

Deutsche Bank

Research



# Global Macro Outlook: Virus curve flattening out and recession curve flattening out

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Torsten Slok, Ph.D.  
Chief Economist  
Managing Director  
60 Wall Street  
New York, New York 10005  
Tel: 212 250 2155  
[Torsten.Slok@db.com](mailto:Torsten.Slok@db.com)



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



# Outline

1. Re-opening the global economy
2. COVID-19 and global financial markets
3. The shape of the economic rebound
4. How are small businesses doing?
5. The US fiscal expansion and long rates
6. Election uncertainty

Investment implications for rates, FX, credit, and equities

# Behavioral changes slowing growth over the coming quarters



## Household sector

- Increase in precautionary savings for households, similar to what we saw after the Great Depression in the 1930s
- More space between seats at restaurants, cinemas, sport events, concerts, conferences, trains, busses, and airplanes
- Fewer people traveling on vacation and going out until we have a vaccine, all contributing to lower consumer spending
- Older generations staying at home until a vaccine is released, less willingness to put parents in retirement homes
- Limits on the number of people in supermarkets at the same time, more online shopping, more online doctor visits
- Fewer people going to fitness centers, doing group sports
- More people driving their own car to avoid public transportation
- Health insurance premiums going up

## Corporate sector

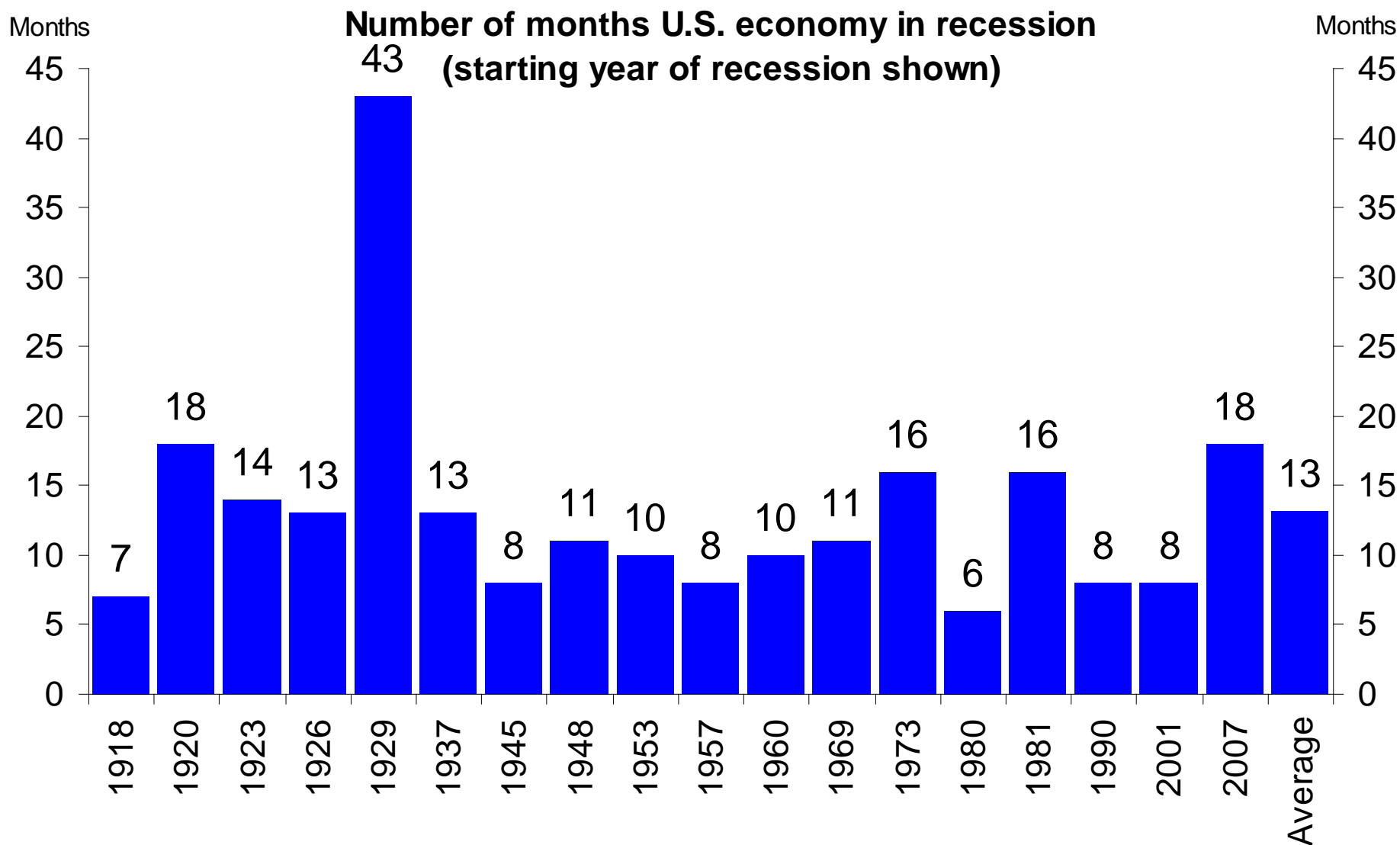
- Less business travel globally, more video conferencing
- Staggered work schedules, more distance between seats in offices, fewer cubicles
- More permanent work from home solutions, more disaster planning
- Fewer buybacks, lower dividend payouts
- Health insurance costs going up, higher insurance premiums
- Increased pressure for paid sick leave, health benefits, labor protection, including for gig workers

## Government sector

- Global restrictions on travel to and from high-risk areas, more fever scanners at airports, borders
- More regulation forcing households and corporates to hold, say, three months of cash in emergency savings
- More regulation and spending to ensure health care system is better prepared, a global covid-19 immunity registry
- Increased health safety regulations for retirements homes
- Stocking of medical supplies, including ventilators, domestically, a desire to be less dependent on other countries
- More systematic planning and preparedness, perhaps introduce better automatic stabilizers
- More supply of government bonds, increasing risk of a debt crisis



## The 1918-1919 recession lasted 7 months



Source: NBER, Wikipedia, DB Global Research



# 1. Re-opening the global economy



# Re-opening the global economy: Three key questions

1. Which countries will open first?
2. Which sectors of the economy will open first?
3. Which parts of the population will be allowed to go out first?

The answers to these questions are important for global asset allocation



## Potential dates for the initial lifting of restrictions

	End of announced lockdown (not including possible extensions)	Estimated date that restrictions will start to be lifted based on the Hubei experience	Estimated date of "containment" based on 2003 SARS experience
US	30-Apr	22-May	19-Jun
Italy	May 3	7-May	4-Jun
UK	May 7	23-May	20-Jun
Spain	May 10	18-May	15-Jun
France	May 11	18-May	15-Jun
Germany**	May 3	22-May	19-Jun

\* For US most state-level restrictions have been extended to early-to-mid May, with minor easing in places.. The 30 April date represents the date until which President Trump has issued social distancing guidelines. On 16 April, the President outlined guidelines for state authorities on easing restrictions. Recommendations include that states showing a downward trajectory in cases for at least two weeks can begin a three-phase process to reopen, with declines in cases to be assessed every two weeks before states can move onto the next phase. \*\* This is assumed to be a period of two generations of the covid-19 (max 28 days) in which there are no new cases. Hubei last declared a new case on 24 March so 'containment' would theoretically occur on 21 April. We deem these dates unlikely for the countries in this analysis, however, we include them here as a reference point \*\*\* Germany announced Wednesday that small shops (with a retail space of below 800 square meters) will be allowed to re-open from Monday April 20. Schools in the country will open their doors on Monday May 4. But Large, mass gatherings will remain banned until August 31.

Source: Deutsche Bank, WHO, CDC, Worldometer, DB Global Research



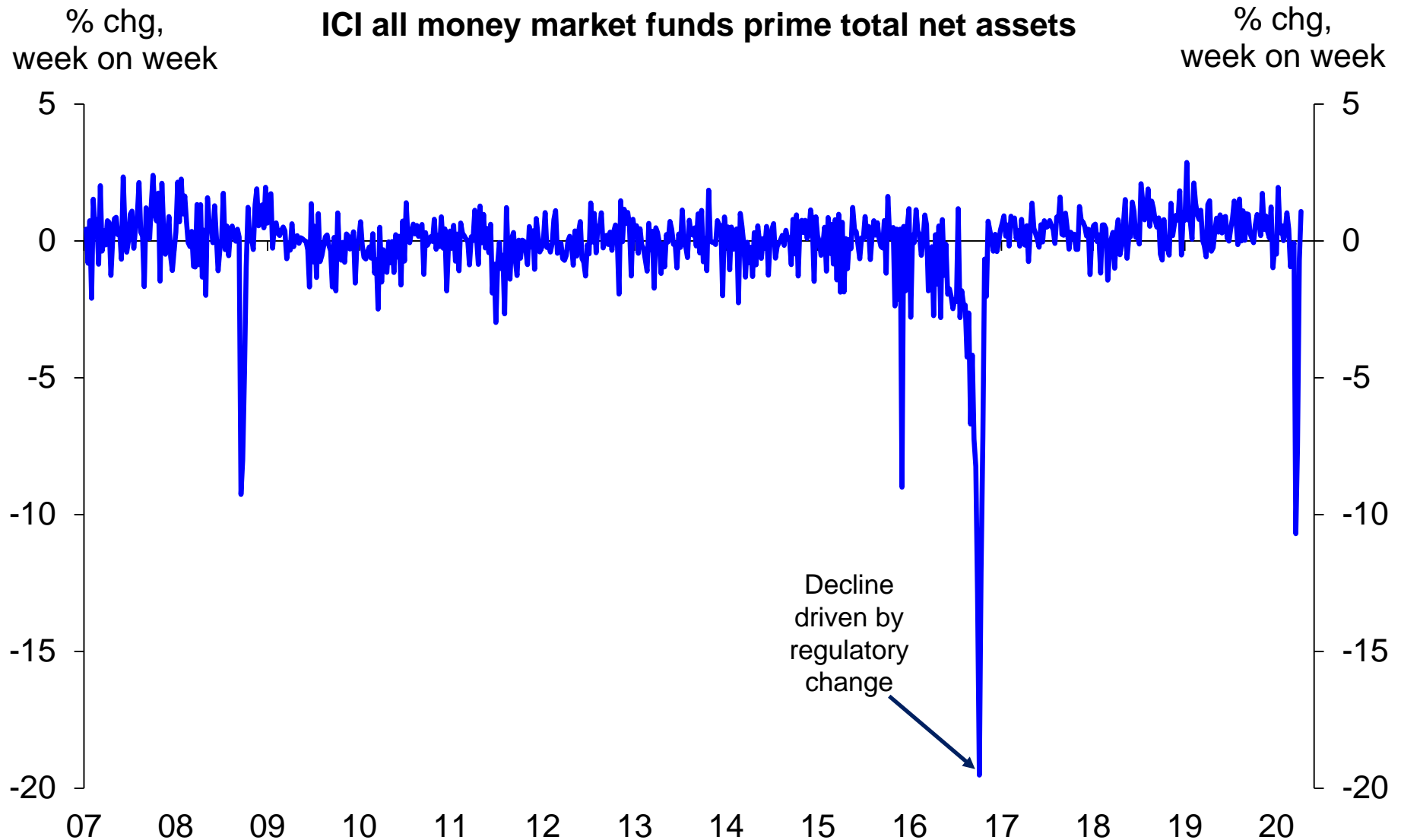


## 2. COVID-19 and global financial markets





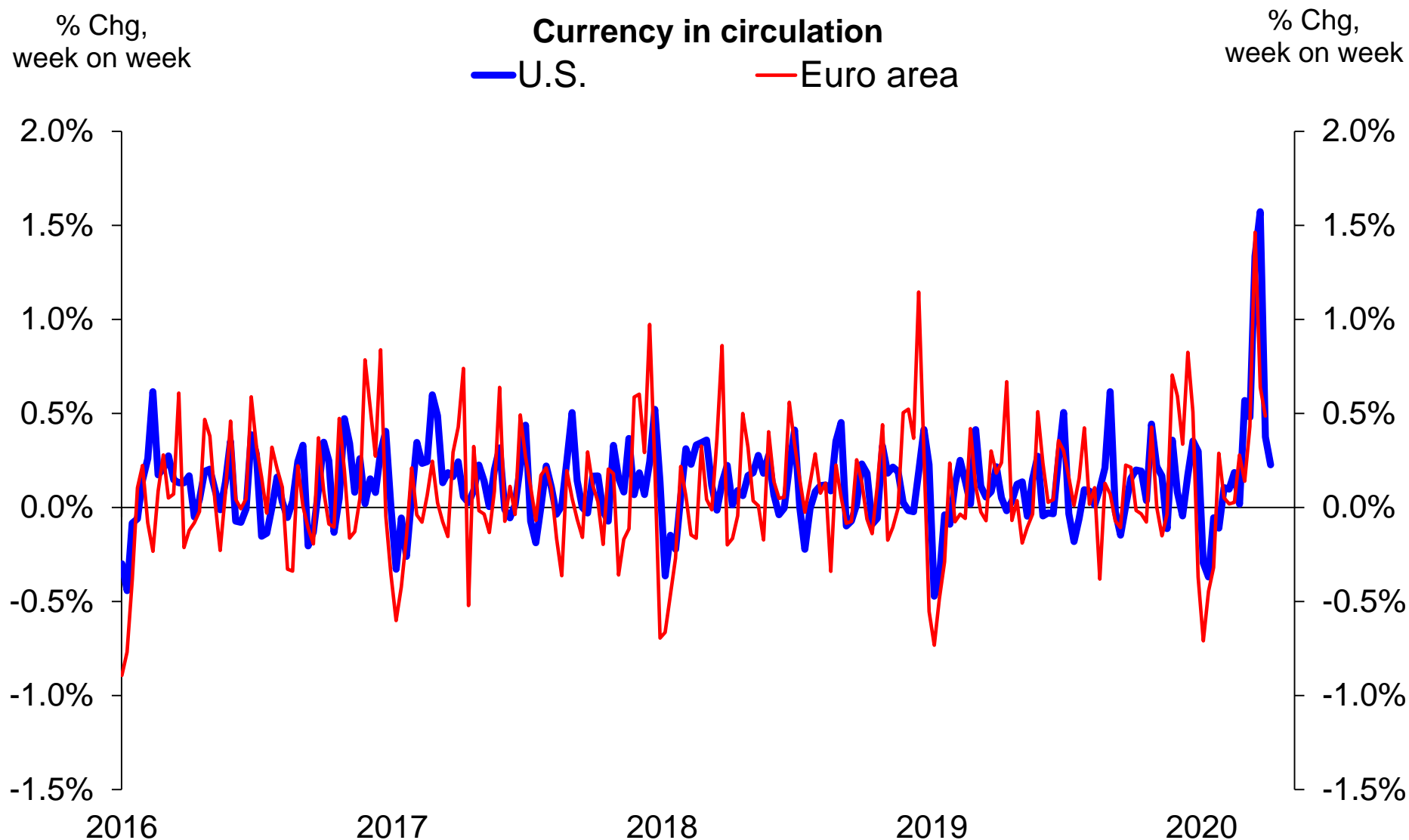
# Decline in assets held by prime money market funds



Source: Bloomberg Finance LP, DB Global Research



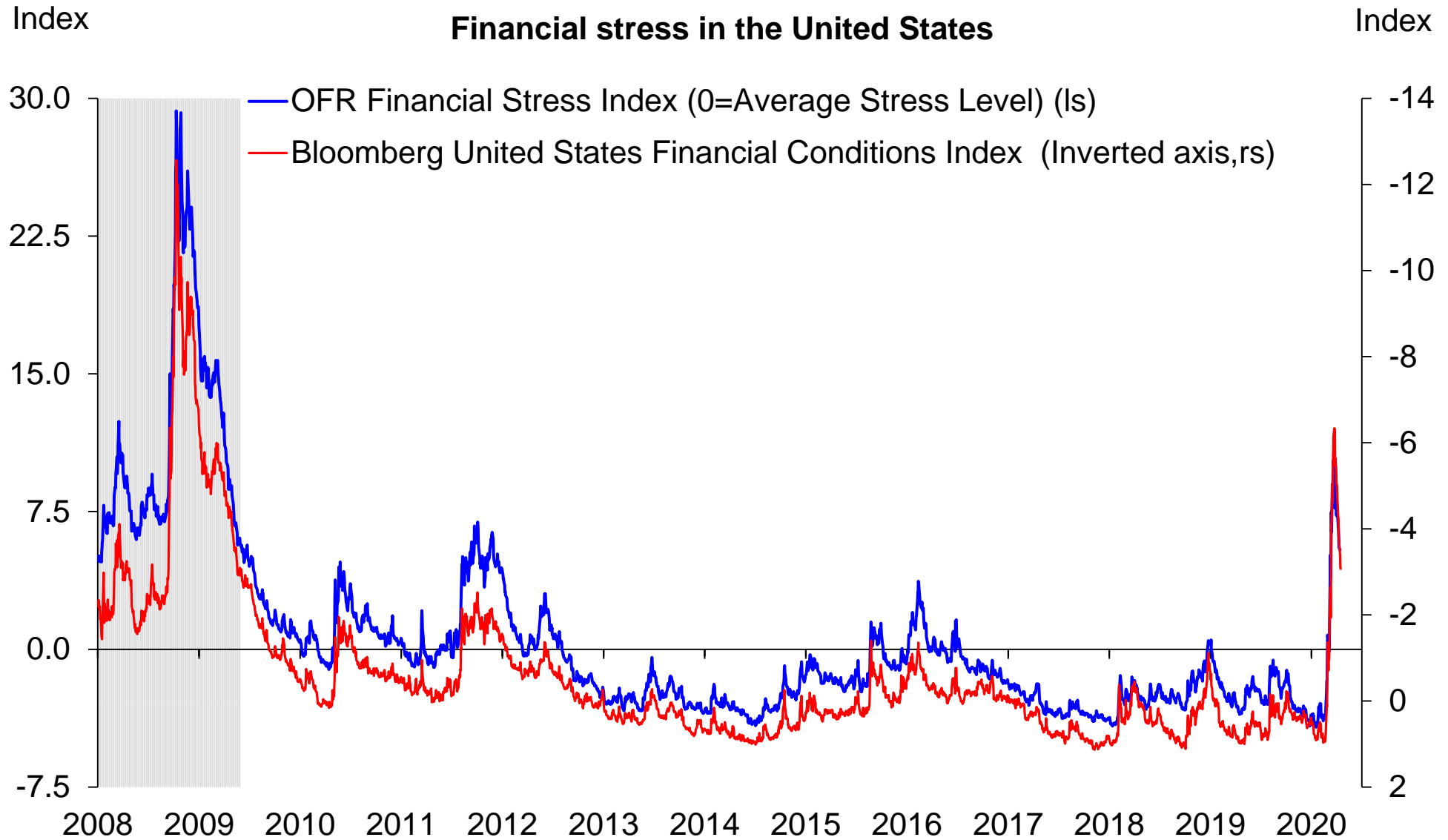
# Currency in circulation up in recent weeks



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



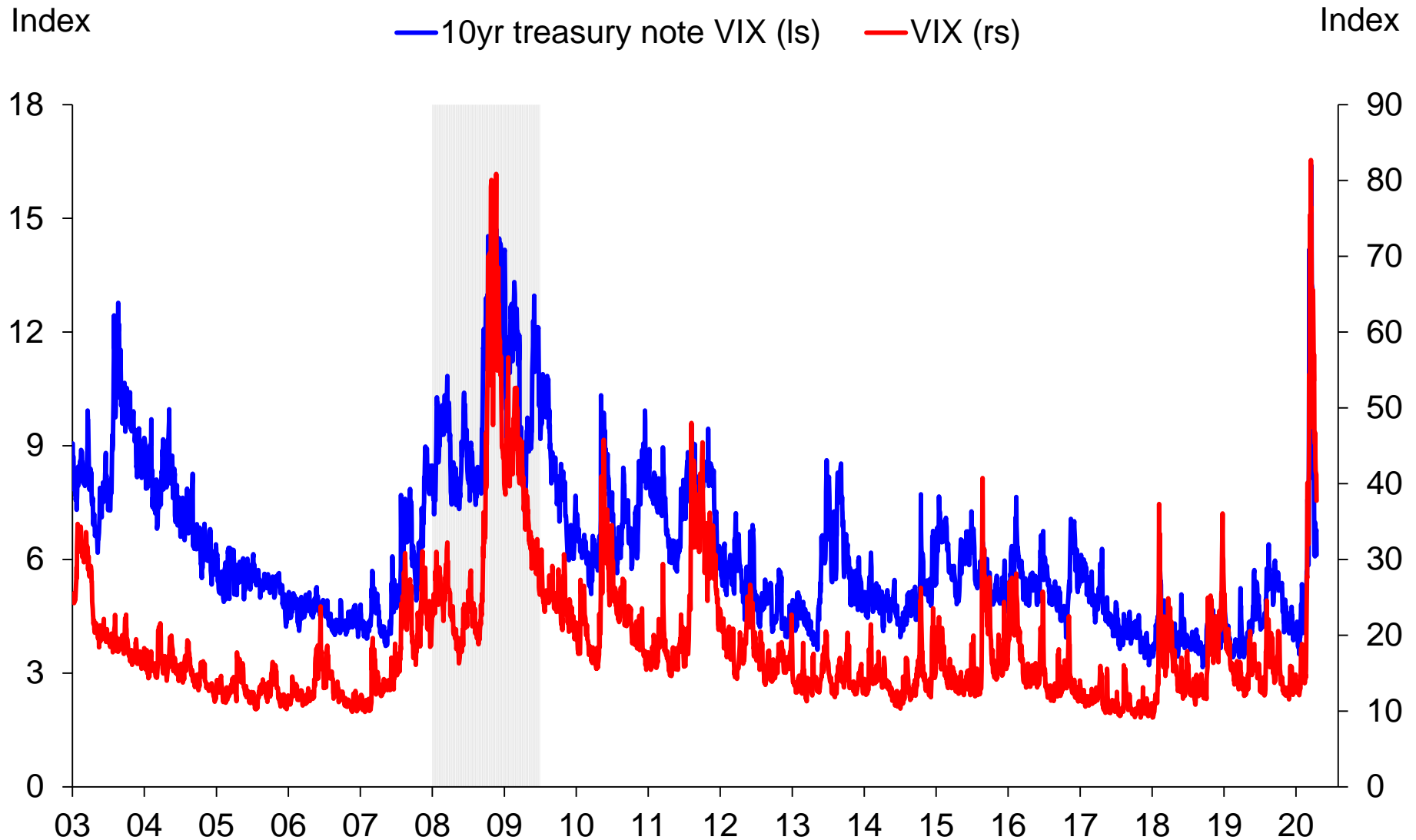
# US financial stress coming down from recent peak



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

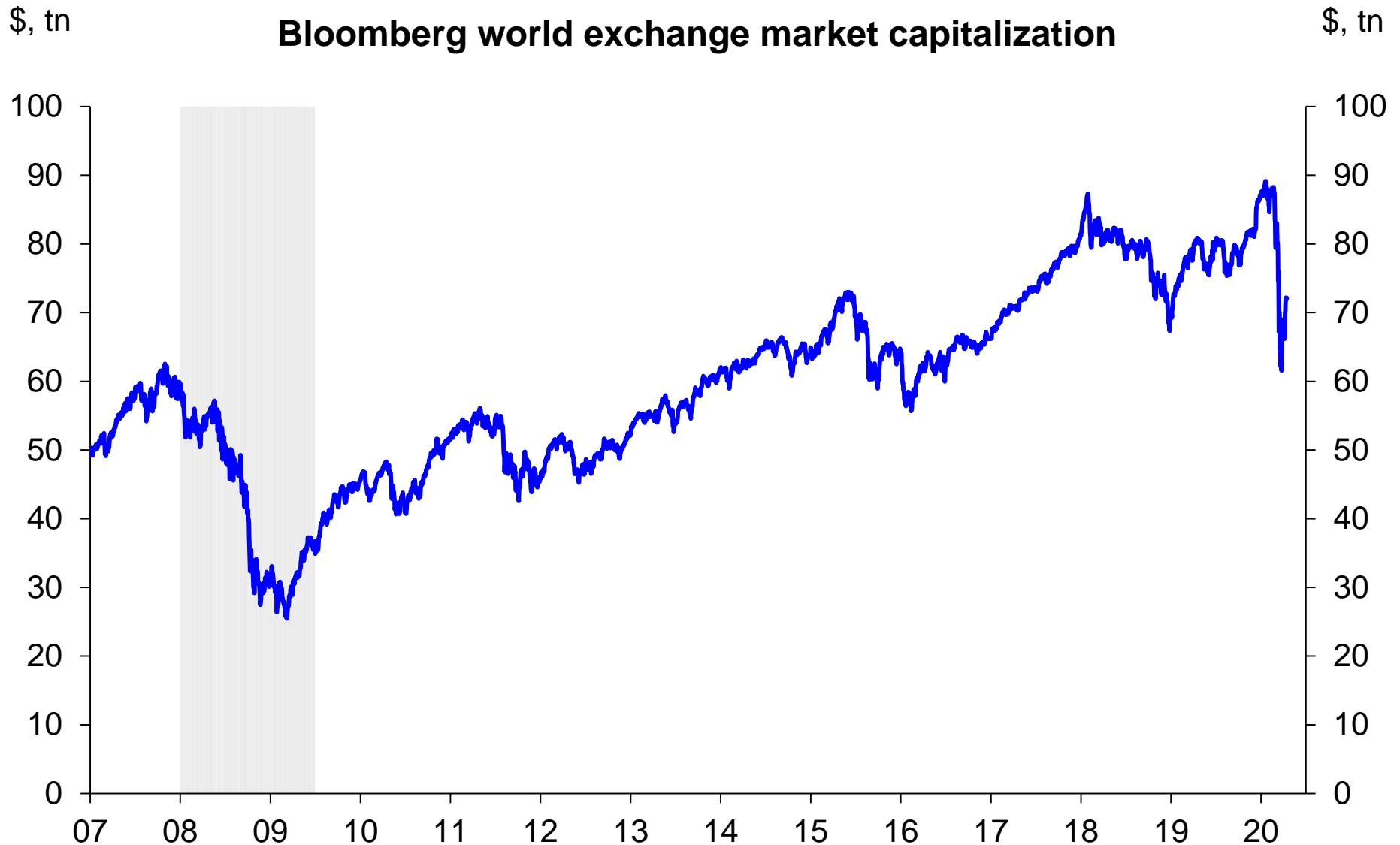


# Rates and equity vol coming down from record highs



Source: CBOE, WSJ, Haver Analytics, DB Global Research

# Global stock markets have lost \$20trn over the past month



Source: Bloomberg Finance LP, DB Global Research

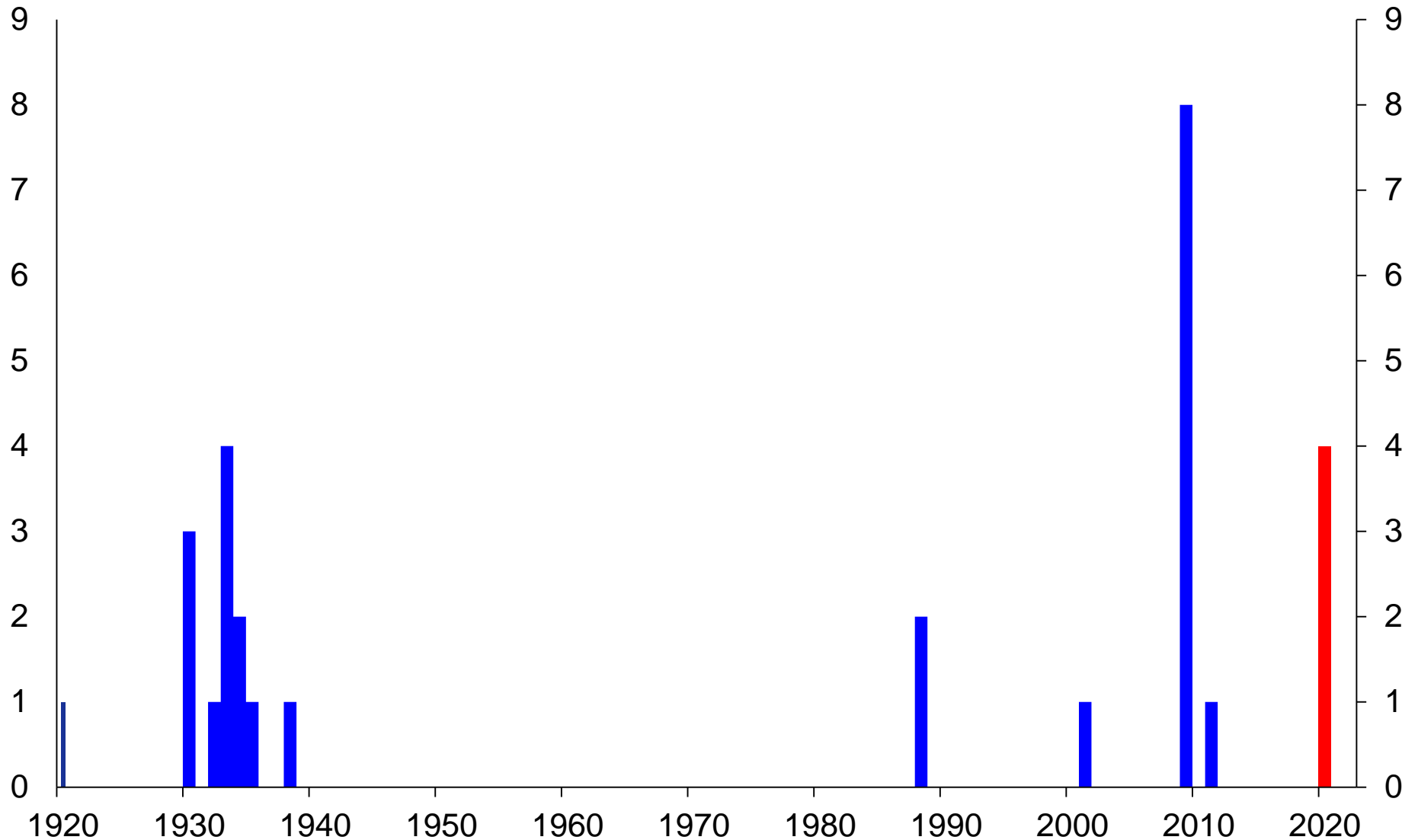
# The number of circuit breakers



# number

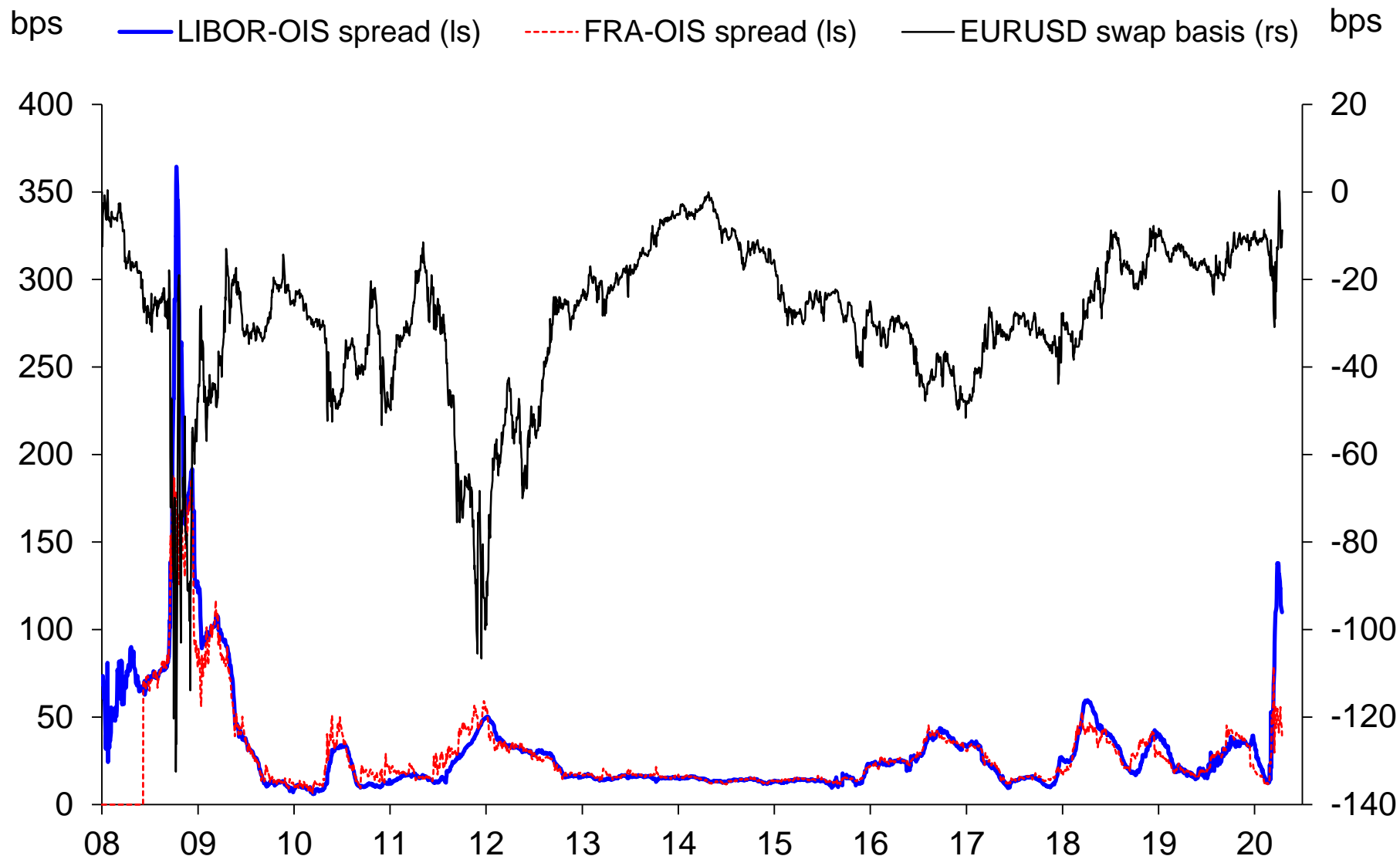
**Number of times S&P 500 fell 7% and hit a circuit breaker**

