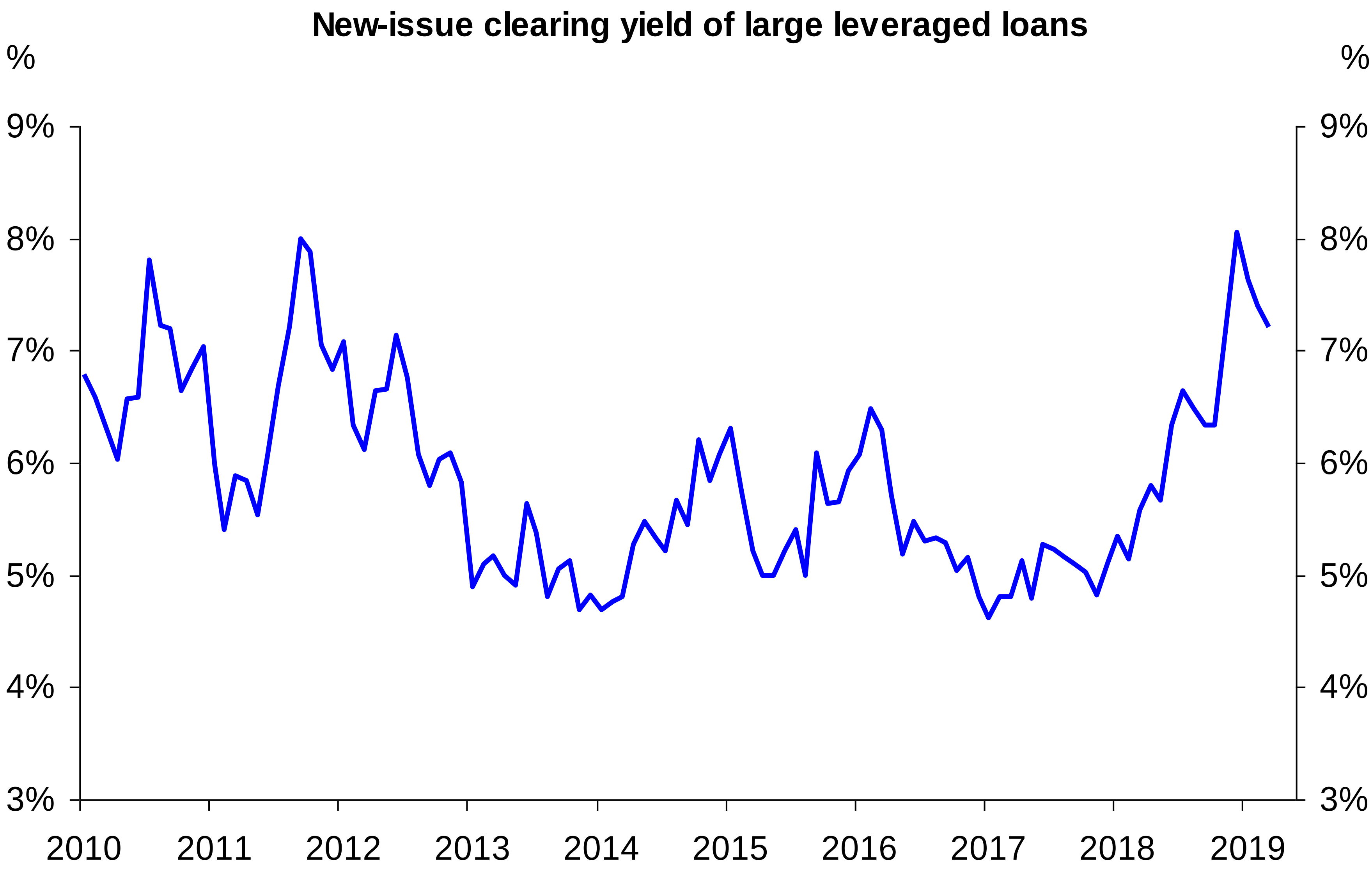
Spread between BBB and AAA



Note: The chart plots (iBoxx BBB 10+ yield – 10y treasury yield) ratio with (iBoxx AAA 10+ yield – 10y treasury yield)

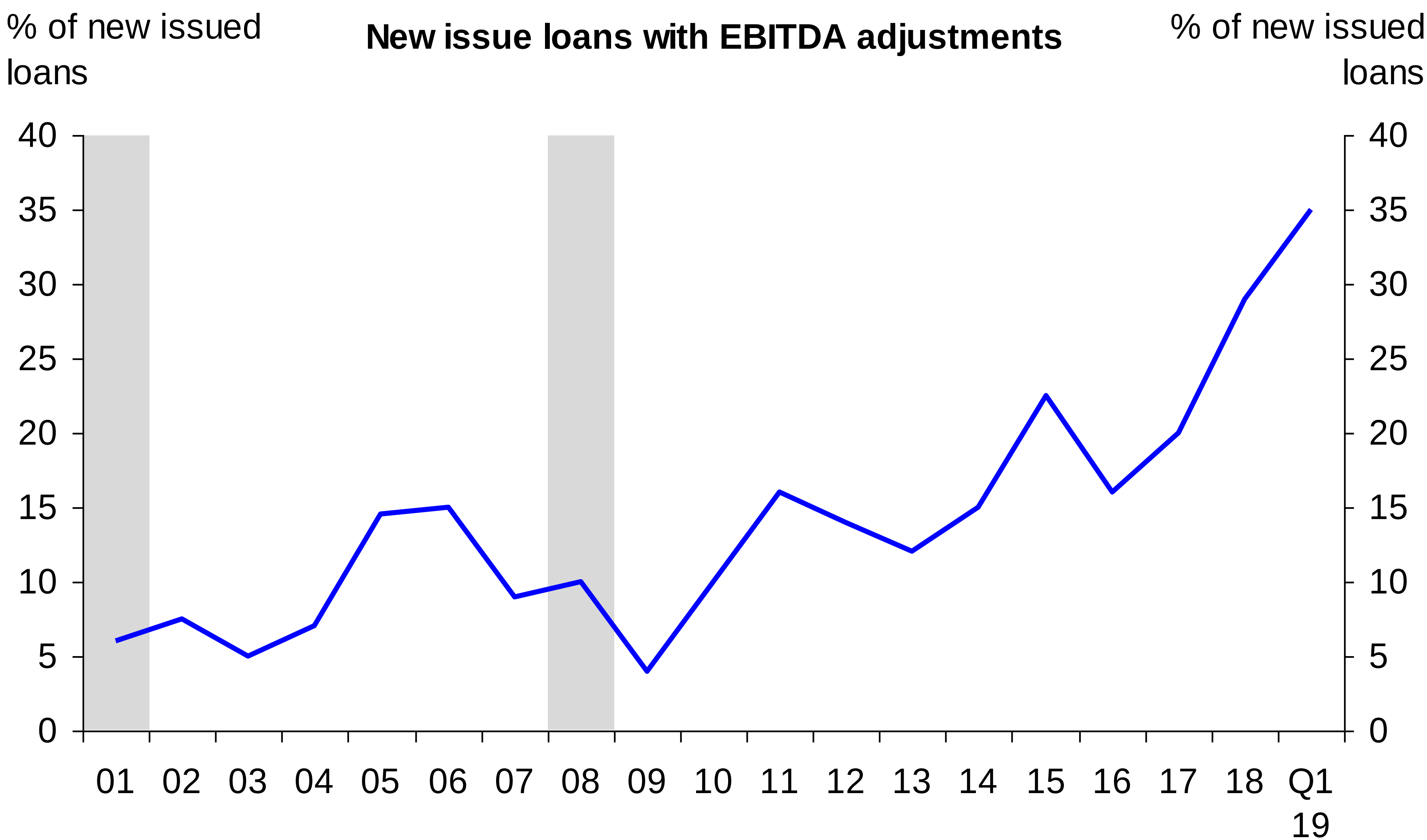
Source: IHS Markit, FRB, Haver Analytics, DB Global Research

Yields higher on leveraged loans



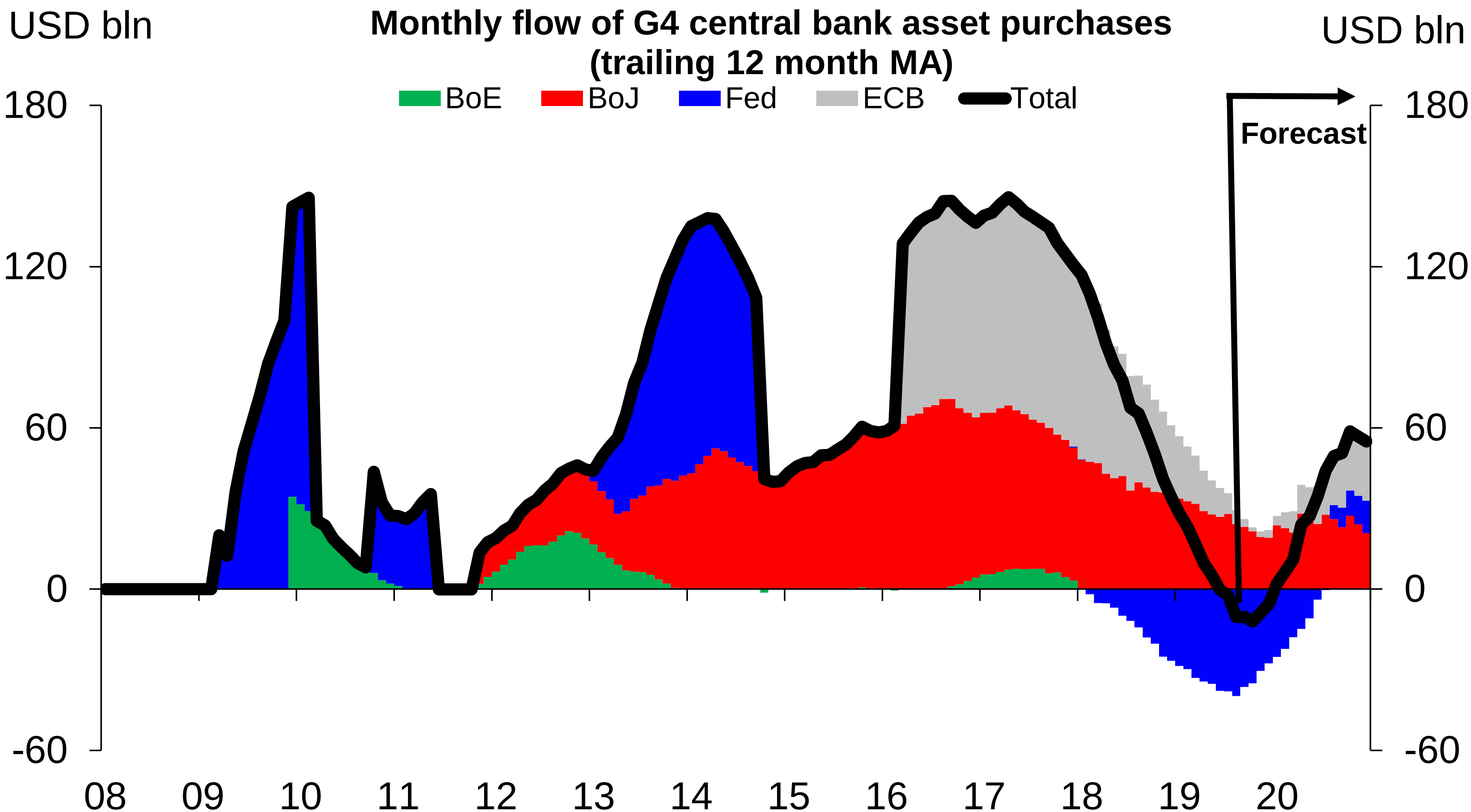
Source: S&P LCD Global Market Intelligence , DB Global Research

More loans have EBITDA adjustments



Source: S&P LCD, DB Global Research

Central bank asset purchases coming back



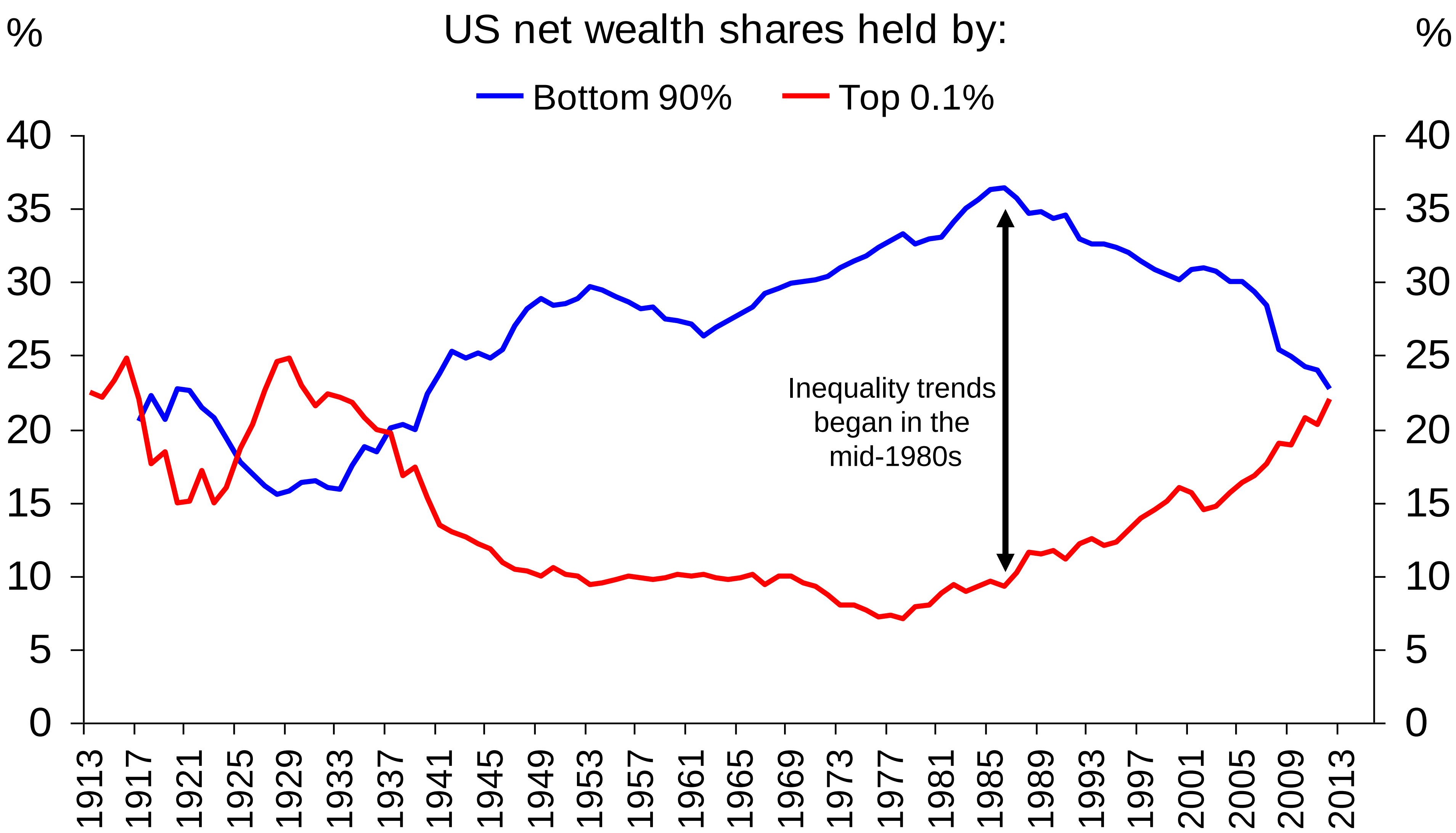
Assumptions: *Fed to purchase $ 16 bn assets monthly from March 2020 through December 2020; ECB to purchase EUR 20 bn assets monthly from September 2019 through December 2020; BoE to maintain assets as is through December 2020; BoJ to stealth taper asset purchases such that monthly purchases to become zero by December 2020 from September 2019. All FX forecasts assumed to be the same as August 2019.*

Source: Fed, ECB, BoJ, BoE, Haver Analytics, DB Global Research

Risk #6:

