



Trade war uncertainty still weighing on global outlook

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

Distributed on: 29/10/2019 17:18:10 GMT

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



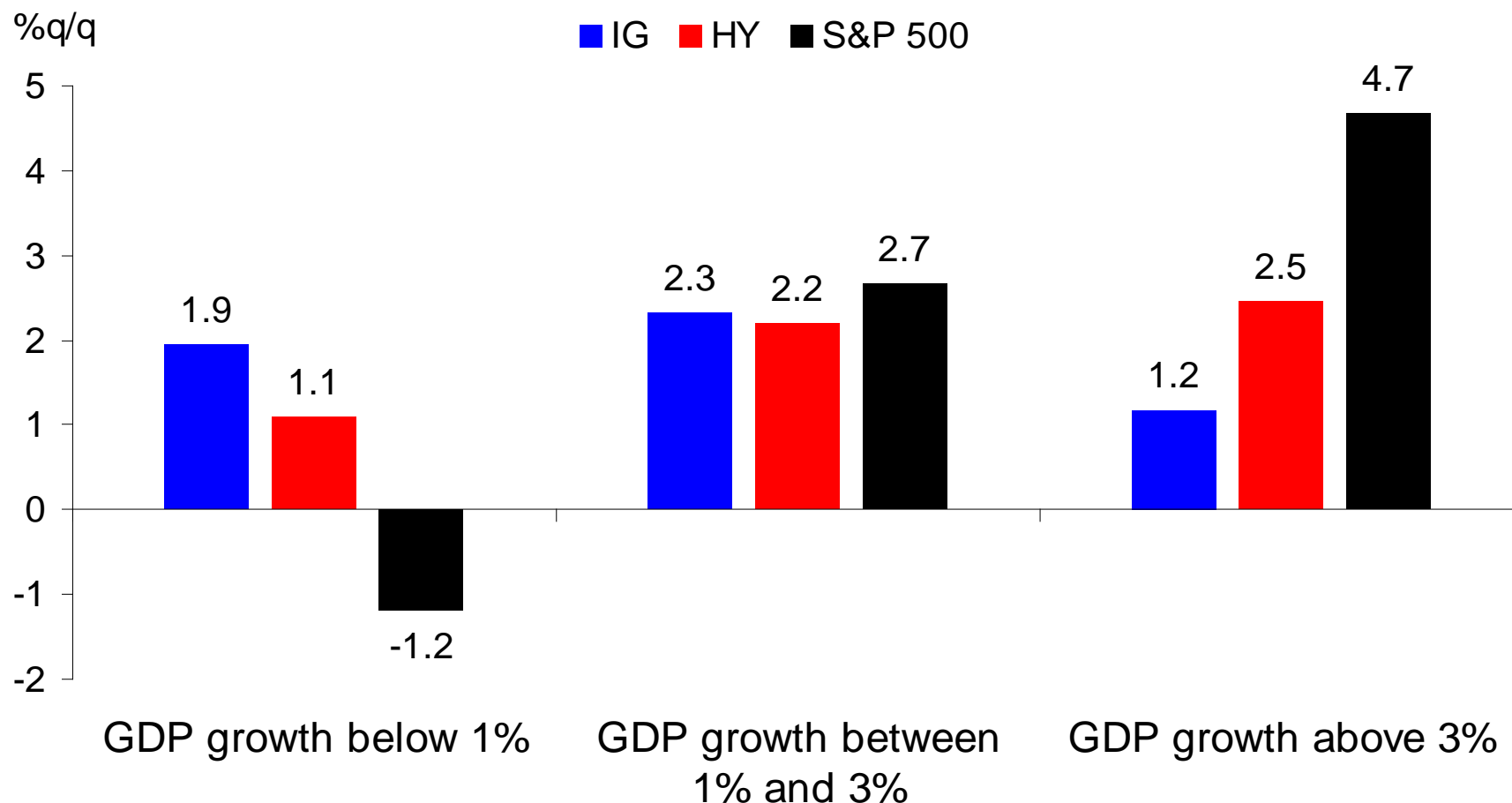
96) Chart		97) Set as Default View		Disclaimer		Economic Forecasts				
Country/Region/World			Contributor		Contributor Composite			● Yearly ● Quarterly		
 United States			Browse		● Private ● Official					
Actual / Forecasts						Probability of Recession				35.0%
Indicator	Q4 18	Q1 19	Q2 19	Q3 19	Q4 19	Q1 20	Q2 20	Q3 20	Q4 20	Q1 21
Real GDP (YoY%)	2.5	2.7	2.3	2.0	2.1	1.8	1.7	1.7	1.7	1.8
Real GDP (QoQ% SAAR)	1.1	3.1	2.0	1.8	1.7	1.6	1.8	1.8	1.8	1.9
Consumer Spending ...	1.4	1.1	4.6	2.7	2.1	1.9	2.0	2.0	2.0	2.0
Government Spendin...	-0.4	2.9	4.8	1.5	1.5	1.7	1.6	1.3	1.1	1.1
Private Investment (...)	3.0	6.2	-6.3	0.8	1.0	1.5	1.6	2.3	2.5	2.9
Exports (QoQ% SAAR)	1.5	4.1	-5.7	1.2	1.8	2.0	1.8	2.0	2.3	2.5
Imports (QoQ% SAAR)	3.5	-1.5	0.0	2.5	2.0	2.3	2.3	2.5	2.5	3.0
Industrial Production (Yo...			1.5	0.4	-0.2	0.5	1.2	1.1	1.2	1.4
Price Indices										
CPI (YoY%)	2.2	1.7	1.8	1.7	2.0	2.2	2.0	2.1	2.0	2.1
PCE Price Index (YoY%)	1.9	1.4	1.4	1.5	1.6	2.0	1.9	1.9	1.9	1.9
Core PCE (yoy%)	1.9	1.6	1.6	1.7	1.8	2.1	2.1	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 growing
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

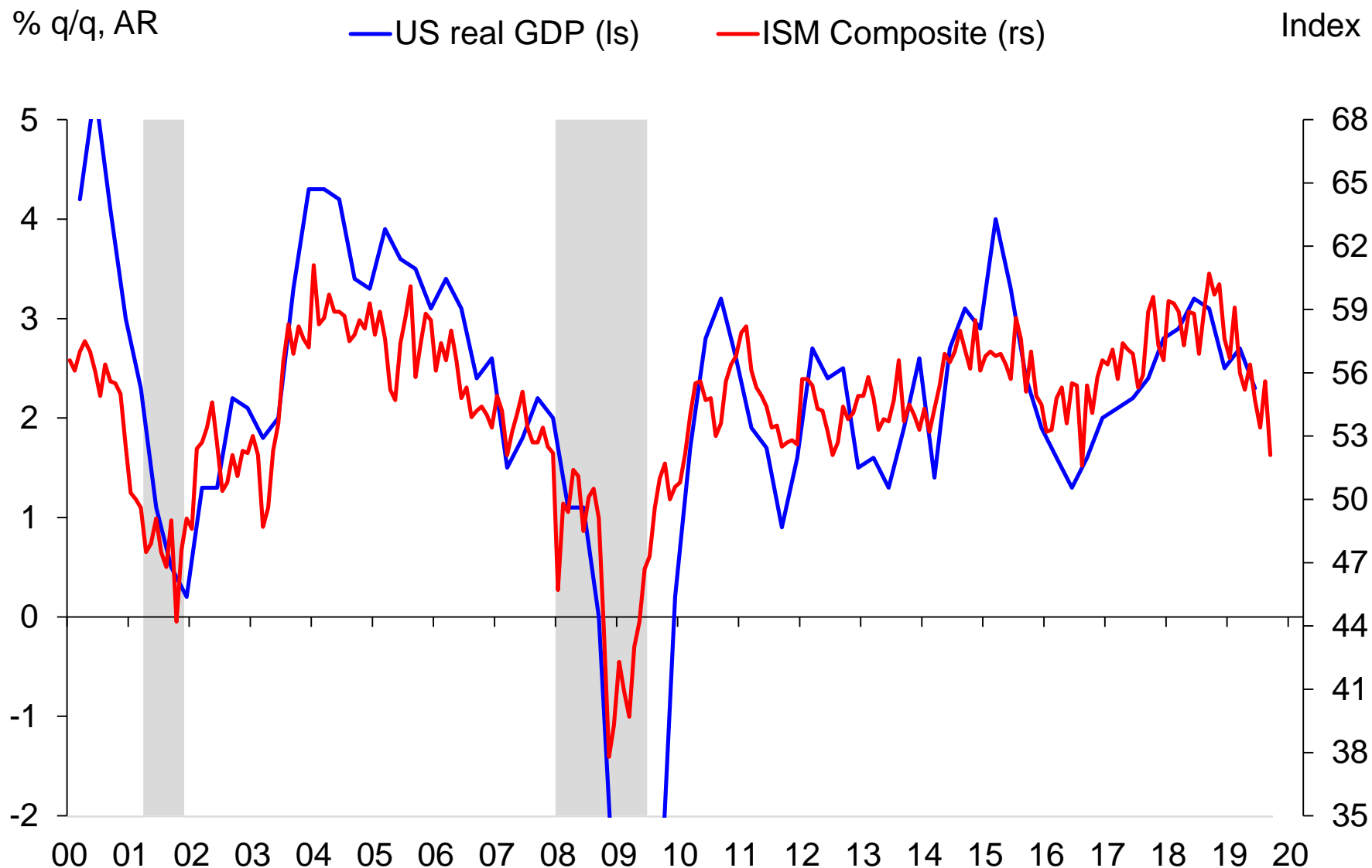


Risk #1

Quantifying the macro impact of the trade war



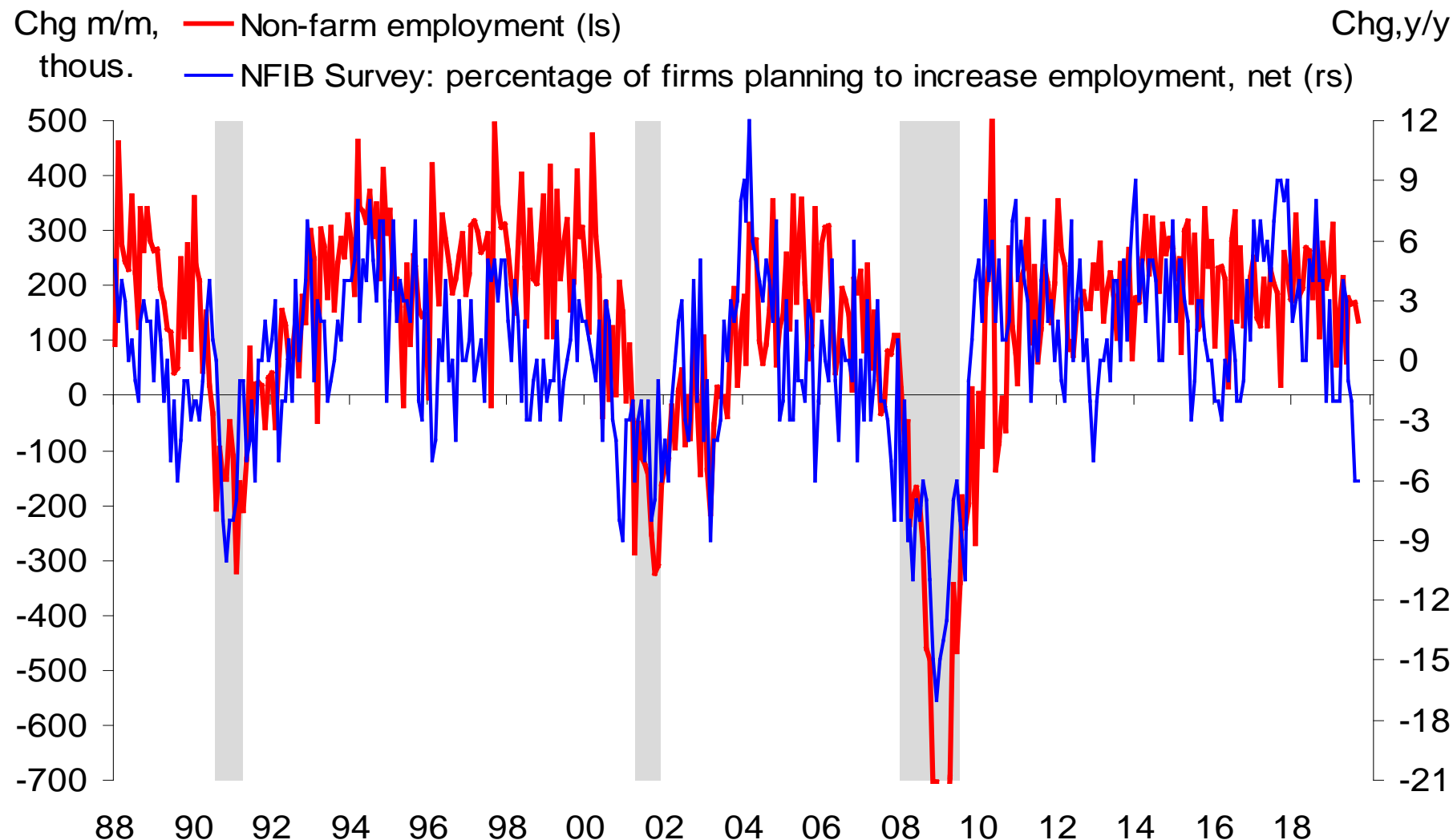
ISM composite pointing to sharp slowdown



Source: BEA, Bloomberg Finance LP, DB Global Research



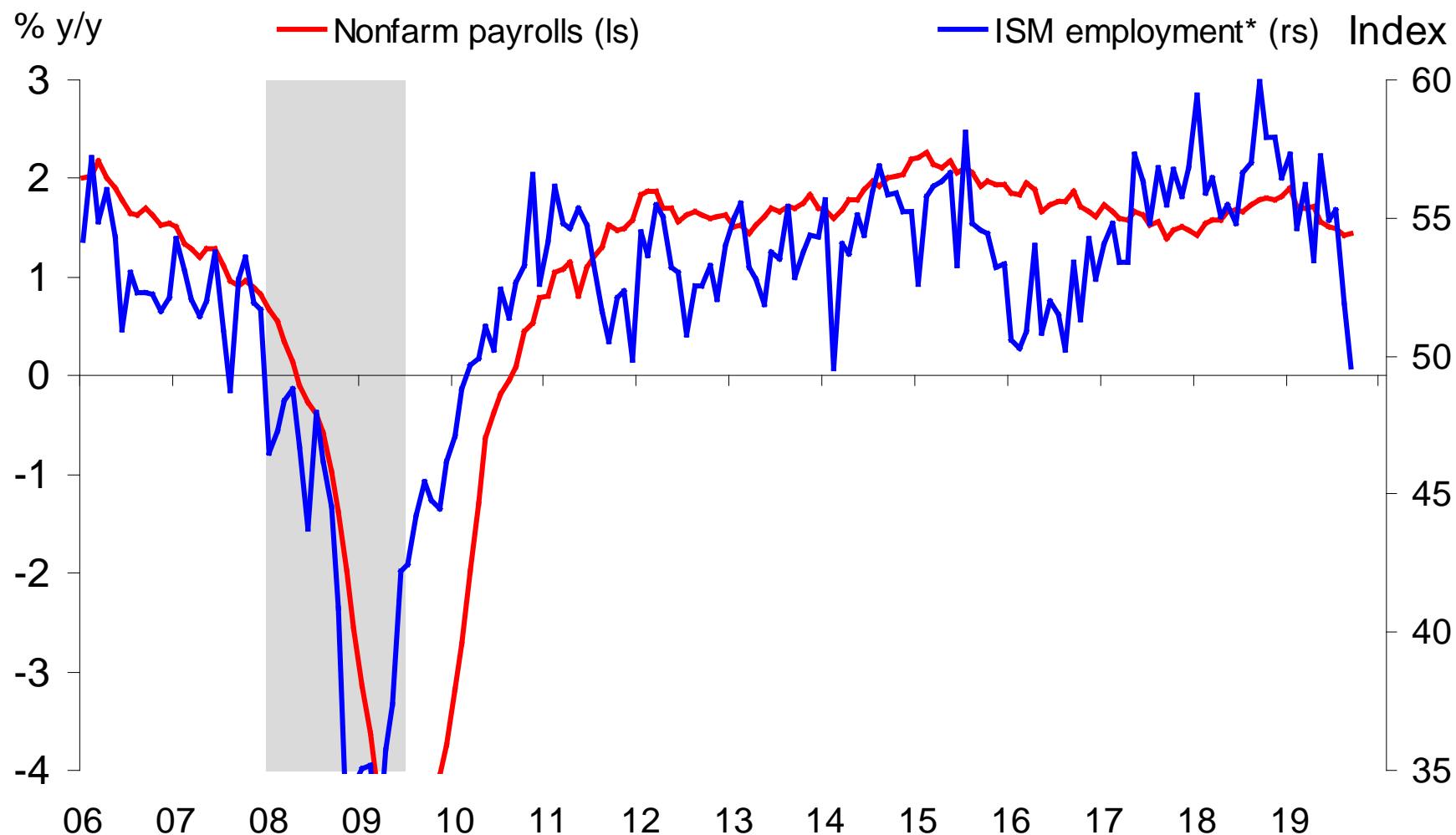
Downside risks to employment



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



Downside risks to employment

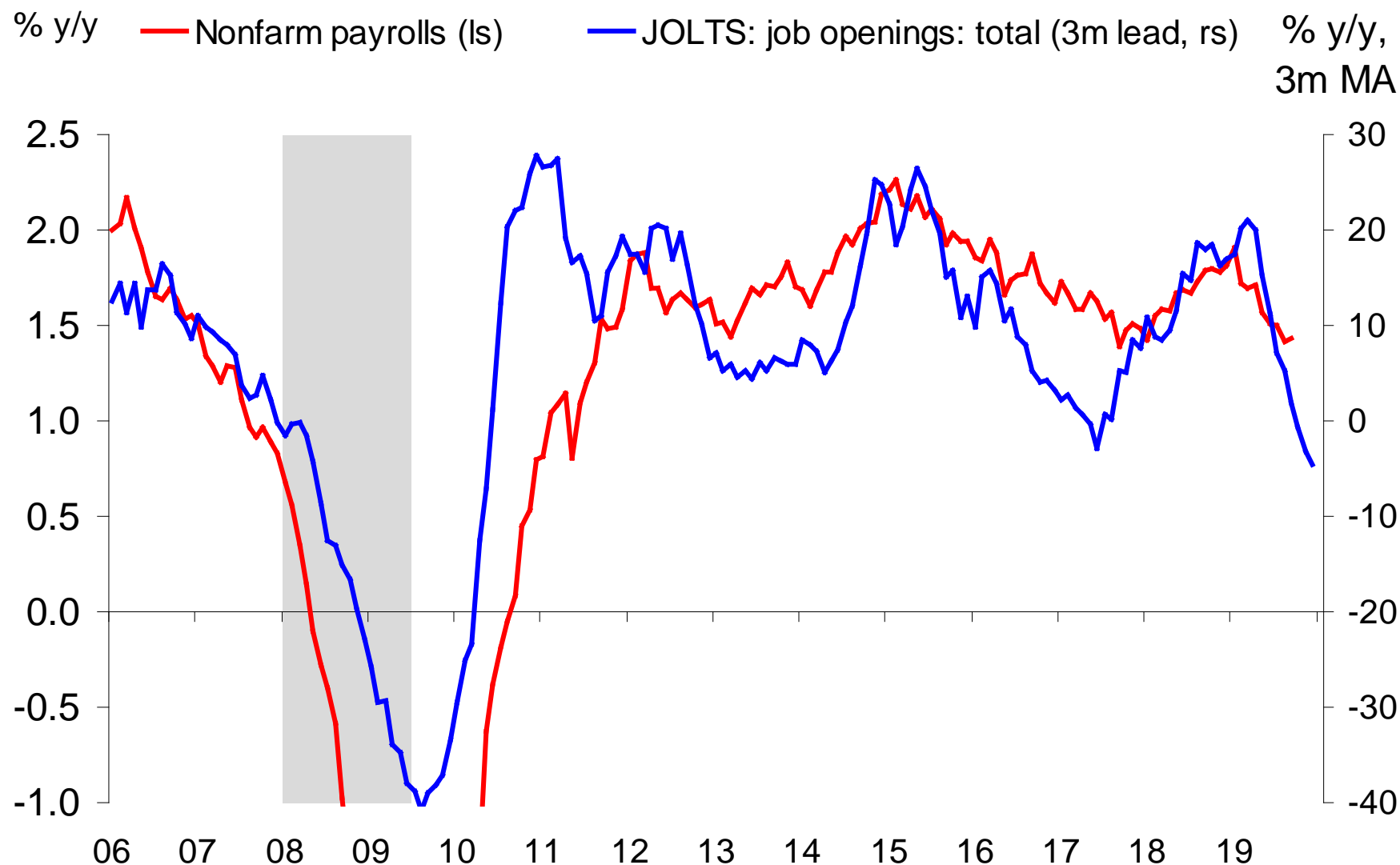


*weights are assigned as 20% to manufacturing and 80% to non-manufacturing ISM.

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



Downside risks to employment

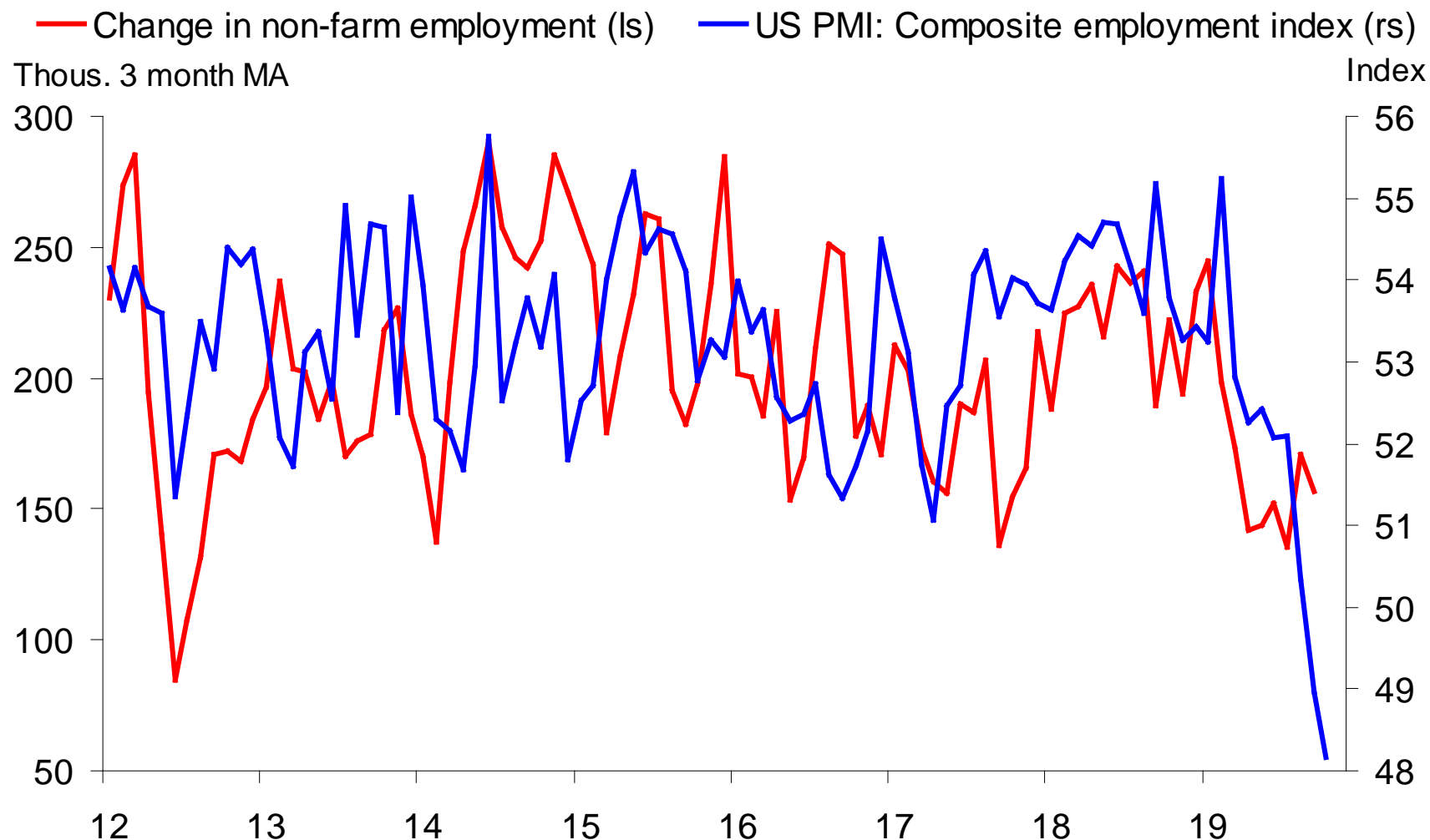


Source: BLS, Haver Analytics, DB Global Research



Downside risks to employment

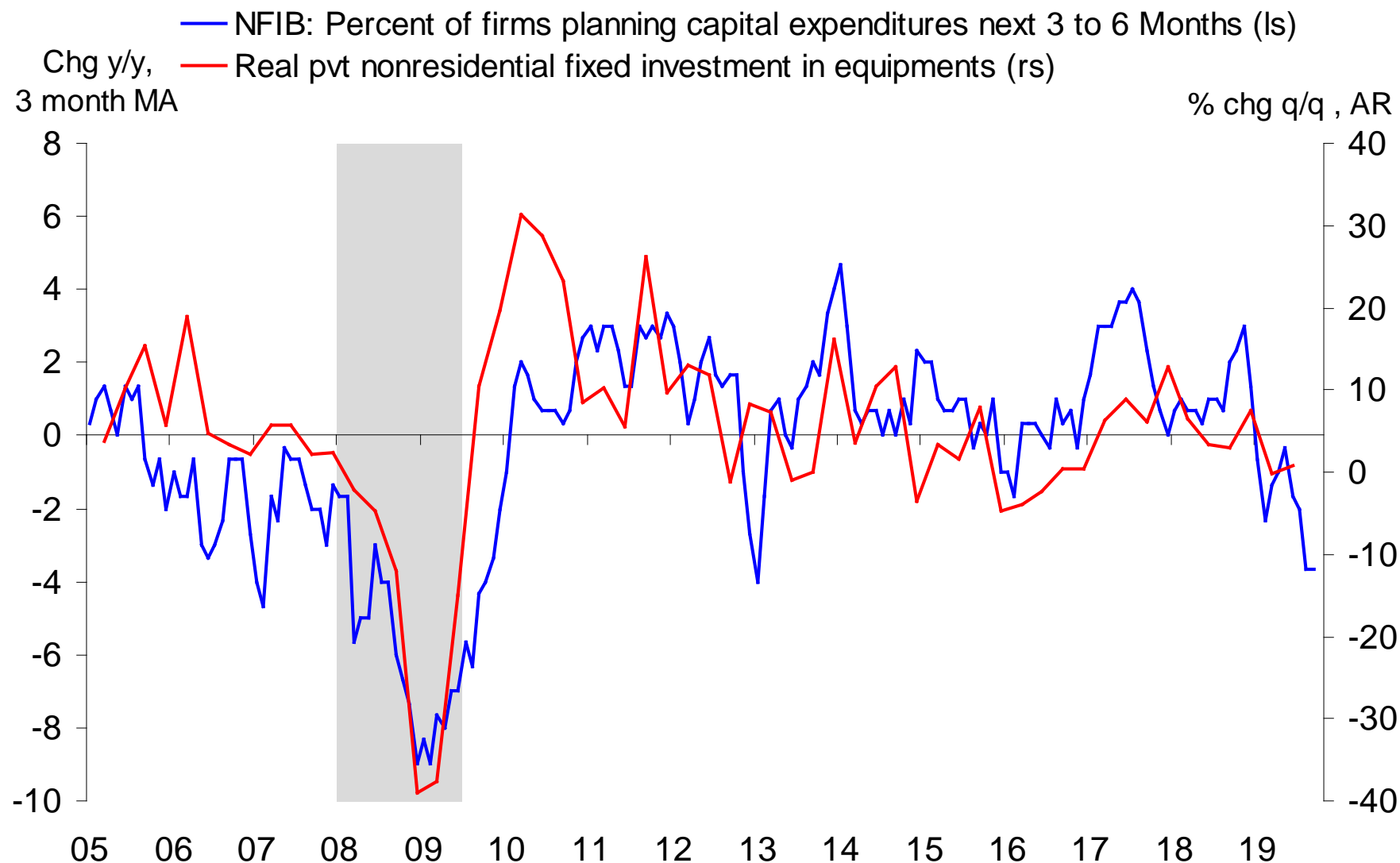
Nonfarm payrolls growth and PMI employment index



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



Downside risks to capex

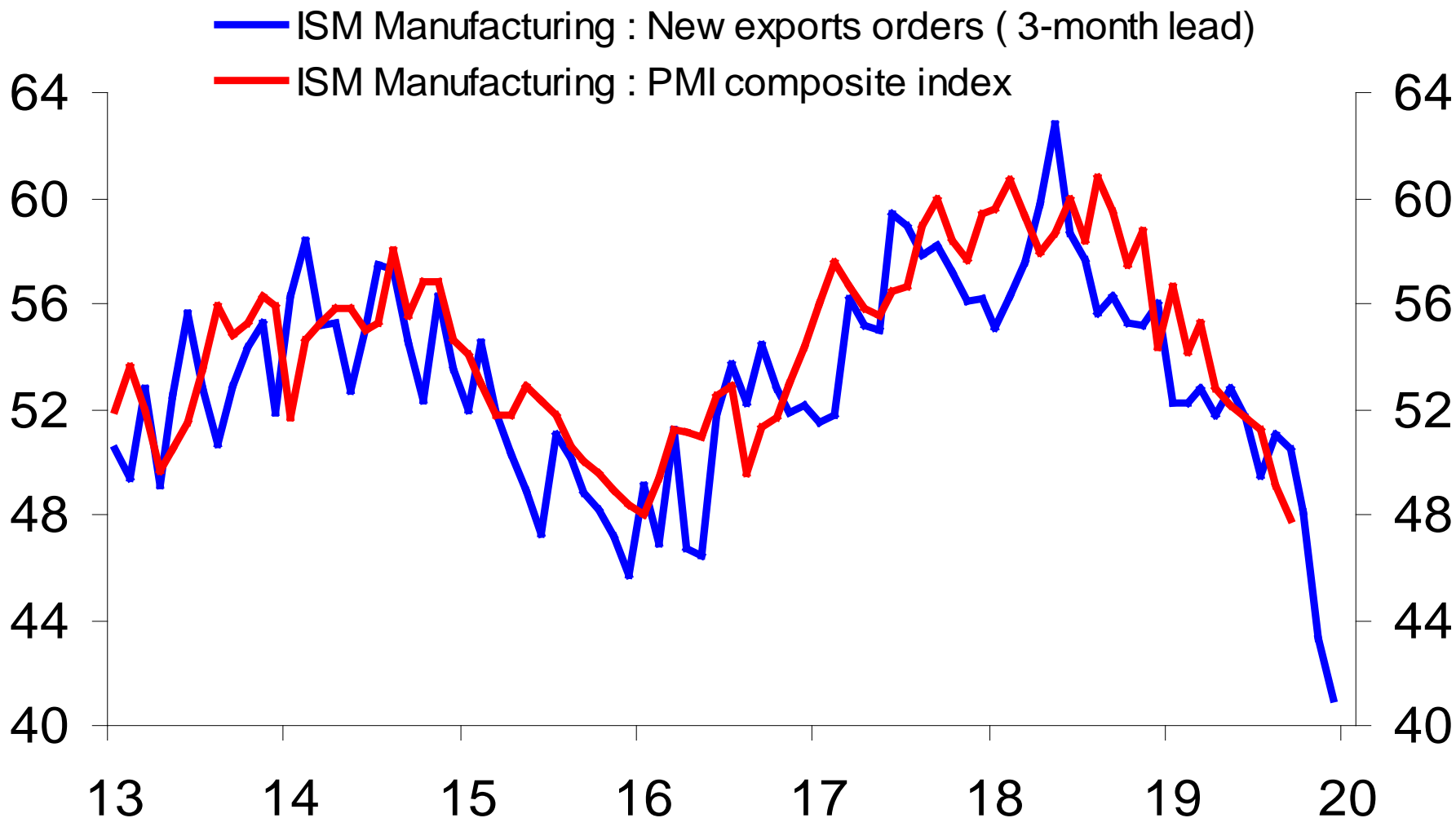


Source: NFIB, BEA, Haver Analytics, DB Global Research



More downside risk to ISM in coming months

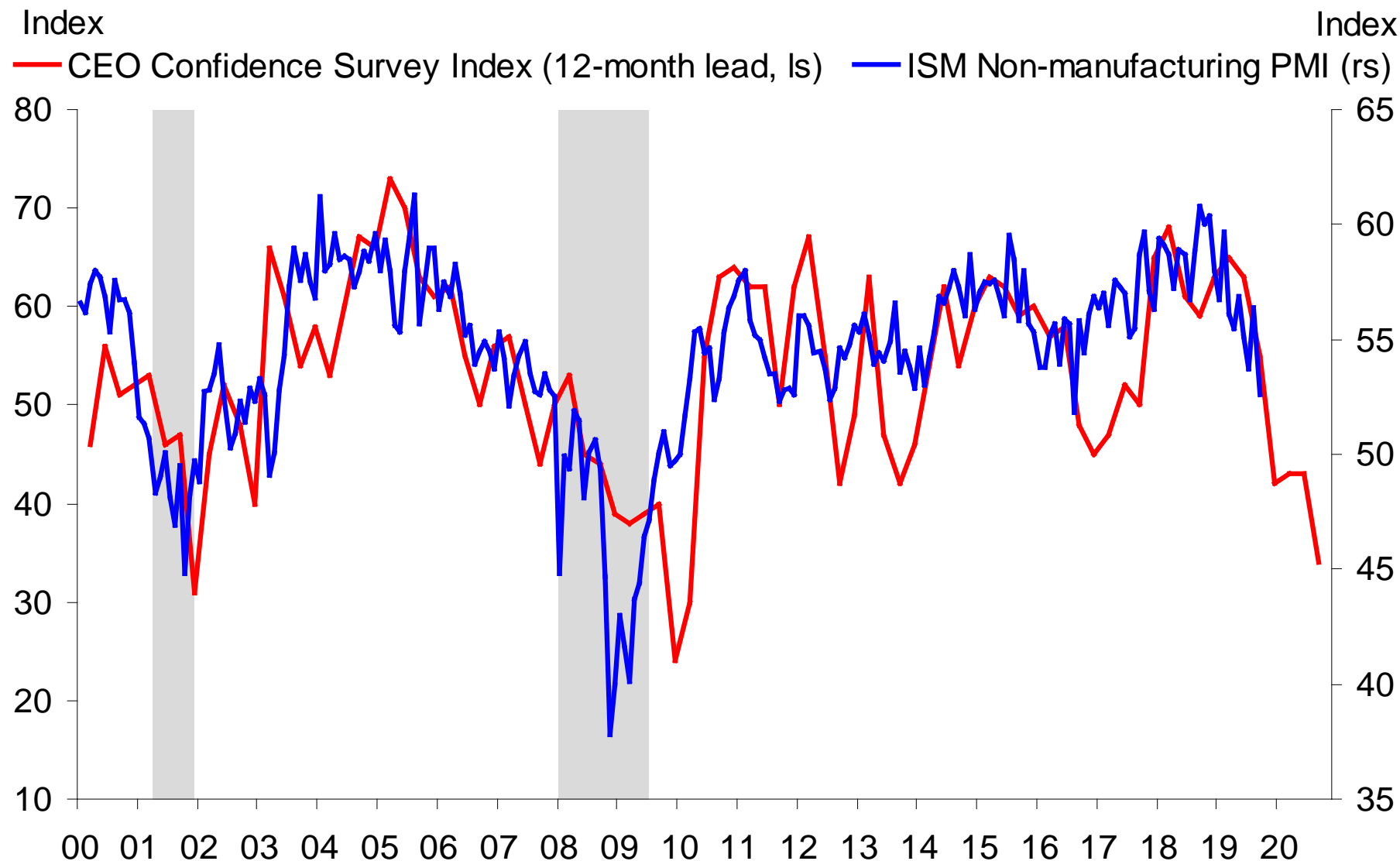
Index **ISM Manufacturing : New export orders and PMI composite index** Index



Source: ISM, Haver Analytics, DB Global Research

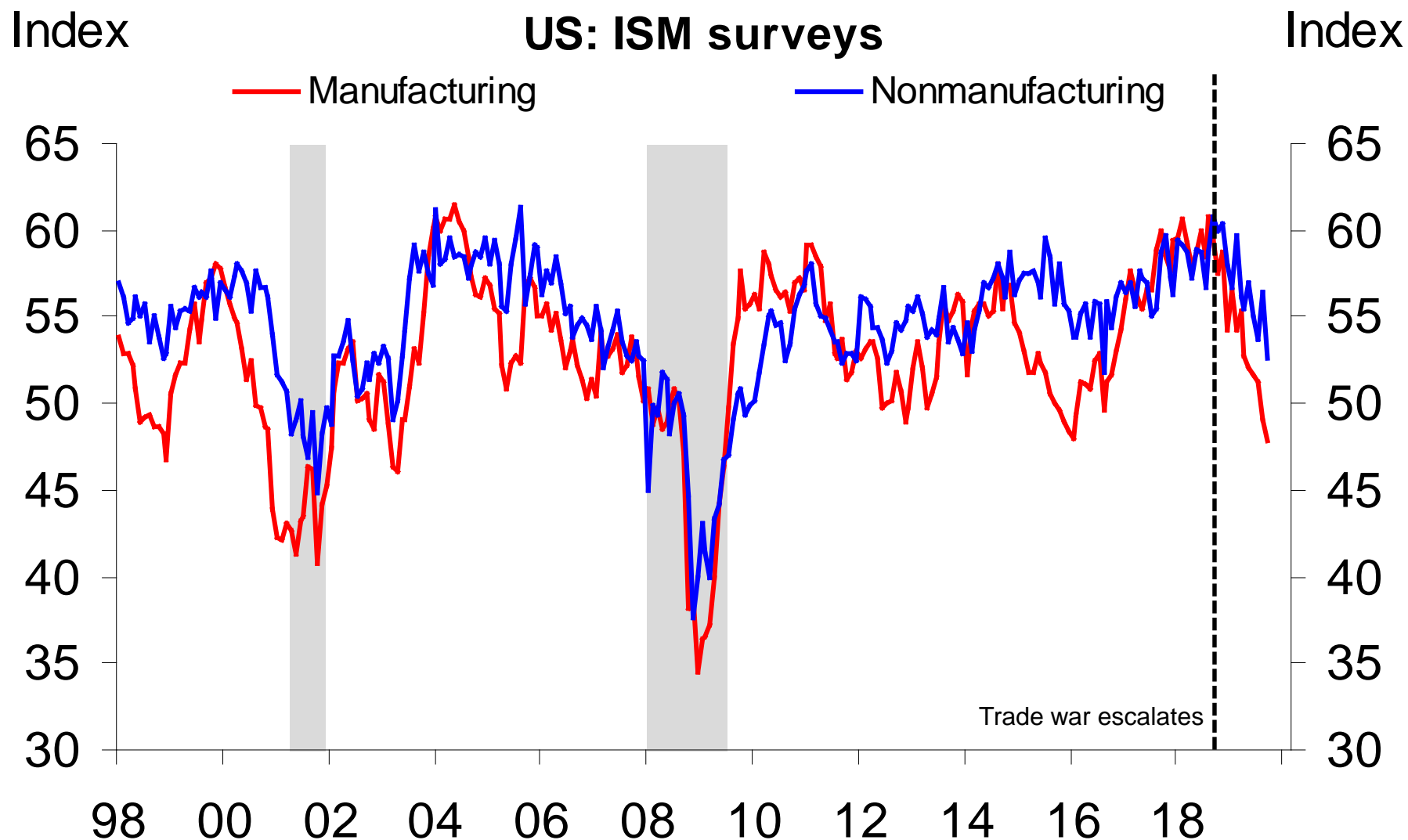


The slowdown is not only in manufacturing



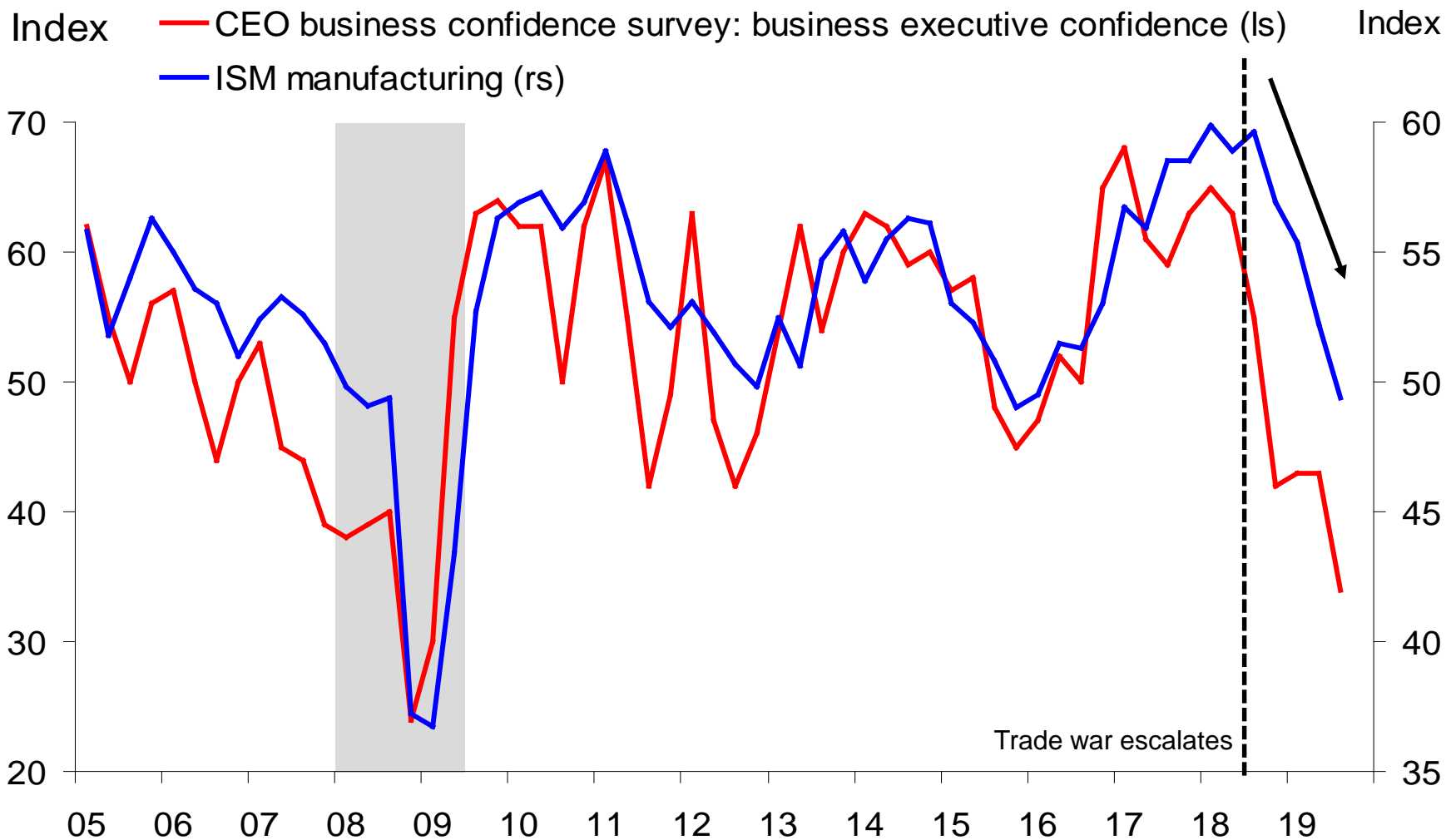
Source: ISM, The Conference Board, Bloomberg Finance LP, Haver Analytics, DB Global Research

Trade war uncertainty also dragging down the service sector



Source: ISM, Haver Analytics, DB Global Research

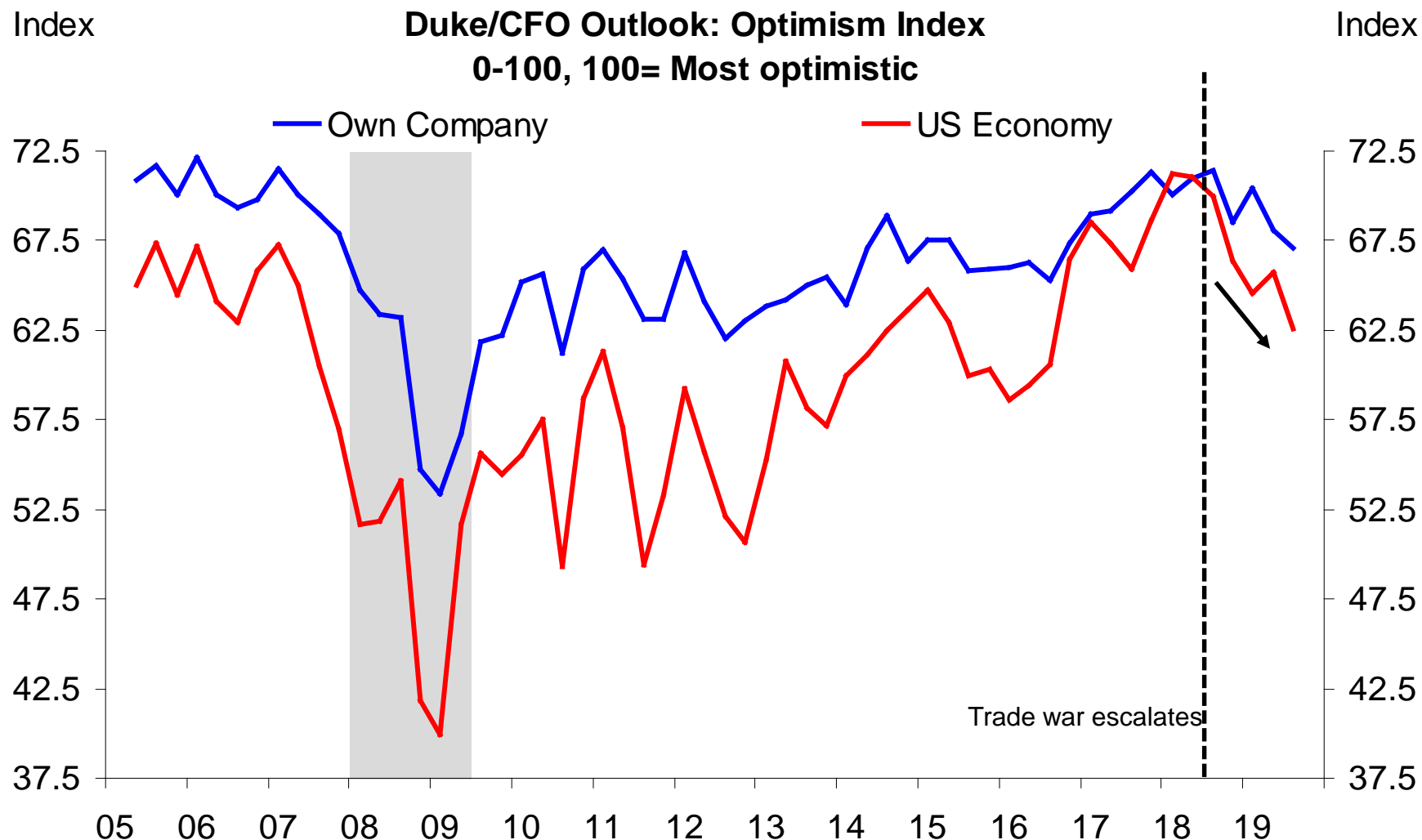
Something happened to CEO confidence and business confidence when the trade war escalated in 2018



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



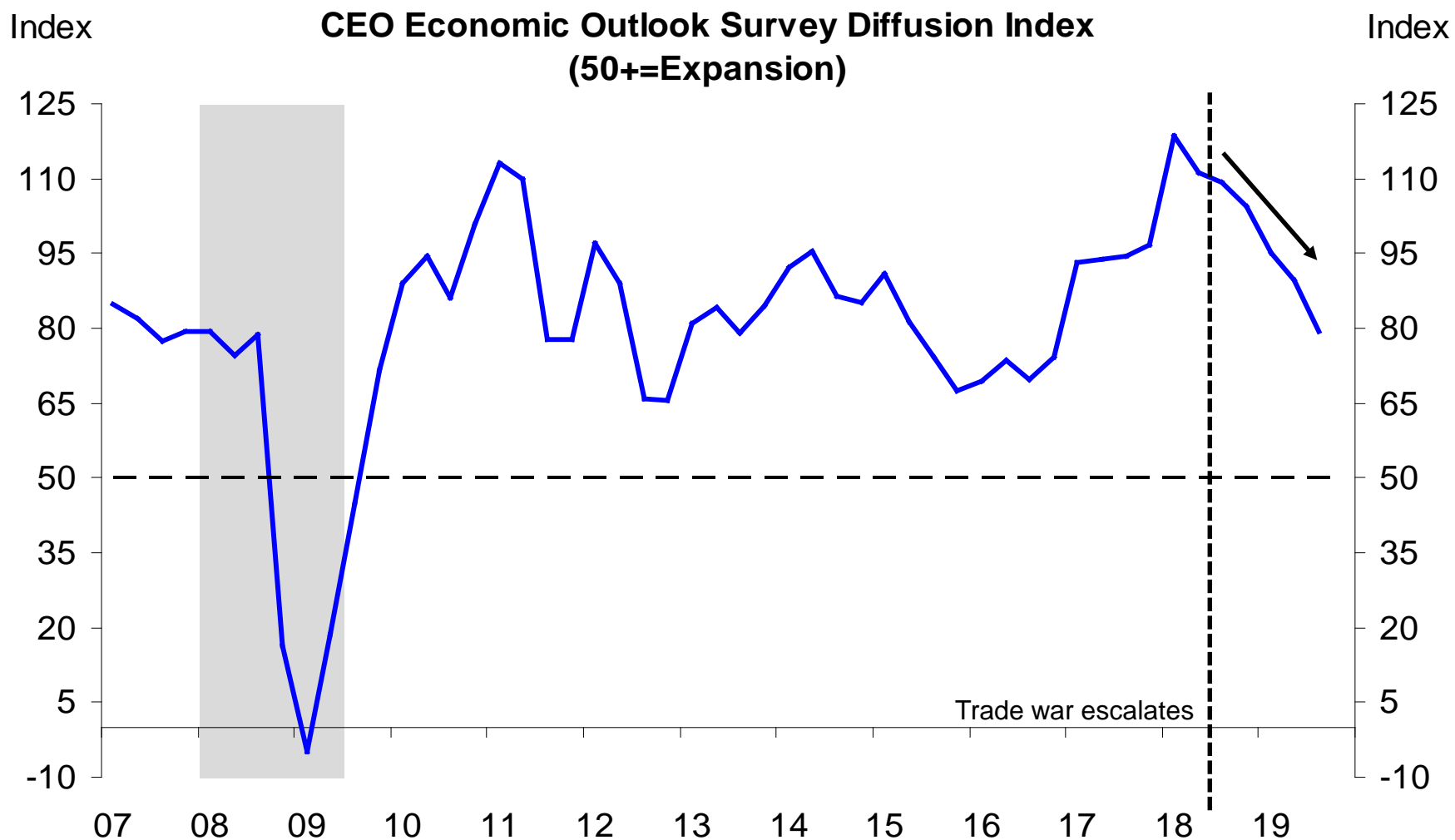
Something happened to CFO and business optimism when the trade war escalated in 2018



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

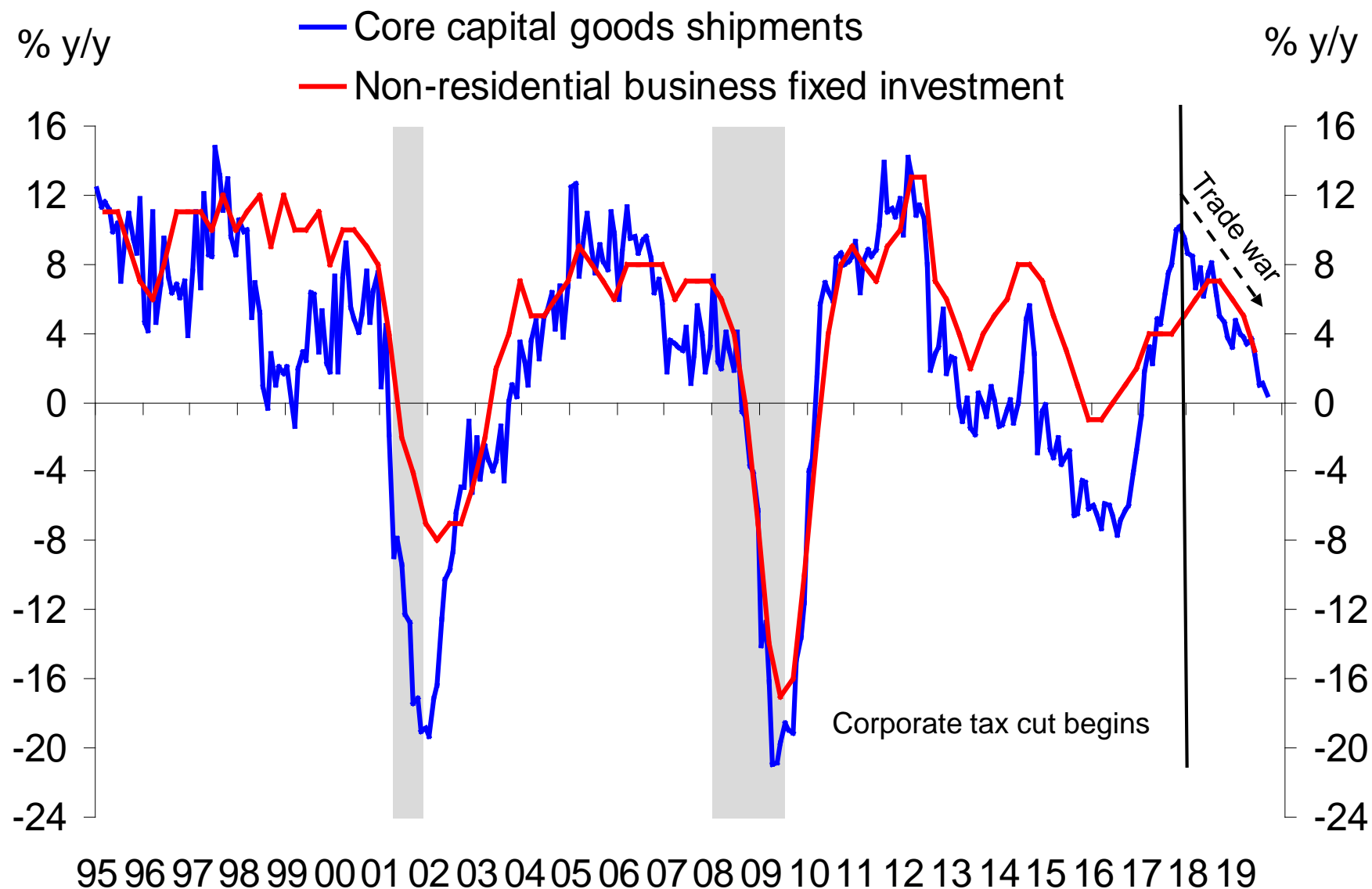


Something happened to CEO confidence when the trade war escalated in 2018



Source: Business Roundtable, Haver Analytics, DB Global Research

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



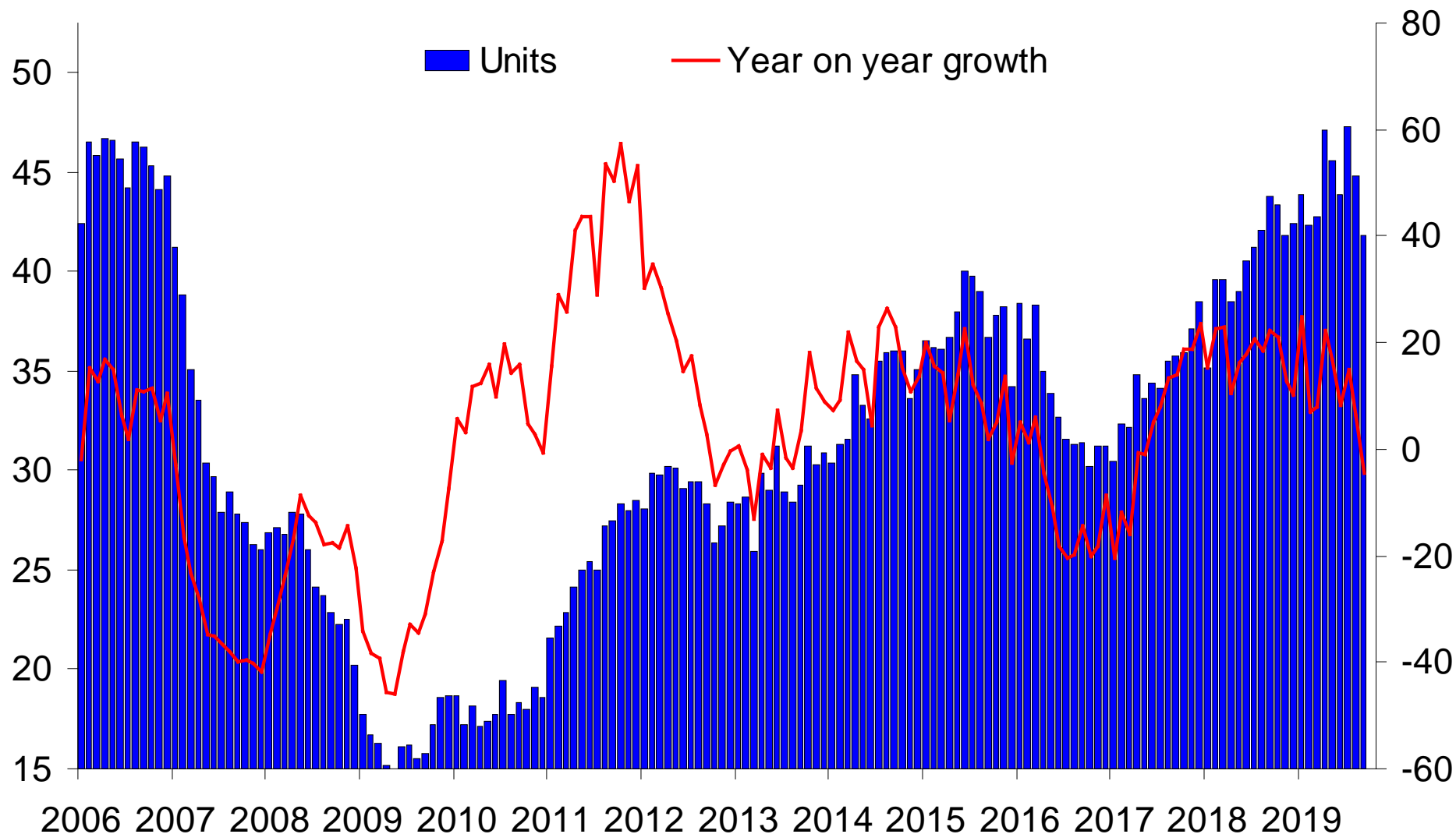
Source: Census, BEA, Haver Analytics, DB Global Research