# number



Source: Bloomberg Finance LP, DB Global Research

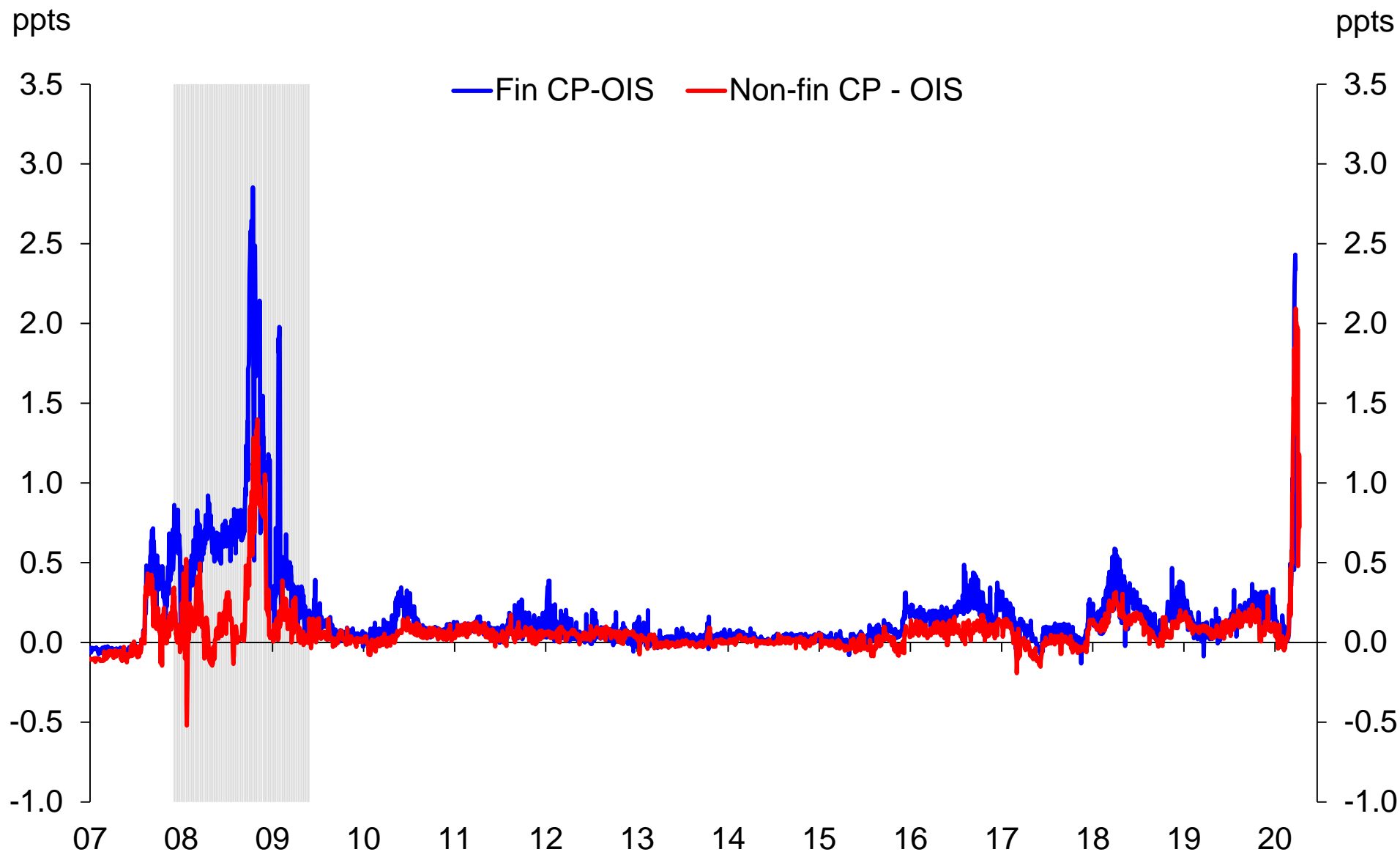
# Fed and ECB support easing strains in funding markets



Source: Bloomberg Finance LP, DB Global Research



# CPFF helping commercial paper markets

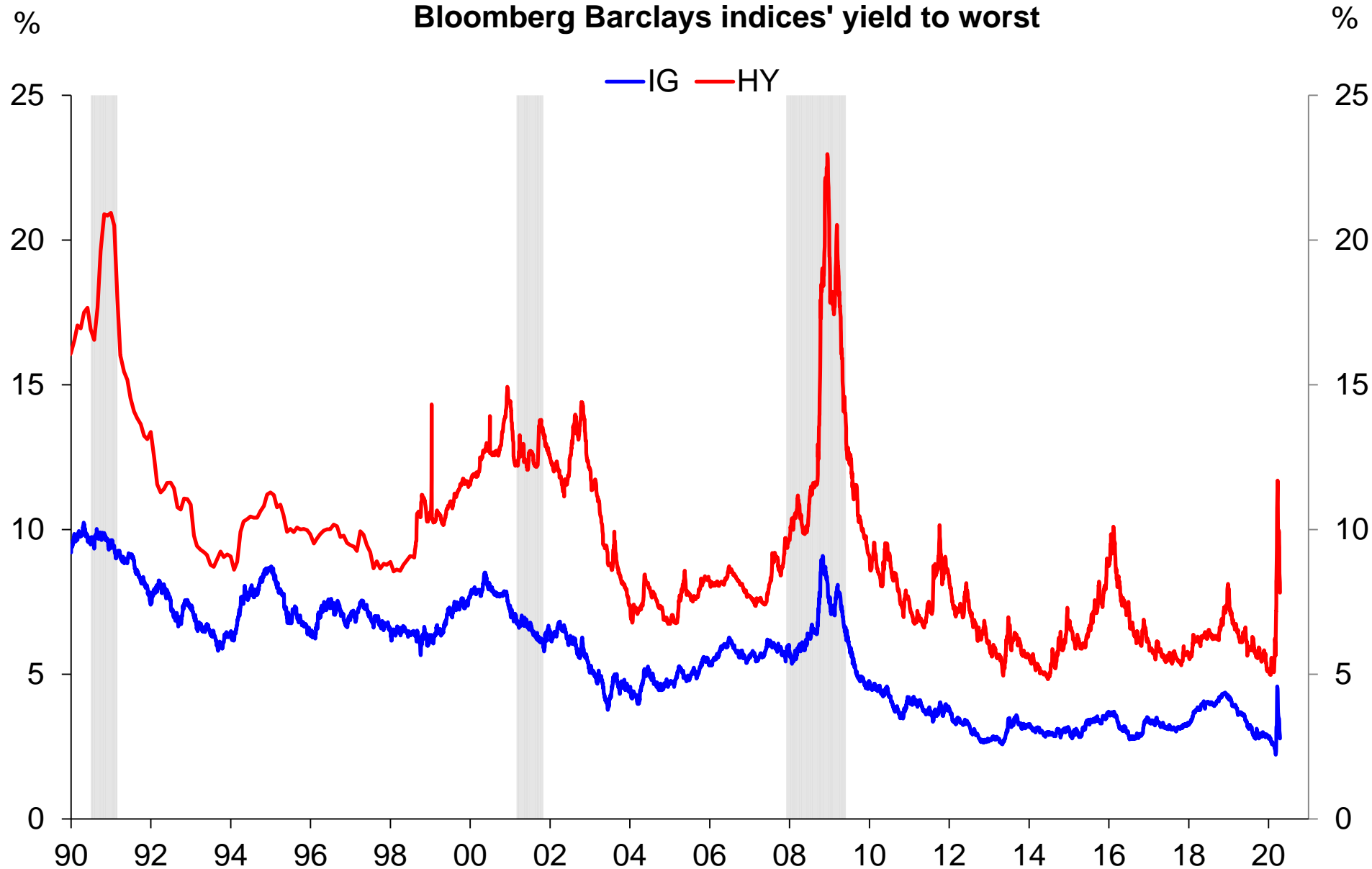


Source: Bloomberg Finance LP, DB Global Research



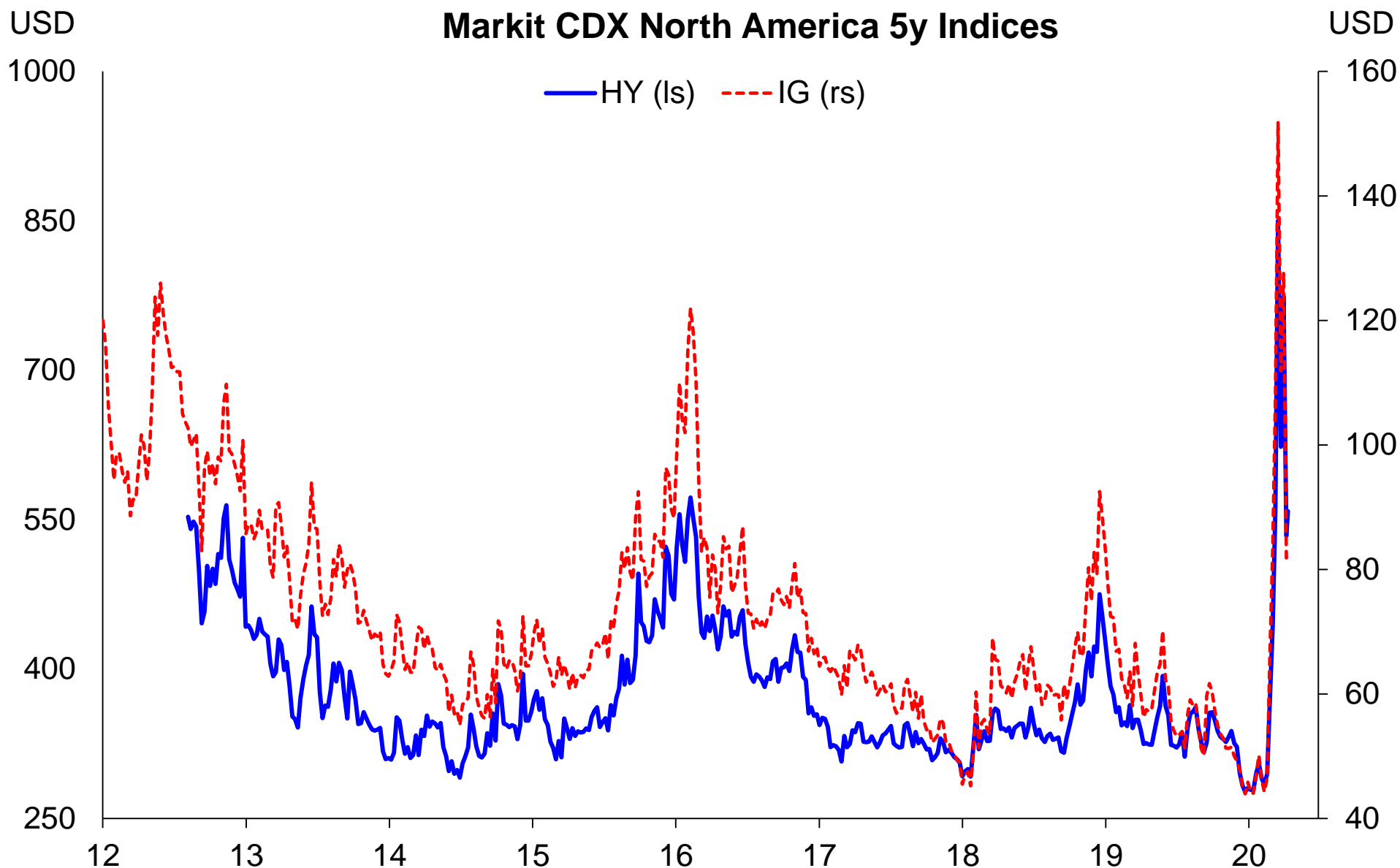
# Yields on IG and HY corporate bonds coming down

**Bloomberg Barclays indices' yield to worst**



Source: Bloomberg Finance LP, DB Global Research

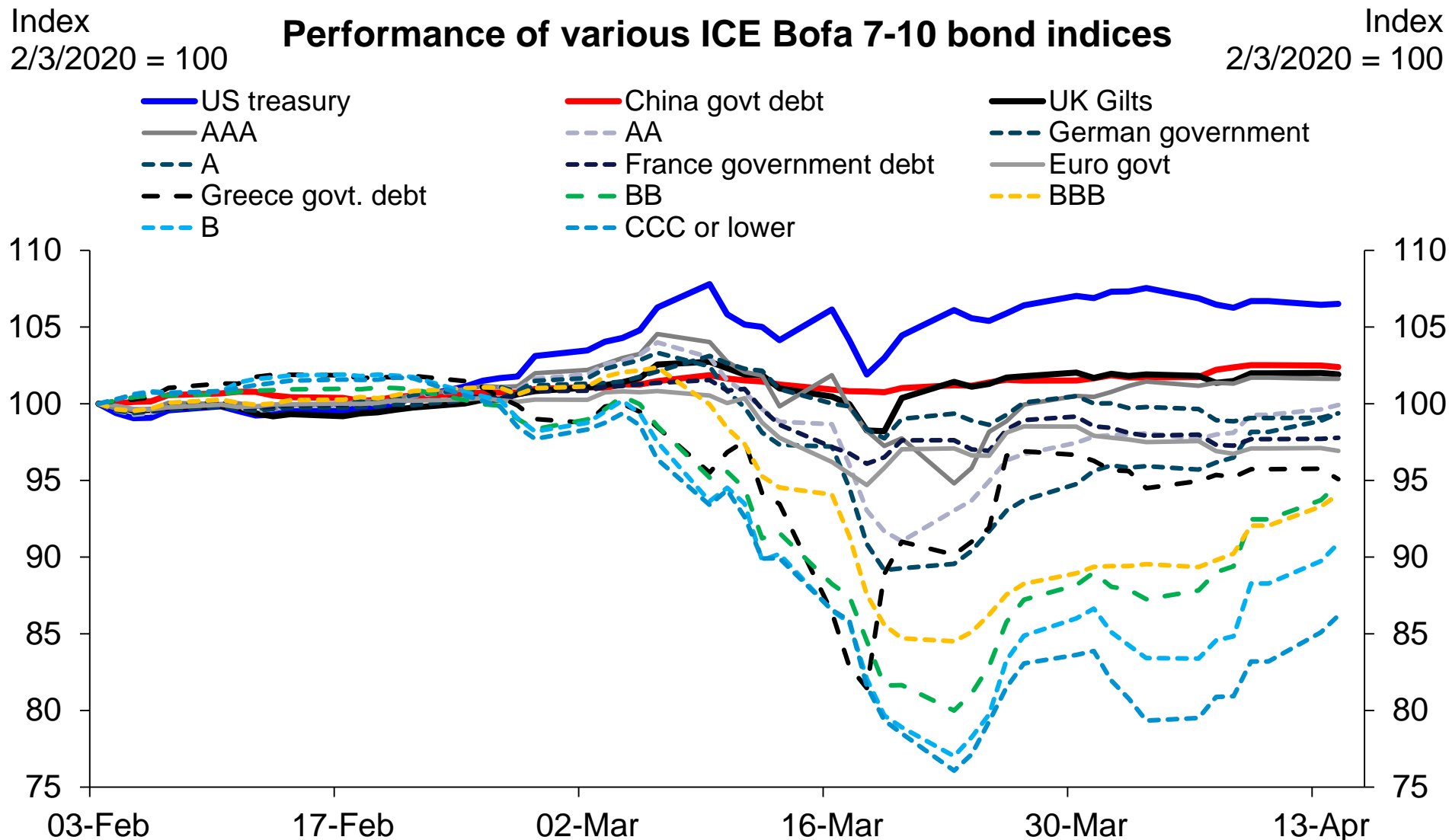
# IG and HY CDS coming down



Source: Markit, Bloomberg Finance LP, DB Global Research



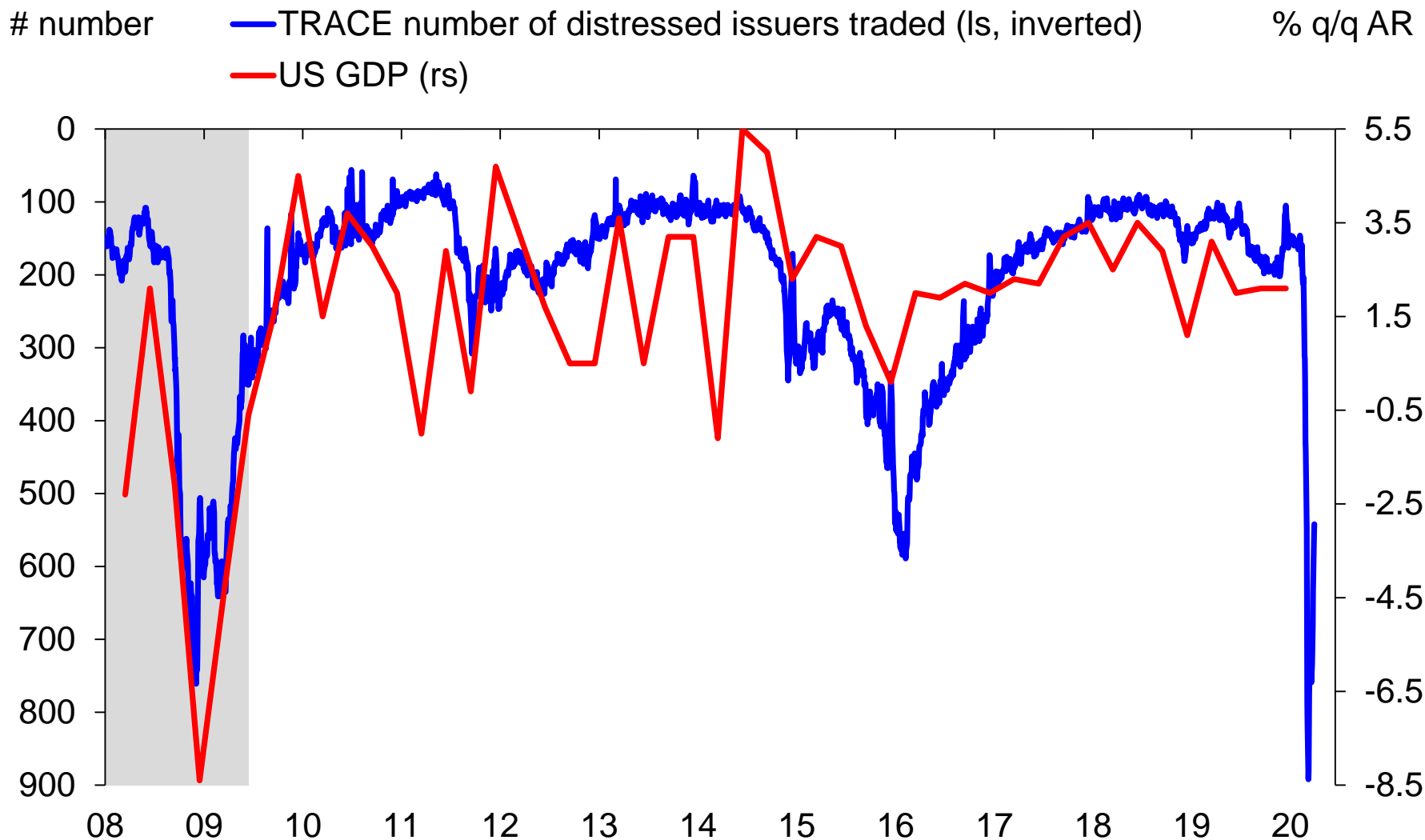
# Less stress in credit markets than a few weeks ago



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



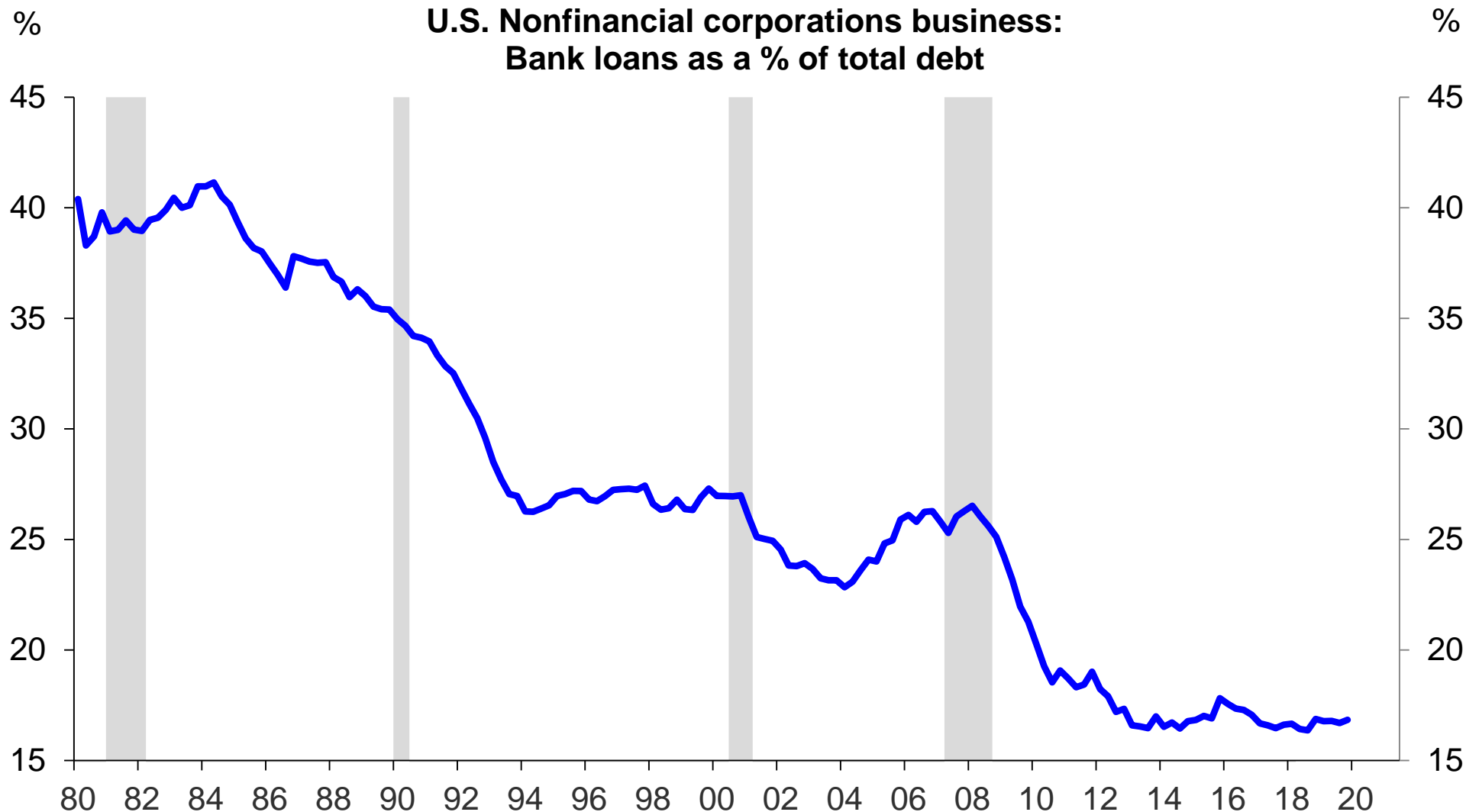
# Number of distressed issuers traded



Note: Distressed bonds are bonds trading at more than 1000 basis points over the benchmark Treasury.

Source: BEA, Bloomberg Finance LP, DB Global Research

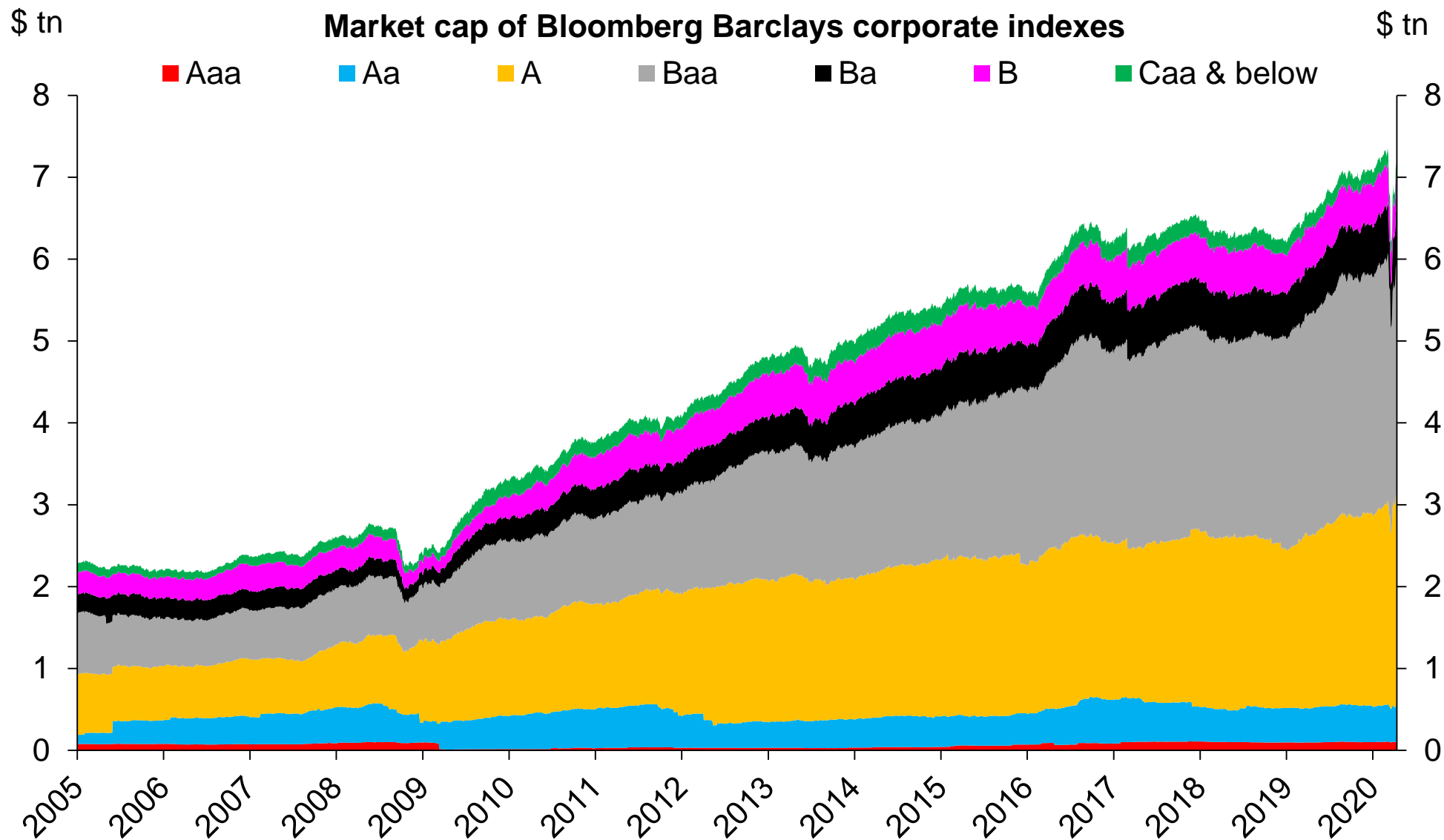
# US corporates getting financing other places than in banks



Note: Bank loans is defined as the sum of loans and mortgages with depository institutions. Corporate debt is defined as the sum of debt securities and bank loans

Source: FRB, Haver Analytics. DB Global Research

US credit markets have grown from \$2trn in 2008 to \$7trn today.  
All driven by much more BBB and single-A paper outstanding



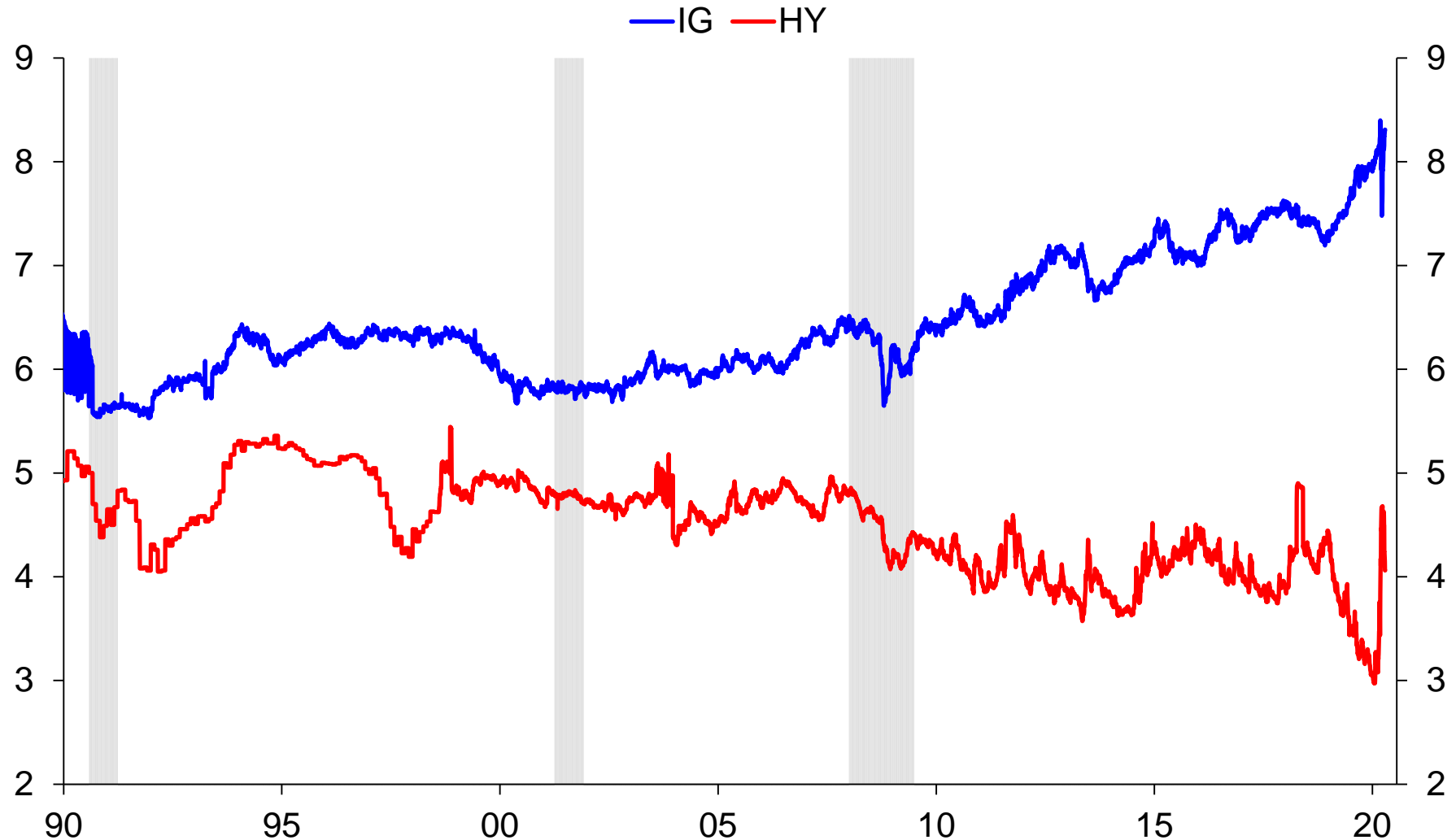
Source: Bloomberg Finance LP, DB Global Research





## Duration of IG and HY indexes

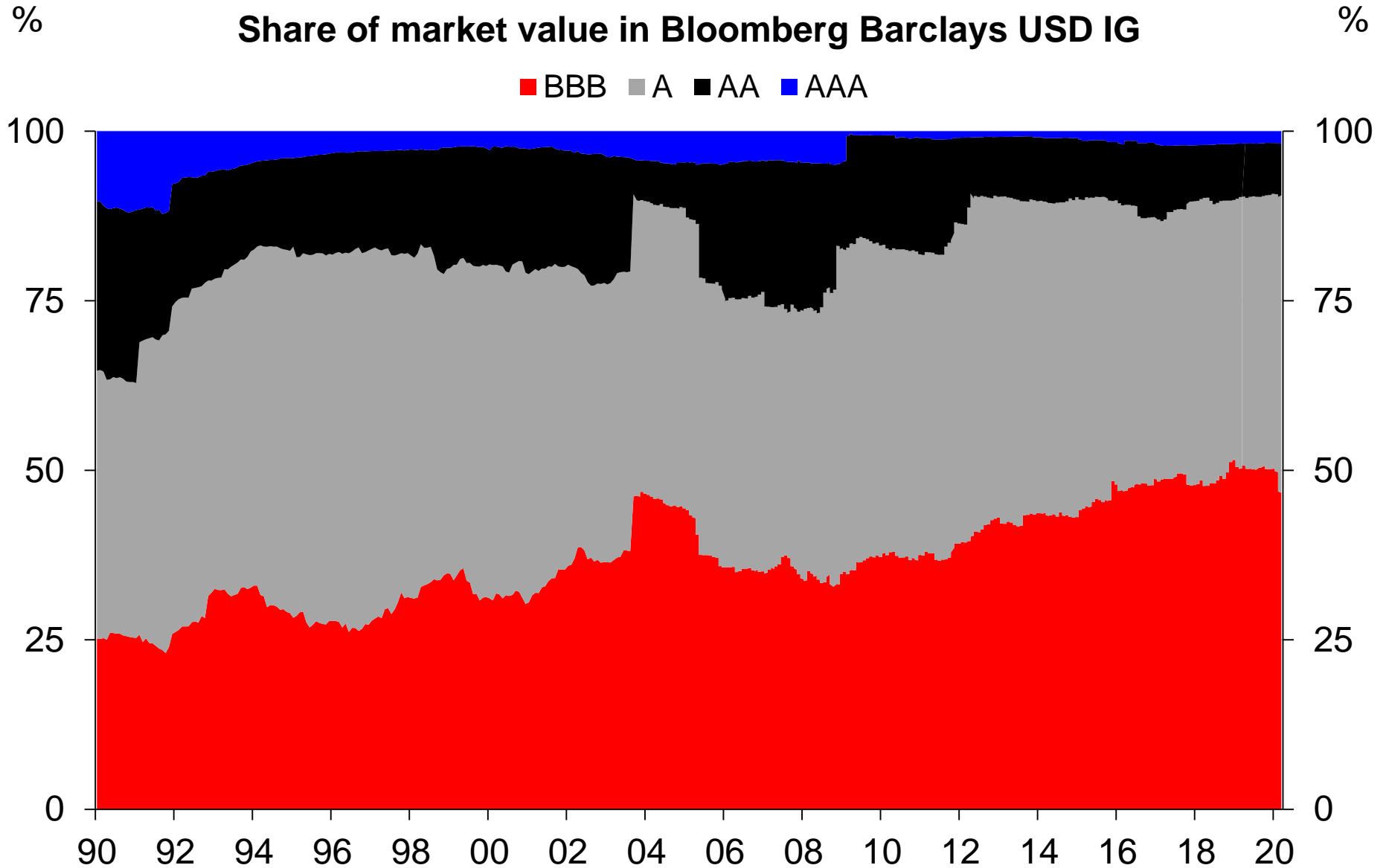
# years **Macaulay duration of Bloomberg Barclays corporate indices** # years