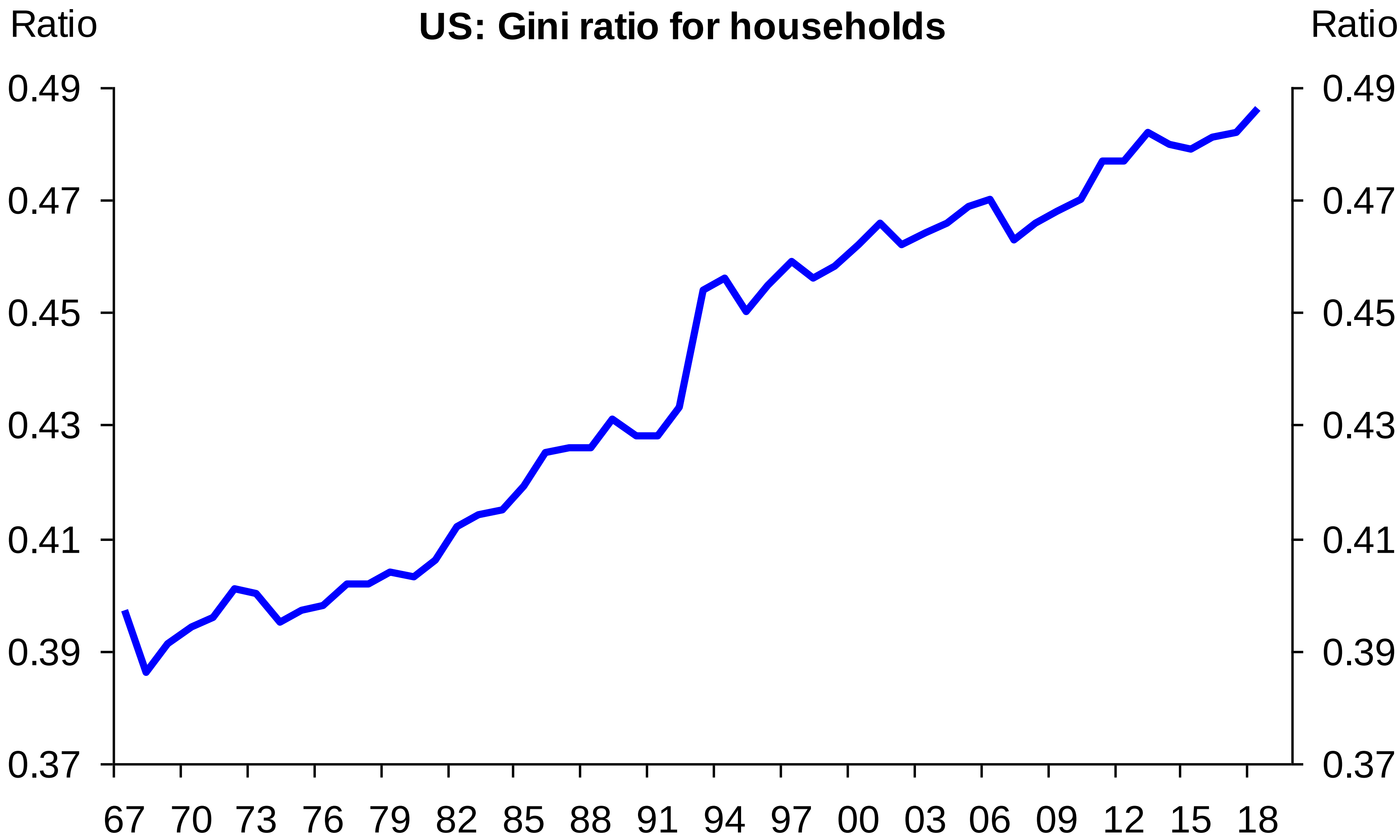
Inequality, populism, and markets

US: Top 0.1% owns as many assets as the bottom 90%



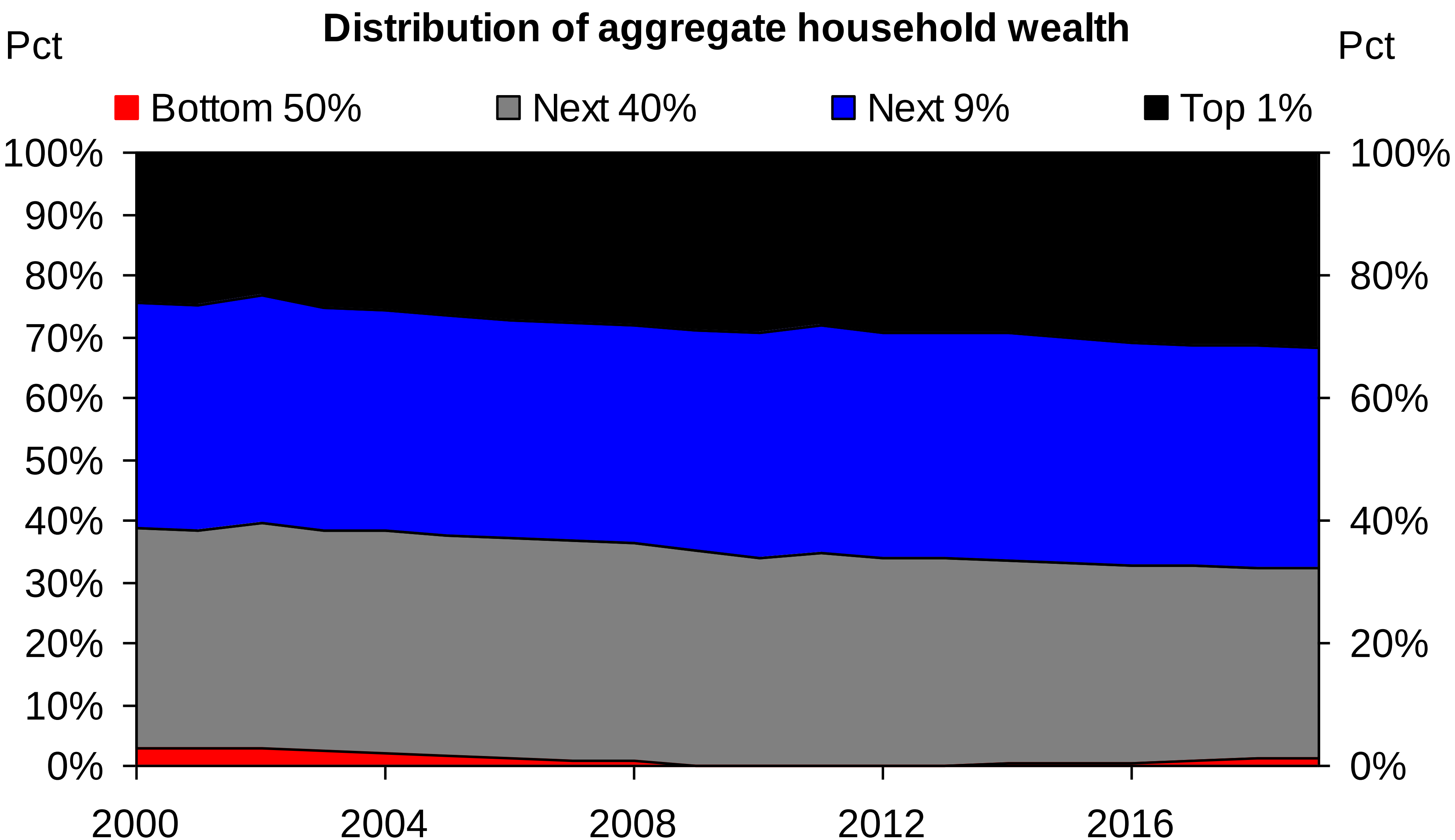
Source: The World Wealth and Income Database, DB Global Markets Research

Record-high inequality: Gini coefficient almost 0.5



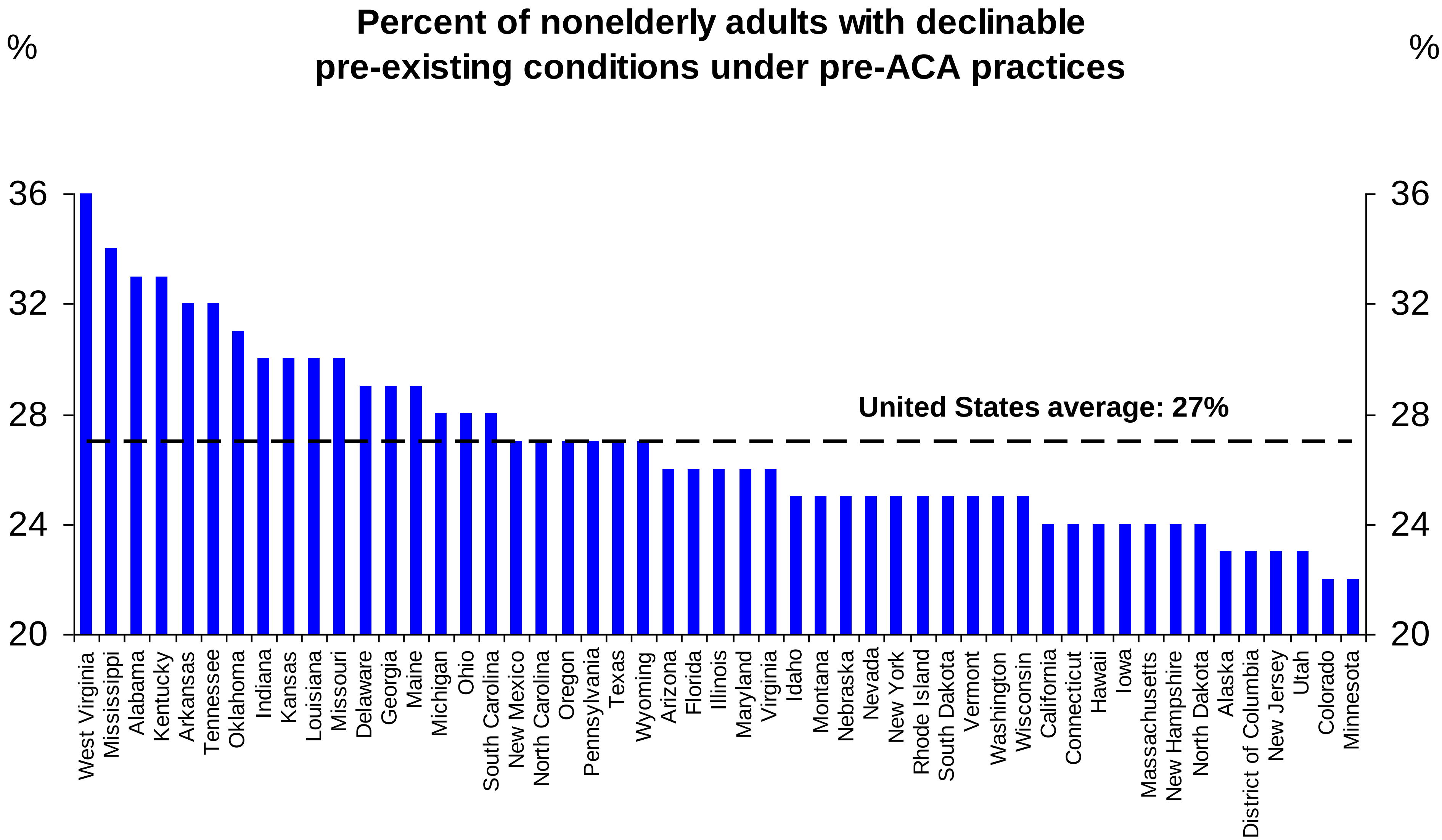
Source: Census Bureau, Haver Analytics, DB Global Research

The 10% richest households in the US used to own 60% of all wealth. Now they own almost 70%



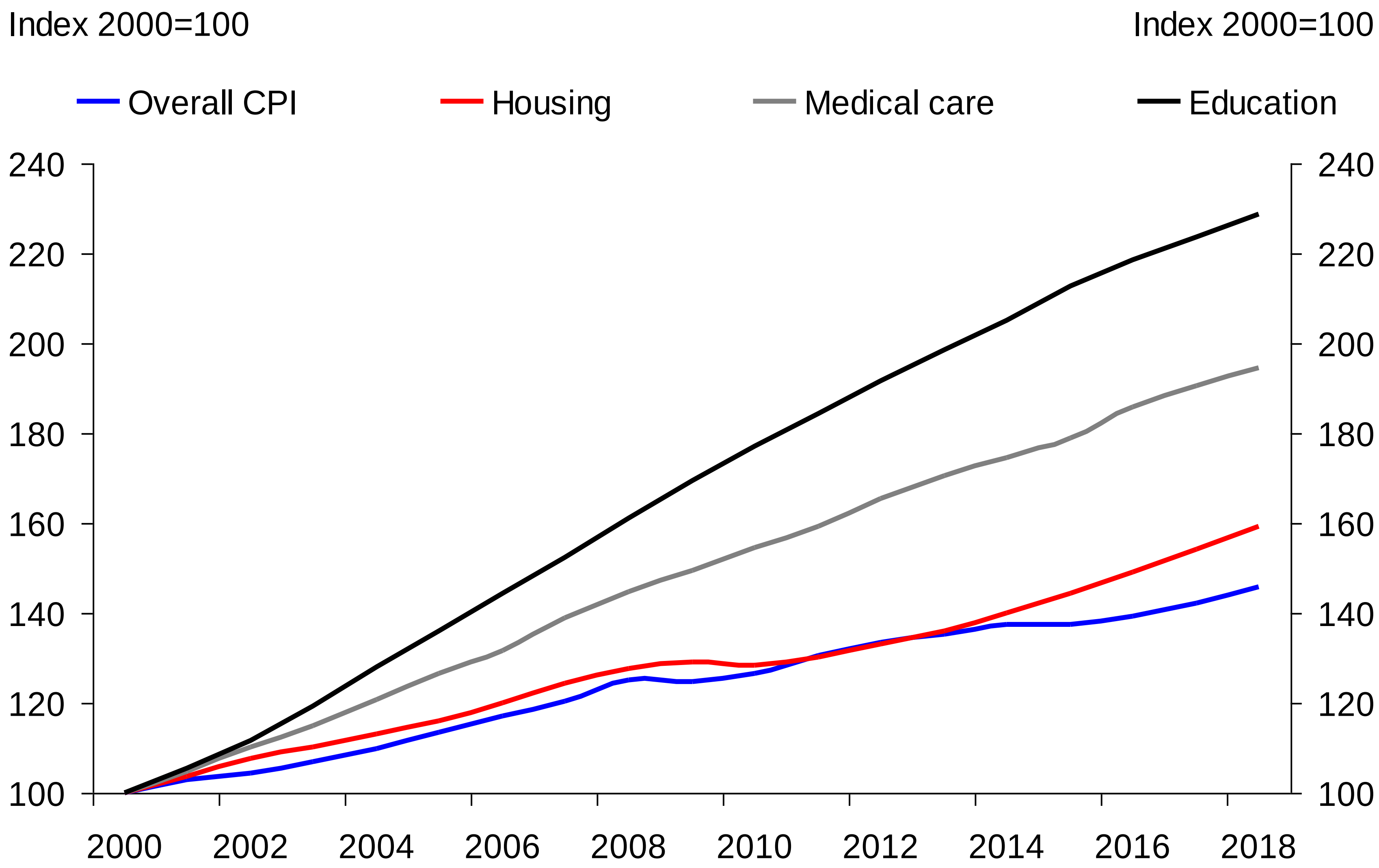
Source: FRB, DB Global Research

US: 27% of population have pre-existing conditions



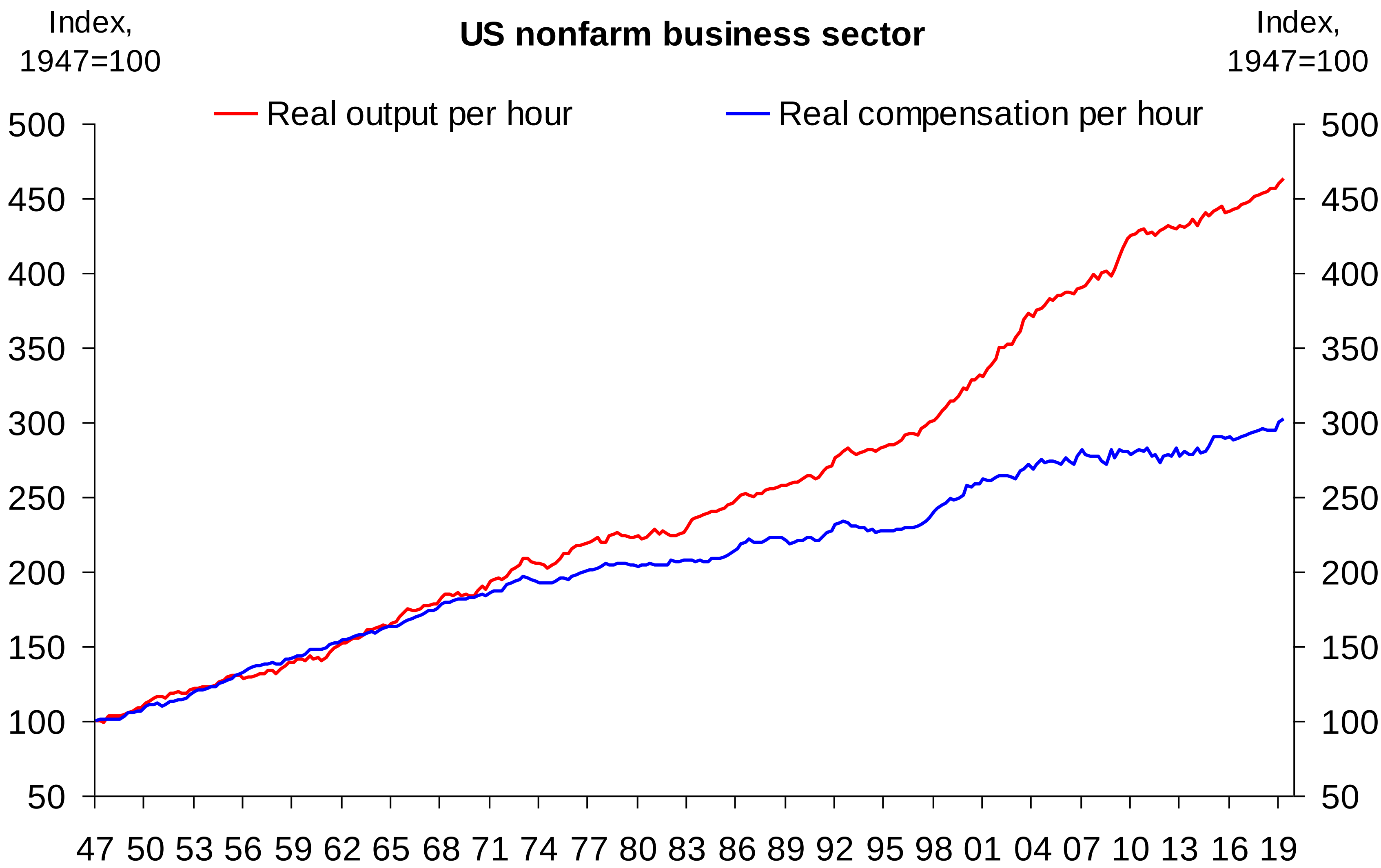
Source: Kaiser Family Foundation, DB Global Research

No inflation? Plenty of inflation in the price of healthcare, education, and housing



Source: BLS, Haver Analytics, DB Global Research

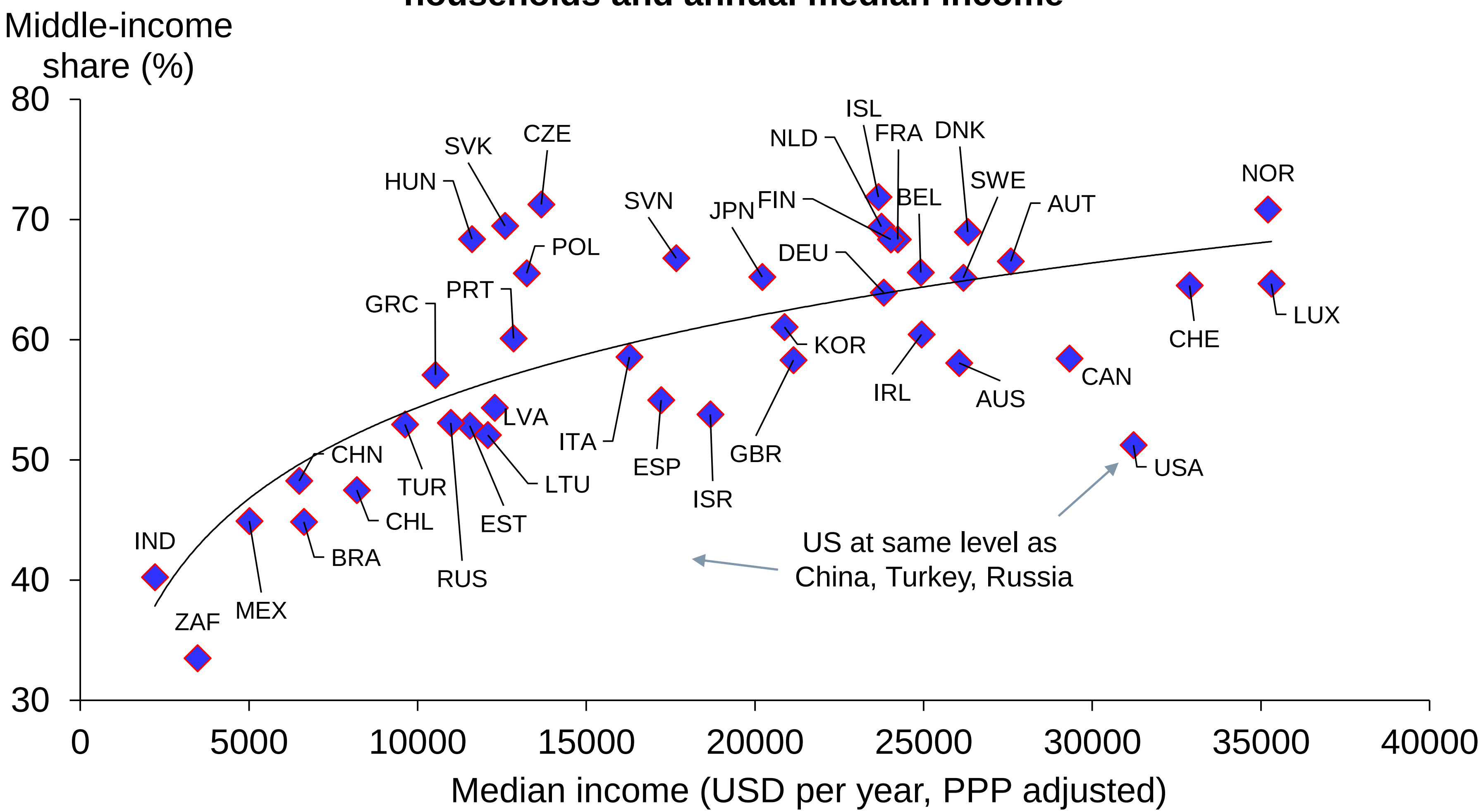
US: Productivity up but wages stagnating