Growth in US truck sales declining

Thous.Units **Medium and heavy truck sales in United States**

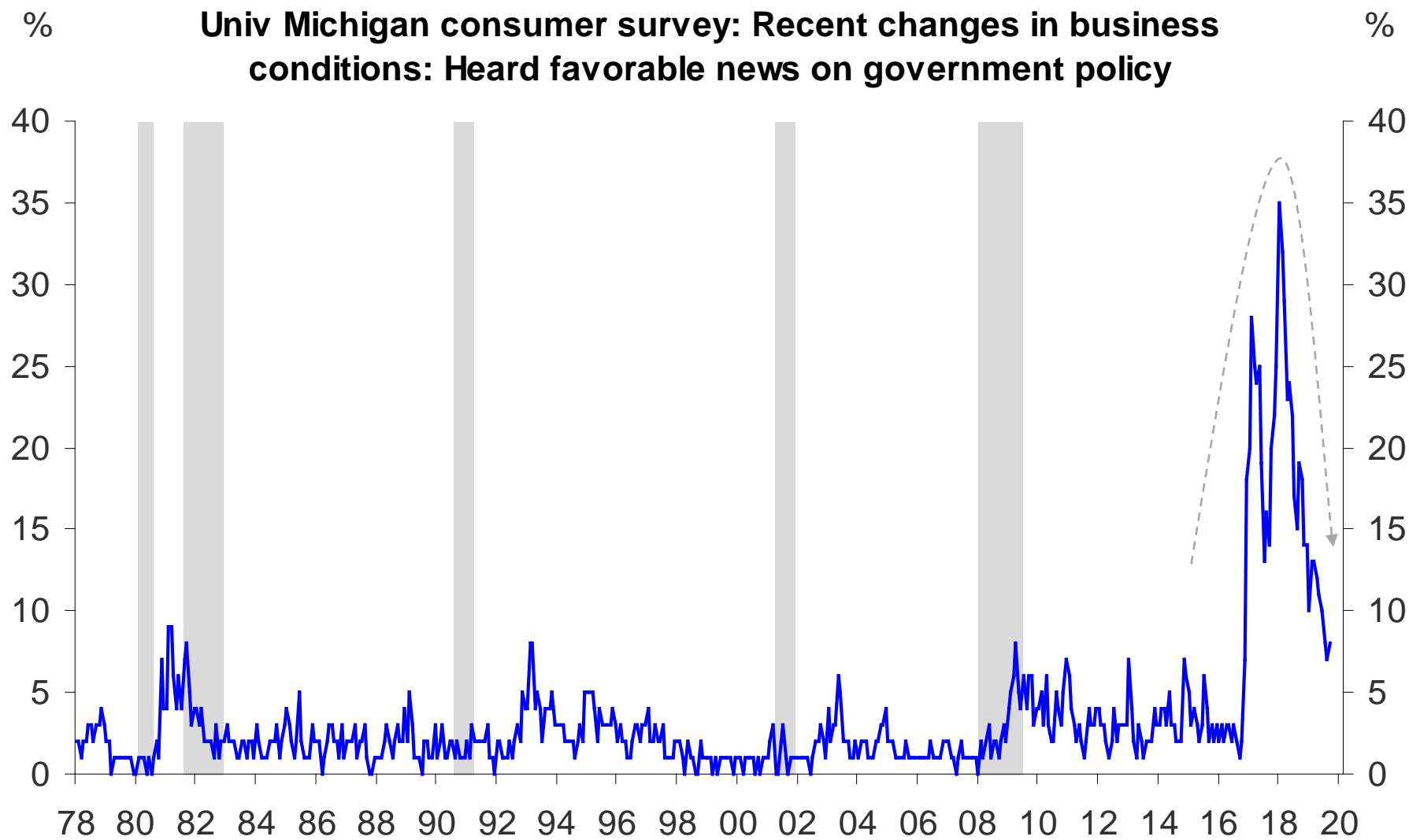
%y/y



Source: BEA, Haver Analytics, DB Global Research



Big U-turn in consumer attitudes toward government policies since 2018



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

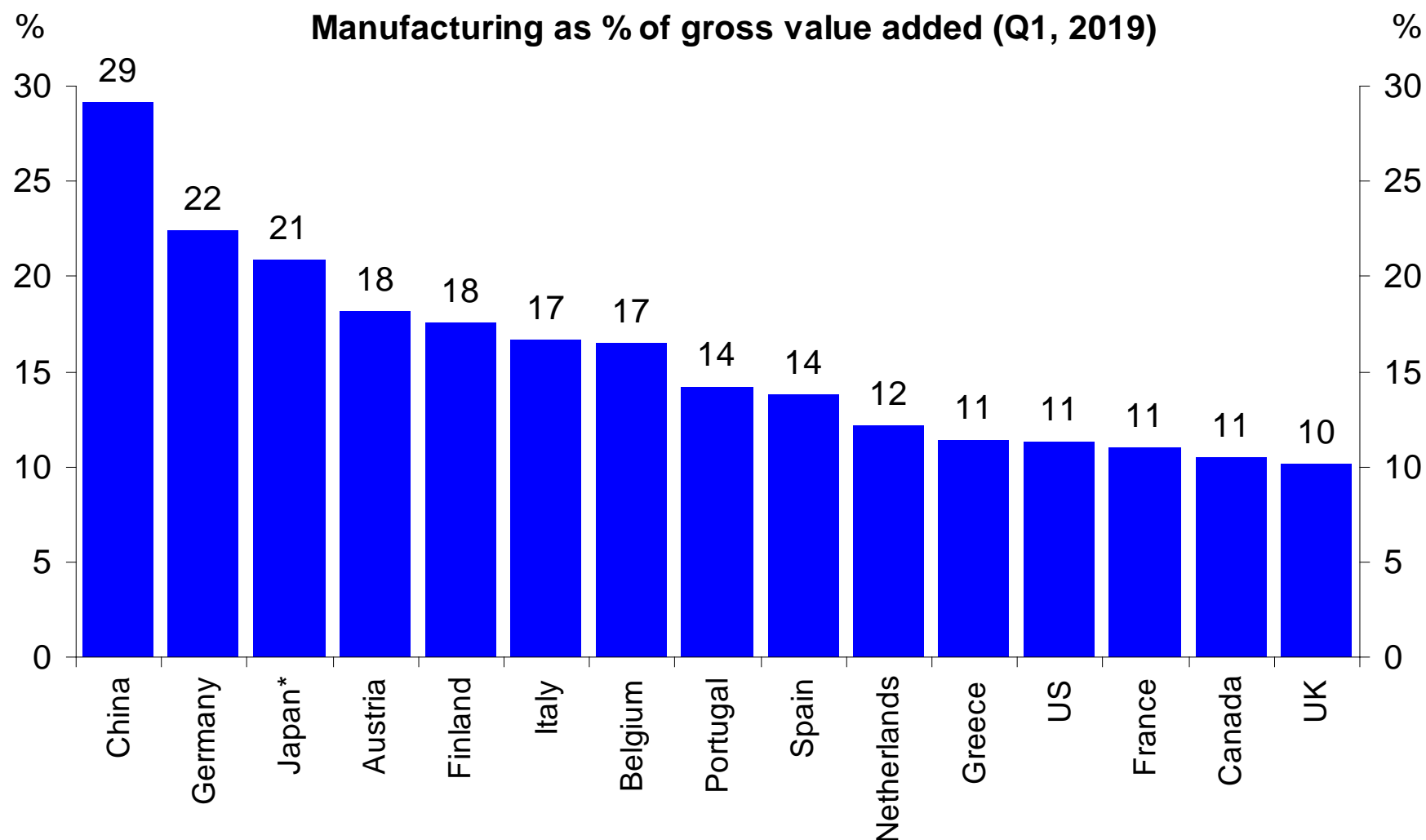


Risk #2:

Growth is weak in Europe, China, and Japan



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

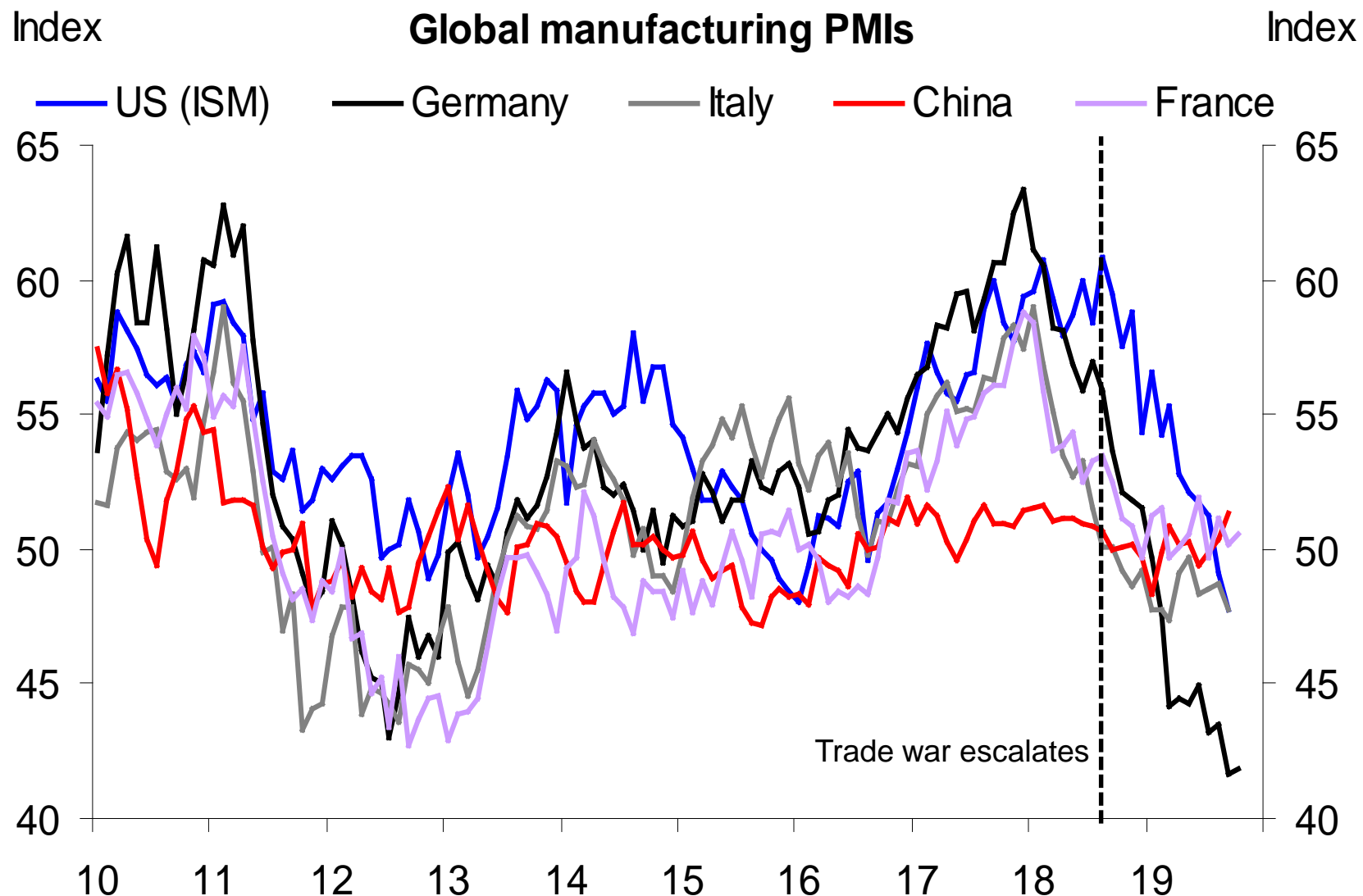


Note*: Japan data is as of 2017.

Source: National Sources, Haver Analytics, DB Global Research



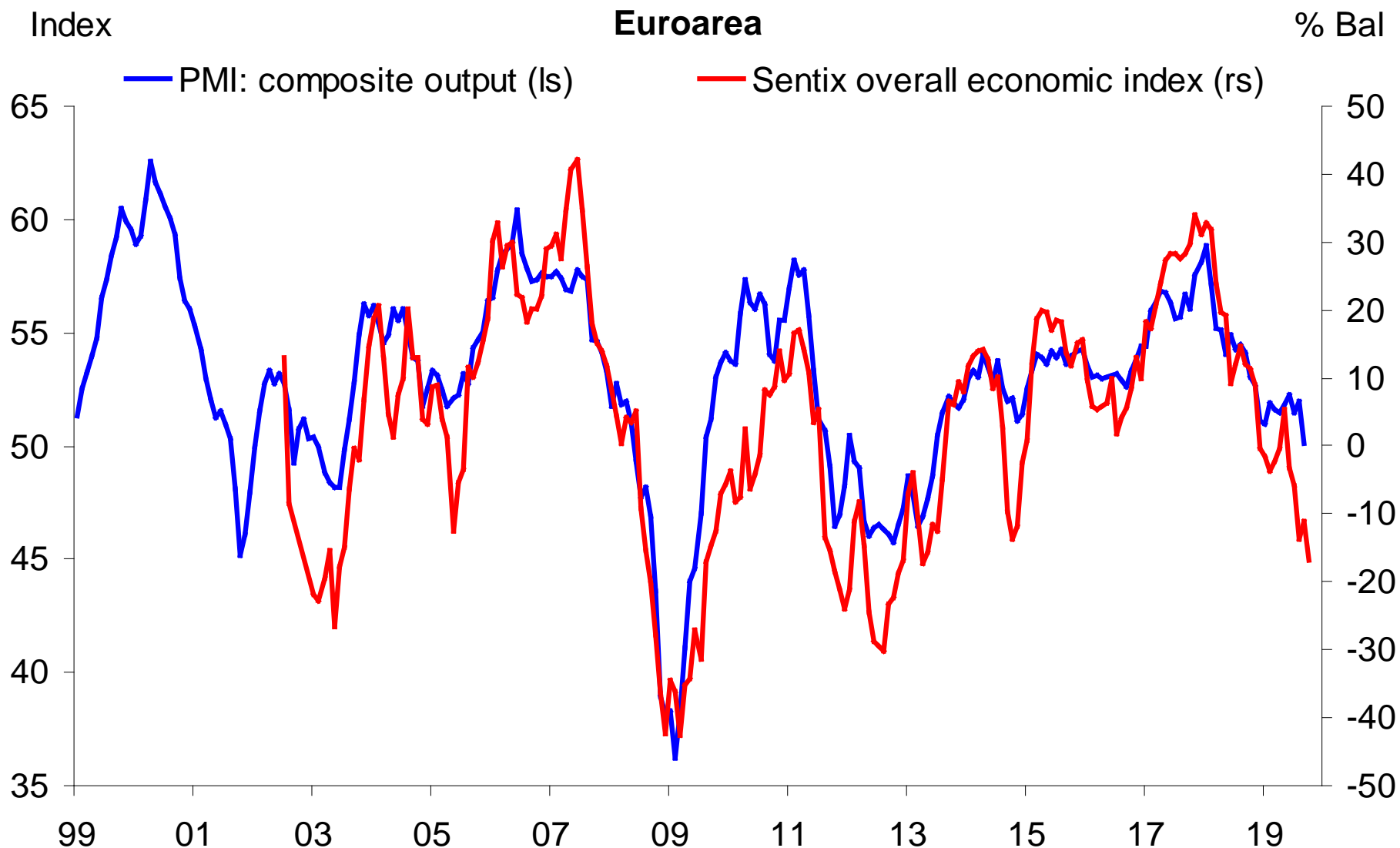
Germany particularly weak



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



Leading indicator for Europe trending lower



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



Heathrow freight traffic declining



Source: Civil Aviation Authority UK, DB Global Research



Leading indicator for Japan trending lower



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

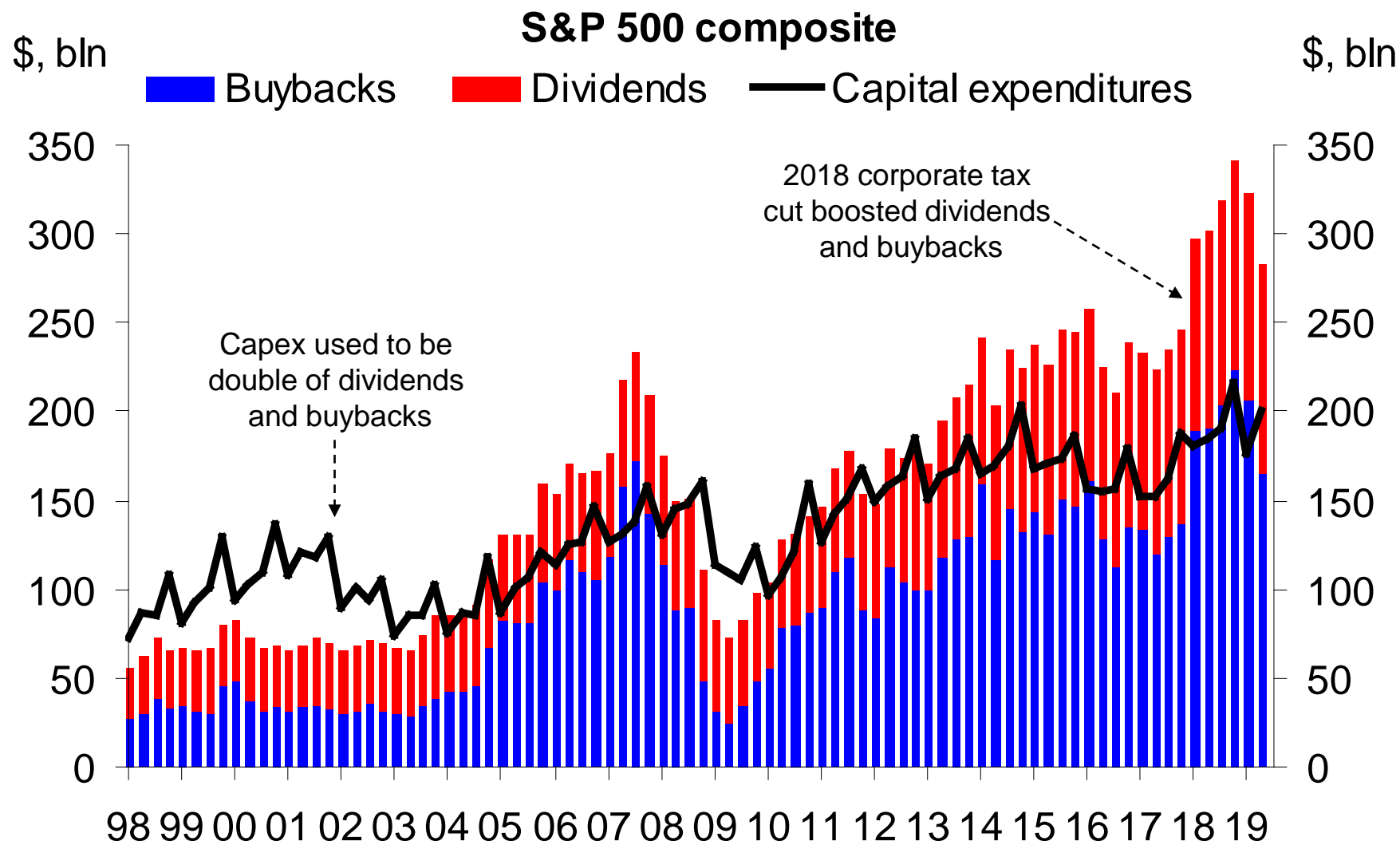


Risk #3:

Positive effects of corporate tax cuts beginning to fade

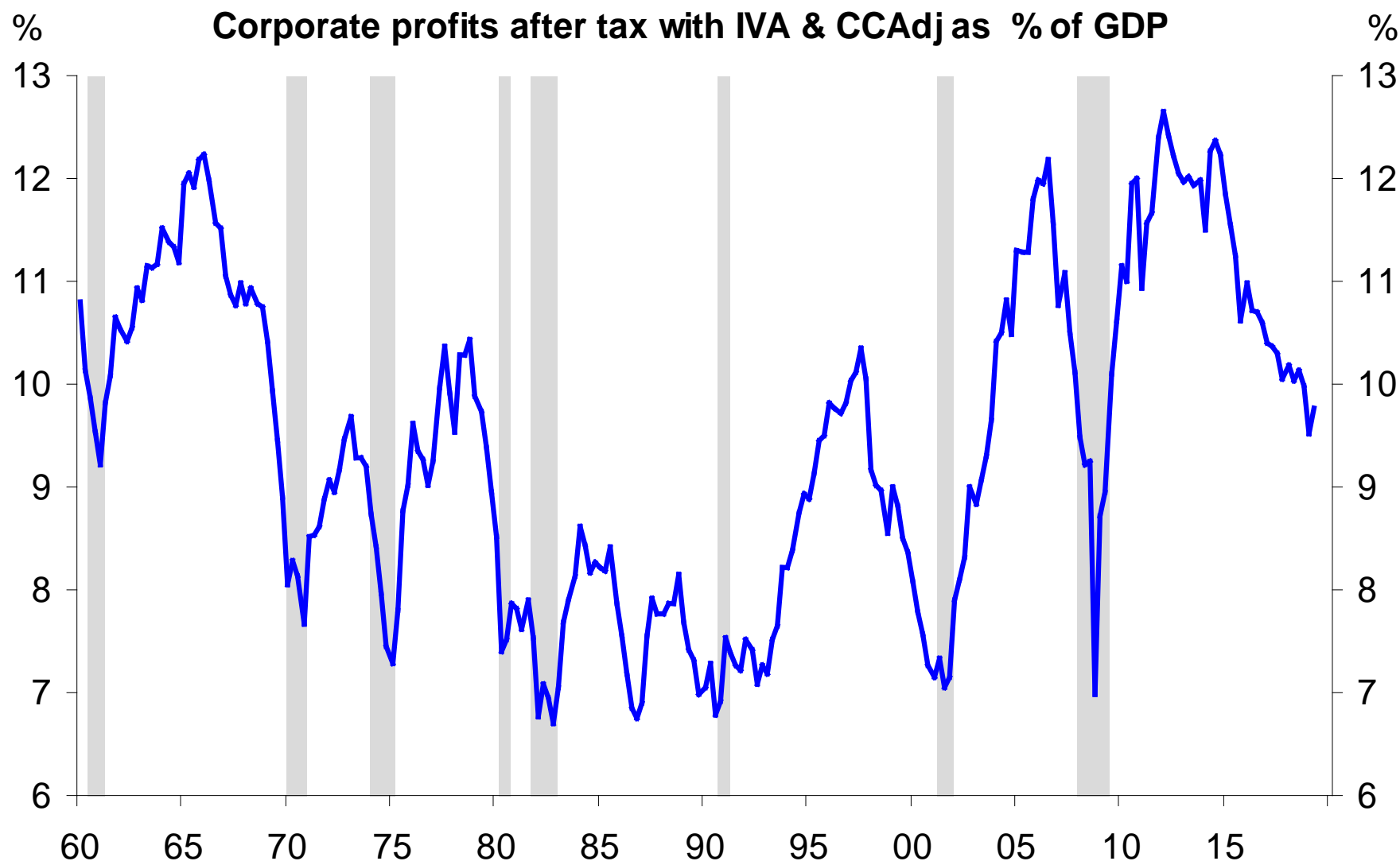


Capex used to be much higher than dividends and buybacks



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

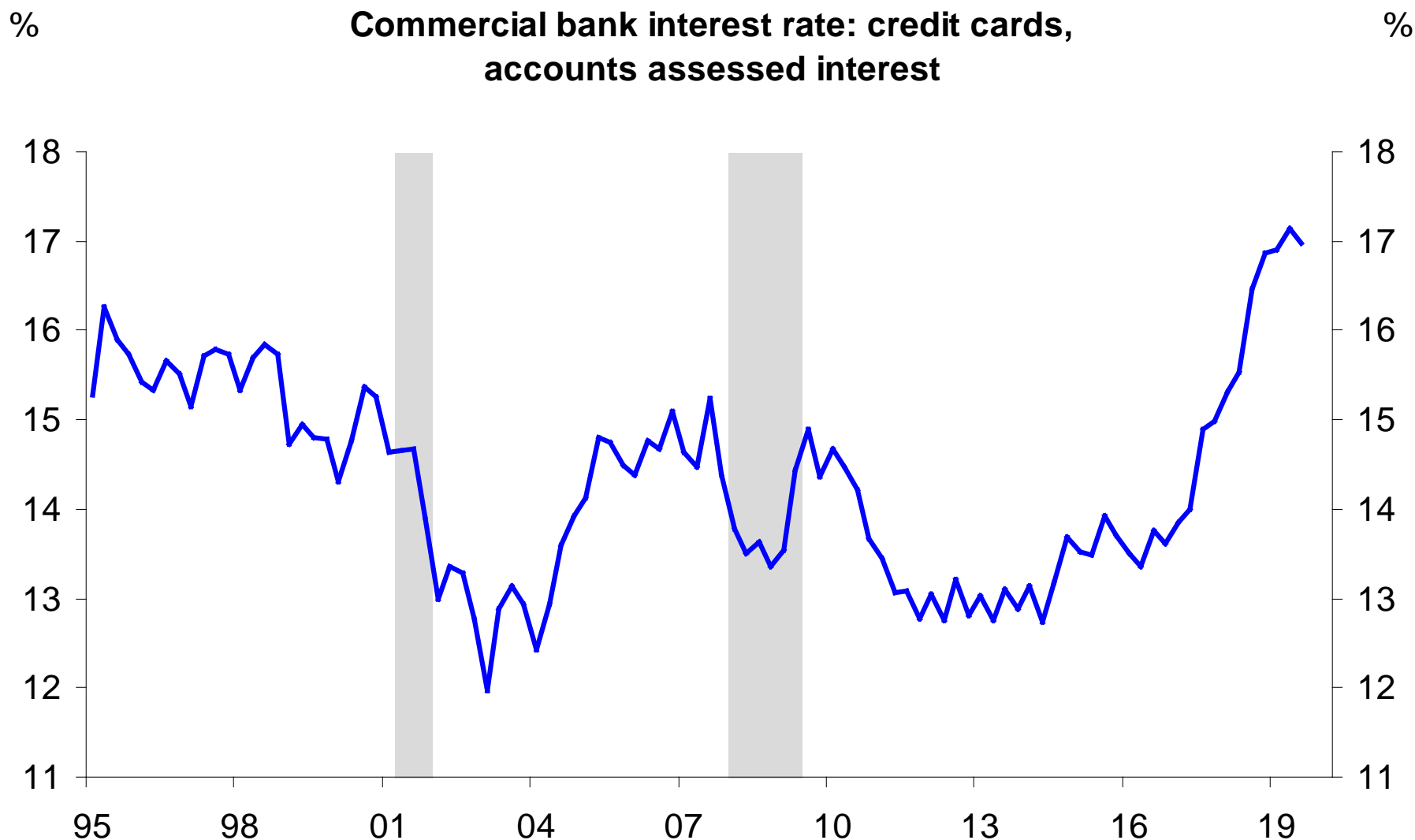


Risk #4:

Is the US consumer getting tired?



Credit card interest rate at highest level in decades

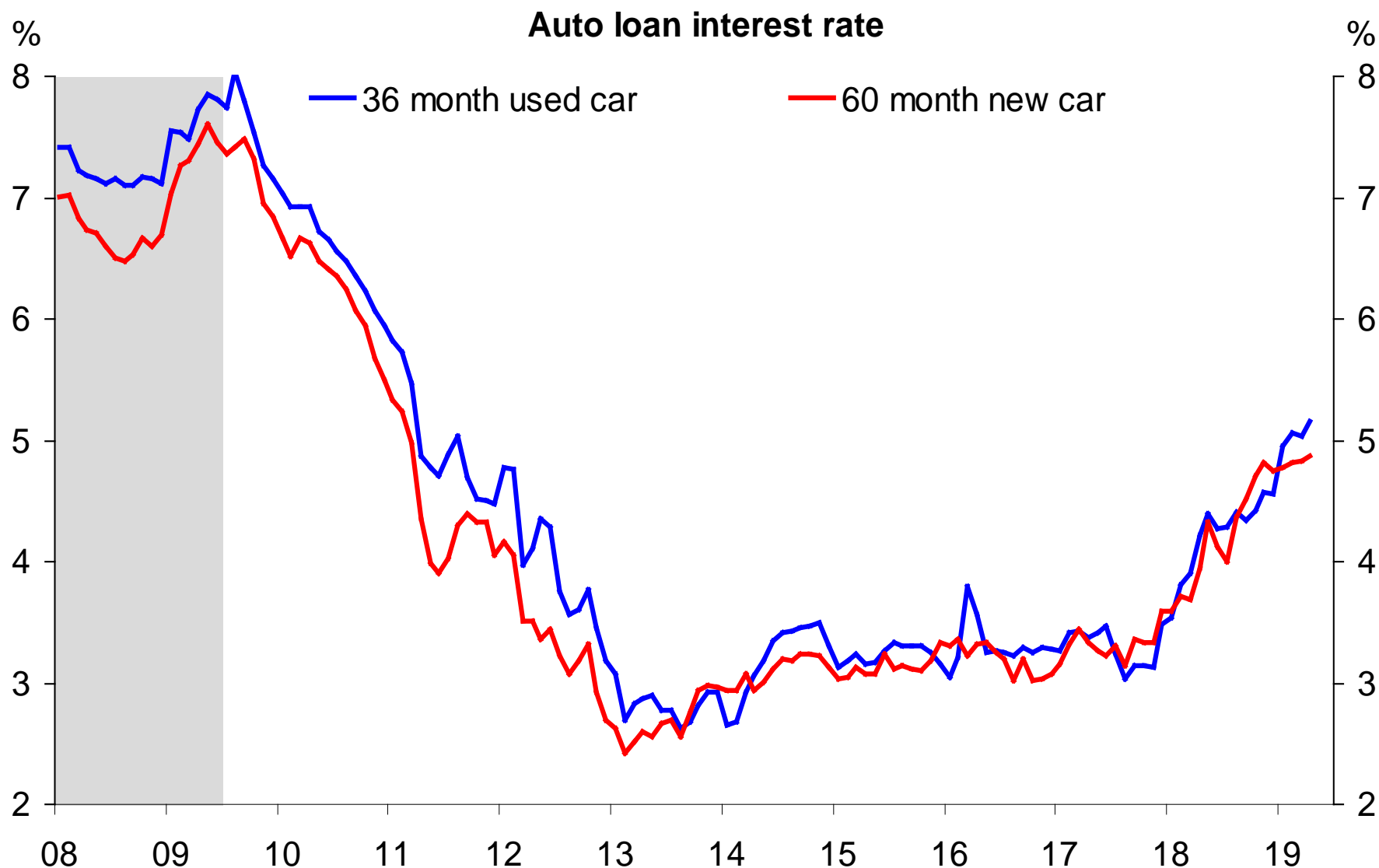


Note: This rate is the annualized ratio of total finance charges at all reporting banks to the total average daily balances against which the finance charges were assessed

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



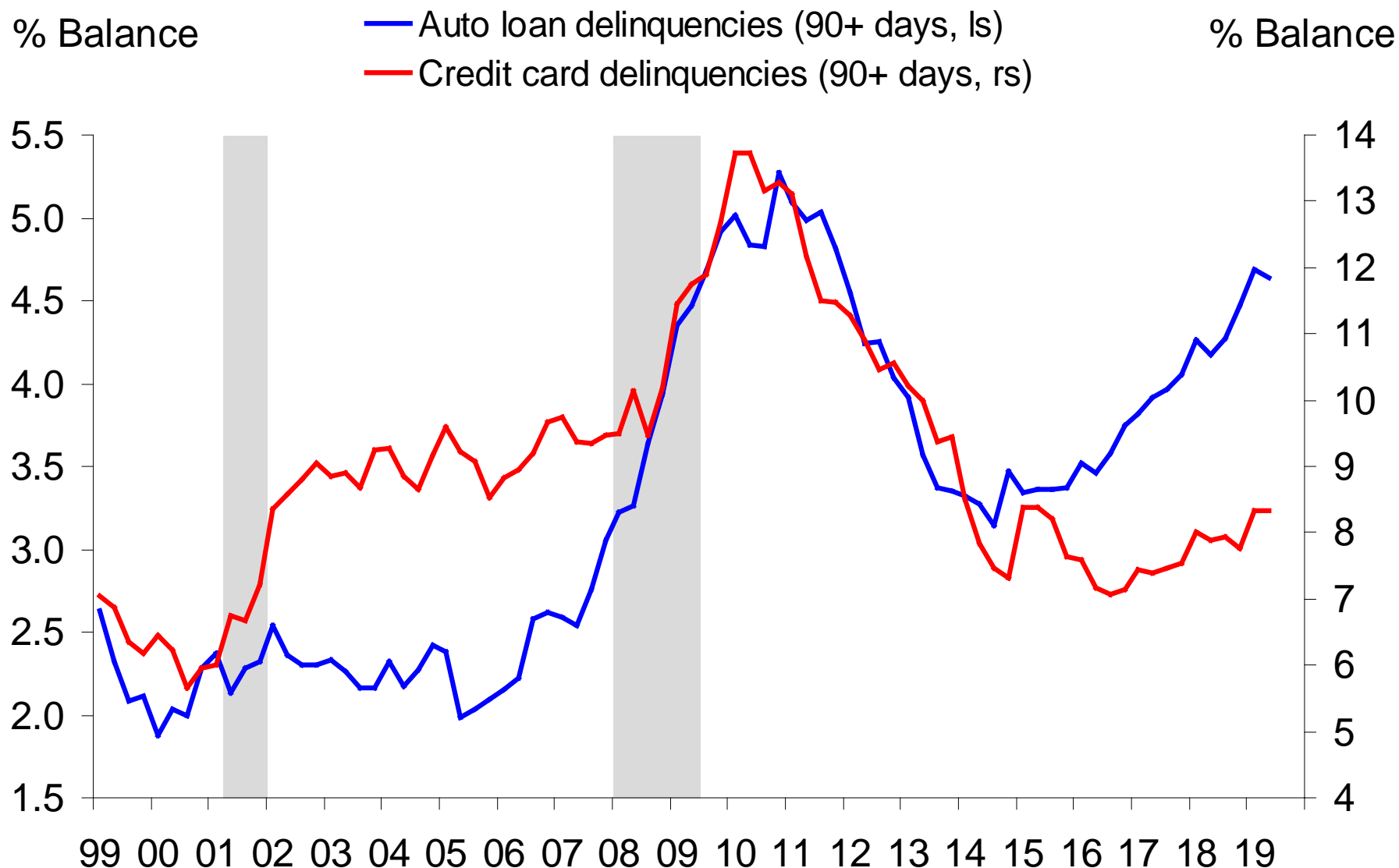
Auto loan interest rates increased by 2%-points in 2018



Source: FRB, Haver Analytics, DB Global Research



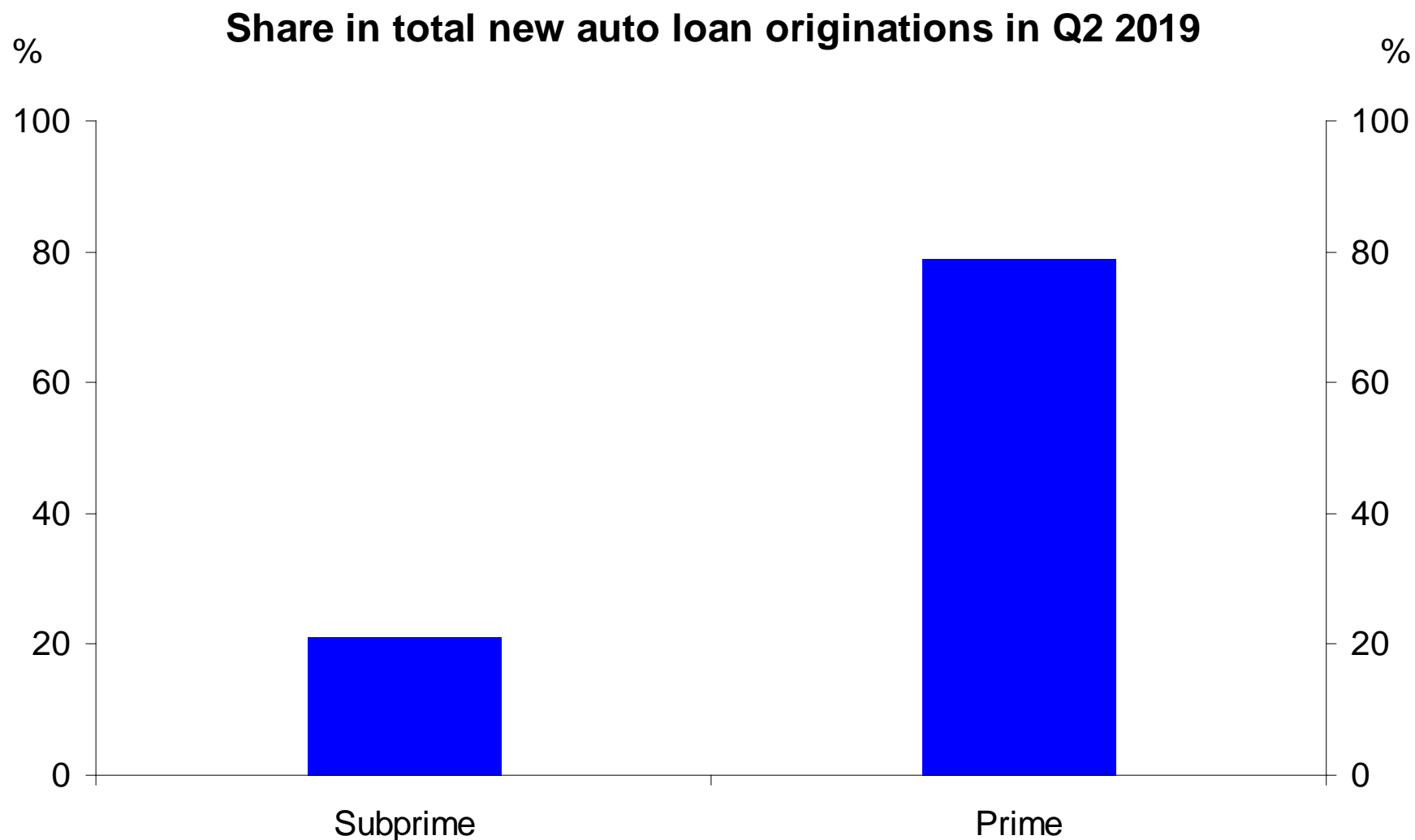
Delinquency rates moving up for consumers



Source: FRB, Haver Analytics, DB Global Research



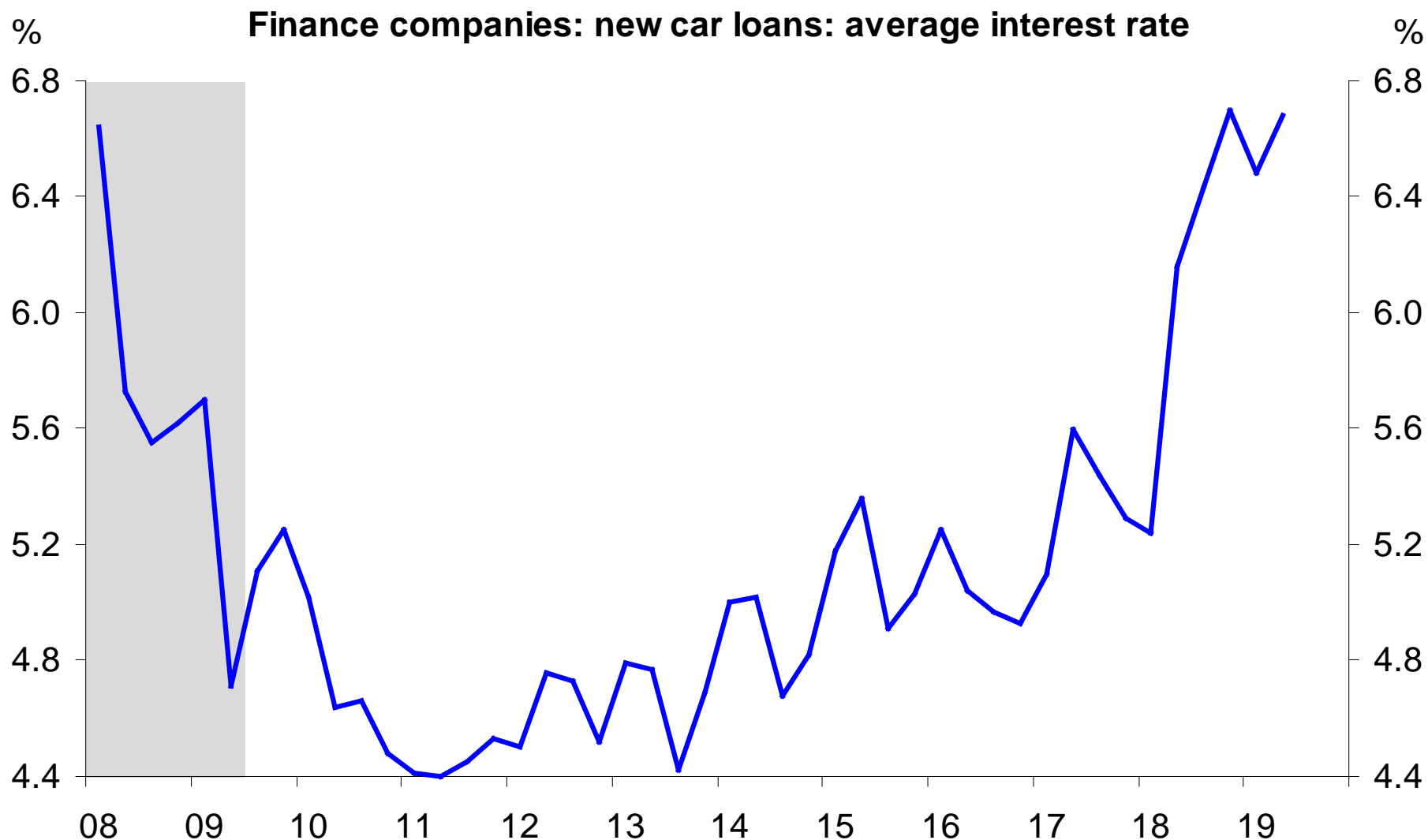
85% of new cars sold are financed.
And 20% of new car sales are subprime



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



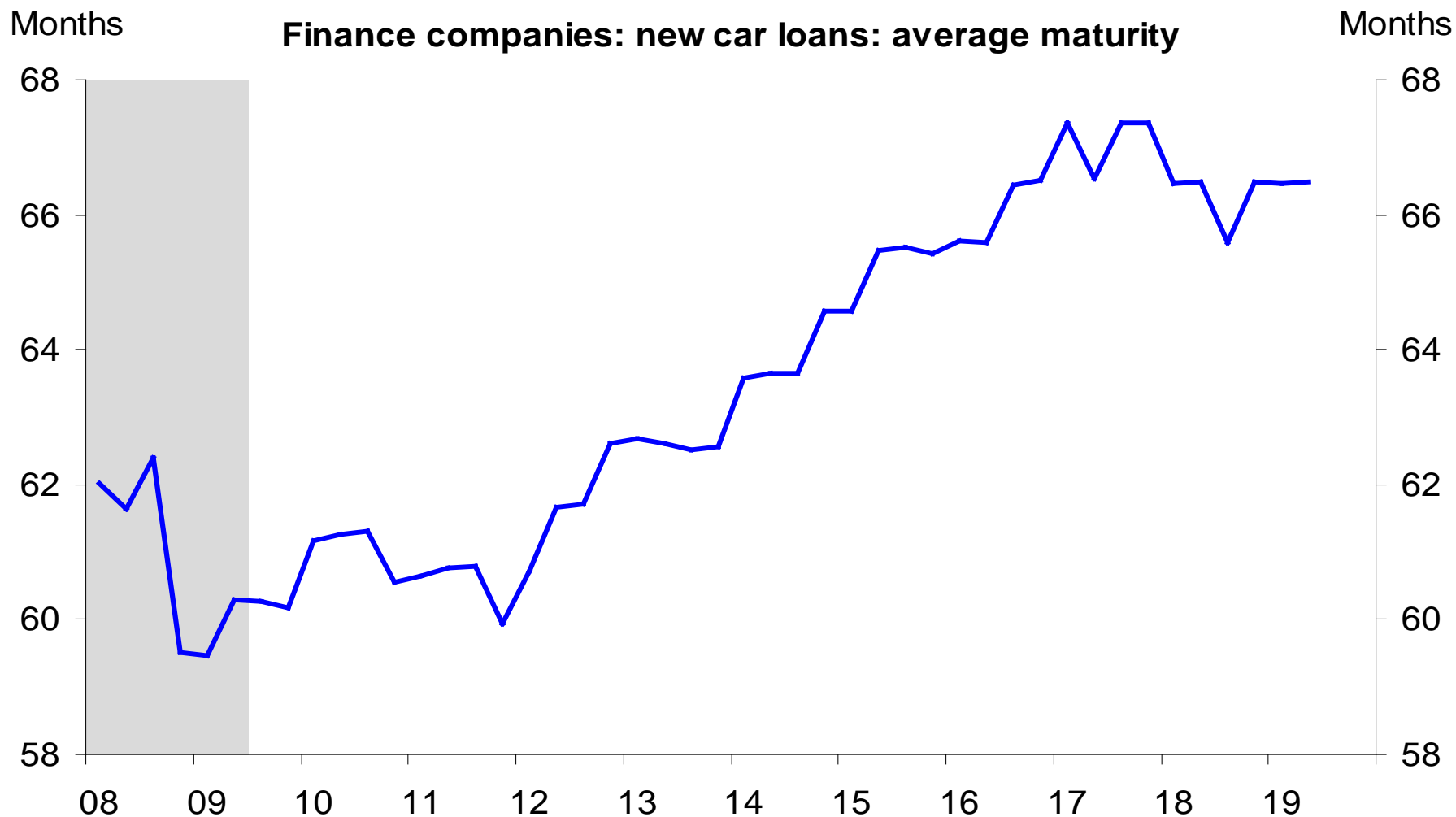
Interest rate on car loans at finance companies going up



Source: FRB, Haver Analytics, DB Global Research

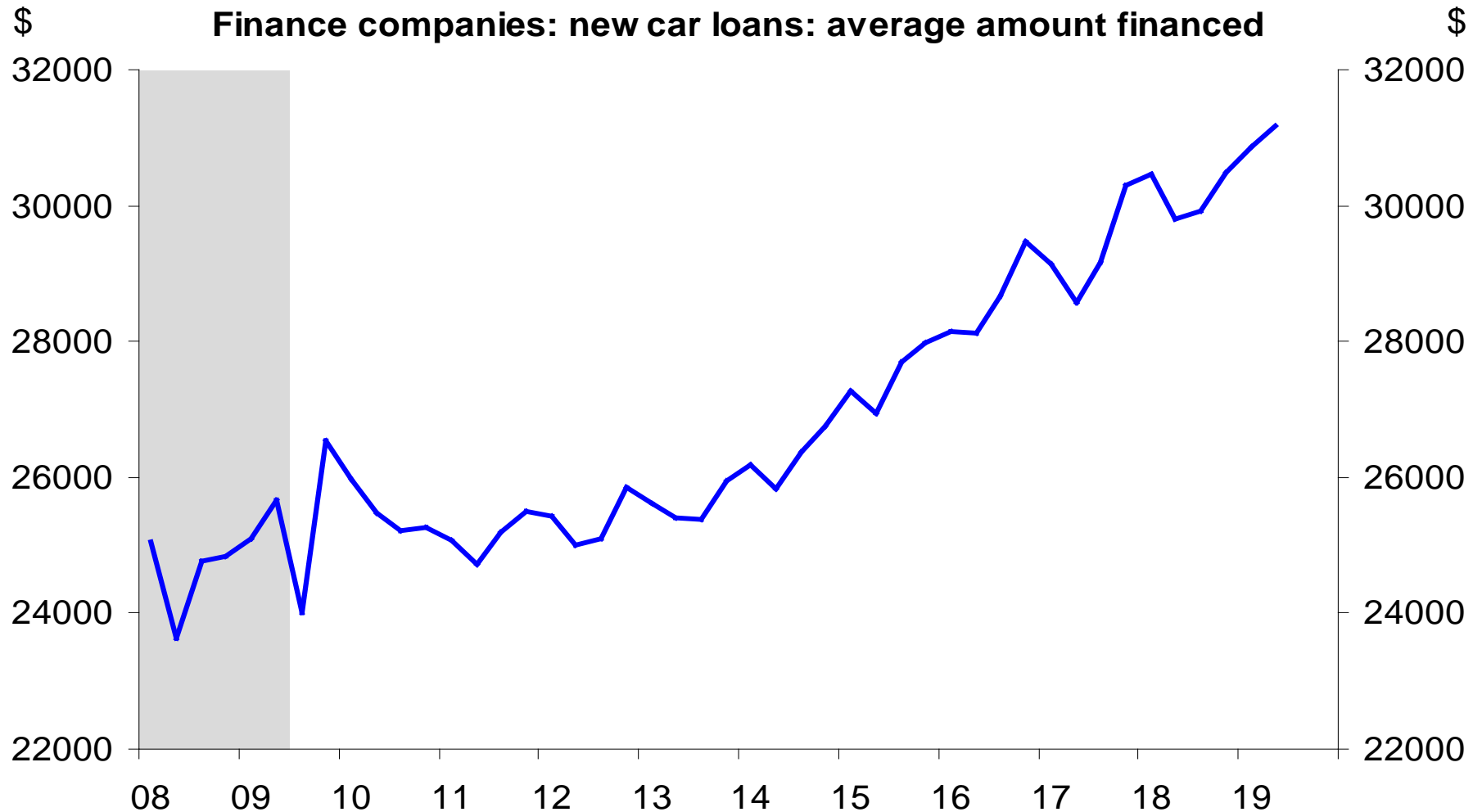


Average maturity of auto loans going up



Source: FRB, Haver Analytics, DB Global Research

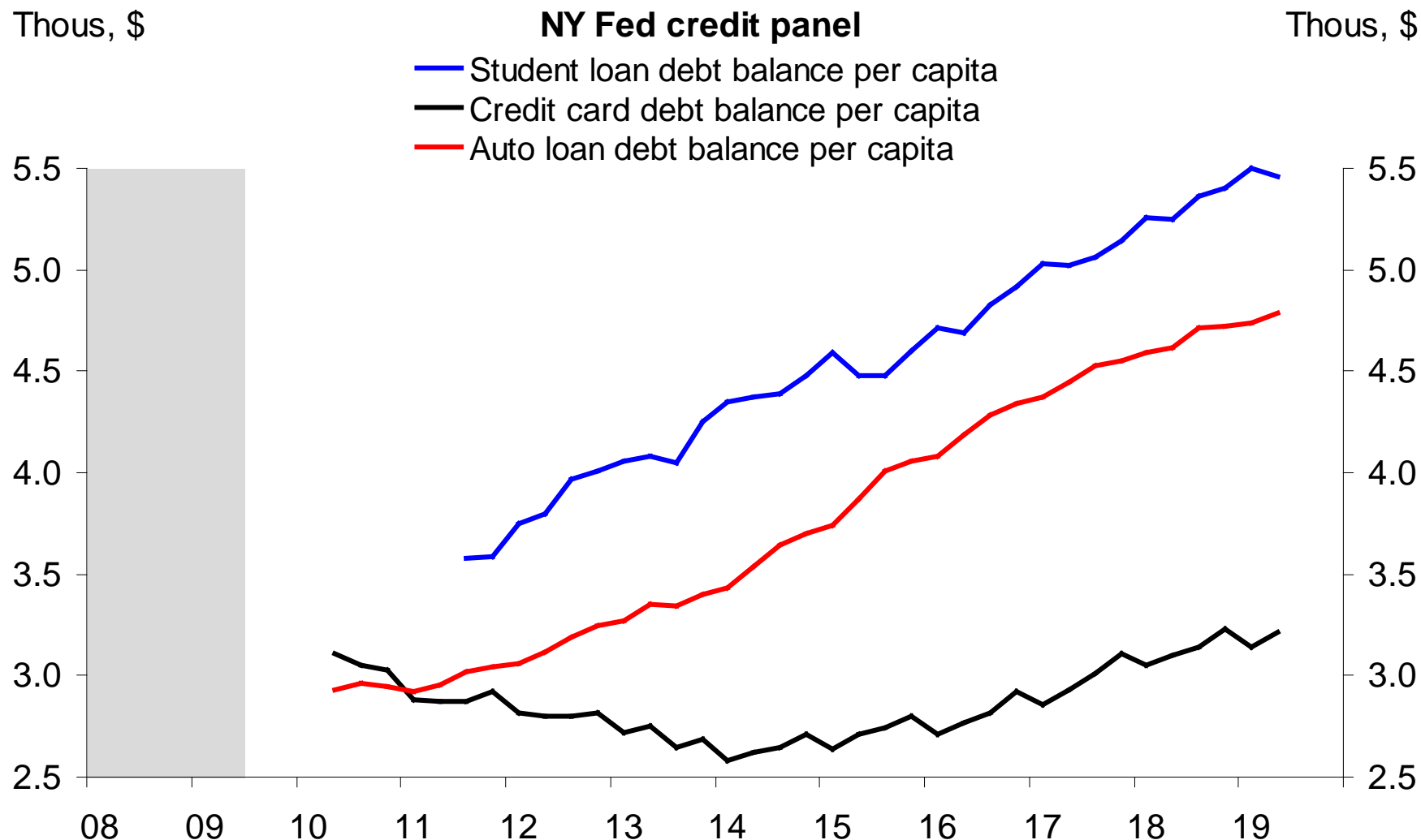
Average amount financed on new car loans moving higher



Source: FRB, Haver Analytics, DB Global Research



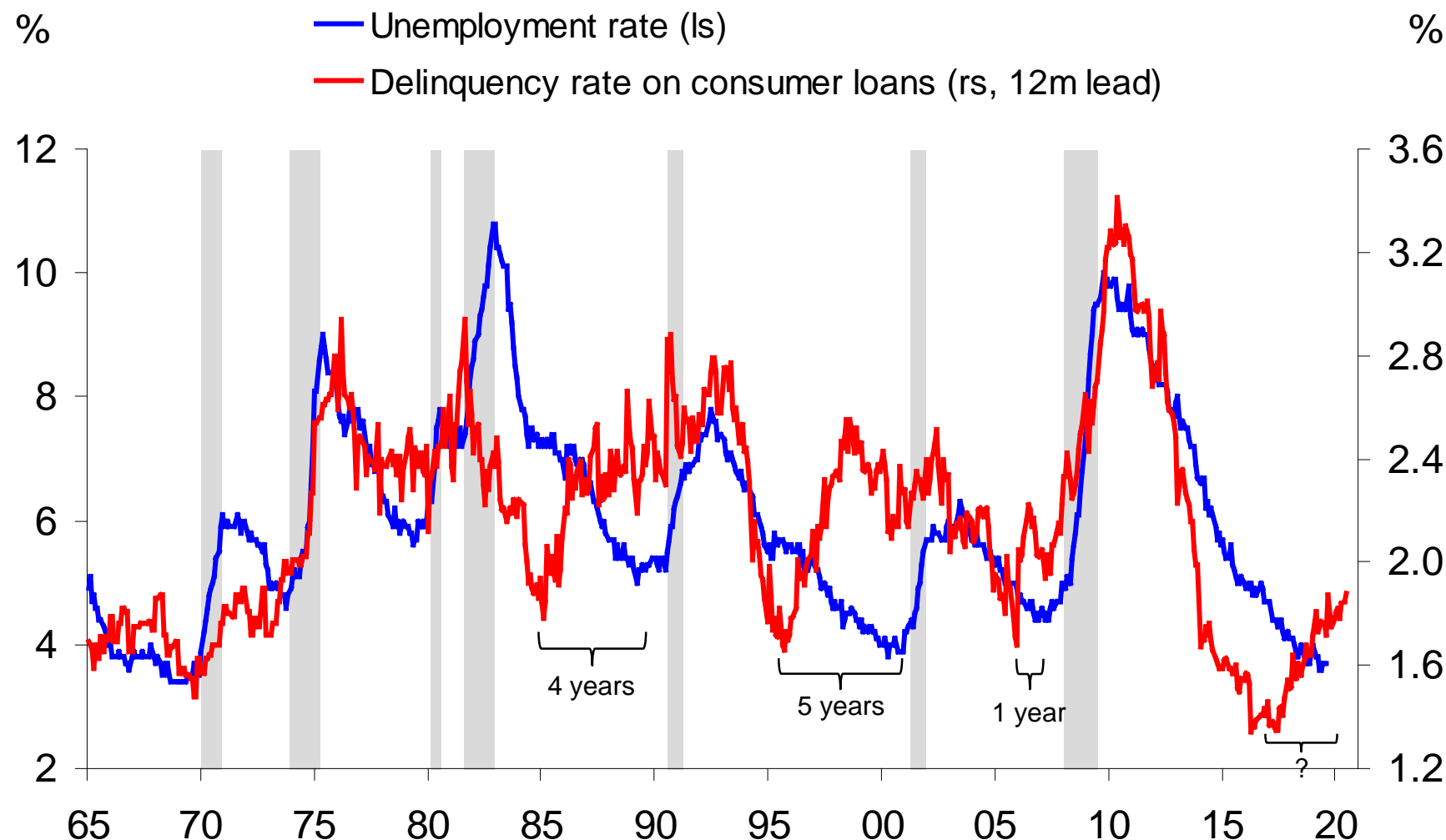
Student debt per capita: \$5460
 Auto loan debt per capita: \$4790
 Credit card balance per capita: \$3210



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



Late-cycle worries: Delinquency rates moving higher

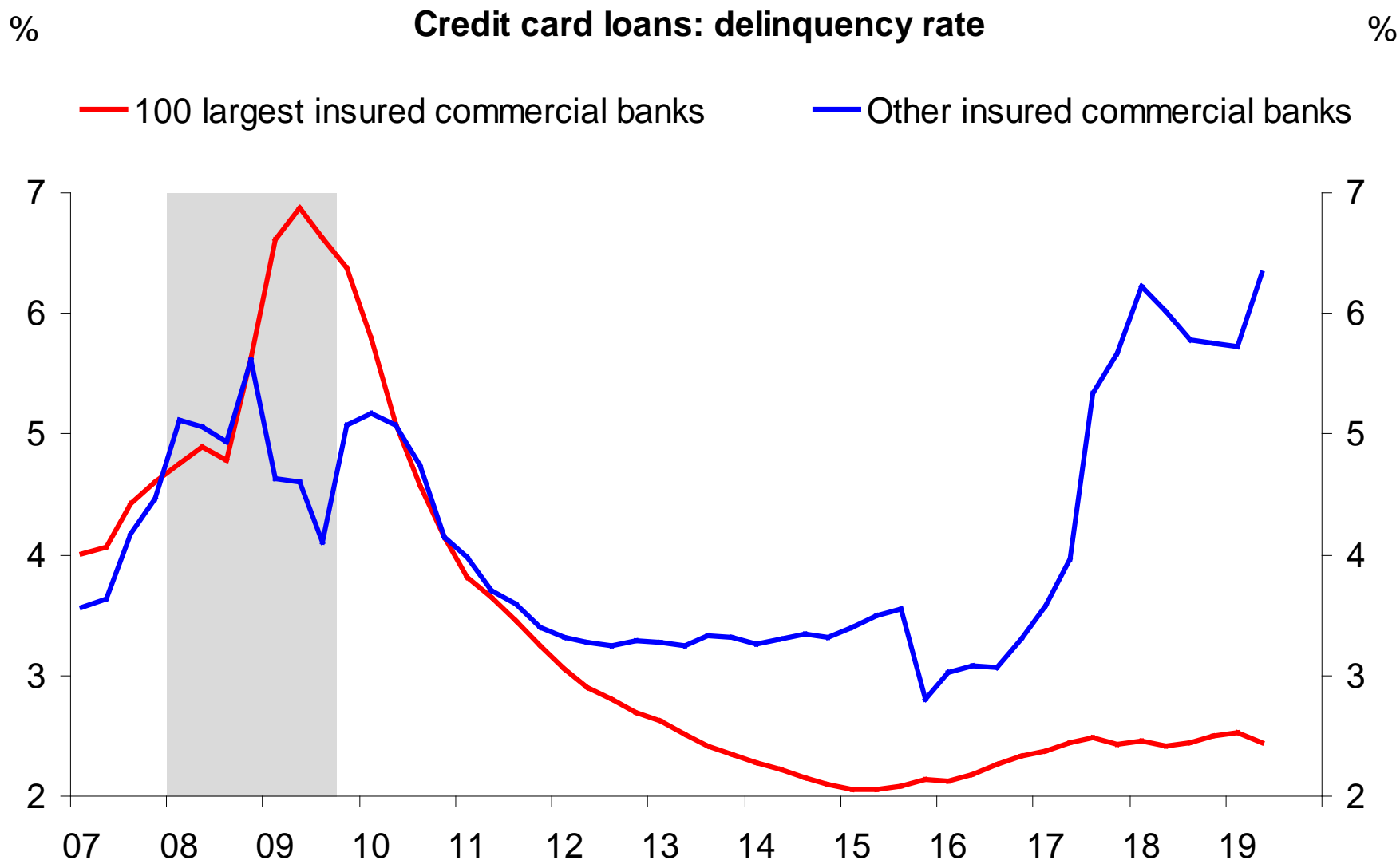


Note: Composite consumer loans consists of eight loan types: personal, automobile direct & indirect, mobile homes, recreational vehicles, marine financing loans, property improvement and home equity and second mortgage loans.