Source: Bloomberg Finance LP, DB Global Research



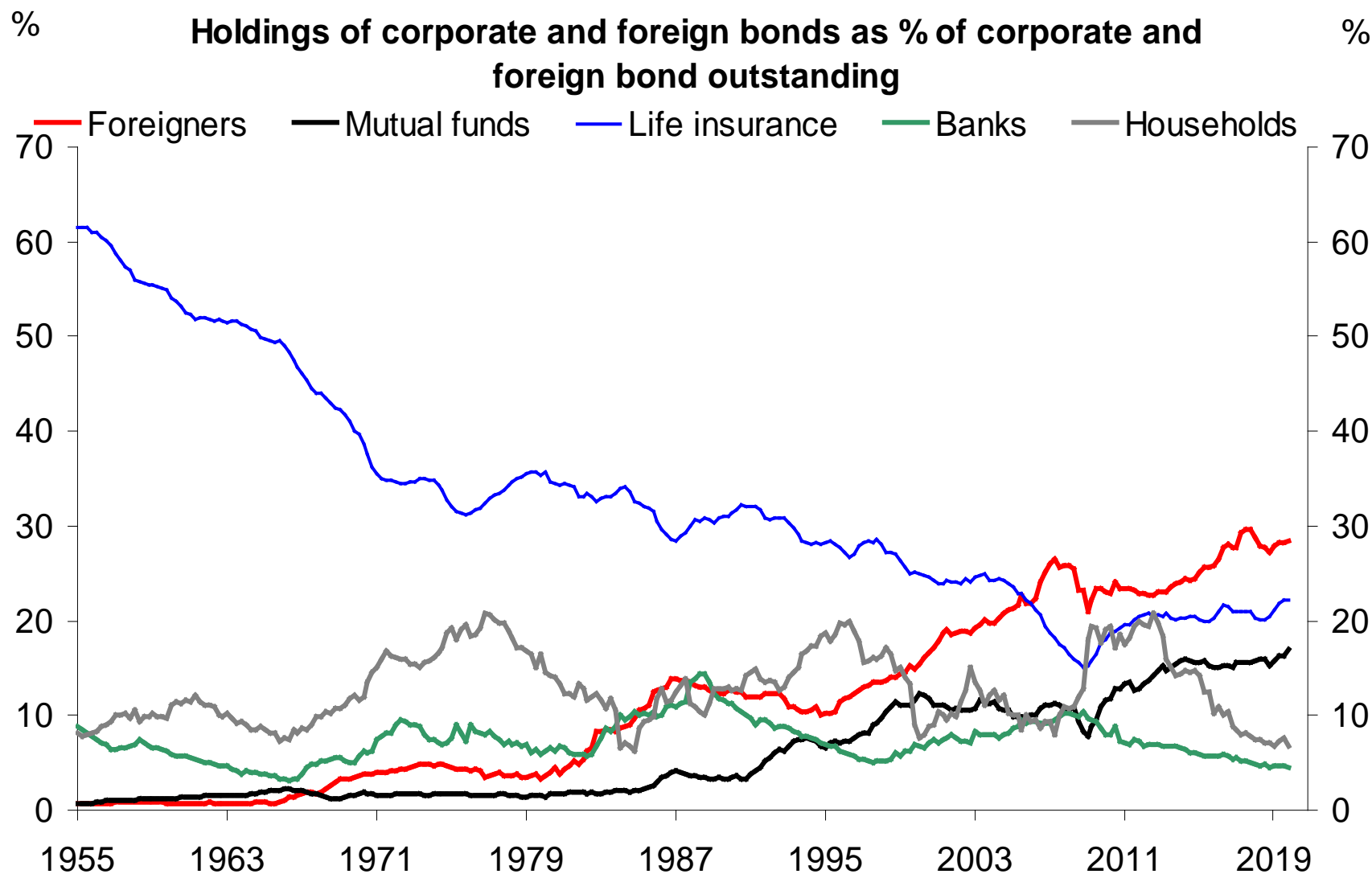
## 50% of the IG index is BBB



Source: Bloomberg Finance LP, DB Global Research



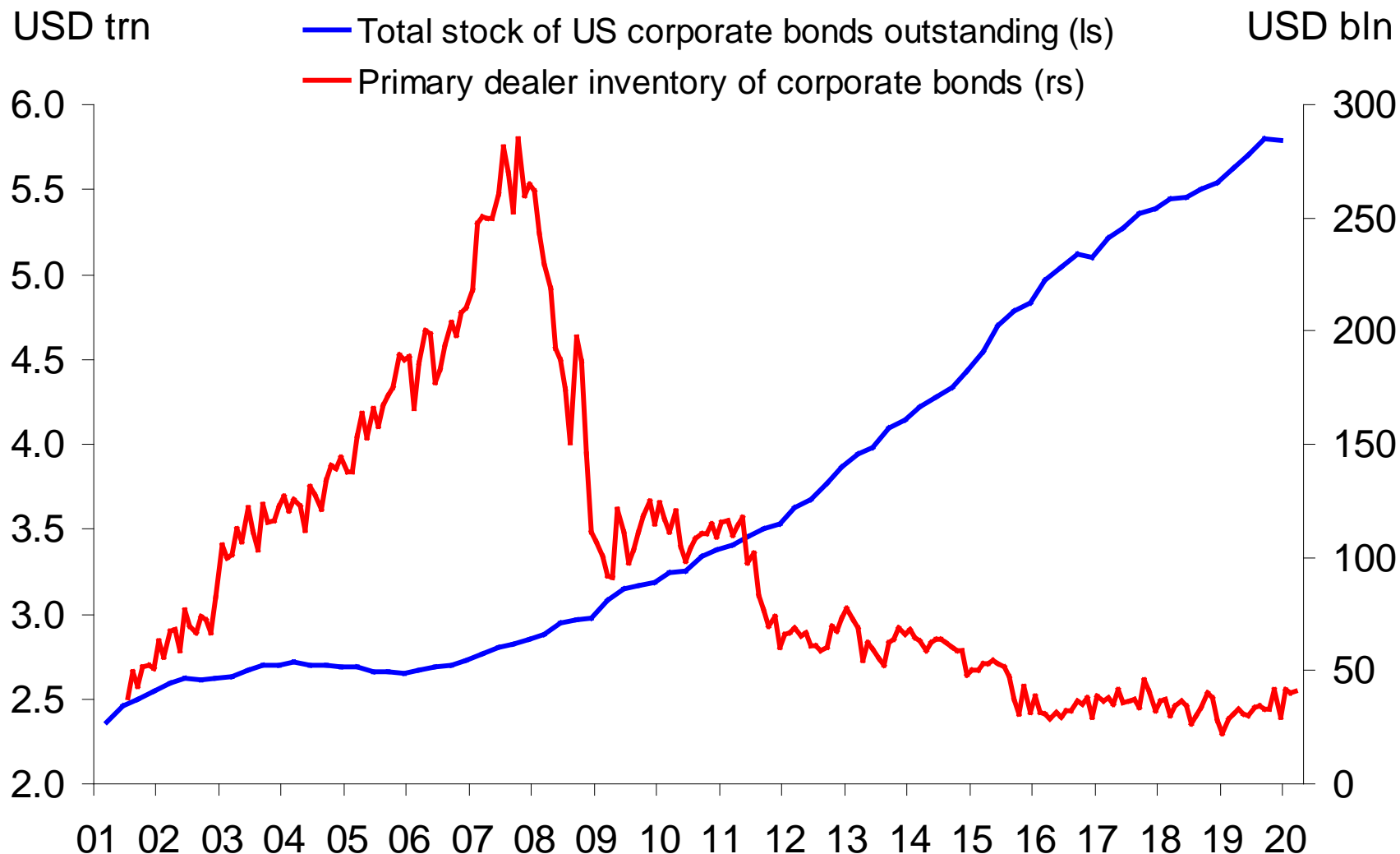
# Foreign appetite for US IG and HY



Source: FRB, Haver Analytics, DB Global Research



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

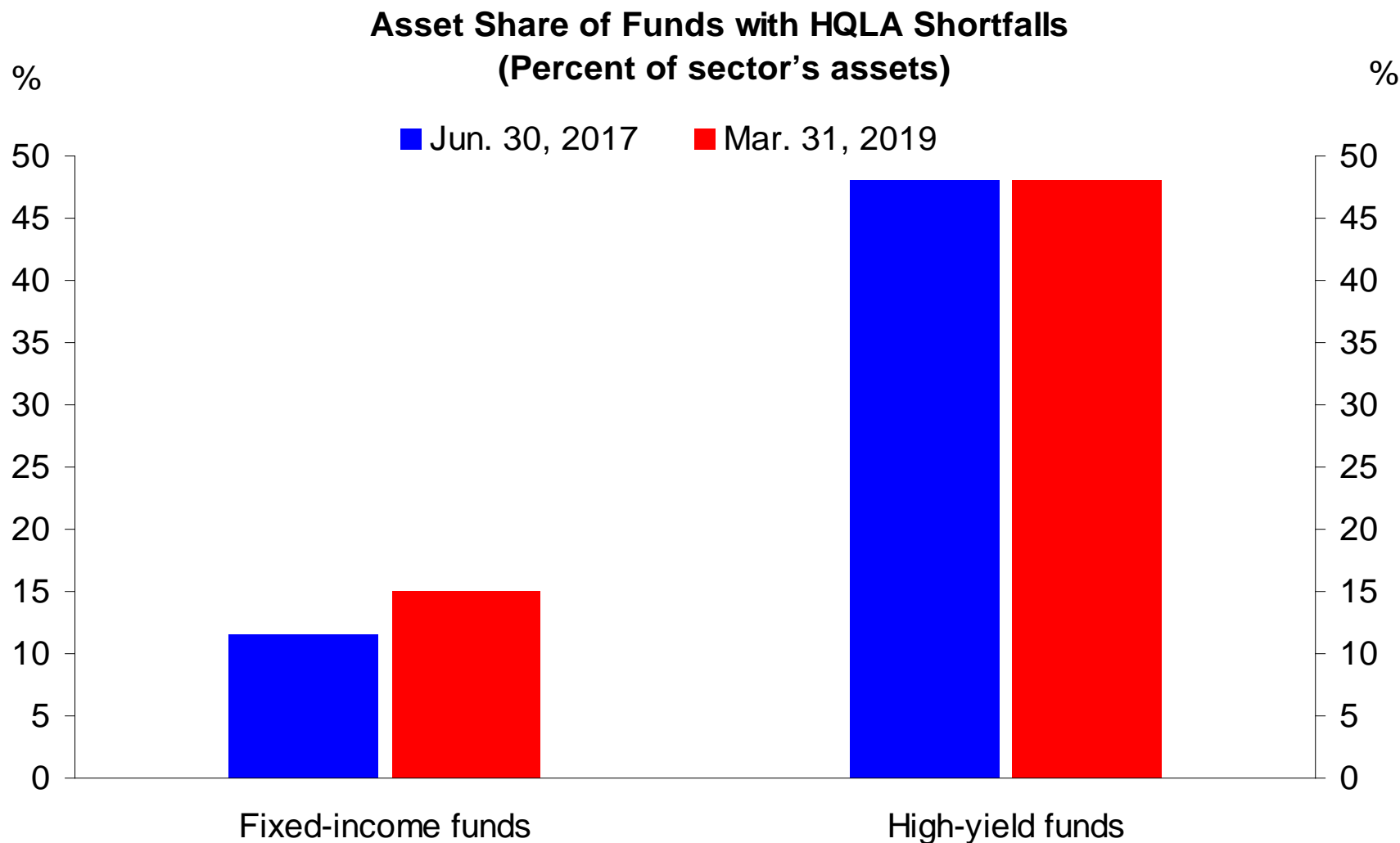


Source: FRB-NY, FRB, Haver Analytics, DB Global Research



# How vulnerable are markets to a redemption shock?

## Funds with estimated liquidity shortfalls account for half of all high-yield fund assets

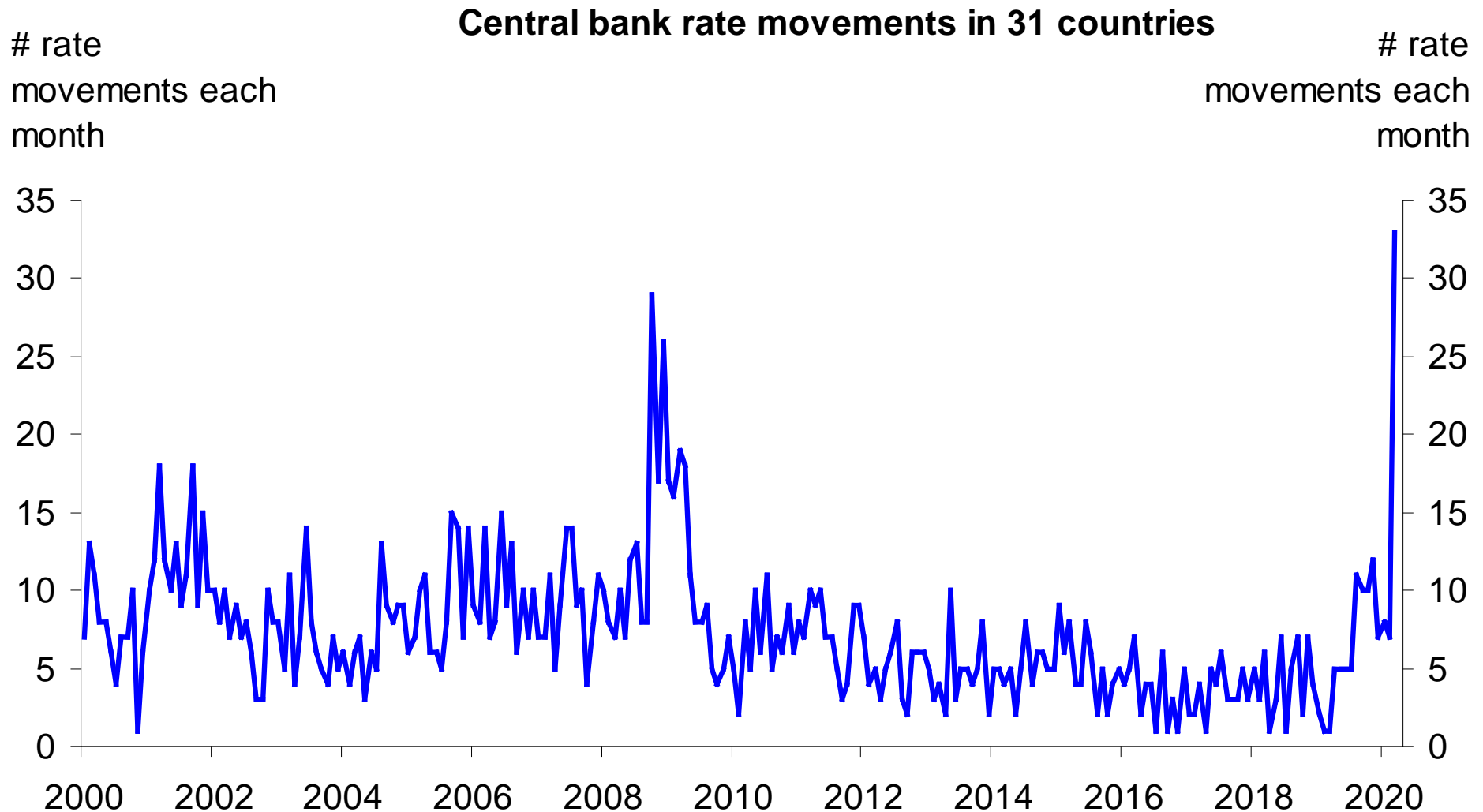


Note: Total AUM of funds analyzed: \$10.5trn. The exercise assumes that redemption shocks are equivalent to the worst percentile of funds' monthly asset outflows during 2000–19. If these shocks cannot be absorbed, funds suffer liquidity shortfalls.

Source: IMF GFSR October 2019, DB Global Research



# Global central banks: Record amount of rate cuts



Note: Central Banks considered are Euro area, US, UK, Denmark, Norway, Sweden, Switzerland, Canada, Japan, Iceland, Australia, New Zealand, South Africa, Brazil, Chile, Colombia, Peru, Israel, Saudi Arabia, Hong Kong, India, Indonesia, South Korea, Malaysia, Philippines, Thailand, China, Czech Republic, Hungary, Poland, Romania

Source: BIS, Haver Analytics, DB Global Research

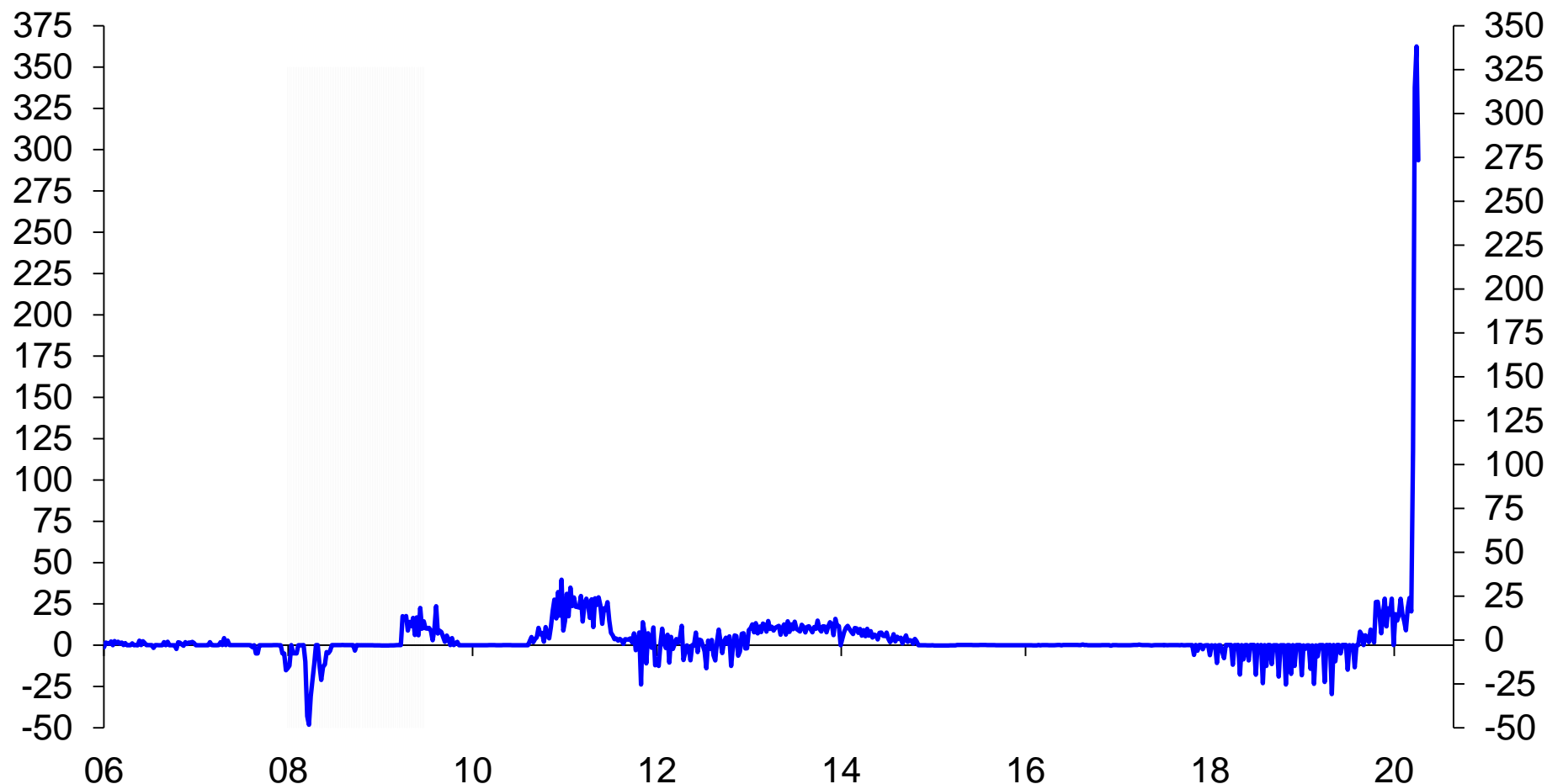


# At the peak of QE Fed bought \$120bn of Treasuries every month. Today they are buying \$70bn each day

\$ bn,  
weekly chg.

## Treasury securities held outright by the Fed

\$ bn,  
weekly chg.



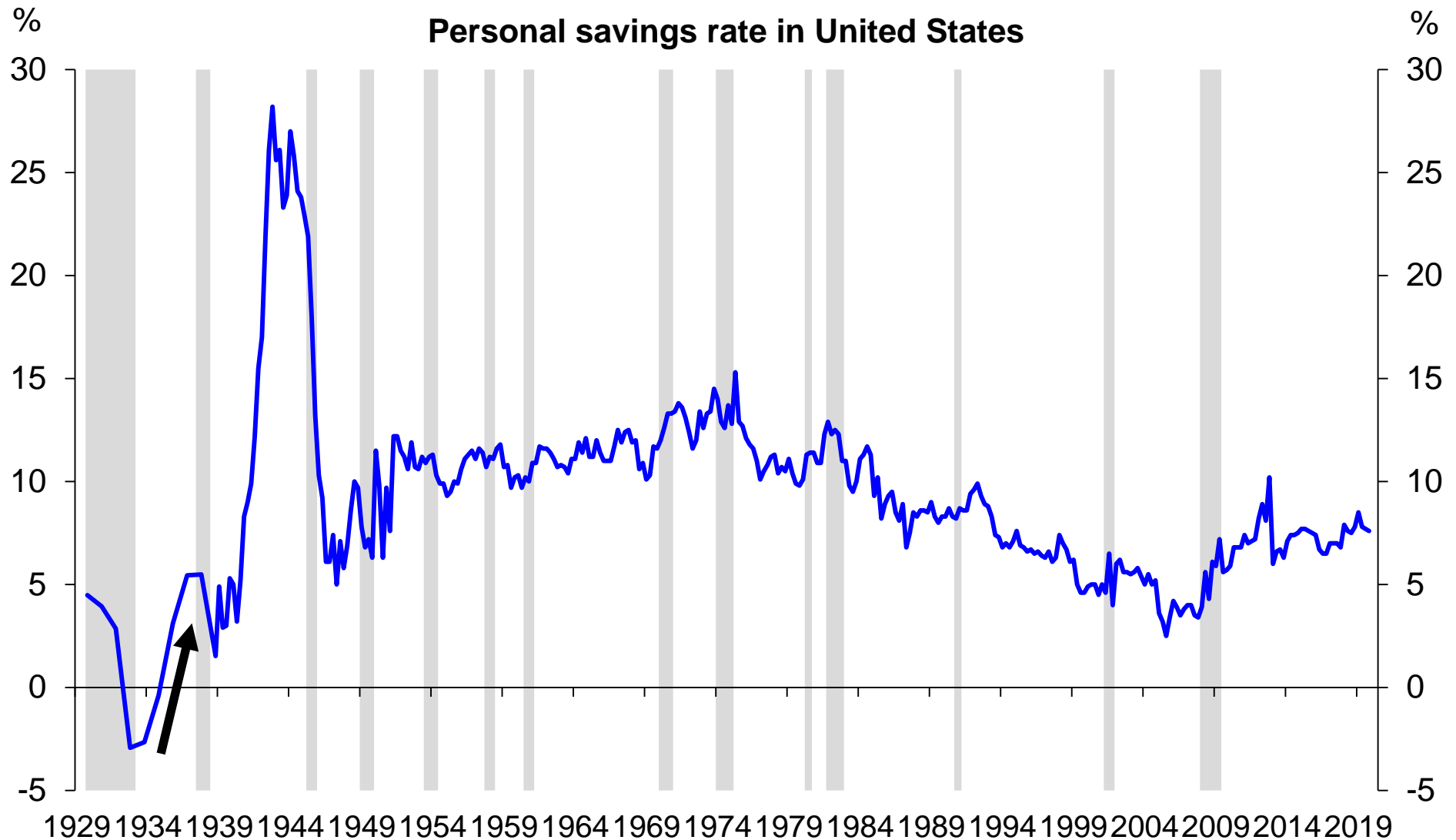
Source: Federal Reserve, Haver Analytics, DB Global Research





# 3. The shape of the economic rebound

# The household savings rate increased after the Great Depression in the 1930s



Source: Historical Statistics of United States US Census Bureau, BEA, FRED, Haver Analytics, DB Global Research

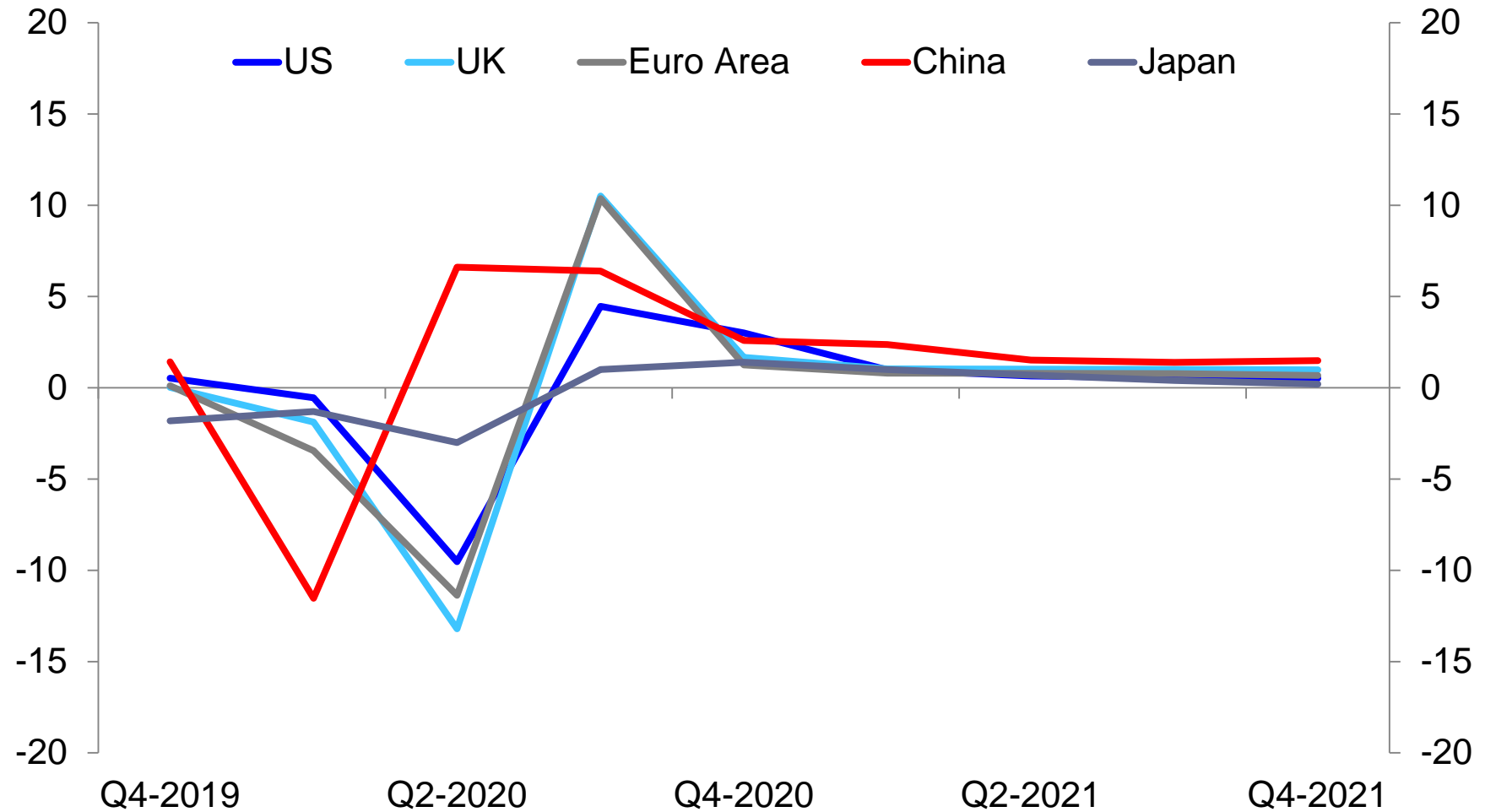


# A swoosh recovery

%qoq

## GDP growth - baseline

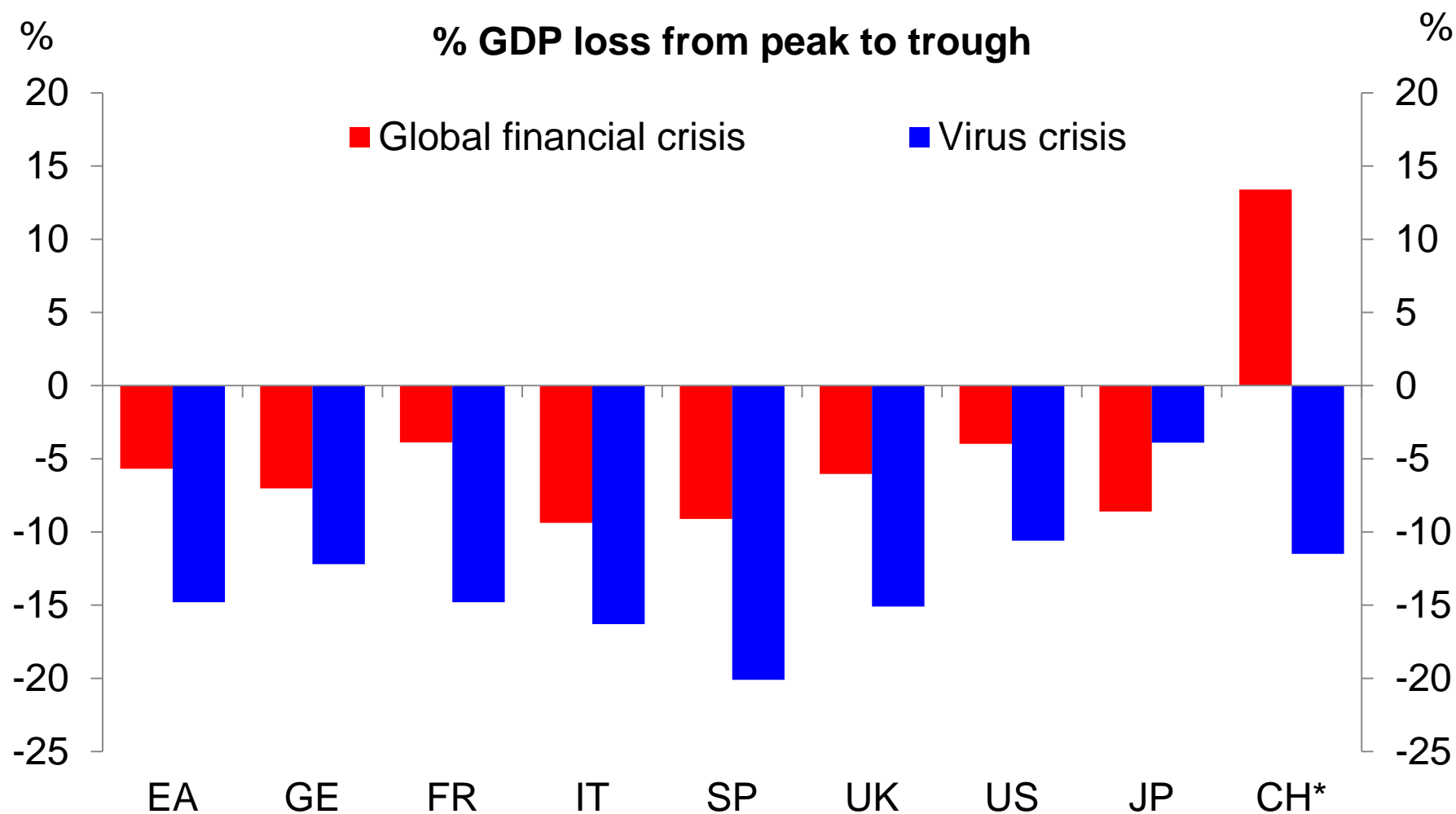
%qoq



Source: DB Global Research



# This recession will be deeper than the 2008 Great Recession



Note: China 'GFC crisis' based on GDP growth over the same period the US contracted; 'virus crisis' is Q1-2020 only

Source: DB Global Research



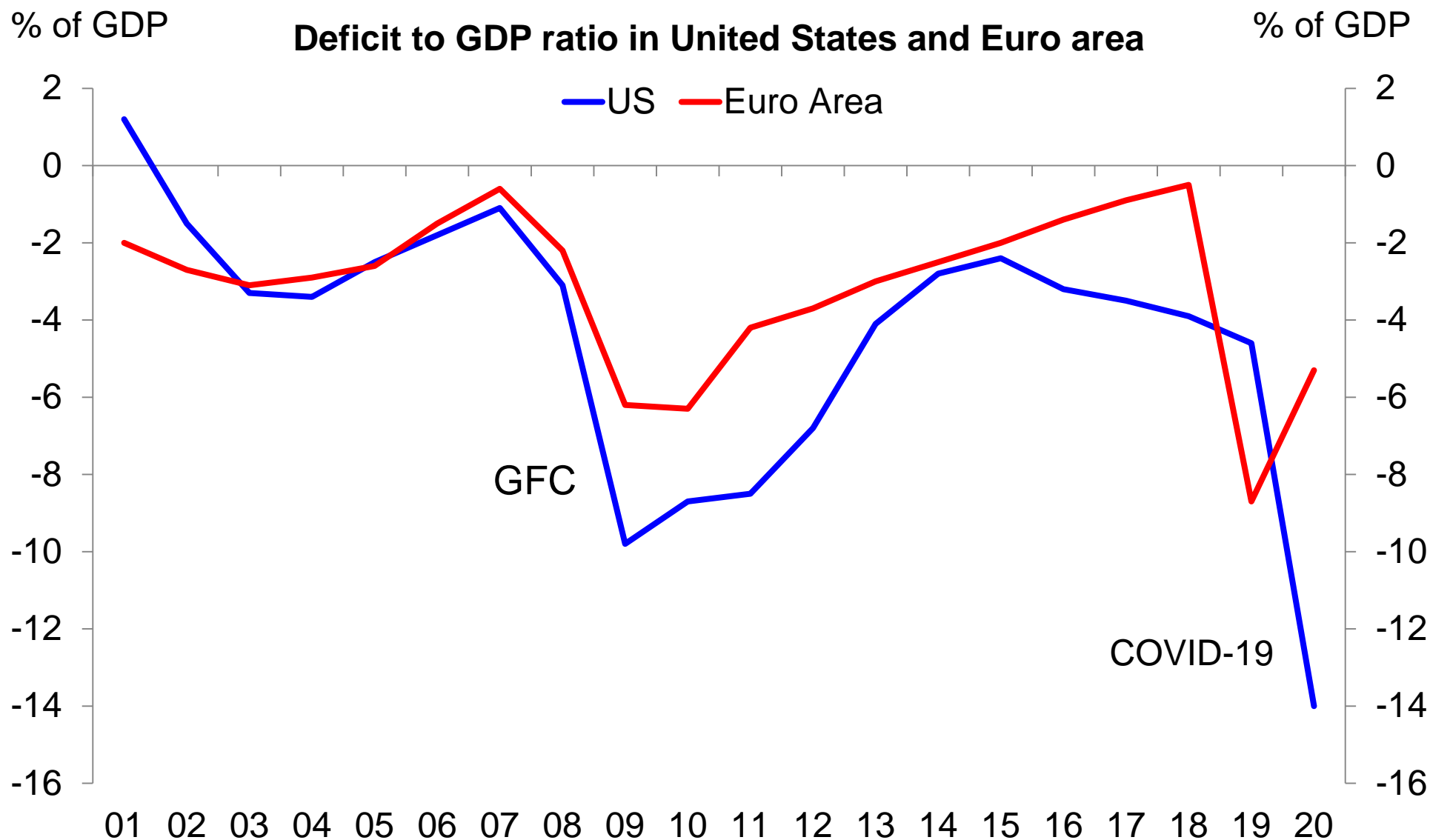
# US and EU: Massive fiscal and monetary response

USD bn	EA	US
<i>Fiscal policy</i>		
Discretionary stimulus	300	1650
Cyclical deficit	600	350
Credit guarantees, etc	1750	N/A
<i>Monetary policy</i>		
Assets purchases	750	1000*
Lending operations	1200	5000
<b>TOTAL</b>	<b>4600</b>	<b>8000</b>

Note: US asset purchases only include through March.