Source: BLS, Haver Analytics, DB Global Research

Rich countries tend to have a bigger middle class, except the United States

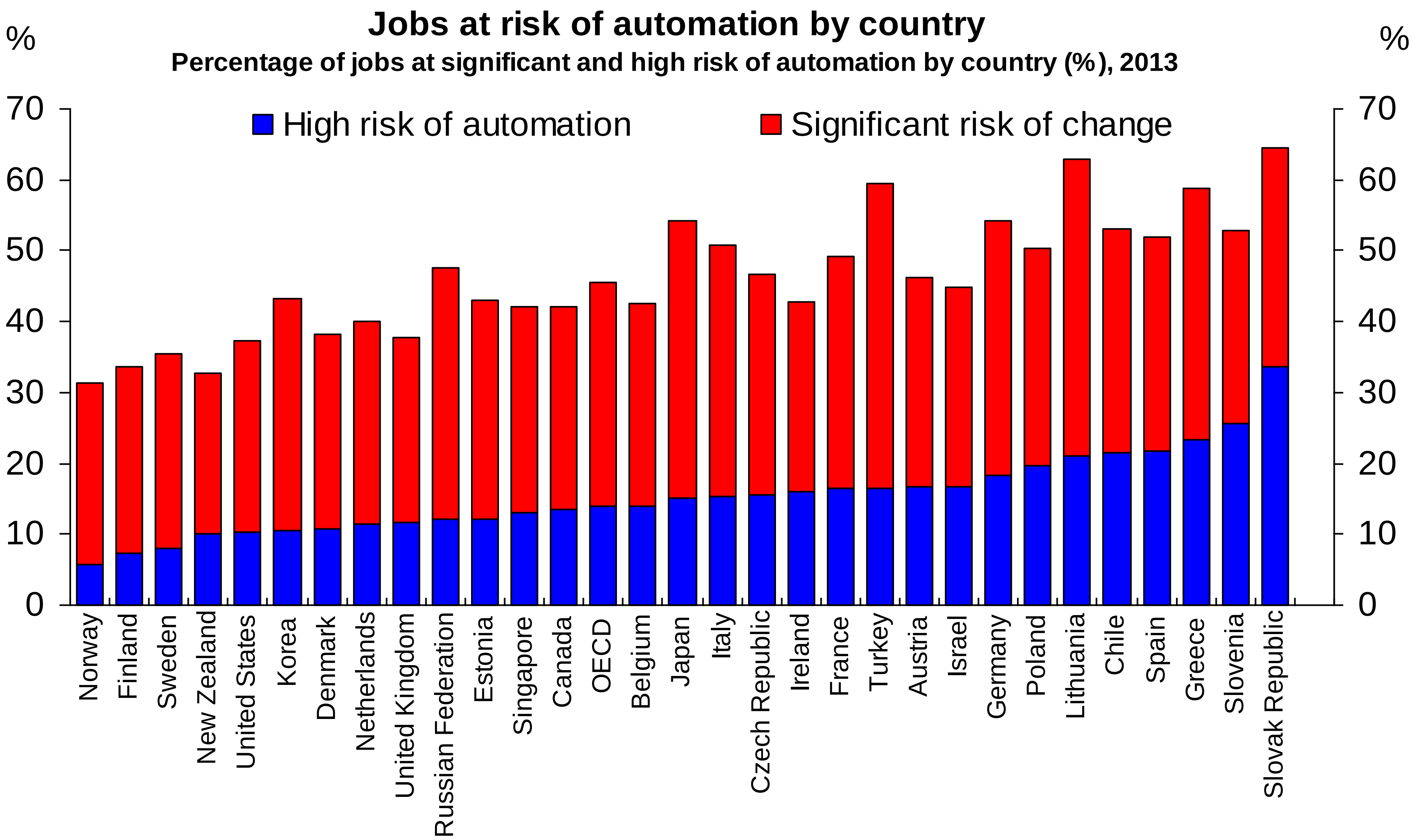
Share of population in middle-income households and annual median income



Note: Middle-income classes and median incomes are defined relative to equivalised household disposable income. The middle-income class comprises individuals in households with incomes that are between 75% and 200% of the median.

Source: OECD report "Under Pressure: The Squeezed Middle Class" (2019), DB Global Research

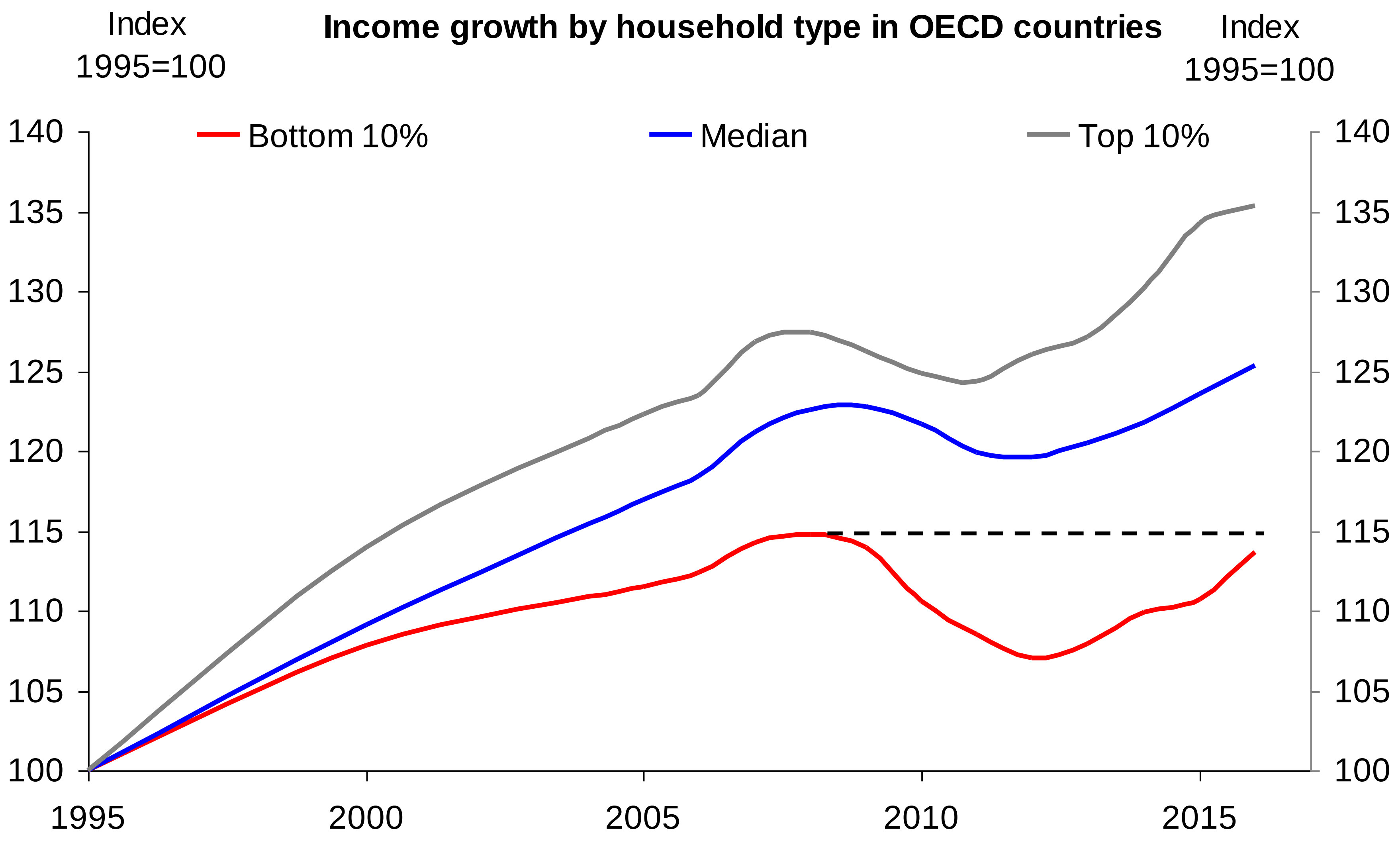
US workers less vulnerable to automation than many other countries



Note: 'High risk of automation' refers to the share of workers whose jobs face a risk of automation of 70% or above. 'Significant risk of change' reflects the share of workers whose jobs have a 50-70% chance of being automated.

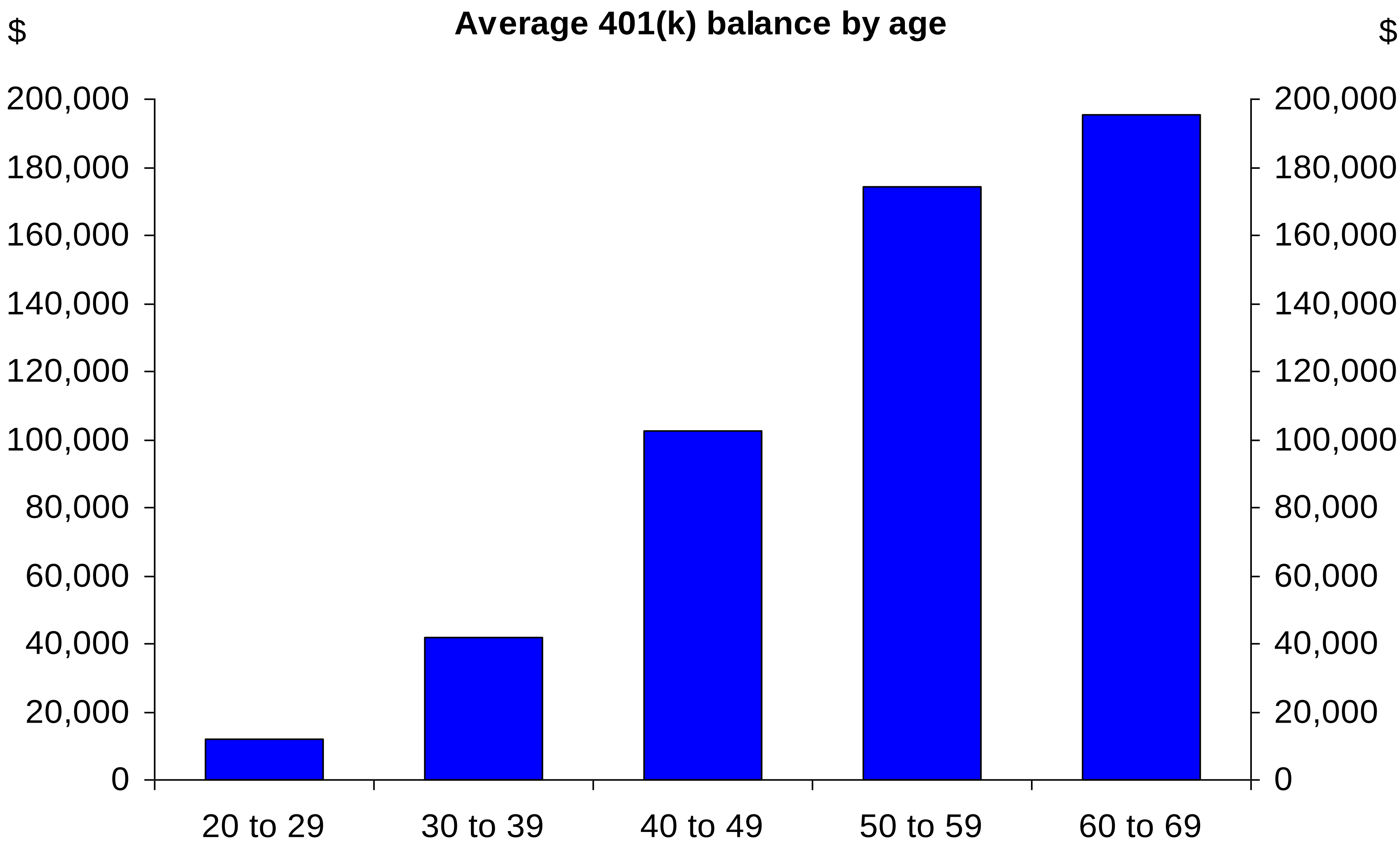
Source: OECD, DB Global Research

Lower incomes paid the highest price



Source: OECD, DB Global Research

Average 401(k) balance by age



Source: Fidelity Investments, CNN, DB Global Research

Risk #7:
German fiscal expansion

Rising risk of recession in Germany

Source: IFO, Federal Statistical Office, Haver Analytics, DB Global Research

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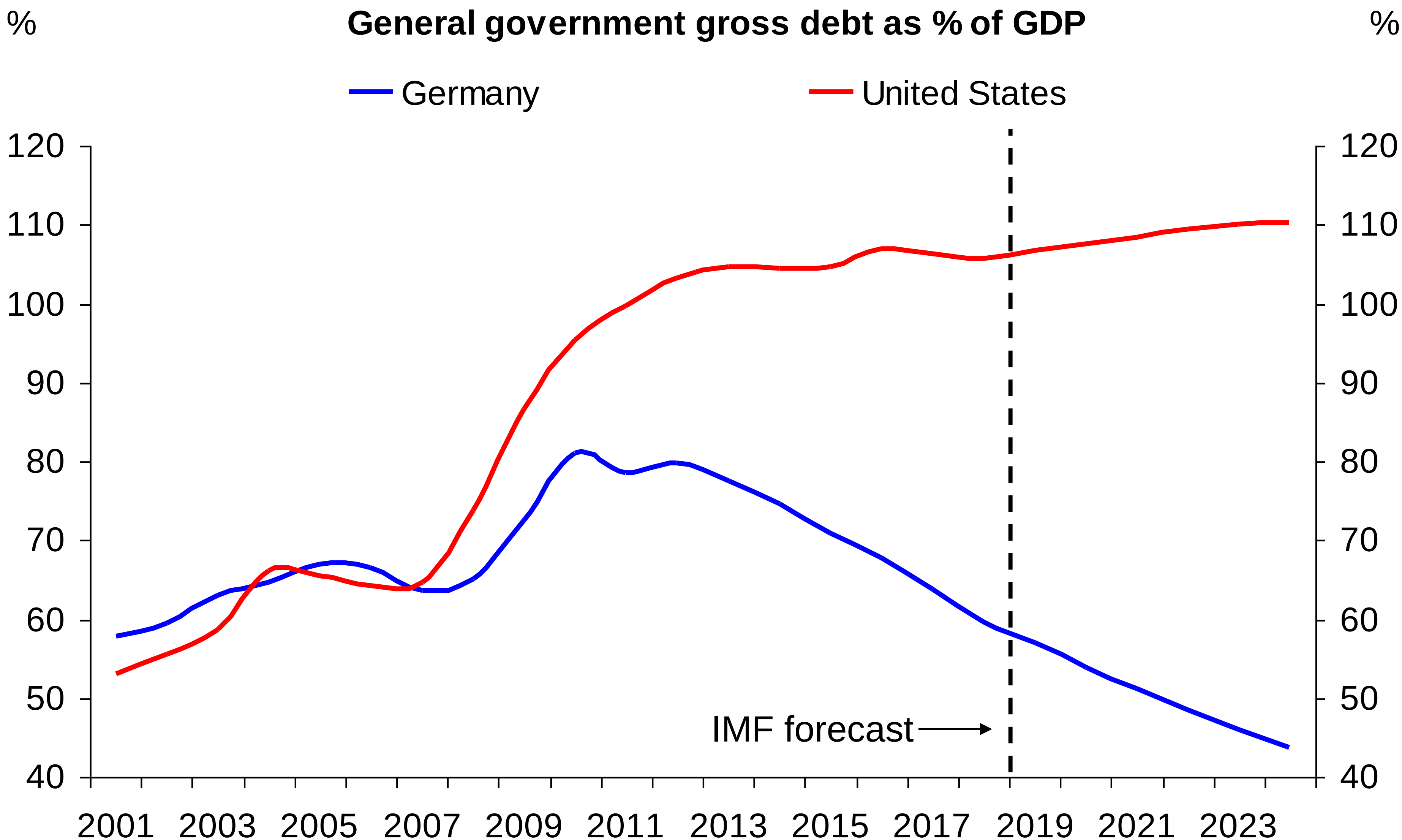
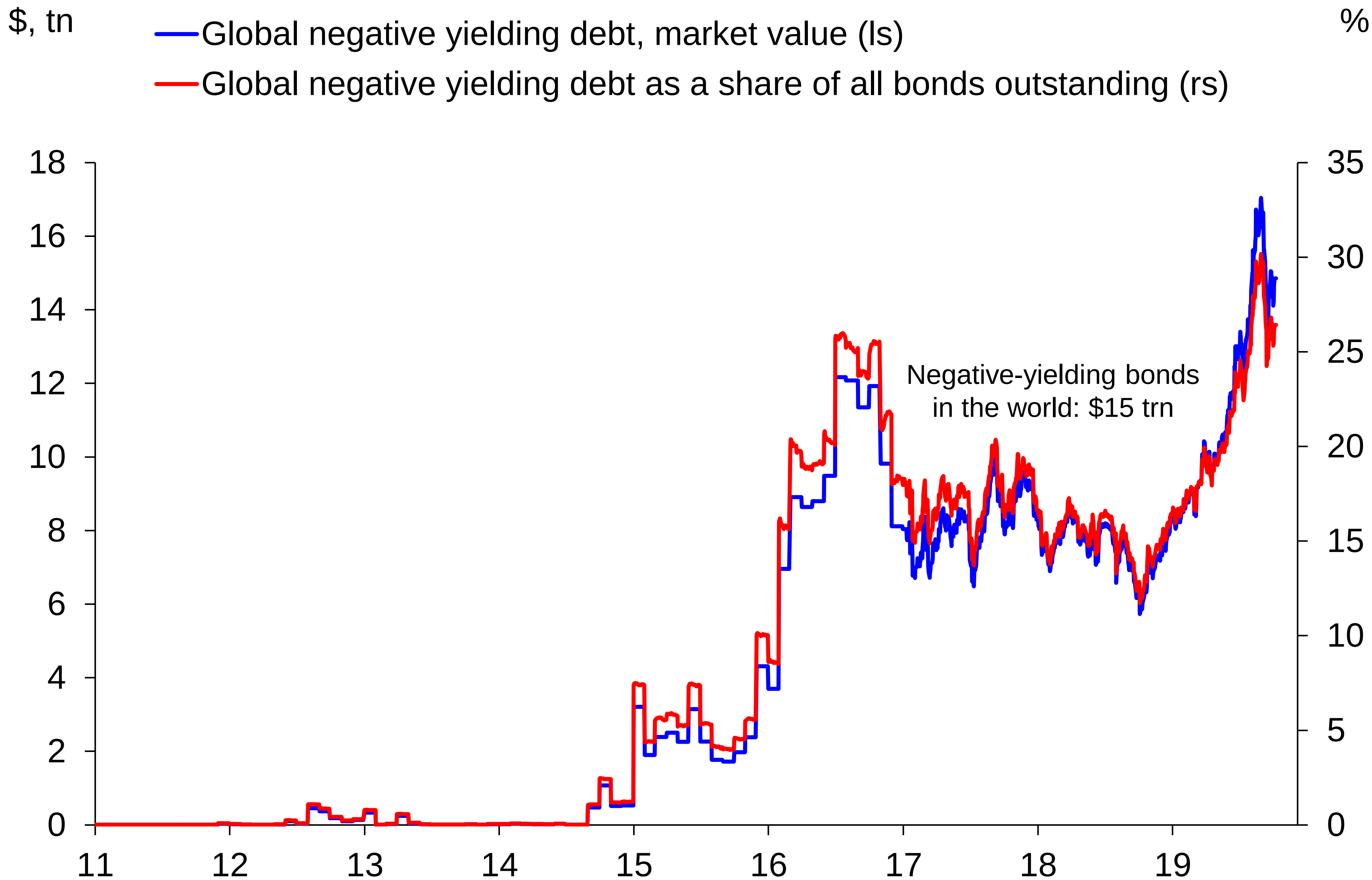
Government debt level rising in the US and falling in Germany