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



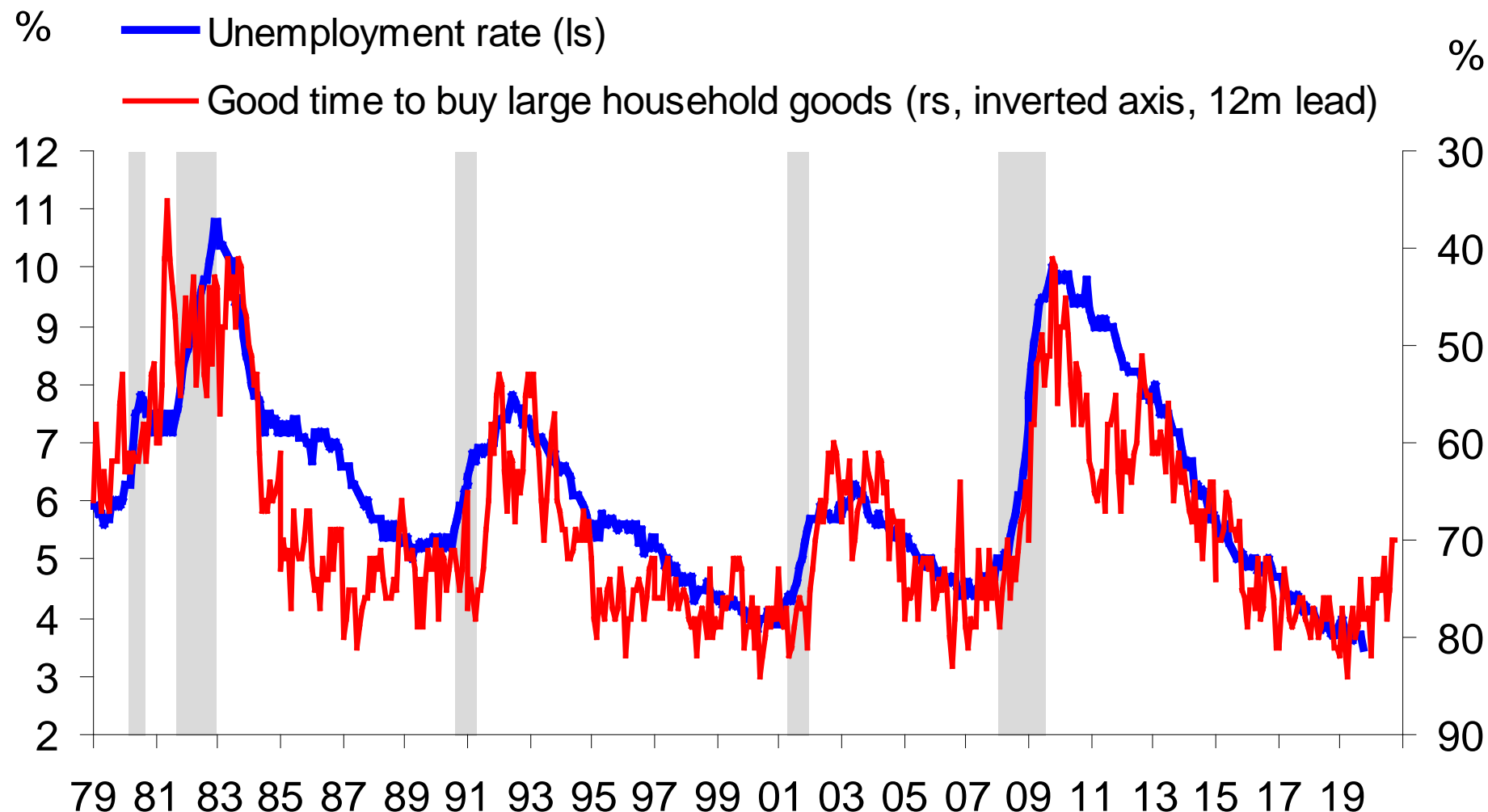
Credit card delinquencies above 2008 levels for smaller lenders



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

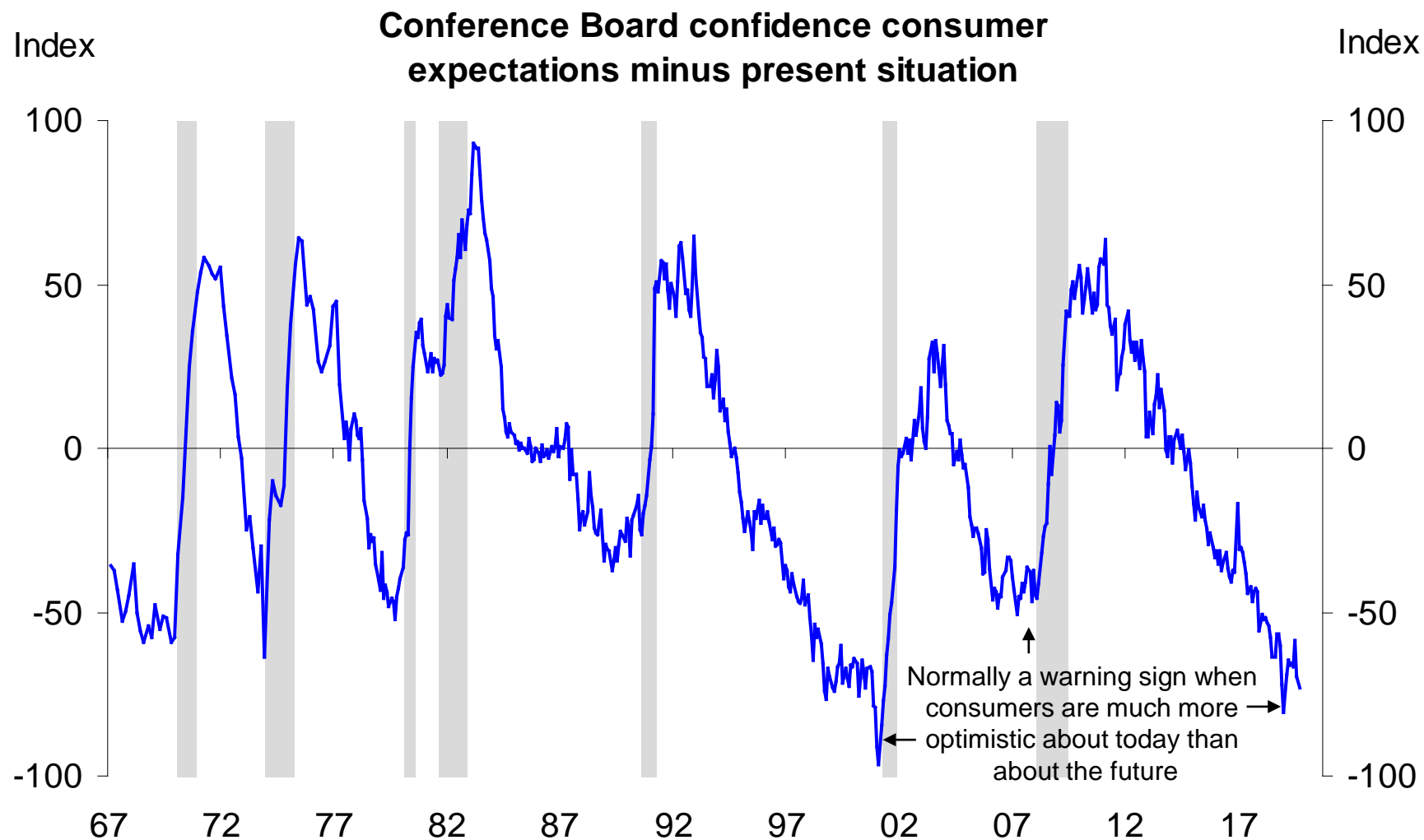


Consumers have less appetite for buying durable goods This is a classic sign that we are late cycle



Source: BLS, University of Michigan, 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

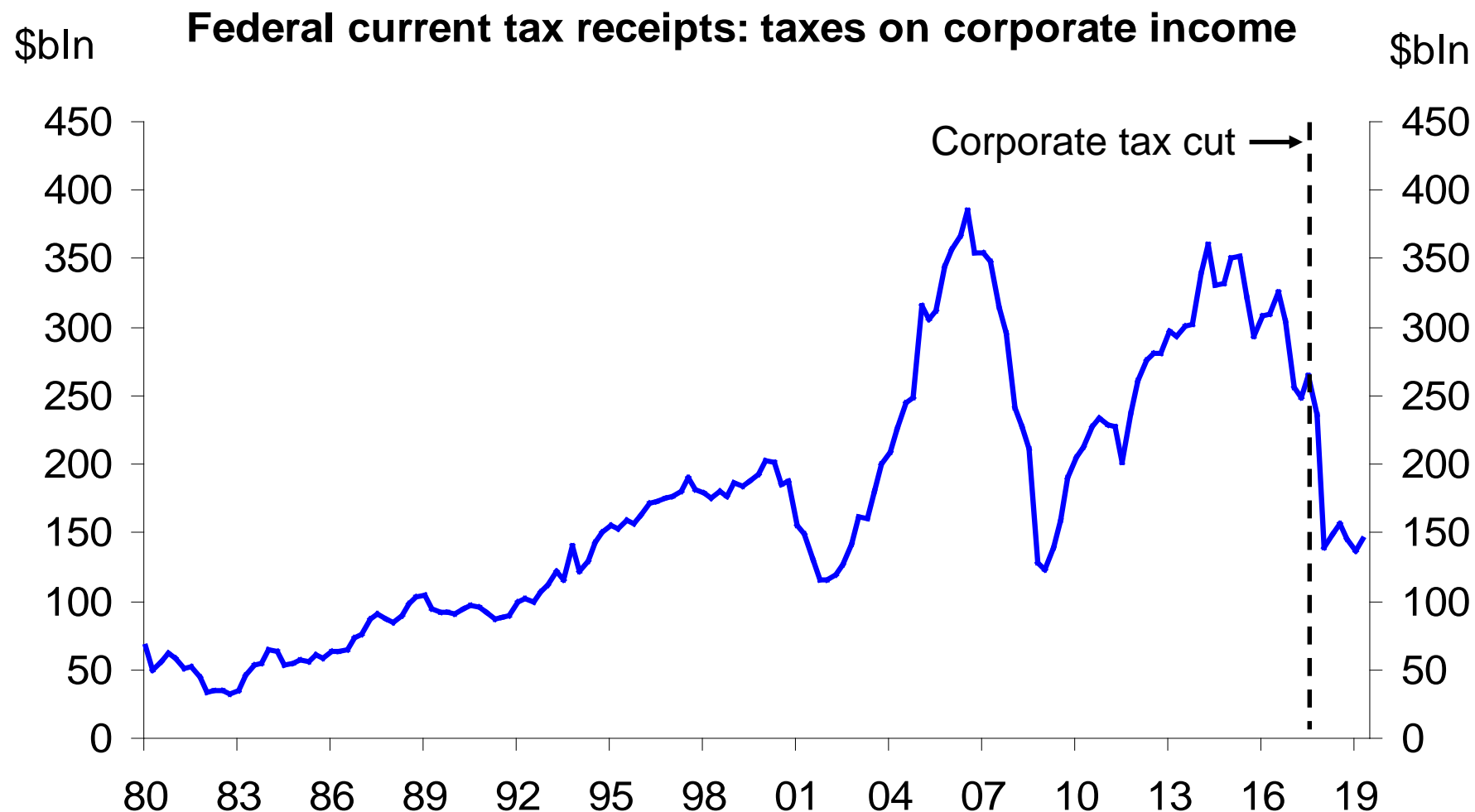


Risk #5

Treasury issuance rising



Corporate tax revenue down significantly

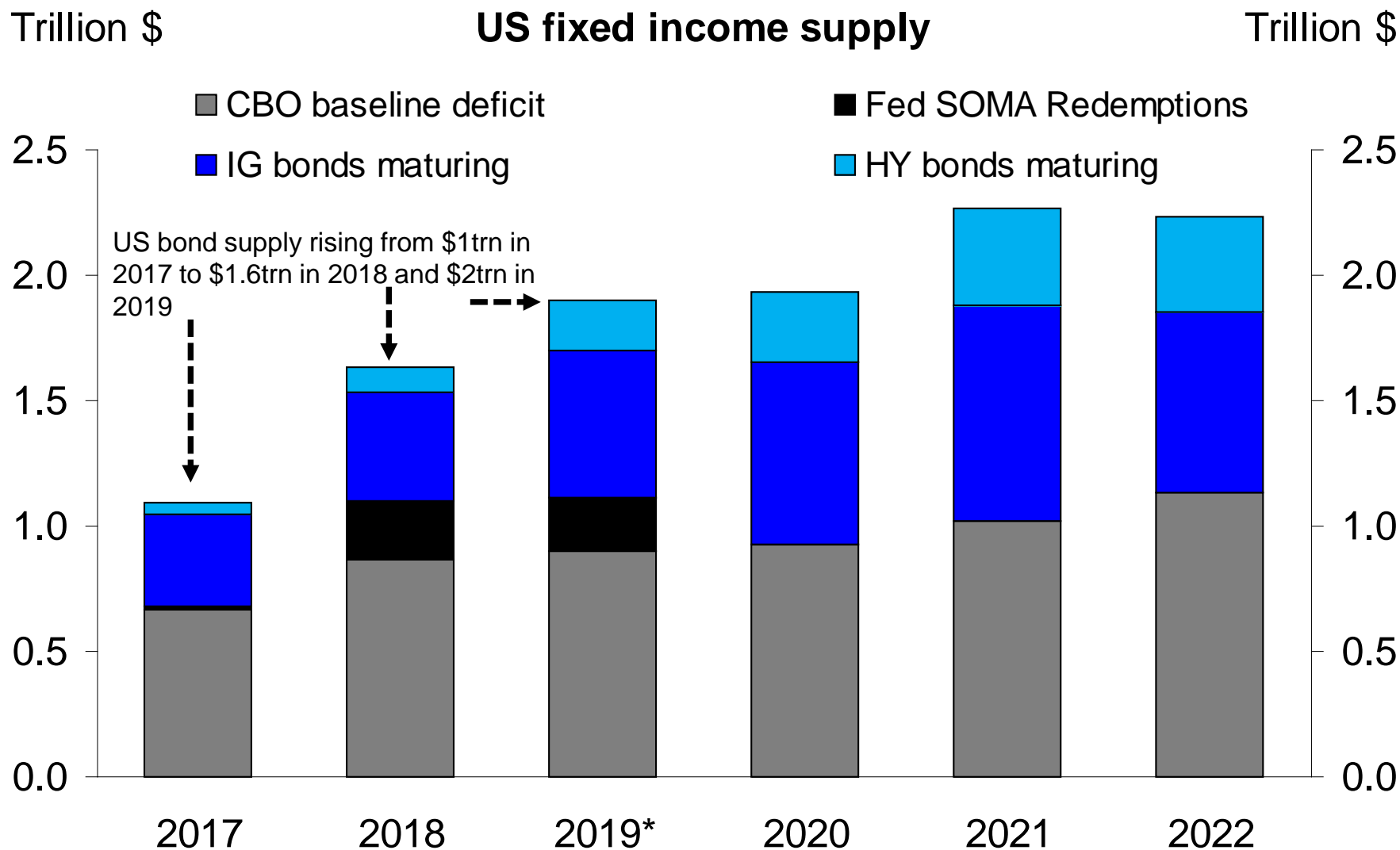


Source: FRED, <https://fred.stlouisfed.org/series/B075RC1Q027SBEA>, DB Global Research



Stock of risk-free assets growing dramatically:

Increasing US Treasury supply from tax cuts
will crowd out investments in IG, HY, and equities



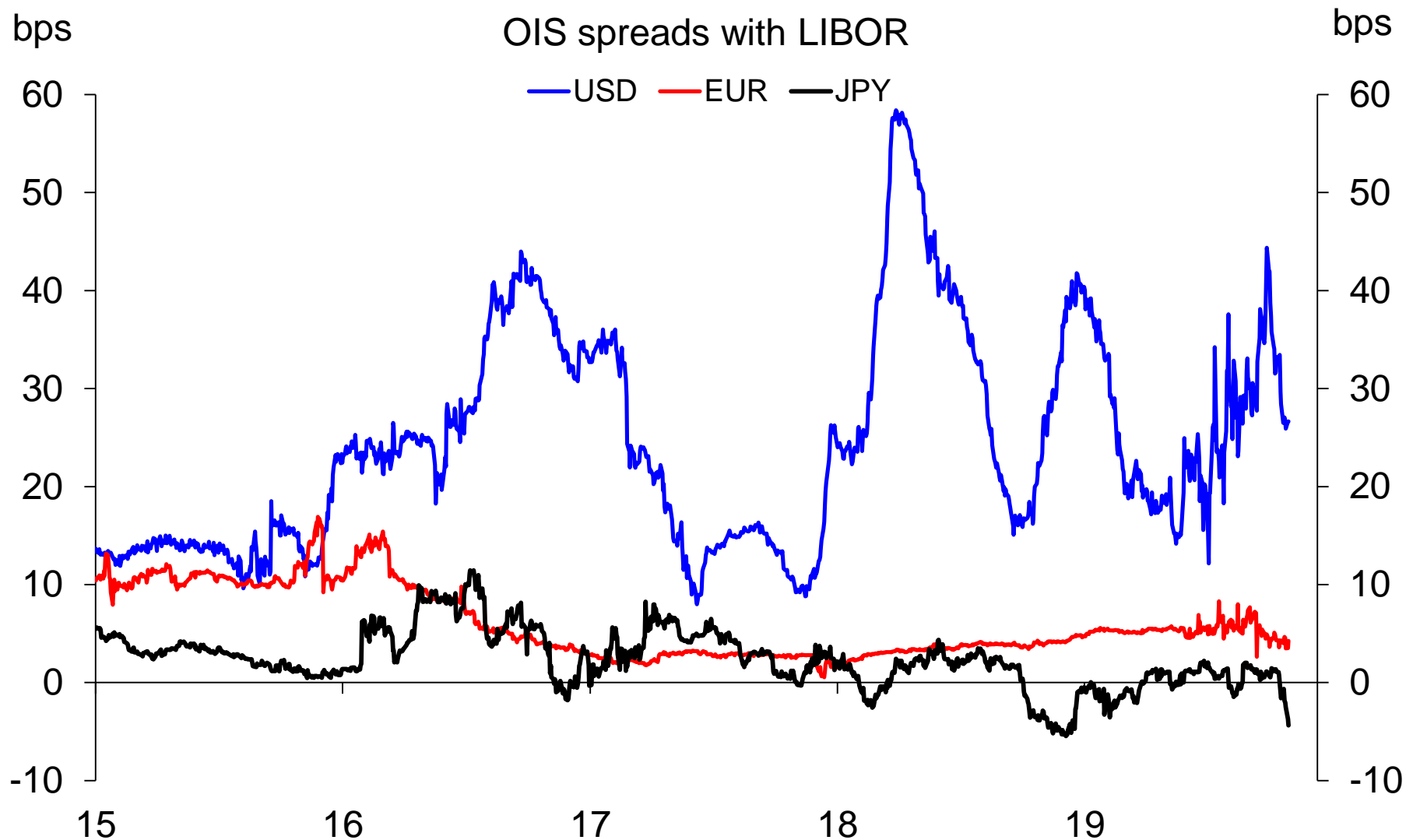
Notes: Deficit projections based on the January 2019 CBO Outlook and are adjusted from fiscal year basis to calendar year basis.

*If the Fed stops the runoff in October 2019

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



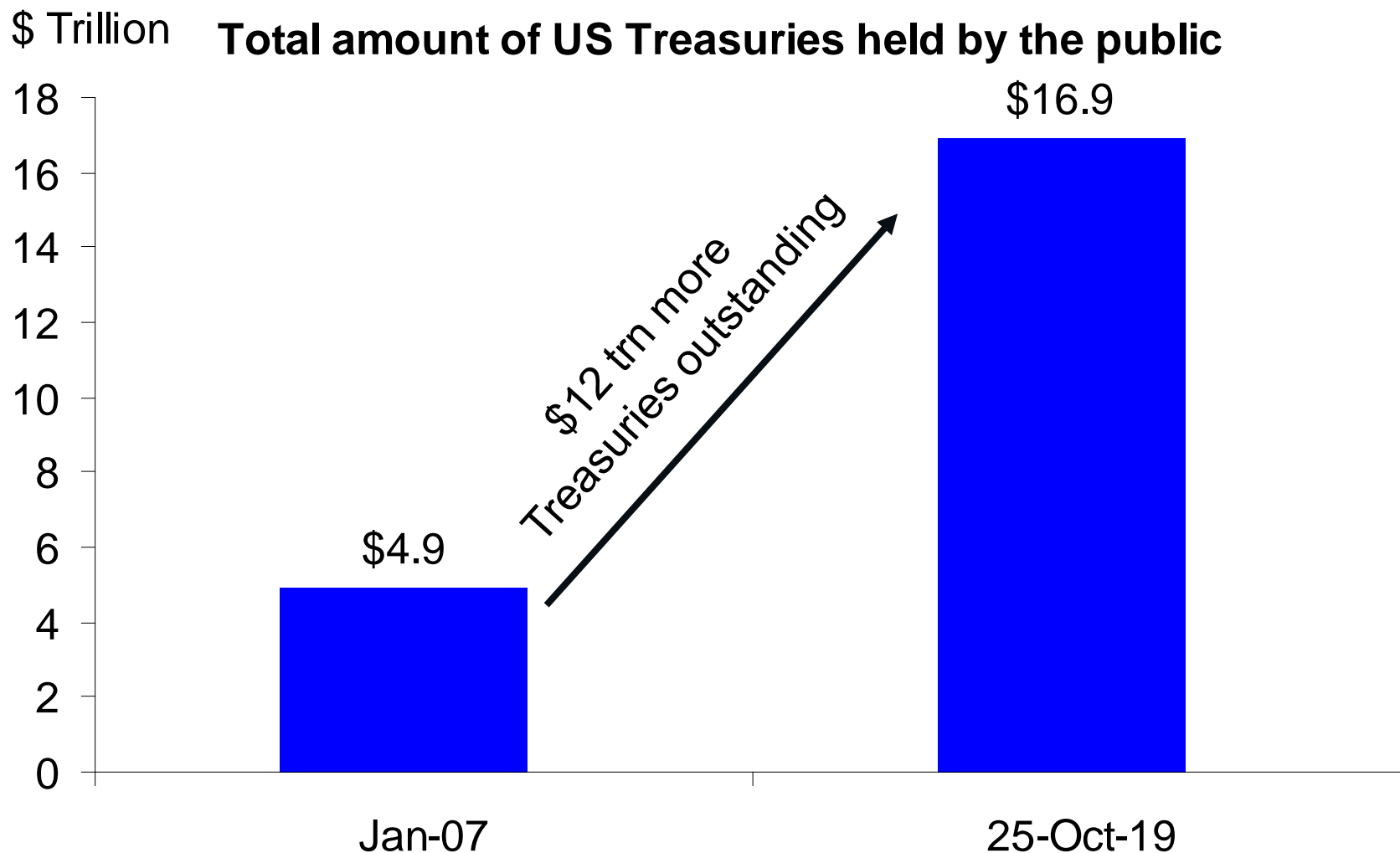
LIBOR OIS widening is a US phenomenon



Source: Bloomberg Finance LP, DB Global Research



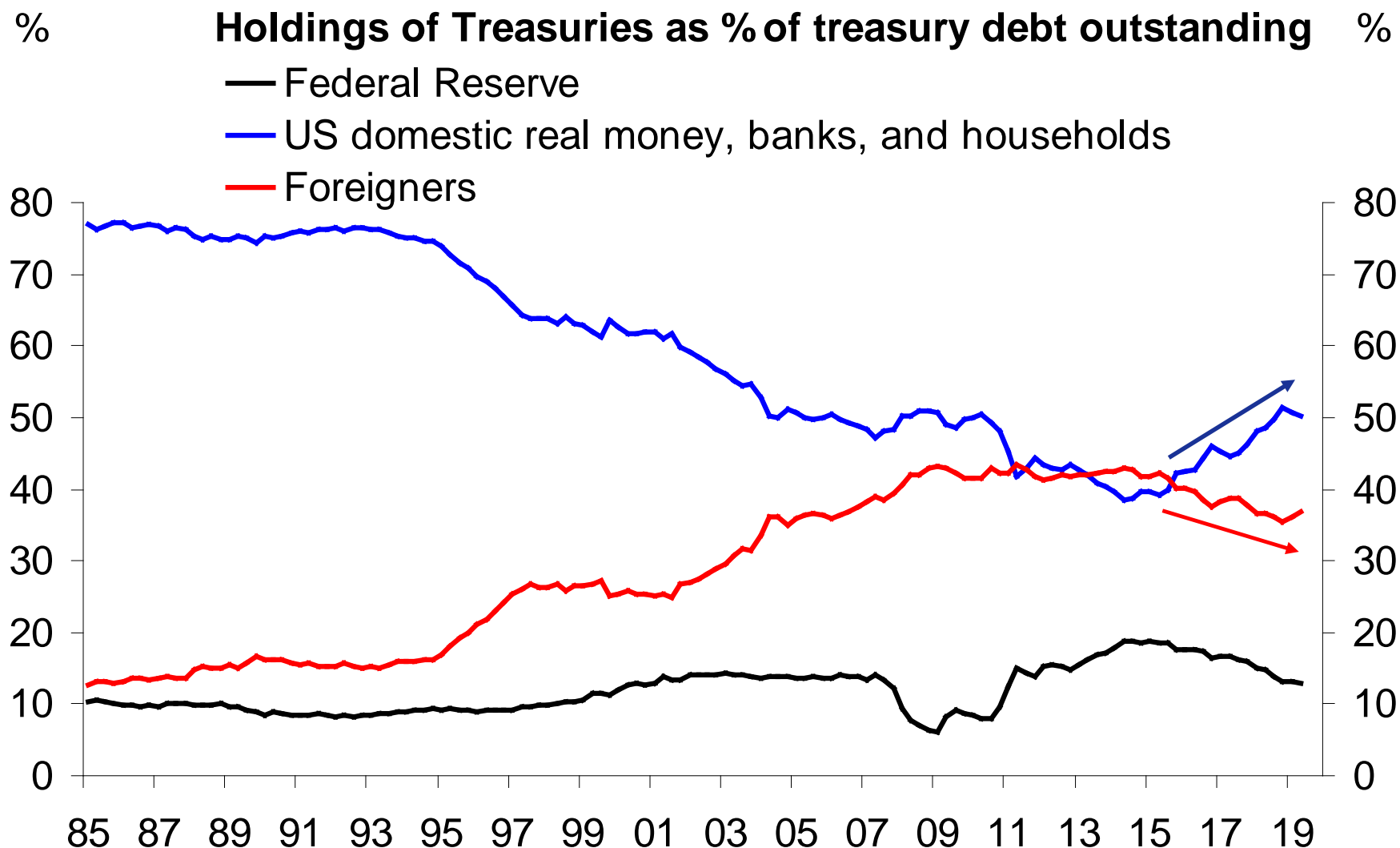
The amount of risk-free assets outstanding is growing dramatically



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

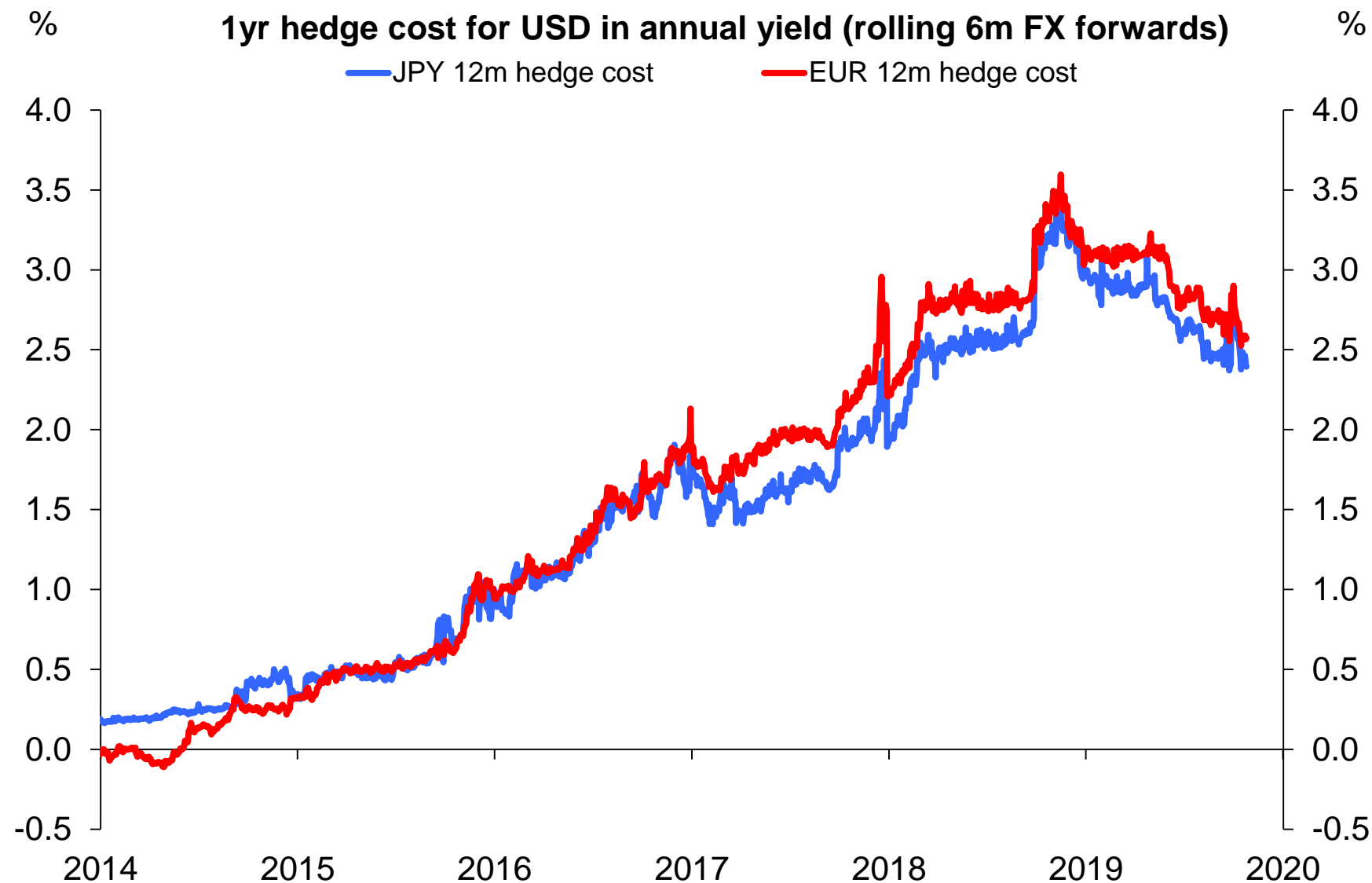


US domestic investors buying a lot of Treasuries



Source: FRB, Haver Analytics, DB Global Markets Research

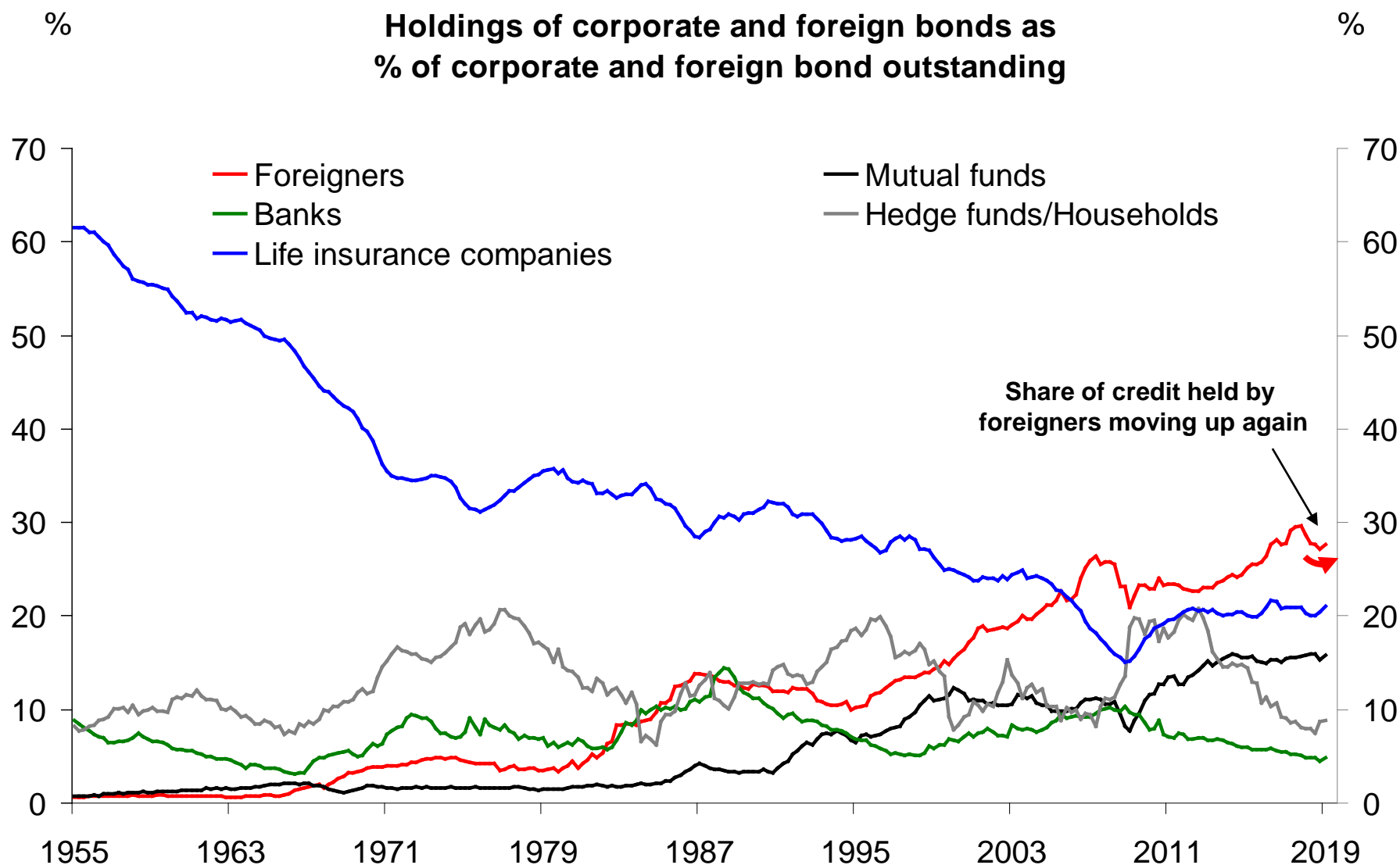
Hedging costs coming down for European and Japanese investors who want to buy US fixed income



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



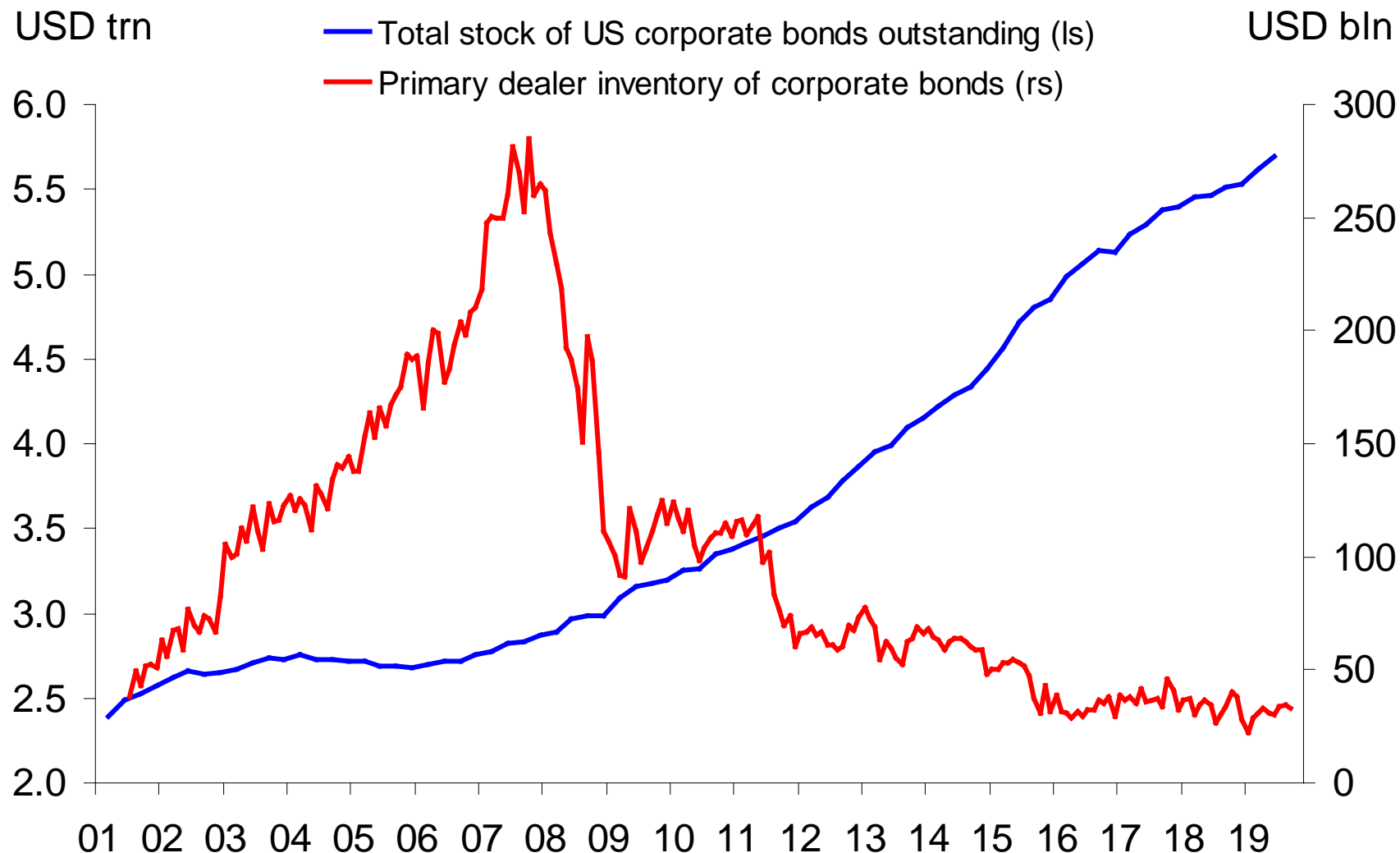
Foreign appetite for US IG and HY



Source: FRB, Haver Analytics, DB Global Research

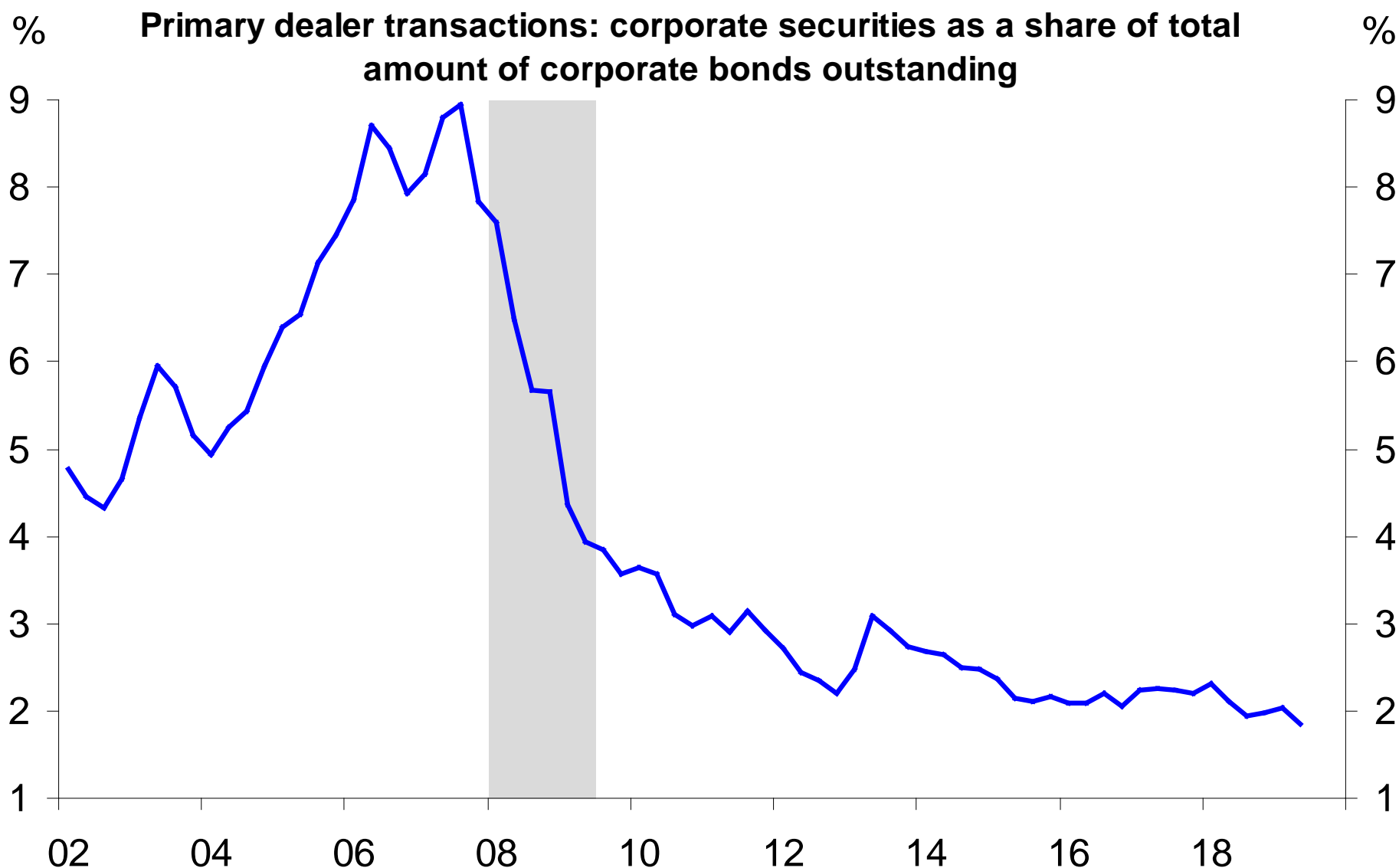


Low primary dealer inventory of corporate bonds relative to the outstanding stock of IG and HY outstanding



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

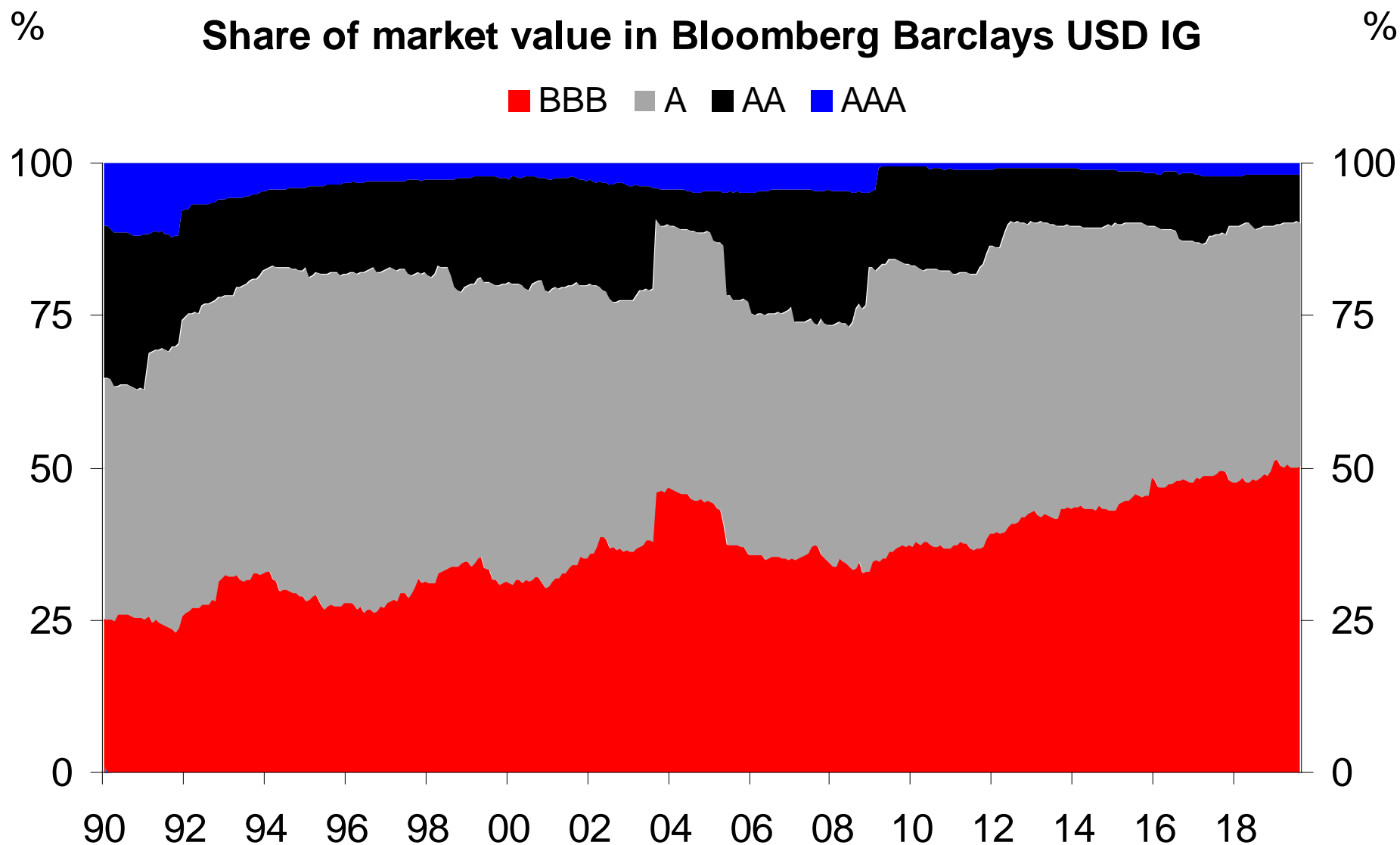
Primary dealer trading volumes as a share of the total corporate bond market



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



50% of the IG index is BBB

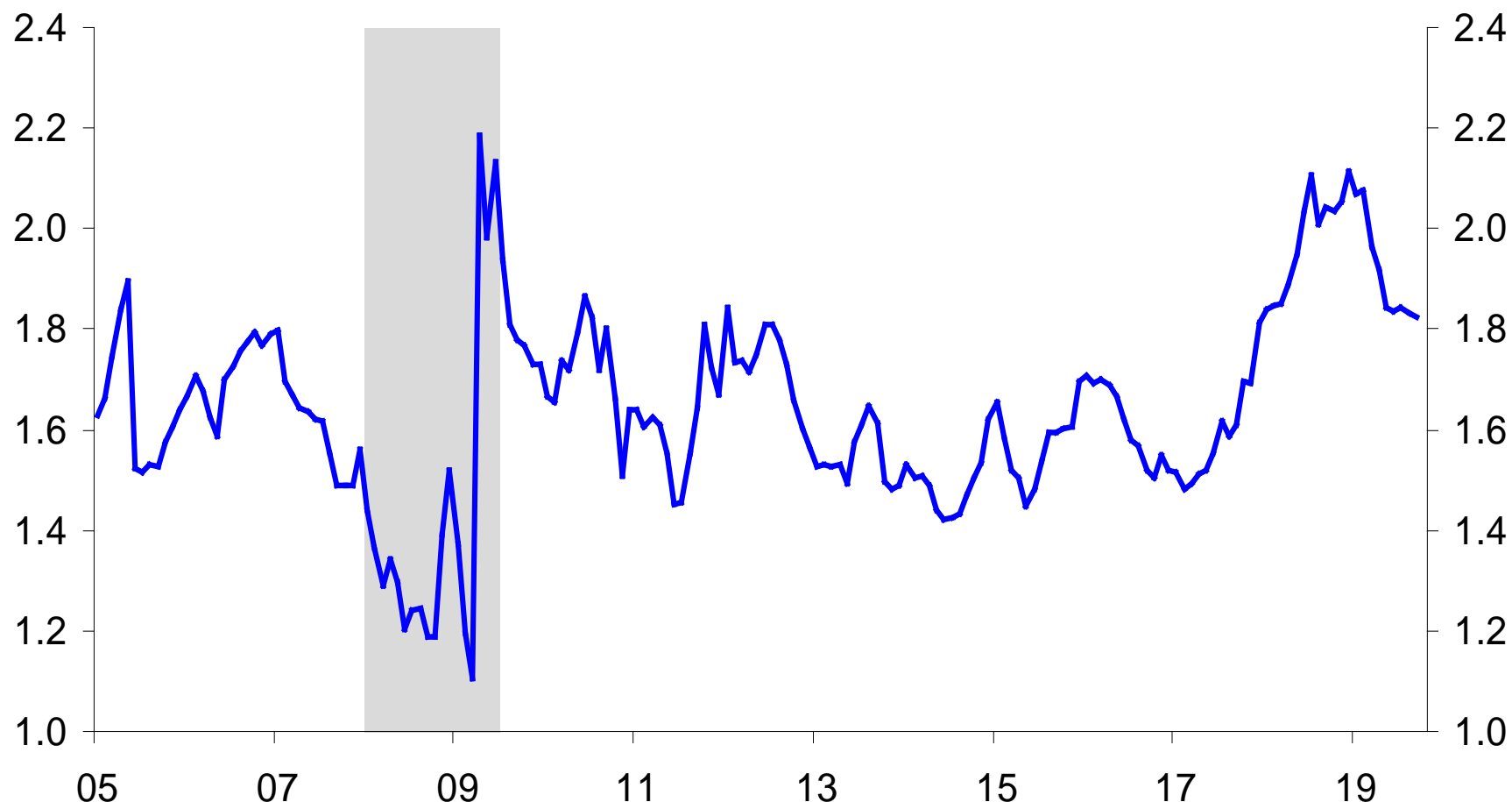


Source: Bloomberg Finance LP, DB Global Research



Spread between BBB and AAA

Ratio **Ratio of spreads of iBoxx 10+ USD Domestic BBB and AAA annual yields with 10 year treasury note** Ratio



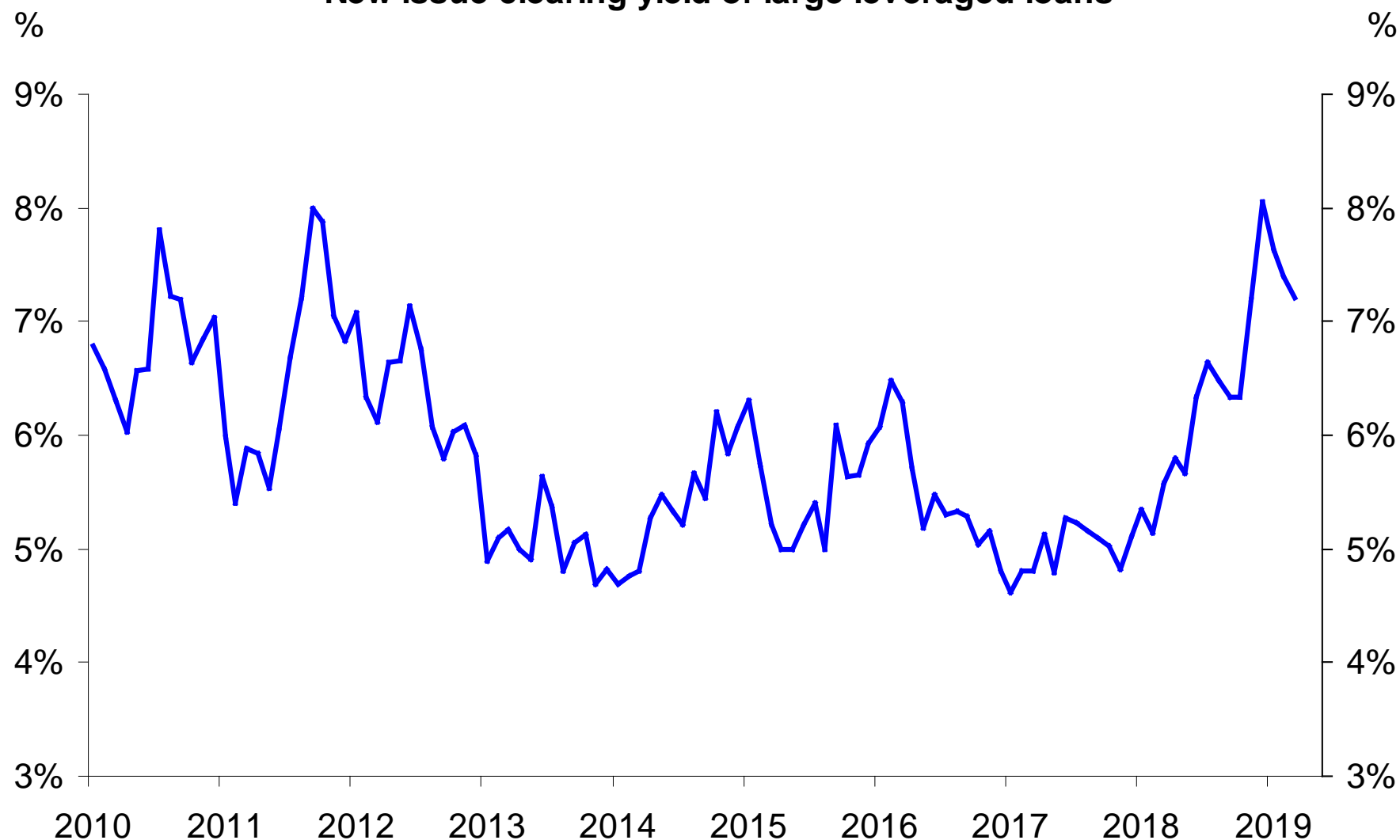
Note: The chart plots (iBoxx BBB 10+ yield – 10y treasury yield) ratio with (iBoxx AAA 10+ yield – 10y treasury yield)

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



Yields higher on leveraged loans

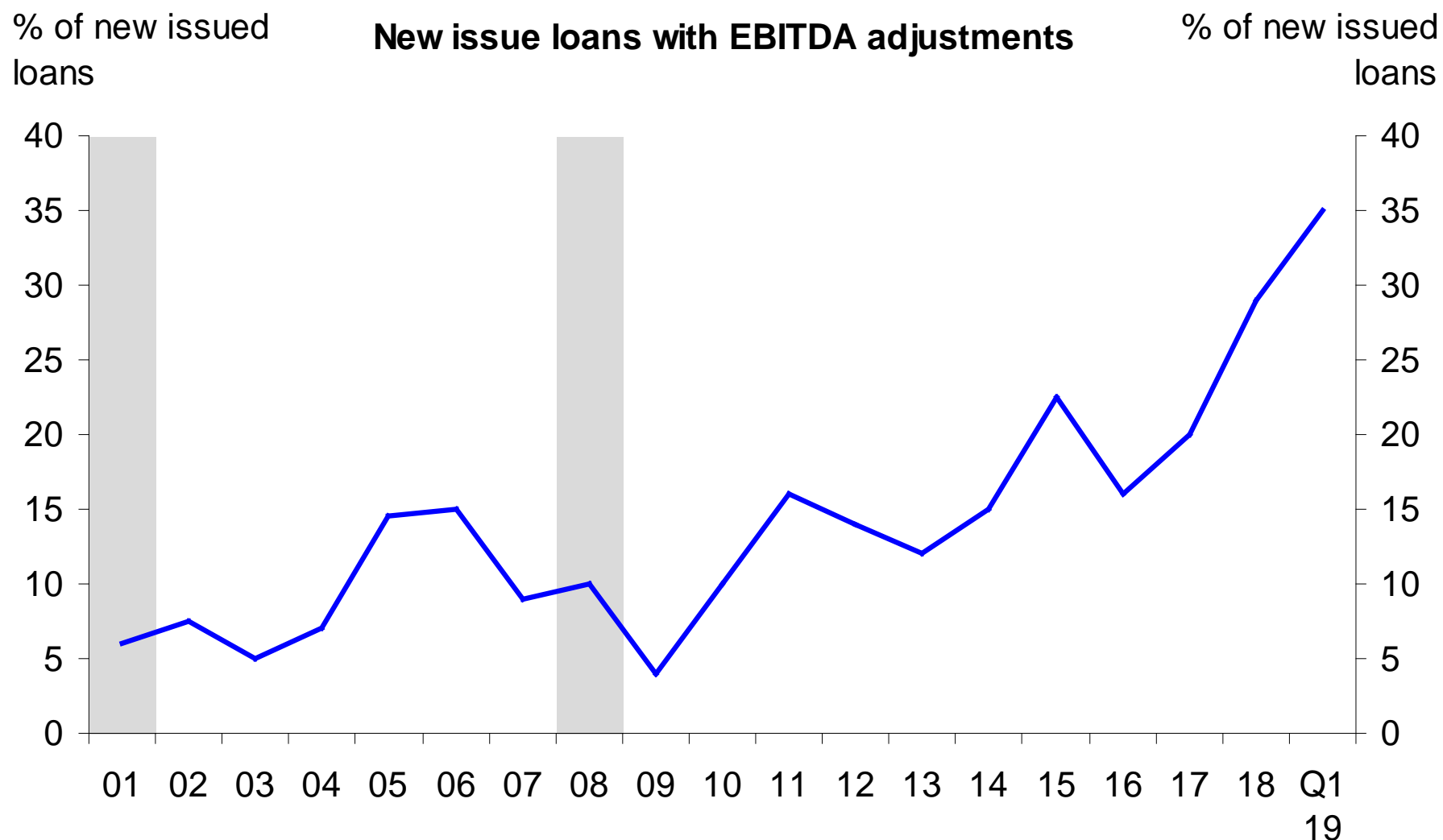
New-issue clearing yield of large leveraged loans



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



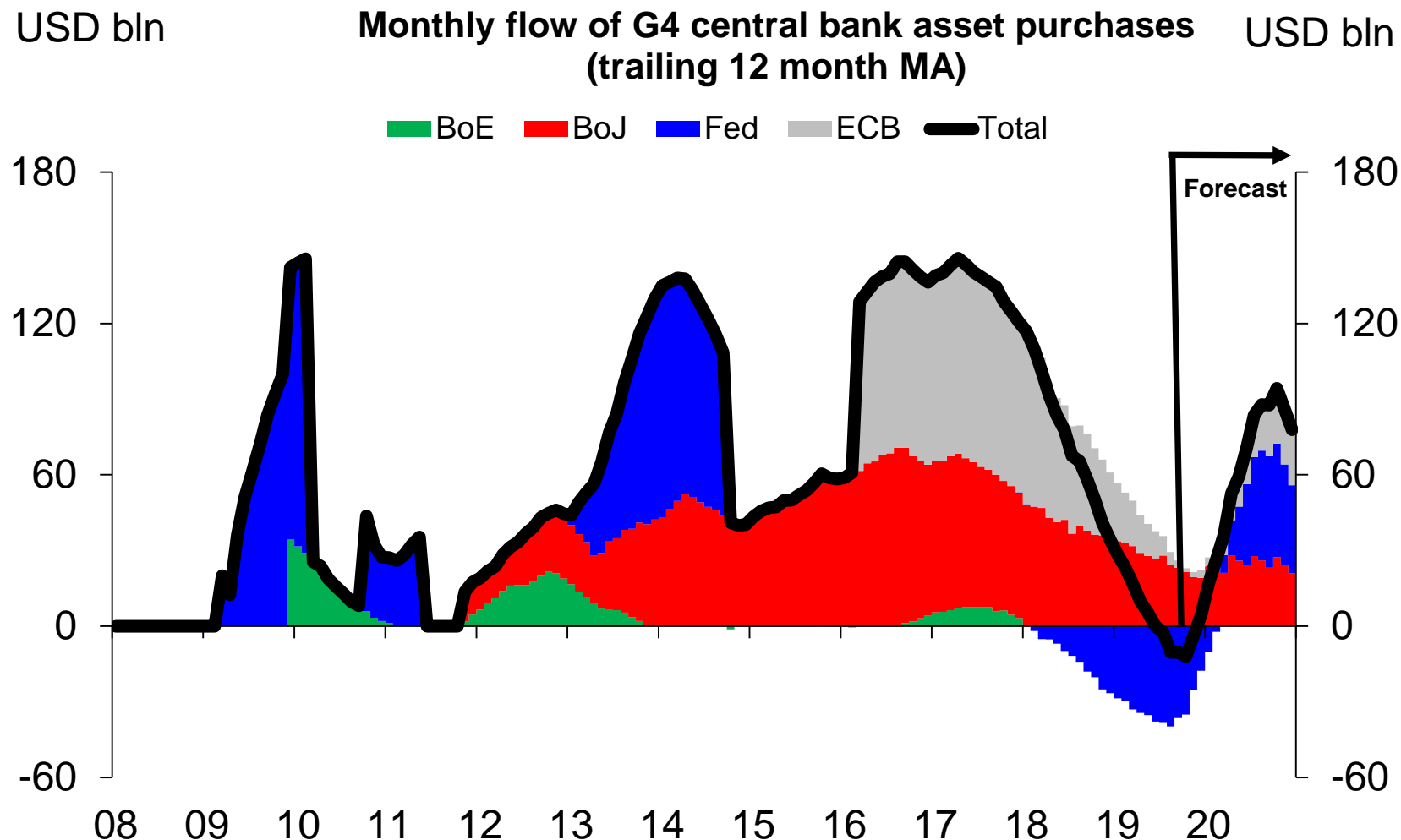
More loans have EBITDA adjustments



Source: S&P LCD, DB Global Research



Central bank asset purchases coming back



Assumptions: Fed to purchase \$ 60 bn assets monthly from October 2019 through June 2020 and hold assets steady; 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 September 2019.