Source: DB Global Research

# Fiscal response today is bigger than during the financial crisis



Source: Eurostat, DB Global Research



# Fiscal sustainability coming back as macro topic

% of GDP	Fiscal balance		Gross public debt	
	2019	2020E	2019	2020E
Germany	1.3	-7.3	59.2	68.3
France	-3.2	-9.5	99.2	114.4
Italy	-1.6	-9.2	135.6	157.0
Spain	-2.1	-9.7	96.0	113.5
US	-4.6	-14.0	79.0	95.0

Source: DB Global Research



# Baseline Scenario Projections

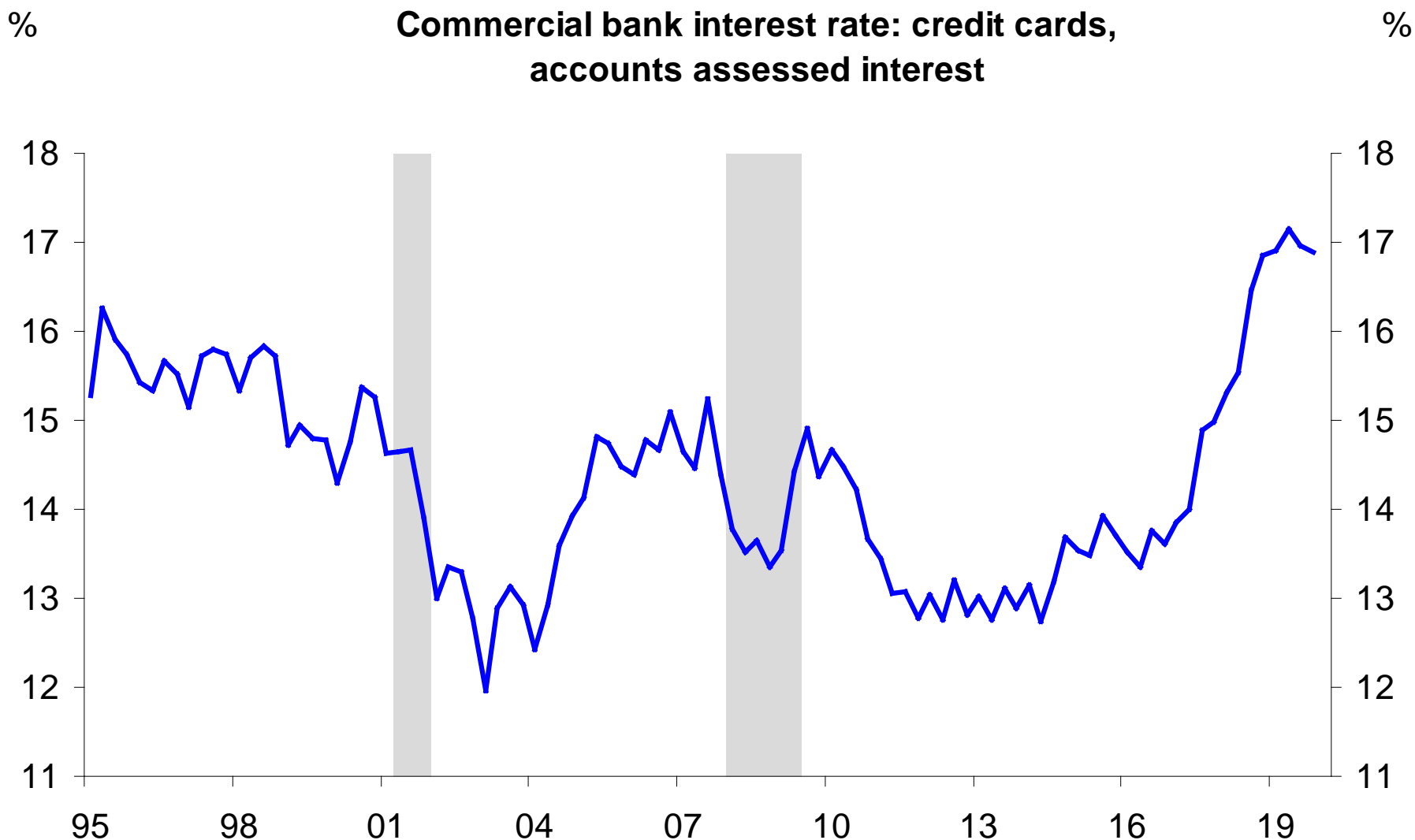


	Q1 2020	Q2 2020	Q3 2020	Q4 2020	2020	2021	2020	2021
<b>GDP Growth (%qoq)</b>					<b>%yoy</b>	<b>%yoy</b>	<b>%q4/q4</b>	<b>%q4/q4</b>
US	-0.5	-9.5	4.5	3.0	-4.2	3.8	-3.2	2.7
Euro Area	-3.4	-11.4	10.4	1.3	-6.9	4.8	-4.4	3.1
Germany	-2.6	-9.6	8.7	1.6	-5.3	5.4	-2.8	4.0
UK	-1.9	-13.2	10.5	1.7	-6.5	5.2	-4.3	4.1
France	-2.8	-12.0	10.2	1.2	-6.8	4.2	-4.7	2.8
Italy	-6.3	-10.0	10.9	0.8	-8.7	4.1	-5.7	1.7
Spain	-3.0	-17.1	14.6	1.2	-8.7	5.0	-6.7	3.3
Japan	-1.3	-3.0	1.0	1.4	-3.9	2.6	-1.9	2.3
China	-11.5	6.6	6.4	2.6	-1.4	11.9	2.9	6.9
Fed Funds Rate	0.1	0.1	0.1	0.1				
ECB Main Refinancing Rate	0.0	0.0	0.0	0.0				
ECB Deposit Facility Rate	-0.5	-0.5	-0.5	-0.5				
BoJ Policy Rate	-0.1	-0.1	-0.1	-0.1				
10Yr US Treasury	1.0	0.9	0.8	1.3				
10Yr German Bund	-0.4	-0.3	-0.1	0.0				
S&P 500	2350	2650	2950	3250				
STOXX 600	275	330	385	440				
US HY	1020*	1100	700	535		400		
US IG	380*	280	180	155		140		
EUR HY	920*	1000	650	490		400		
EUR IG	235*	230	155	130		110		
EUR/USD	1.08	1.13	1.17	1.20		1.30		
* Credit numbers are for Q1 are current								

Source: DB Global Research



# Credit card interest rate at highest levels in decades

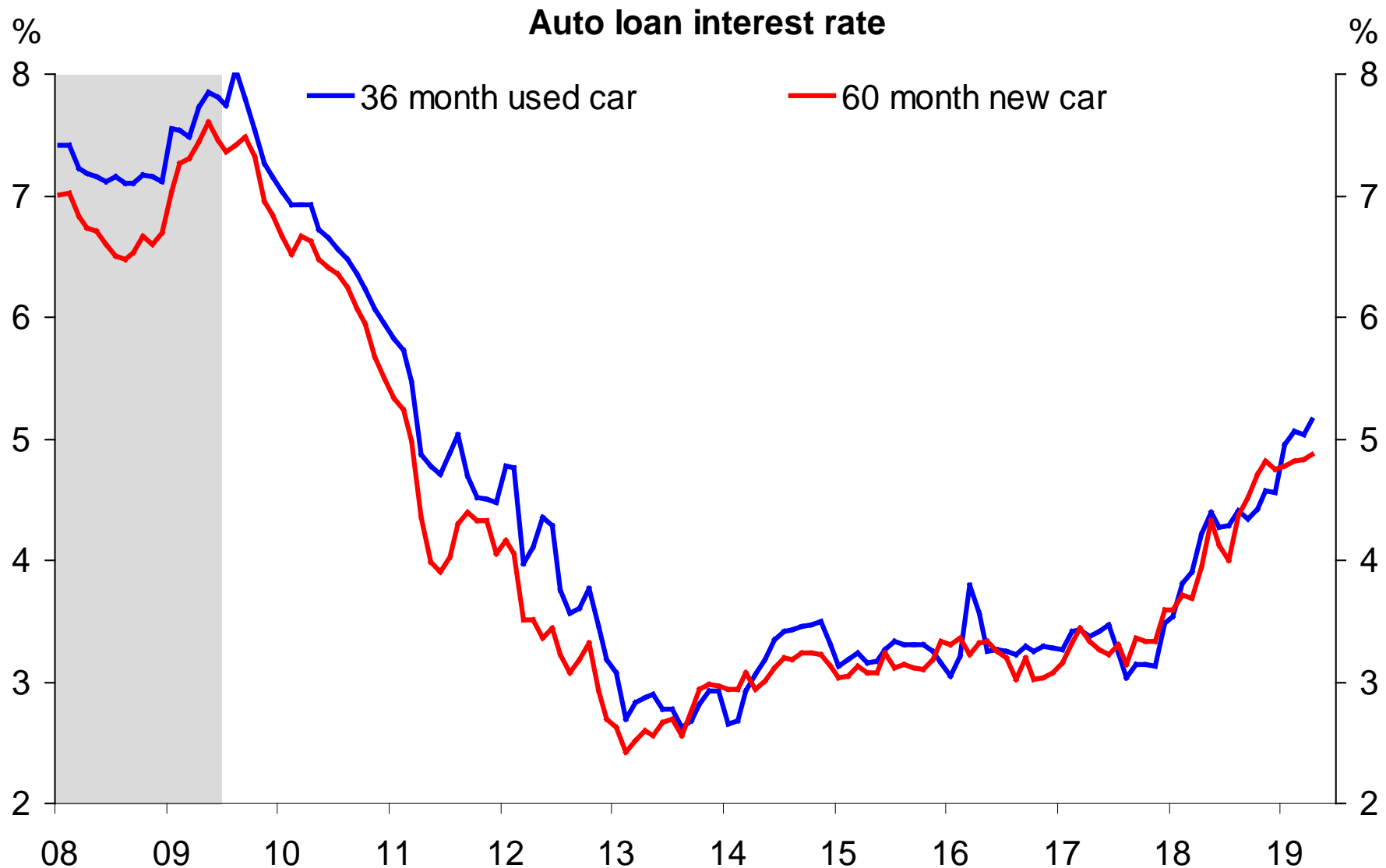


*Note: This rate is the annualized ratio of total finance charges at all reporting banks to the total average daily balances against which the finance charges were assessed*

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



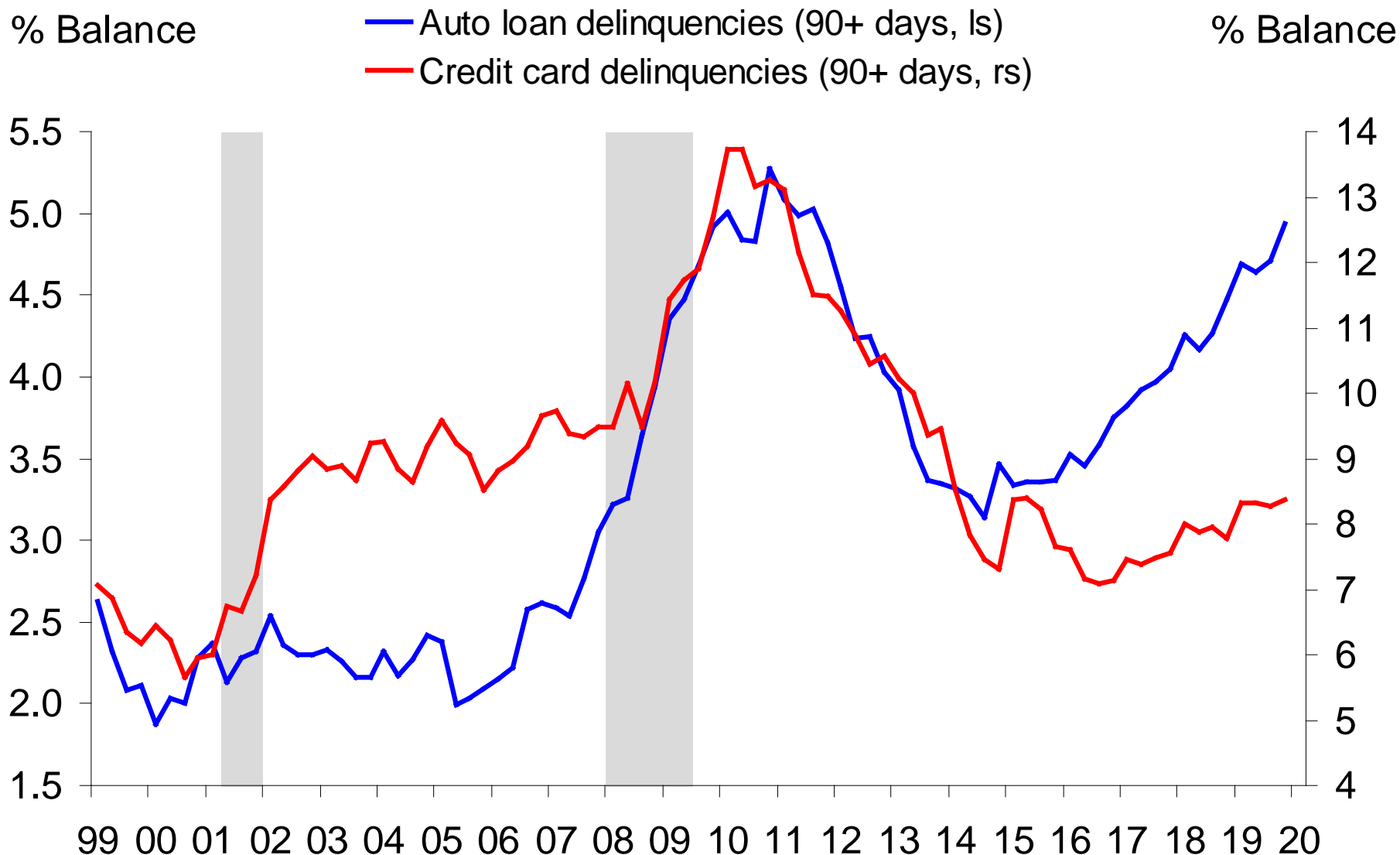
# Auto loan interest rates increased by 2%-points in 2018



Source: FRB, Haver Analytics, DB Global Research



# Delinquency rates moving up for consumers

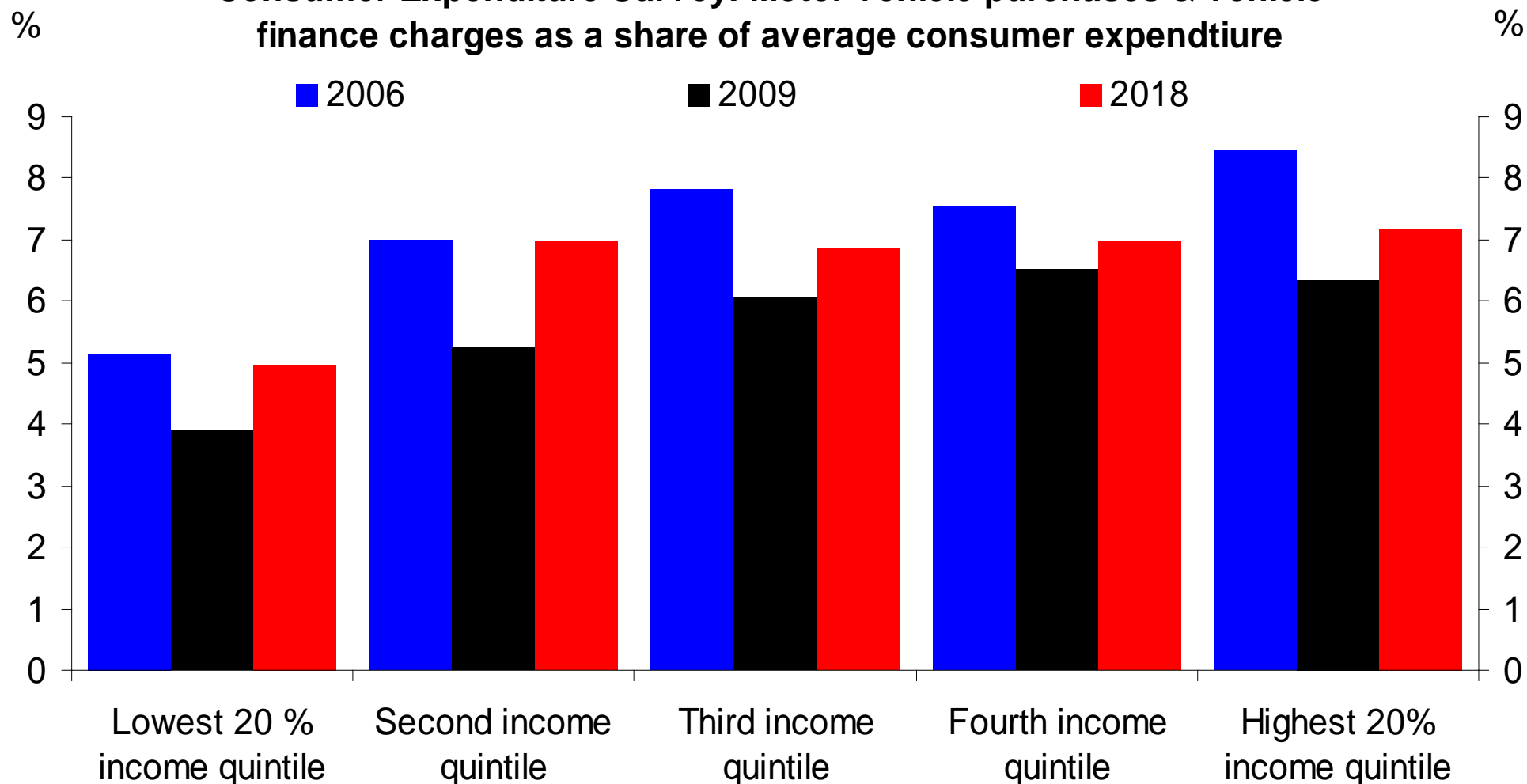


Source: FRB, Haver Analytics, DB Global Research



## Auto loans: Lower income groups currently at 2006 levels in terms of debt and interest payments

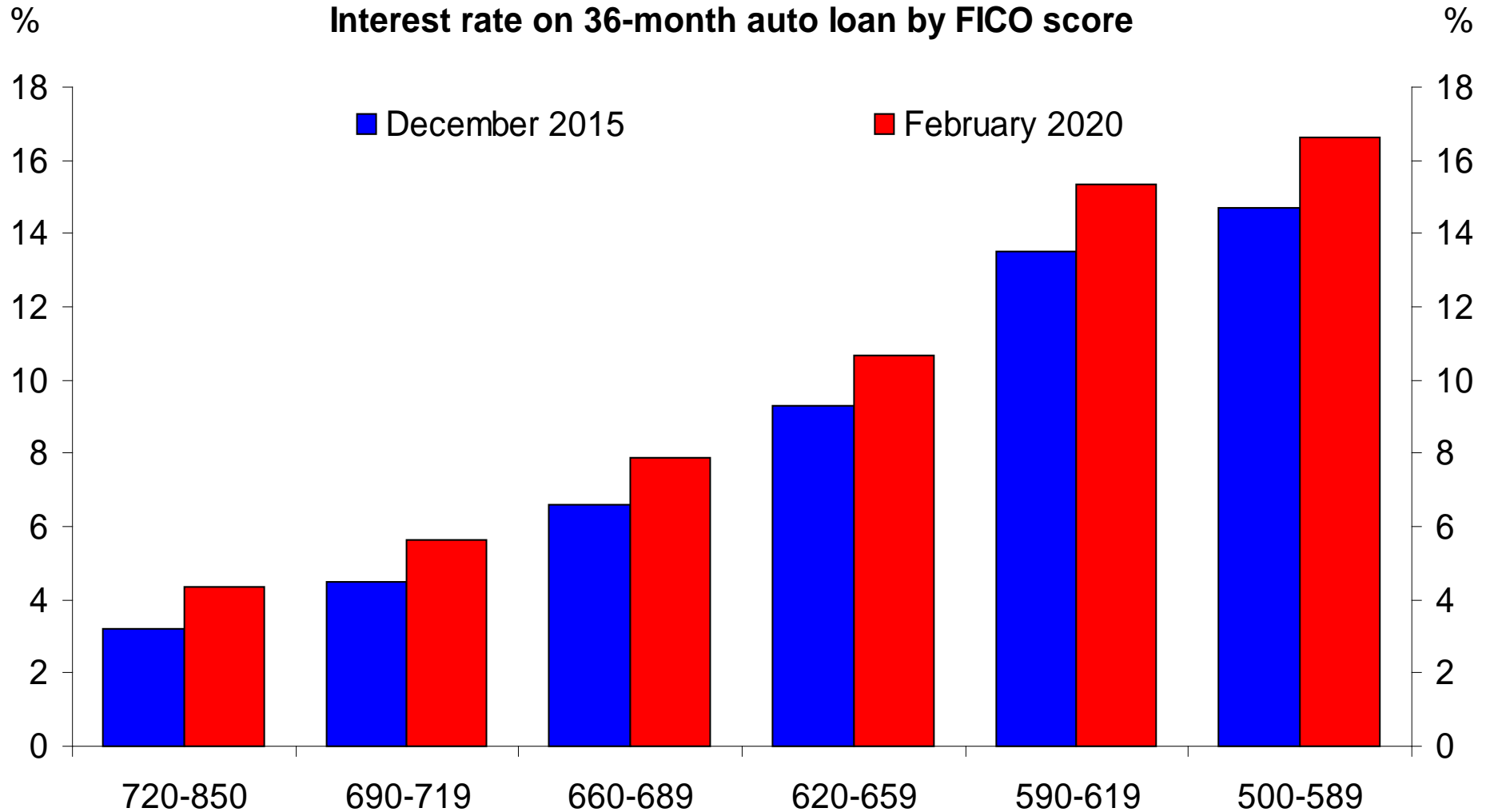
### Consumer Expenditure Survey: Motor vehicle purchases & vehicle finance charges as a share of average consumer expenditure



Source: BLS, Haver Analytics, DB Global Research



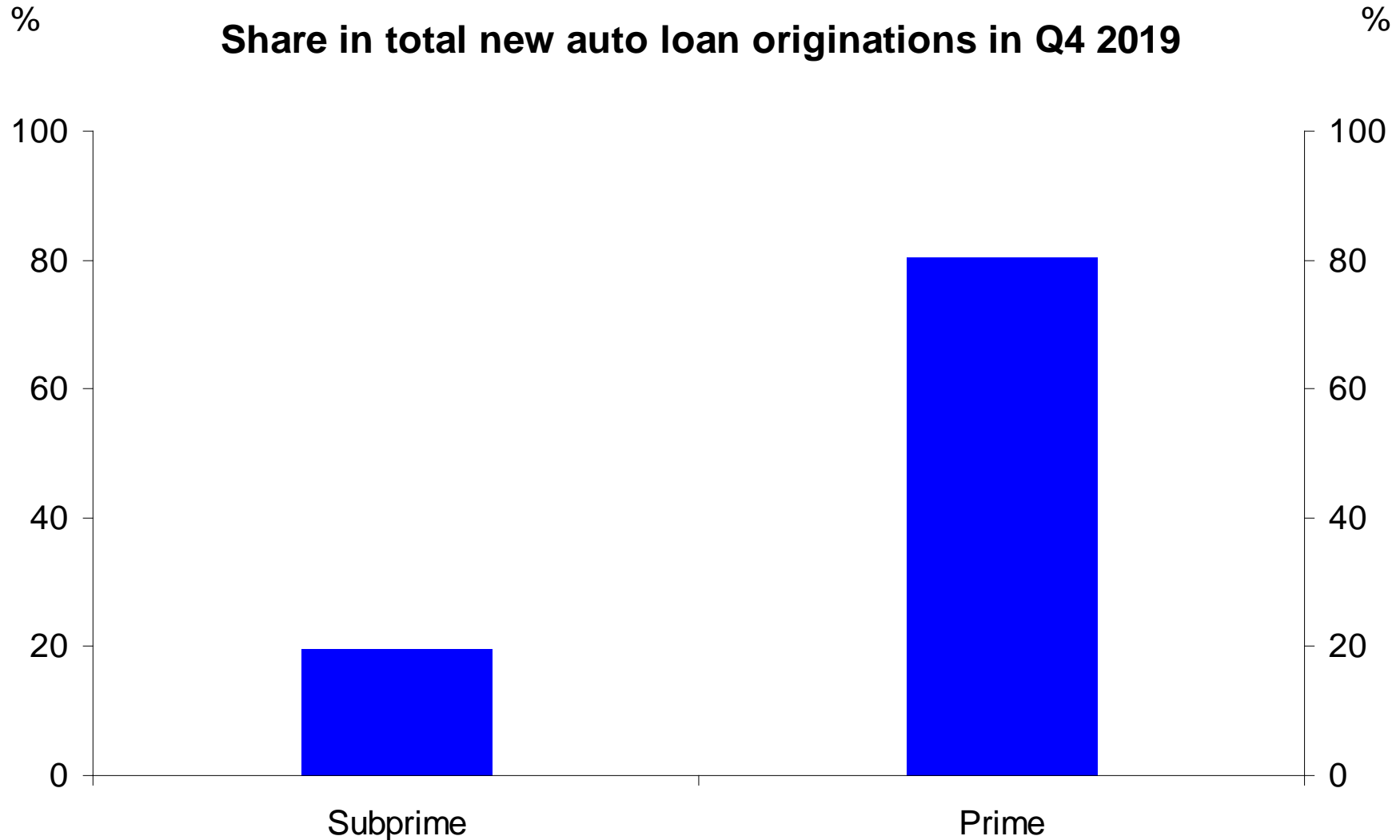
# US: Auto loan interest rates higher across all FICO scores