Source: IMF Fiscal Monitor, Haver Analytics, DB Global Research

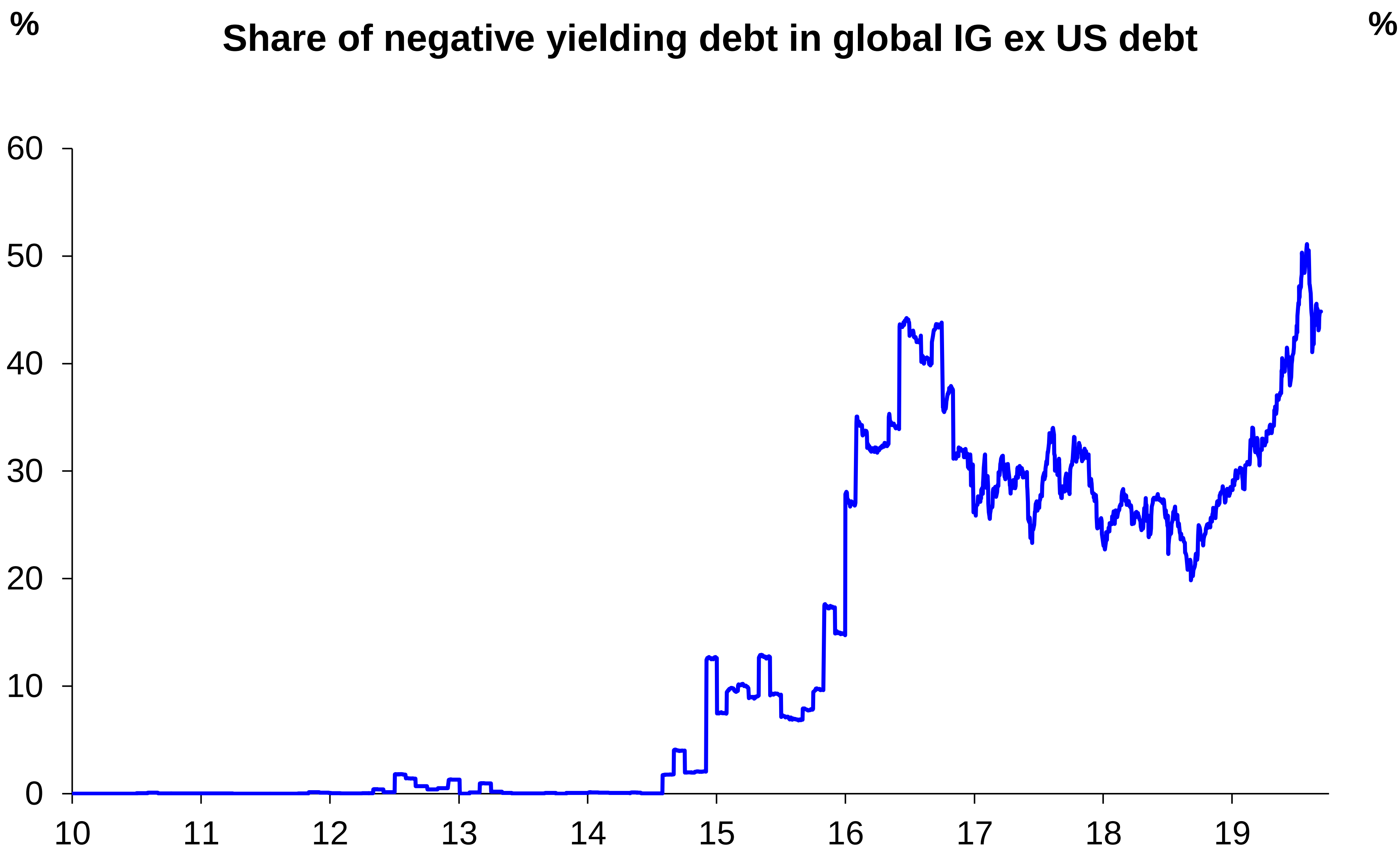
Risk #8:
Negative interest rates

26% of all bonds in the world trade at negative interest rates



Source: Bloomberg Finance LP, DB Global Research

Excluding US from the global IG index shows that 45% of global bond markets outside US trade at negative yields



Source: Bloomberg Finance LP, DB Global Research

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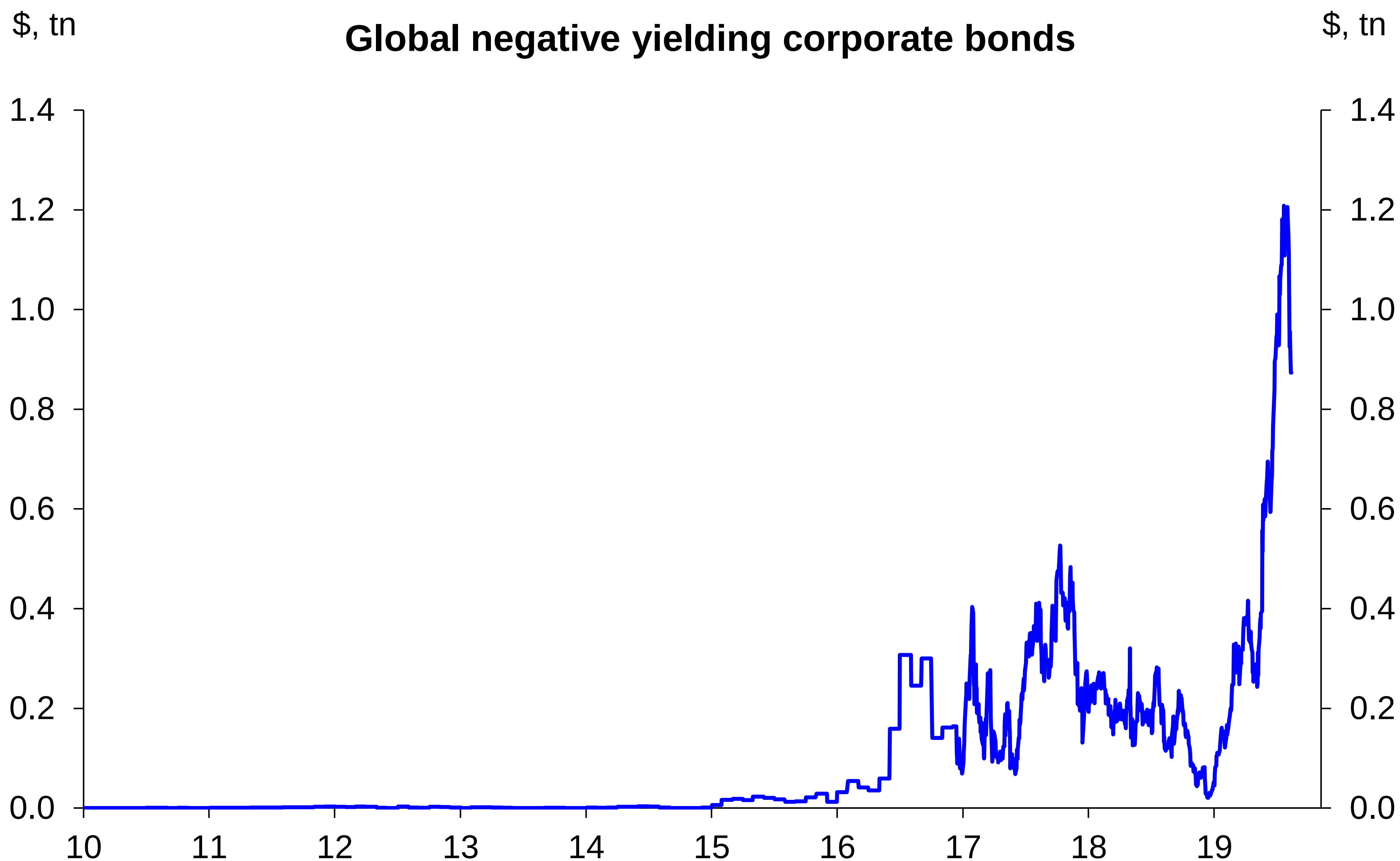
$900bn in corporate bonds globally trade at negative interest rates

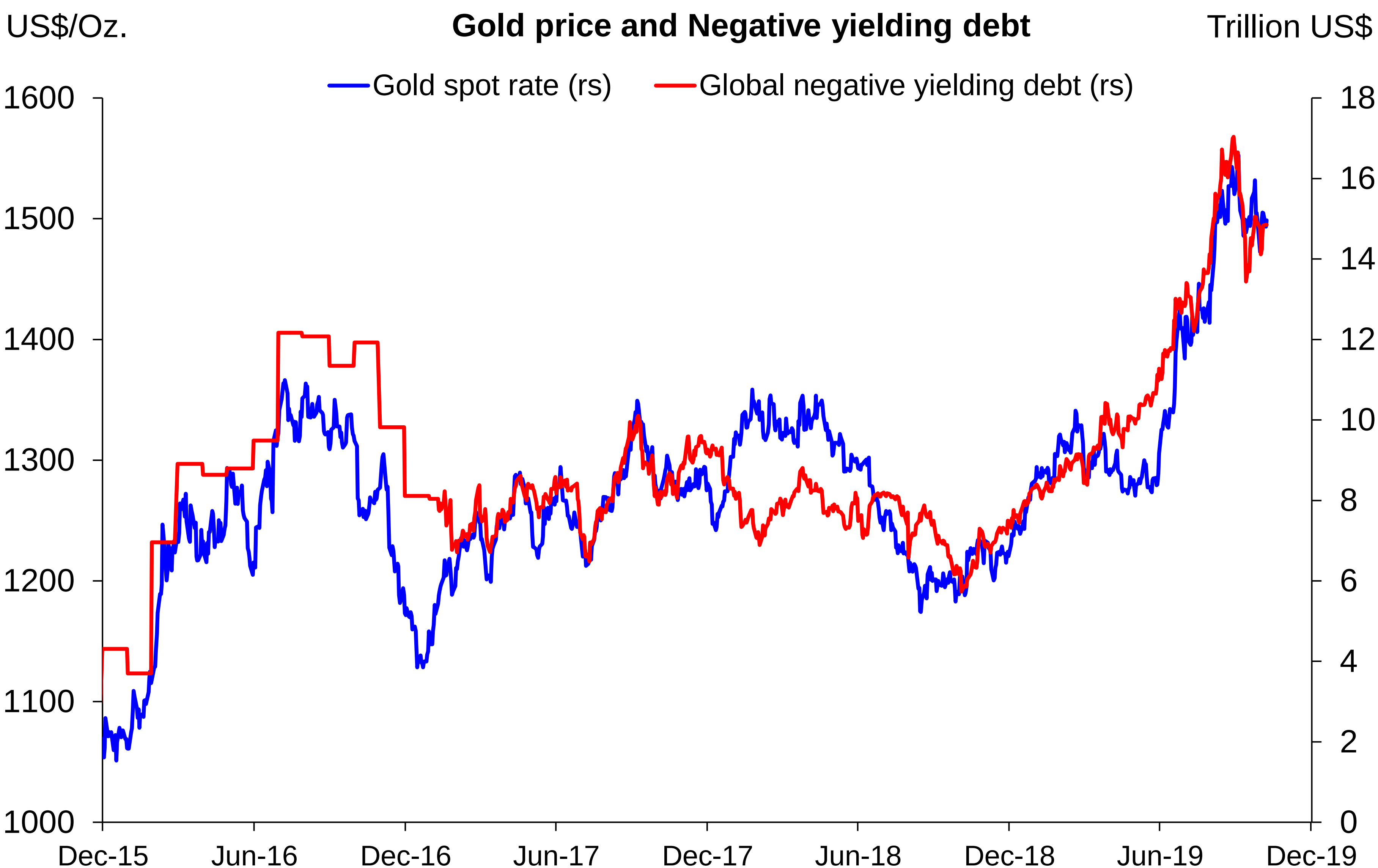


Source: Bloomberg Finance LP, DB Global Research

7% of global corporate IG bonds trade at negative yields

Source: Bloomberg Finance LP, DB Global Research

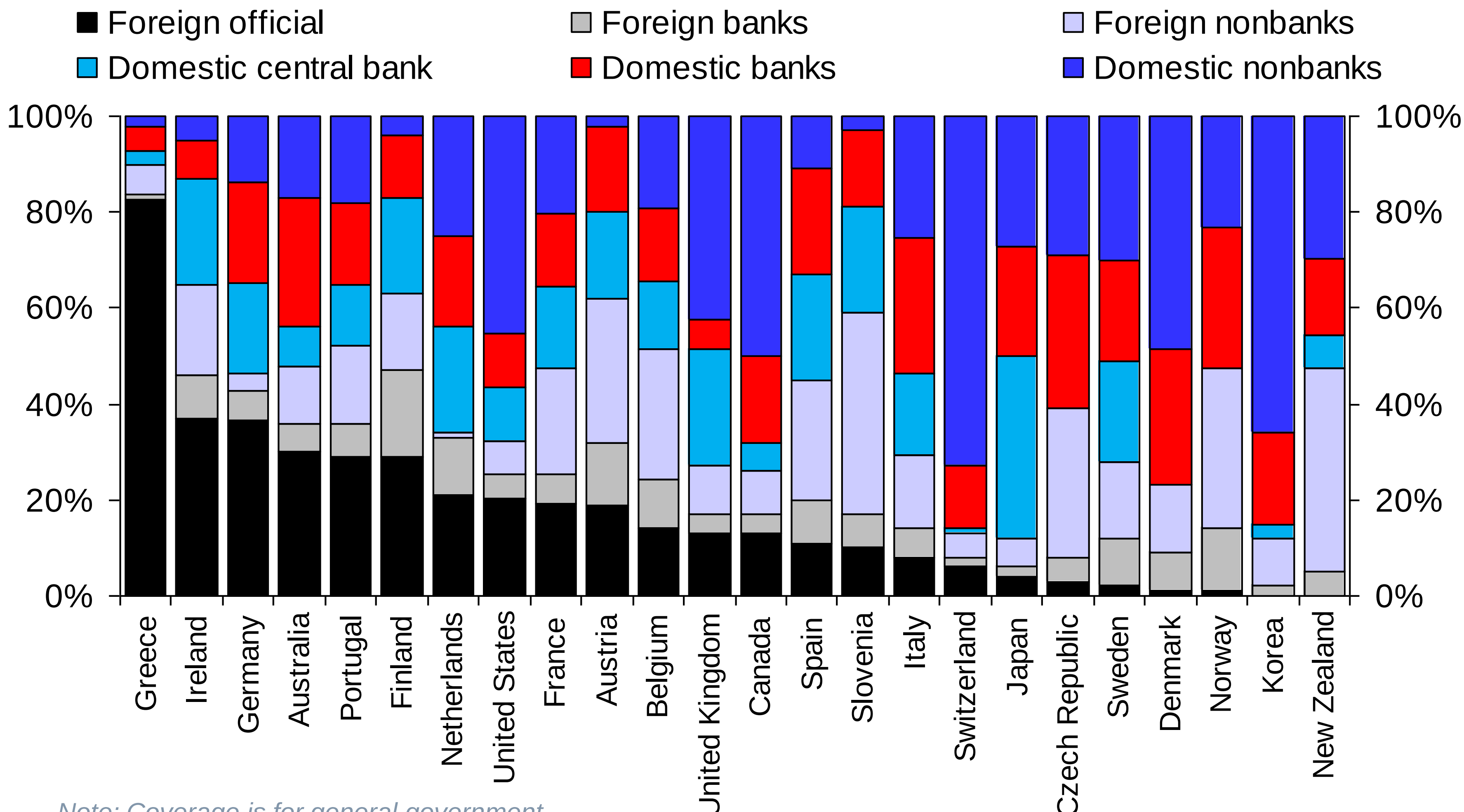
Negative interest rates pushing gold prices higher



Source: Bloomberg Finance LP, DB Global Research

Who owns different countries' government bonds?

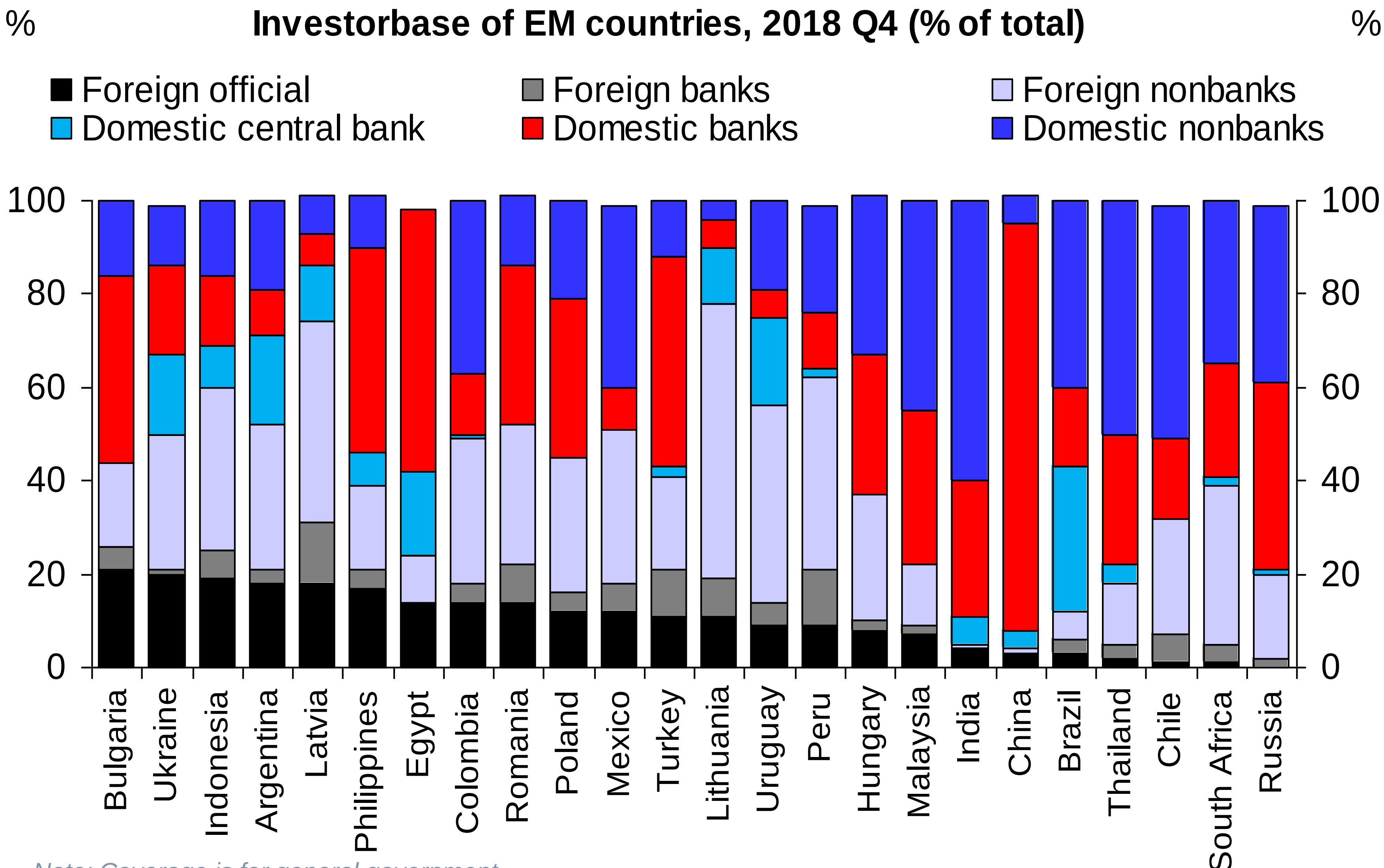
Investorbase of advanced economies, 2018-Q4 (as % of total)



Note: Coverage is for general government

Source: IMF Sovereign investor base estimate by Arslanalp and Tsuda, DB Global Research

EM: Who owns different countries' government debt?