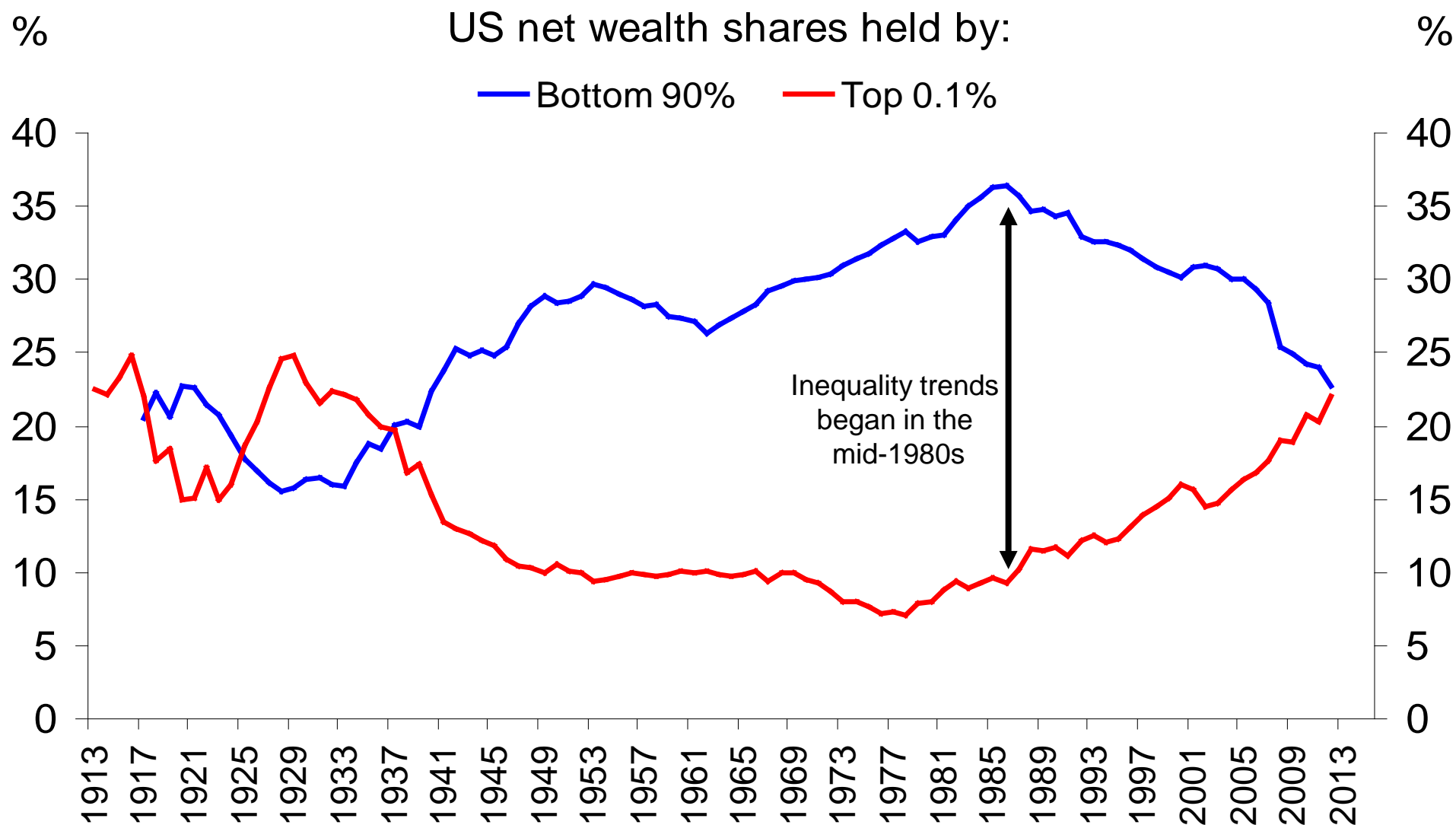
Source: Fed, ECB, BoJ, BoE, Haver Analytics, DB Global Research



Risk #6: Inequality, populism, and markets



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

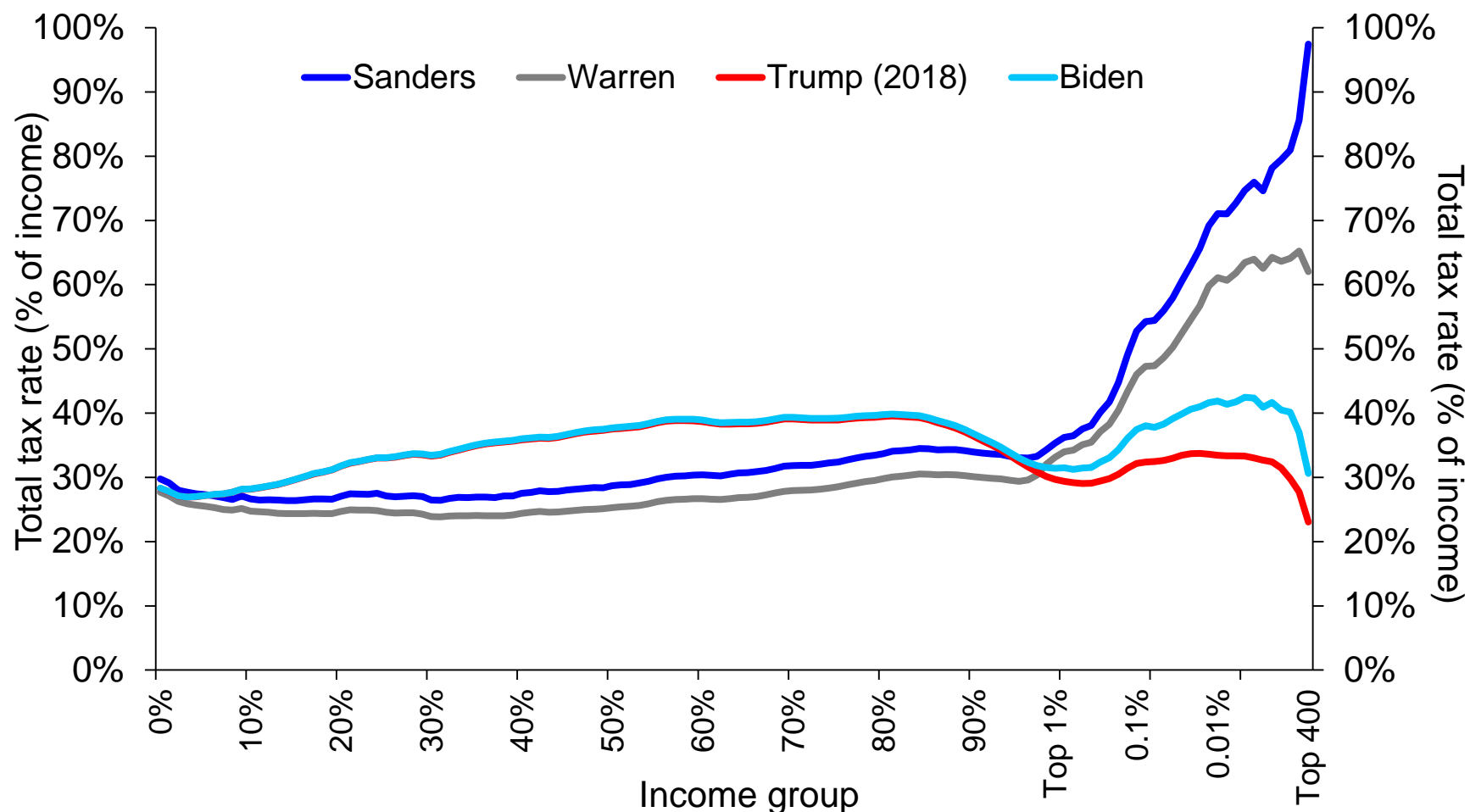


Source: The World Wealth and Income Database, DB Global Markets Research



Comparing income tax plans for presidential candidates

United States: Proposed tax plans

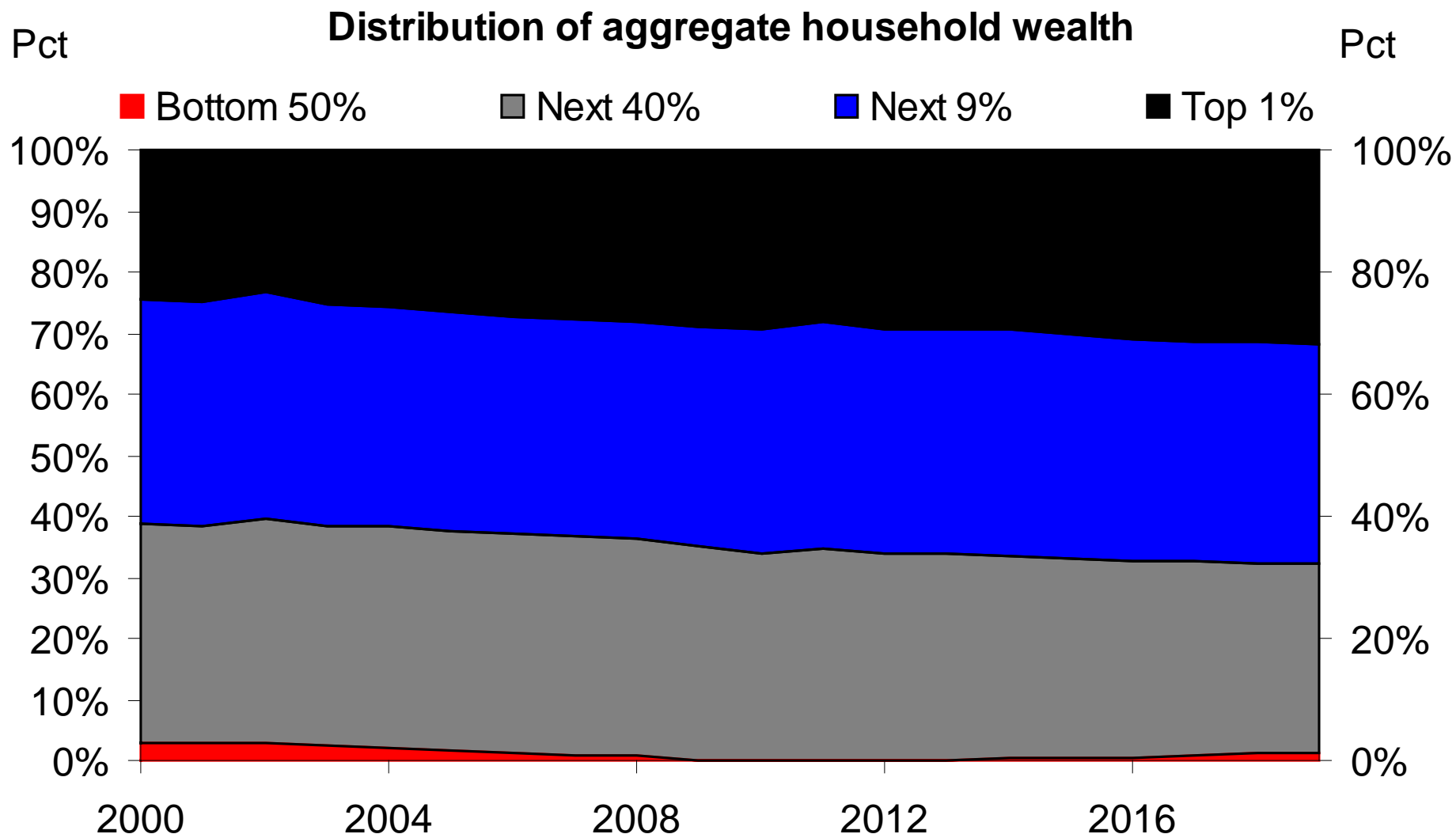


Note: Average tax rate by income groups in 2018 (after the Trump tax cut) and under the three leading candidates for the democratic presidential primary. All federal, state, and local taxes are included. Private health insurance contributions (7% of national income) as an extra tax paid by insured workers are also included as Warren and Sanders plan to replace these private contributions by public funding. Taxes are expressed as a fraction of pre-tax income. Pre-tax income is comprehensive (it includes all labor and capital income including fringe benefits, retained earnings of corporations, etc.) and sums up to national income as described in Piketty, Saez, and Zucman (2018).

Source: Saez and Zucman (2019), <https://taxjusticenow.org>, DB Global Research

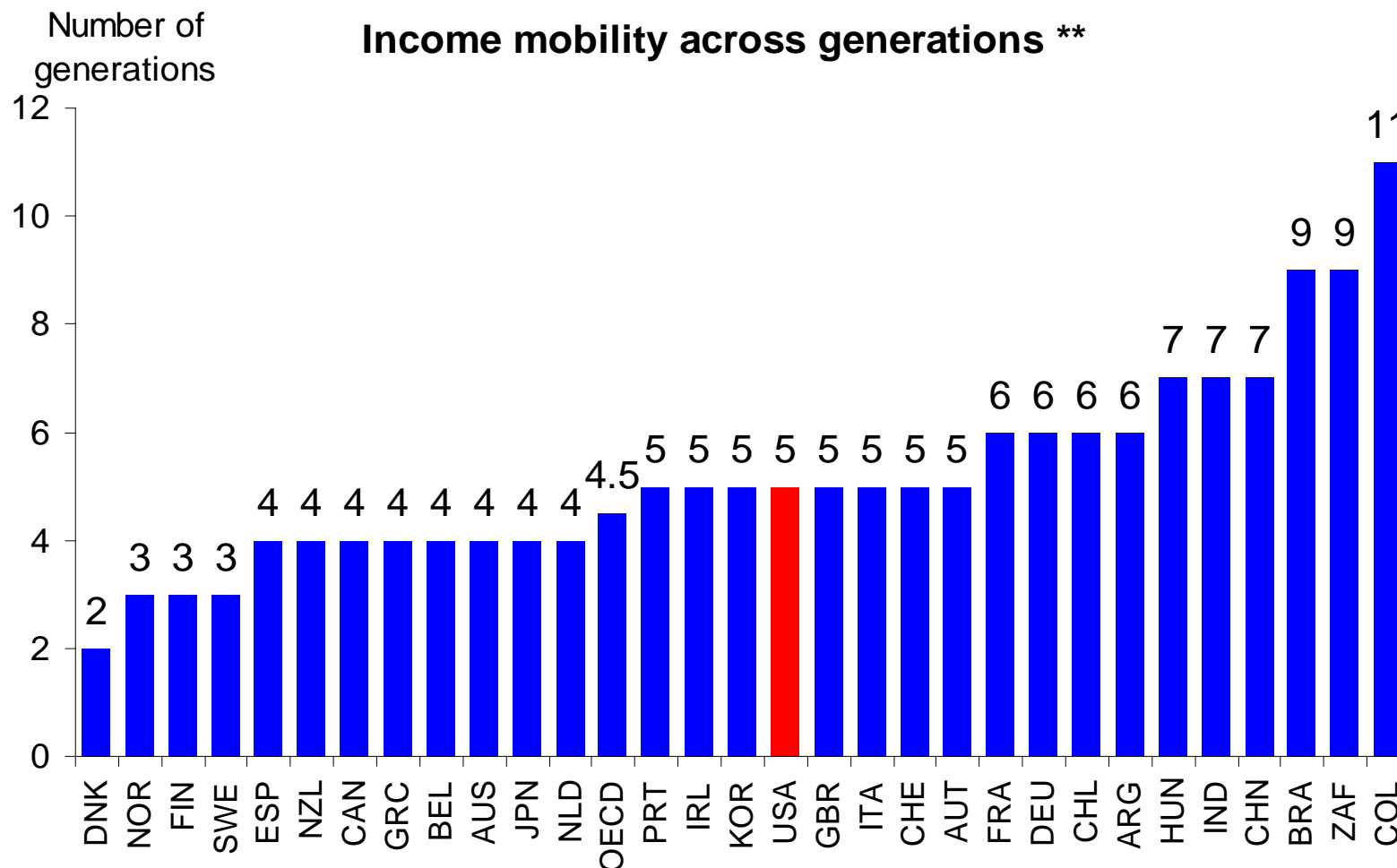


The 10% richest households in the US used to own 60% of all wealth. Now they own almost 70%



Source: FRB, DB Global Research

In the US it takes five generations for individuals born in low-income families to reach the mean income in society



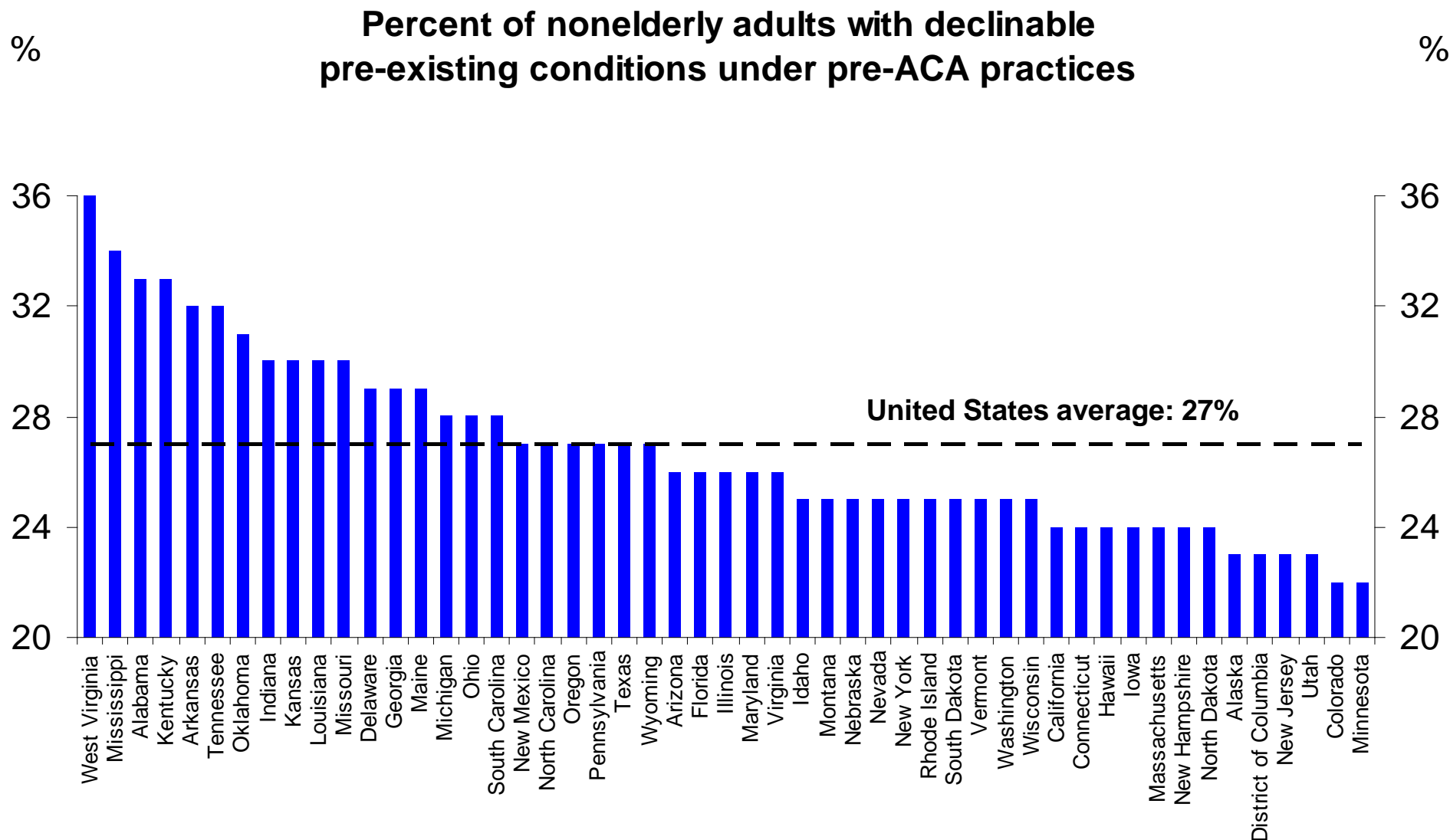
** Number of generations it would take for those born in low-income families to approach the mean income in their society.

Note: These estimates are based on earnings persistence (elasticities) between fathers and sons and the current level of household incomes of the bottom decile and the mean, assuming constant elasticities, following Bowles and Gintis (2002). Low-income family is defined as the first income decile, i.e. the bottom 10% of the population. Also, these estimates are simulation-based and intended to be illustrative. They should not be interpreted as giving the precise time that a person from a low-income household will need to reach the average income.

Source: OECD, DB Global Research



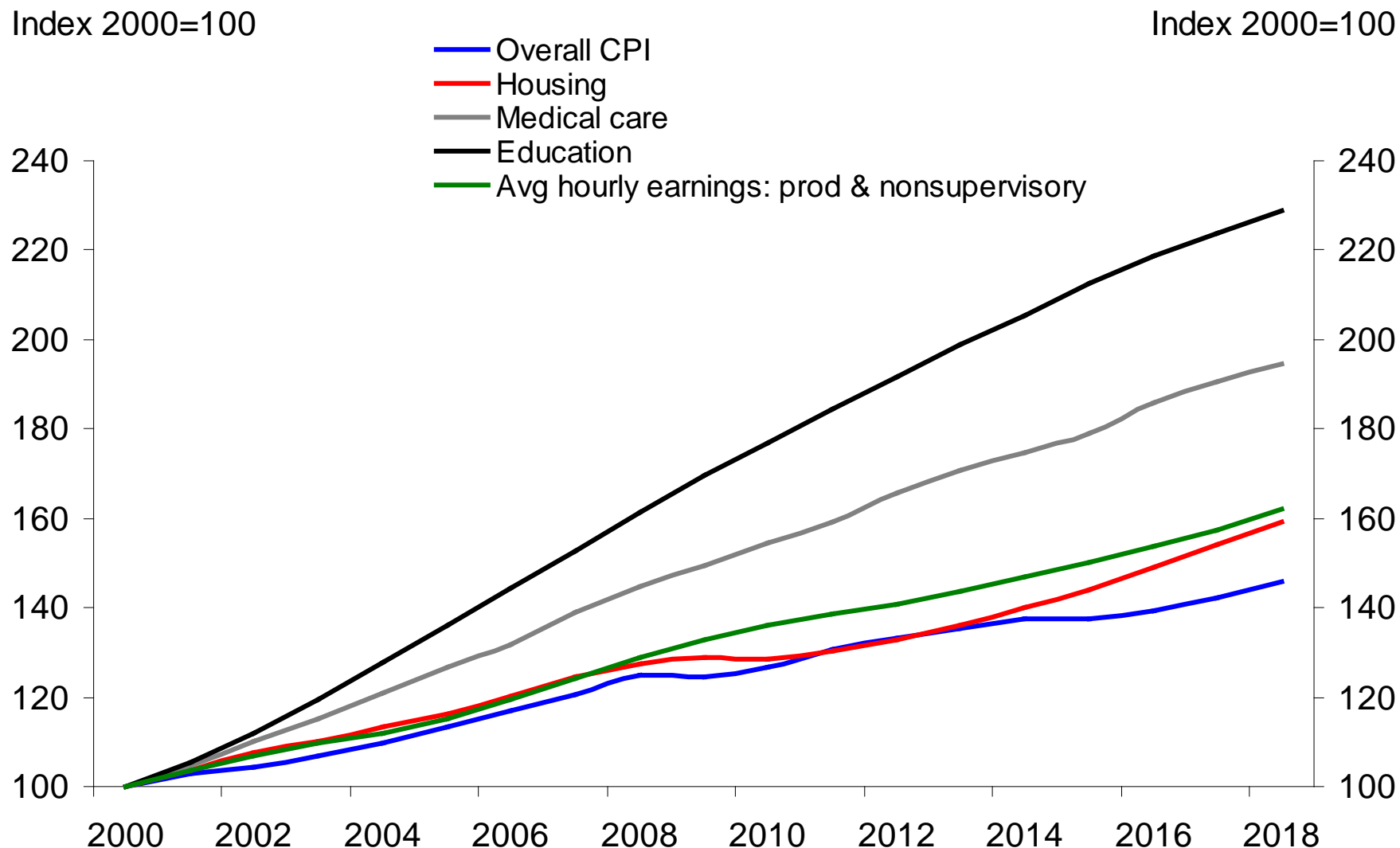
US: 27% of population have pre-existing conditions



Source: Kaiser Family Foundation, DB Global Research



Plenty of inflation in the price of healthcare, education, and housing

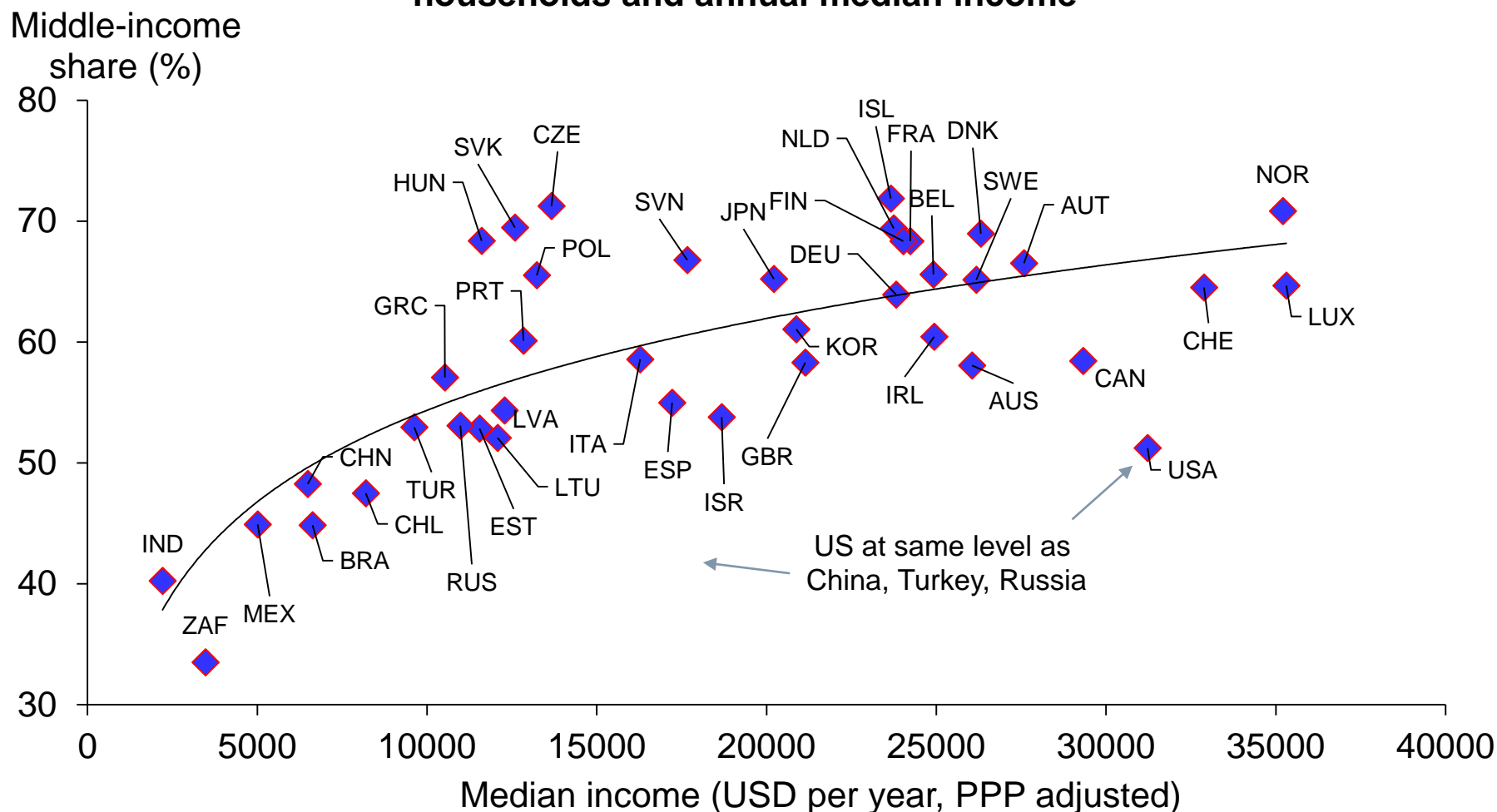


Source: BLS, Haver Analytics, DB Global Research



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

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

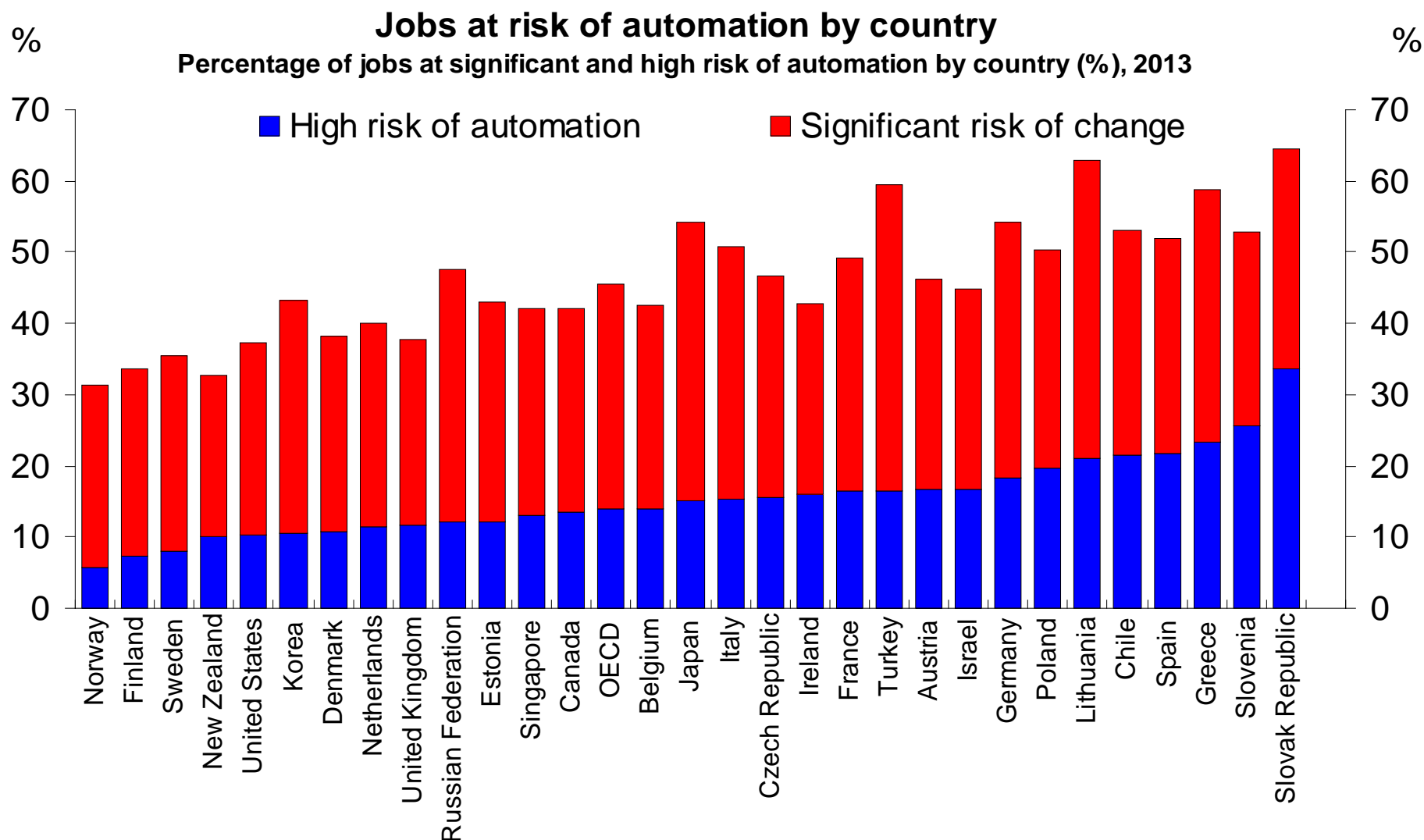


Note: Middle-income classes and median incomes are defined relative to equivalised household disposable income. The middle-income class comprises individuals in households with incomes that are between 75% and 200% of the median.

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



US workers less vulnerable to automation

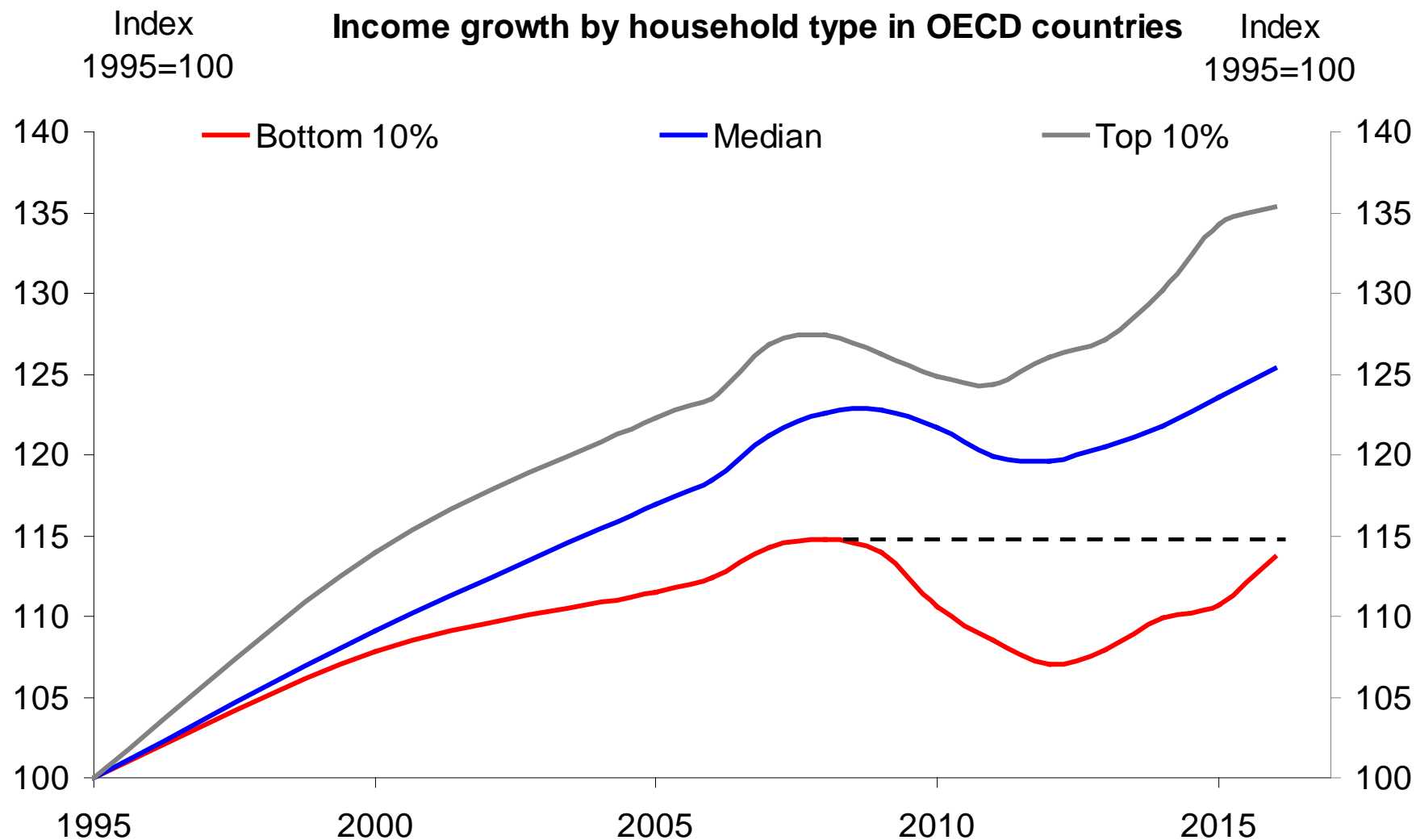


Note: 'High risk of automation' refers to the share of workers whose jobs face a risk of automation of 70% or above. 'Significant risk of change' reflects the share of workers whose jobs have a 50-70% chance of being automated.

Source: OECD, DB Global Research



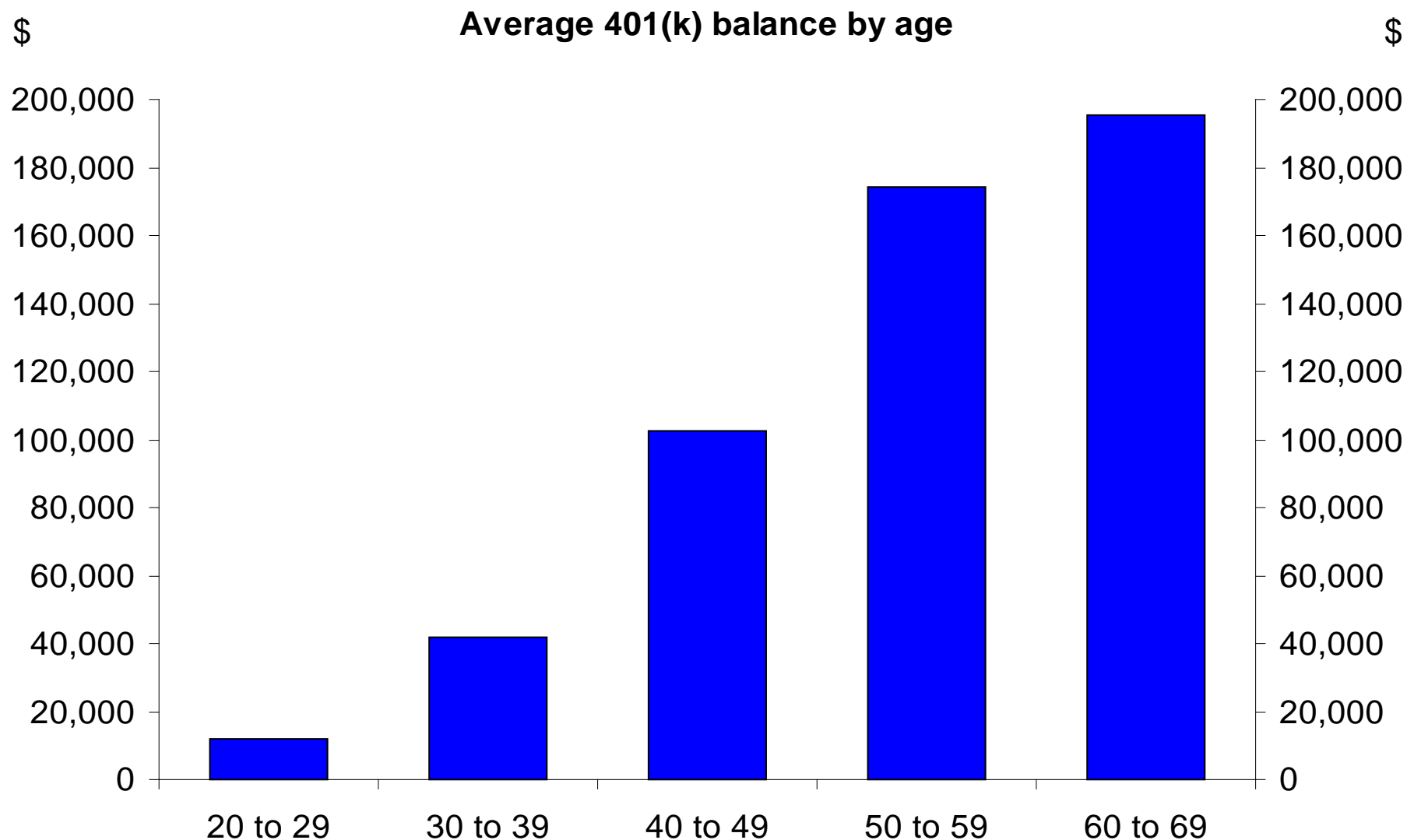
Lower incomes paid the highest price



Source: OECD, DB Global Research



Average 401(k) balance by age

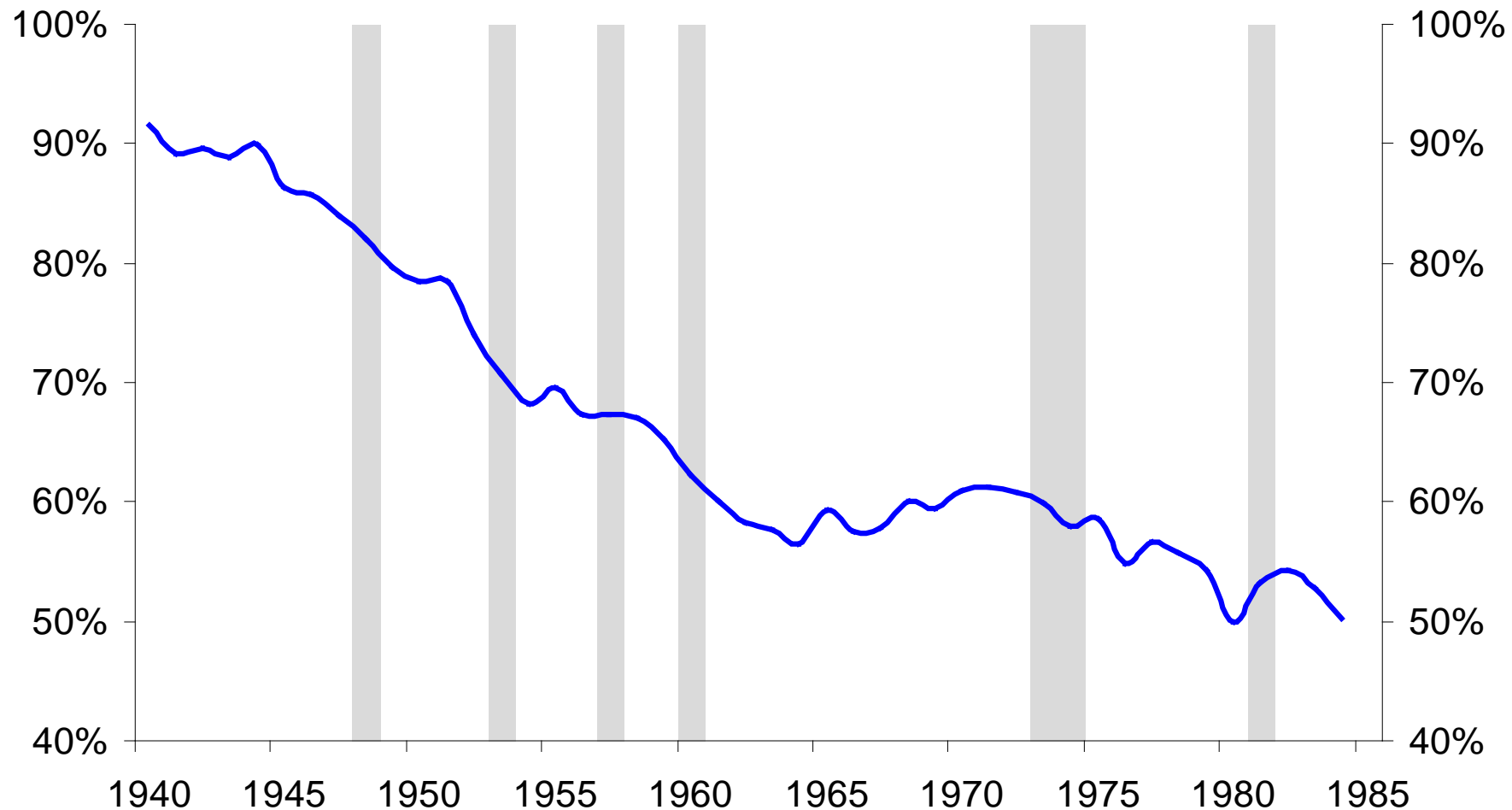


Source: Fidelity Investments, CNN, DB Global Research



Percentage of children earning more than their parents

Percent of children earning more than their parents at age 30, by year of birth



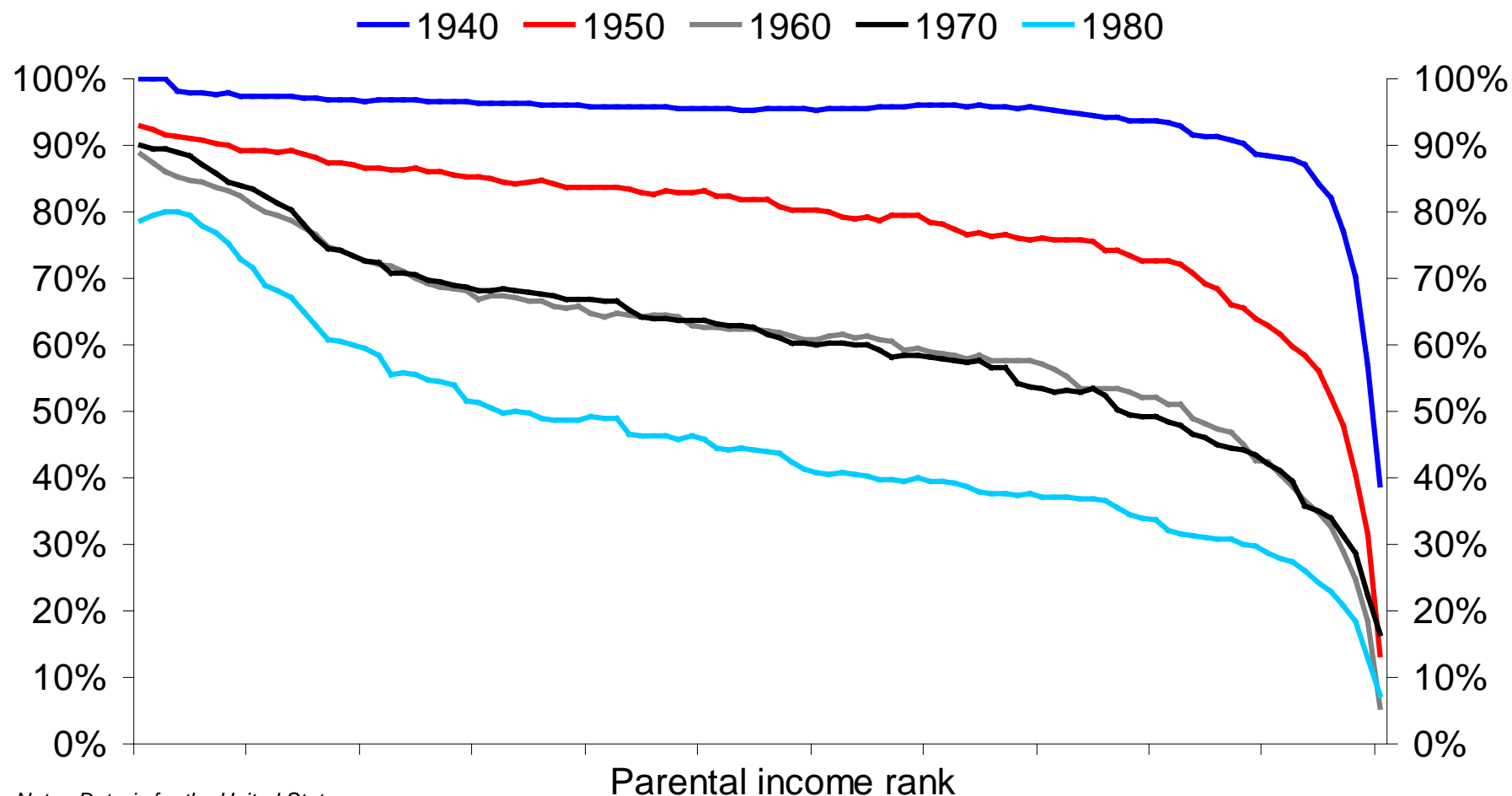
Note : Data is for the United States

Source: Chetty et al. "The Fading American Dream: Trends in Absolute Income Mobility Since 1940." Science 356(6336): 398-406, 2017, DB Global Research

Steady decline in generations making more money than their parents



Share of children in each cohort who earn more than their parents, by parental income percentile



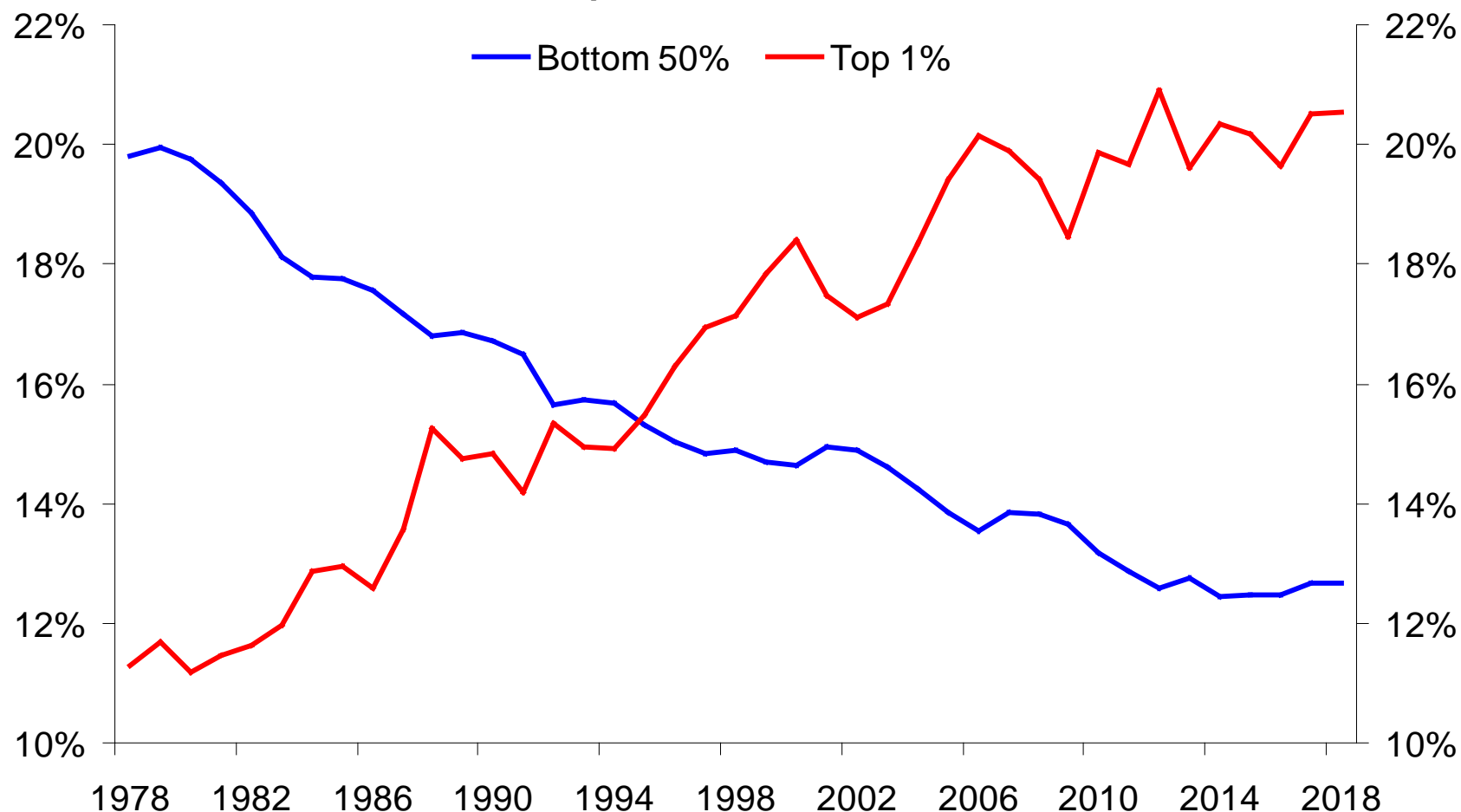
Note : Data is for the United States

Source: Chetty et al. "The Fading American Dream: Trends in Absolute Income Mobility Since 1940." Science (2017), DB Global Research



Share of income earned

United States: Share of national income earned by the top 1% vs. bottom 50%

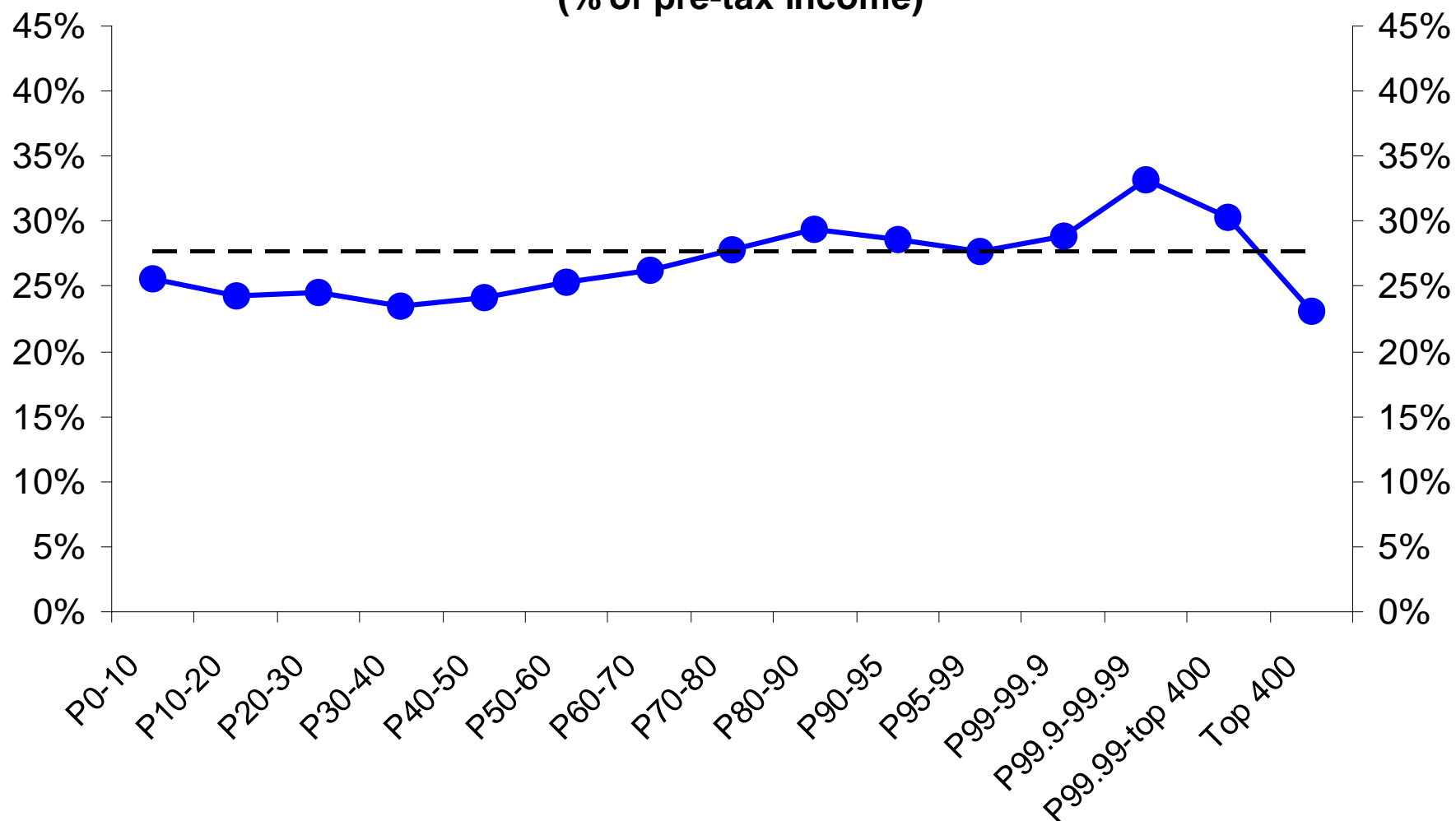


Source: Saez and Zucman (2019), <https://taxjusticenow.org> , DB Global Research



Highest income groups have lowest tax rate

Average tax rates by pre-tax income group in 2018
(% of pre-tax income)