Source: myfico.com, DB Global Research

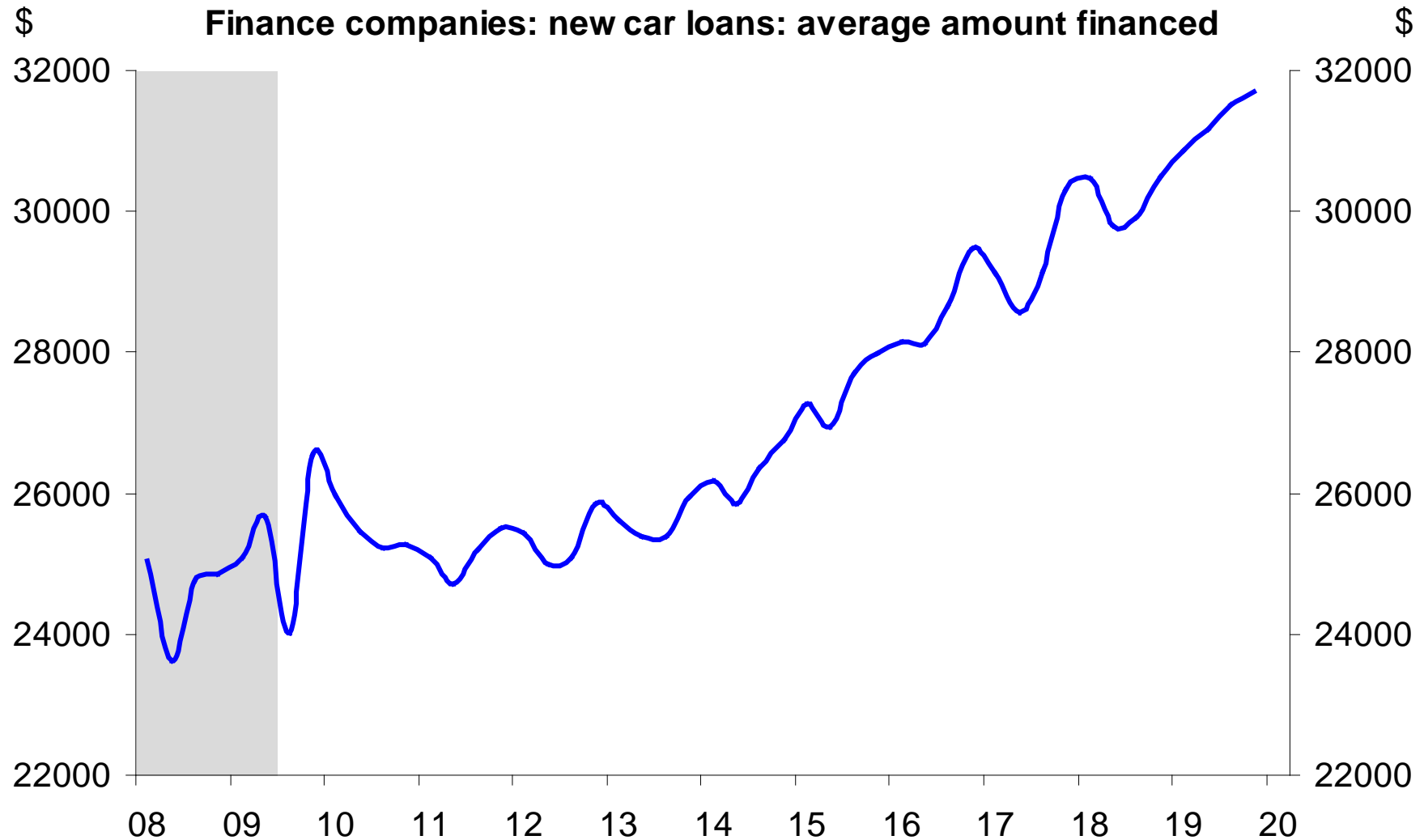


80% of new cars sold are financed.  
And 20% of new car sales are subprime



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

# Average amount financed on new car loans moving higher

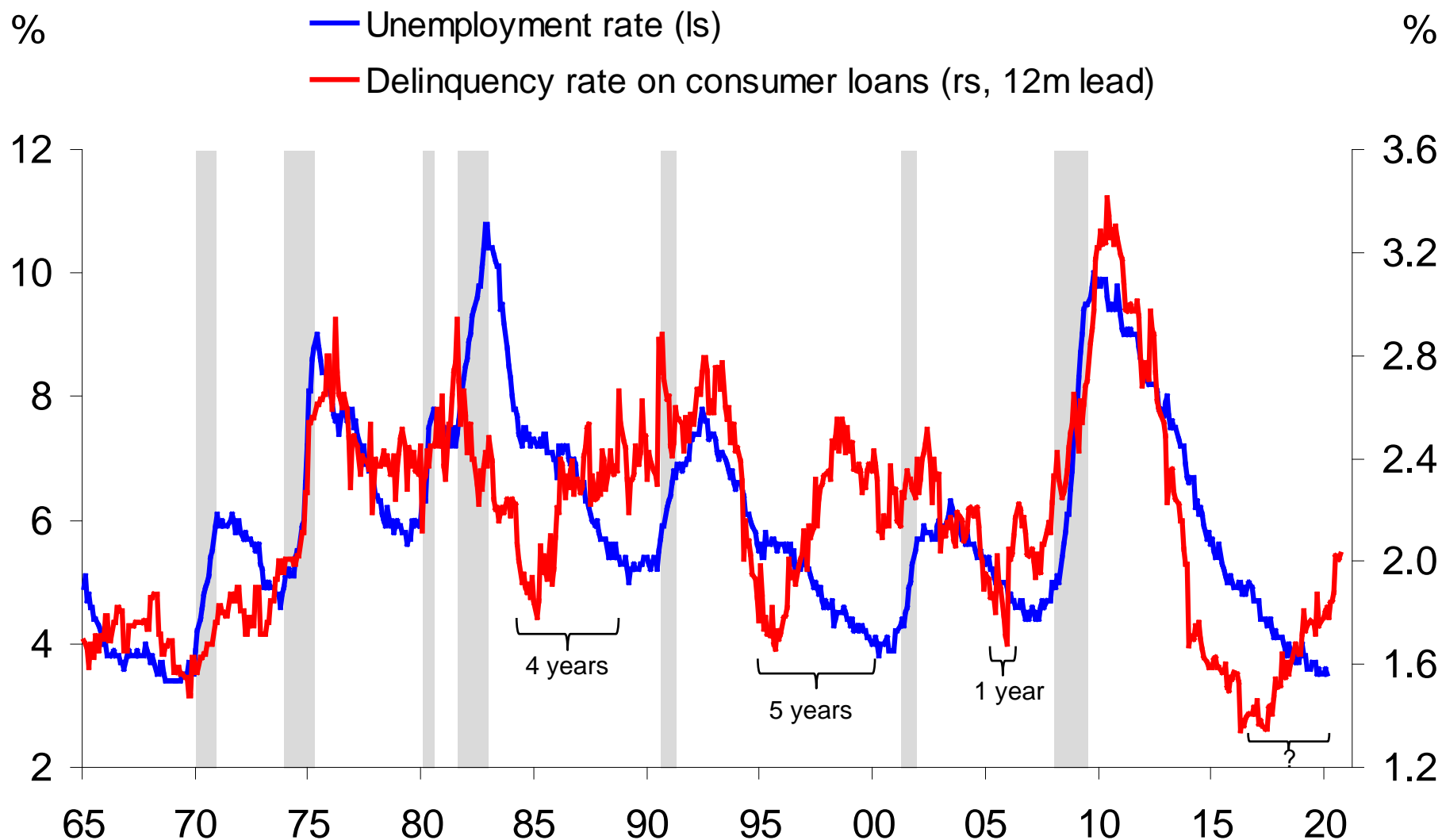


Source: FRB, Haver Analytics, DB Global Research





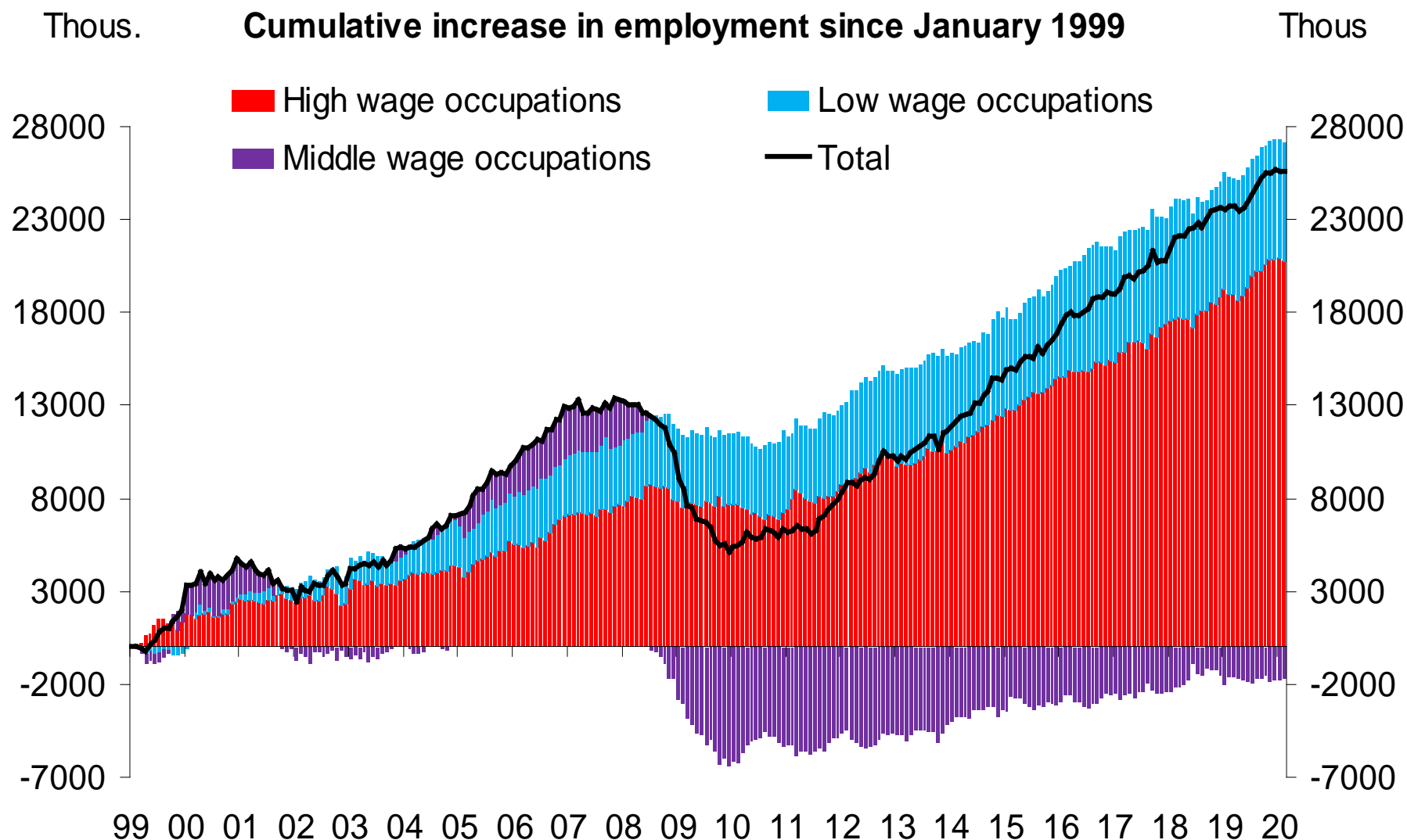
# Delinquency rates already moving higher pre-virus



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

# Job losses during mild recession (2000) versus severe recession (2008)

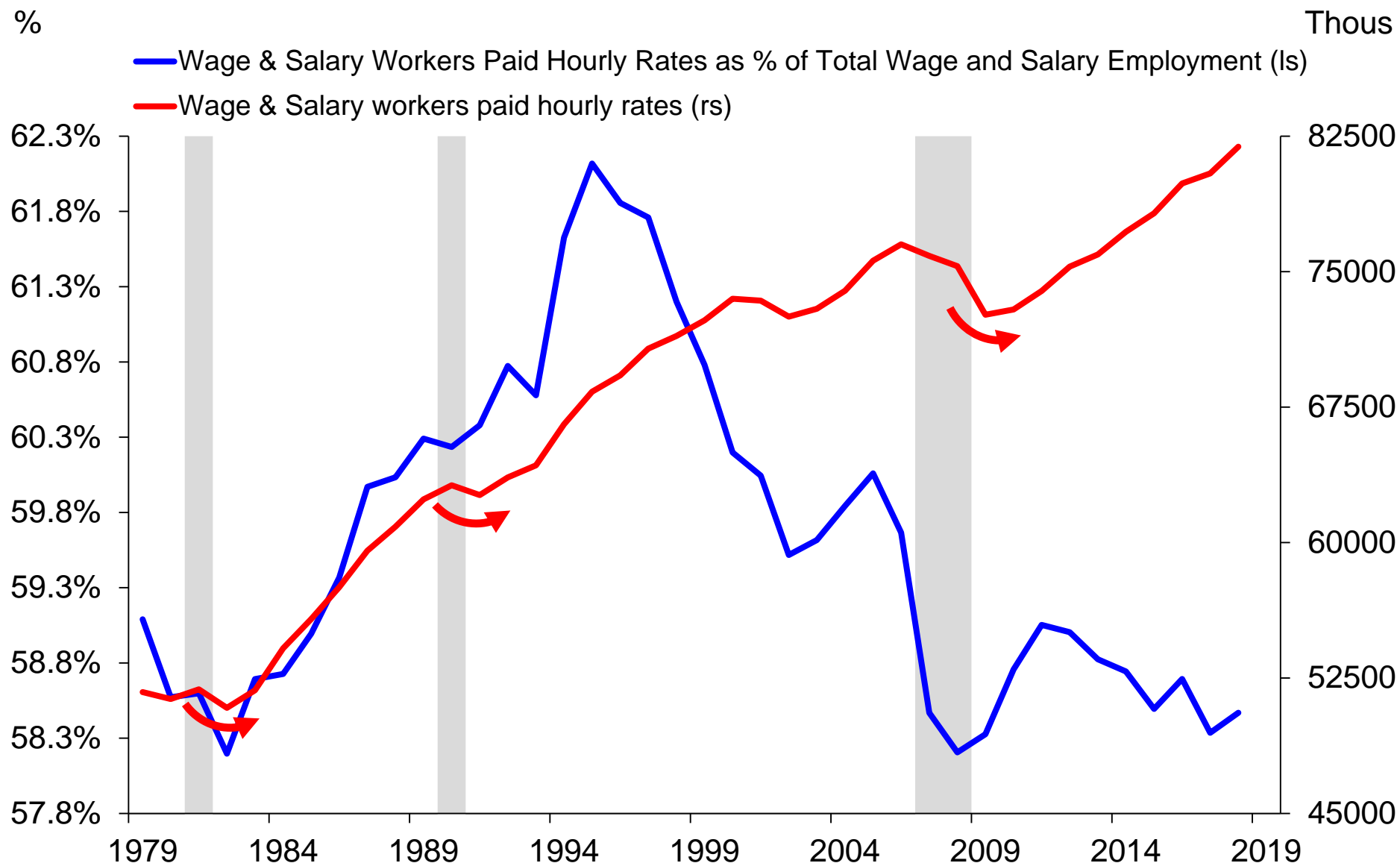


High wage occupational categories are management, professional and related occupations. Medium wage categories are sales and office occupations; construction and extraction occupations; installation, maintenance and repair occupations; and production/transportation and material moving occupations. Low wage occupations are service occupations and farming, fishing, and forestry.

Source: BLS, Haver Analytics, DB Global Research



# Hourly workers are the first to get fired during recessions



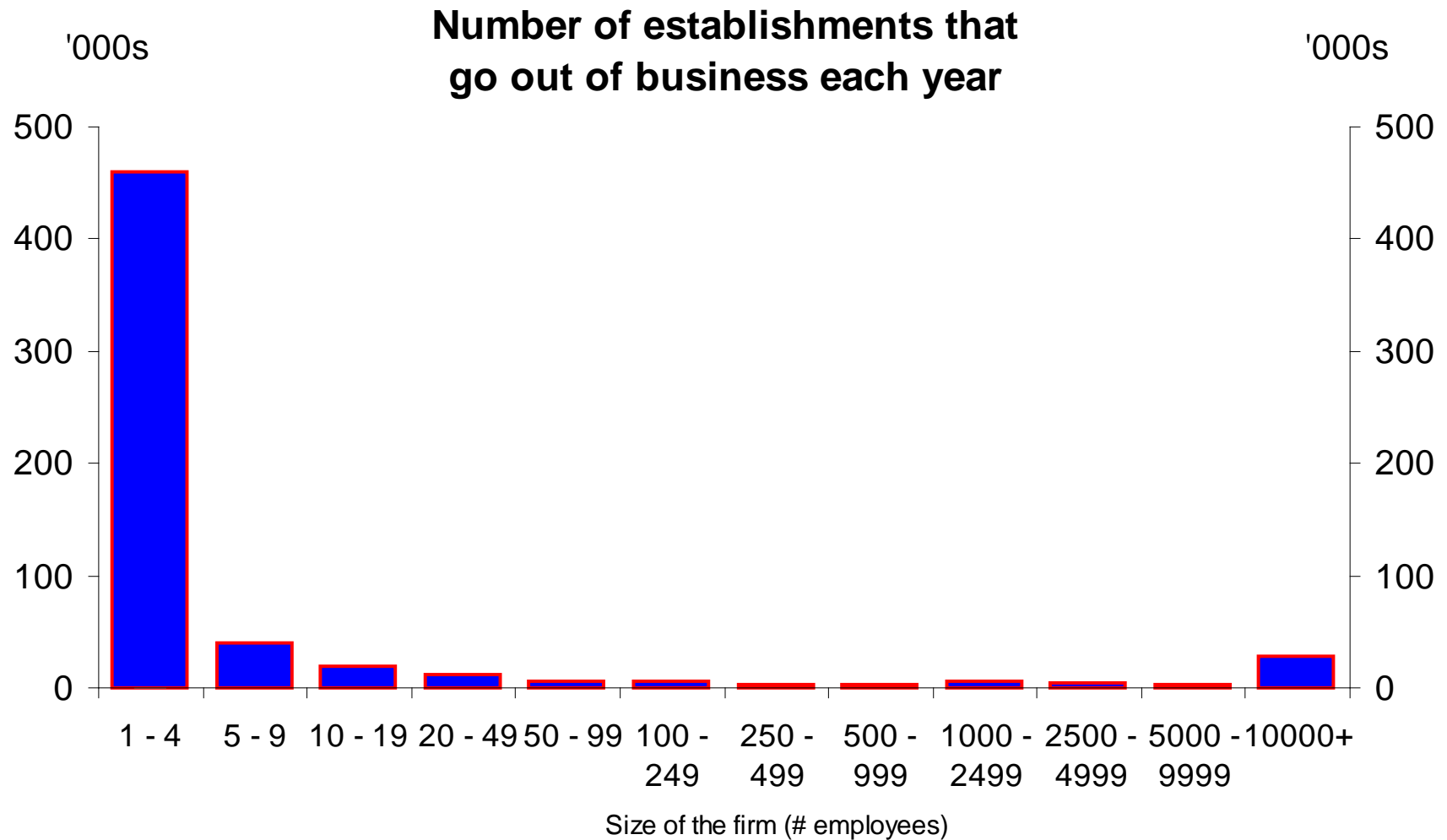
Source: BLS, Haver Analytics, DB Global Research



# 4. How are small businesses doing?



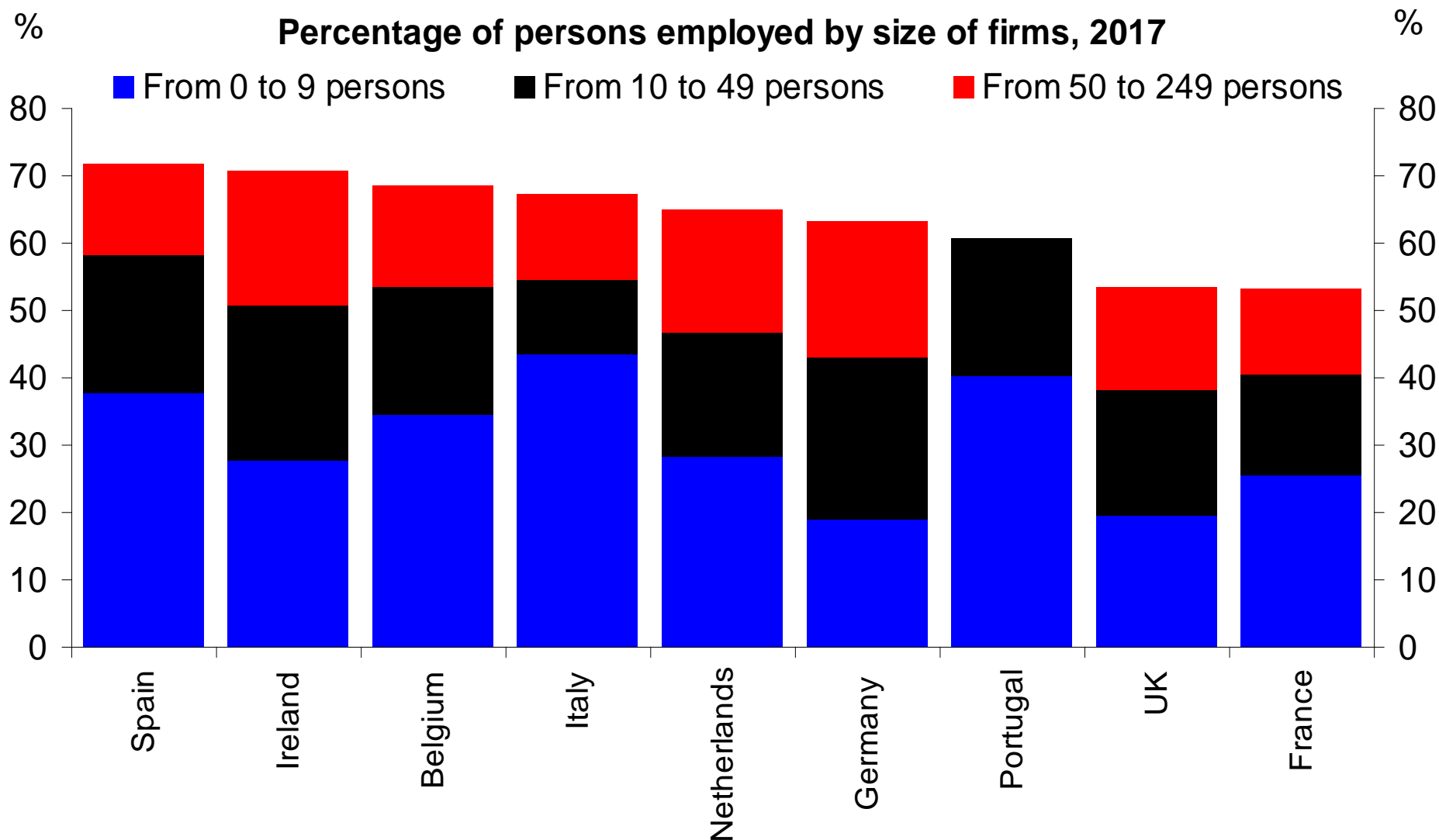
# In the US 600K companies go out of business every year. That's 1600 each day



Source: Latest data is for 2016. Census, DB Global Research



# Percentage of people employed, by firm size



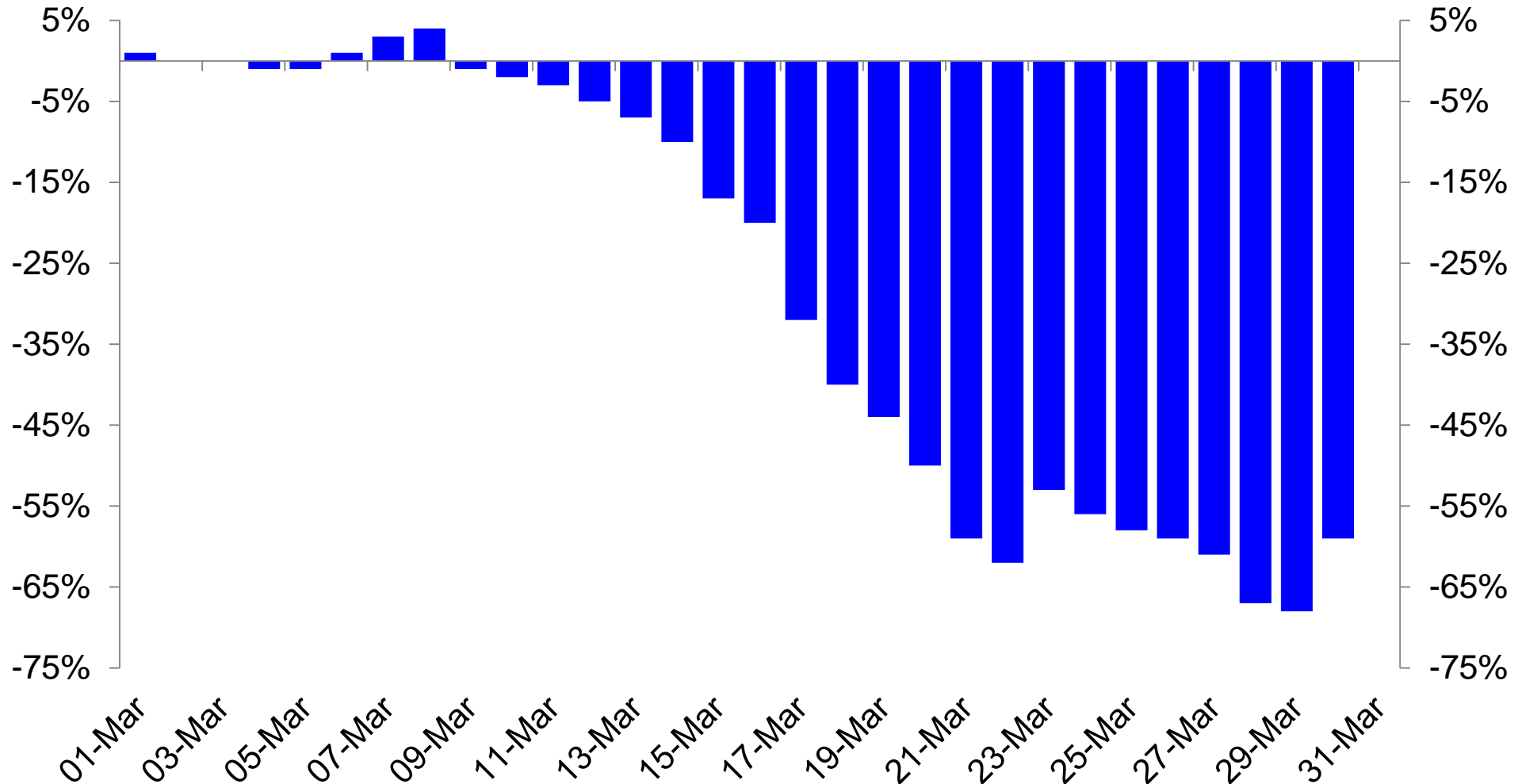
Note: For Portugal 50 to 249 persons figure is not available

Source: Eurostat, DB Global Research



# Some signs of stabilization among small businesses

## Percentage change in total hours worked by hourly employees in US Compared to median attendance on same weekdays in January



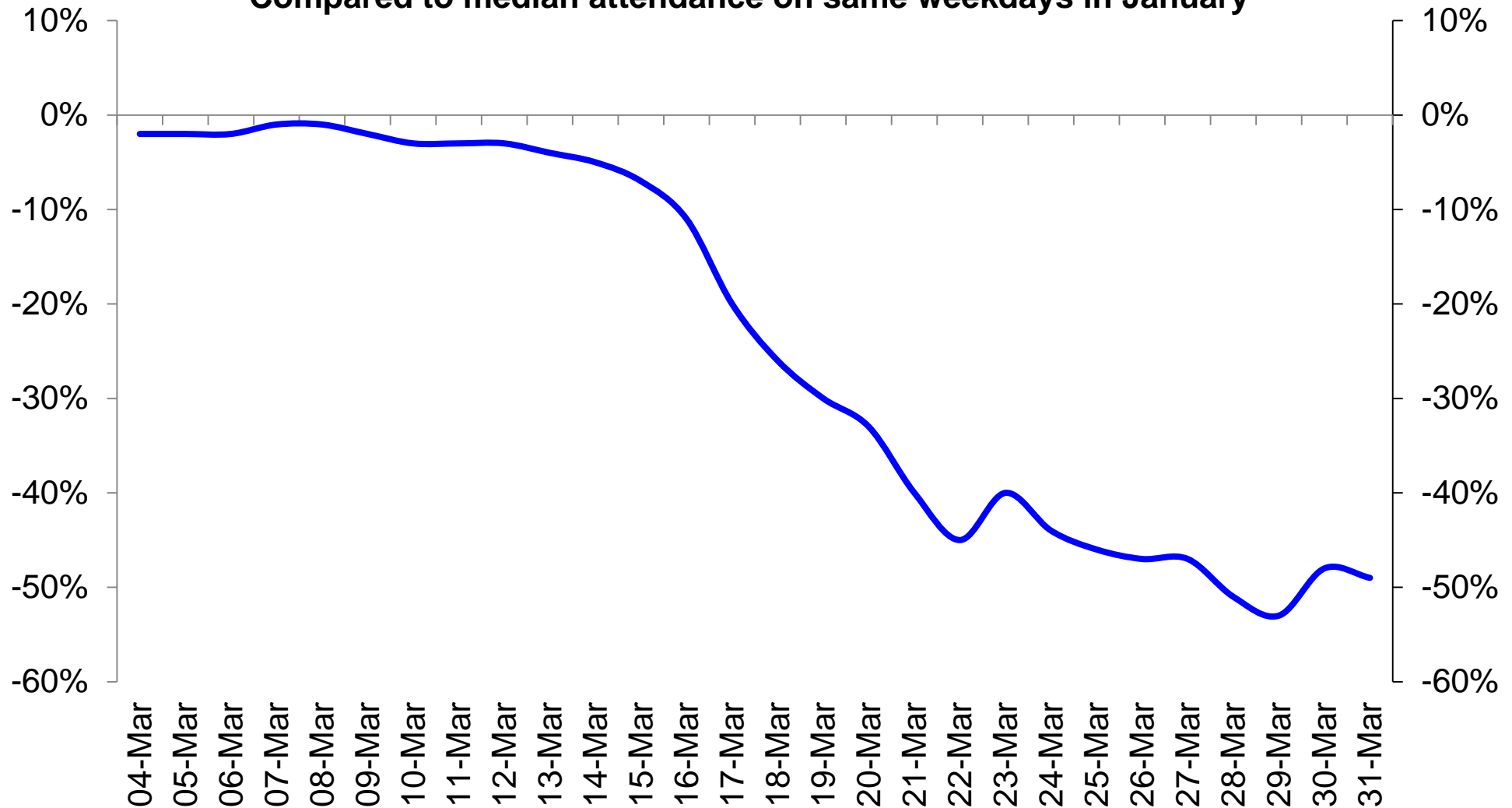
Note : Based on Homebase data covering 60,000 businesses and 1 million hourly employees active in these metropolitan areas

Source: Homebase, DB Global Research



# Some signs of stabilization among small businesses

**Percentage change in number of business open in United States  
Compared to median attendance on same weekdays in January**



Note : Based on Homebase data covering 60,000 businesses and 1 million hourly employees active in these metropolitan areas

Source: Homebase, DB Global Research

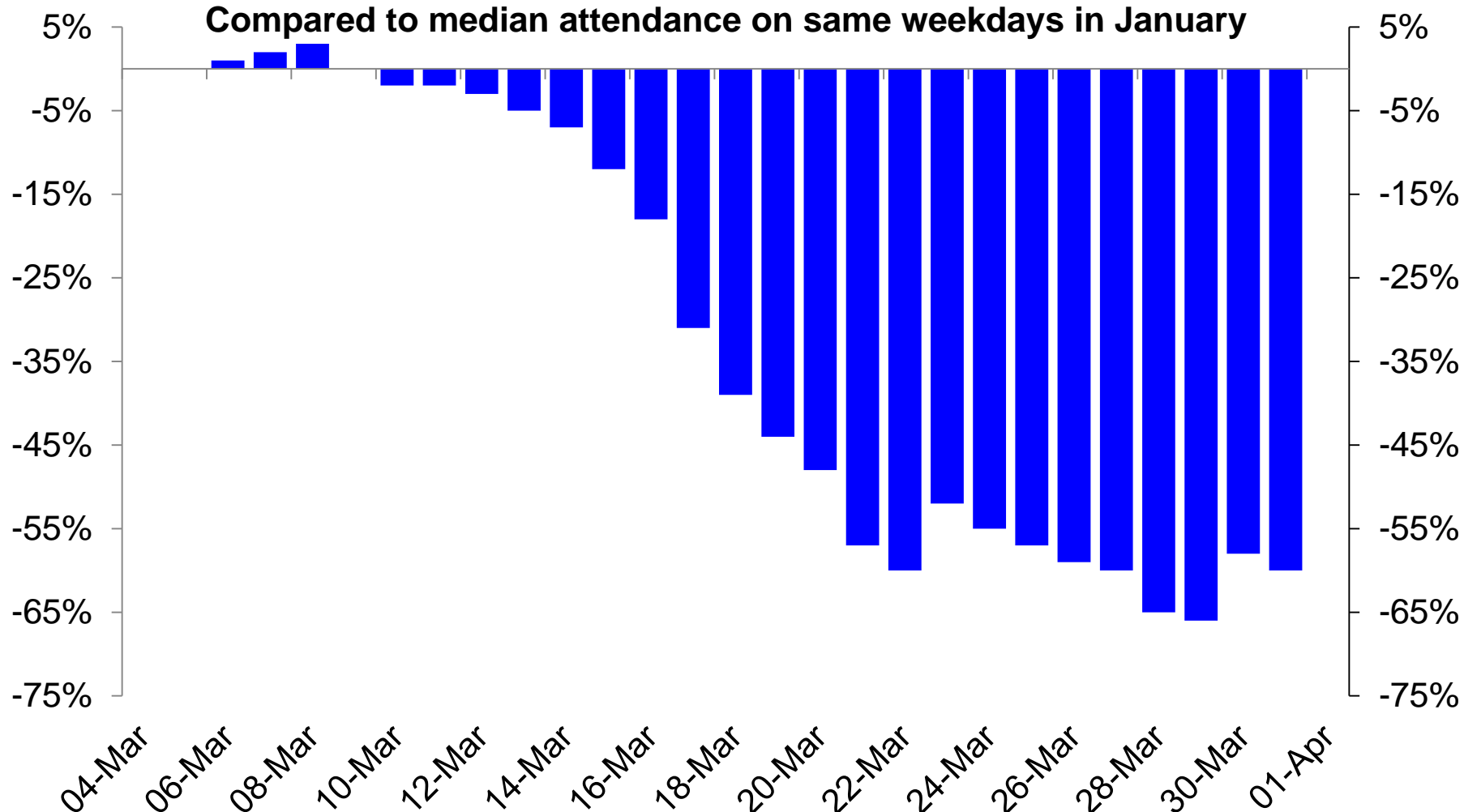




# Some signs of stabilization among small businesses

## Percentage change in number of hourly employees going to work in United States

Compared to median attendance on same weekdays in January



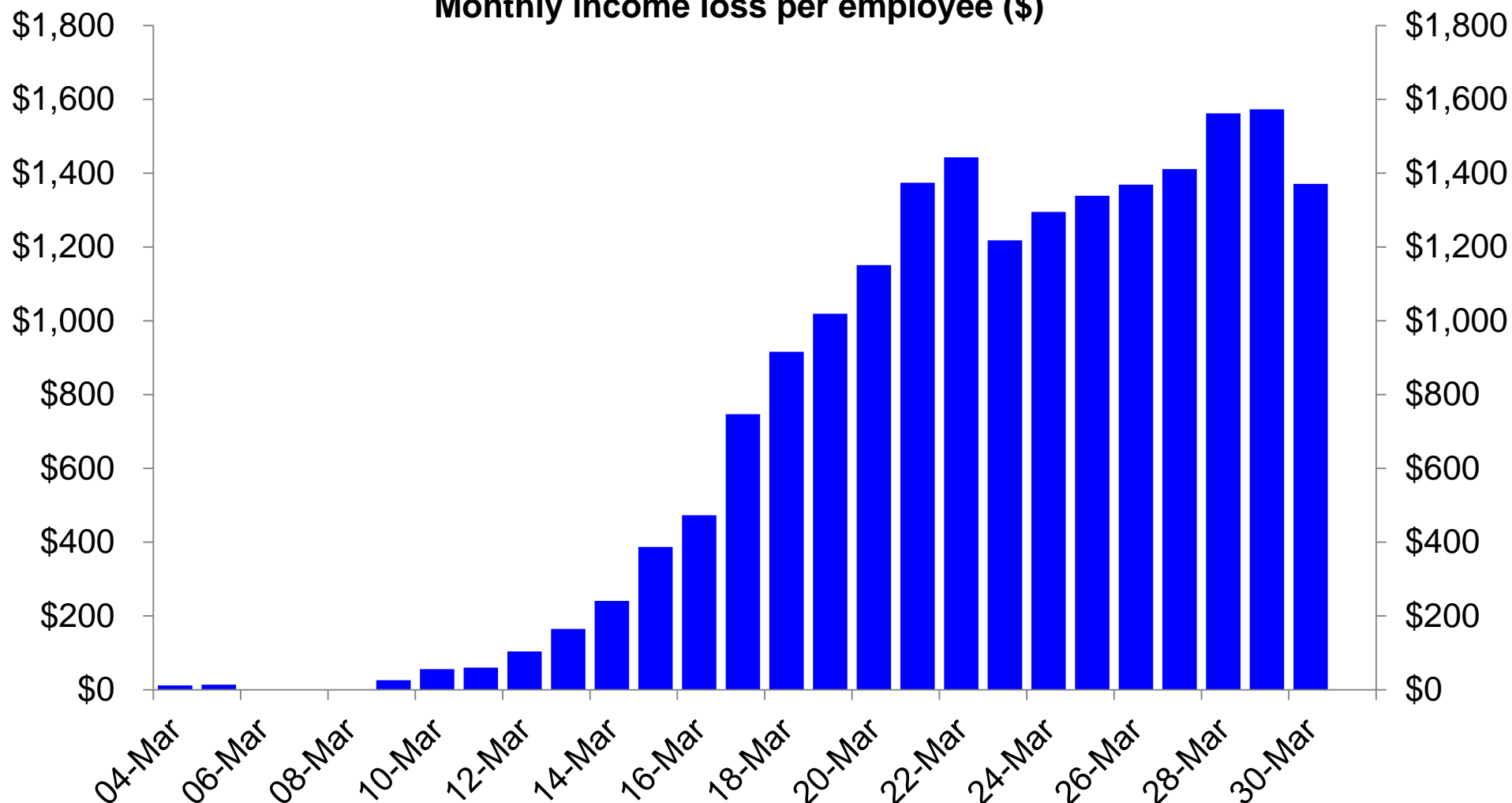
Note : Based on Homebase data covering 60,000 businesses and 1 million hourly employees