Note: Coverage is for general government

Source: IMF Sovereign investor base estimates by Arslanalp and Tsuda , DB Global Research

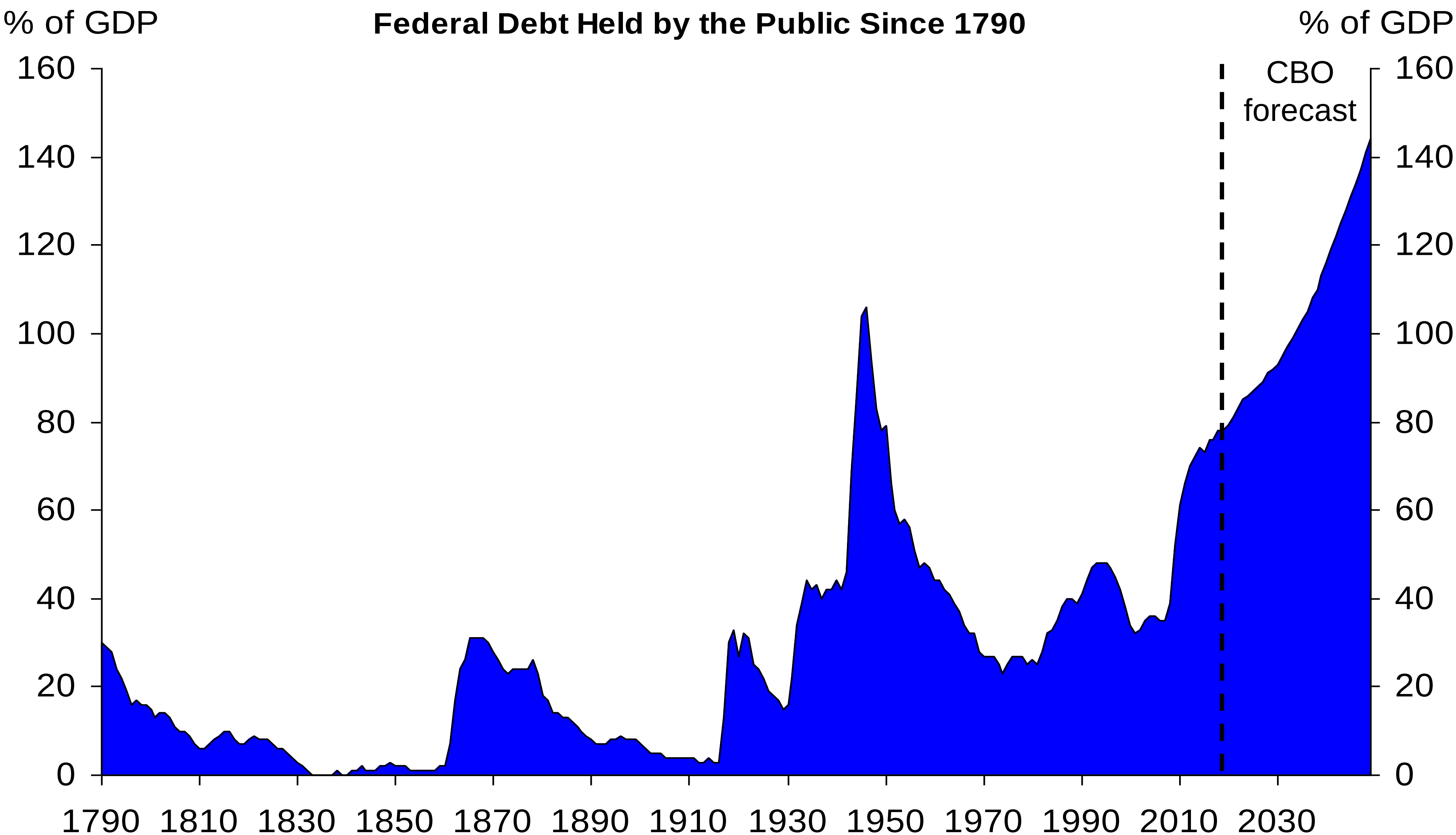
US makes up 50% of global IG markets

Source: ICE BofAML , Bloomberg Finance LP, DB Global Research

Risk #9:

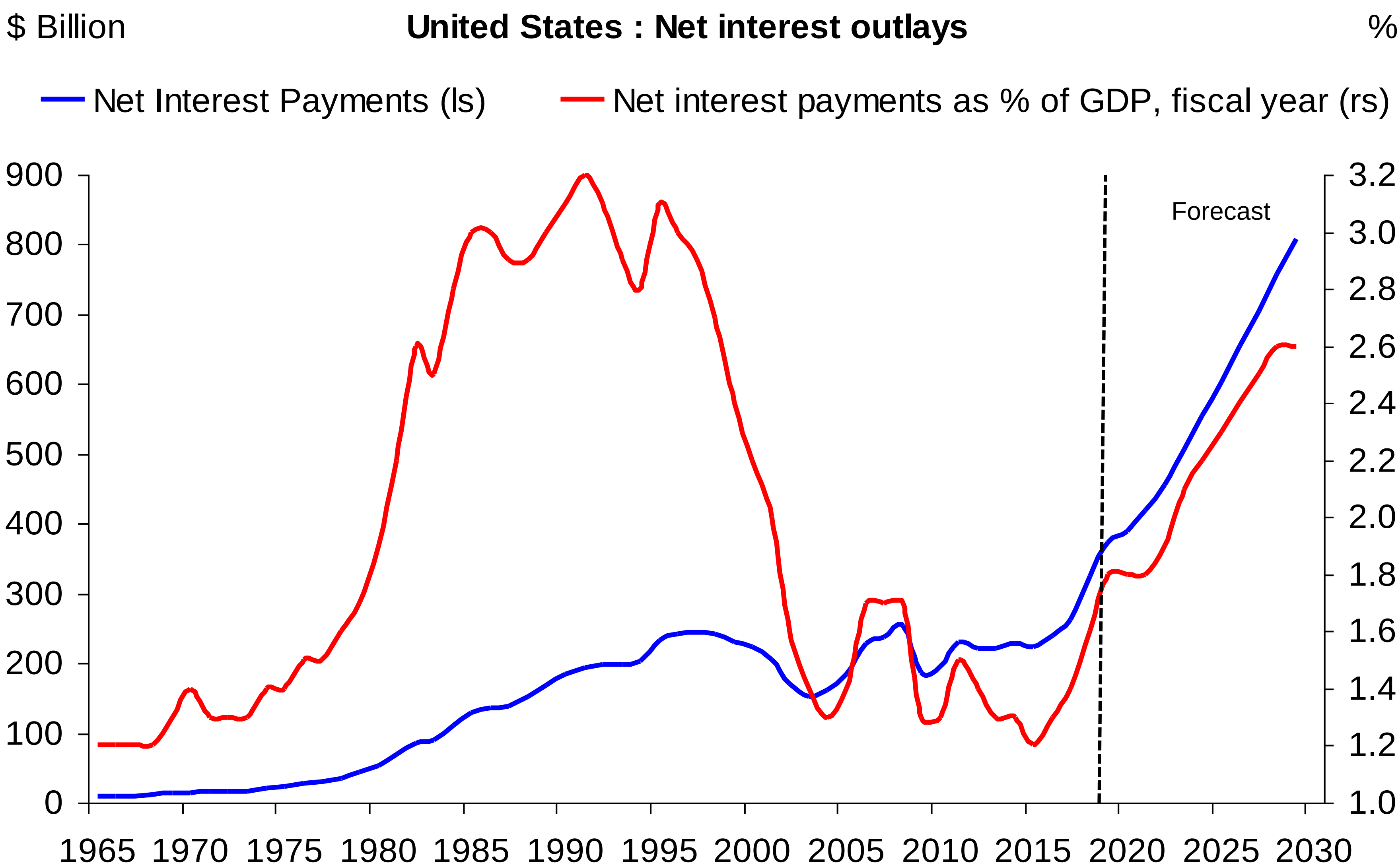
Policy options when the next recession comes

US debt rising to 140% of GDP under unchanged policies



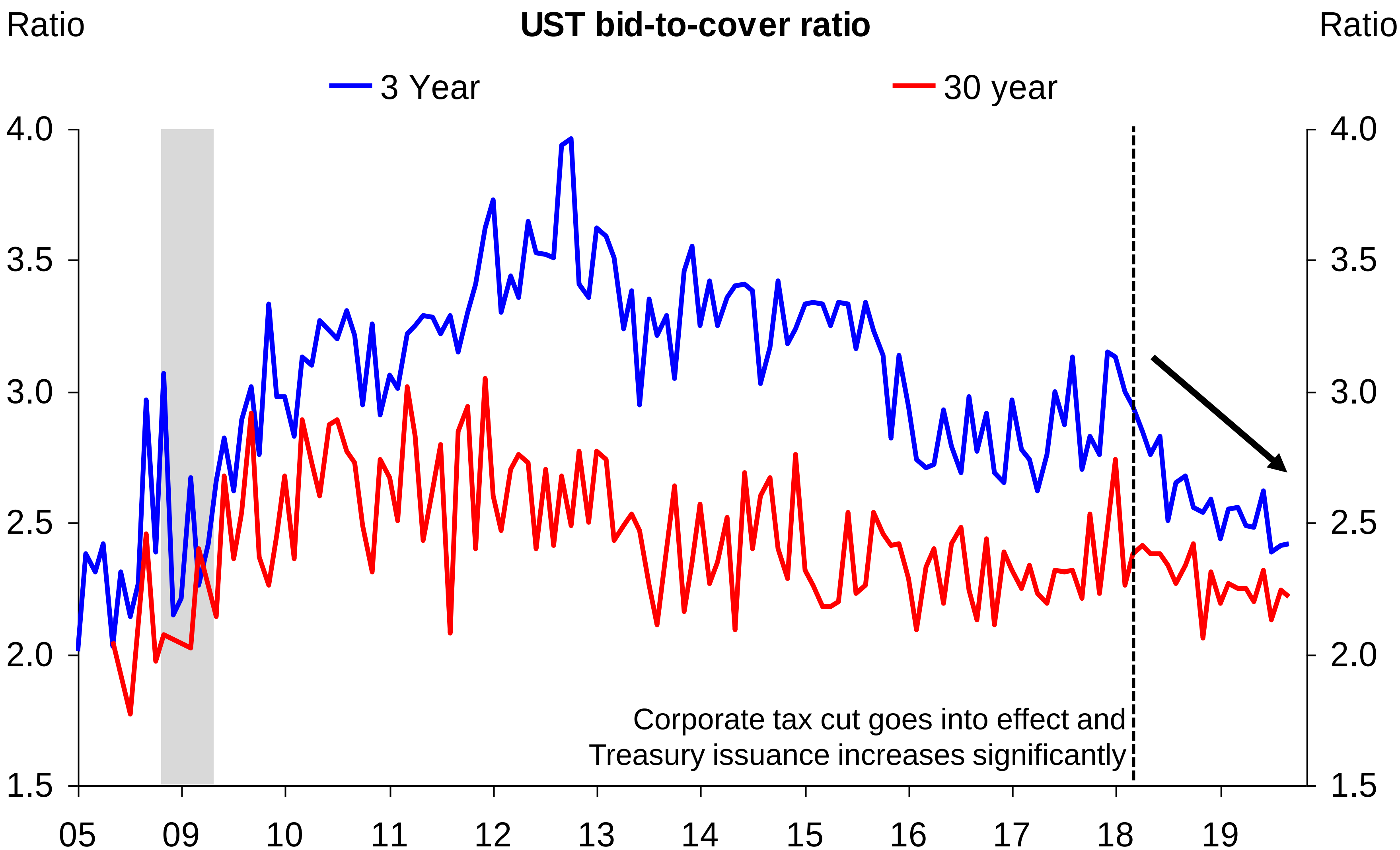
Source: CBO, DB Global Research

Interest payments on government debt going up



Source: CBO, Haver Analytics, DB Global Research

Since the fiscal expansion began in 2018 the bid-to-cover ratio has been trending lower across the Treasury curve



Source: Bloomberg Finance LP, DB Global Research

Overview: Policy options for US, Europe, and Japan when the next recession hits

United States:

Monetary policy: Rate cuts, forward guidance, average inflation targeting, QE, yield curve control, and CCyB. Negative interest rates unlikely, changing inflation target unlikely.

Fiscal policy: Automatic stabilizers, active countercyclical policies, infrastructure spending

Europe:

Monetary policy: Forward guidance, TLTRO, credit easing, depo tiering, QE, increase the 33% issuer-limit, add more asset classes to the eligible QE list.

Fiscal policy: Automatic stabilizers, German fiscal stimulus package, Italian structural reforms, complete banking union and capital markets union, more fiscal risk sharing.

Japan:

Monetary policy: Rate cuts, forward guidance, lower 10y yield target, increase ETF purchase volume, increase JGB purchase volume, purchas other assets such as mortgages or munis. Impact of these initiatives would likely be minimal. TLTRO expected to harm bank earnings.

Fiscal policy: Postpone October's consumption tax hike, increase infrastructure spending

Academic studies show QE less and less effective

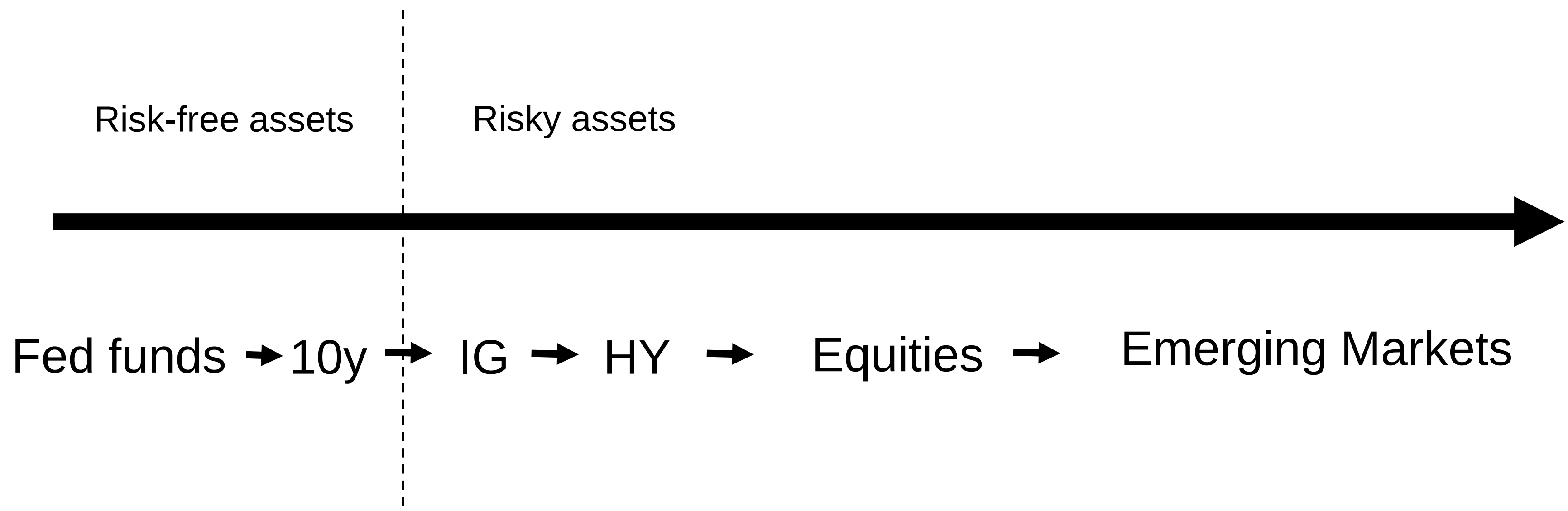
Impact of QE on long-term interest rates, in bps	QE 1	QE 2	QE 3	BoE	ECB	Riksbank
Gagnon et al (2010)	-91					
Krishnamurthy and Vissing Jorgensen (2011)	-73	-21				
Krishnamurthy and Vissing Jorgensen (2011)	-21	-2				
Glick and Leduc (2012)	-20	0.2		-9.8		
Bauer and Neely (2014)	-31	-8	-7			
Bowman et al. (2015)	-99	-28	-41			
De Rezende et al (2015)						-27
Georgiadis and Grab (2015)					-7	
Di Maggio et al. (2016)	-117	-37	-18			
Borrallo et al. (2016)	-104	-29	-10			
Altavill (2016)	-116	-36	-4			
Mamaysky (2016)	-106	-38	7	-38		
Rios et al (2017)	-24	-8	-0.2	-11		-3
Altavilla and Giannone (2017)	-104	-29	-4			
Varghese et al (2018)					-10	
Wang (2019)	-54	-9	-9			
Average	**-74**	**-20**	**-10**	**-20**	**-9**	**-15**

Source: World Bank, Ayhan Kose, Various authors, DB Global Research

Investment implications/Markets

The hunt for yield – how will it reverse?

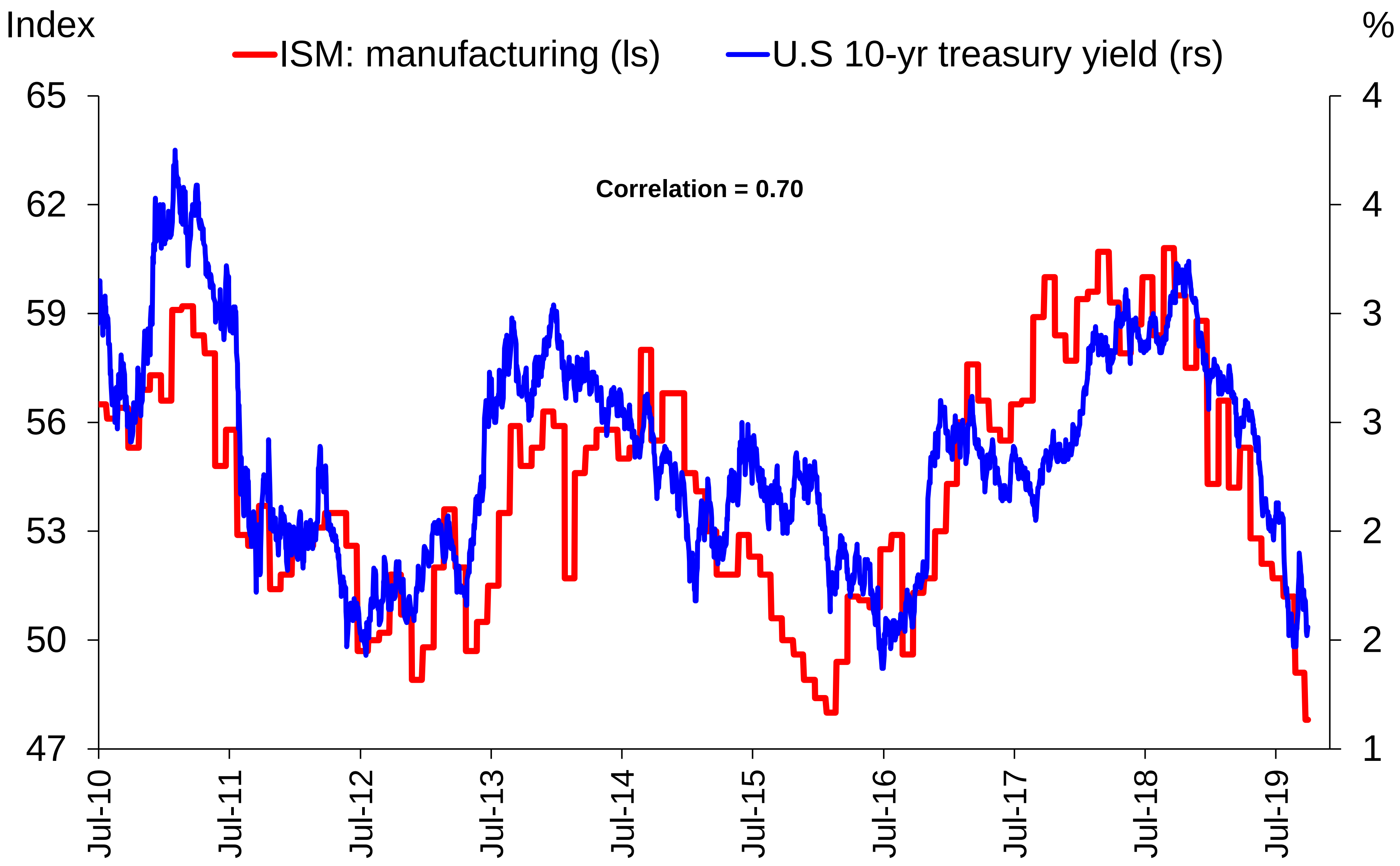
Risk spectrum



Three risks for disruptive reversal:
1) Higher US inflation
2) Treasury supply rising sharply
3) ECB exit/higher EU rates