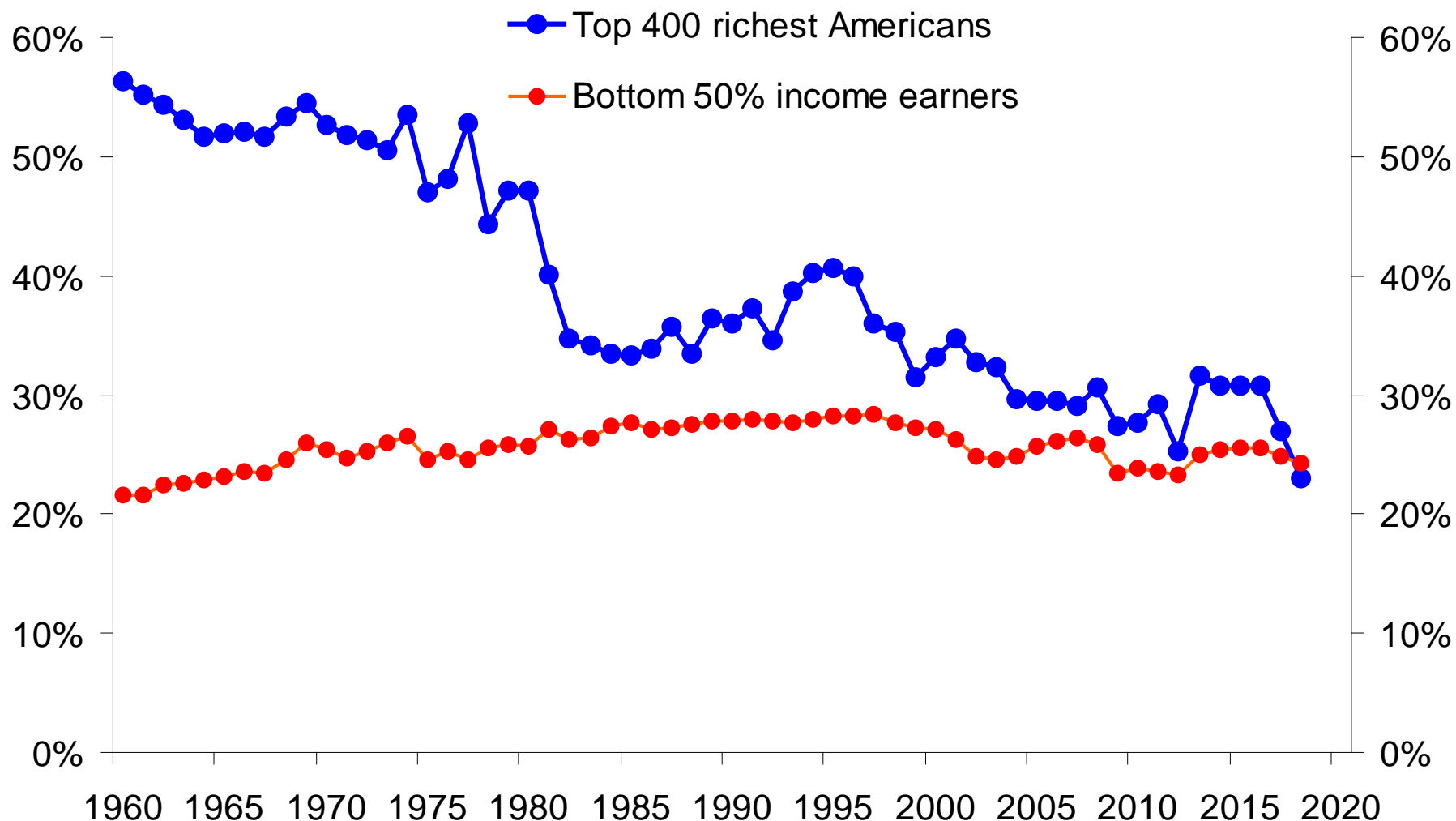


Source: Saez and Zucman (2019), <https://taxjusticenow.org> , DB Global Research



Average tax rates

United States : Average tax rate (% of pre-tax income)

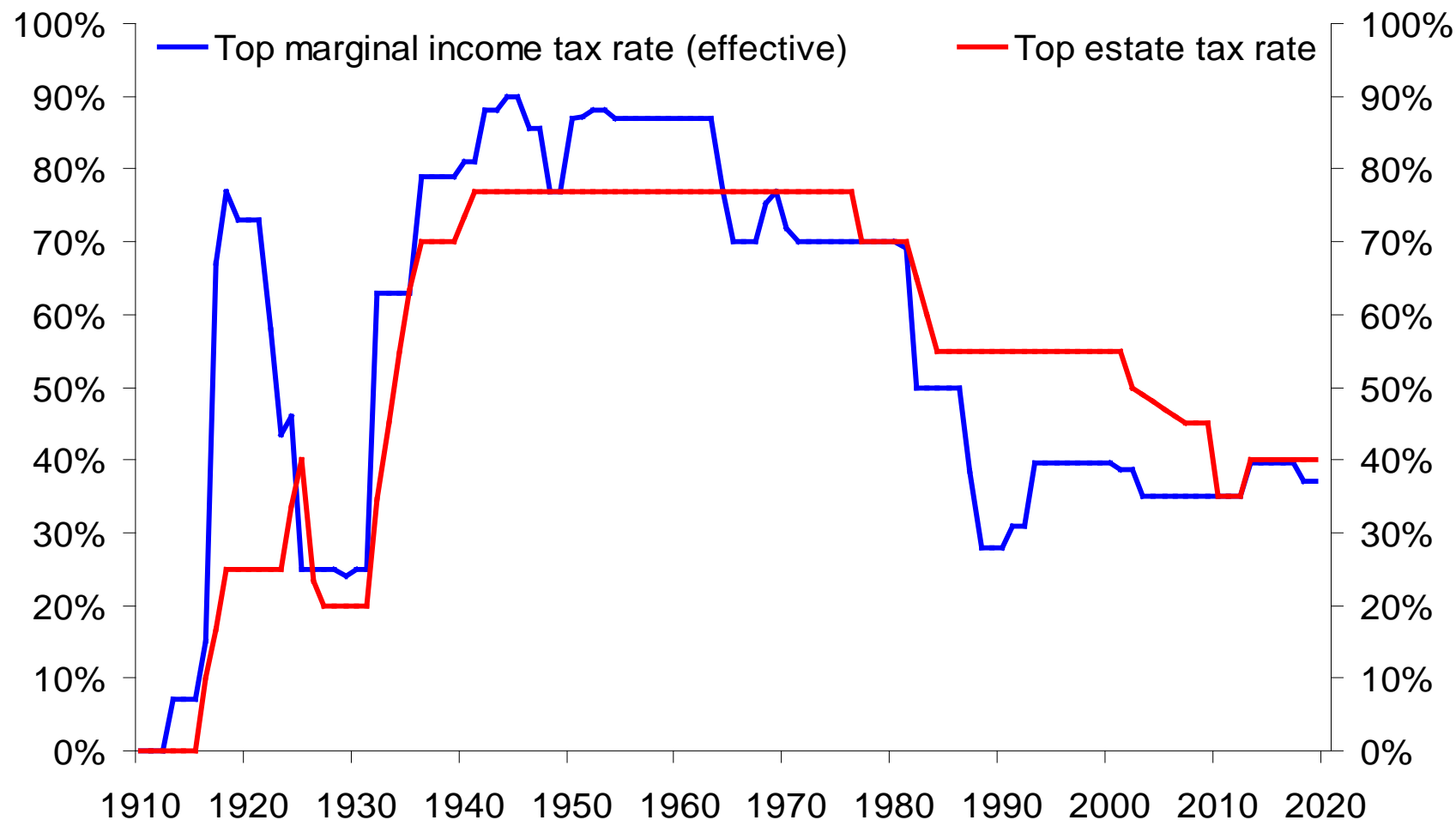


Source: Saez and Zucman (2019), <https://taxjusticenow.org> , DB Global Research



US marginal tax rate over time

United States: Top marginal tax rates

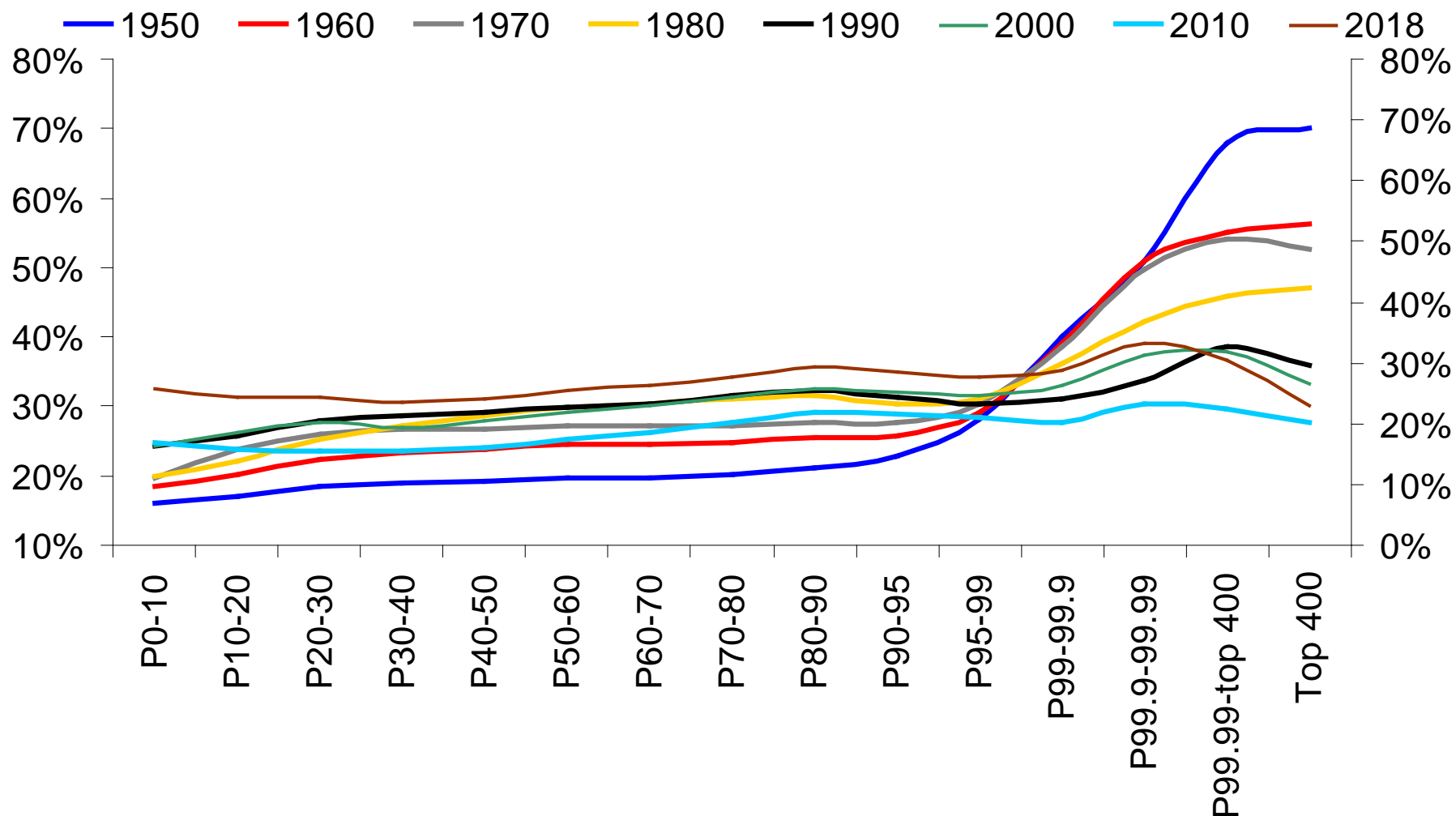


Source: Saez and Zucman (2019), <https://taxjusticenow.org> , DB Global Research



Comparing tax rates for different parts of the income distribution over decades

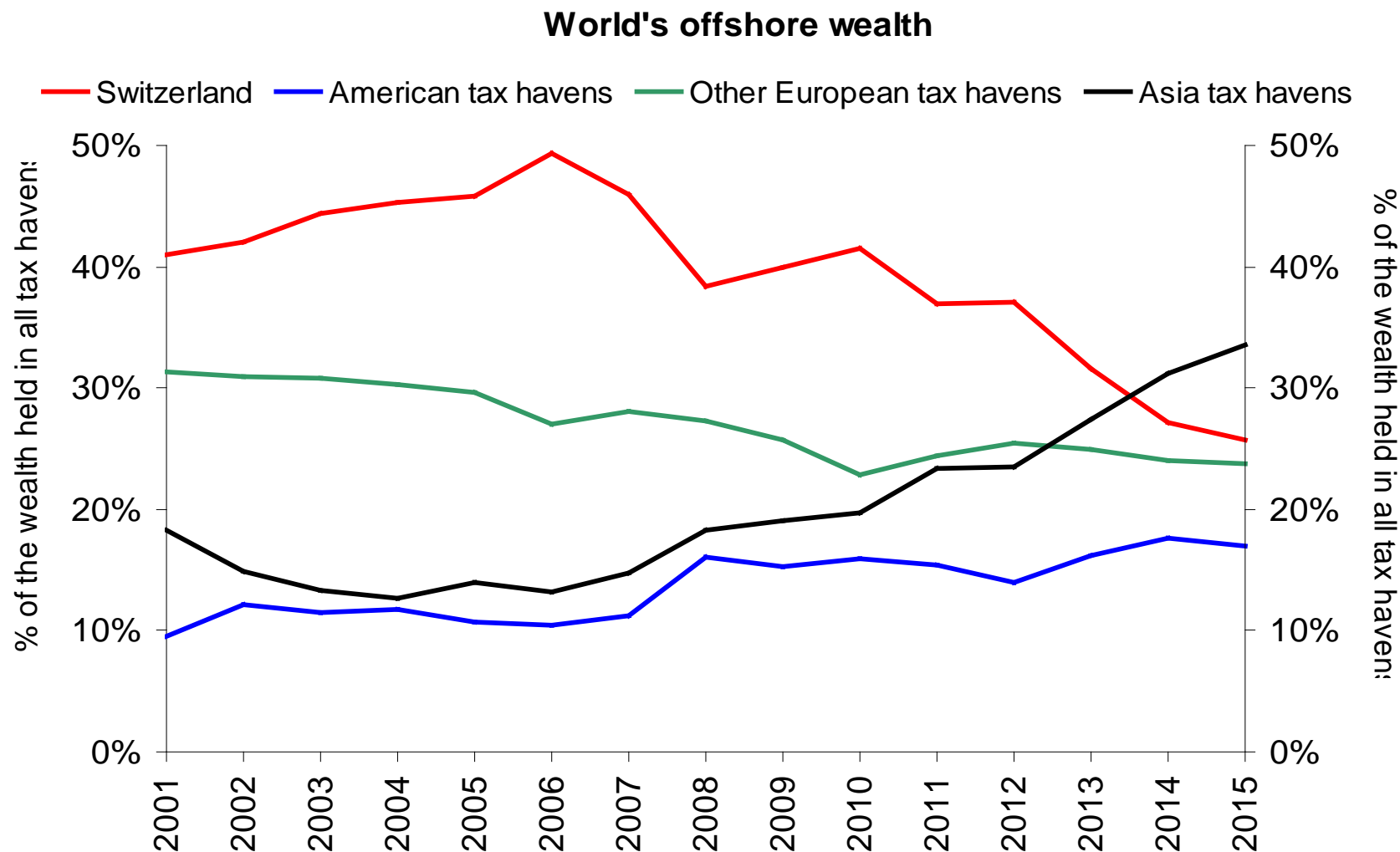
Average tax rates by pre-tax income groups (selected years)



Source: Saez and Zucman (2019), <https://taxjusticenow.org>, DB Global Research



World's offshore wealth

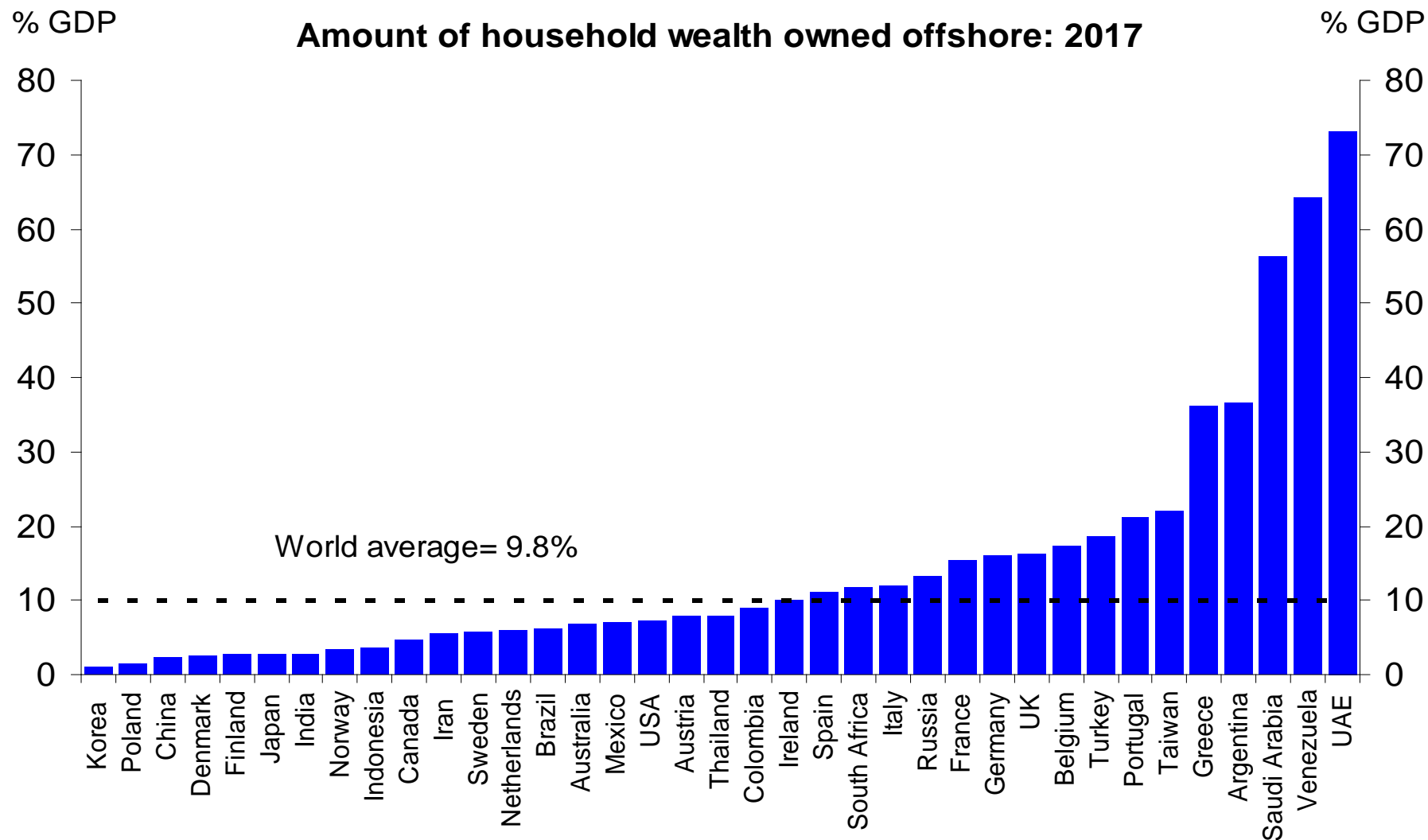


Note: The figure plots the share of global offshore wealth managed in Switzerland, in the other European offshore centers (Cyprus, Guernsey, Jersey, Isle of Man, Luxembourg, Austria, Belgium, and the United Kingdom), in the Asian offshore centers (defined as Hong Kong, Singapore, Macao, Malaysia, Bahrain, as well as the Bahamas, Bermuda, and the Netherland Antilles), and in the American offshore centers (defined as the Cayman Islands, Panama, and the United States).

Source: Alstadsaeter, Johannesen, and Zucman, NBER (2017), DB Global Research



Share of wealth offshore



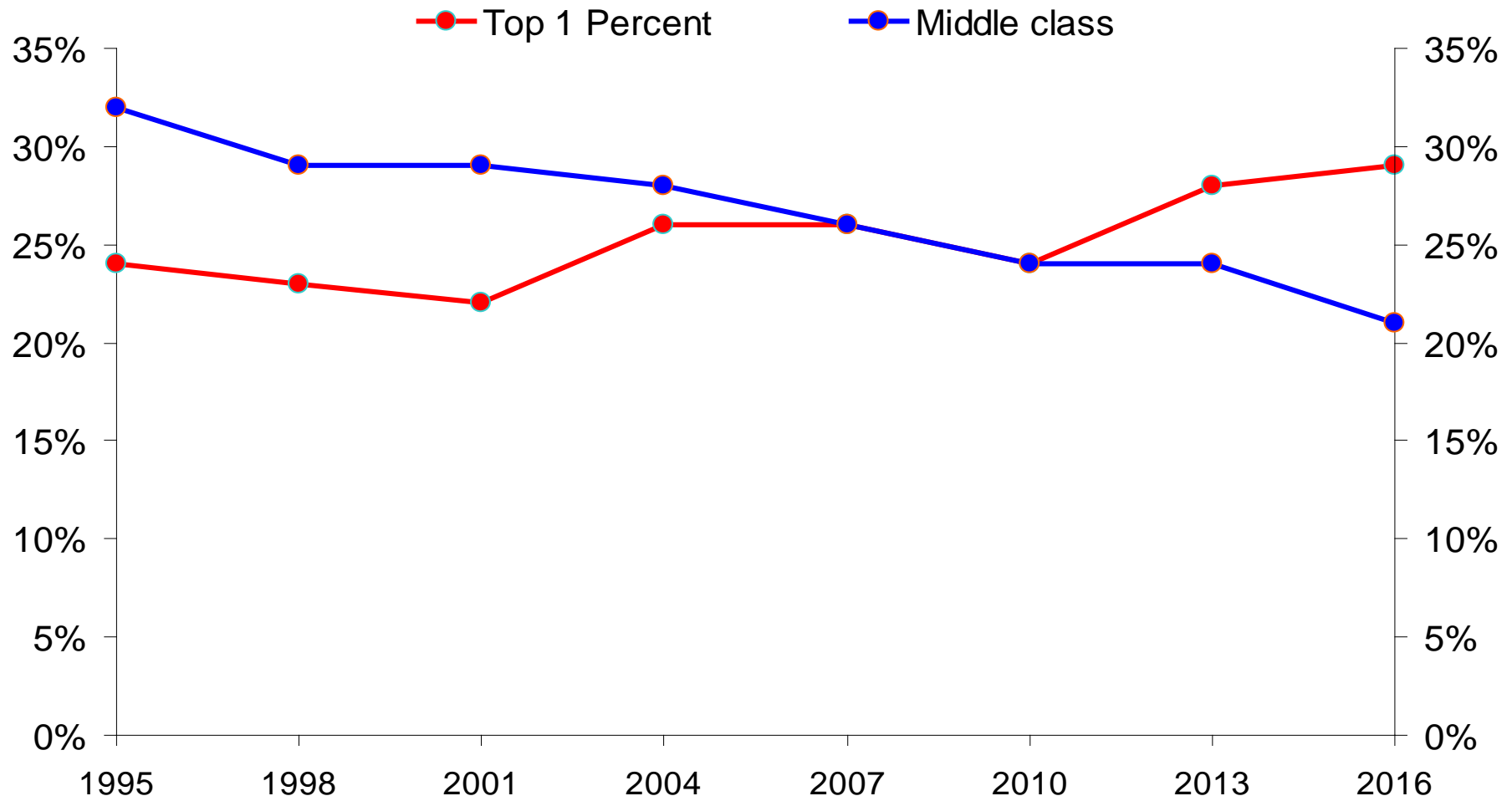
Note: The sample includes all the world's countries with more than \$200 billion in GDP in 2007.

Source: Alstadsaeter, Johannesen, and Zucman, NBER (2017), DB Global Research



Share of wealth owned by Top 1% and Middle class

Wealth Shares by Usual Income Group, 1995-2016



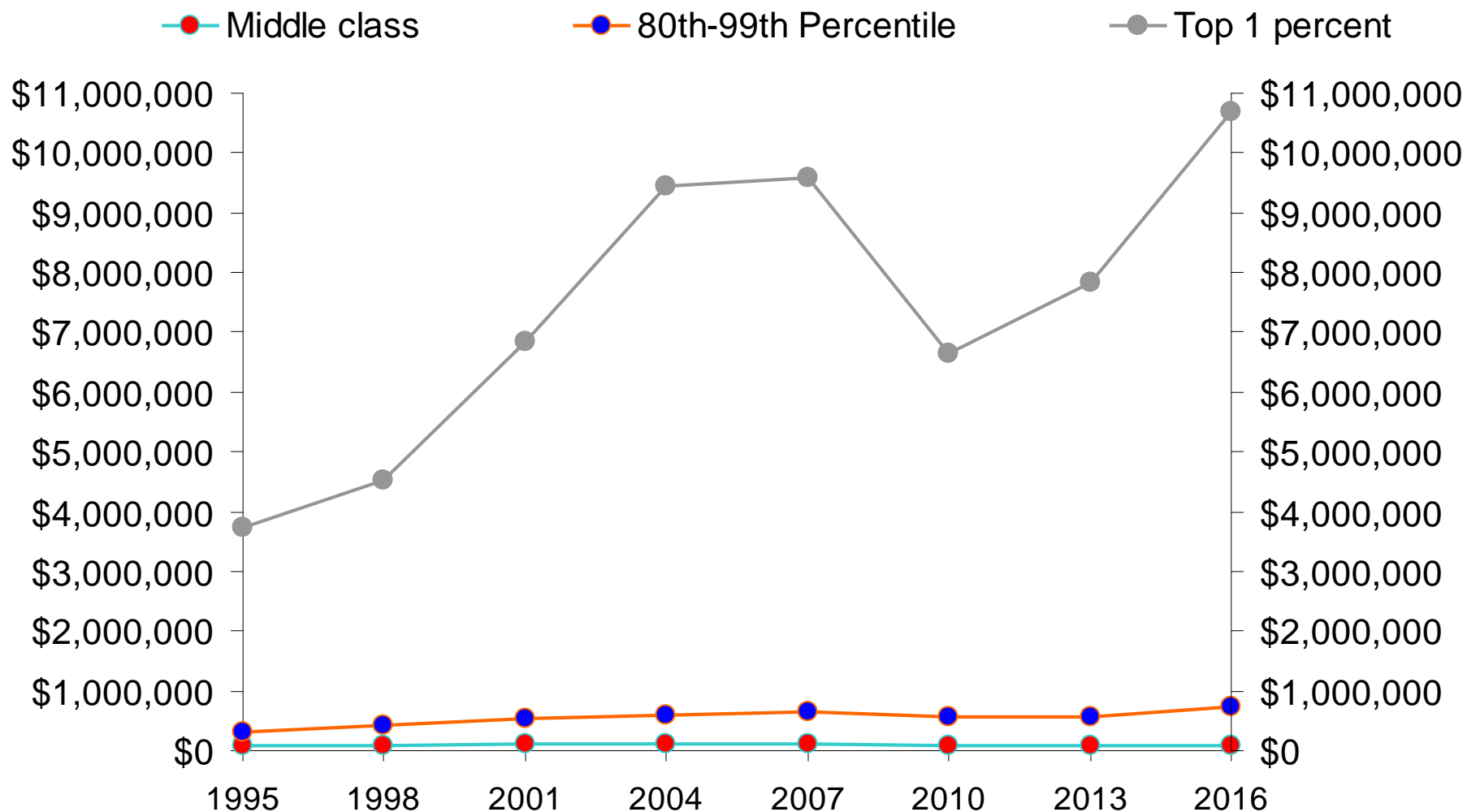
Note: Income groups are defined by usual income, a measure of family income where economic shocks are smoothed. The middle class makes up the second, third, and fourth usual income quintiles. SCF Bulletin Net Worth. 2016 dollars using CPI-U-RS.

Source: The Brookings Institution, DB Global Research



Median net worth by income group

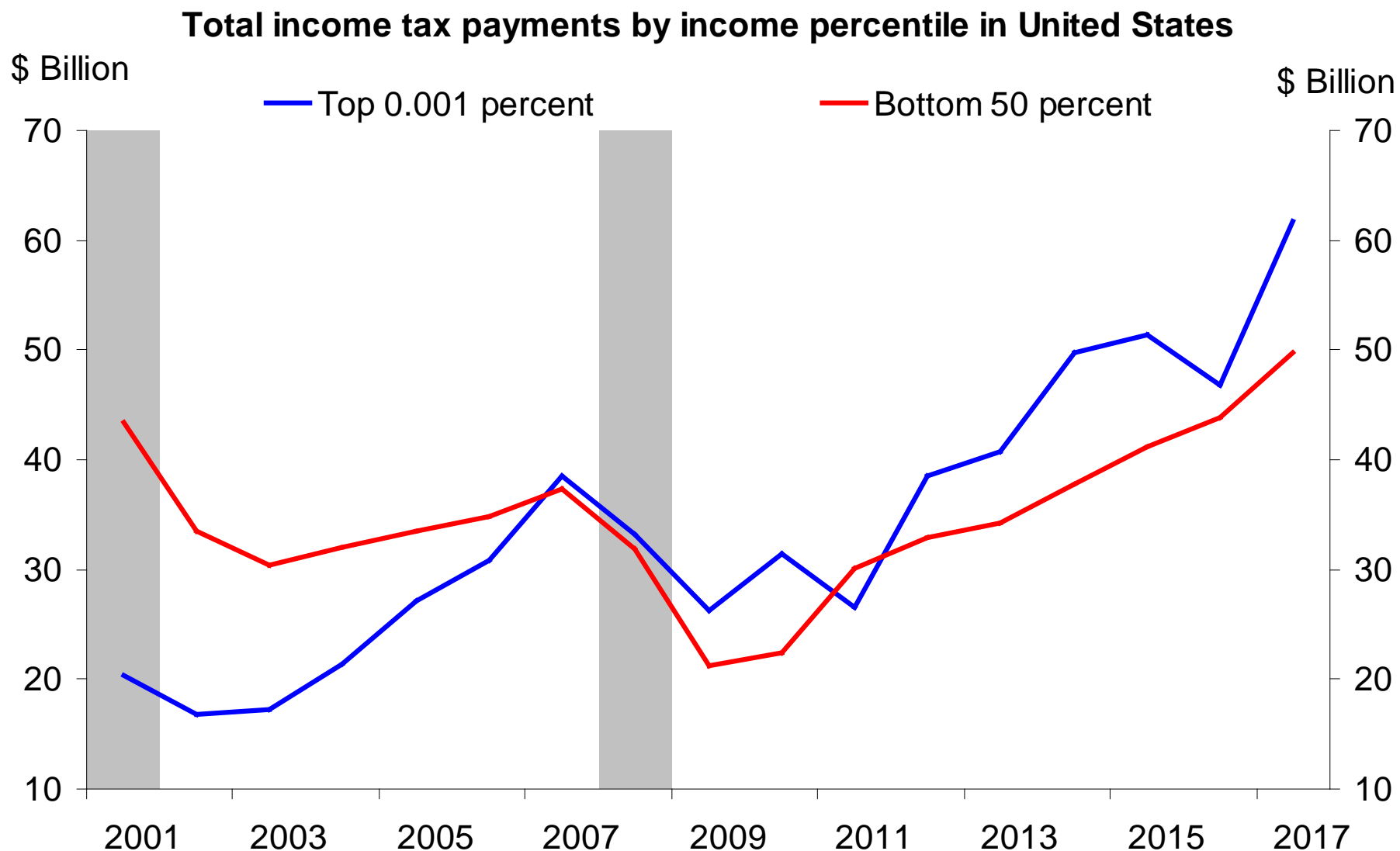
Median net worth by usual income group, 1995-2016



Note: Income groups are defined by usual income, a measure of family income where economic shocks are smoothed. The middle class makes up the second, third, and fourth usual income quintiles. SCF Bulletin Net Worth. 2016 dollars using CPI-U-RS.

Source: The Brookings Institution, DB Global Research

Total income tax payments by Top 0.001% and Bottom 50%

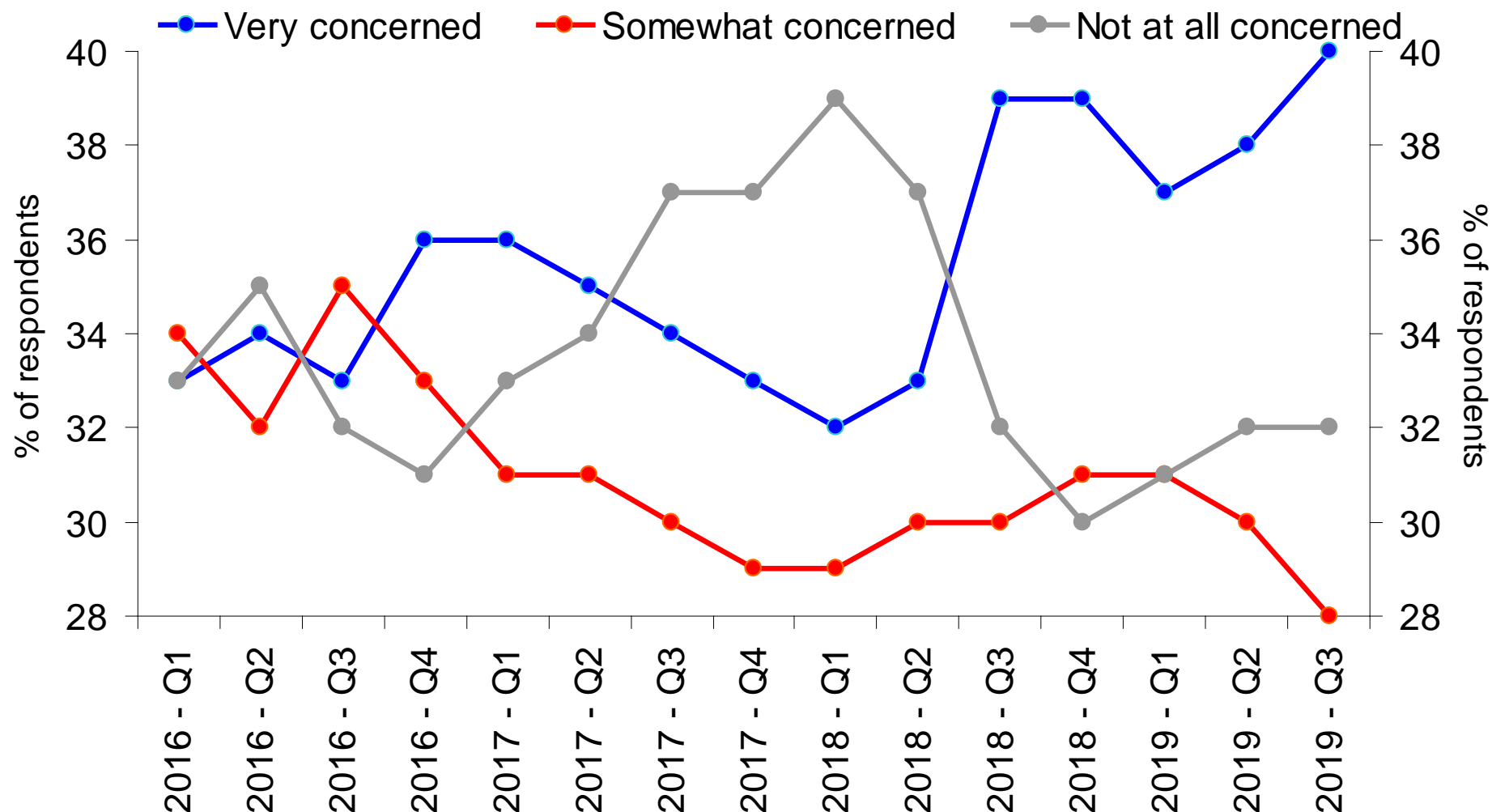


Source: IRS, DB Global Research



Rising share of population are concerned about inequality

How concerned are you right now about income inequality in the United States

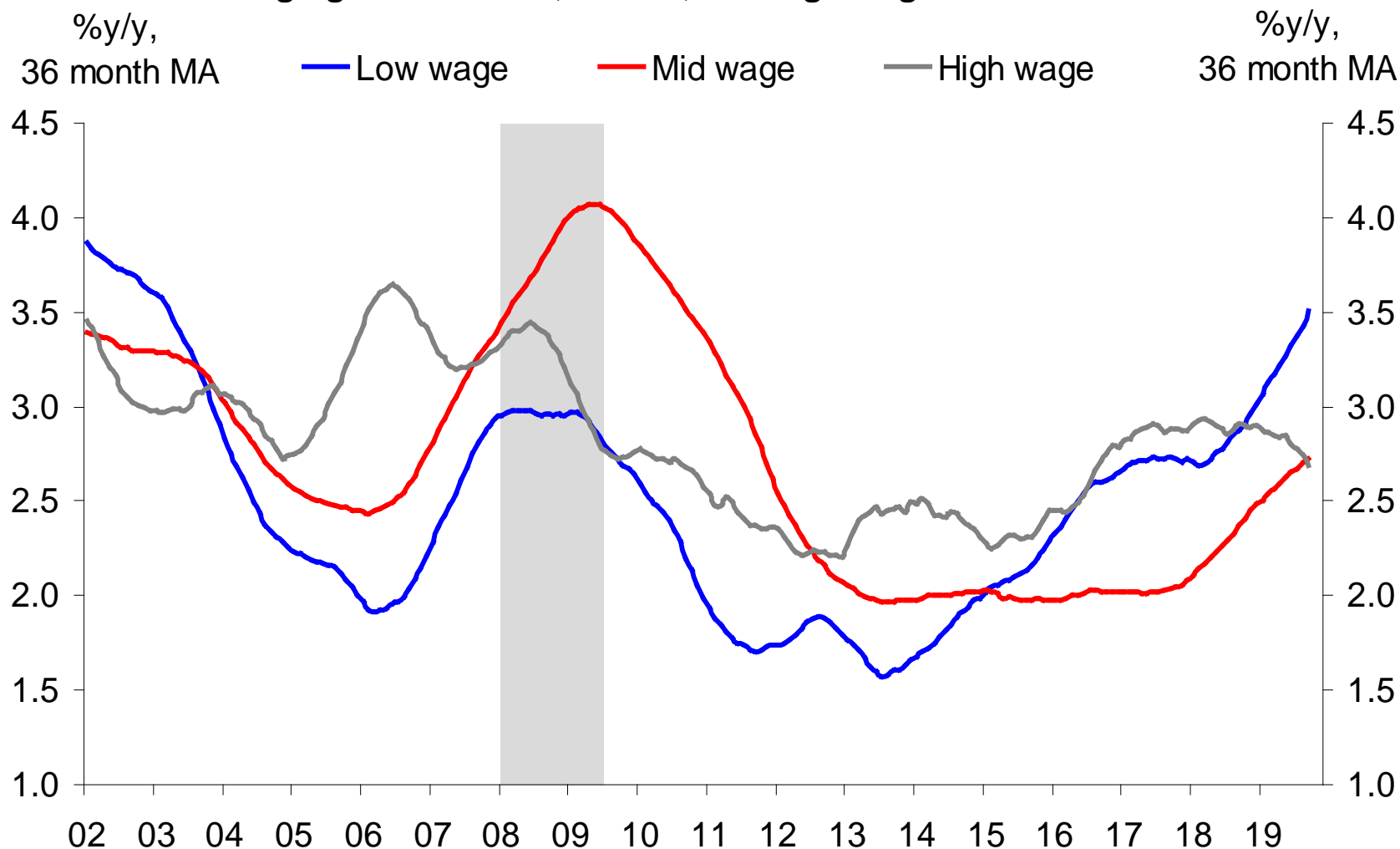


Source: Civic Science, DB Global Research



Wages growing faster for low-wage workers at the moment

Wage growth for low, middle, and high wage workers

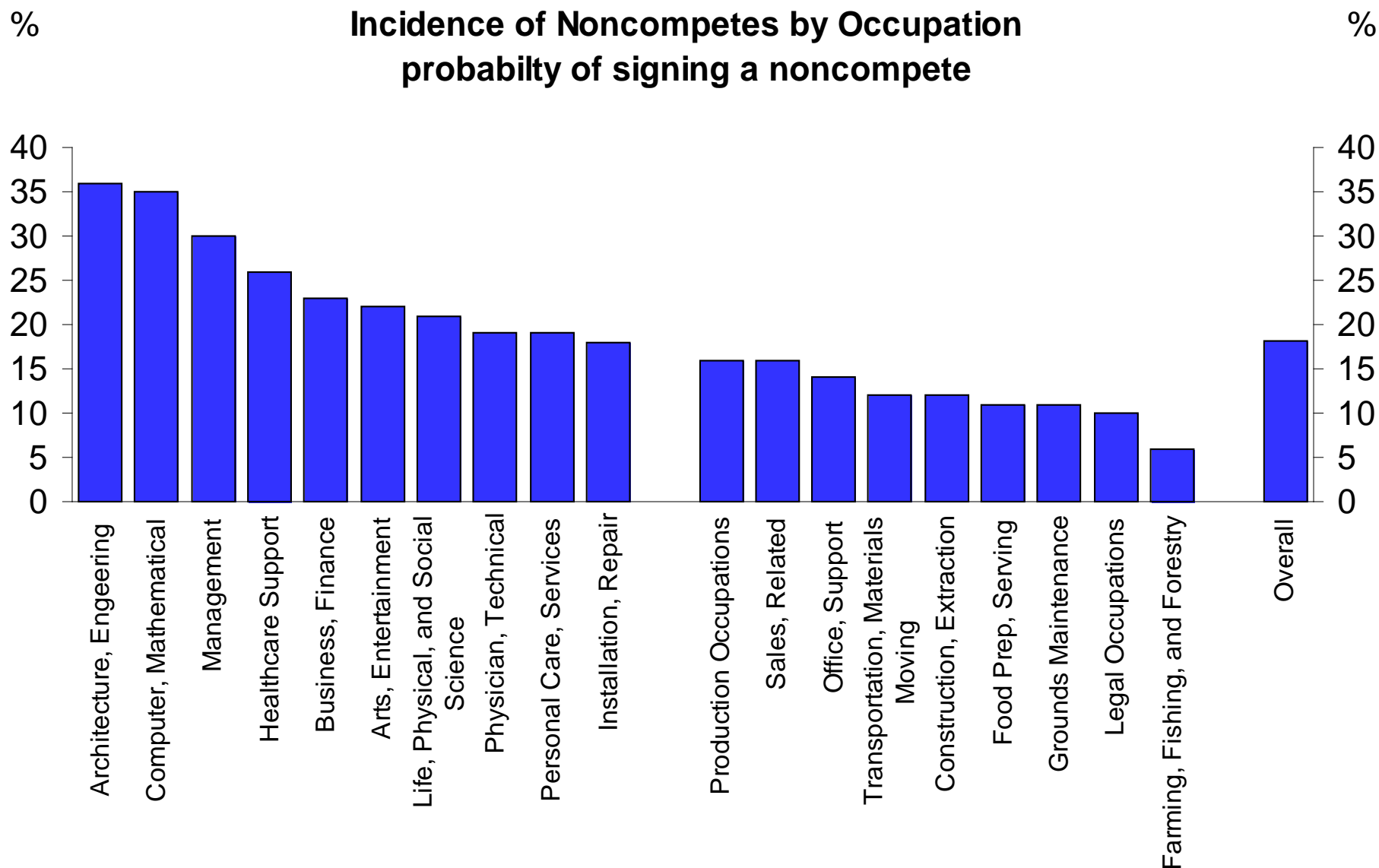


Note: Low, middle and high wage jobs are classified according to the historical average of overall industry wage. Average hourly earnings used.

Source: BLS, Haver Analytics, DB Global Research



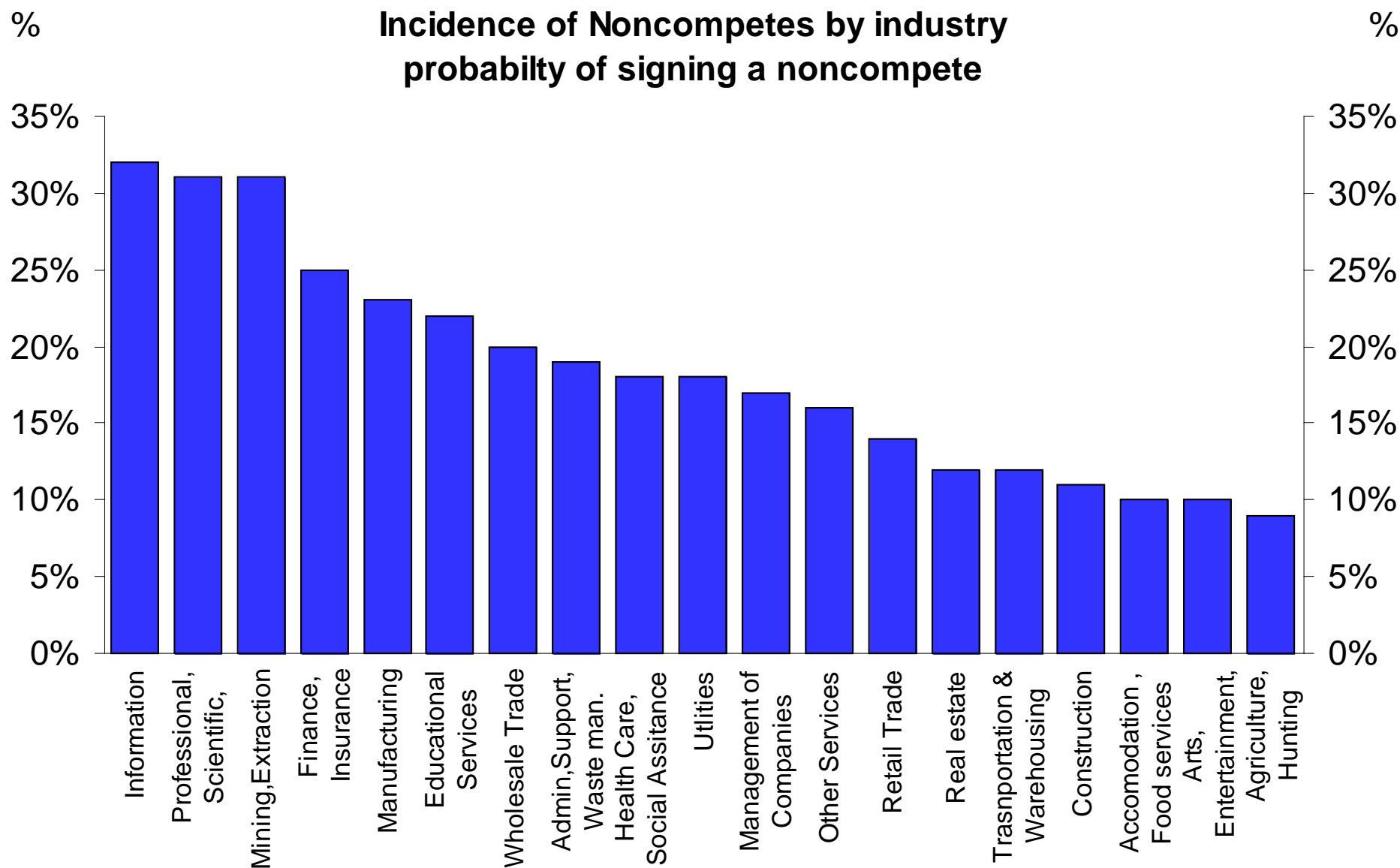
Non-compete agreements across occupations



Source: Starr, Evan and Prescott, J.J. and Bishara, Norman D, "Noncompetes in the U.S. Labor Force" (August 30, 2019). U of Michigan Law & Econ Research Paper No. 18-013, DB Global Research

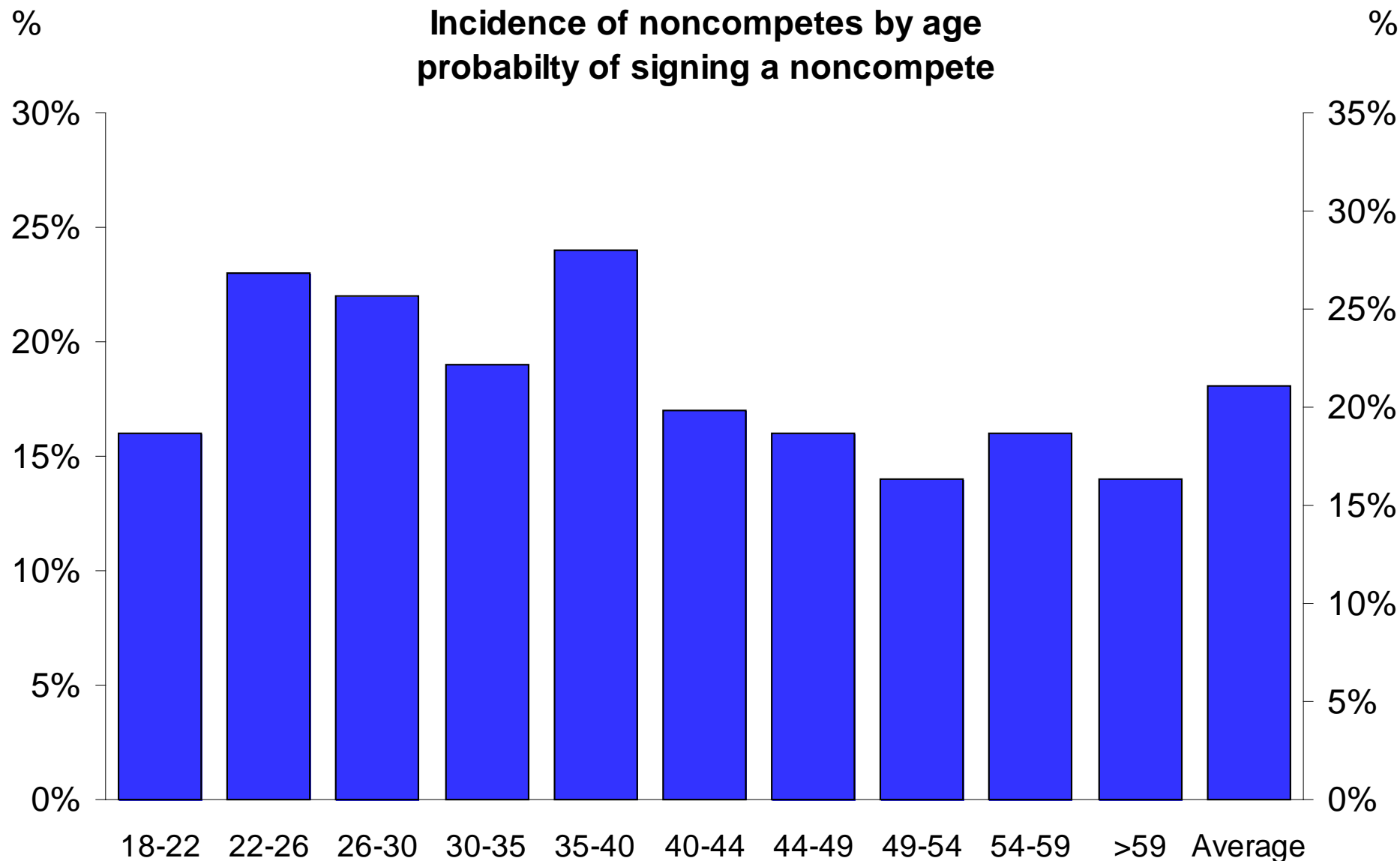


Non-compete across industries



Source: Starr, Evan and Prescott, J.J. and Bishara, Norman D, "Noncompetes in the U.S. Labor Force" (August 30, 2019). U of Michigan Law & Econ Research Paper No. 18-013, DB Global Research

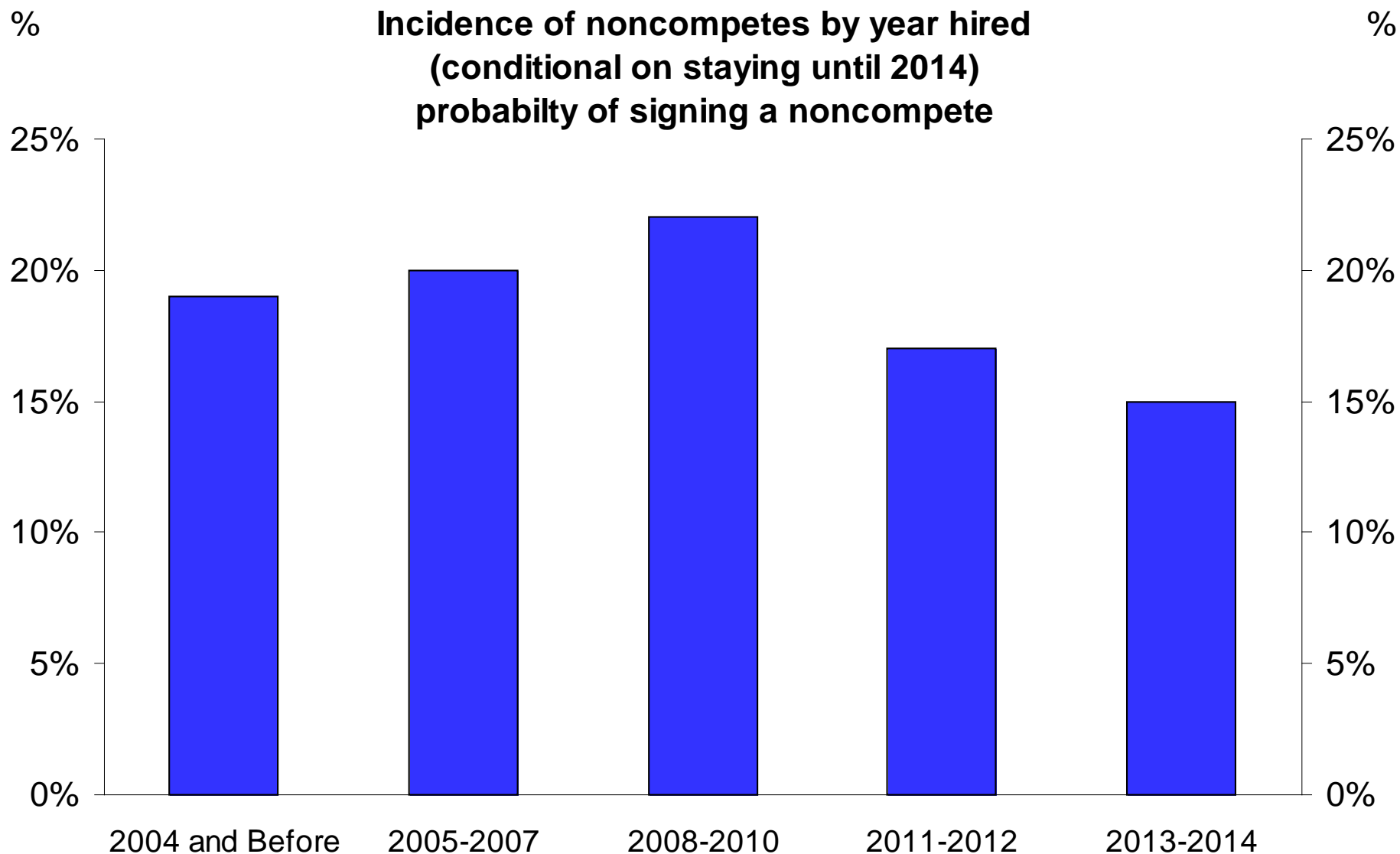
Non-compete agreements pronounced for younger generations



Source: Starr, Evan and Prescott, J.J. and Bishara, Norman D, "Noncompetes in the U.S. Labor Force" (August 30, 2019). U of Michigan Law & Econ Research Paper No. 18-013, DB Global Research



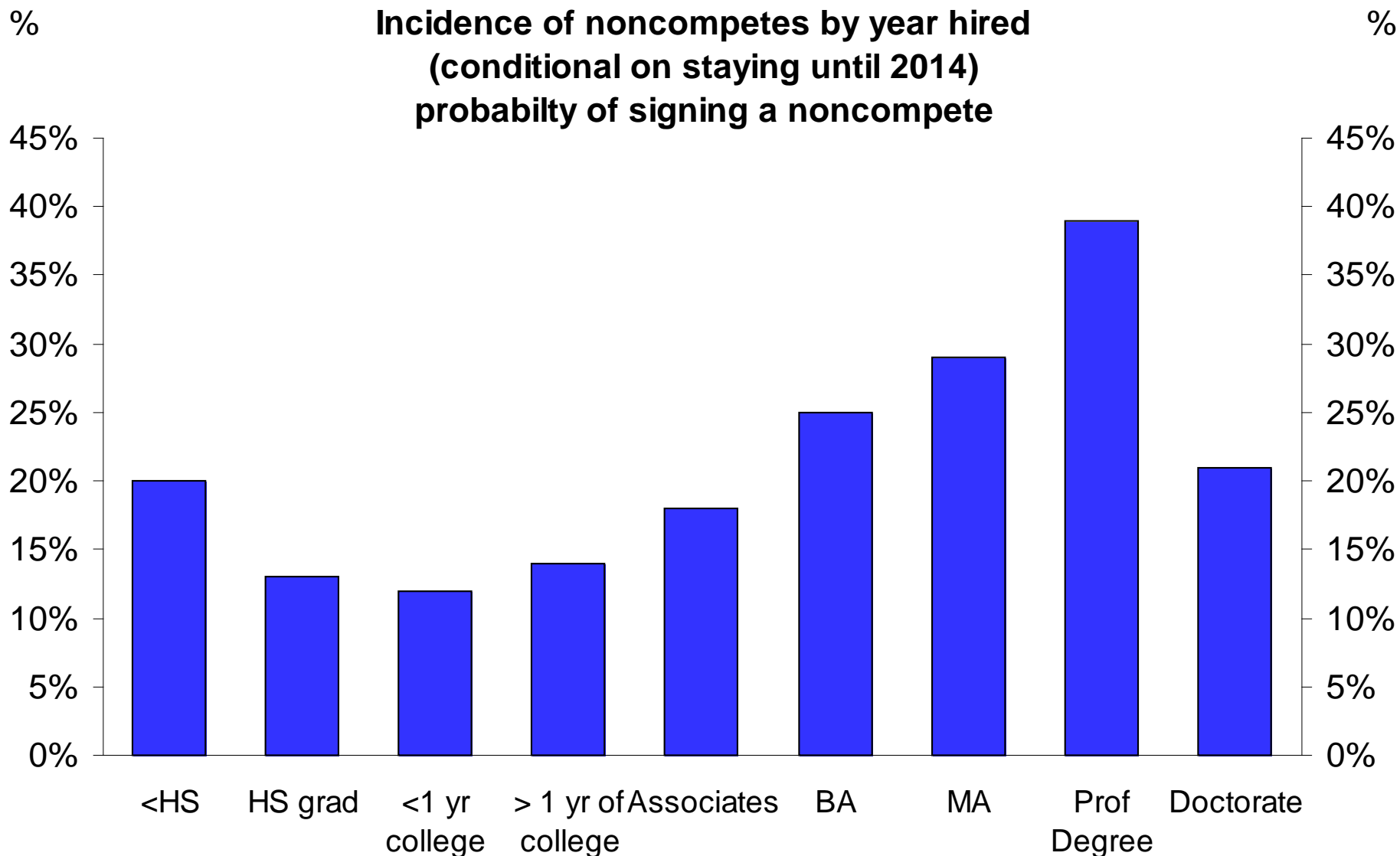
Non-compete agreements



Source: Starr, Evan and Prescott, J.J. and Bishara, Norman D, "Noncompetes in the U.S. Labor Force" (August 30, 2019). U of Michigan Law & Econ Research Paper No. 18-013, DB Global Research