Source: Homebase, DB Global Research



# Some signs of stabilization among small businesses

## United States: Economic impact on hourly employees Monthly income loss per employee (\$)



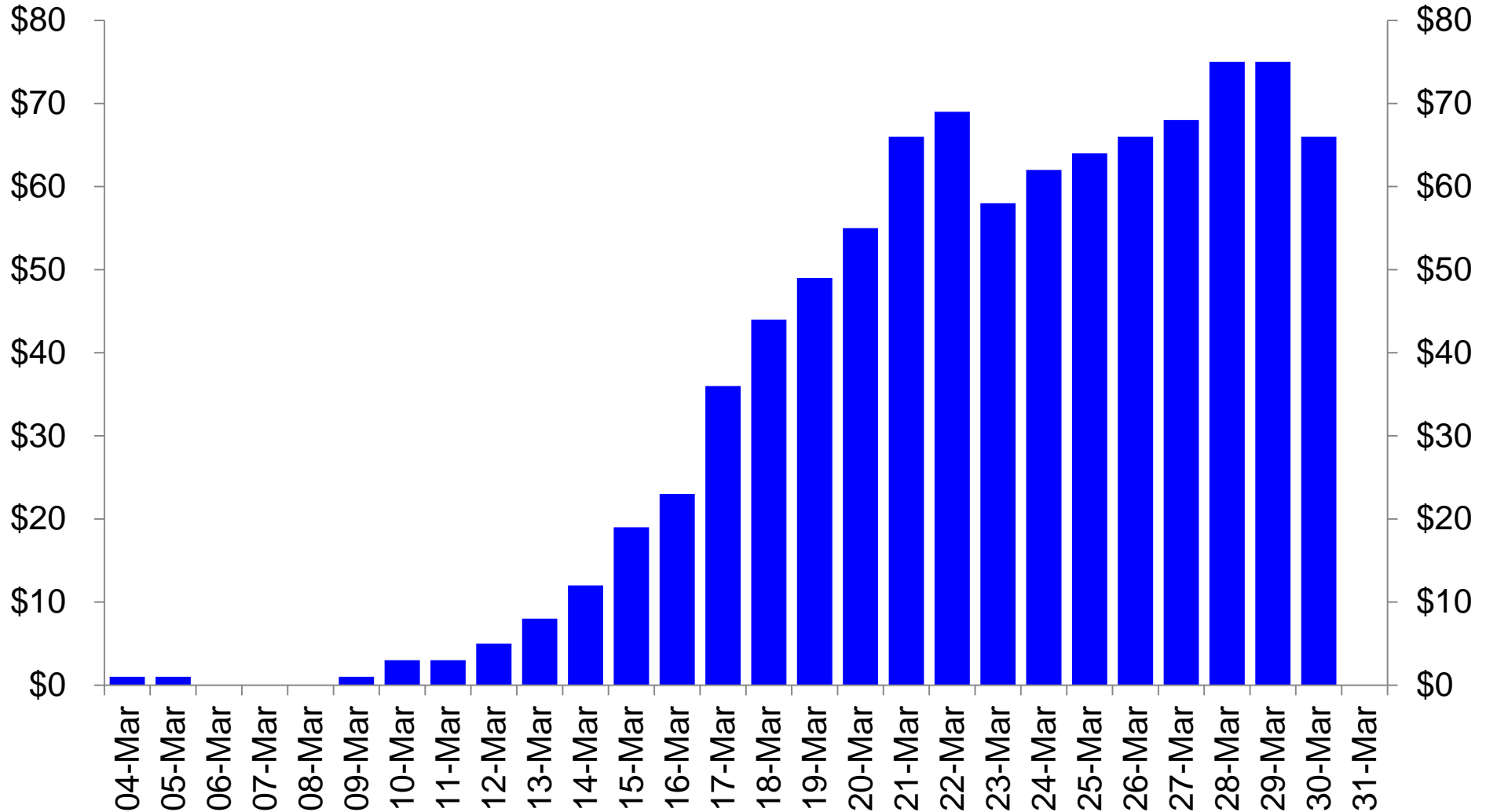
Note : Based on Homebase data and U.S. Bureau of Labor Statistics data covering 48 million hourly workers across restaurant, food & beverage, retail, other main street and services

Source: Homebase, DB Global Research



# Some signs of stabilization among small businesses

## United States: Economic impact on hourly employees US-wide income loss per month (\$bn)

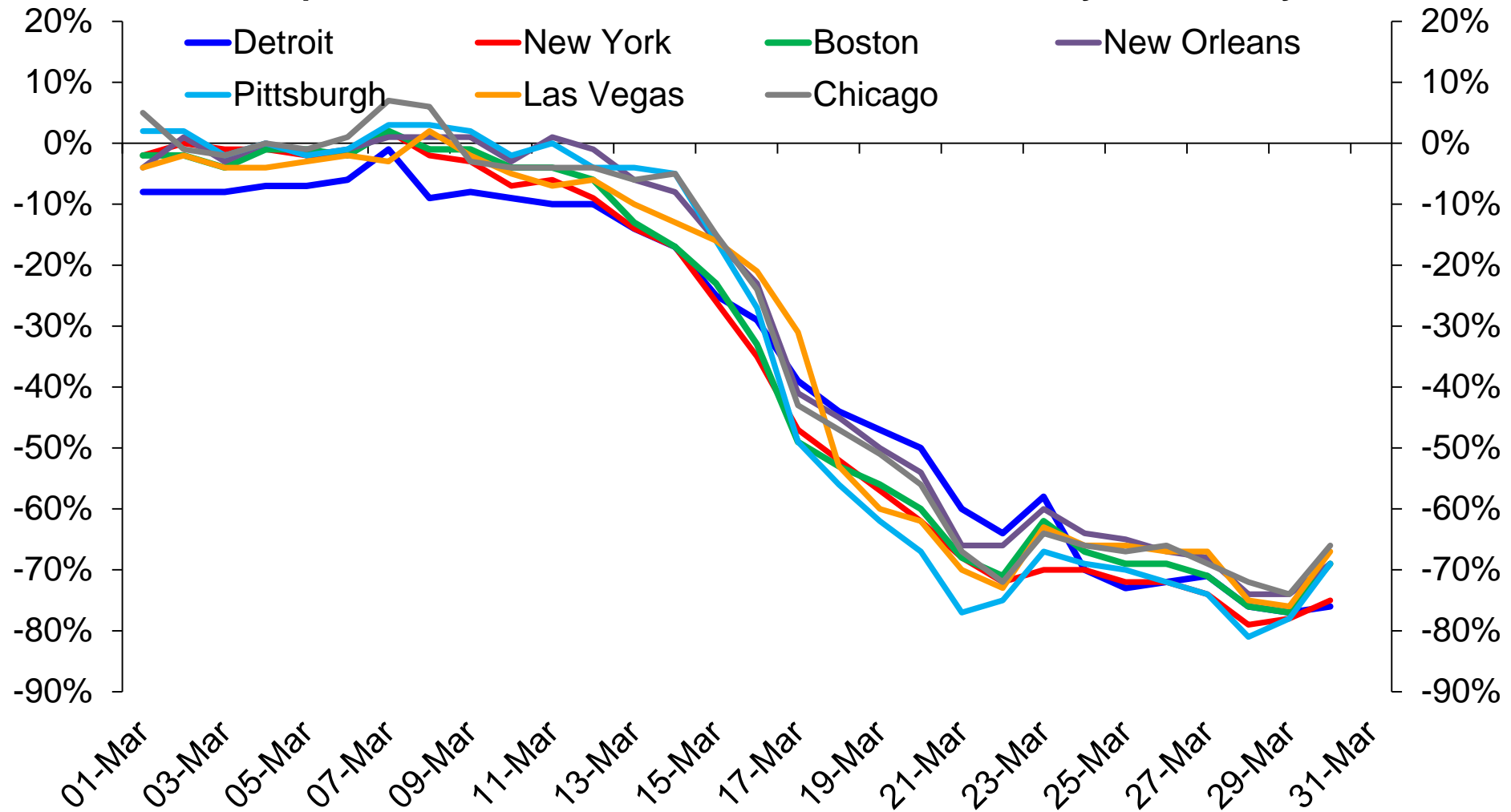


Source: Homebase, DB Global Research



# Some signs of stabilization among small businesses

**Percentage change in number of hours worked by hourly employees compared to median hours worked on same weekdays in January**

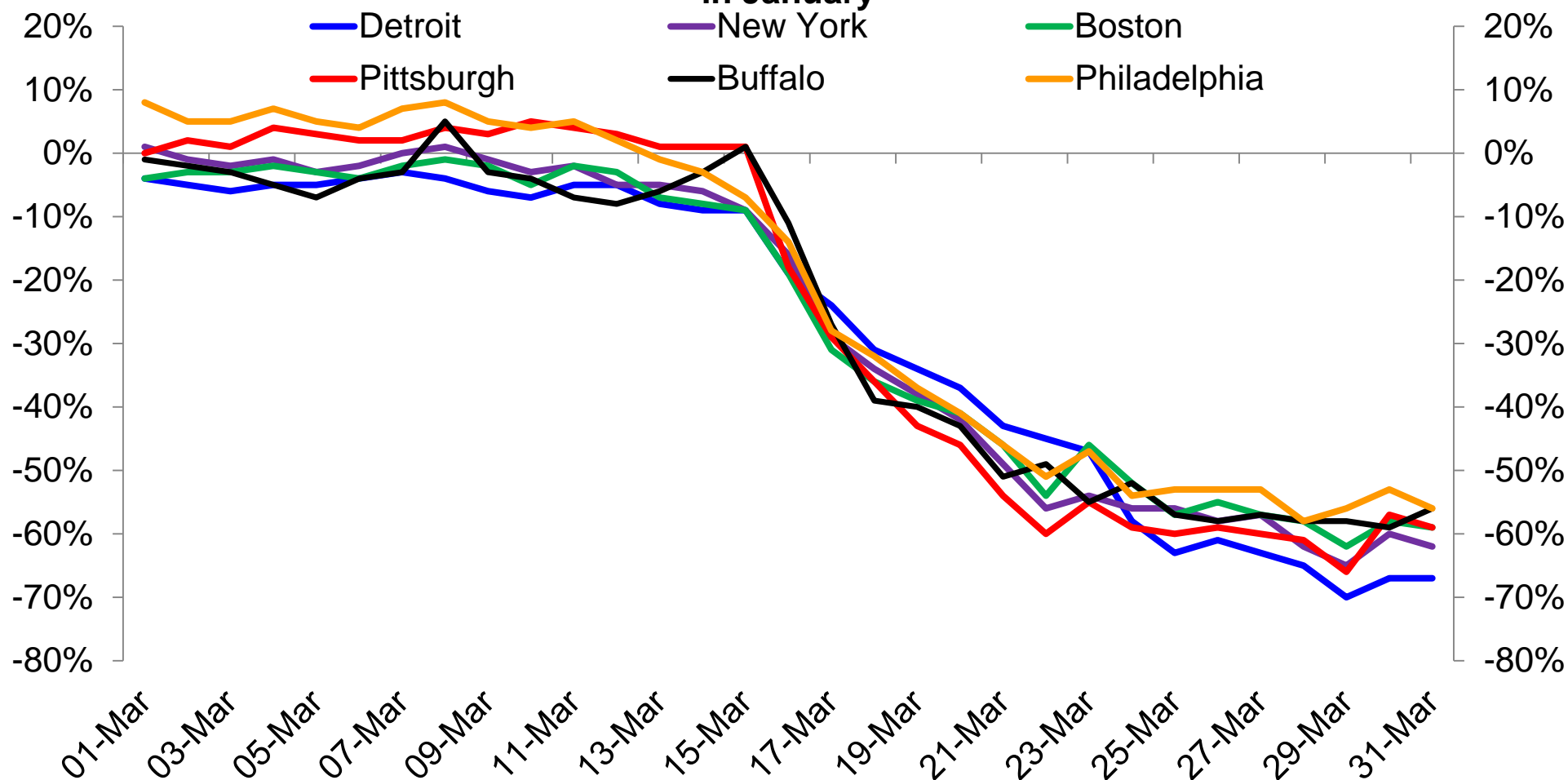


Source: Homebase, DB Global Research



# Some signs of stabilization among small businesses

**Percentage change in number of local business open compared to median number of local business open on same weekdays in January**

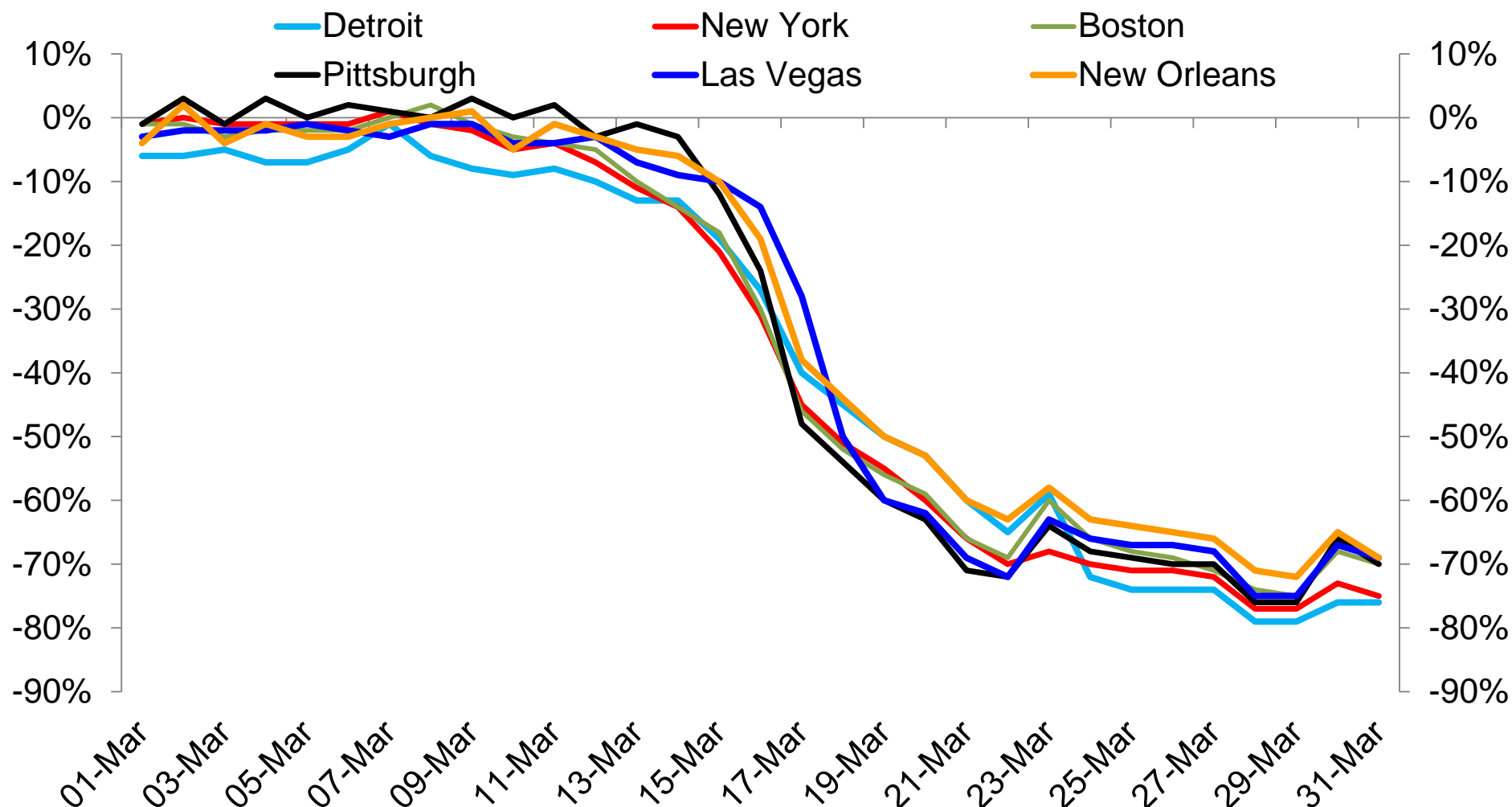


Source: Homebase, DB Global Research



# Some signs of stabilization among small businesses

**Percentage change in number of hourly employees working compared to median number of hourly employees working on same weekdays in January**



Source: Homebase, DB Global Research



# 5. The US fiscal expansion and long rates

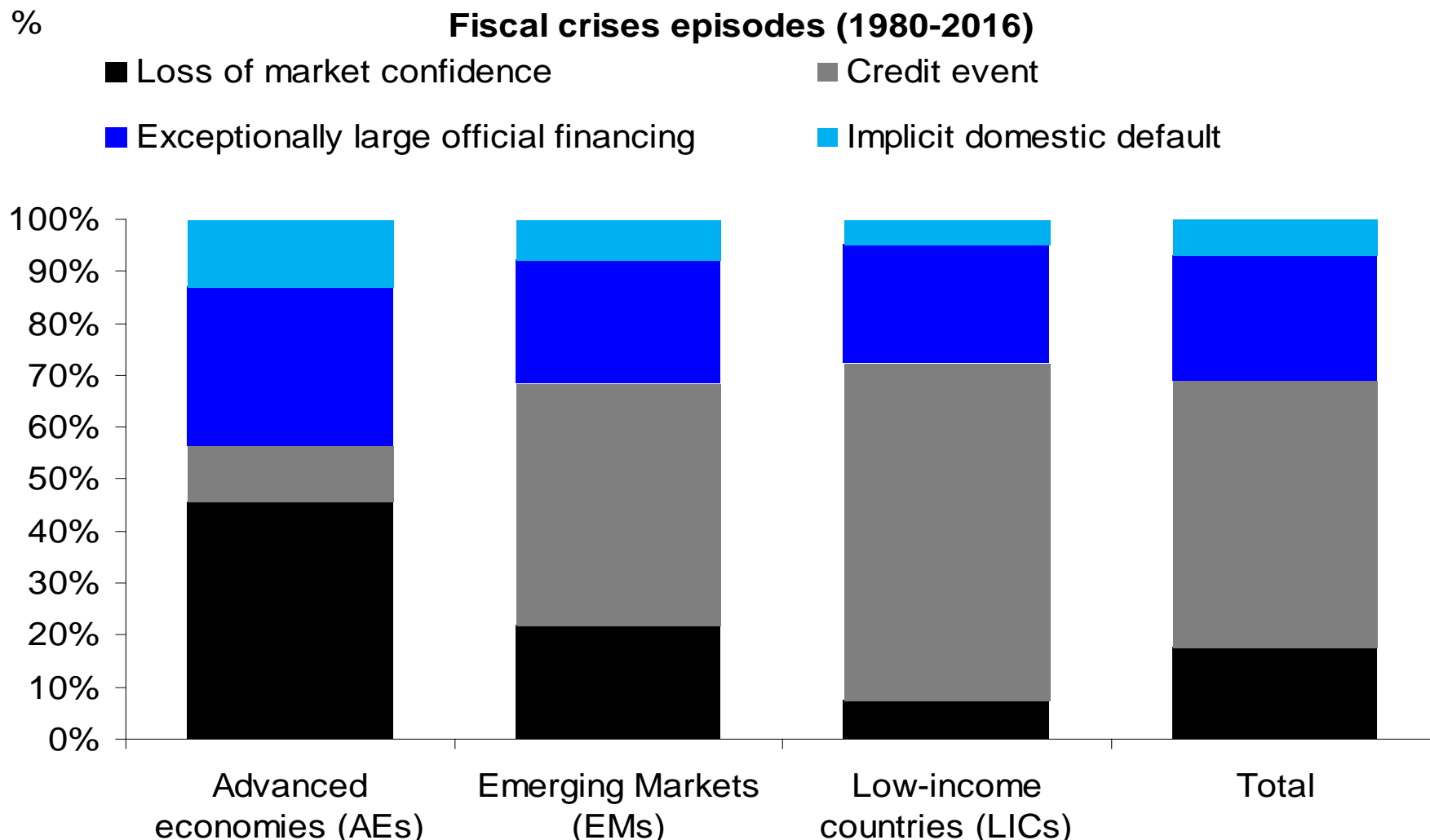


At the peak in late March, the Fed was buying \$75bn in Treasuries every day, and we are now down to “only” \$30bn per day, see also [here](#). **These enormous Fed purchases combined with rates moving sideways in recent weeks make you wonder where 10-year rates would have been if the Fed had not intervened.** As the Fed gradually steps away over the coming weeks, and Treasury issuance continues to increase to finance the fiscal stimulus, the market will be focusing more and more on demand and supply in the US Treasury market, see chart below and also our write-up [here](#).





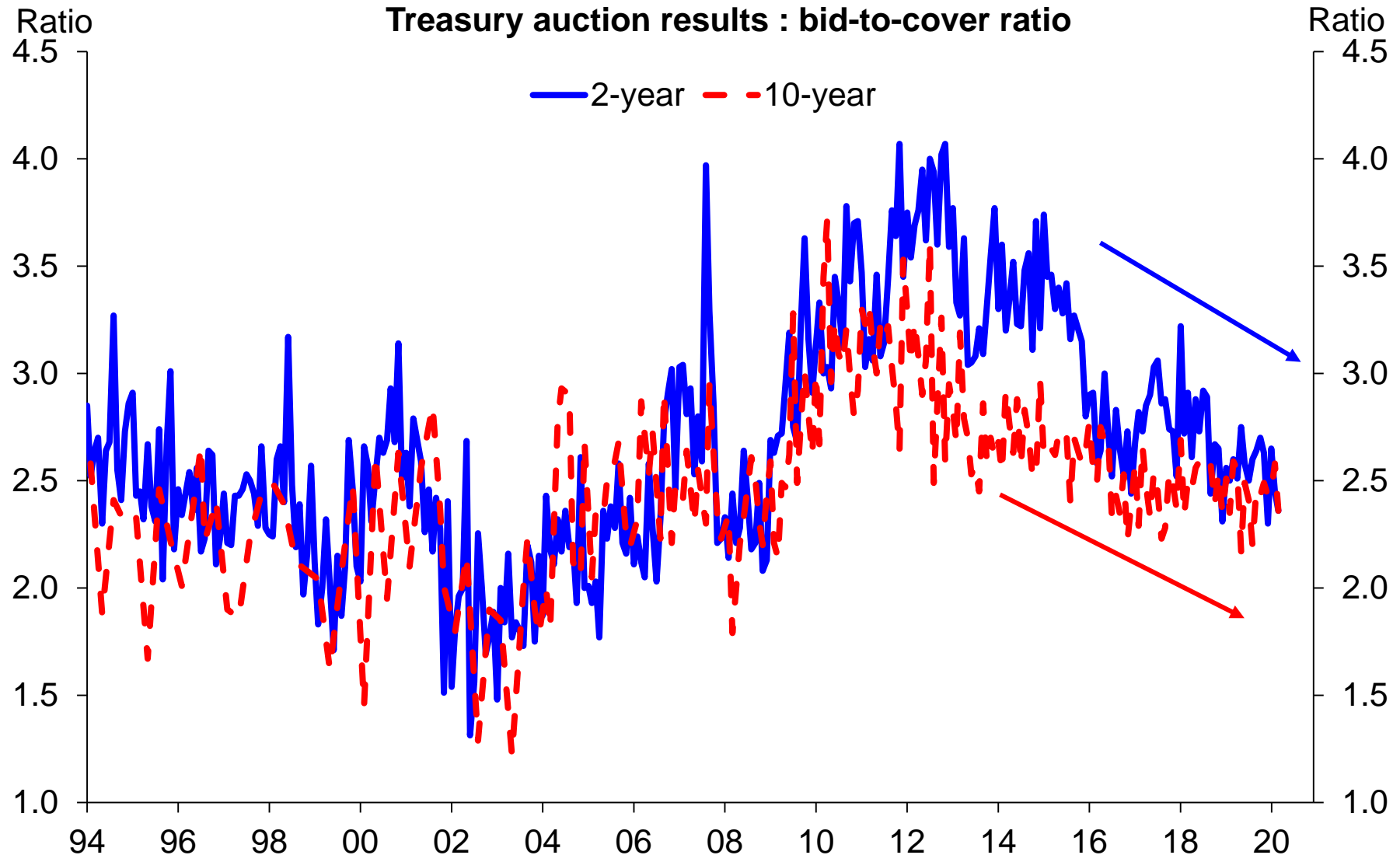
# Fiscal crises in advanced economies normally triggered by a sudden loss of market confidence or large increases in government bond auctions



Source: Debt Is Not Free (IMF, 2020), DB Global Research



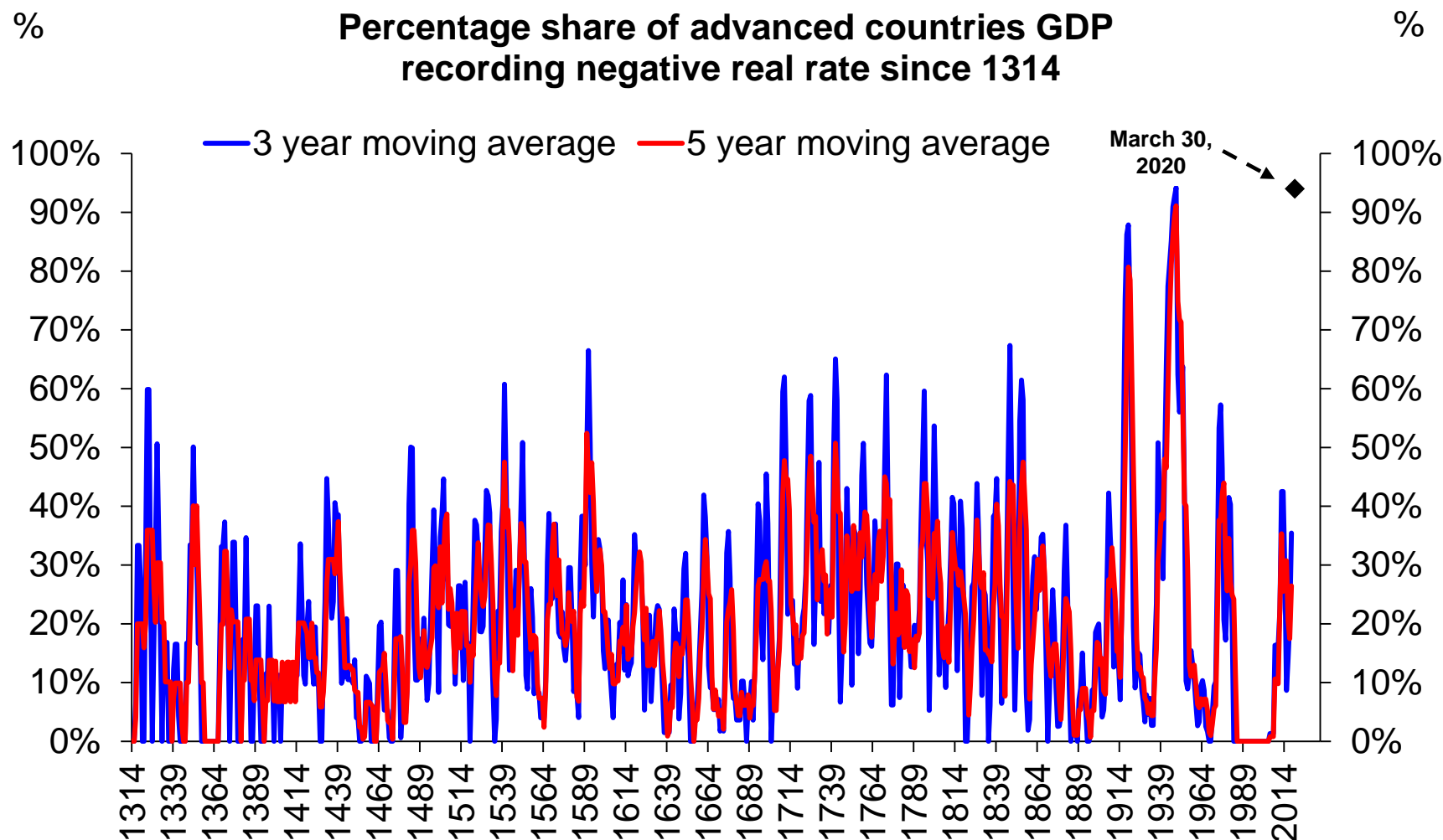
# Downtrend in bid-to-cover ratios for US Treasuries



Source: Bloomberg Finance LP, DB Global Research



# Record high level of world GDP experiencing negative real interest rates

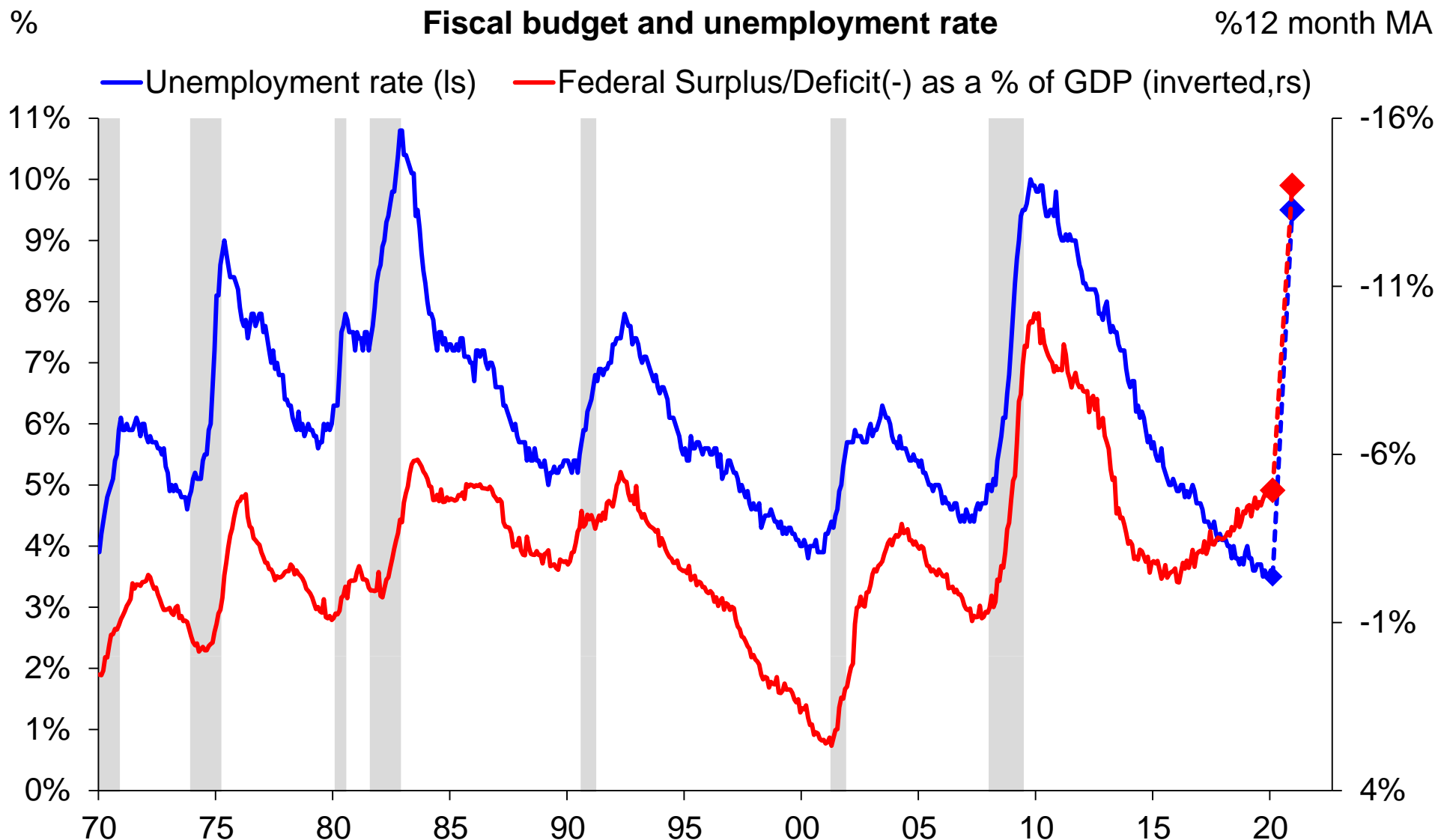


Note: Advanced countries here are Italy, France, Germany, Spain, Netherlands, Japan, UK & US