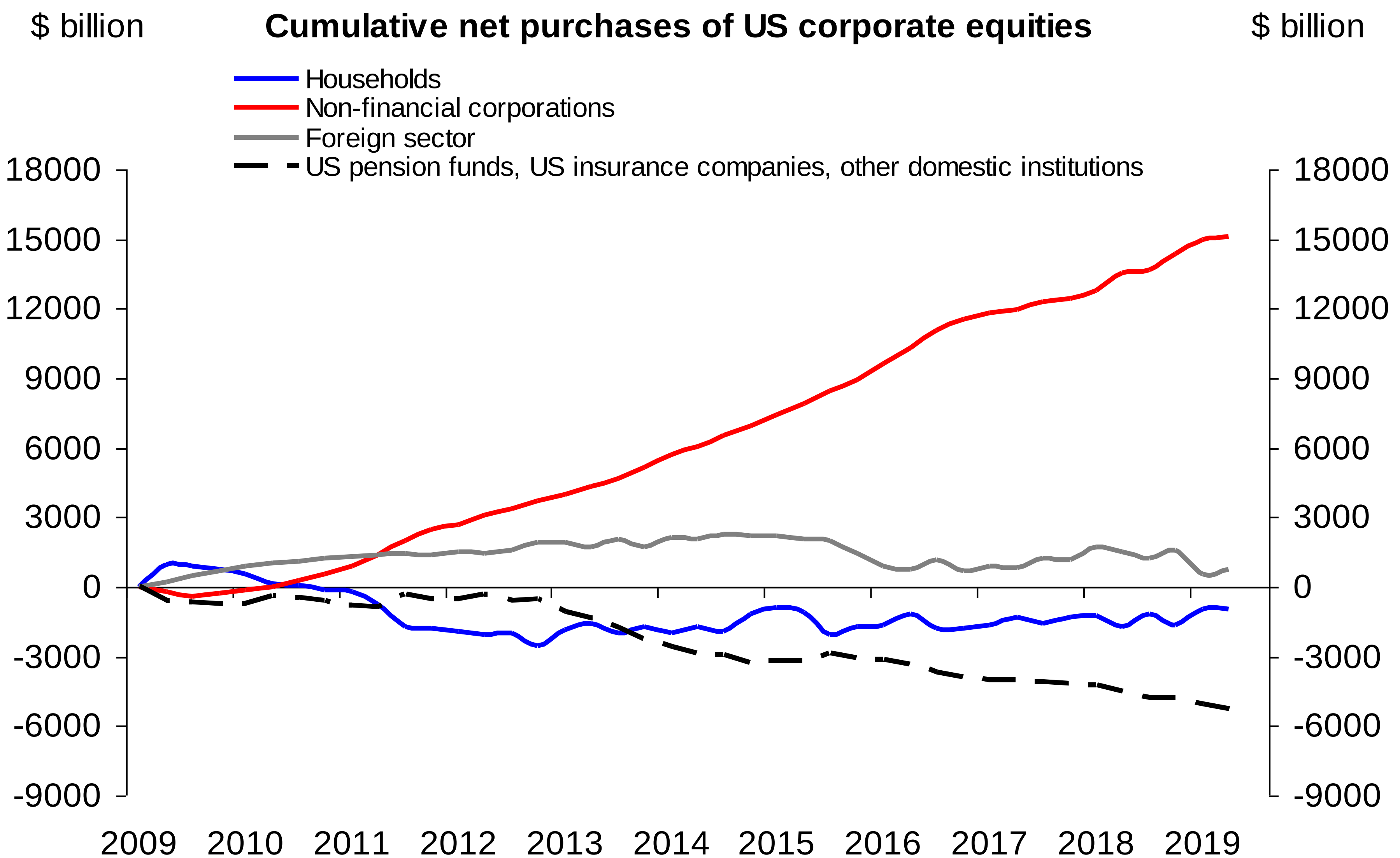
Source: DB Global Research

US 10-year rates driven by US fundamentals and not by foreigners buying US Treasuries



Source: FRB, ISM, Haver Analytics, DB Global Research

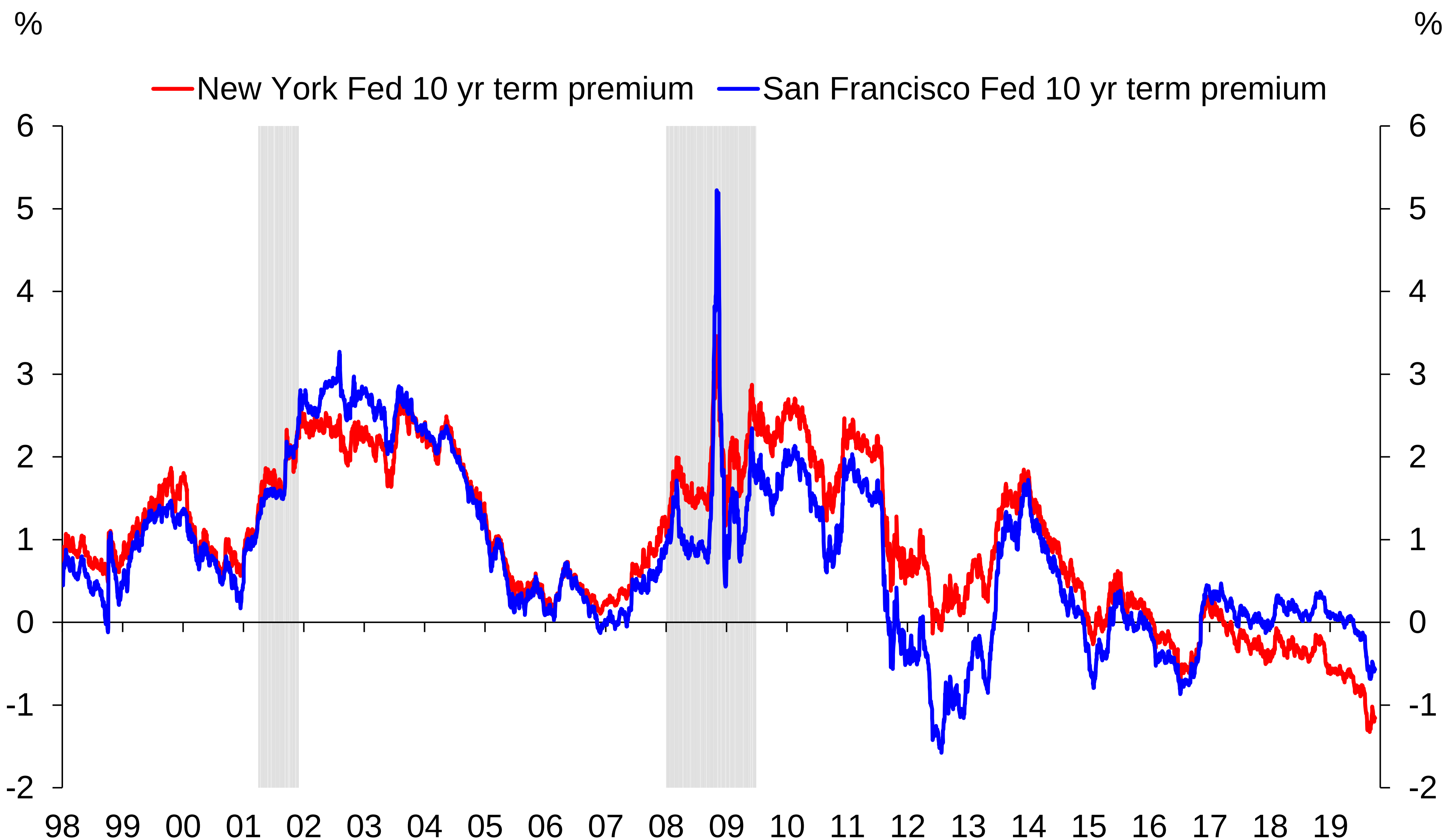
What's the source of the rally in the stock market since 2009? Buybacks



Note: Other domestic institutions includes Property-Casualty Insurance Companies, Life Insurance Companies, Private Pension Funds, Federal government retirement funds and state/local government employment defined benefit retirement funds

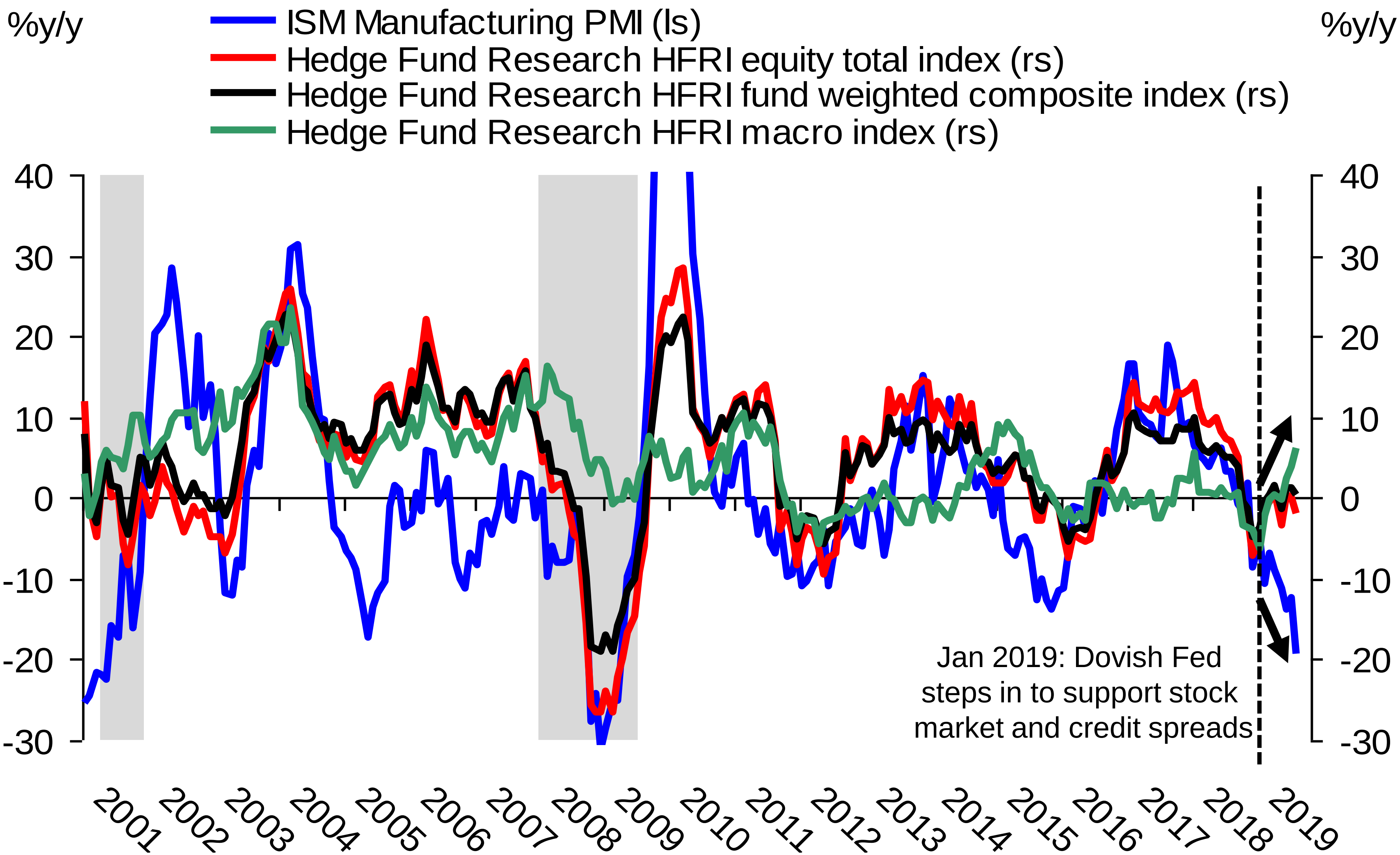
Source: FRB, Haver Analytics, DB Global Research

Term premium for 10-year rates very low at the moment



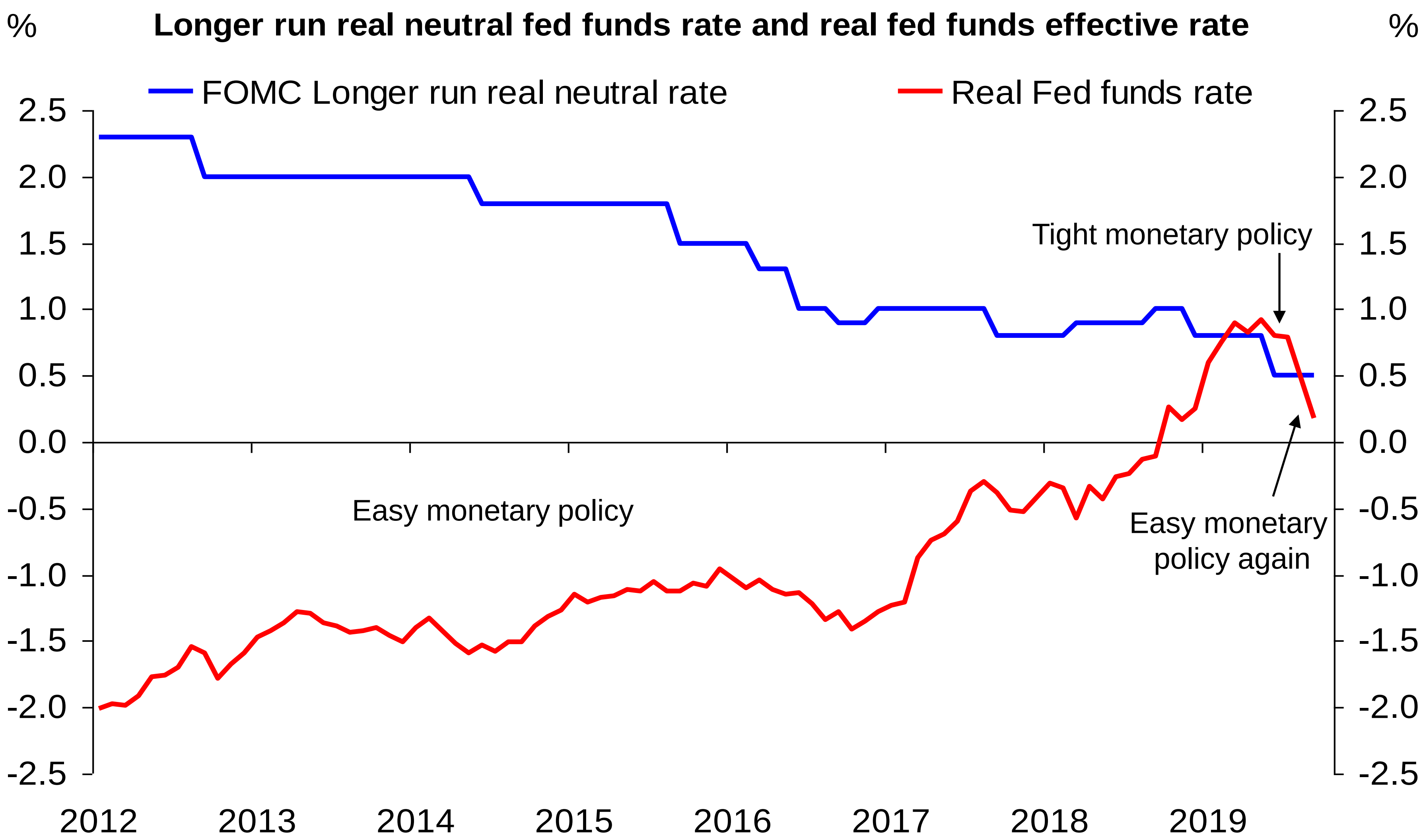
Source: FRBNY, FRB San Francisco, Haver Analytics, DB Global Research

Returns no longer driven by economic fundamentals but by central banks?



Source: ISM, Haver Analytics, Bloomberg Finance LP, DB Global Research

Monetary policy is officially easy again



Note: Longer run real neutral estimates computed by subtracting the Fed's 2% inflation target. Real fed funds rate estimates computed by subtracting year-on-year changes in core PCE inflation (using the core PCE consensus expectation for 2019Q3).

Source: FRB, BEA, Haver Analytics, DB Global Research

What the G7 needs to do to increase growth

Country	Going for Growth 2019 priorities
Canada	• Reduce barriers to entry for both domestic and foreign suppliers, and enhance competition in network and service sectors. Regulatory barriers to competition in network and service sectors weaken pressures to innovate and adopt new technologies. • Reduce barriers to internal trade. Non-tariff interprovincial barriers lower efficiency, particularly by reducing the market size. Supply management regimes distort markets for dairy, poultry and eggs through production quotas, minimum prices and high import tariffs. This weakens relationships with trading partners and contributes to inequality by supporting producers at the expense of consumers. • Enhance access to post-secondary education and its responsiveness to skills demand. Better access to education for disadvantaged groups and the acquisition of skills in demand would boost incomes and reduce inequalities.
France	• Reduce further labor market segmentation. Reducing the excessive use of short-term contracts and improving school to work transitions would raise inclusiveness and strengthen youth employment prospects. • Improve the equity and quality of education. Individualized support for weak students and improved lifelong learning would strengthen skills and employment. • Reduce regulatory barriers to competition. Easing firm entry and growth would boost competition, productivity and jobs, notably in services and network sectors. • Reduce labor taxes. Lowering the tax wedge across the board will translate into employment gains without creating low-wage traps. • Strengthen public spending efficiency. Local administrative fragmentation and weak efficiency of some expenditures lower well-being and raise the tax burden.
Germany	• Make it easier for parents to choose the working hours they want. Women's relatively short working hours result in a large gender earnings gap and underutilization of their skills. • Strengthen skills to cope with technological change. Workers, particularly from weak socio-economic backgrounds, need to develop stronger cognitive and digital skills to adapt to technological change. • Reduce tax wedges on labor income and shift taxation towards less distortive taxes. The tax burden on low labour income is high while there is room to increase taxation on consumption, environmental externalities, real estate and capital income. • Promote better technology diffusion and better resource allocation. Limited firm creation and barriers to competition, including extensive state control of large companies in key sectors, are holding back productivity growth. • Close the infrastructure gap. Limited access to high speed Internet in rural areas and to affordable housing in dynamic economic centres, as well as local infrastructure gaps in financially weak municipalities are holding back stronger and more inclusive growth.
Italy	• Improve the efficiency of the public administration and bolster the rule of law. Public administration inefficiency and regulatory burdens weigh on doing business, well-being and fairness in the society. • Improve the efficiency and equity of the tax structure. The labour tax wedge is high and the tax code is over-complicated, weakening work incentives and abetting informality and tax evasion. • Strengthen apprenticeships, vocational education, training courses and lifelong learning. A large share of young people is neither in education nor in employment and many workers lack the skills sought by employers. • Promote higher and better quality public investment and improve infrastructure management. Public investment remains low, infrastructure management is opaque and projects are often of poor quality, holding back growth and well-being. • Enhance employment services and activation policies. Spending on activation policies is low and their effectiveness varies greatly across regions
Japan	• Ease entry barriers and raise productivity of the service sector and SMEs. Product market regulations limit competition and investment in services, reducing productivity. • Reduce producer support and increase efficiency of the agricultural sector. Support for agricultural producers, which is more than double the OECD average, is concentrated in the potentially most distorting form and raises prices for consumers. • Improve the efficiency of the tax system. The tax system, which has a high corporate tax rate, a narrow personal income tax base, and the third-lowest standard VAT rate among OECD countries, lowers Japan's growth potential. • Strengthen policies to support the labour force participation of all available talents. • Promote green growth. Increased dependence on fossil fuels after the Fukushima accident in 2011 makes it difficult to meet greenhouse gas emission targets.
United Kingdom	• Improve skills. Adults have lower literacy and numeracy skills than the OECD average. • Strengthen work incentives and active labour market policies. The share of all unemployed and not in education, employment nor training (NEET) youth is above the OECD average. • Enhance housing supply. Insufficient housing construction reduces affordability for households and the matching of skills to jobs. • Improve public infrastructure. Congestion is high in the road transport network and the quality of the infrastructure stock is perceived as poor. • Promote R&D spending. Both private and public spending on R&D are comparatively low.
United States	• Improve, maintain and rationalize infrastructure. Public infrastructure provision is not keeping pace with the evolving economy and the poor co-ordination of decisions across jurisdictions is contributing to congestion, urban sprawl, and environmental degradation. • Strengthen active labor market policies. Some displaced workers no longer possess skills that are in high demand by employers and are likely to suffer long bouts of unemployment or exit the labor market. • Improve equality of opportunity and strengthen outcomes in education. Some segments of the population – including children from poor families, females with young children, and persons with criminal records – still lack opportunities to acquire skills valued highly by employers and to sustain employment. • Improve the efficiency of the health care sector. The US devotes a much larger share of its resources to healthcare than other OECD countries, and these resources can be used more productively.