Many people with less than high-school degree sign non-compete agreements with their employers



Source: Starr, Evan and Prescott, J.J. and Bishara, Norman D, "Noncompetes in the U.S. Labor Force" (August 30, 2019). U of Michigan Law & Econ Research Paper No. 18-013, DB Global Research



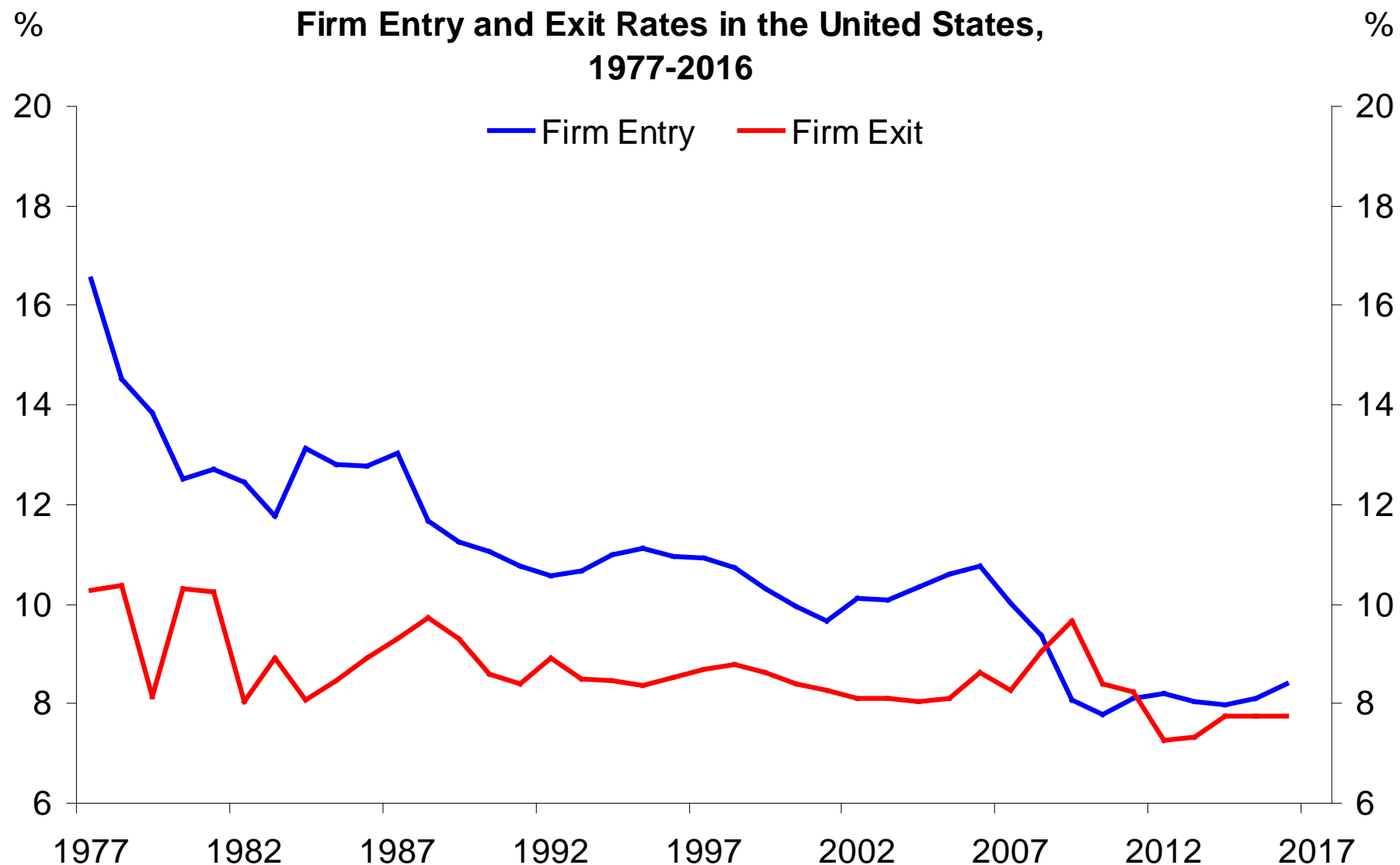
Industry concentration

NAICS code	Industry	Sales of 4 largest firms as percent of total sales (%)	Revenue (\$ bln)
452910	Warehouse clubs and supercenters	93.6	406
4242101	General-line drugs merchant wholesalers	72.1	319
33611	Automobile and light duty motor vehicle manufacturing	68.6	231
446110	Pharmacies and drug stores	69.5	230
5172102	Cellular and other wireless telecommunications	89.4	225
481111	Scheduled passenger air transportation	65.3	157
524292	Third party administration of insurance and pension funds	76.3	145
5171101	Wired telecommunications carriers	73.4	142
5171102	Cable and other program distribution	71.1	138
336411	Aircraft manufacturing	80.1	113

Source: Census (2012), DB Global Research



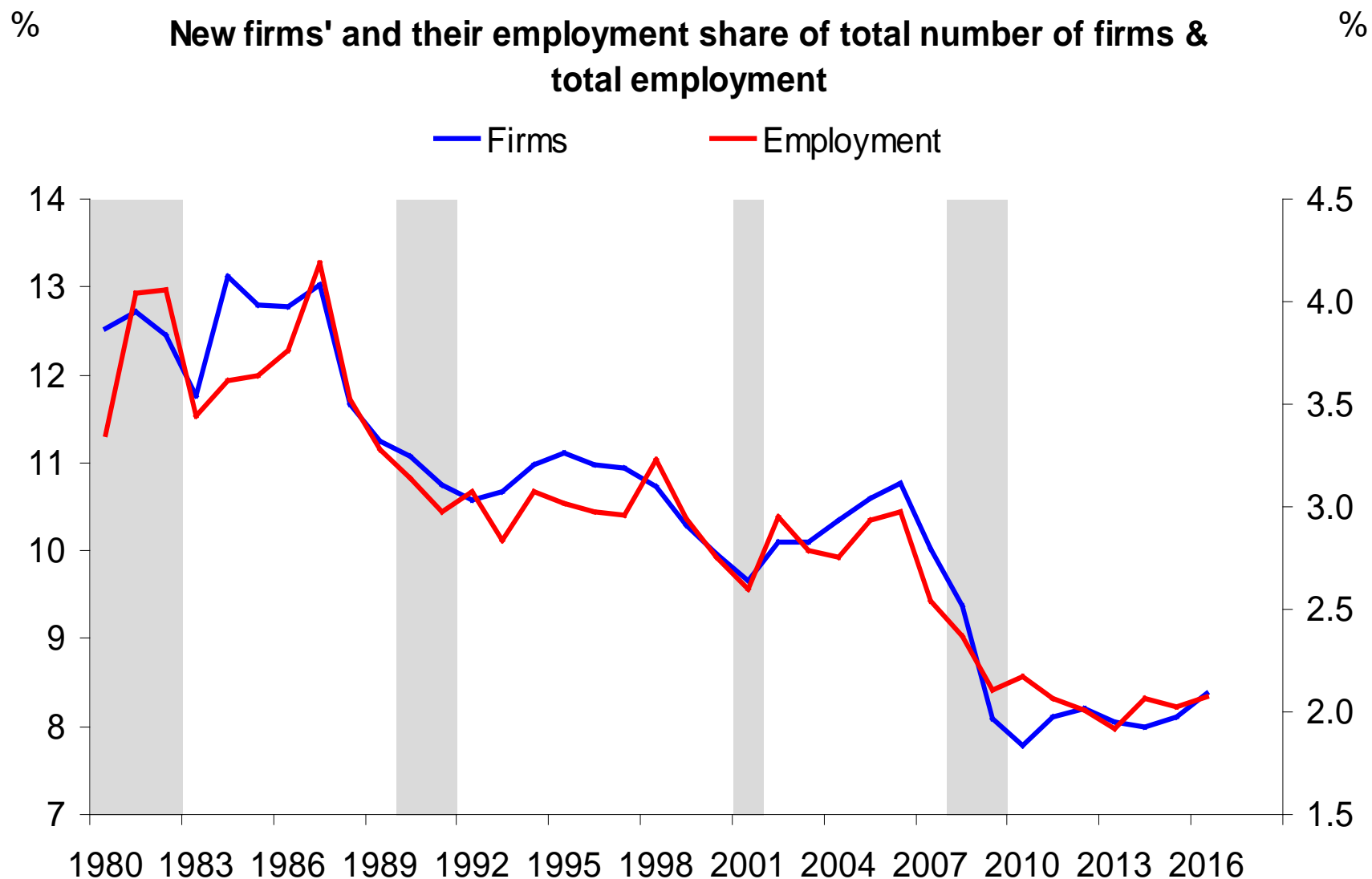
US economy is less dynamic



Source: US Census , DB Global Research



US economy less dynamic than it used to be

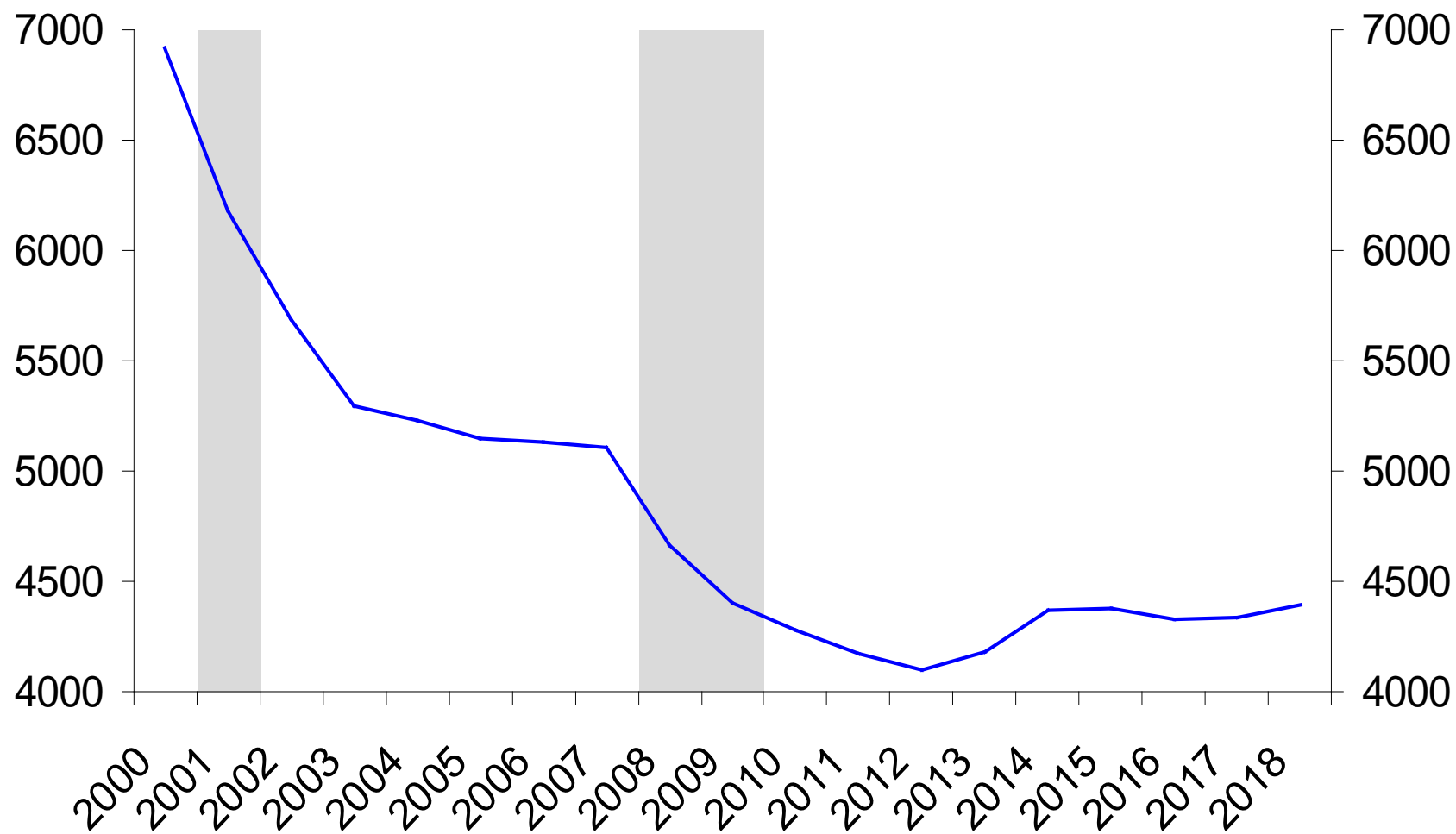


Source: Census, DB Global Research



Fewer listed companies in the US

Number **Total number of listed domestic companies in the US** # Number

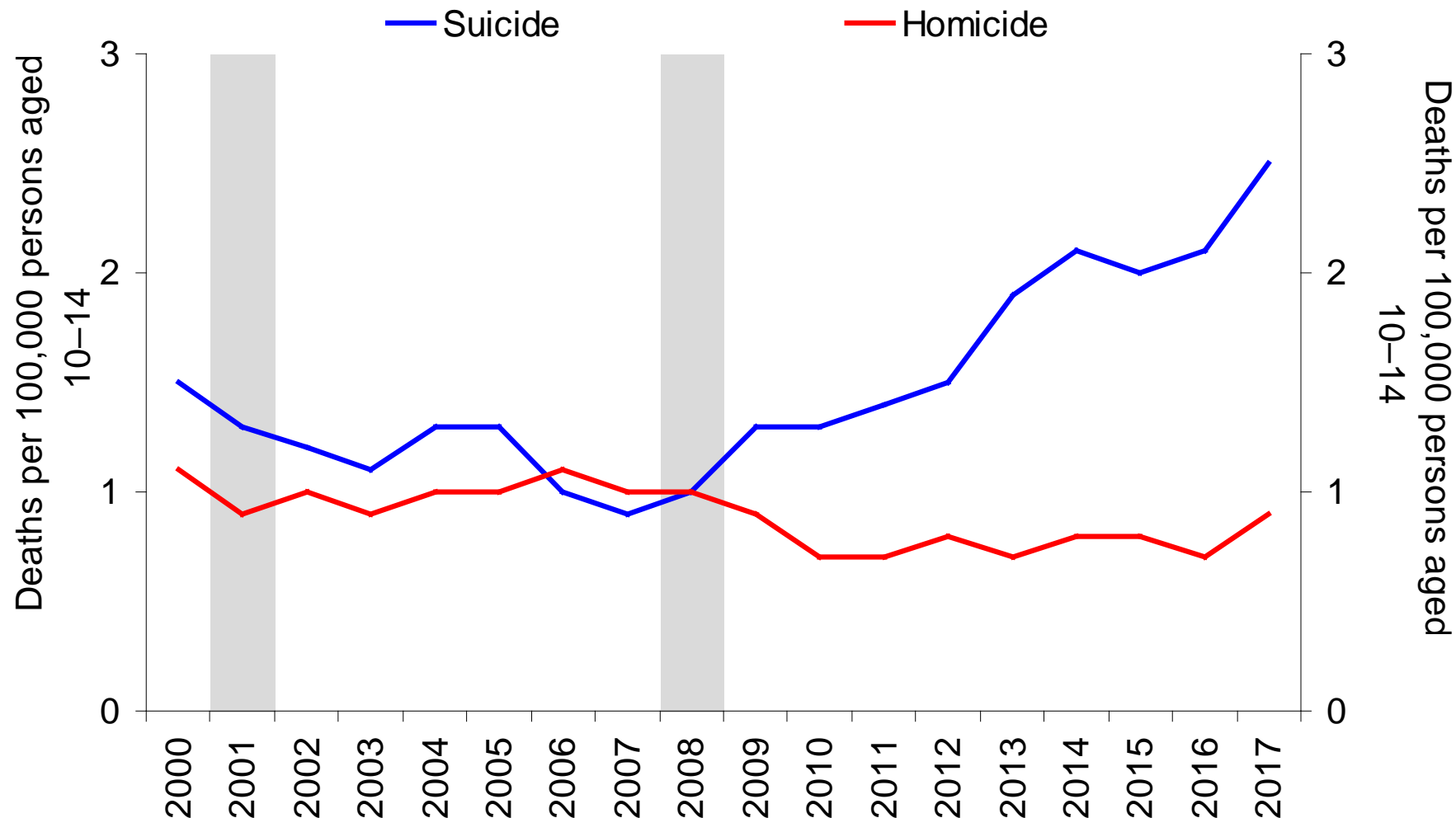


Source: World Bank, Haver Analytics, DB Global Research



Suicide rate up among 10-14 year olds

Suicide and homicide death rates among children and adolescents aged 10–14: United States, 2000–2017

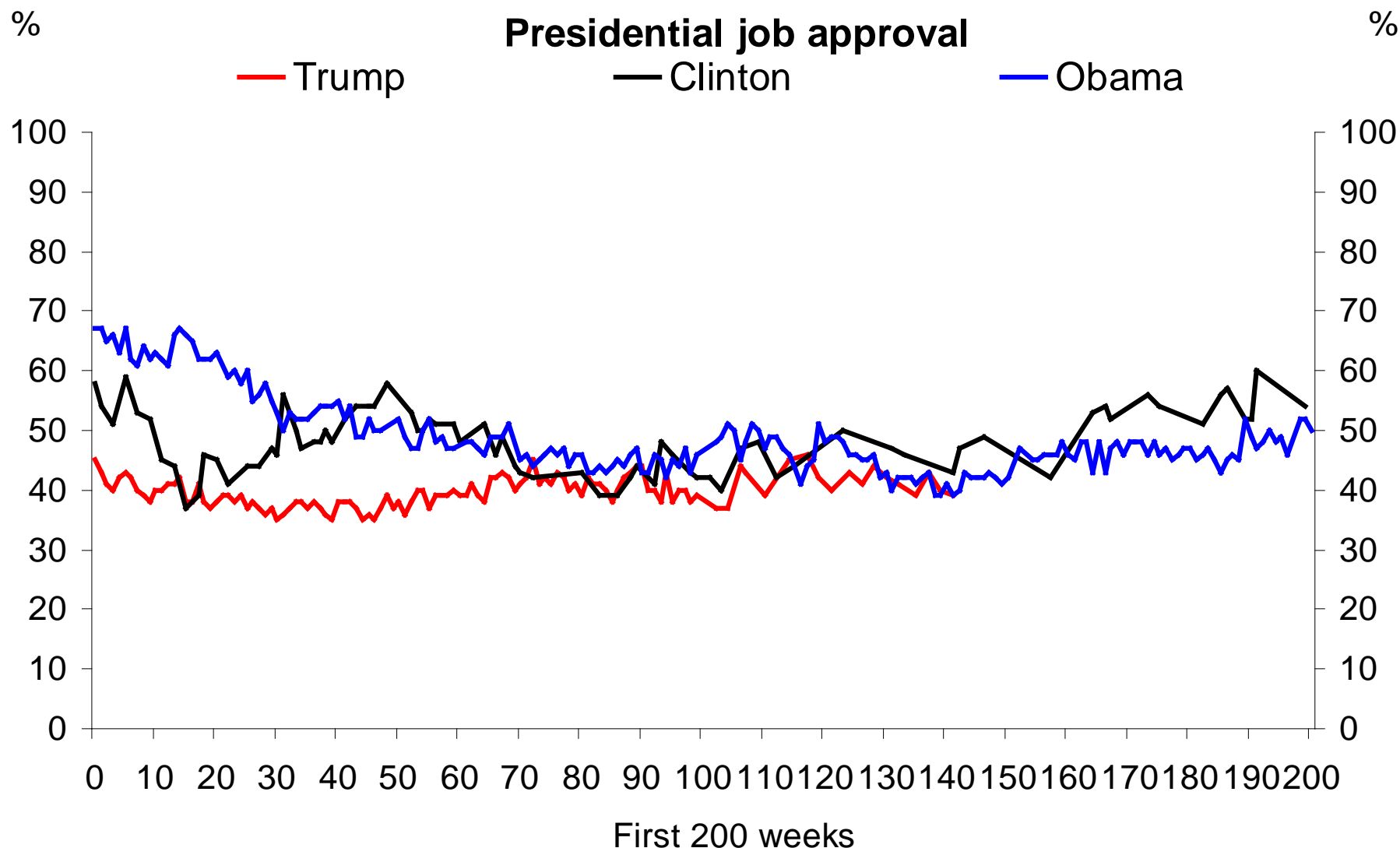


NOTES: Suicide deaths are identified with International Classification of Diseases, 10th Revision (ICD–10) codes U03, X60–X84, and Y87.0; and homicide deaths with ICD–10 codes U01–U02, X85–Y09, and Y87.1.

Source: NCHS, National Vital Statistics System, Mortality DB Global Research



Trump's job approval rating not too different from Obama or Clinton's at this point in presidency

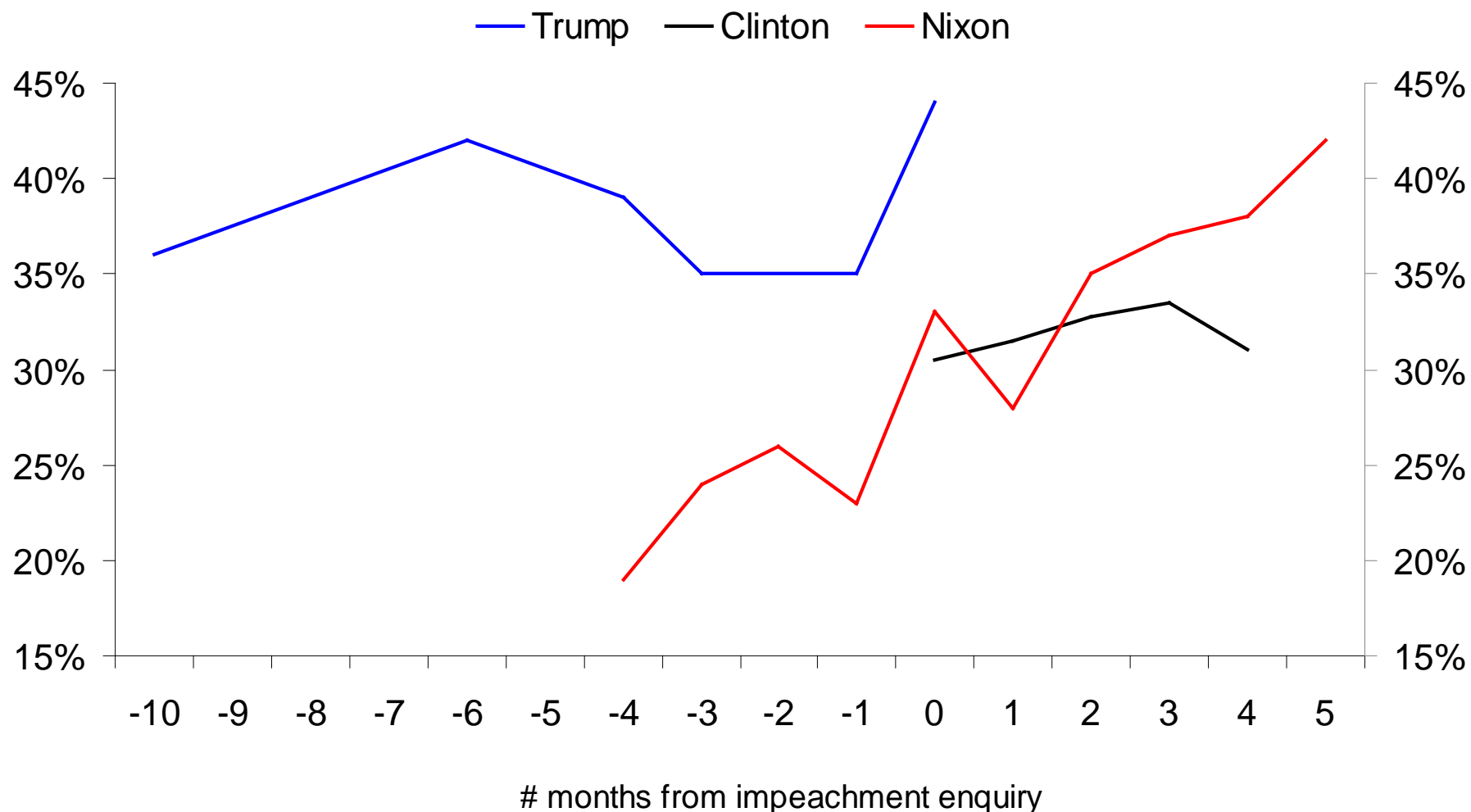


Source: American Presidency Project, Gallup, DB Global Research



Public opinion on impeachment

People who voted that the President should be impeached in polls



Source: Monmouth University, Gallup, CNN, DB Global Research



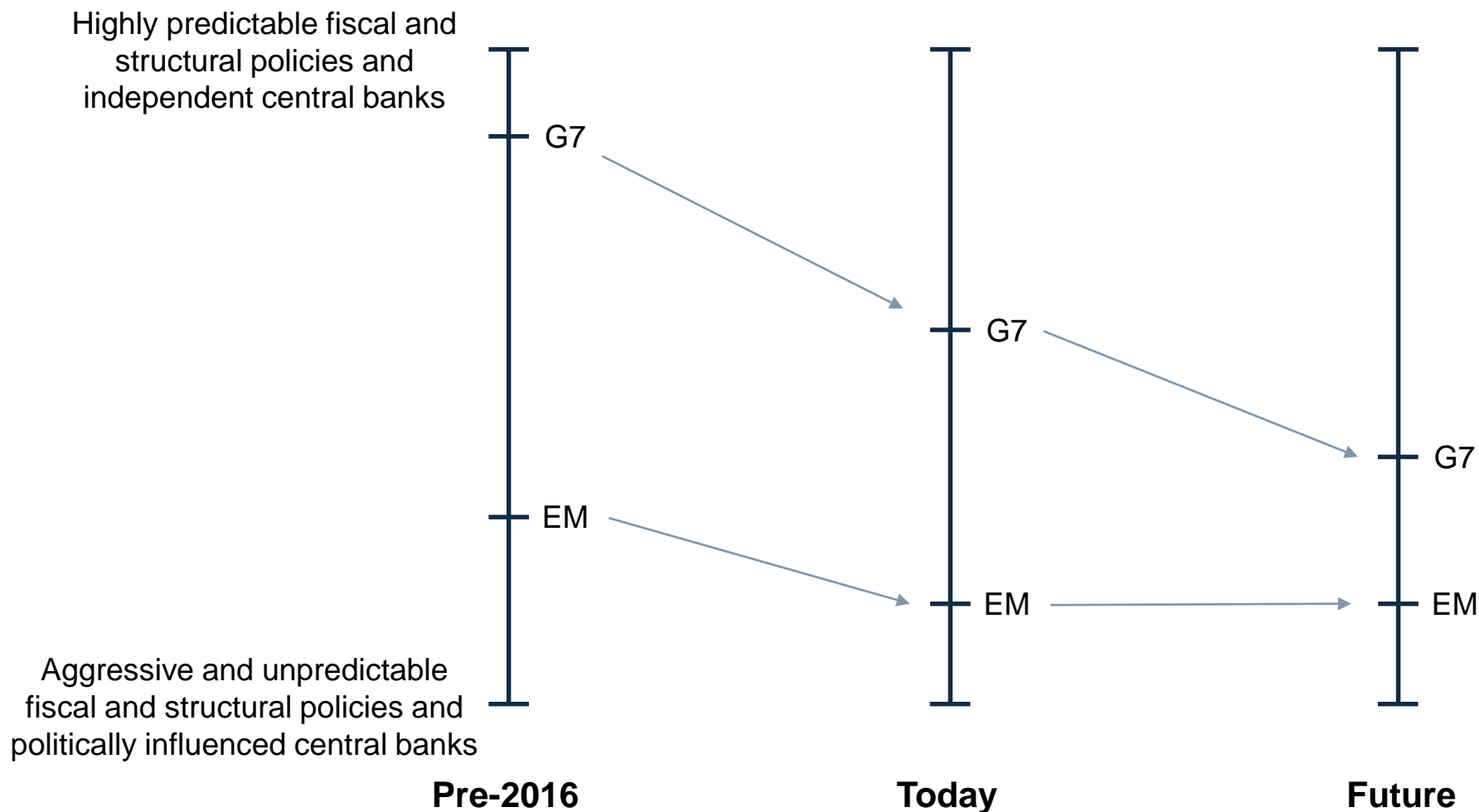
Elizabeth Warren's policy proposals

- 1. Bill to make federal investments to increase housing supply.** Invest \$500 billion over the next ten years to build, preserve, and rehab units that will be affordable to lower-income families. This to be funded by lower the threshold for heir inheriting estate tax to \$7 mil and raise the tax rates for ultra-millionaires and billionaires.
- 2. Empowering workers through accountable capitalism which,**
 - Requires very large American corporations (with more than \$1 bln annual revenue) to obtain a federal charter as a "United States corporation," which obligates company directors to consider the interests of all corporate stakeholders, not just shareholders.
 - Empowers workers at big American corporations to elect no less than 40% of the company's board members
 - Removes bad financial incentives by restricting directors and senior executives at big corporations from selling company shares: Top corporate executives are now compensated mostly in company equity, which gives them huge financial incentives to focus exclusively on shareholder returns.
- 3. Instead of subsidizing industrial agriculture and starving farmers and rural communities, a new approach to guarantee farmers a fair price, reduce overproduction, and pay farmers for environmental conservation. To**
 - achieve the objectives of the Green New Deal to reach net-zero emissions by 2030.
 - make it economically feasible for farmers to be part of the climate change solution by increasing CSP's payments for sustainable farming practices from around \$1 billion today to \$15 billion annually.
 - dedicate resources from the \$400 billion R&D commitment in my Green Manufacturing Plan towards innovations for decarbonizing the agriculture sector, including a farmer-led Innovation Fund that farmers can apply to use towards pioneering new methods of sustainable farming, like agroforestry.
- 4. A new tax on excessive lobbying that applies to every corporation and trade organization that spends over \$500,000 per year lobbying our government.** This tax will reduce the incentive for excessive lobbying, and raise money that we can use to fight back against this kind of onslaught when it occurs.
- 5. Raising the federal minimum wage to \$15 an hour for all workers,** including tipped workers and workers with disabilities. Providing more overtime pay to millions of workers by reviving and expanding the Obama-era overtime rule. protecting union workers in the transition to Medicare for All.
- 6. Ensure trade agreements protect Buy American and other programs** designed to develop local industry, contain strong rule-of-origin standards to promote domestic manufacturing, protect worker pensions, promote equal pay for equal work for women, and prohibit violence against workers.
- 7. Zero additional tax on any household with a net worth of less than \$50 million (99.9% of American households)**
 - 2% annual tax on household net worth between \$50 million and \$1 billion
 - 1% annual Billionaire Surtax (3% tax overall) on household net worth above \$1 billion
 - 10-Year revenue total of \$2.75 trillion (estimate by Saez and Zucman)
- 8. Real corporate profits tax-** This new tax only applies to companies that report more than \$100 million in profits. That first \$100 million is left alone, but for every dollar of profit above \$100 million, the corporation will pay a 7% tax. According to an estimate from economists Emmanuel Saez and Gabriel Zucman, the tax will bring in \$1 trillion in revenue over the next ten years.
- 9. Big Banks -** Bringing back the Glass-Steagall Act which prevented a single company from engaging in both retail and investment banking.
Paid leave - Support broad paid family and medical leave plans in line with Family and Medical Insurance Leave Act.



G7 and EM converging

Predictability of business environment



Source: DB Global Research



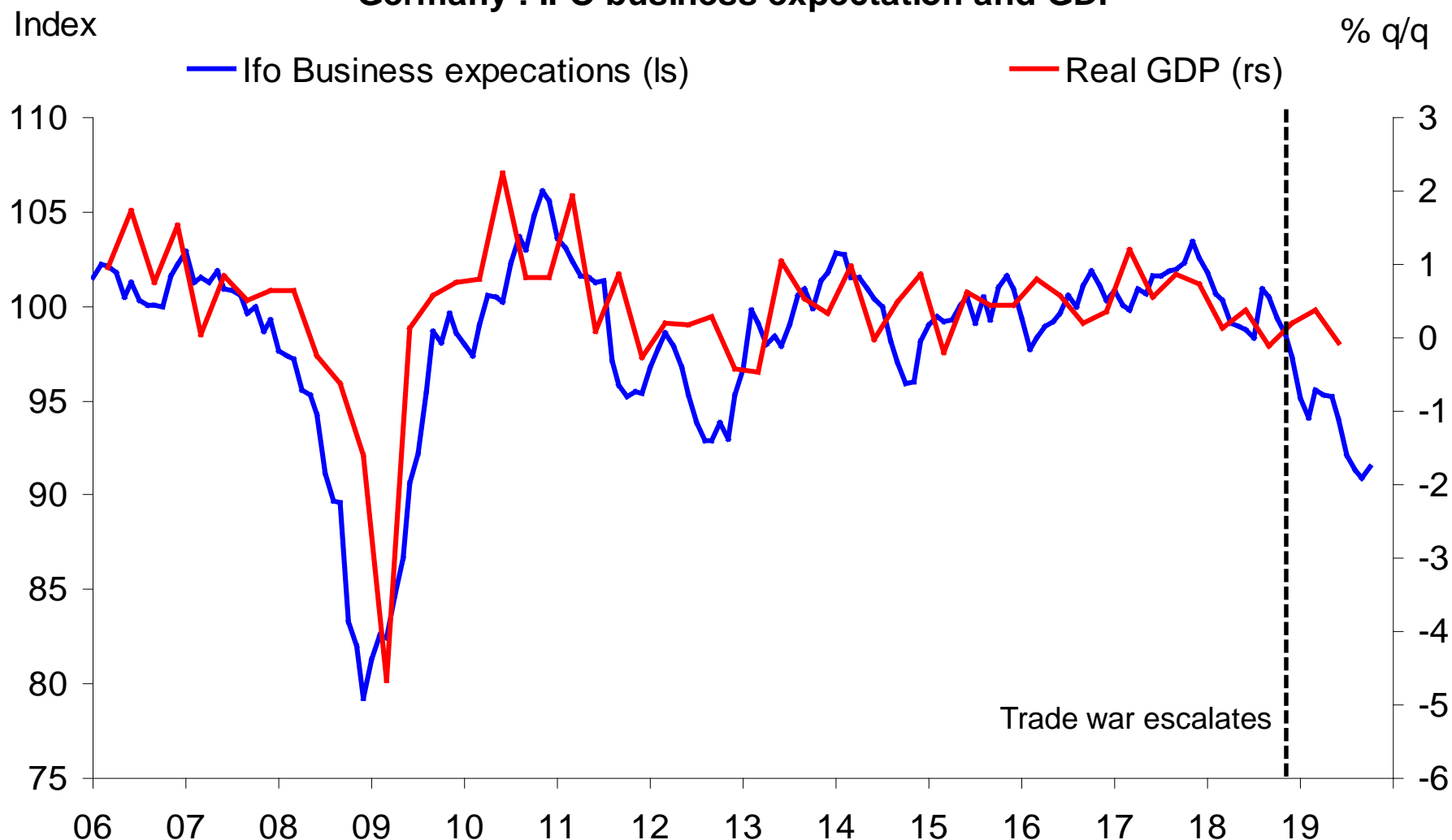
Risk #7:

German fiscal expansion



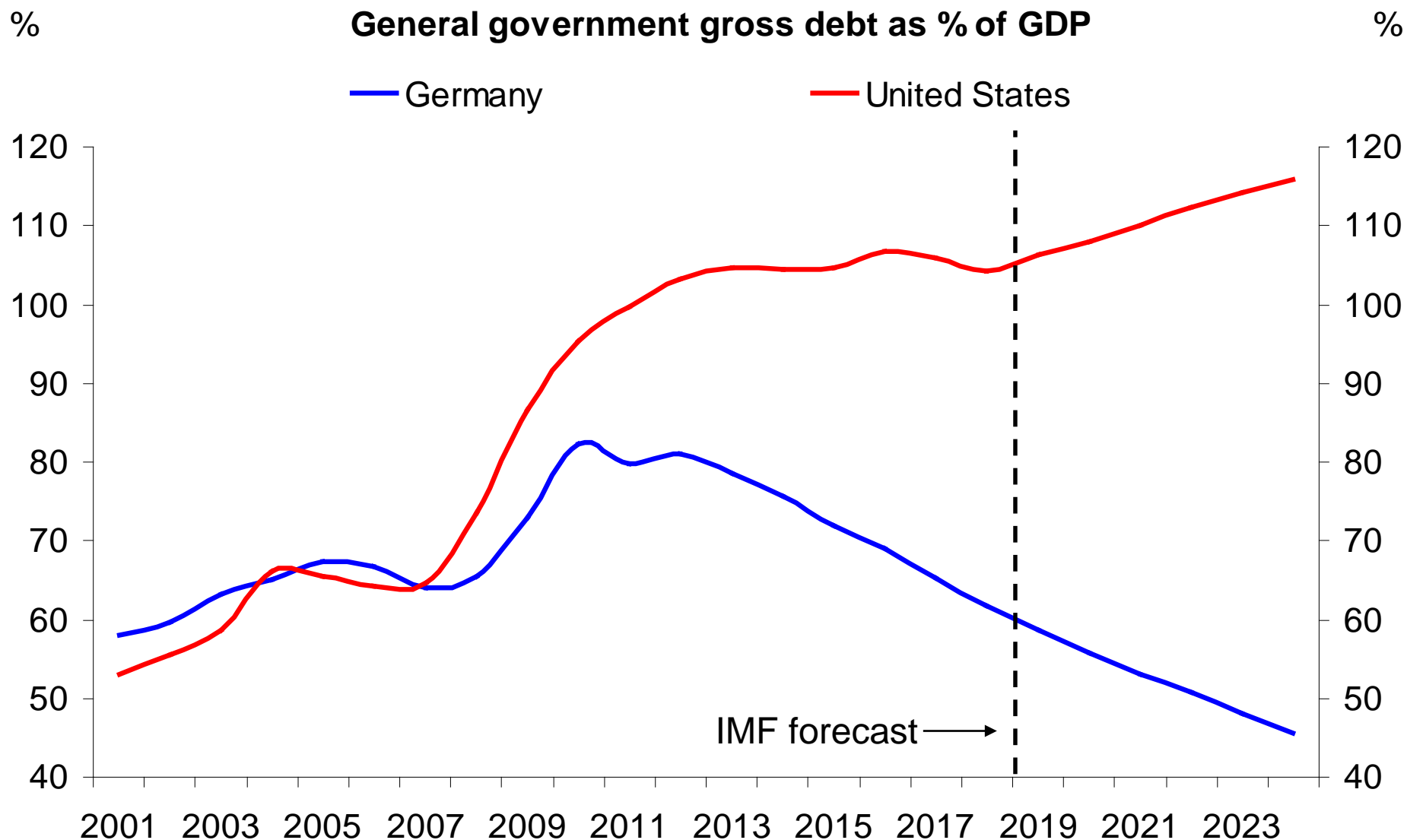
Risk of recession in Germany

Germany : IFO business expectation and GDP



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

Government debt level rising in the US and falling in Germany



Source: IMF, Haver Analytics, DB Global Research



Risk #8:

Negative interest rates

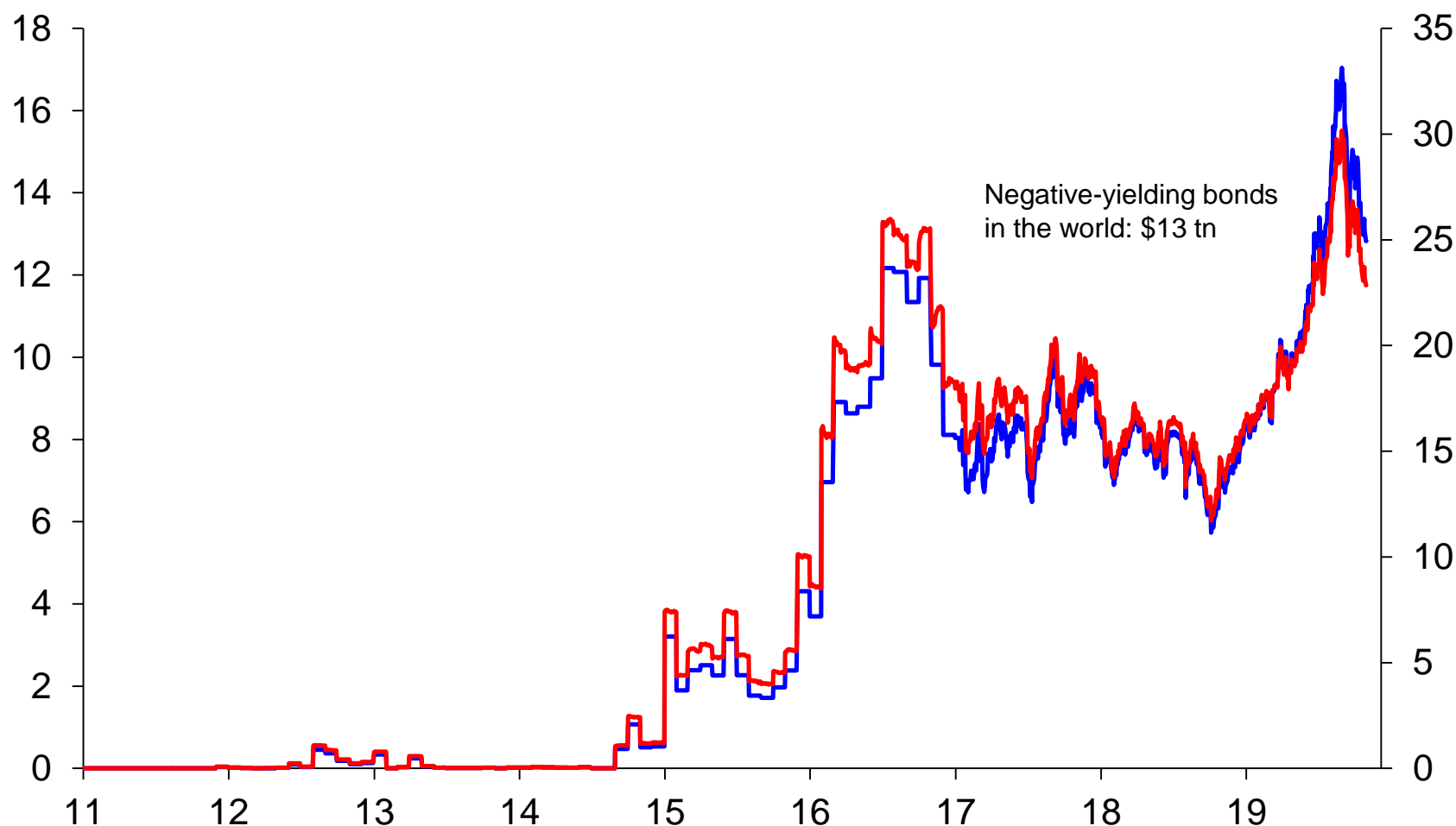


23% of all bonds in the world trade at negative interest rates

\$, tn %

— Global negative yielding debt, market value (ls)

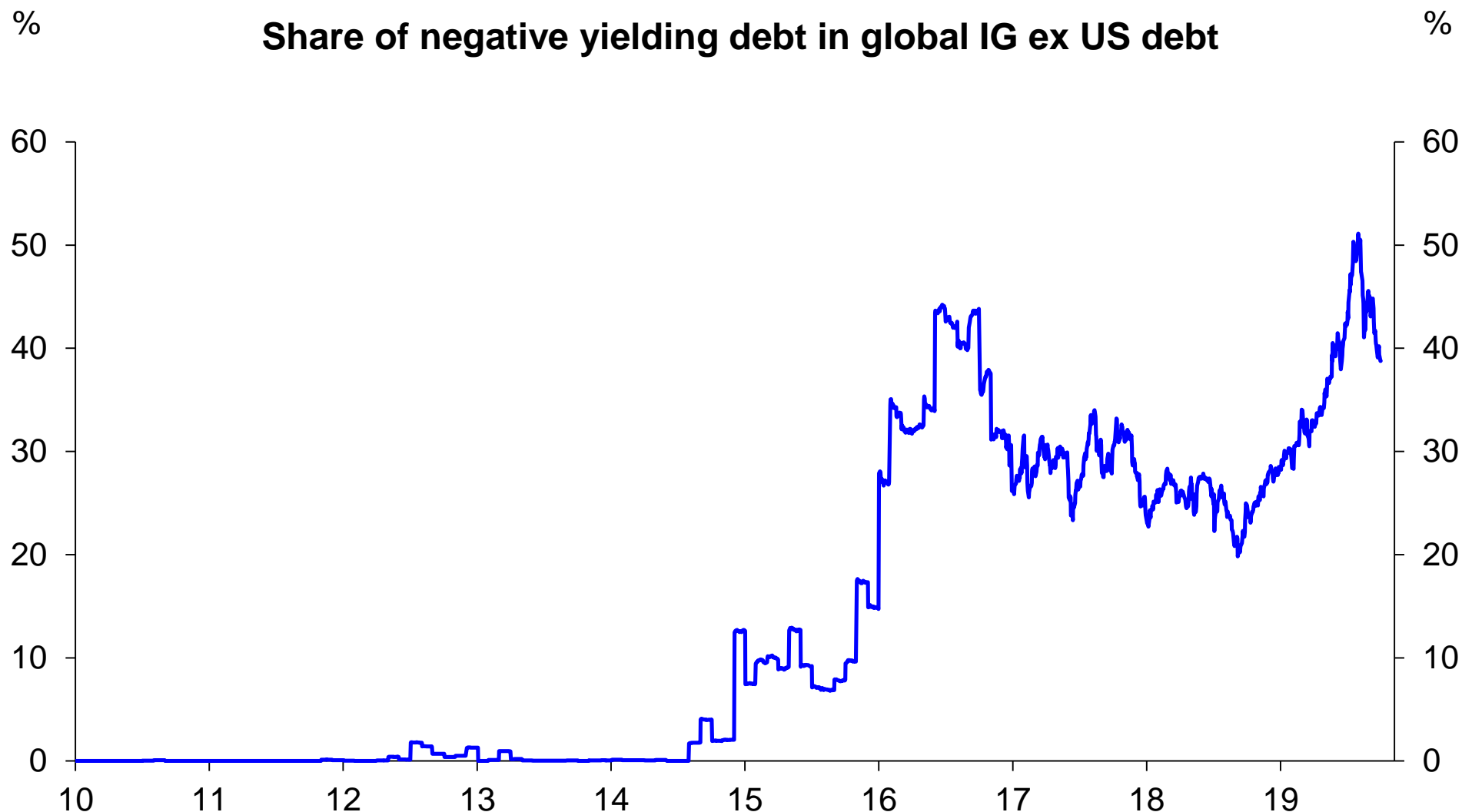
— Global negative yielding debt as a share of all bonds outstanding (rs)



Source: Bloomberg Finance LP, DB Global Research



Excluding US from the global IG index shows that 38% of global bond markets outside US trade at negative yields

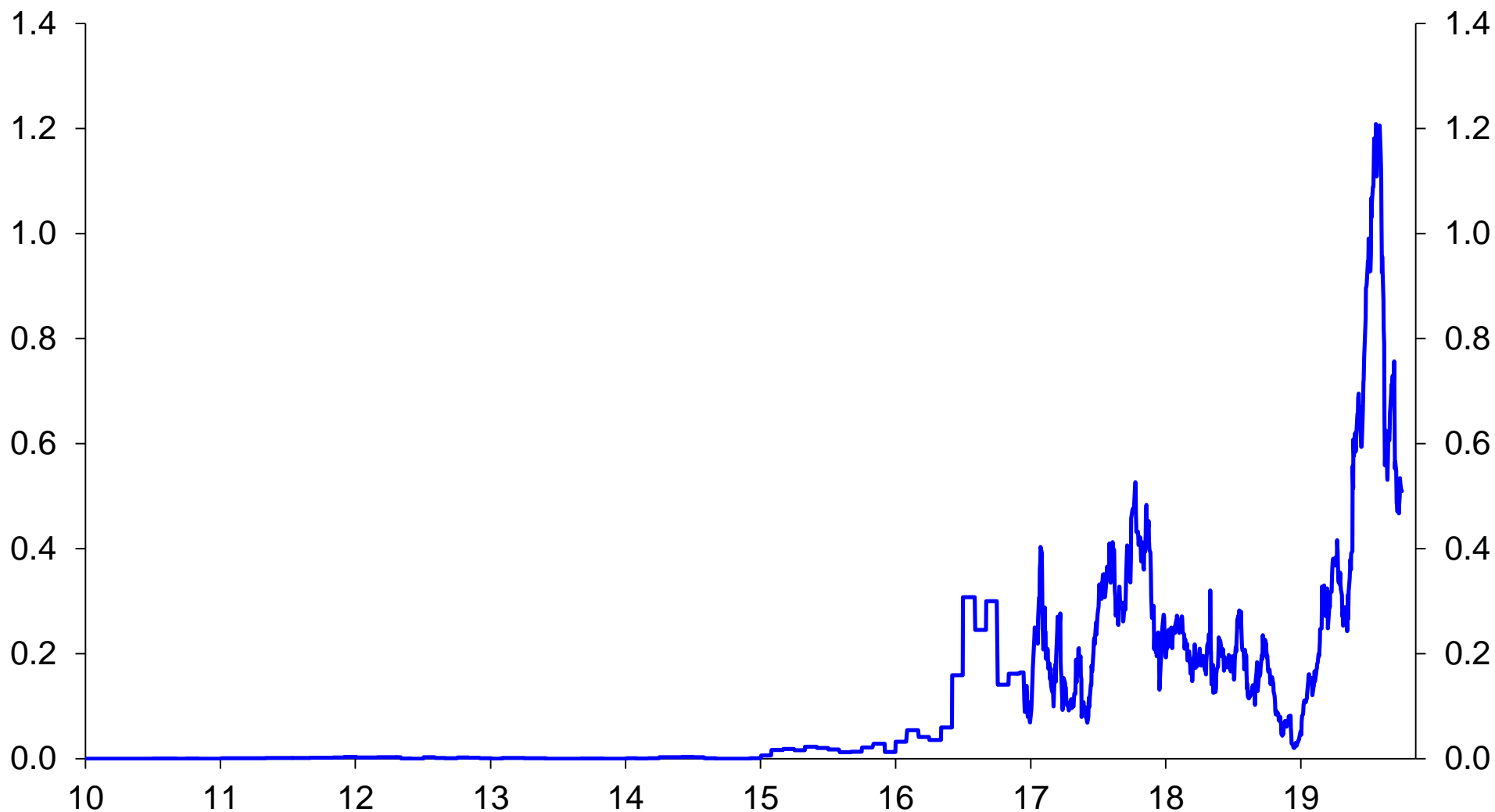


Source: Bloomberg Finance LP, DB Global Research

\$500bn in corporate bonds globally trade at negative interest rates



\$, tn **Global negative yielding corporate bonds** \$, tn



Source: Bloomberg Finance LP, DB Global Research



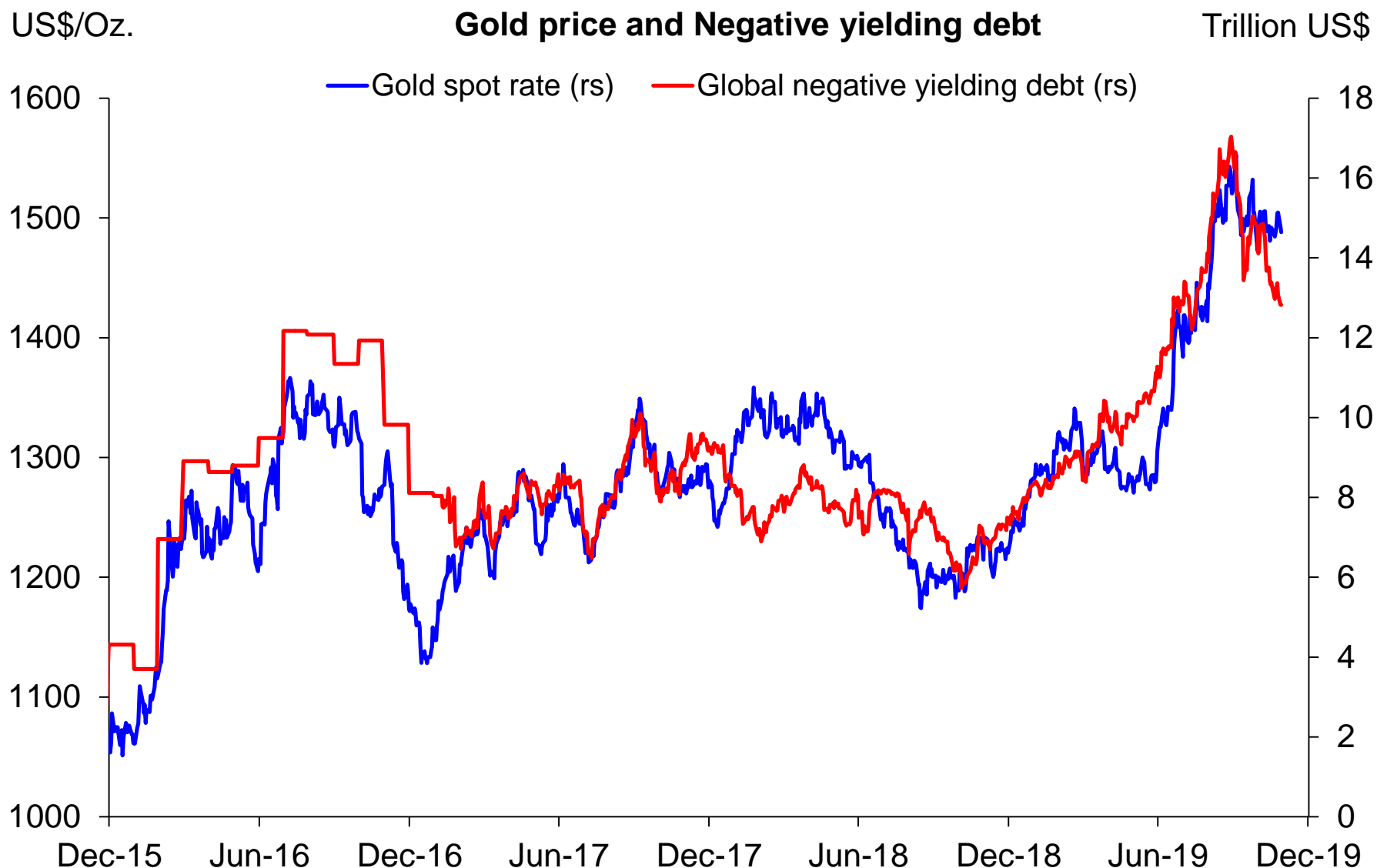
5% of global corporate IG bonds trade at negative yields



Source: Bloomberg Finance LP, DB Global Research



Negative interest rates pushing gold prices higher

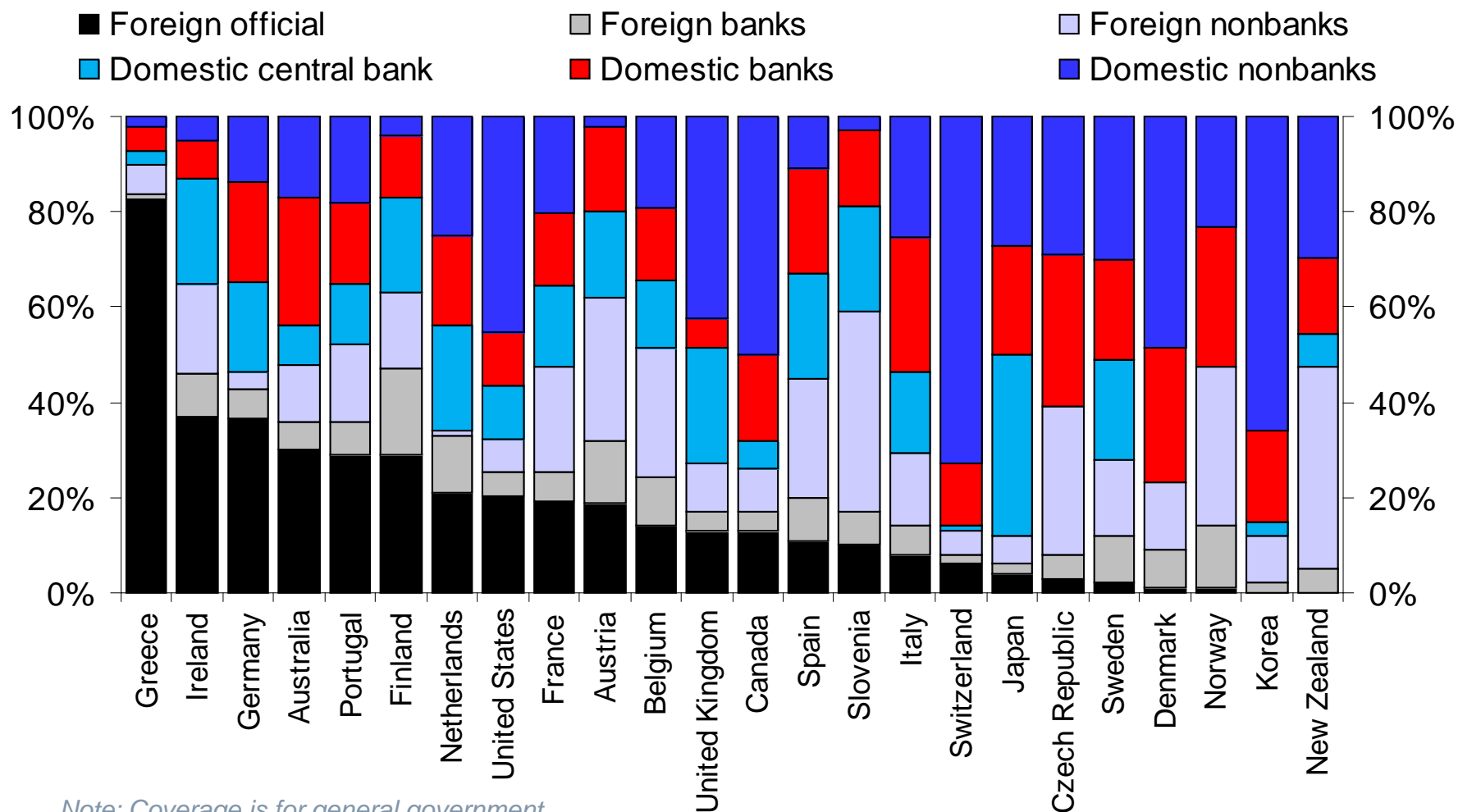


Source: Bloomberg Finance LP, DB Global Research



Who owns different countries' government bonds?