Source: National sources, Paul Schmelzing (BoE, January 2020, DB Global Research

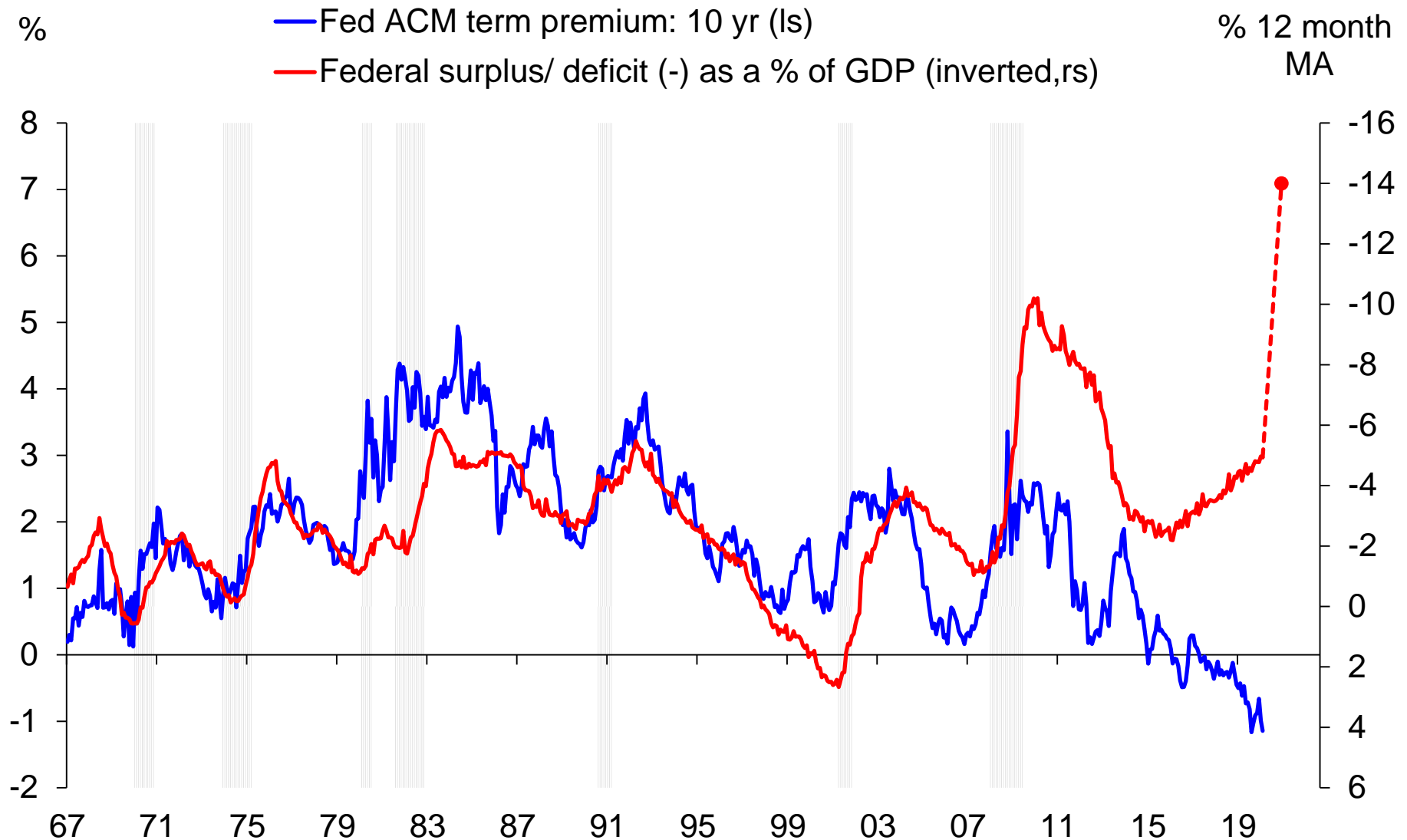


# Big jump in budget deficit and unemployment rate



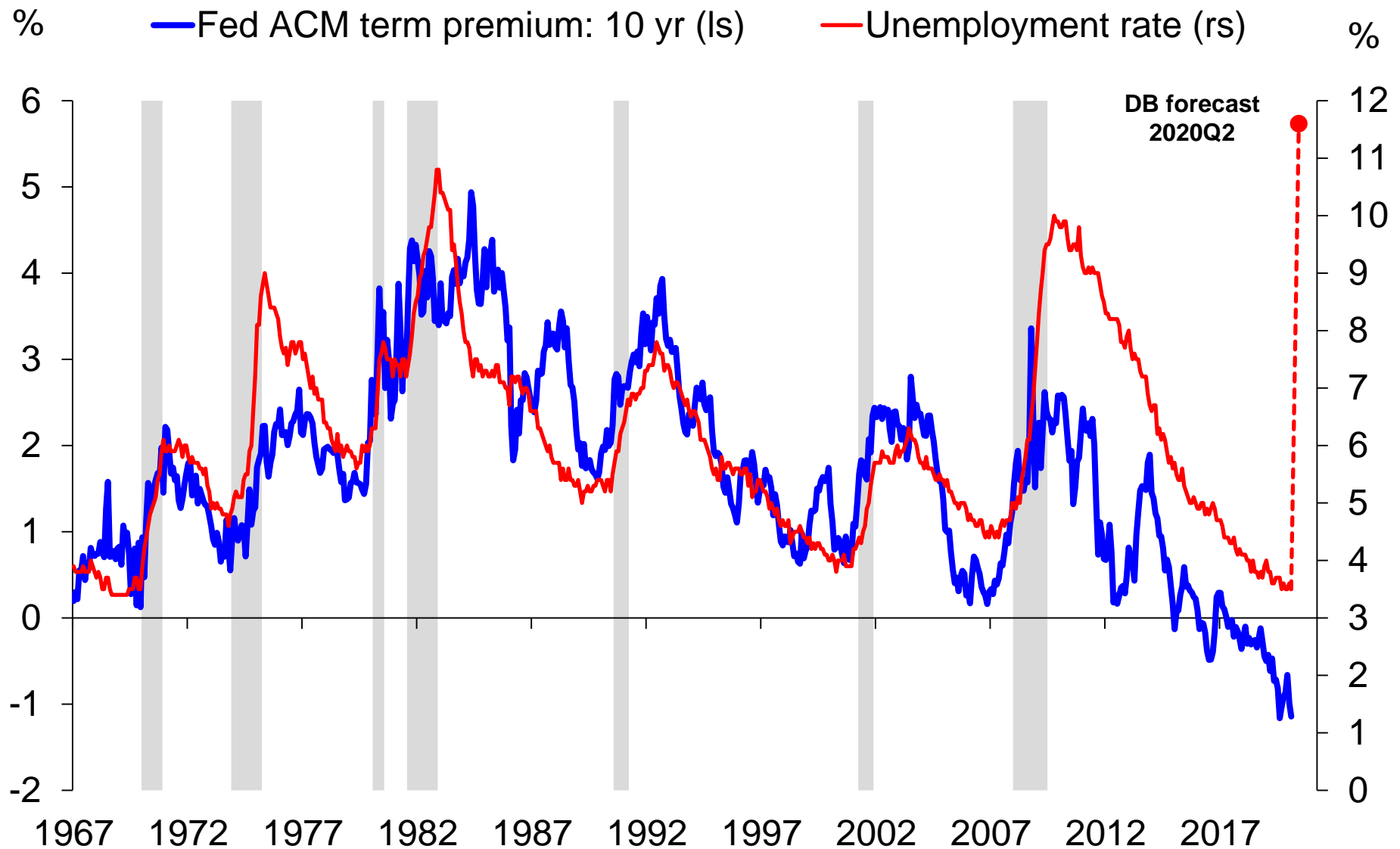
Source: BLS, US Treasury, BEA, Haver Analytics, DB Global Research

# Growing fiscal deficit would normally push long rates up but since 2009 global QE and forward guidance have kept rates low



Source: FRBNY, US Treasury, BEA, Haver Analytics, DB Global Research

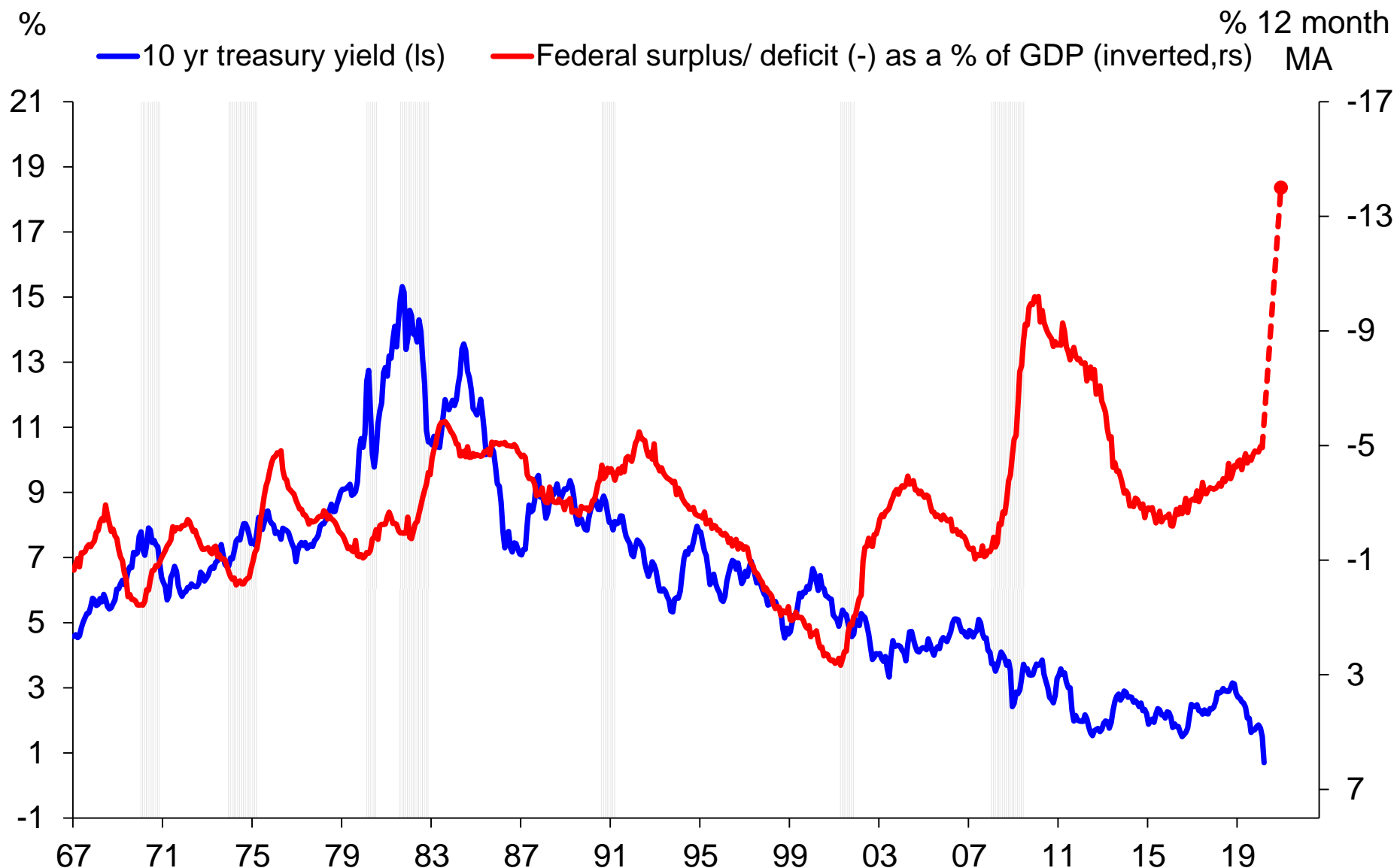
# Normally when the economy enters a recession the term premium rises



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



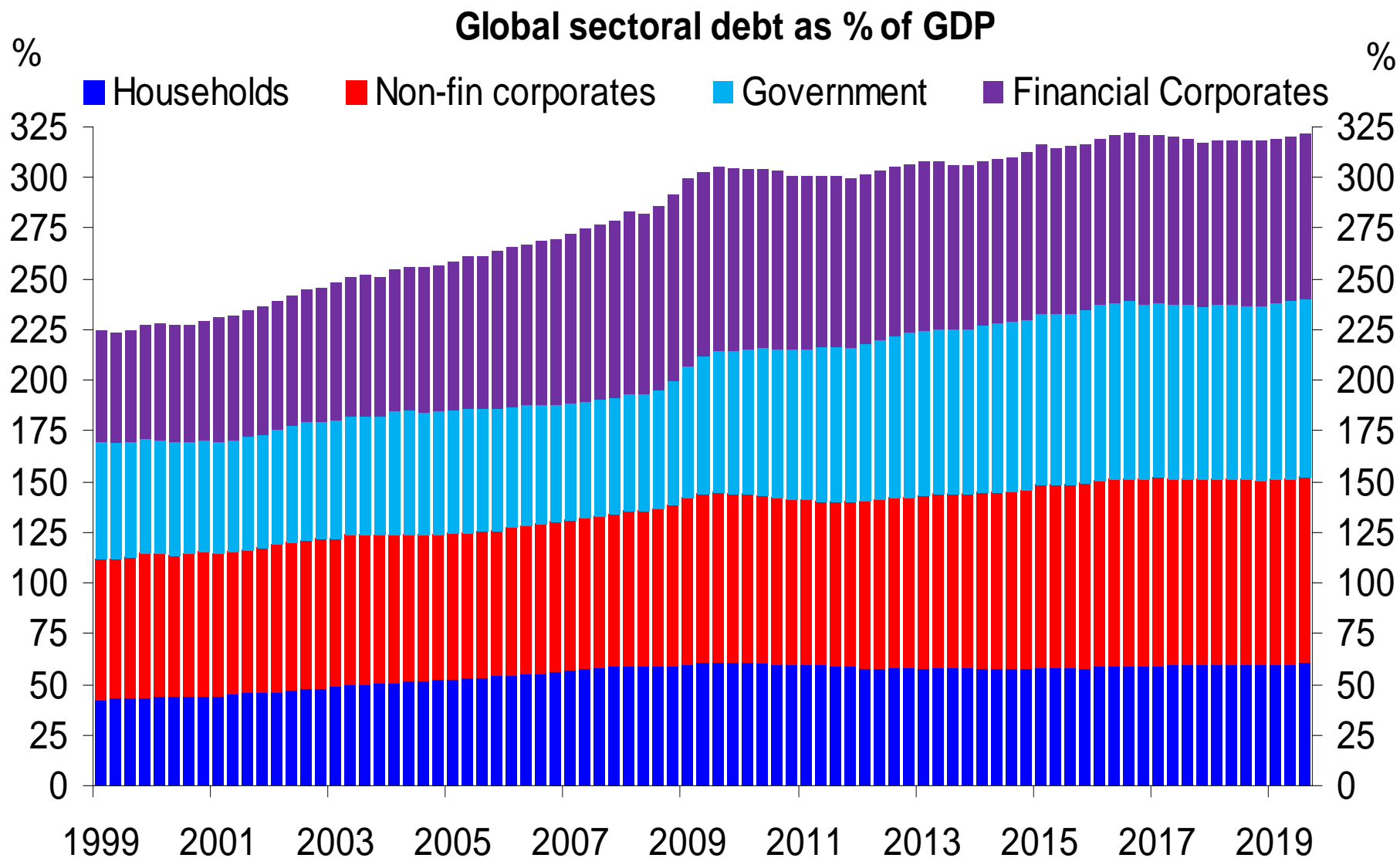
# Fiscal deficit and 10-year rates



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



# Global debt as a share of GDP



Source: IIF Global Debt Monitor, DB Global Research

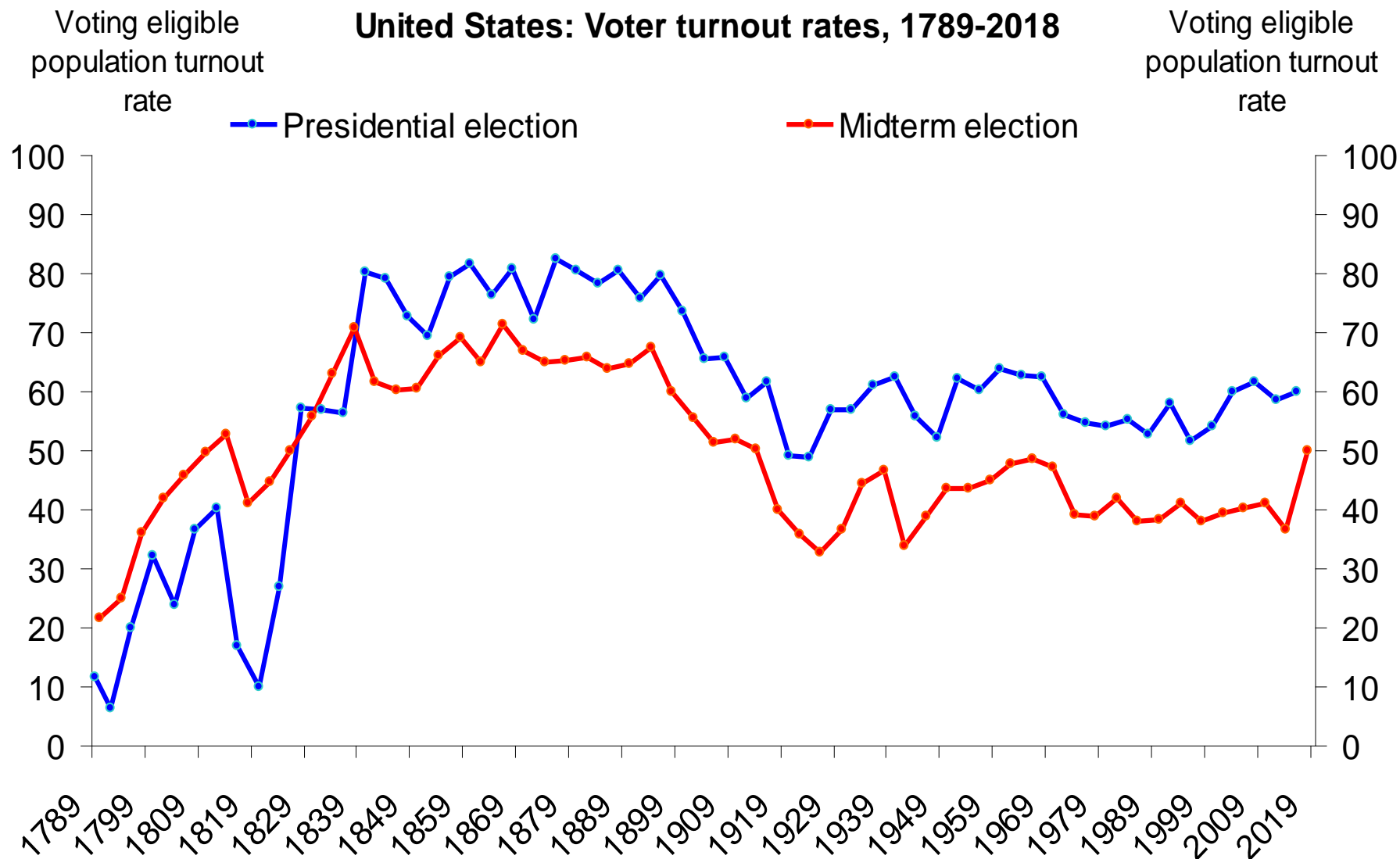




# 6. Election uncertainty



# Voter turnout in Midterm and Presidential elections since 1789

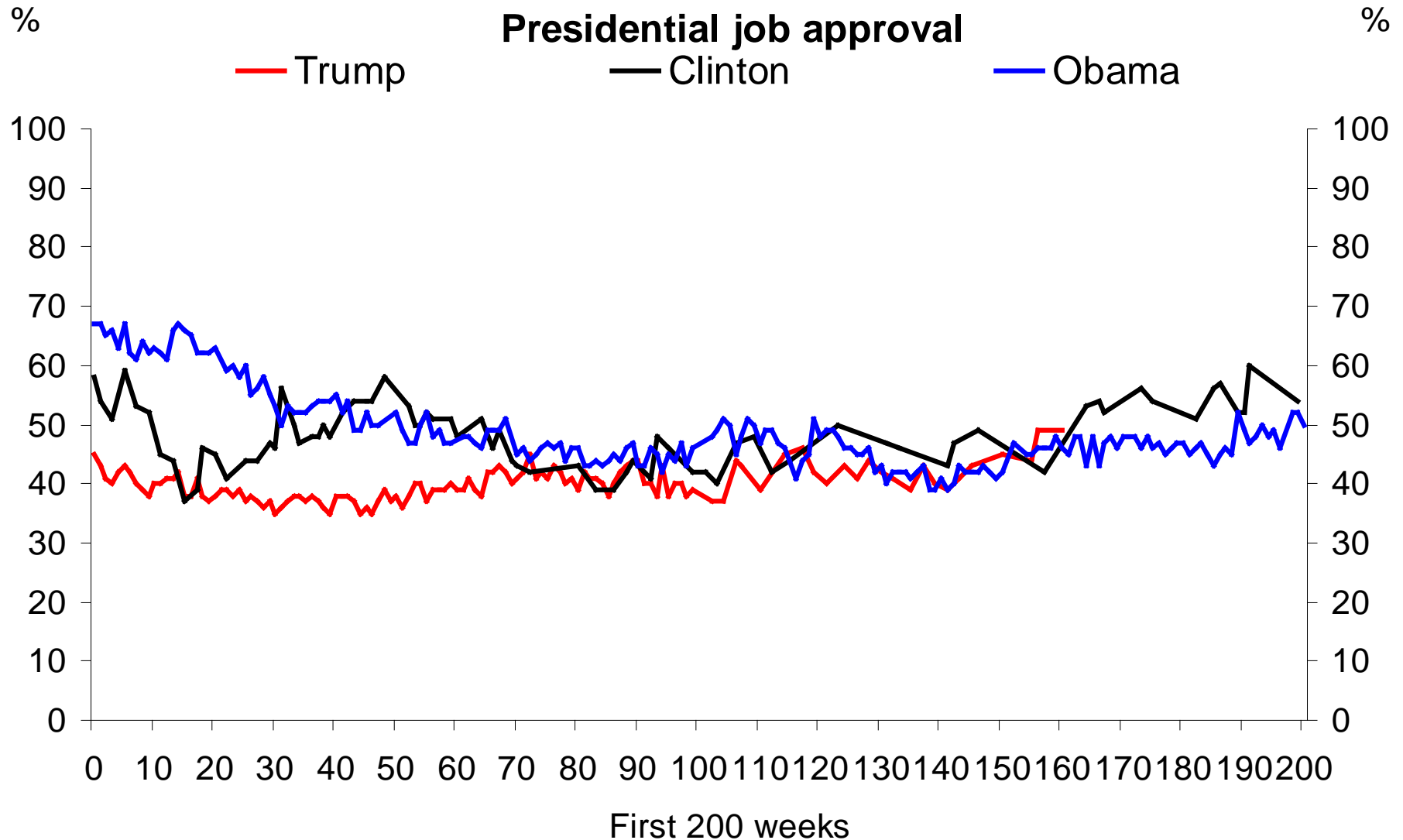


Note: The voting-eligible population (VEP) represents an estimate of persons eligible to vote regardless of voter registration status in an election

Source: <http://www.electproject.org/>, DB Global Research



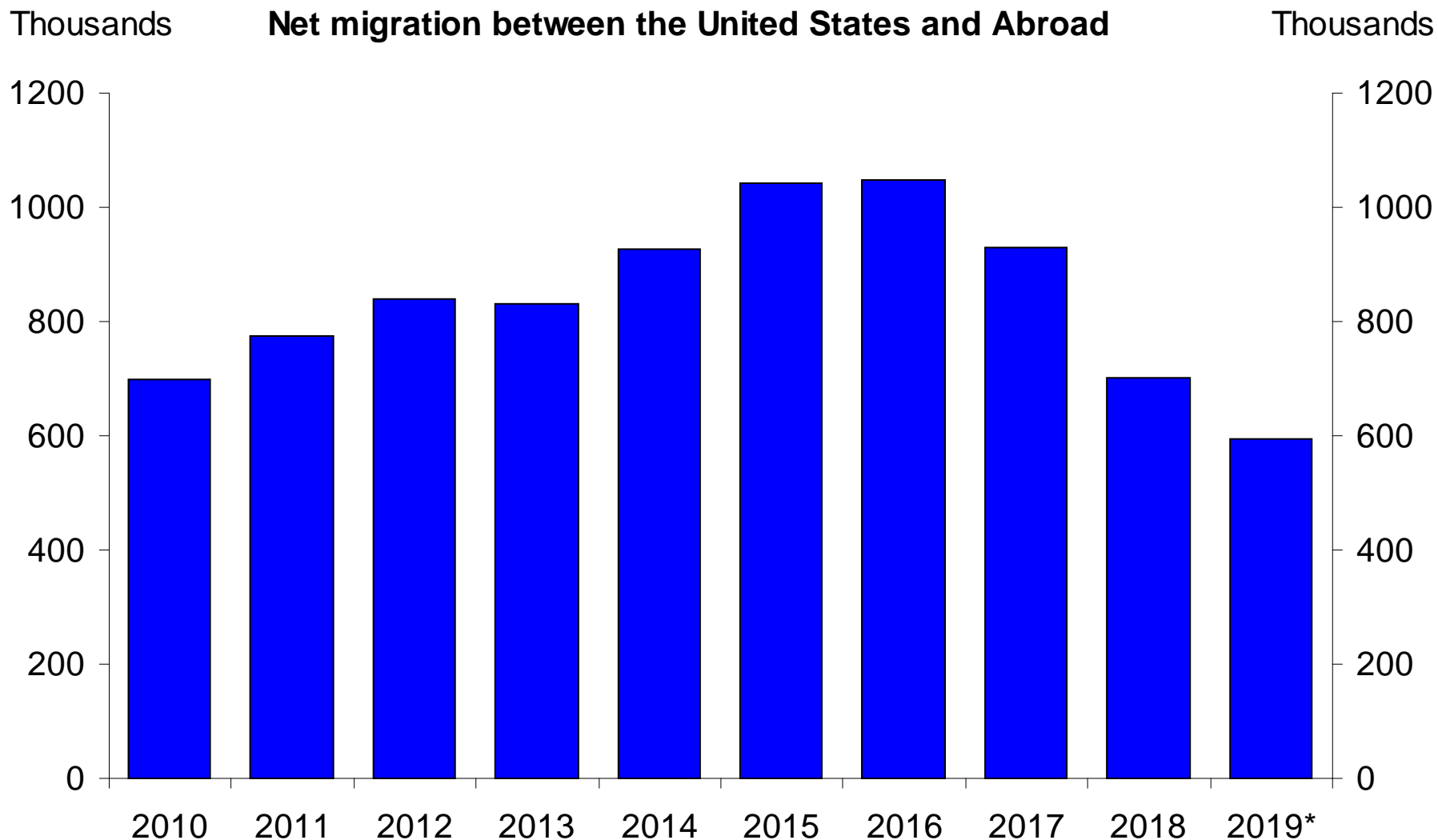
# Trump job approval rating not too different from Obama or Clinton at this point in presidency



Source: American Presidency Project, Gallup, DB Global Research



# Net migration into the US down 40% in recent years

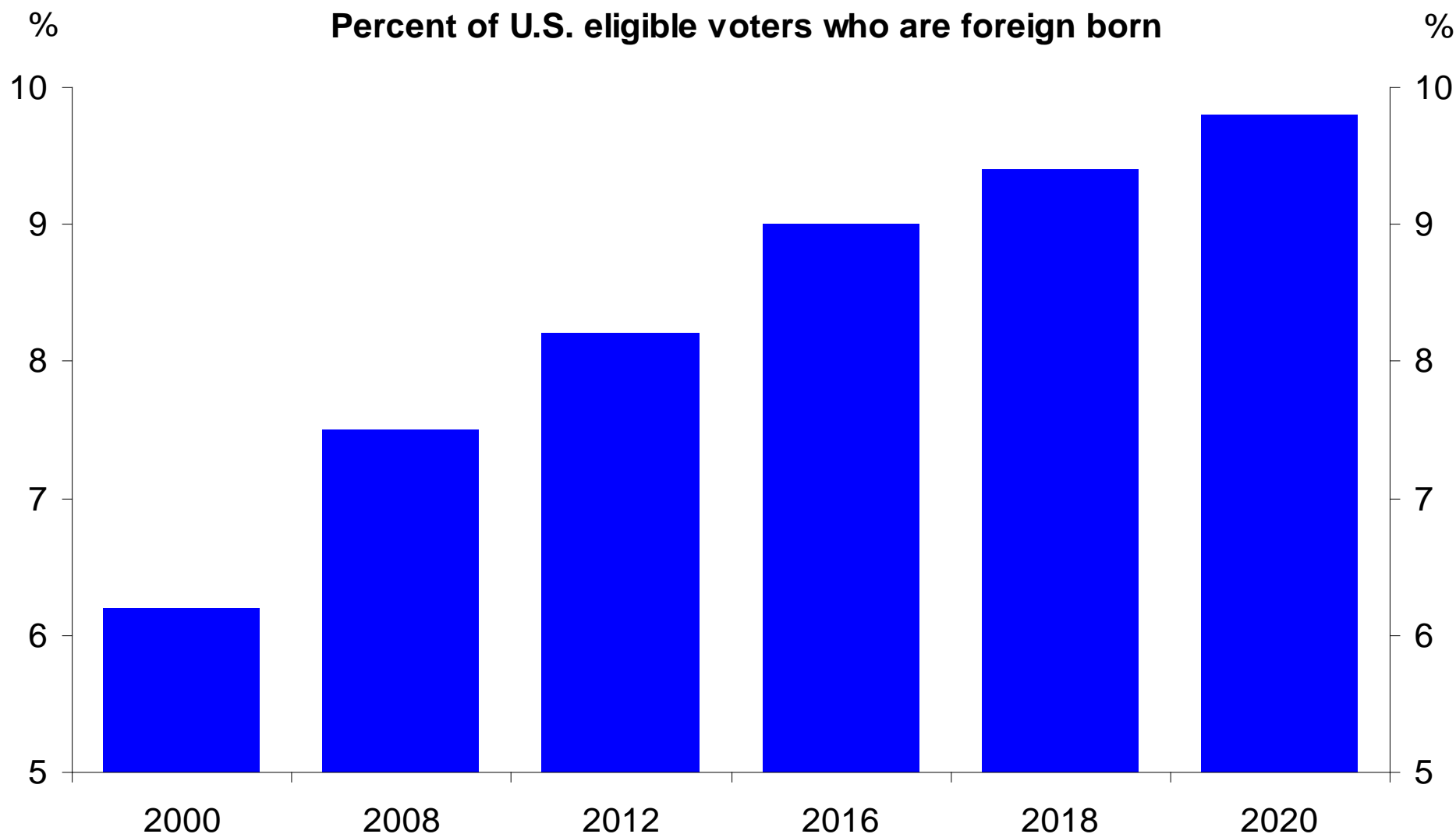


\* Data shown for 2019 are projections. Each year represents the annual estimates period ending on June 30. Released data will report 2010 as a quarter year (April 1, 2010-June 30, 2010) instead of a full year

Source: U.S. Census Bureau, Vintage 2019 Population Estimates, DB Global Research



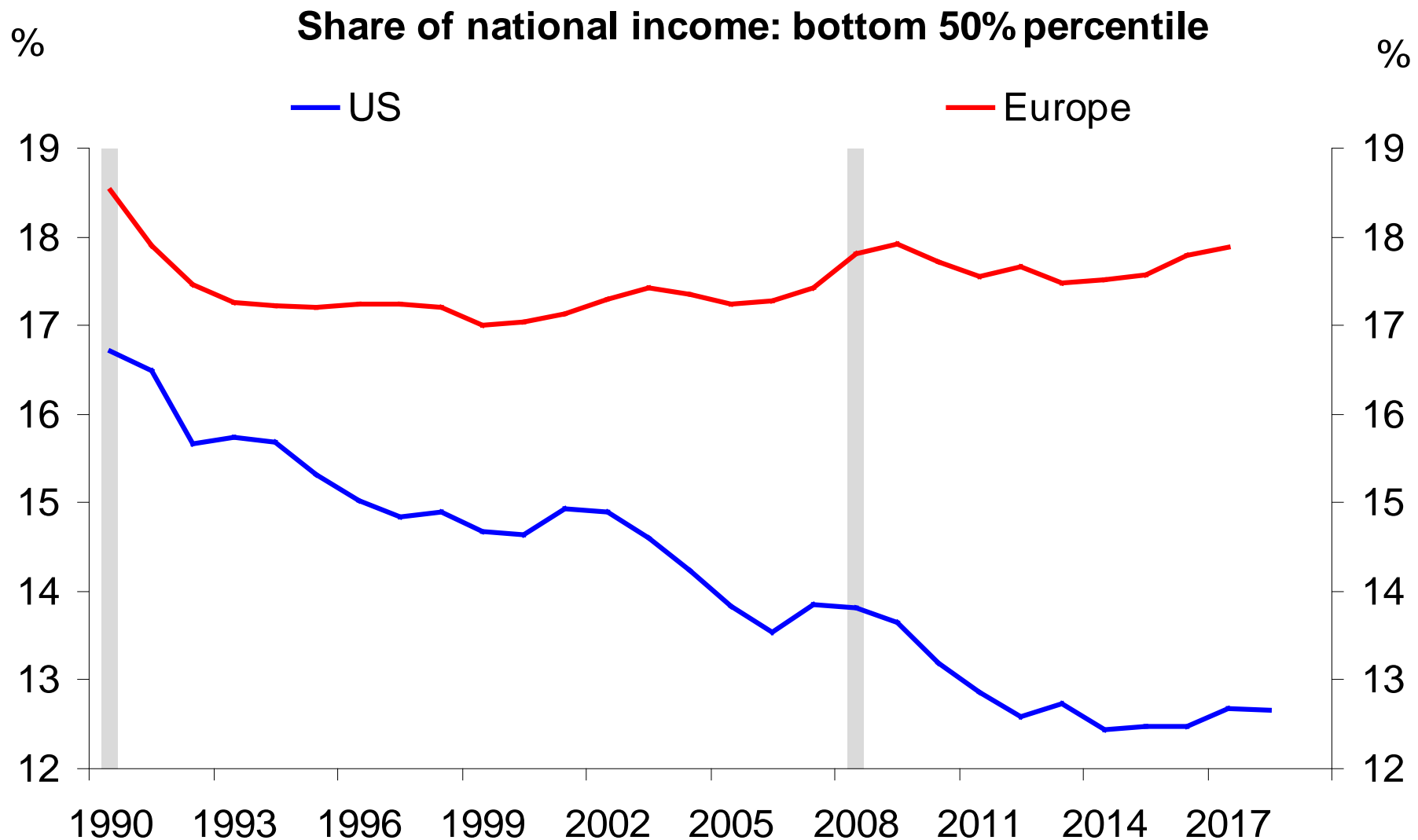
# 10% of voters in 2020 will be foreign born



Note: Data for 2020 from Pew Research Center projections based on U.S. Census Bureau population projections.