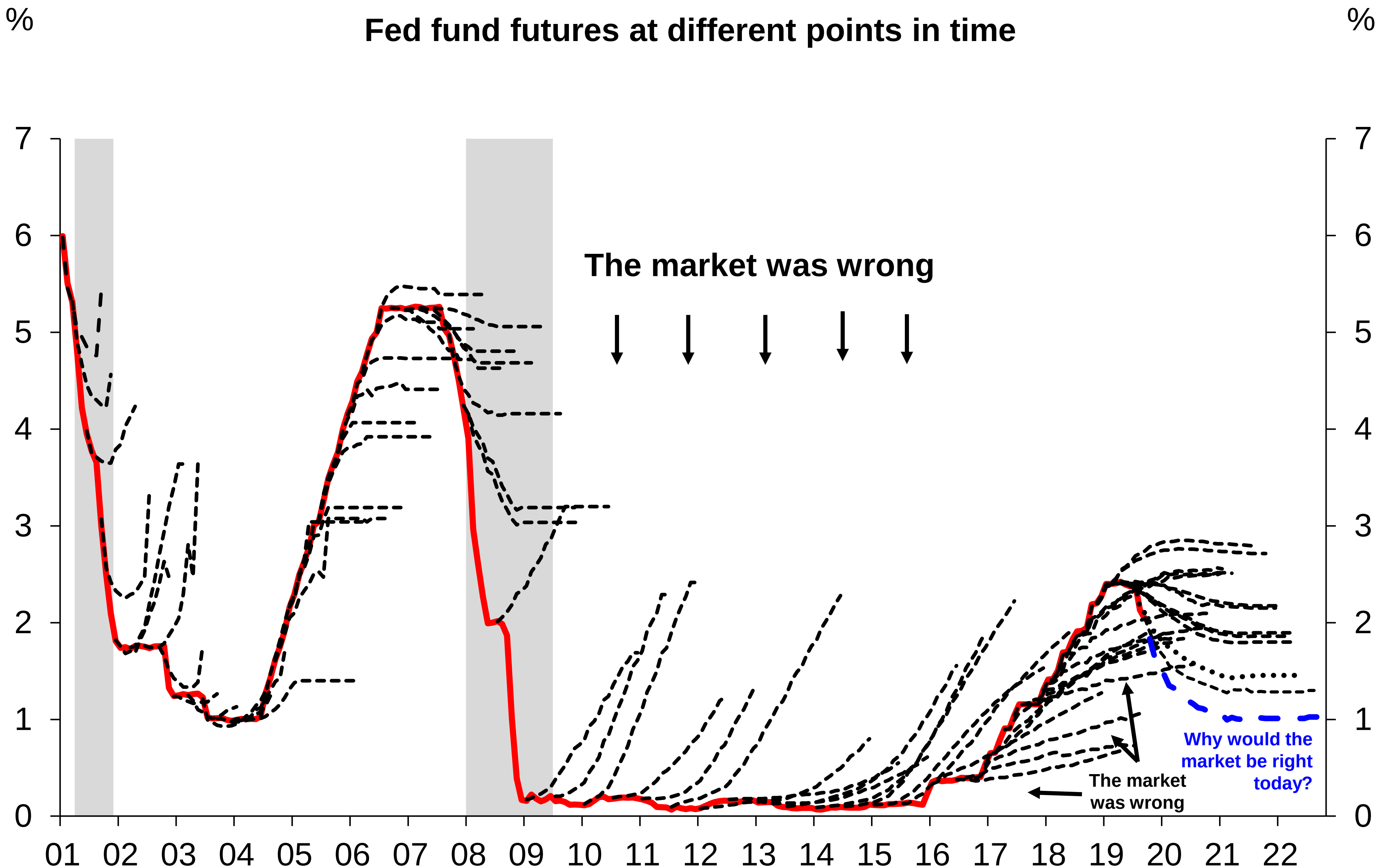
Source: OECD, DB Global Research

Investment implications summarized

Fed outlook **– Fed cuts coming in Oct, Dec, and Jan**	US growth is slowing. Trade war, fading positive effects of tax cuts, slowing global growth, and late-cycle headwinds weighing on the US economic outlook and justifies Fed cuts.
Bond markets **- Downside risks to long rates**	Trade war, slowing growth, and late-cycle headwinds weighing on long rates. Fundamental forces driving long rates are 1) US inflation, 2) Treasury supply, and 3) global QE, 4) Hedging costs, and 5) Europe and China outlook.
Credit **- Credit spreads wider as slowdown continues**	Dovish central banks and negative interest rates without a US recession is bull case for US credit. Global QE and lower hedging costs means more demand for US credit from abroad. But more Treasury supply pulls dollars out of risky assets, especially IG. Sharper economic slowdown because of trade war is a risk to corporate default rates.
Stock markets **- Trade war weighing on equities**	Trade war, slowing global growth, and emerging election uncertainty are downside risks to equities
FX **- Dollar down as slowdown continues**	EURUSD 1.13 and USDJPY 105 by end-2019.
Commodities - **Moving lower**	Slowing growth and peak global growth are downside risks to commodities, in particular energy.
Emerging markets **- Imbalances in some EM countries**	Speed of US growth slowdown is risk to EM. But dovish Fed and ECB helpful for EM.

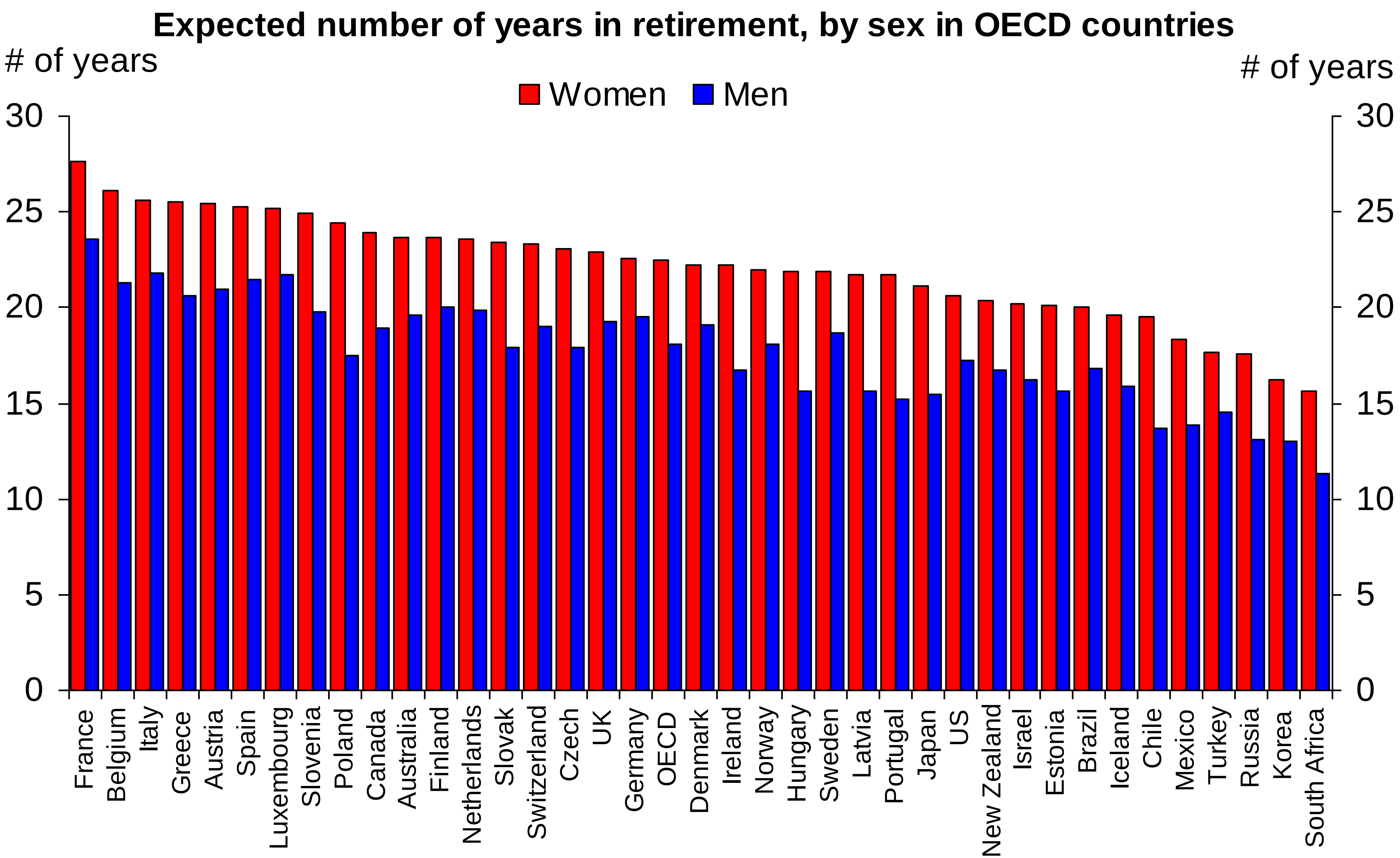
Source: DB Global Research

The market is almost always wrong about what the Fed will do



Source: FRB, Bloomberg Finance LP, DB Global Research

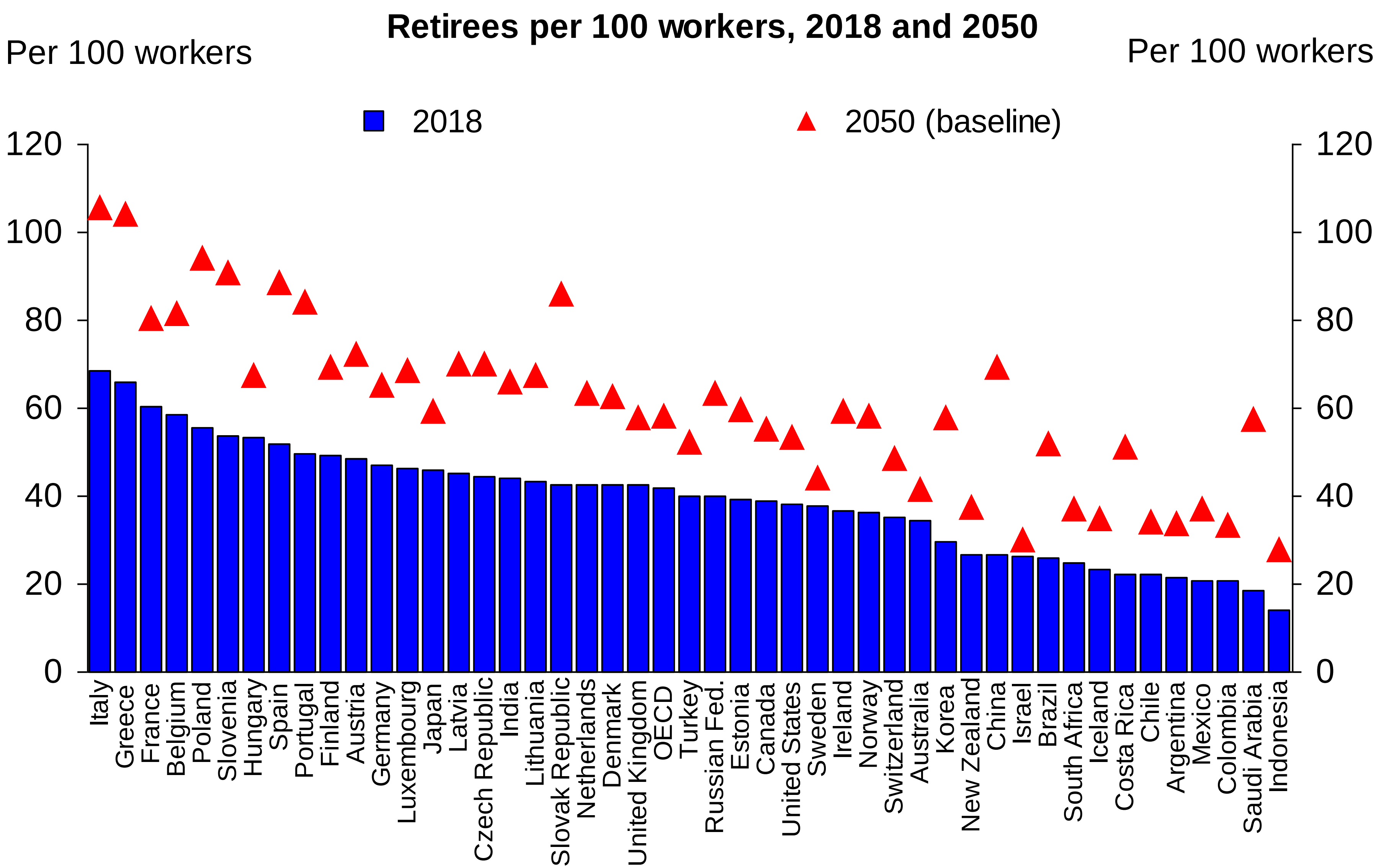
Expected number of years in retirement



Note : Expected years in retirement is life expectancy measured at the age of effective labour market exit for men and women. The latest year is 2016

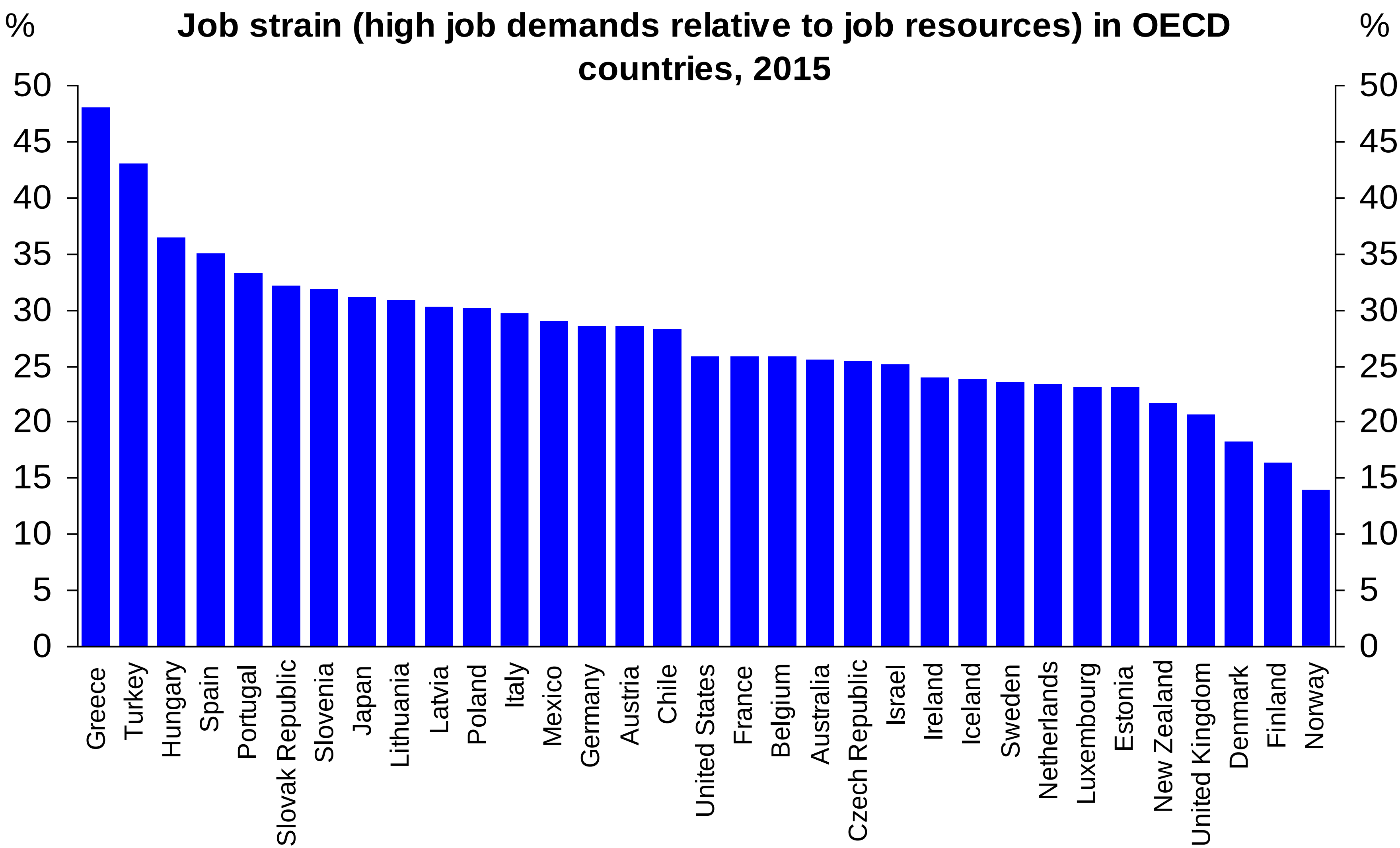
Source: OECD, DB Global Research

Retirees per 100 workers



Source: OECD, DB Global Research

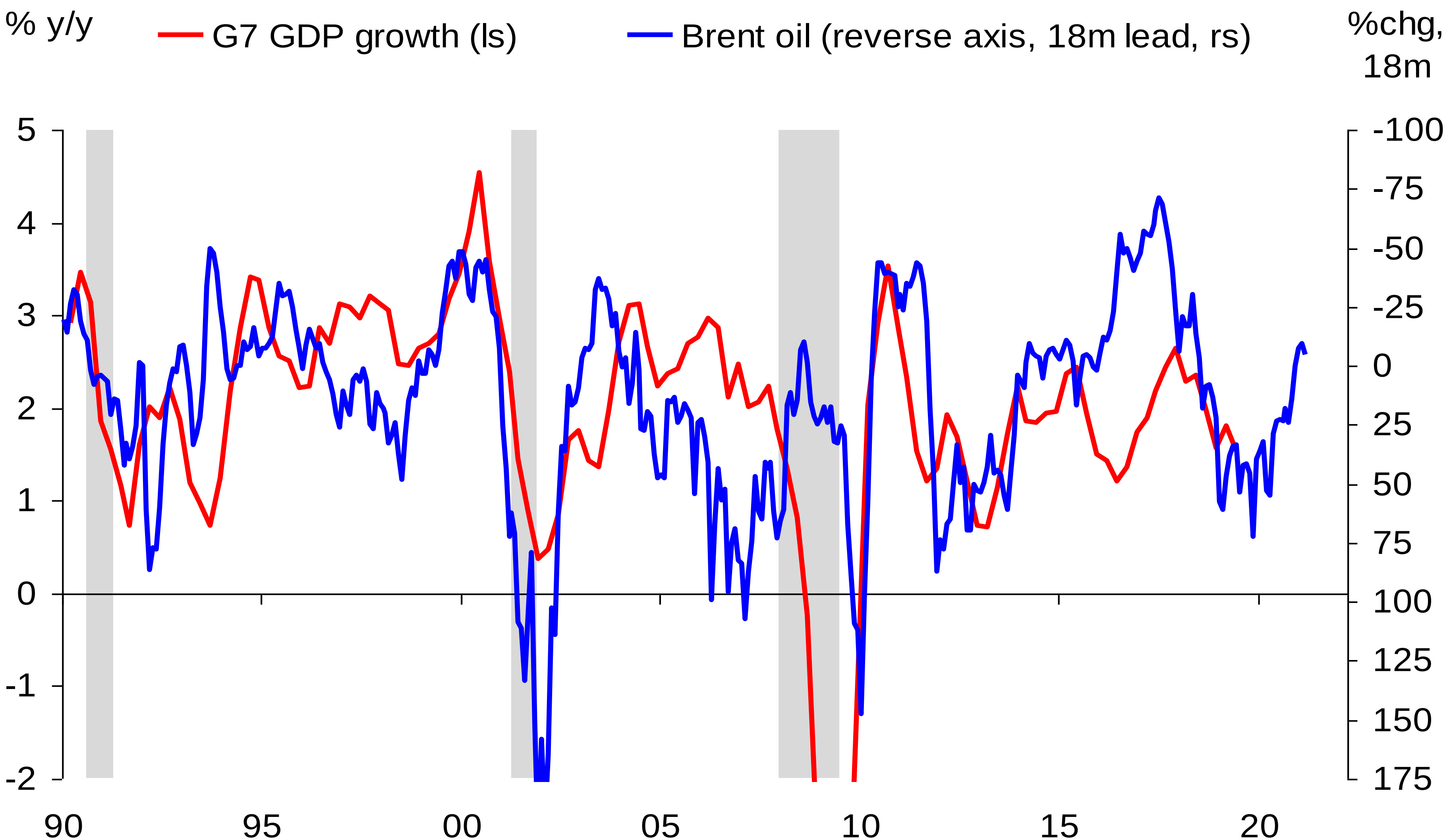
Job strains across countries



Note: Quality of the working environment is measured by the incidence of job strain among workers. Job strain is defined as jobs where workers face more job demands than the number of resources they have at their disposal (as described in Chapter 5 of OECD's How's Life 2013).