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

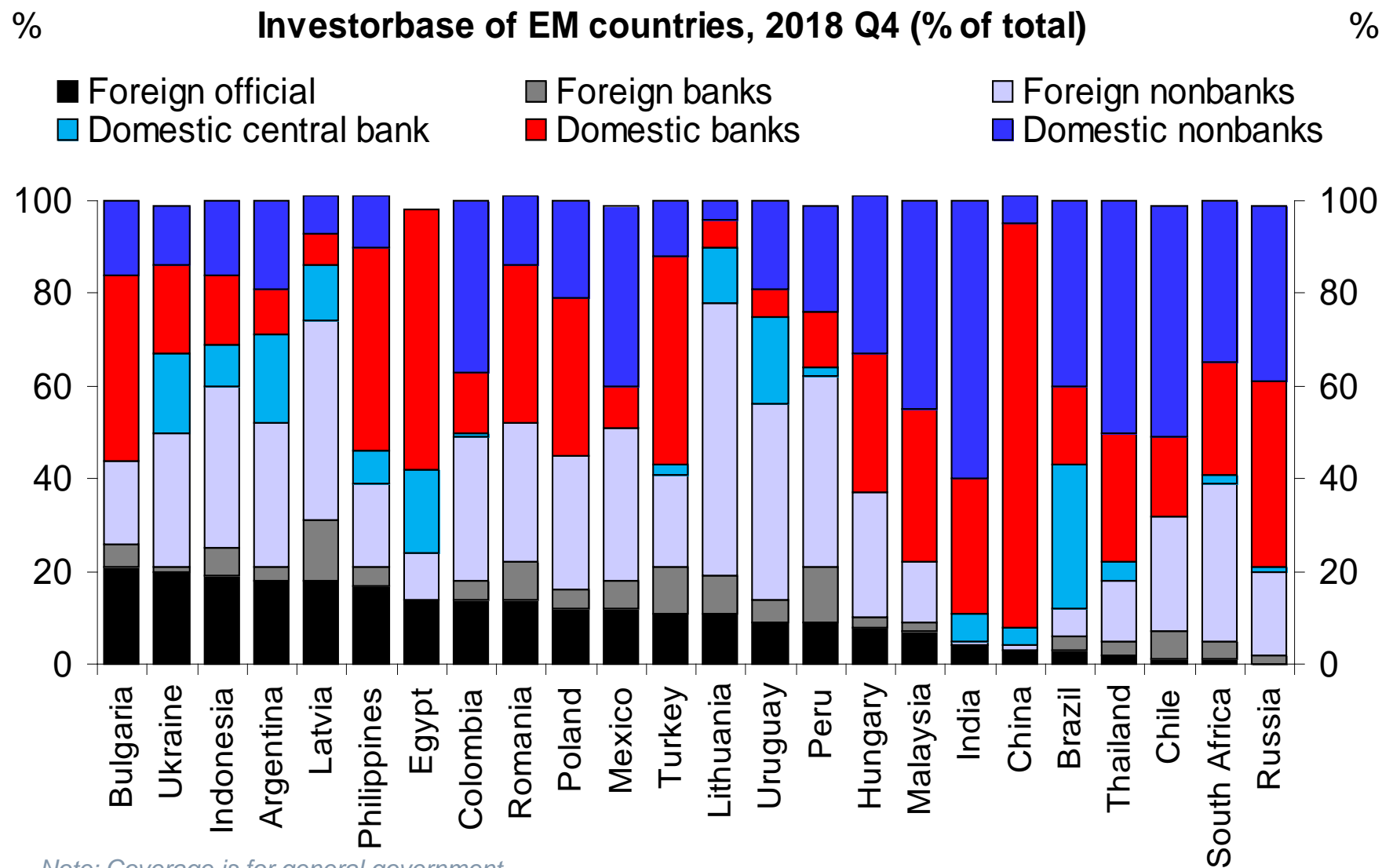


Note: Coverage is for general government

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



EM: Who owns different countries' government debt?

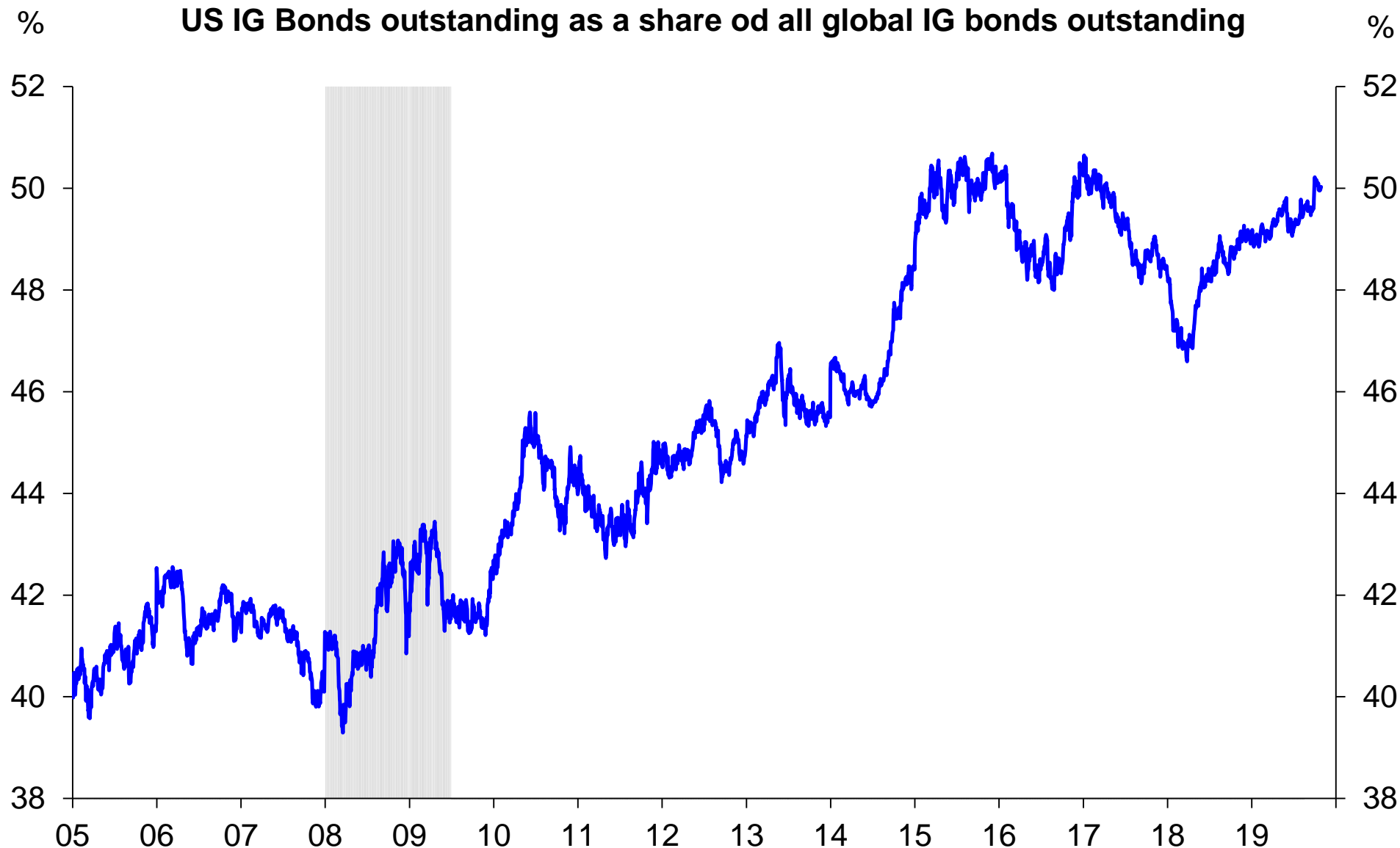


Source: IMF Sovereign investor base estimates by Arslanalp and Tsuda , DB Global Research



US makes up 50% of global IG markets

US IG Bonds outstanding as a share of all global IG bonds outstanding



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

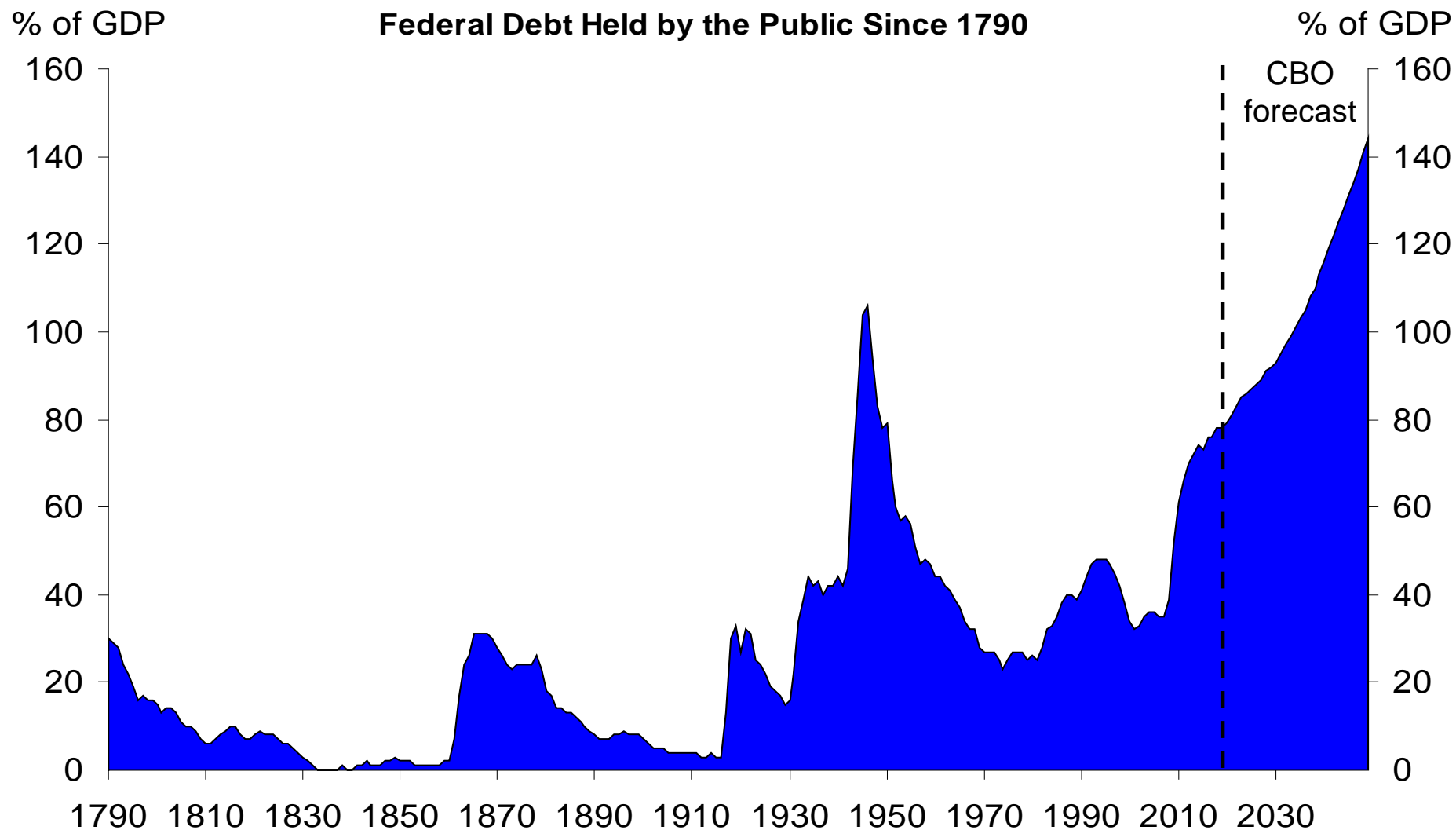


Risk #9:

Policy options when the next recession comes



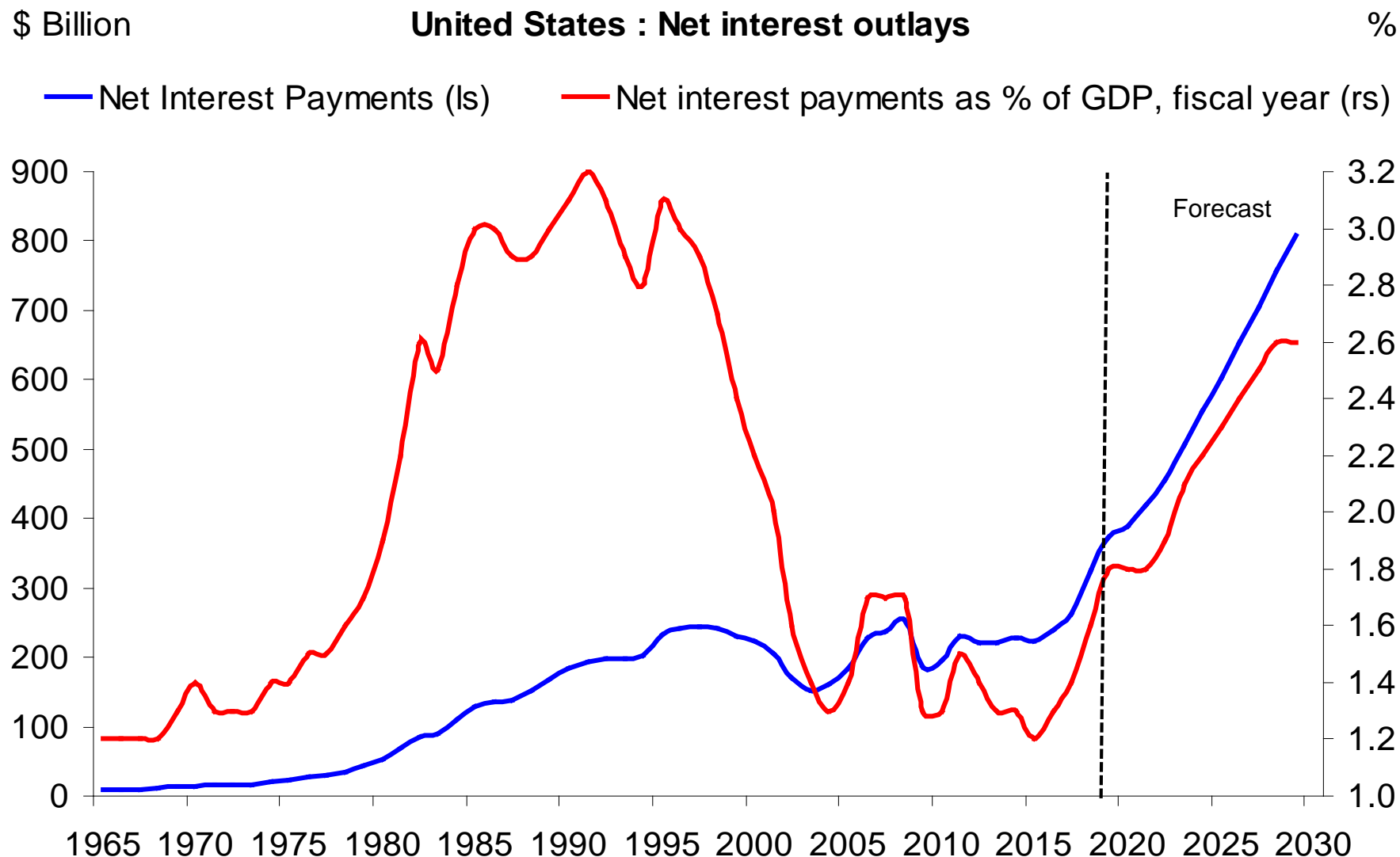
US debt rising to 140% of GDP under unchanged policies



Source: CBO, DB Global Research



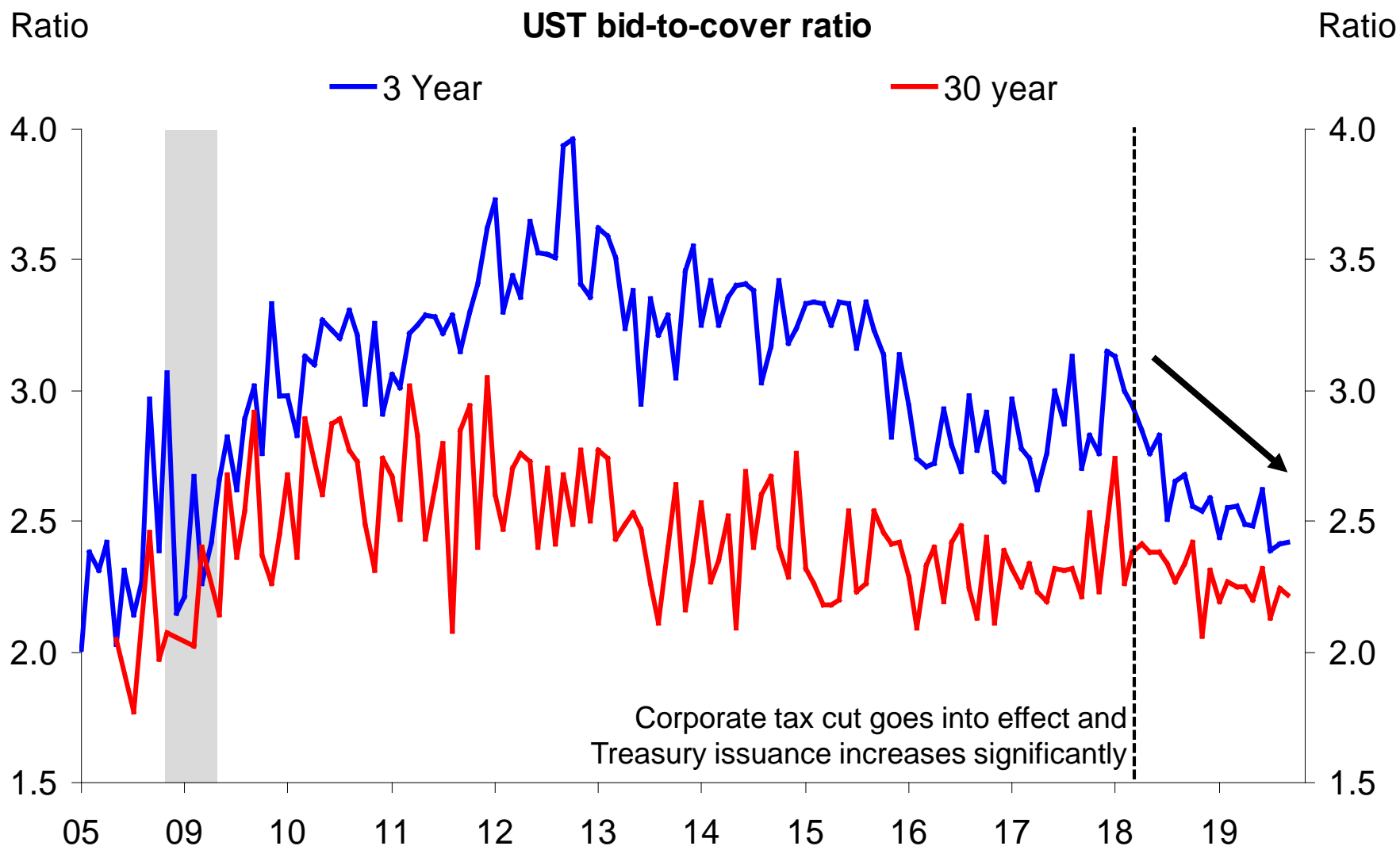
Interest payments on government debt going up



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, purchase 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			
Borralló 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

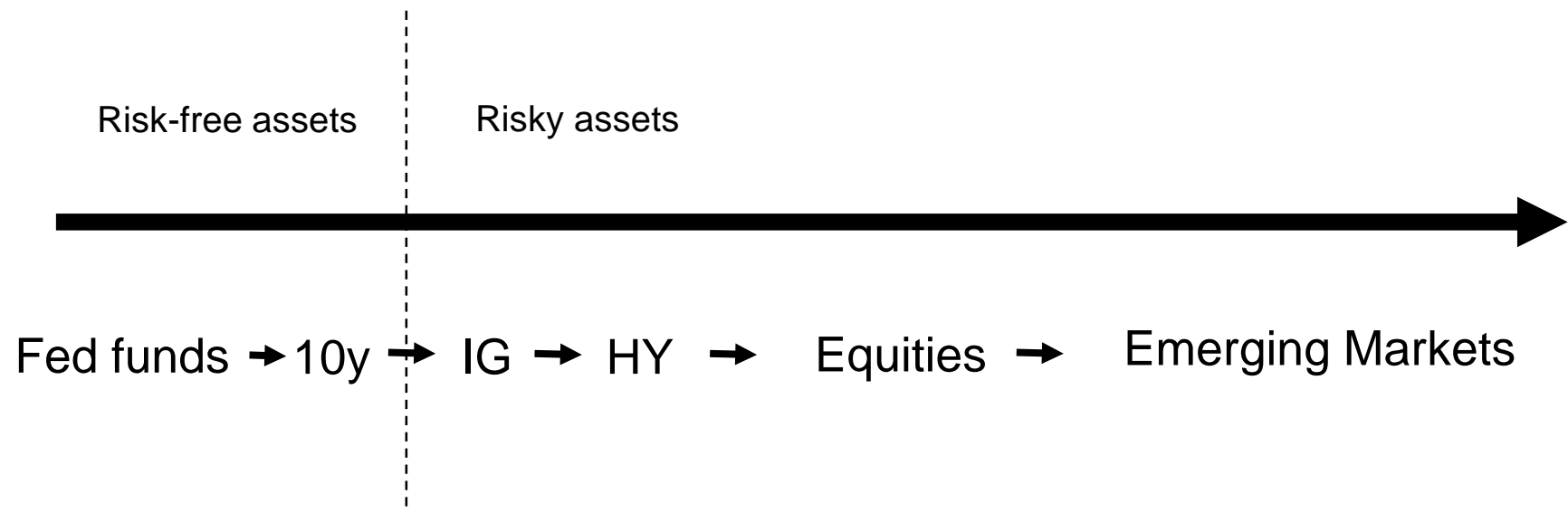


Investment implications/Markets



The hunt for yield – how will it reverse?

Risk spectrum

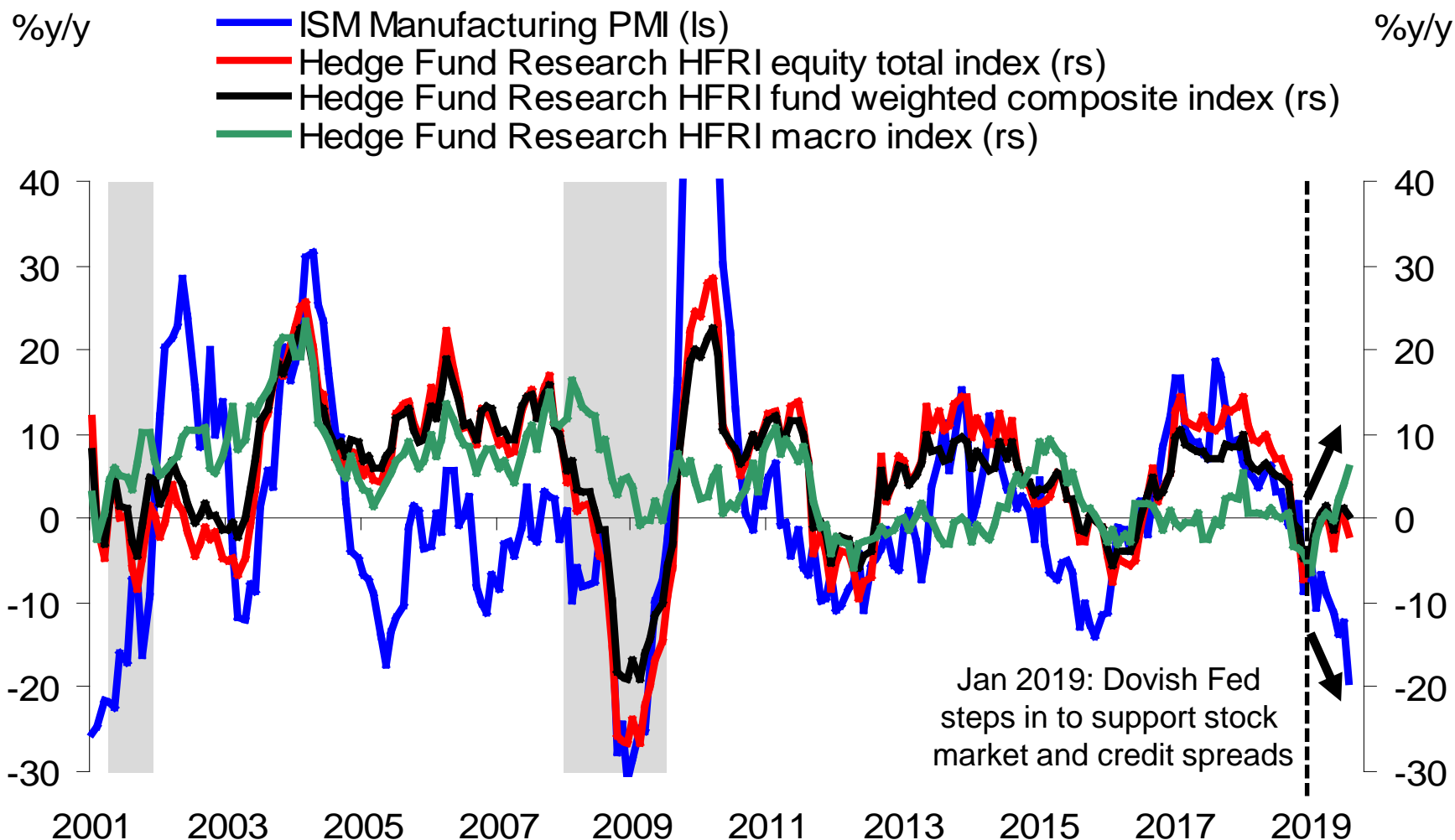


Three risks for disruptive reversal:

- 1) Higher US inflation
- 2) Rising Treasury supply
- 3) US recession

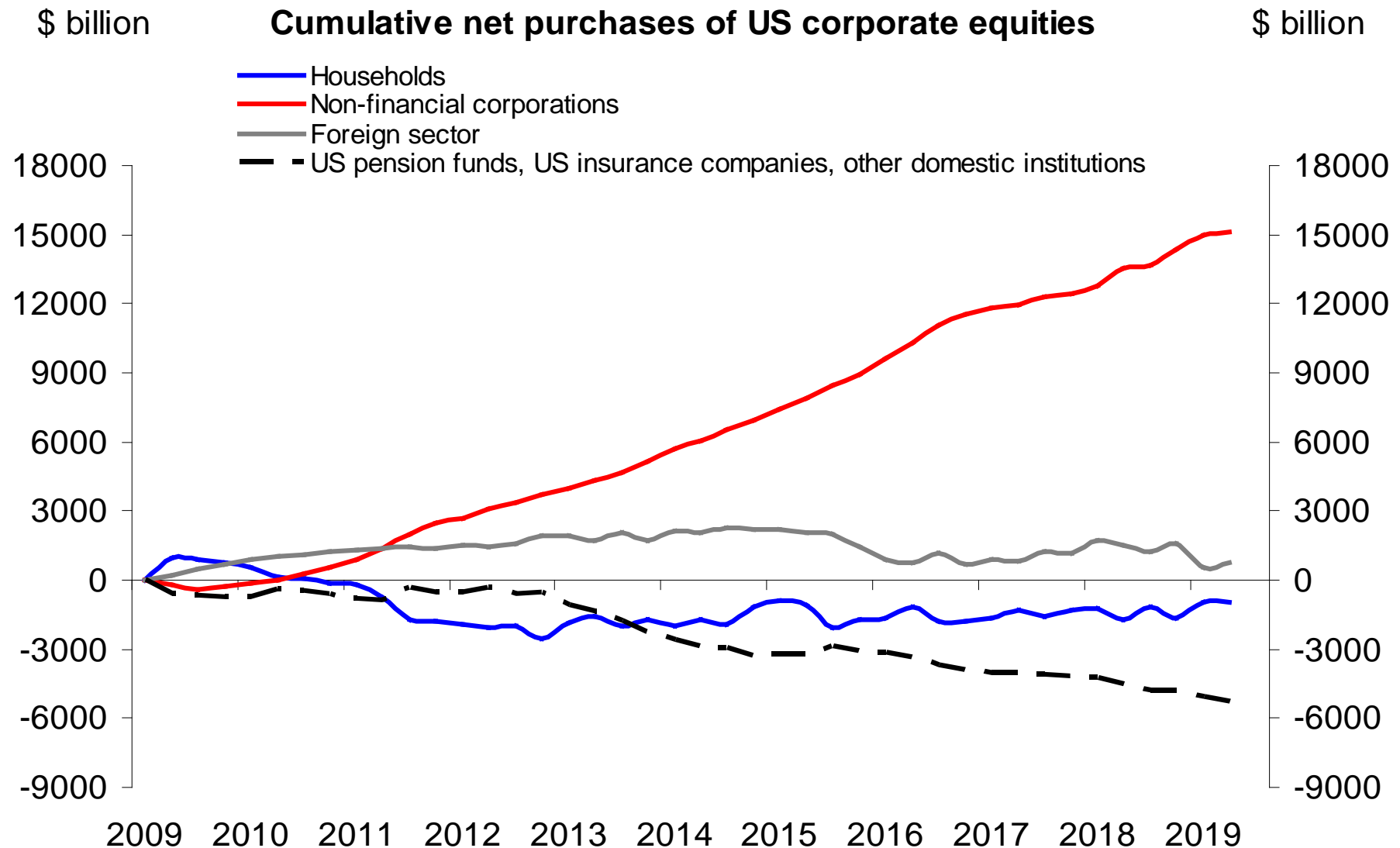
Source: DB Global Research

Returns on risky assets no longer driven by economic fundamentals but by central banks?



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

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

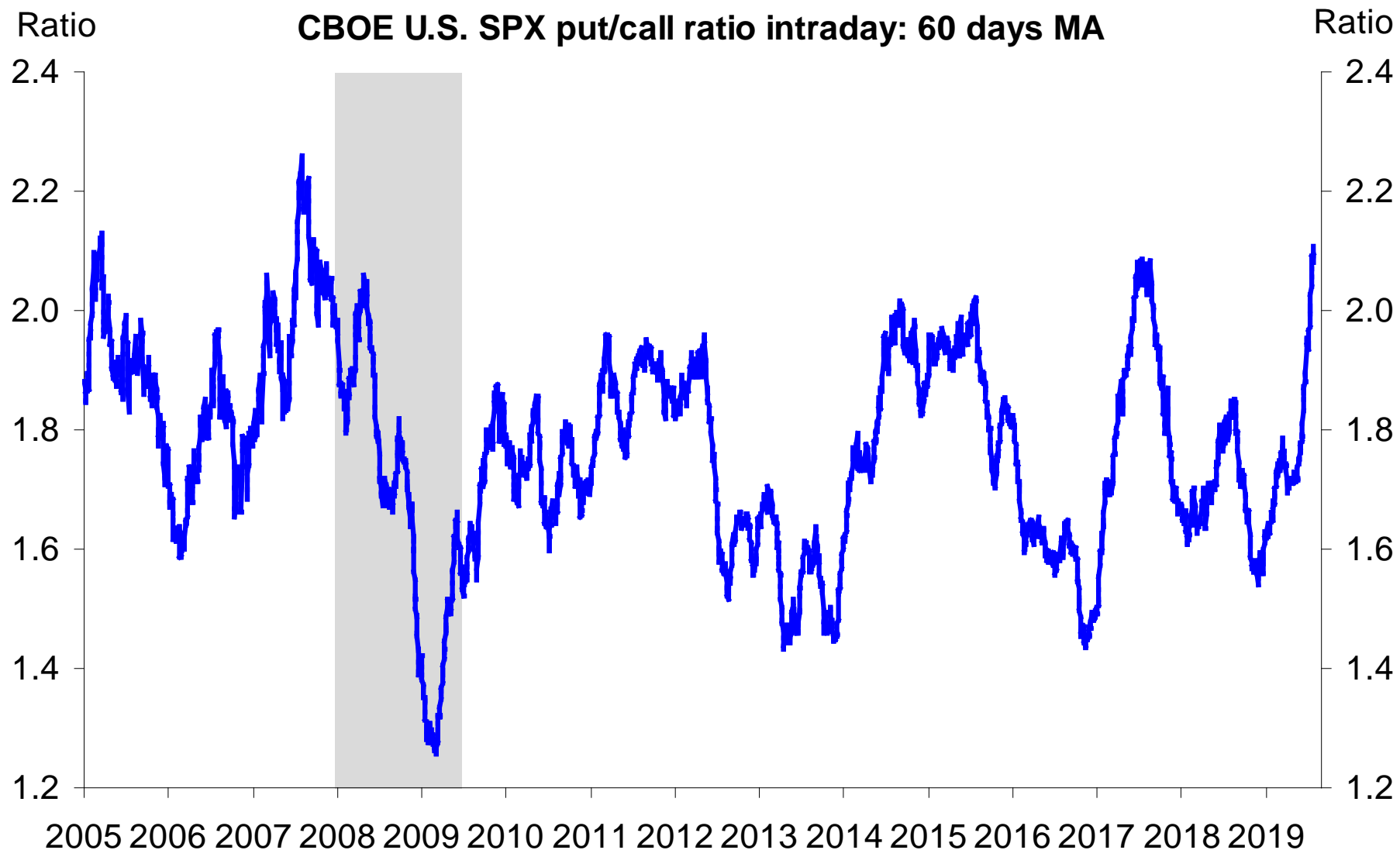


Note: Other domestic institutions includes Property-Casualty Insurance Companies, Life Insurance Companies, Private Pension Funds, Federal government retirement funds and state/local government employment defined benefit retirement funds

Source: FRB, Haver Analytics, DB Global Research



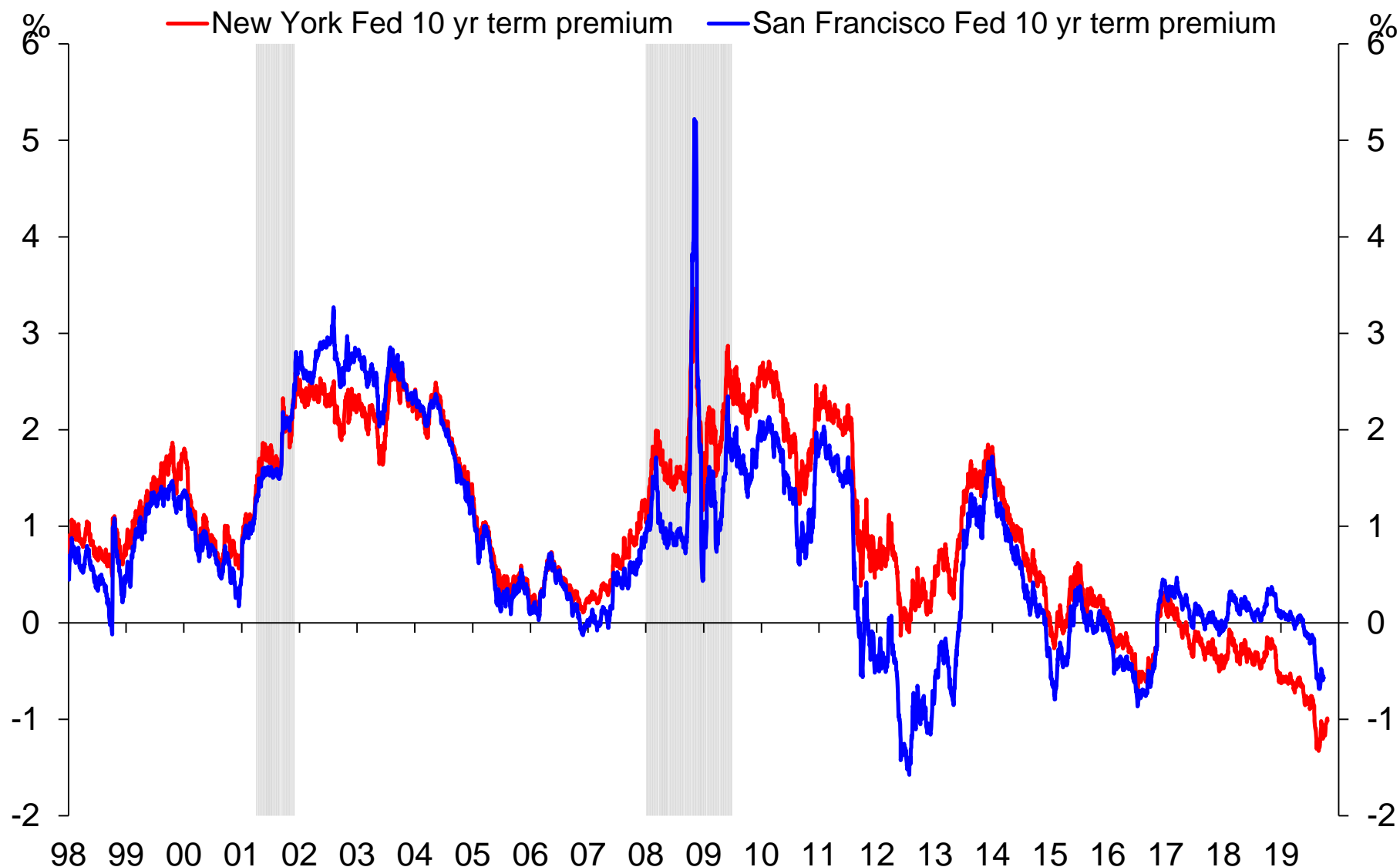
S&P500 put/call ratio very high



Source: CBOE, Bloomberg Finance LP, DB Global Research



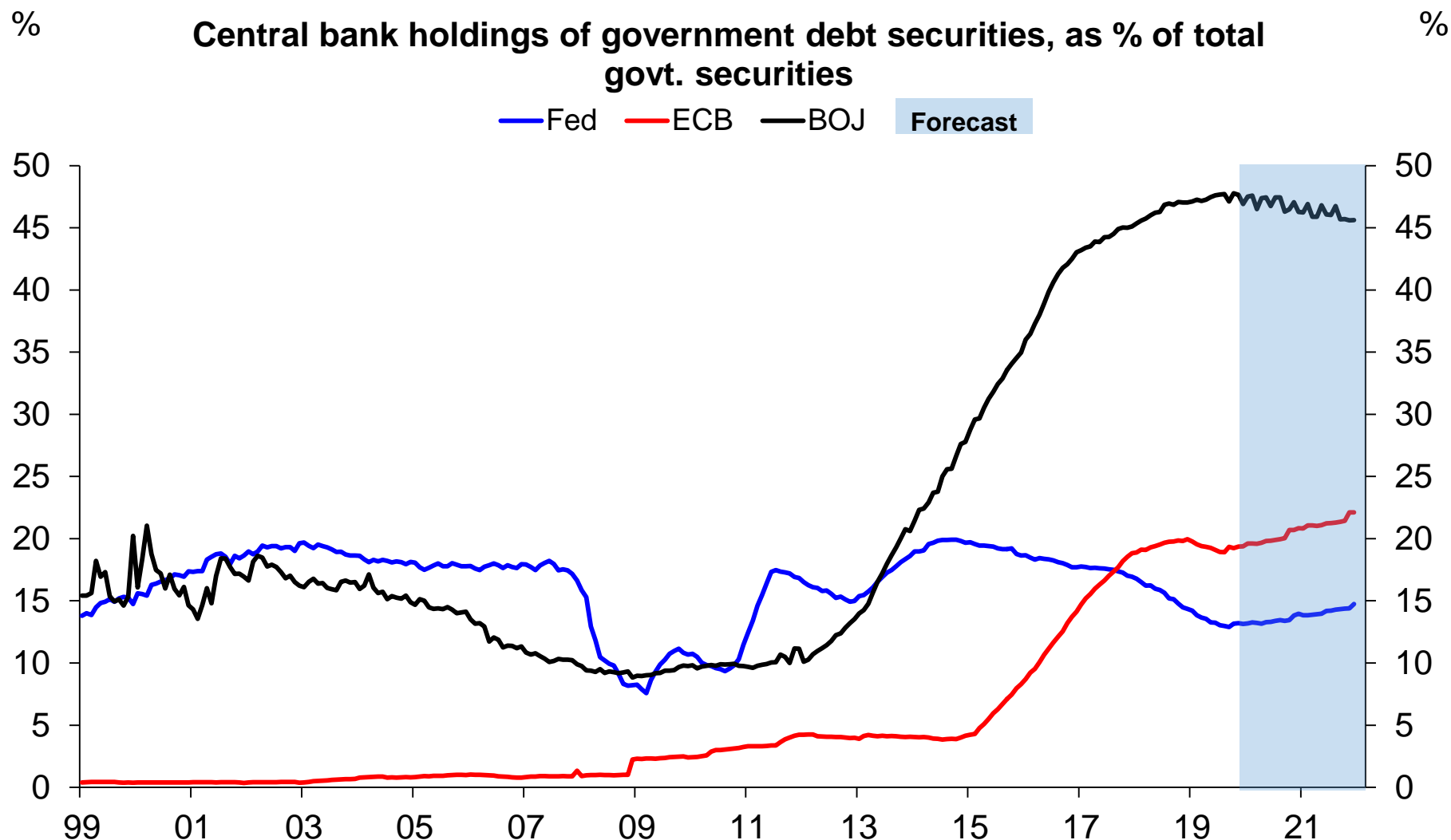
Term premium for 10-year rates very low at the moment



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



BoJ holds almost 50% of all JGBs outstanding

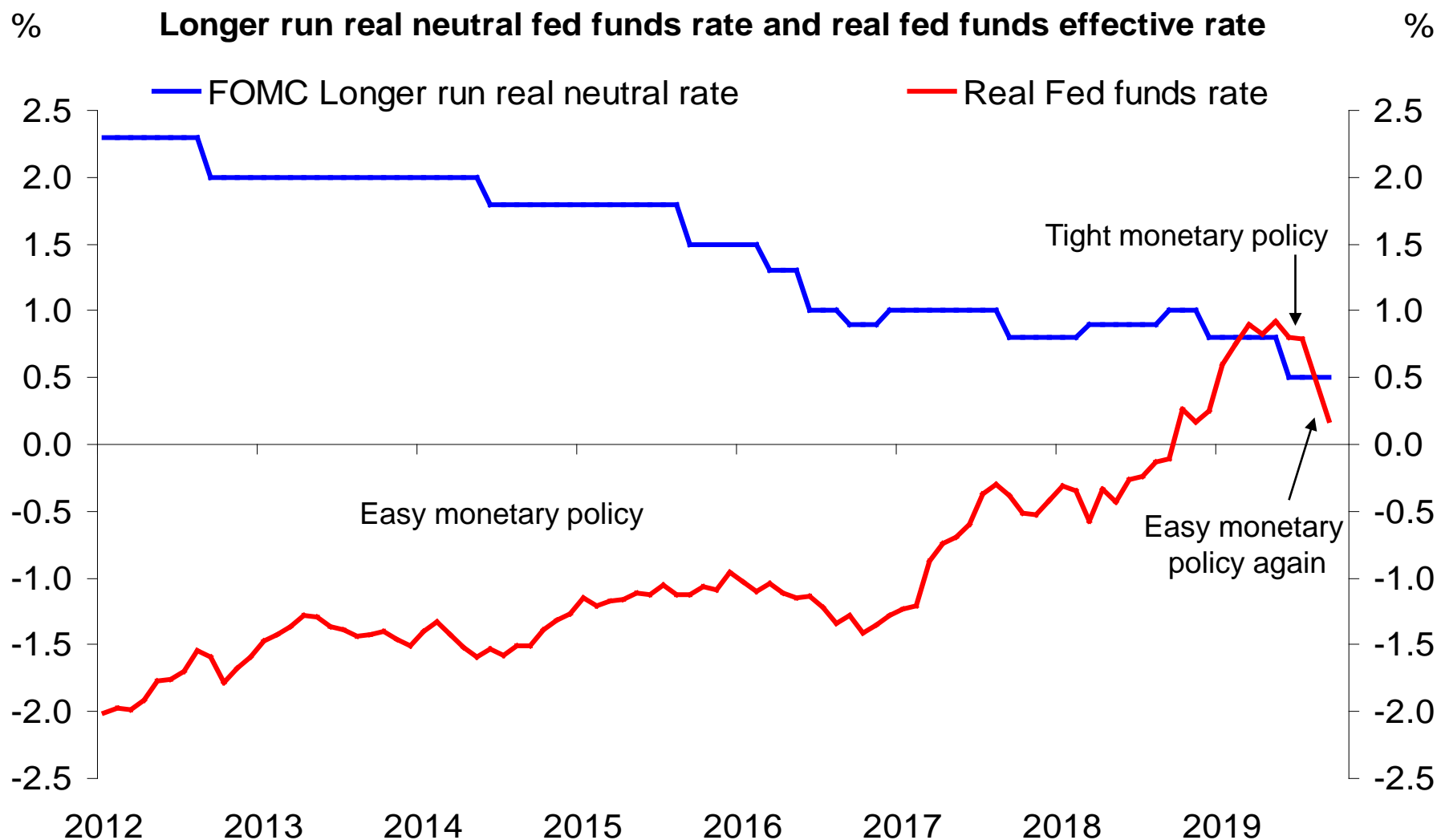


Assumptions: SOMA treasuries are reinvested in full beginning August 2019 & MBS payments are reinvested into treasuries beginning in August 2019. Starting from November 2019, ECB purchases EUR 20 bn government securities & that year on year growth of BoJ's holdings of JGBs would slow linearly to zero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

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



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

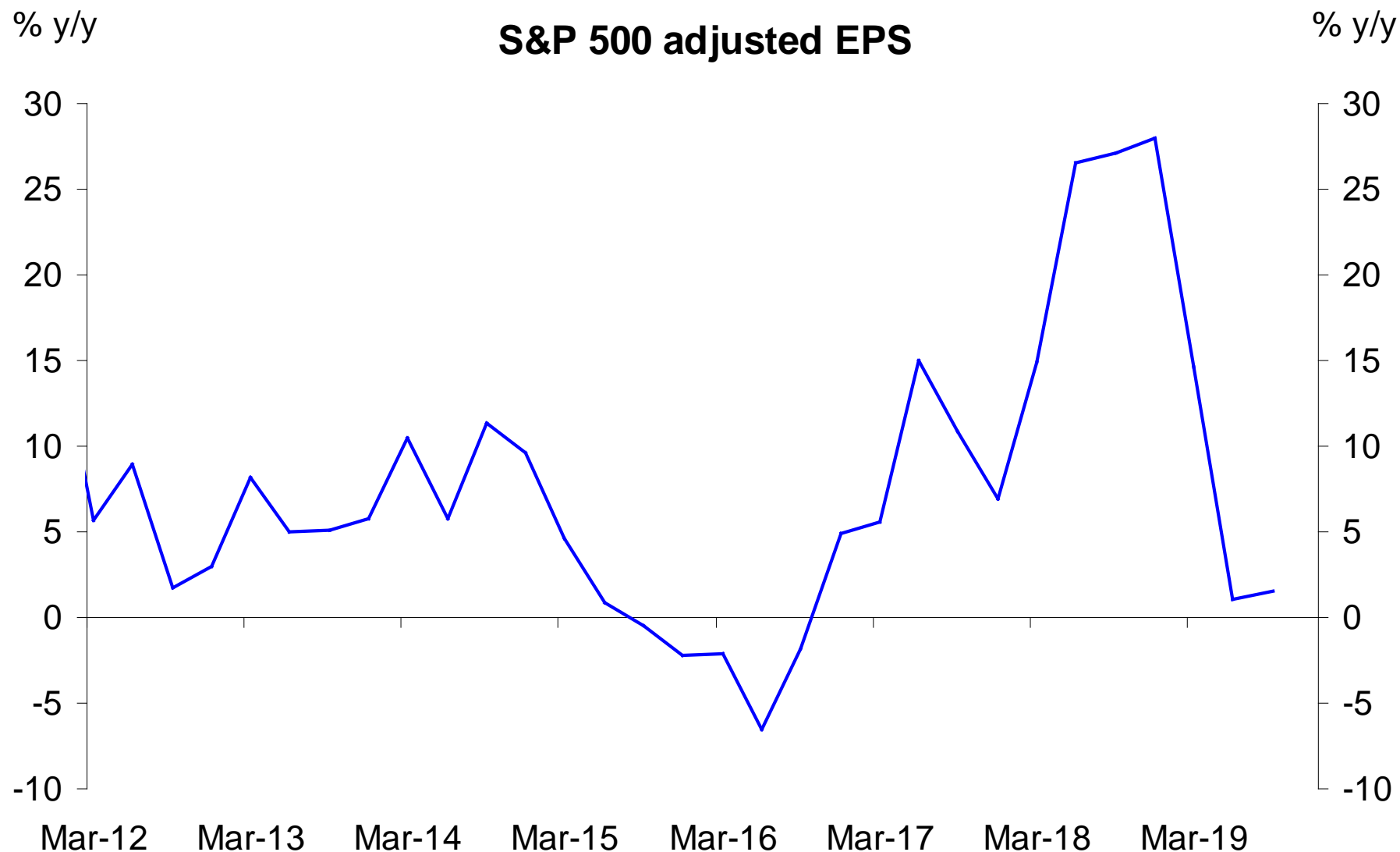


Country	Going for Growth 2019 priorities
United States	<ul style="list-style-type: none"> • Improve, maintain and rationalize infrastructure. Public infrastructure provision is not keeping pace with the evolving economy and the poor co-ordination of decisions across jurisdictions is contributing to congestion, 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.
Canada	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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.

Source: OECD, DB Global Research



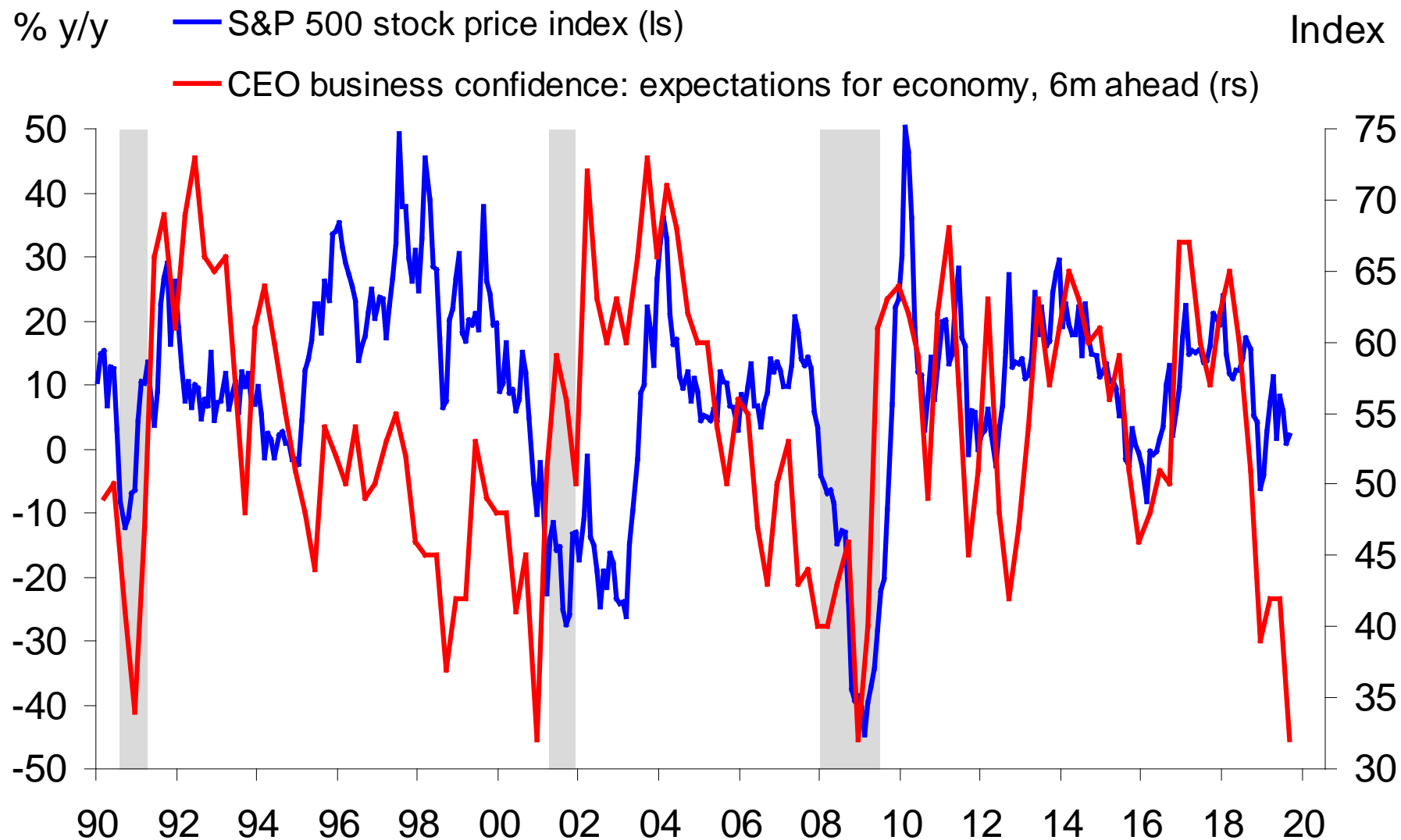
Earnings growth is slowing



Source: Bloomberg Finance LP, DB Global Research



CEO confidence points to downside risks



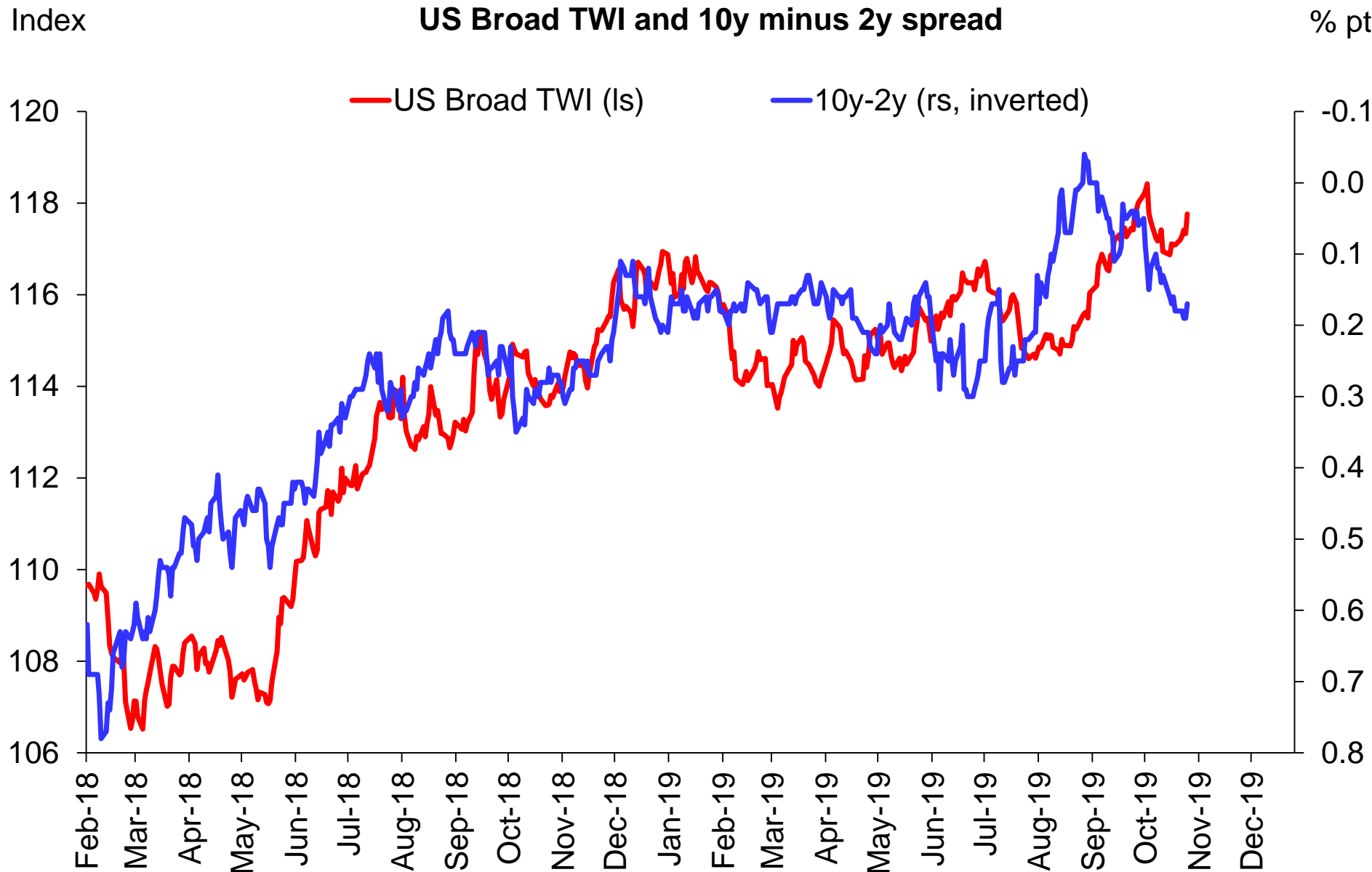
Source: The Conference Board, S&P, Haver Analytics, DB Global Research



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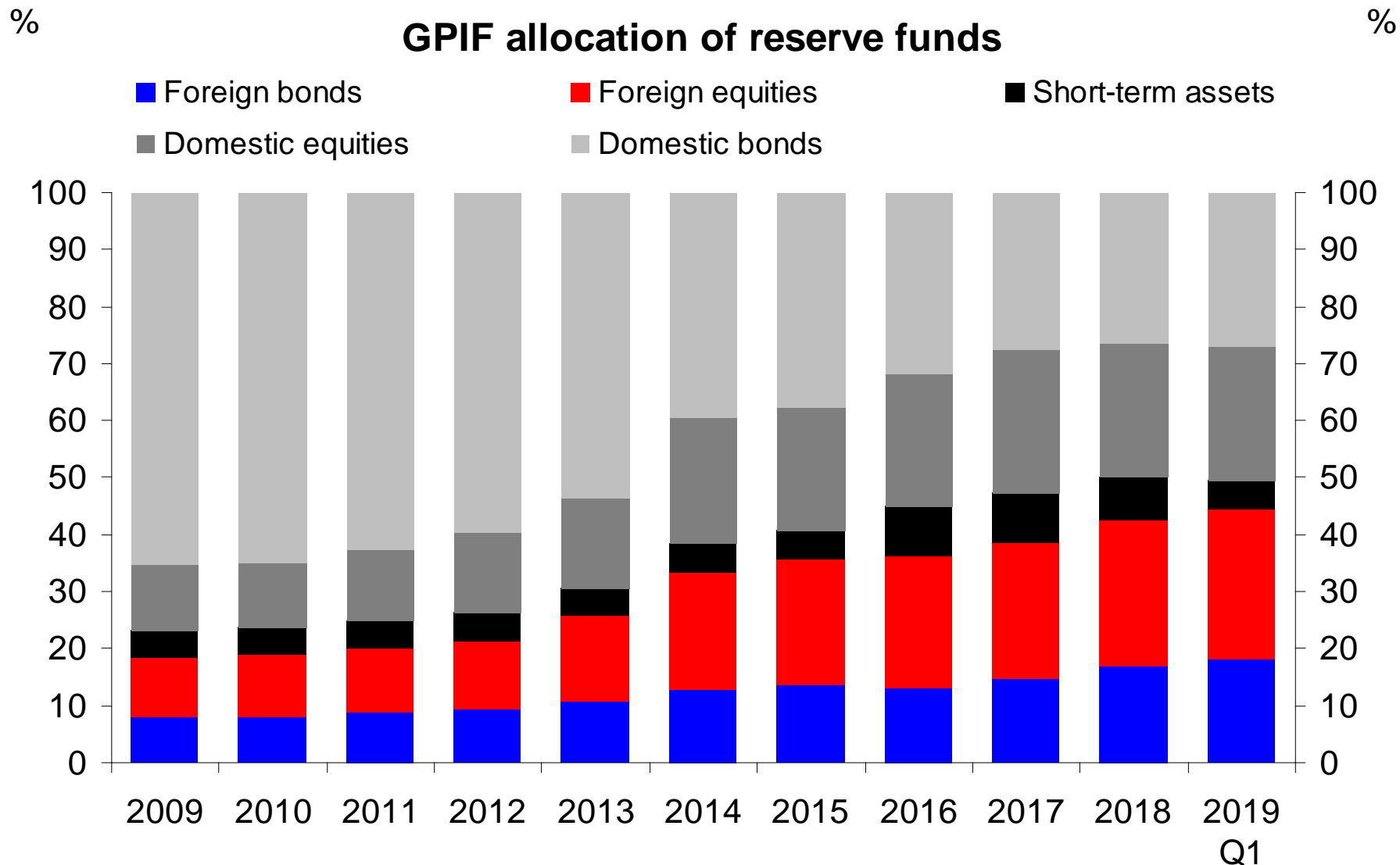
FX and the US yield curve

US Broad TWI and 10y minus 2y spread



Source: FRB, FRED data, DB Global Research

Almost 50% of assets in Japan's Government Pension Investment Fund are in foreign assets, up from 20% ten years ago



Source: GPIF, DB Global Research

Investment implications summarized

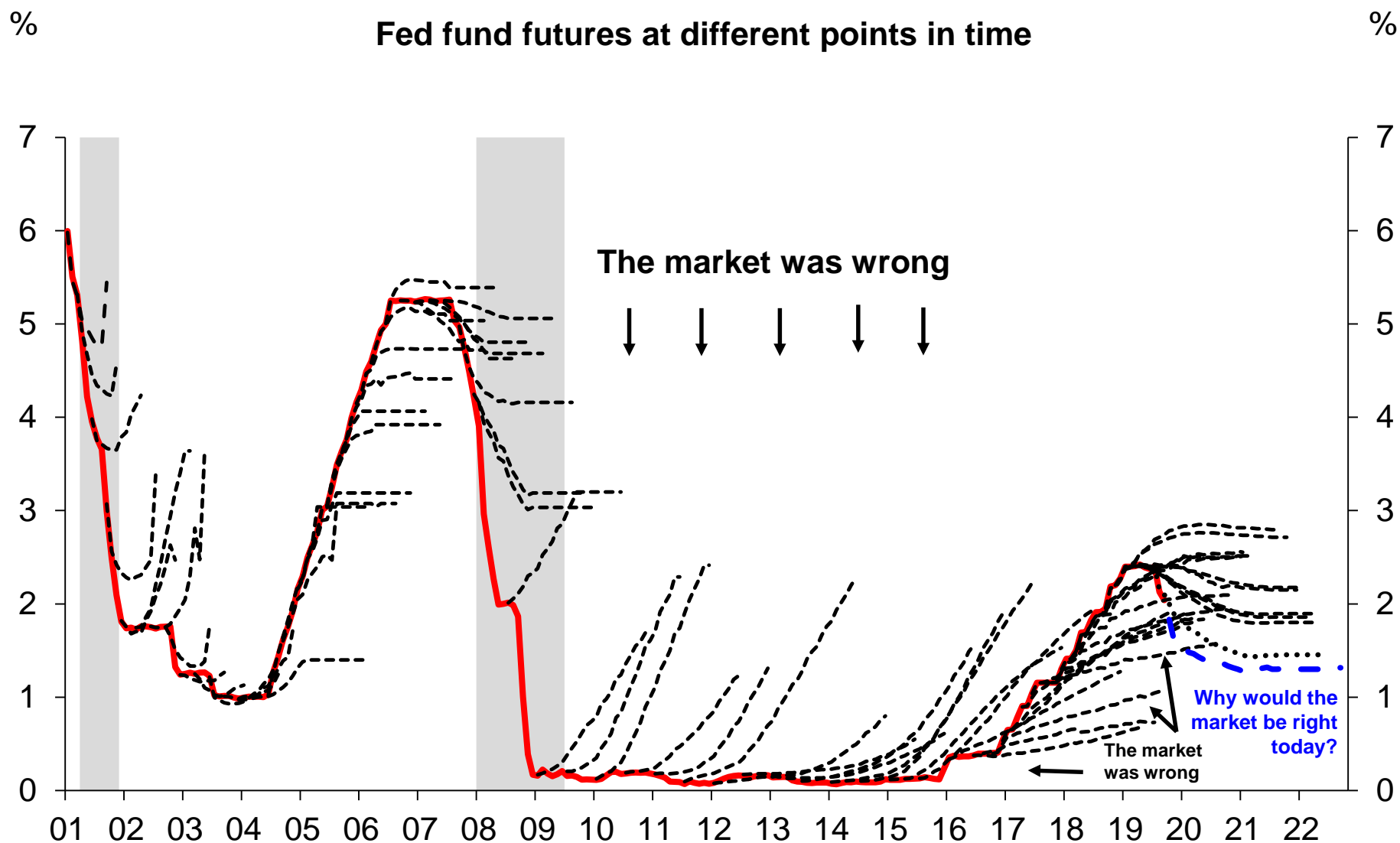


Fed outlook – Fed cutting in Oct, Dec, and Jan	US growth is slowing. Trade war, fading positive effects of tax cuts, slowing global growth, and late-cycle headwinds weighing on the US economic outlook and justifies Fed cuts.
Bond markets – Downside risks to long rates	Trade war, slowing growth, and late-cycle 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



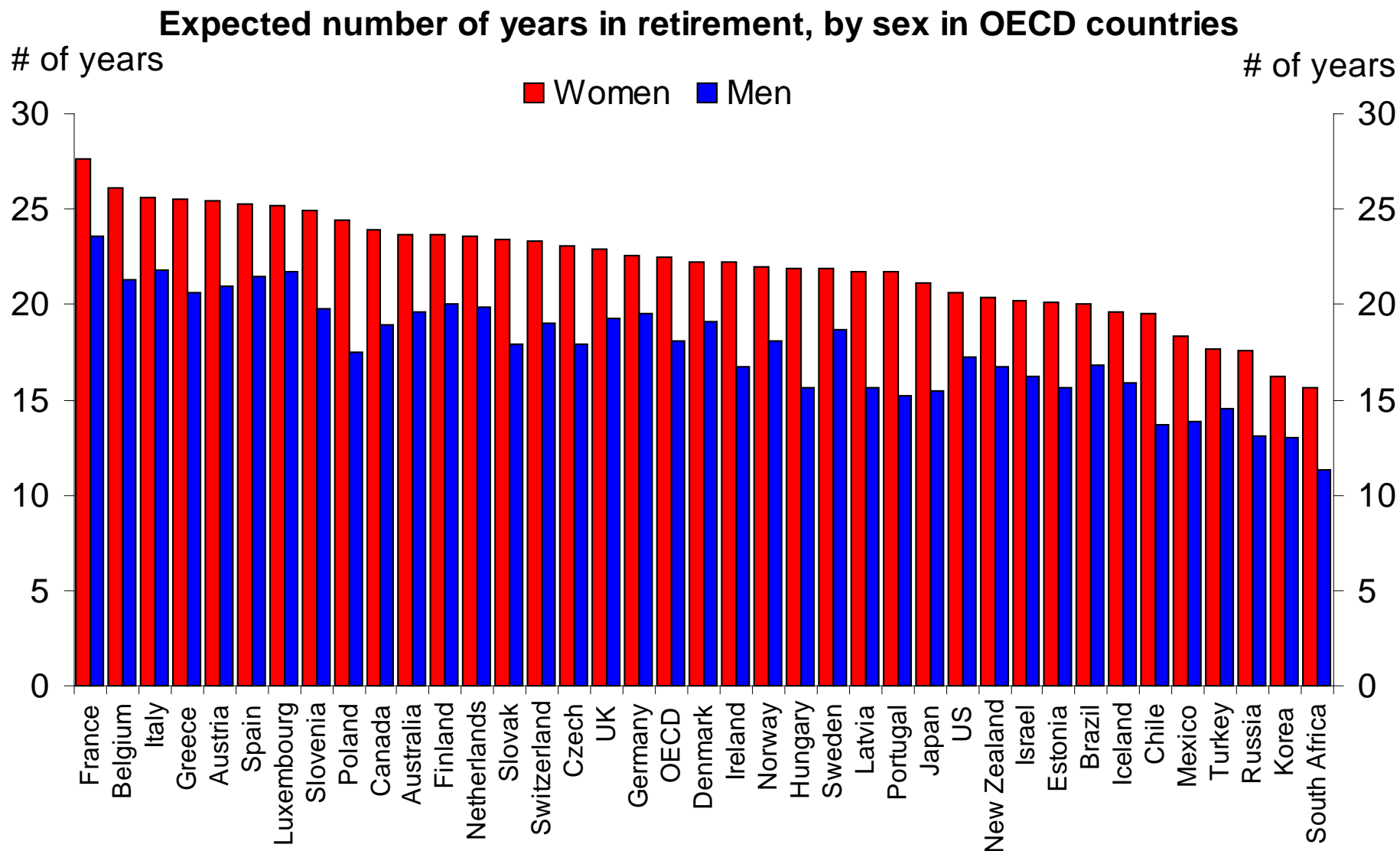
The market is almost always wrong about what the Fed will do



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

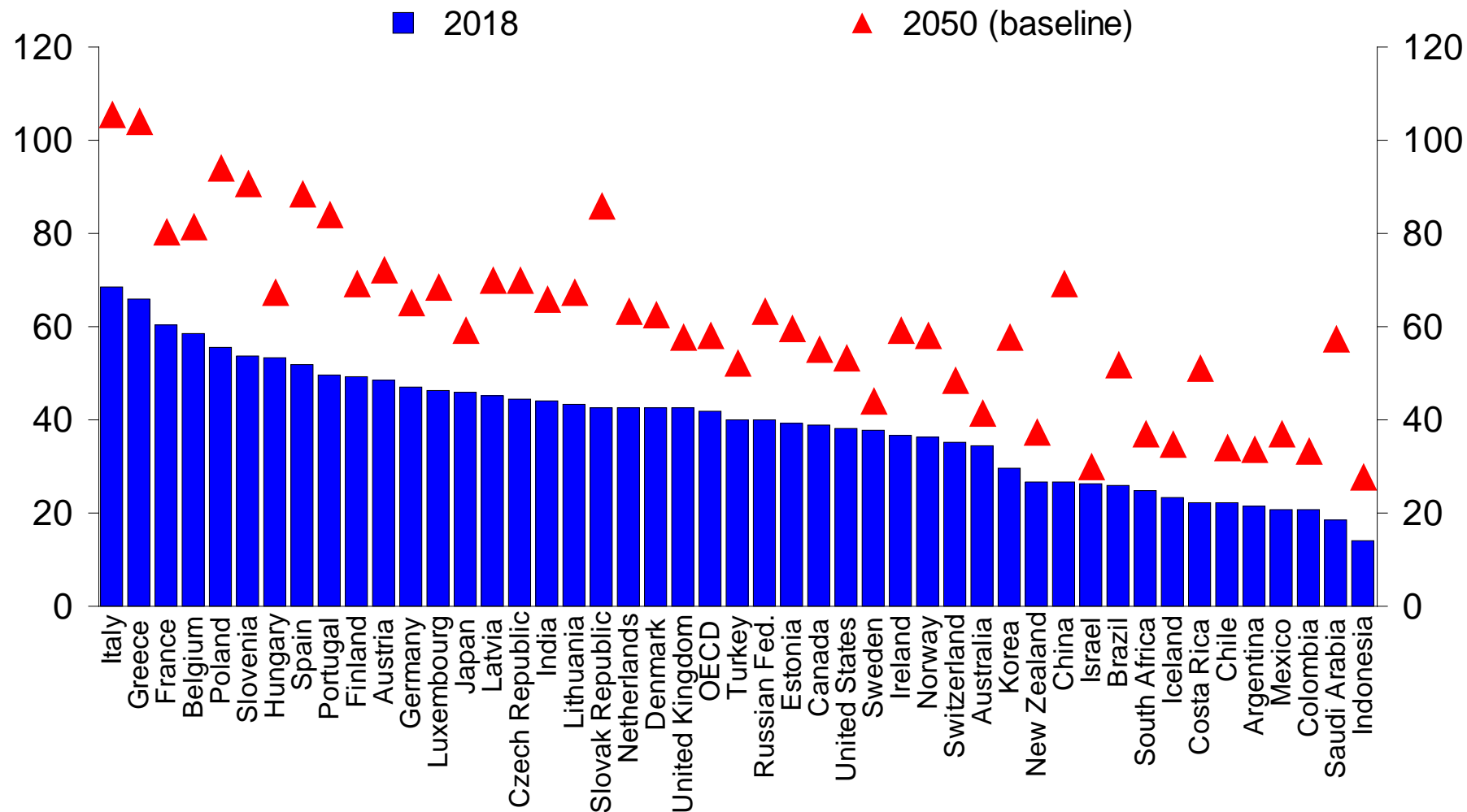


Retirees per 100 workers

Retirees per 100 workers, 2018 and 2050

Per 100 workers

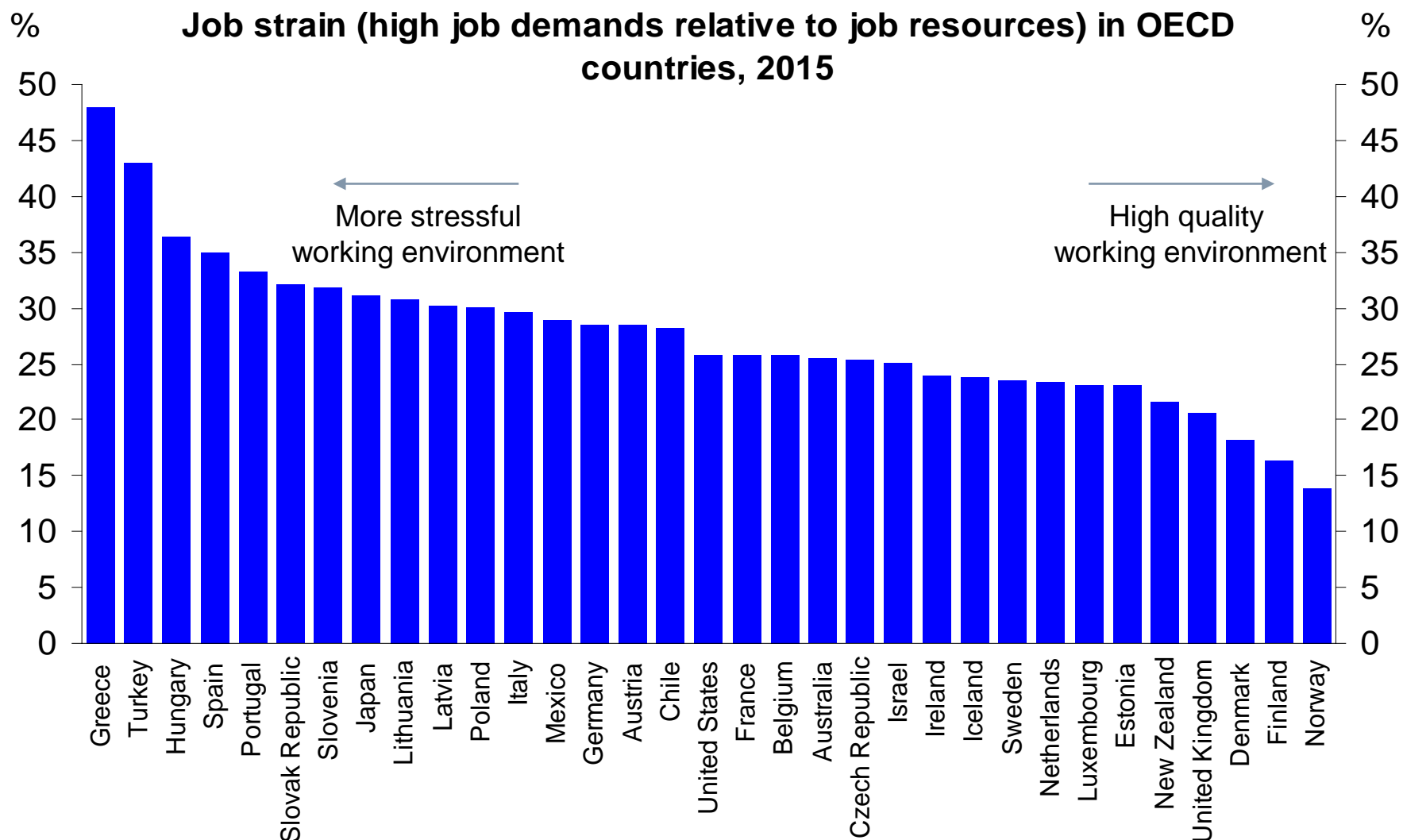
Per 100 workers



Source: OECD, DB Global Research



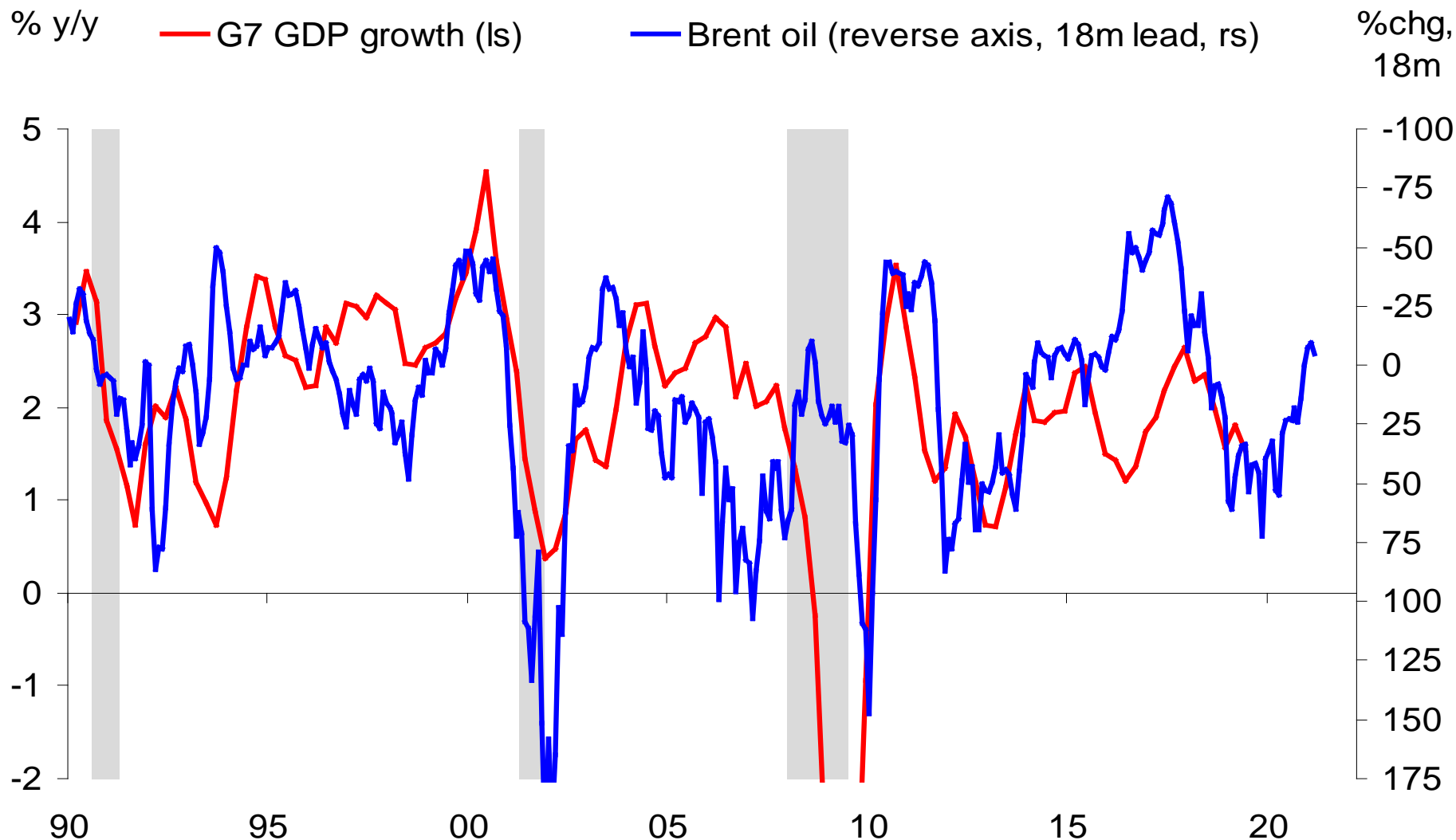
Job strains across countries



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

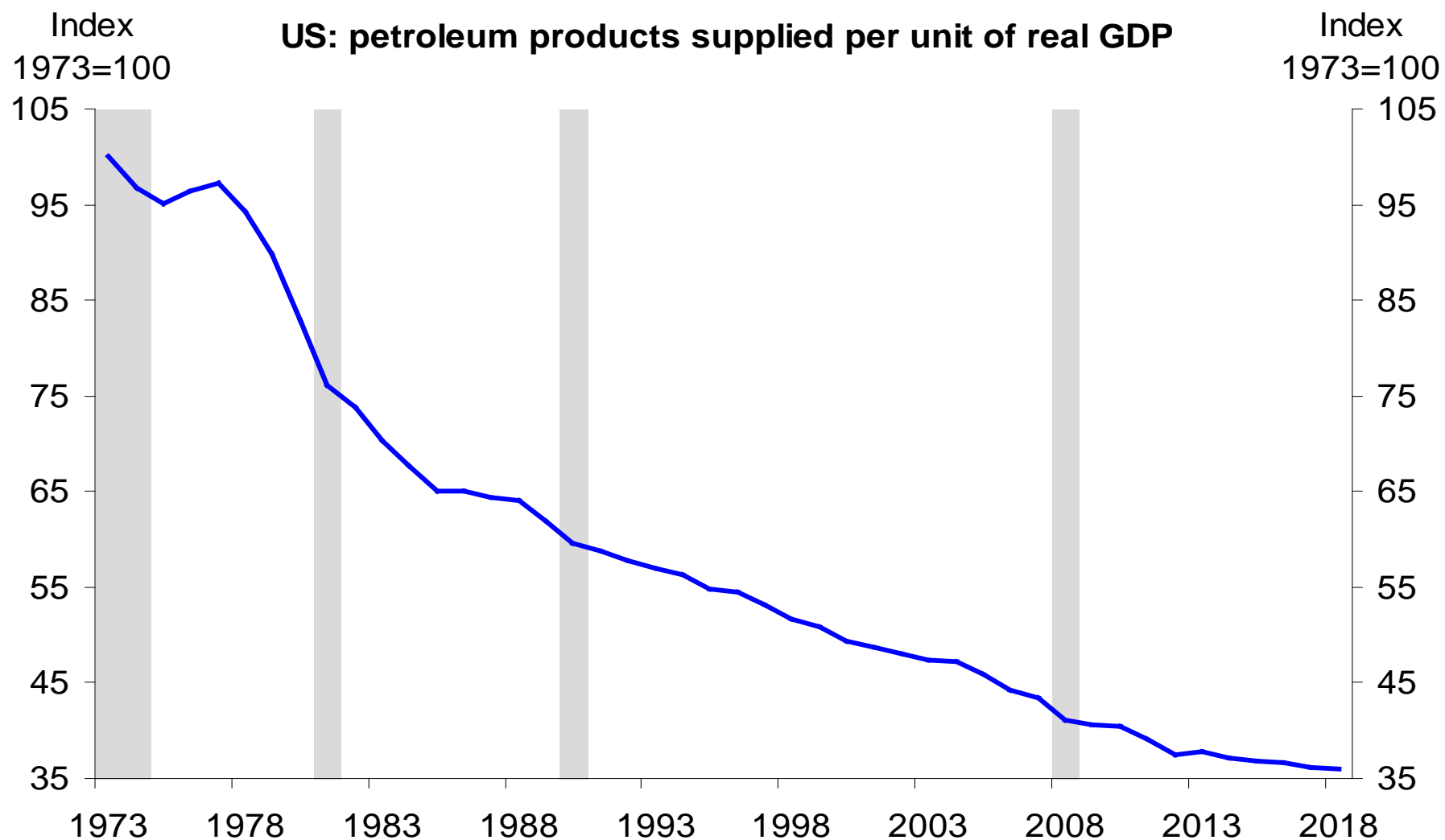


Note: Data as of Sep, 2019

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



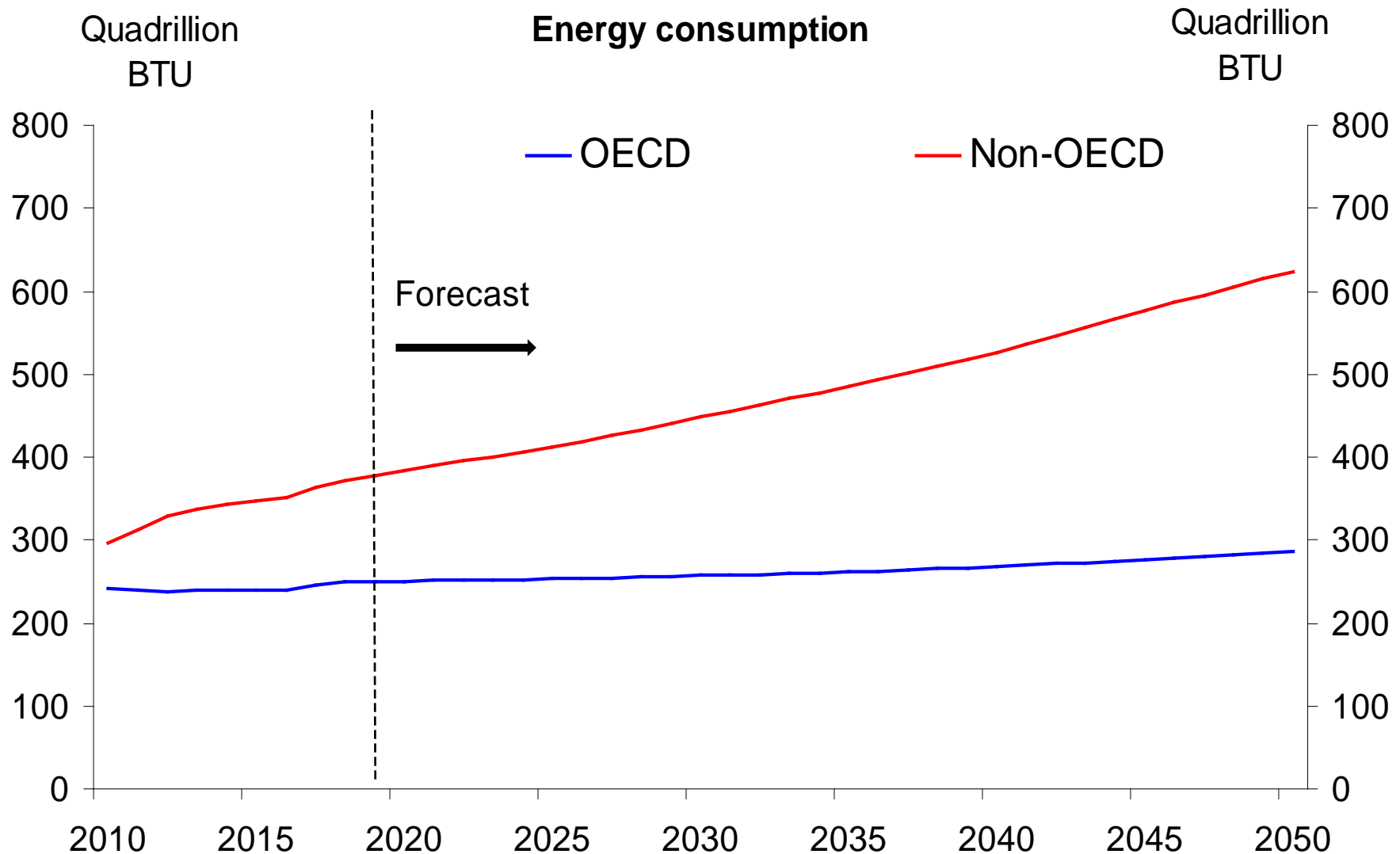
US economy less oil intensive



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



Total energy consumption much higher in EM countries



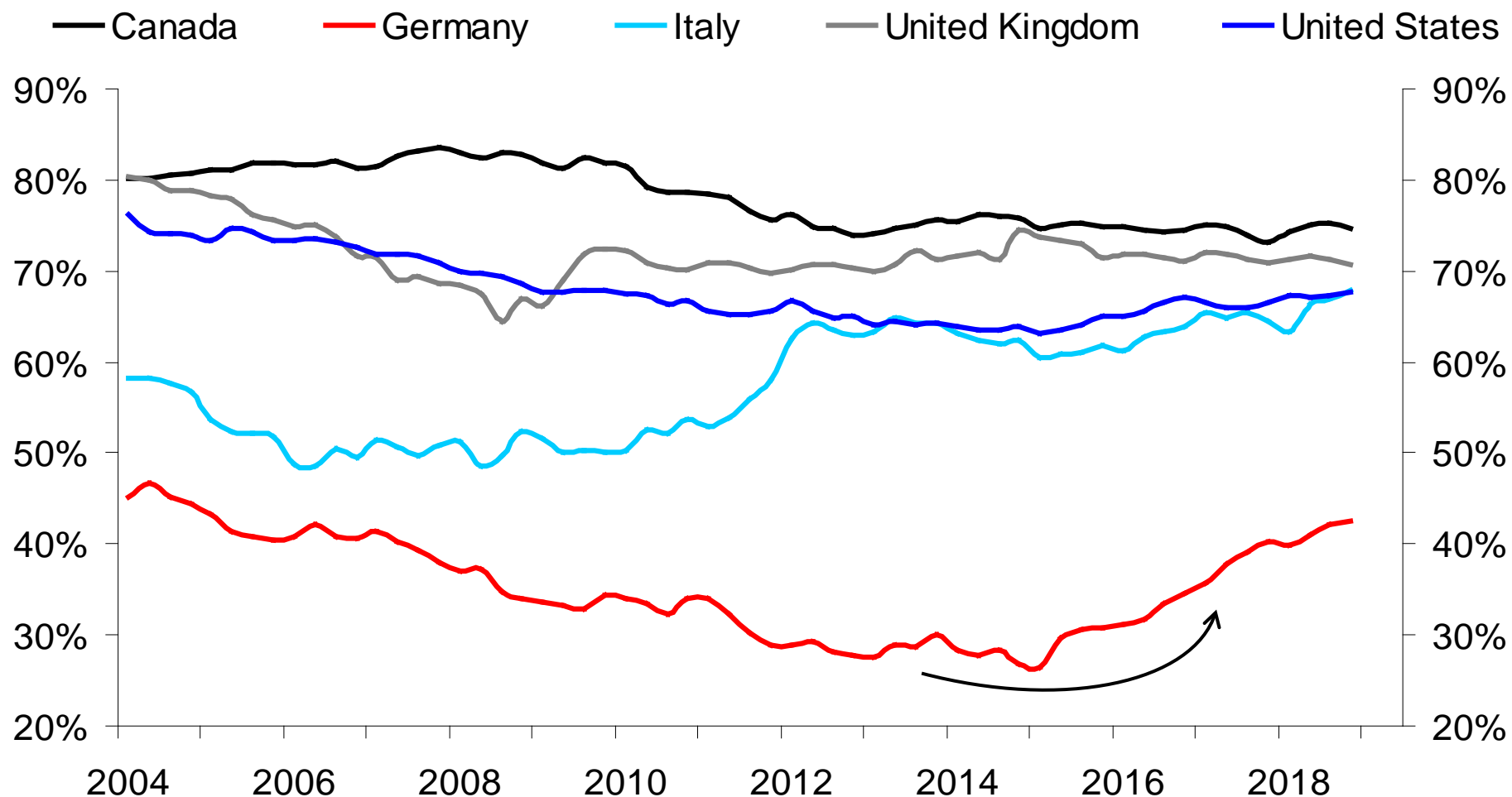
Note: BTU stands for British thermal units and it is defined as the quantity of heat required to raise the temperature of one pound of liquid water by 1 degree Fahrenheit at the temperature that water has its greatest density (approximately 39 degrees Fahrenheit).

Source: EIA , DB Global Research



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

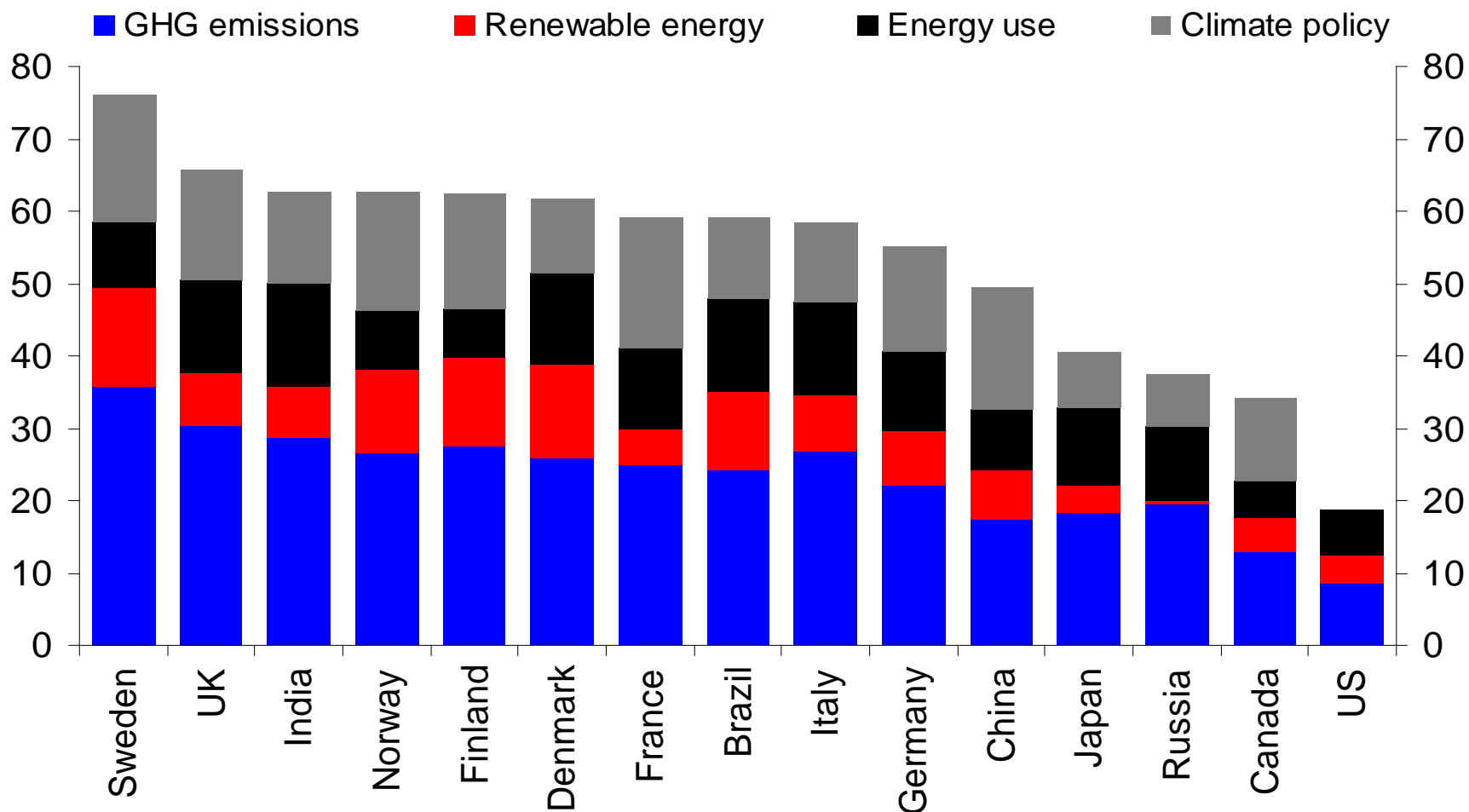
Sweden doing most about climate change, US doing the least



score

Climate Change Performance Index 2019

score

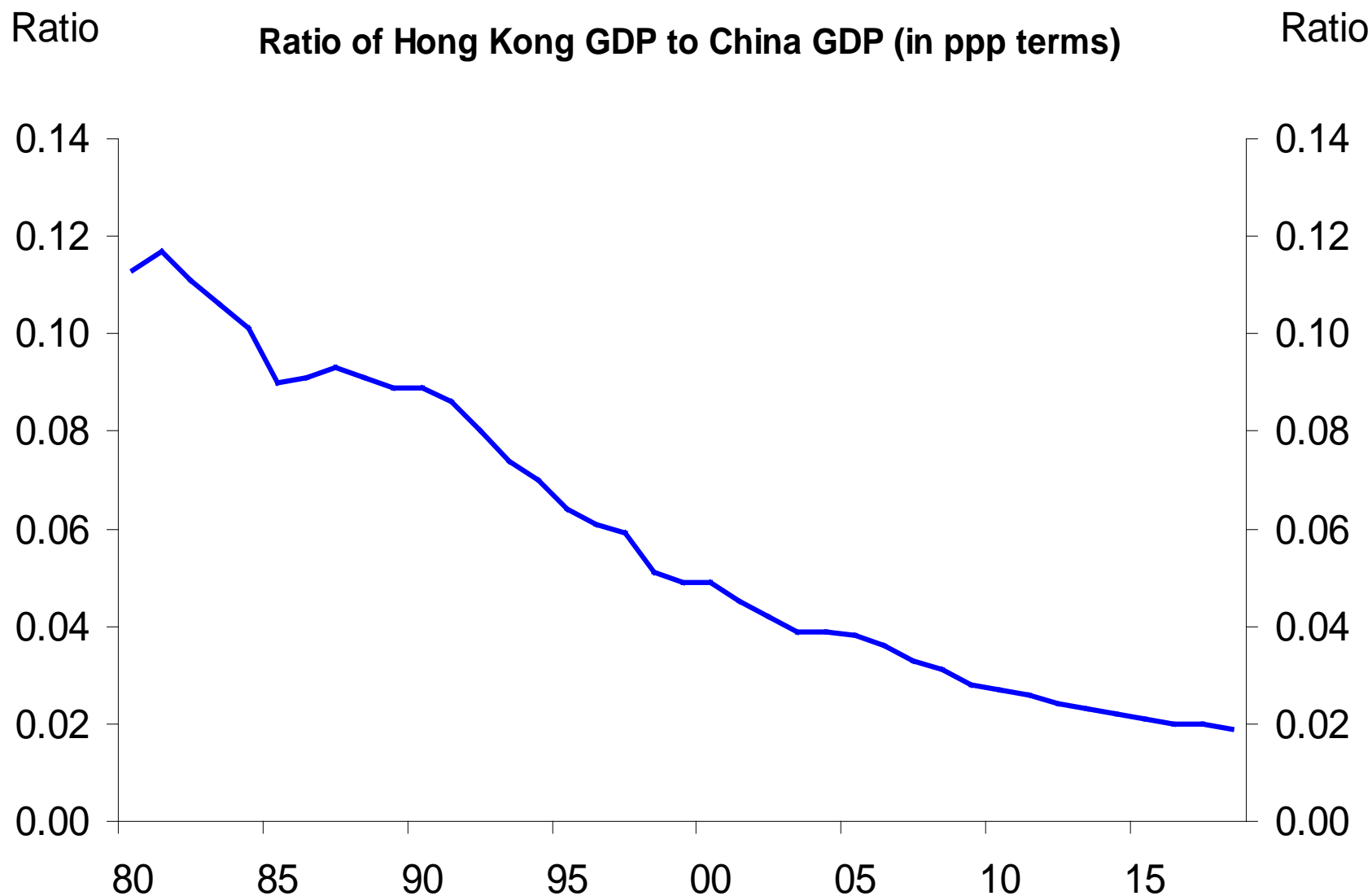


Note: The scores are by country's aggregated performance regarding 14 indicators within the four categories GHG emissions, renewable energy, energy use and climate policy. Higher the score for a country, higher will be its rank. According to the 2019 report, no country has yet made it to one of the top 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



Hong Kong's GDP is 2% of mainland China's GDP

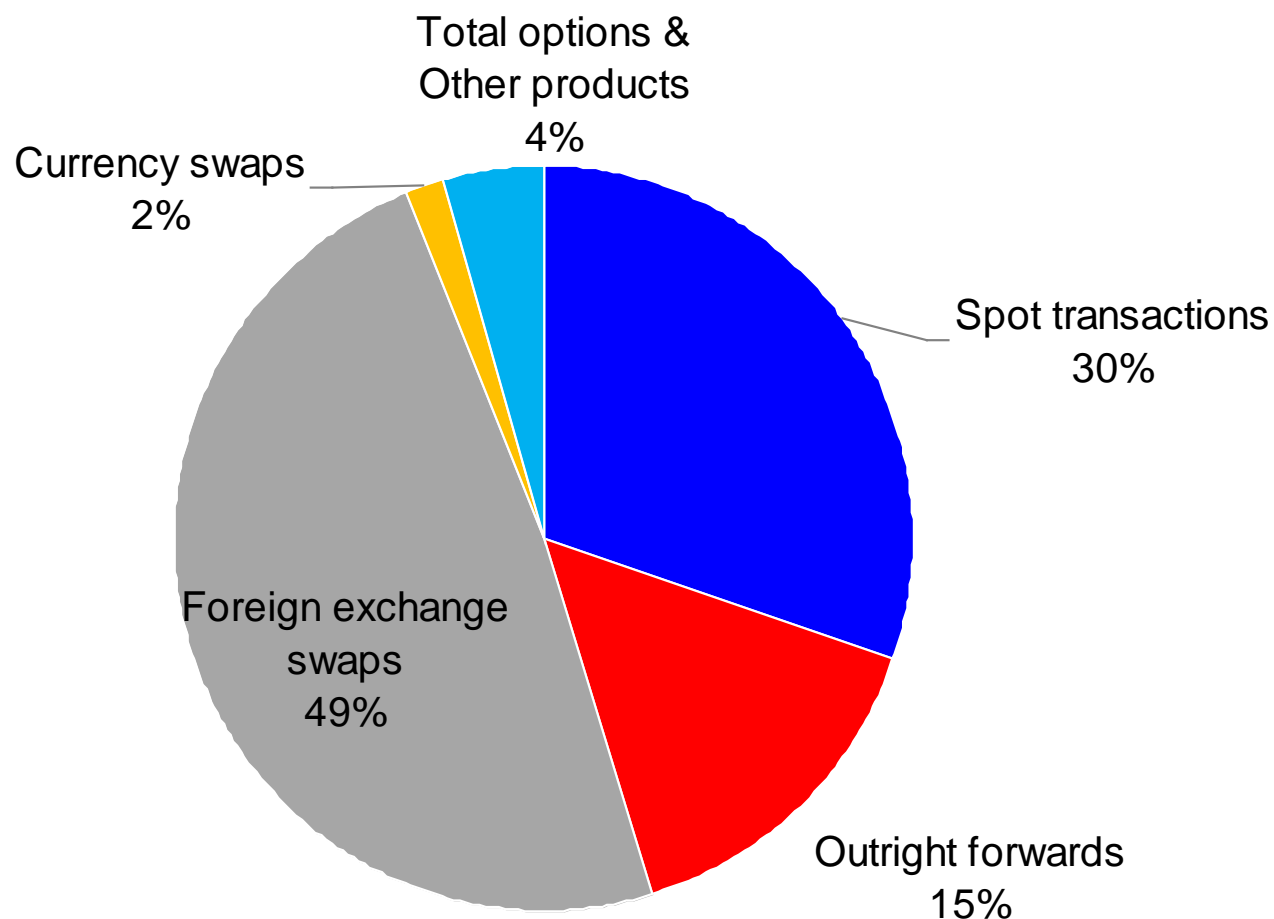


Source: IMF, DB Global Research



Global FX turnover by instrument

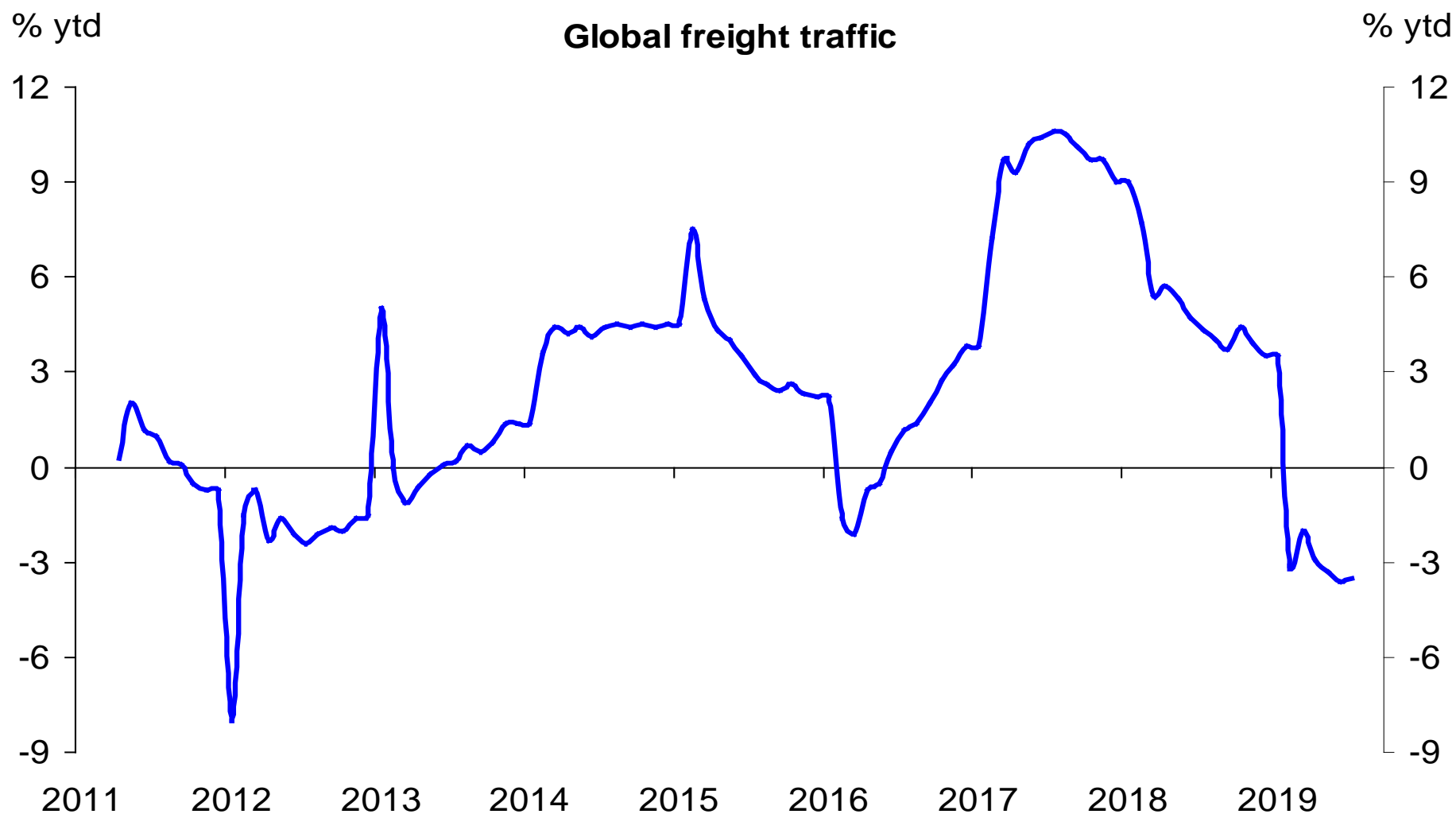
OTC foreign exchange turnover by instrument, in April 2019, "net-net" basis



Source: BIS, DB Global Research



World trade growth moving lower



Source: IATA, DB Global Research

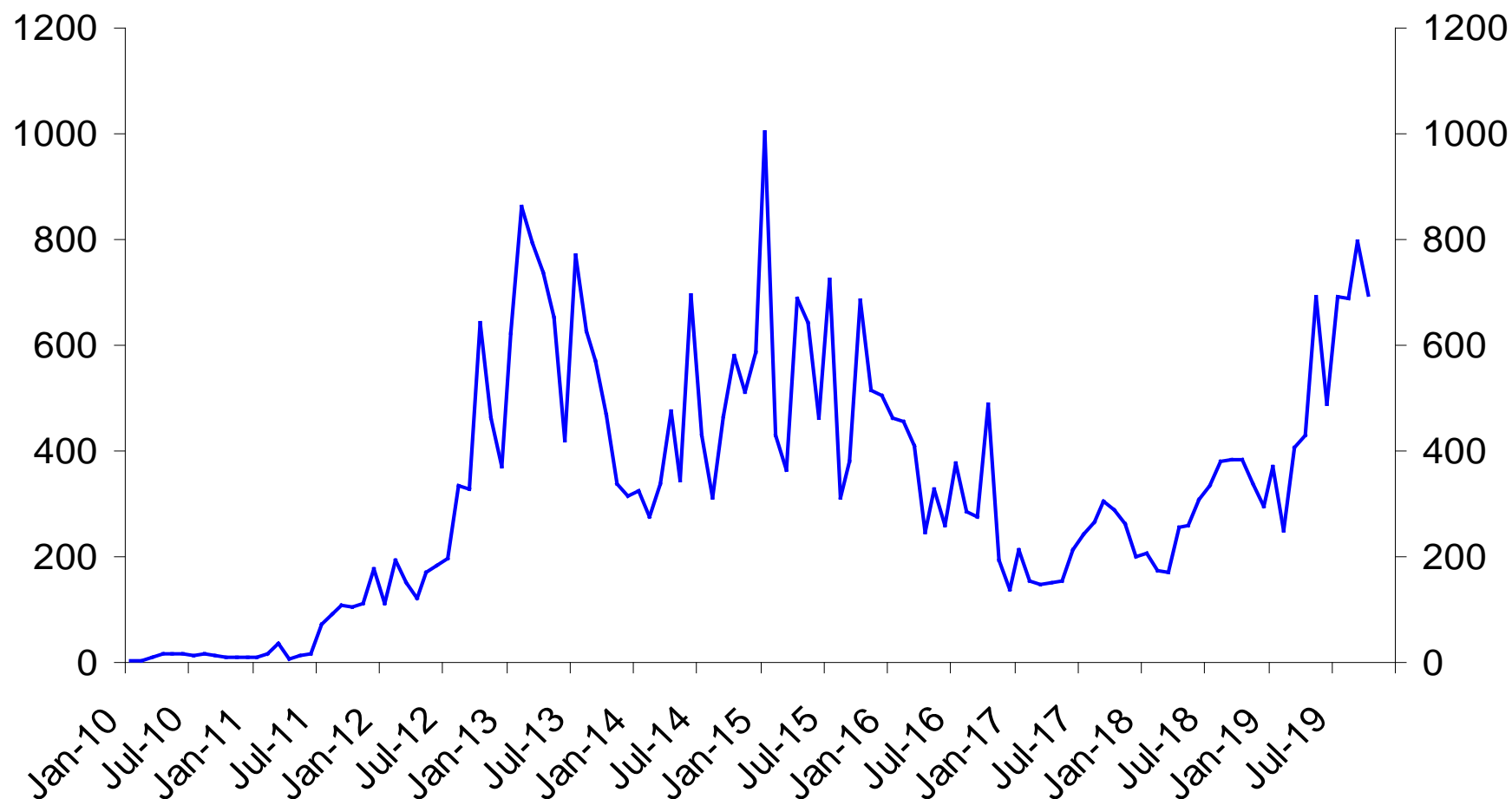


Number of tweets from President Trump

number

Number of tweets from Donald Trump each month

number



Source: www.trumptwitterarchive.com, DB Global Research

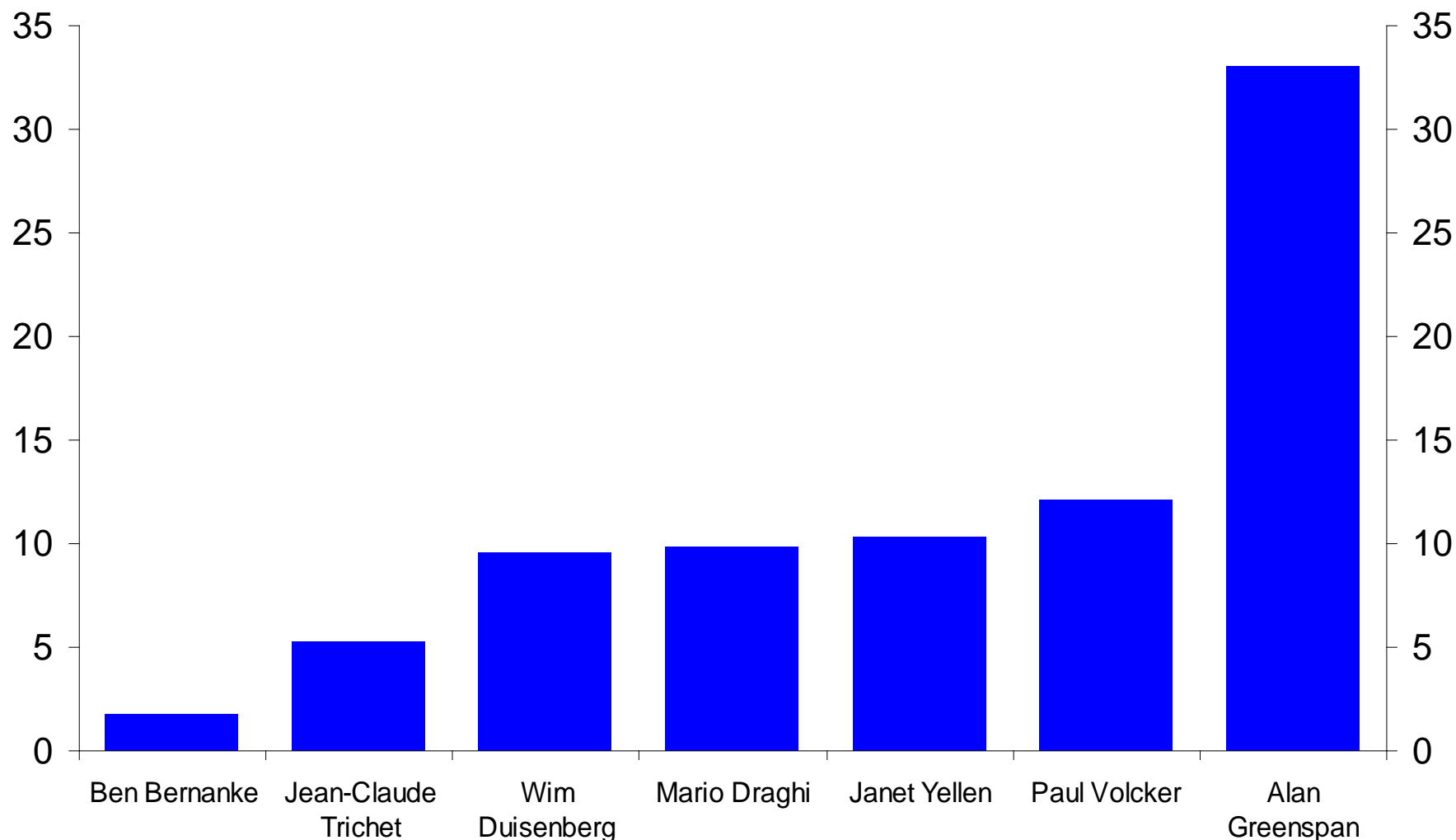
Number of jobs created under different Fed Chairs and ECB Presidents



mlns of jobs

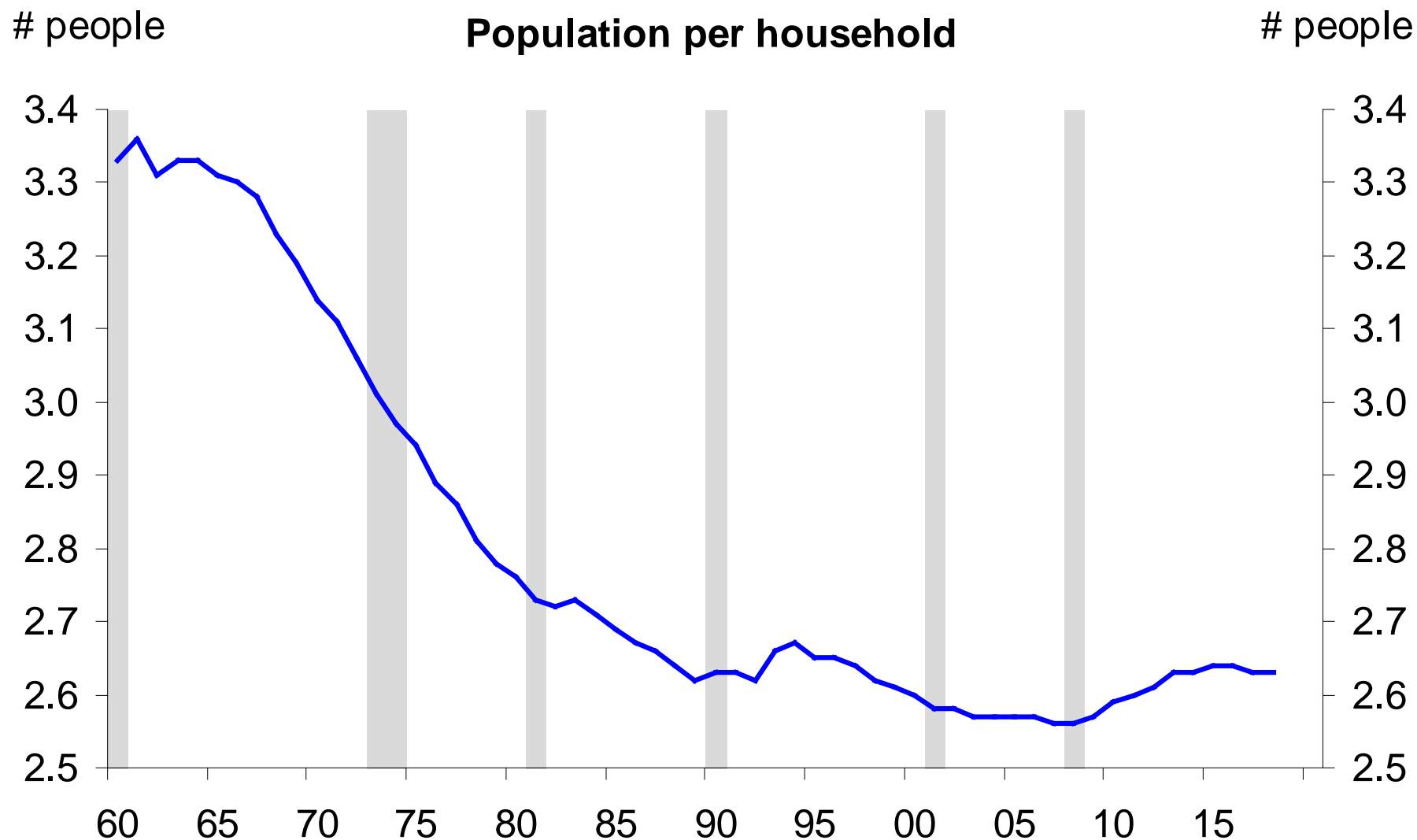
Net jobs created during office

mlns of jobs



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

Number of people living in each household rising after the 2008-2009 recession



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

Percentage of unemployed people receiving unemployment benefits



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



Torsten Slok, Ph.D.

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

- Torsten Slok joined Deutsche Bank Securities in the fall of 2005.
- 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.



Appendix 1

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