Source: OECD, DB Global Research

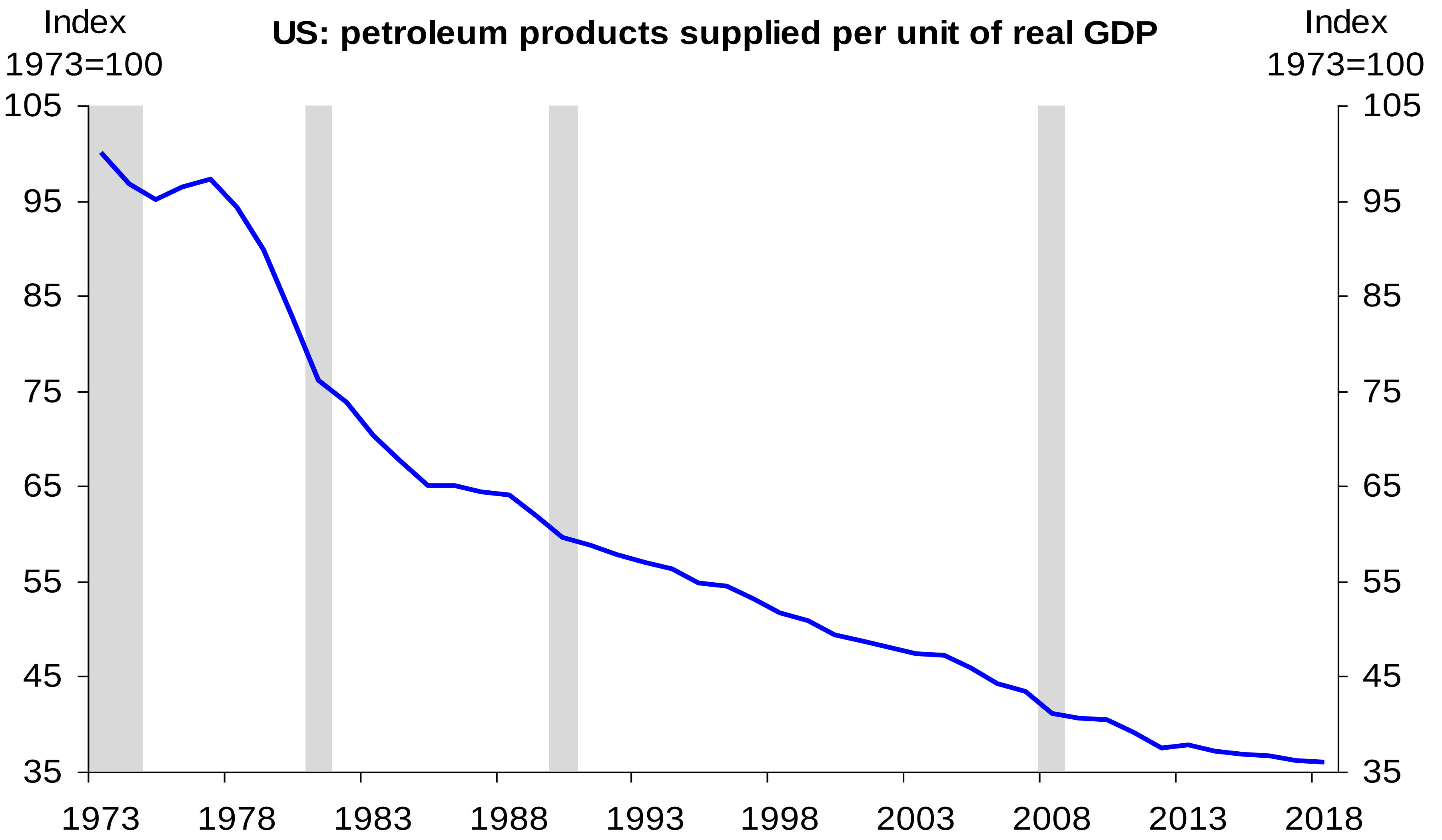
Oil prices correlated with global growth 18 months ahead



Note: Data as of Sep, 2019

Source: EIA, OECD, Haver Analytics, DB Global Research

US economy less oil intensive



Source: EIA, BEA, Haver Analytics, DB Global Research

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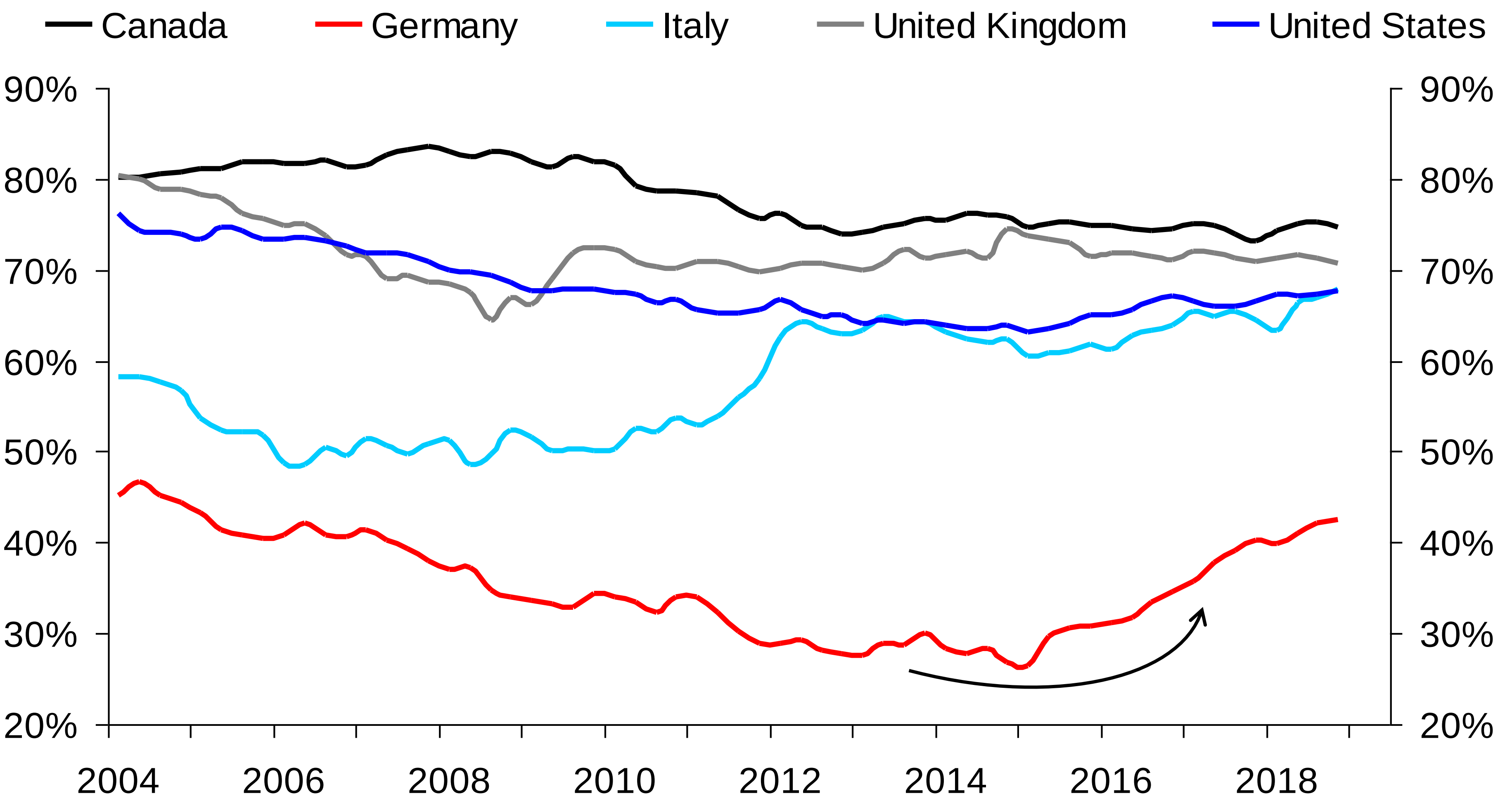
Globalization in reverse:
More government debt held domestically

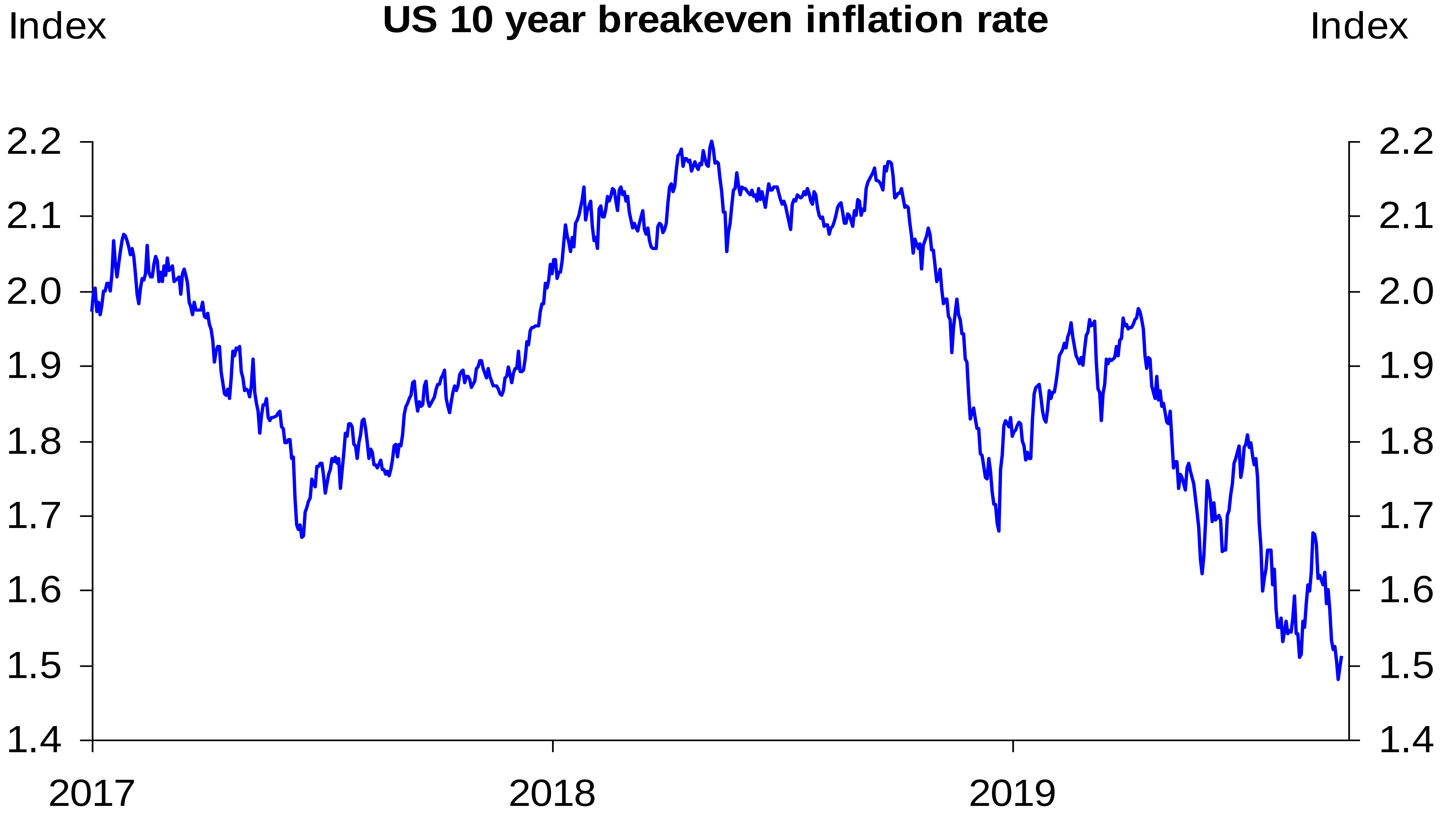
Sovereign debt held domestically by advanced economies
(as % of total sovereign debt)



Source: IMF, DB Global Research

Breakeven inflation very low

US 10 year breakeven inflation rate



Source: Bloomberg Finance LP, DB Global Research

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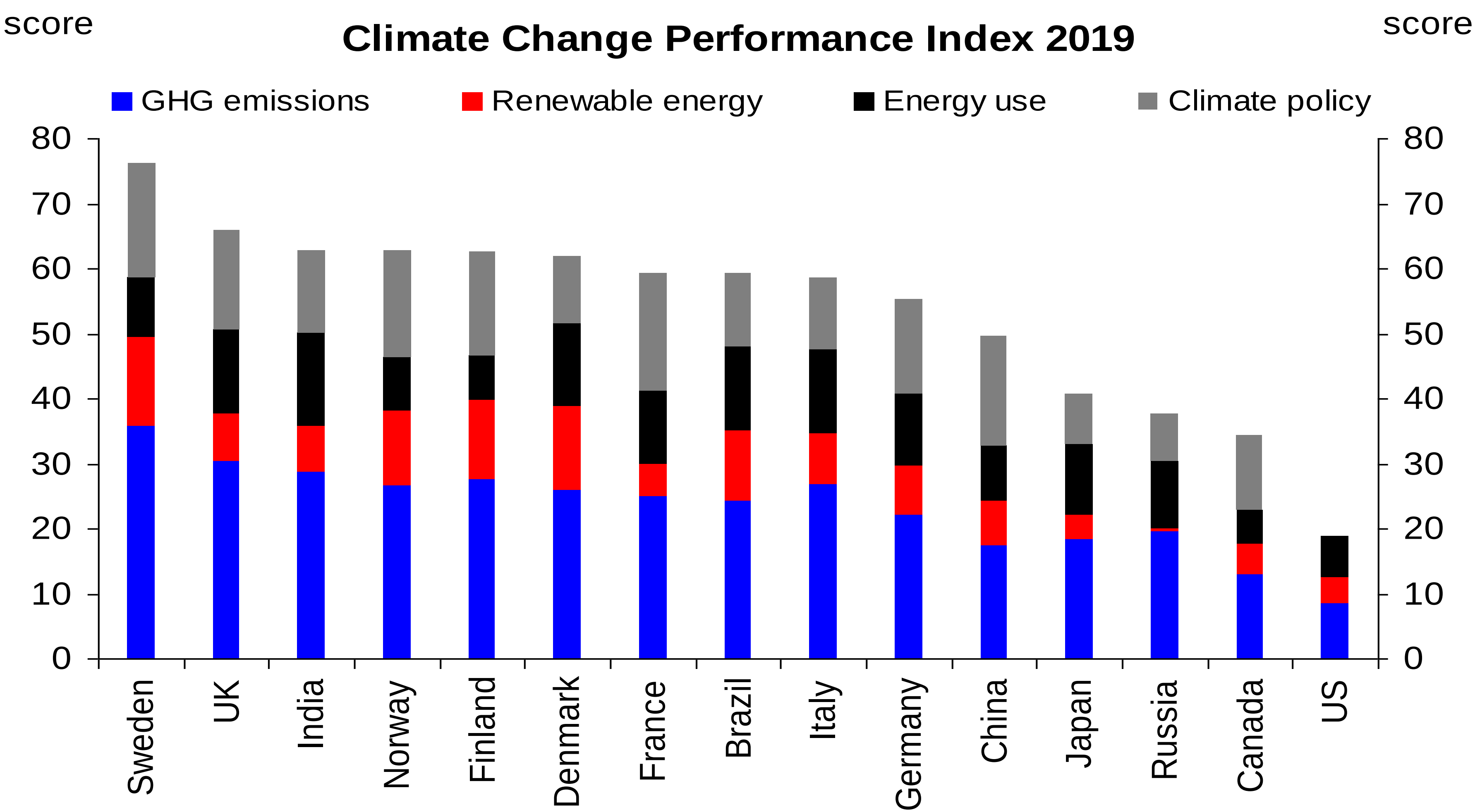
Sweden doing most about climate change, US doing the least



Note: *The scores are by country's aggregated performance regarding 14 indicators within the four categories GHG emissions, renewable energy, energy use and climate policy. Higher the score for a country, higher will be its rank. According to the 2019 report, no country has yet made it to one of the top three places and Sweden leads the ranking at fourth position among 56 evaluated countries and the EU.*

Source: Germanwatch, NewClimate Institute, Climate Action Network, DB Global Research

Torsten Slok, Ph.D.

- **Chief Economist, Managing Director**
- **Deutsche Bank Securities, Inc.**

- **Mr. Slok's Economics team has been top-ranked by Institutional Investor in fixed income and equities since 2010, including #1 in 2019.** Slok currently serves as a member of the Economic Club of New York
- Prior to joining the firm, Mr. Slok worked at the OECD in Paris in the Money and Finance Division and the Structural Policy Analysis Division. Before joining the OECD he worked for four years at the IMF in the Division responsible for writing the World Economic Outlook and the Division responsible for China, Hong Kong, and Mongolia.
- Mr. Slok studied at University of Copenhagen and Princeton University. He has published numerous journal articles and reviews on economics and policy analysis, including in Journal of International Economics, Journal of International Money and Finance, and The Econometric Journal.

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