Source: PEW Research, DB Global Research

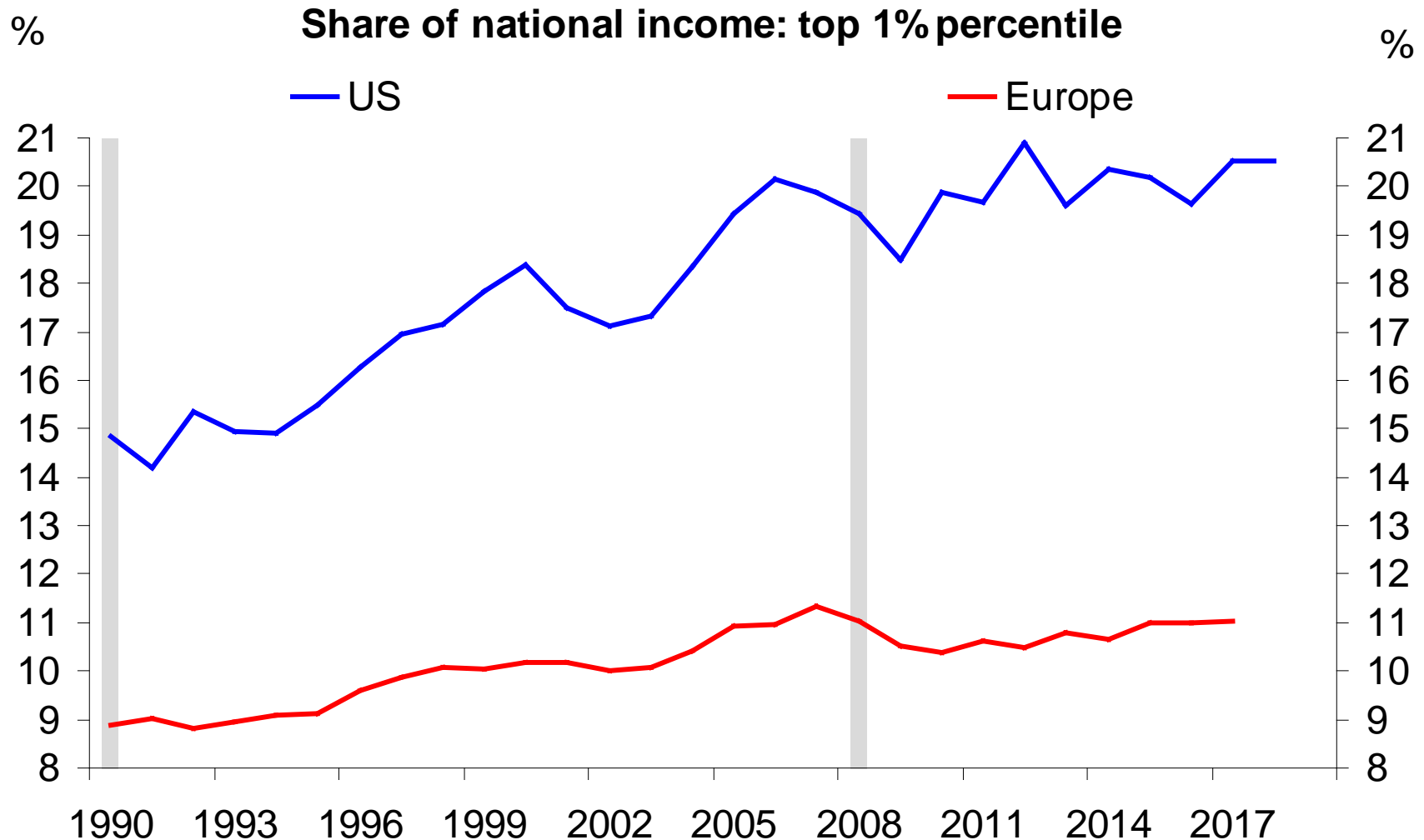
# The share of income going to the Bottom 50% of the population is down in the US and unchanged in Europe



Source: Saez (2019), Blanchet, Chancel & Gethin (April 2019), WID, DB Global Research

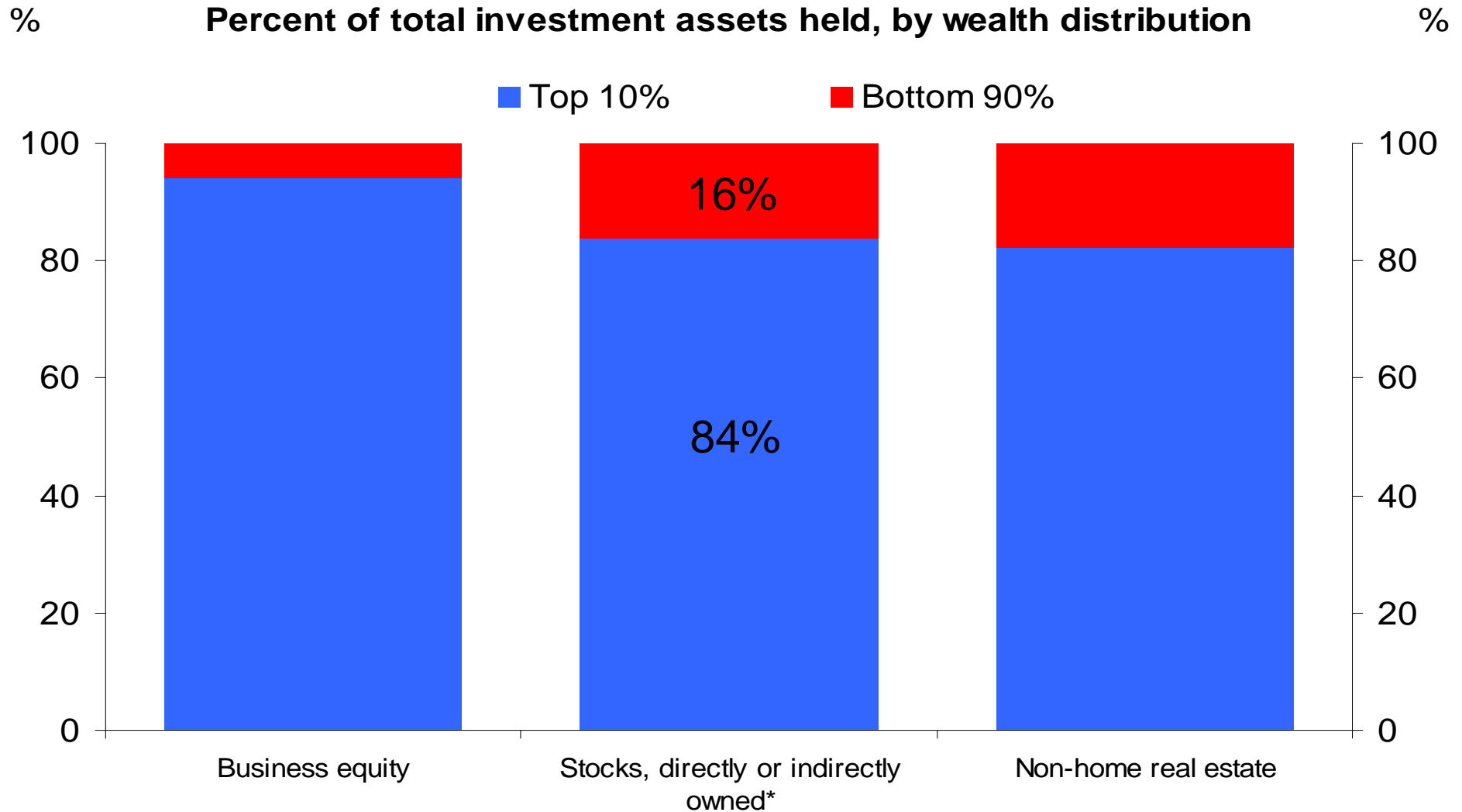


# The share of income going to the Top 1% is up 6%-points in the US and 2%-points in Europe



Source: Saez (2019), Blanchet, Chancel & Gethin (April 2019), WID, DB Global Research

# 10% of the US population own 84% of all stocks held by households



\* Includes direct ownership of stocks and indirect ownership through mutual funds, trusts, and IRAs, Keogh plans, 401(k) plans, and other retirement accounts

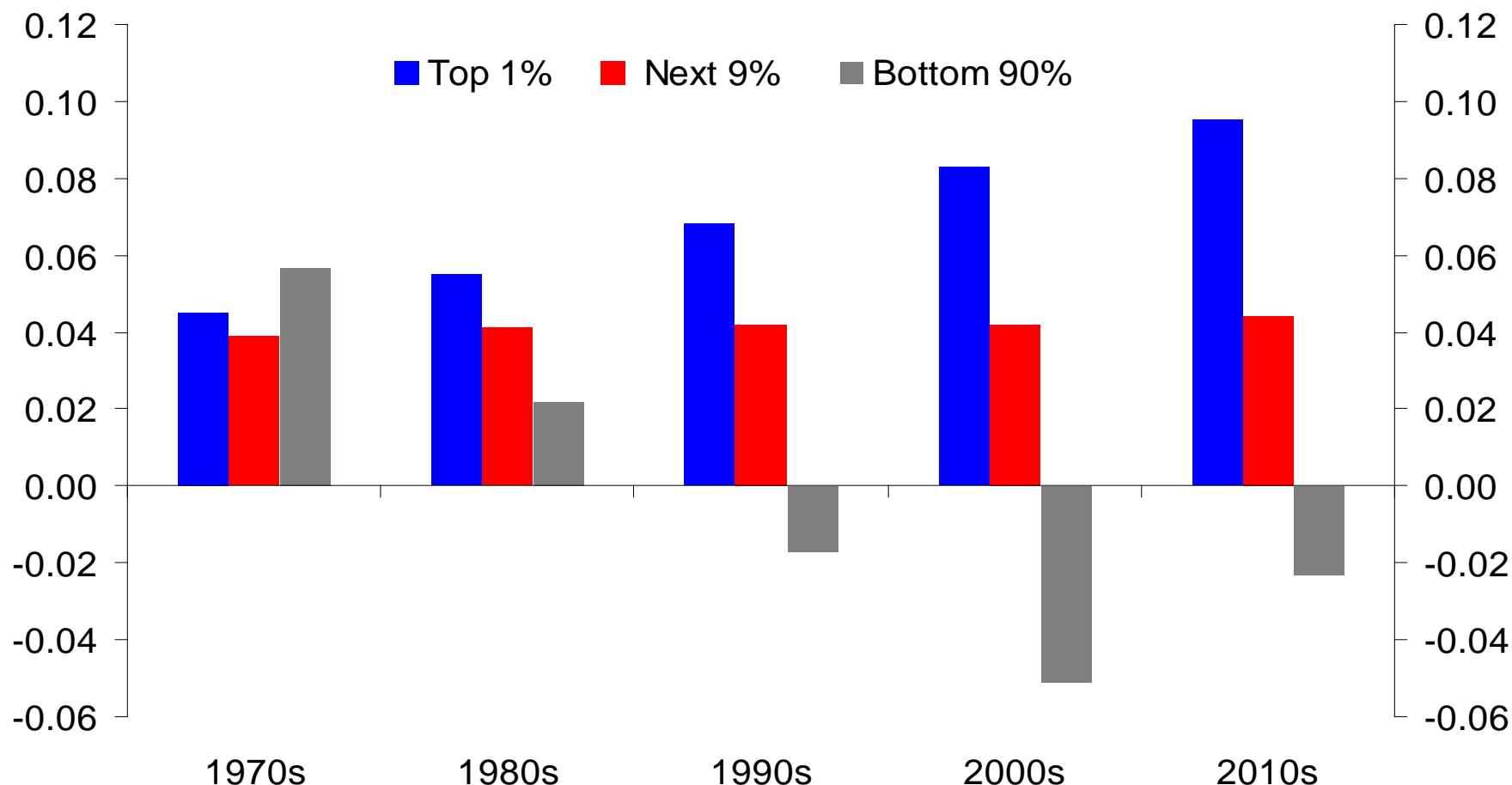
Source: Edward N. Wolff, (2018), Survey of Consumer Finances, DB Global Research





# US: Negative savings rate for the bottom 90% of the population

**Net saving rates across the income distribution**

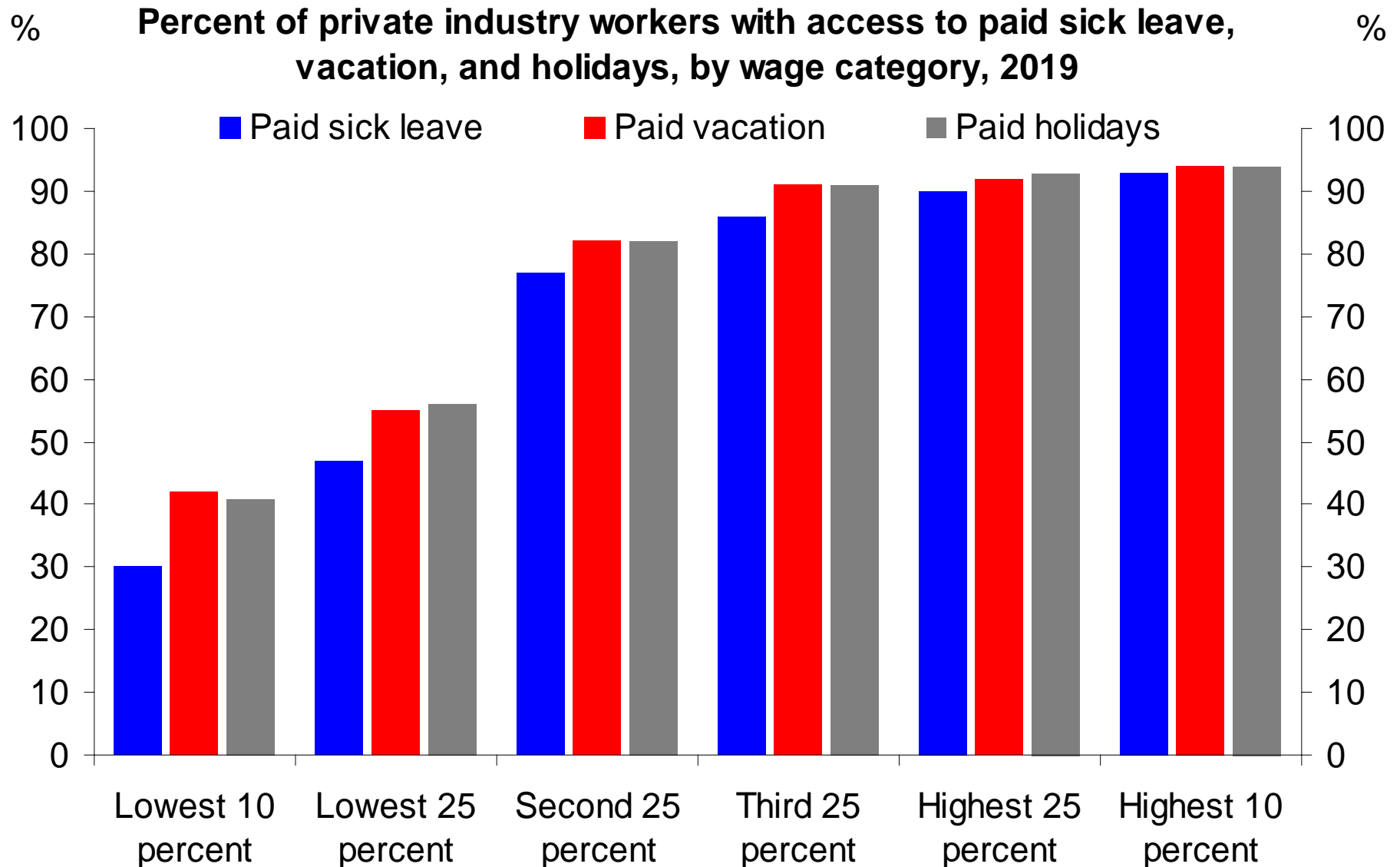


Note: The saving of the top 1% is defined to be the after-tax income of the top 1% of the income distribution minus personal consumption of the top 1% of the income distribution, scaled by national income. Net saving of the other two groups is similarly defined. Averages for the decades are shown.

Source: Mian, Straub & Sufi "The Saving Glut of the Rich and the Rise in Household Debt," (Nov 2019), DB Global Research



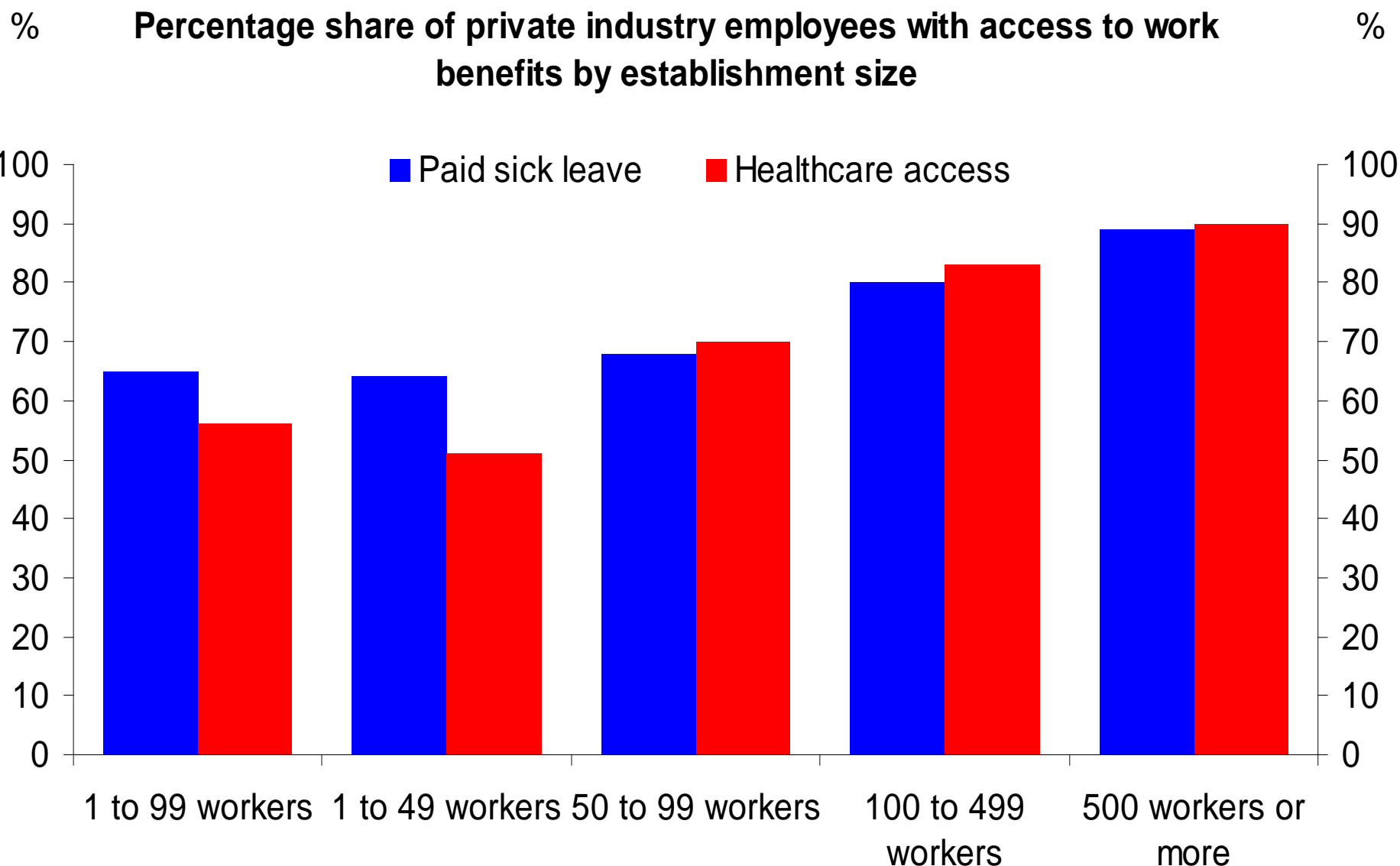
# US: Coronavirus likely to have bigger impact on low-income groups



Source: Bureau of Labor Statistics, National Compensation Survey, DB Global Research



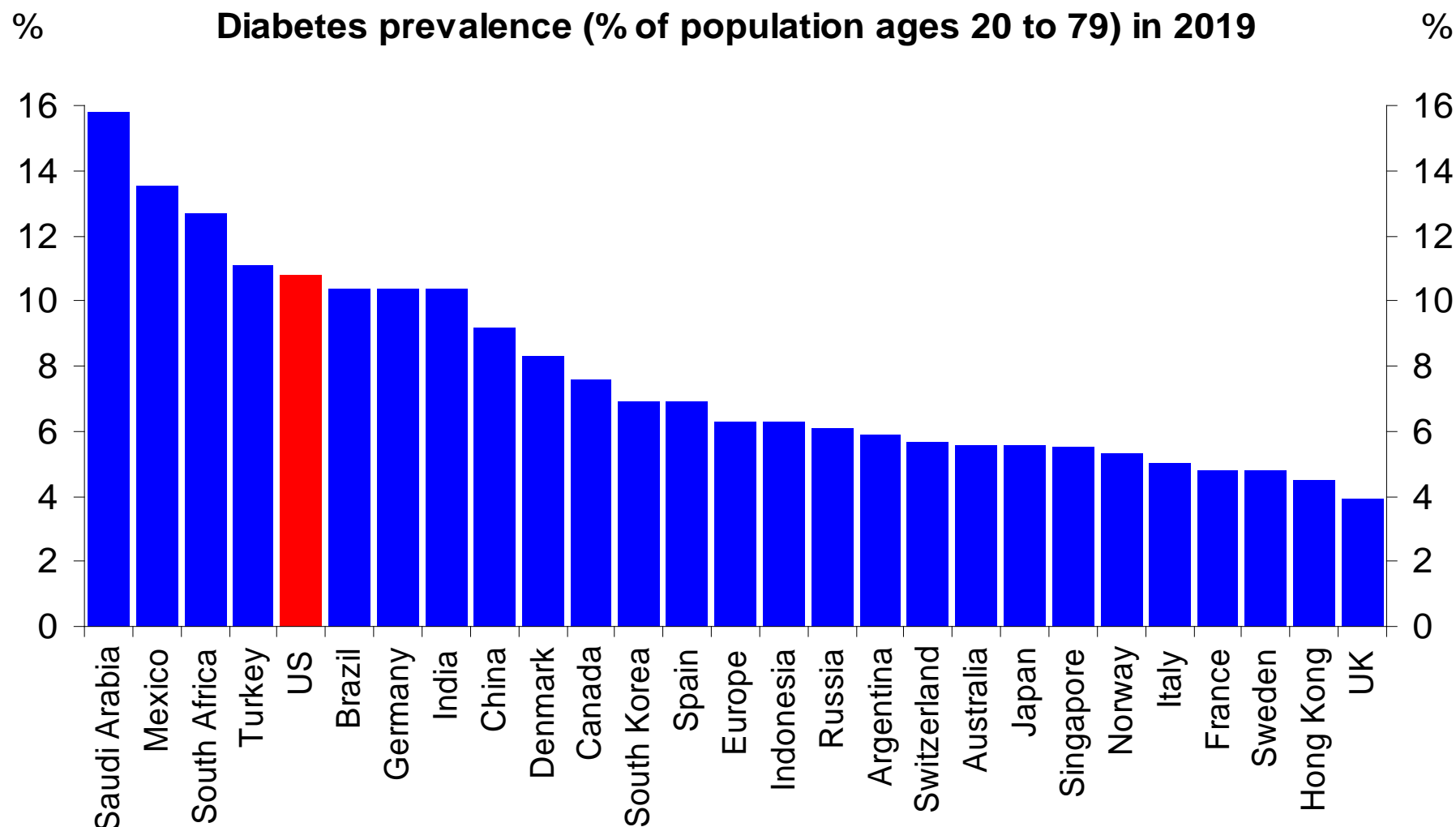
# Paid sick leave and healthcare access by establishment size



Source: BLS, DB Global Research



# Share of population with diabetes

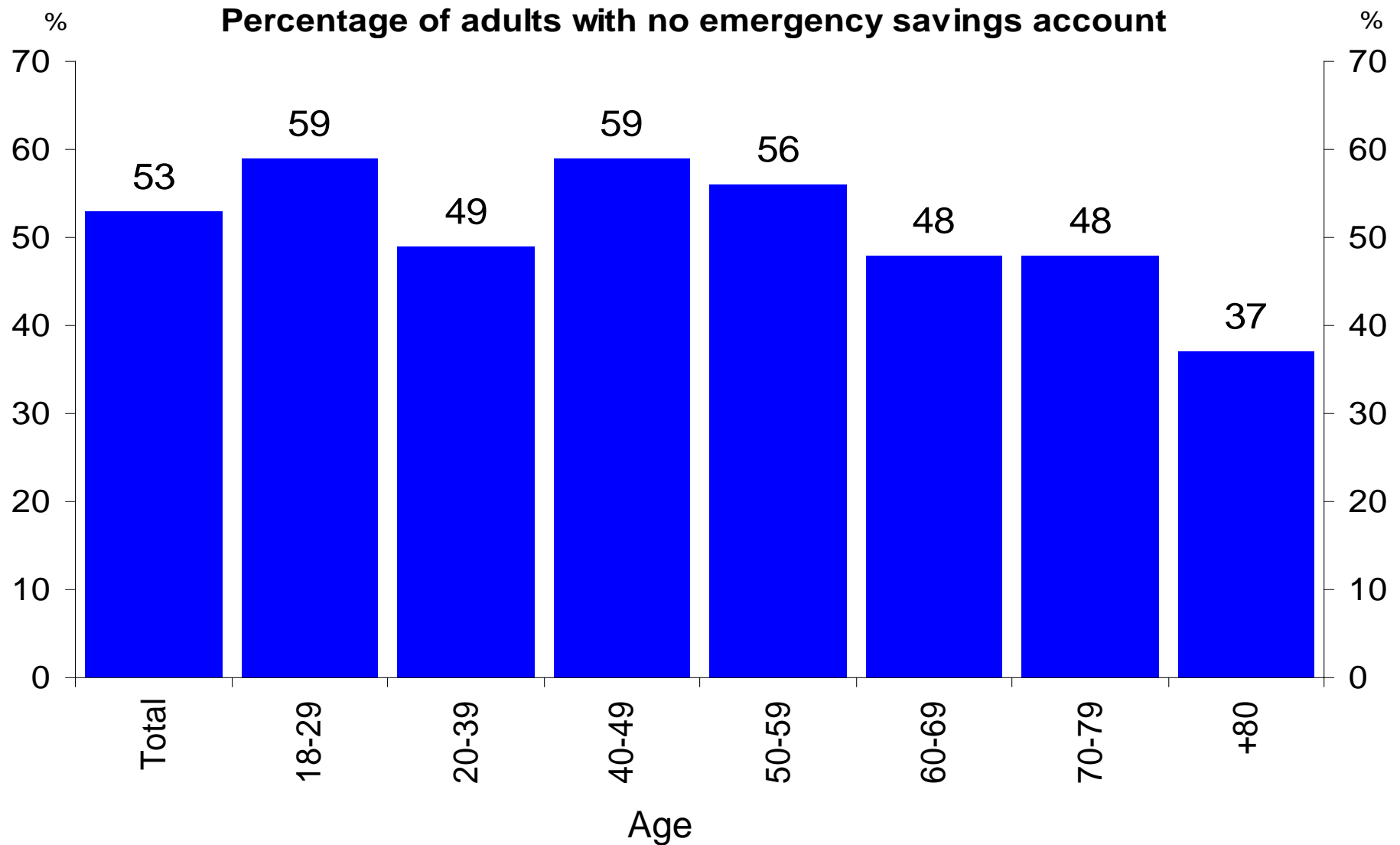


Note: Diabetes prevalence refers to the percentage of people ages 20-79 who have type 1 or type 2 diabetes.

Source: IDF Diabetes Atlas, DB Global Research

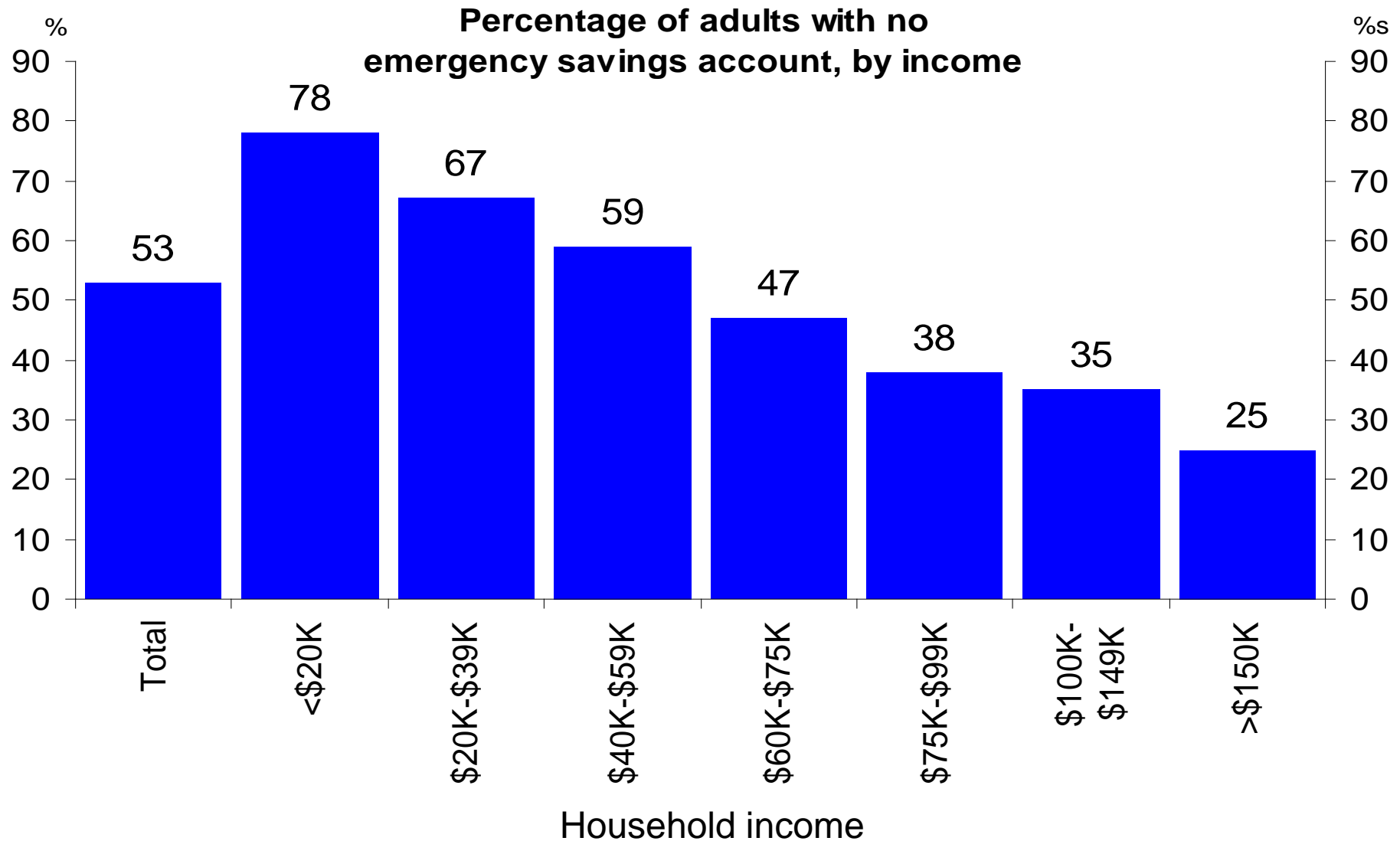


# 53% of US households don't have emergency savings



Source: AARP, DB Global Research

# 25% of US households with income higher than \$150,000 don't have emergency savings

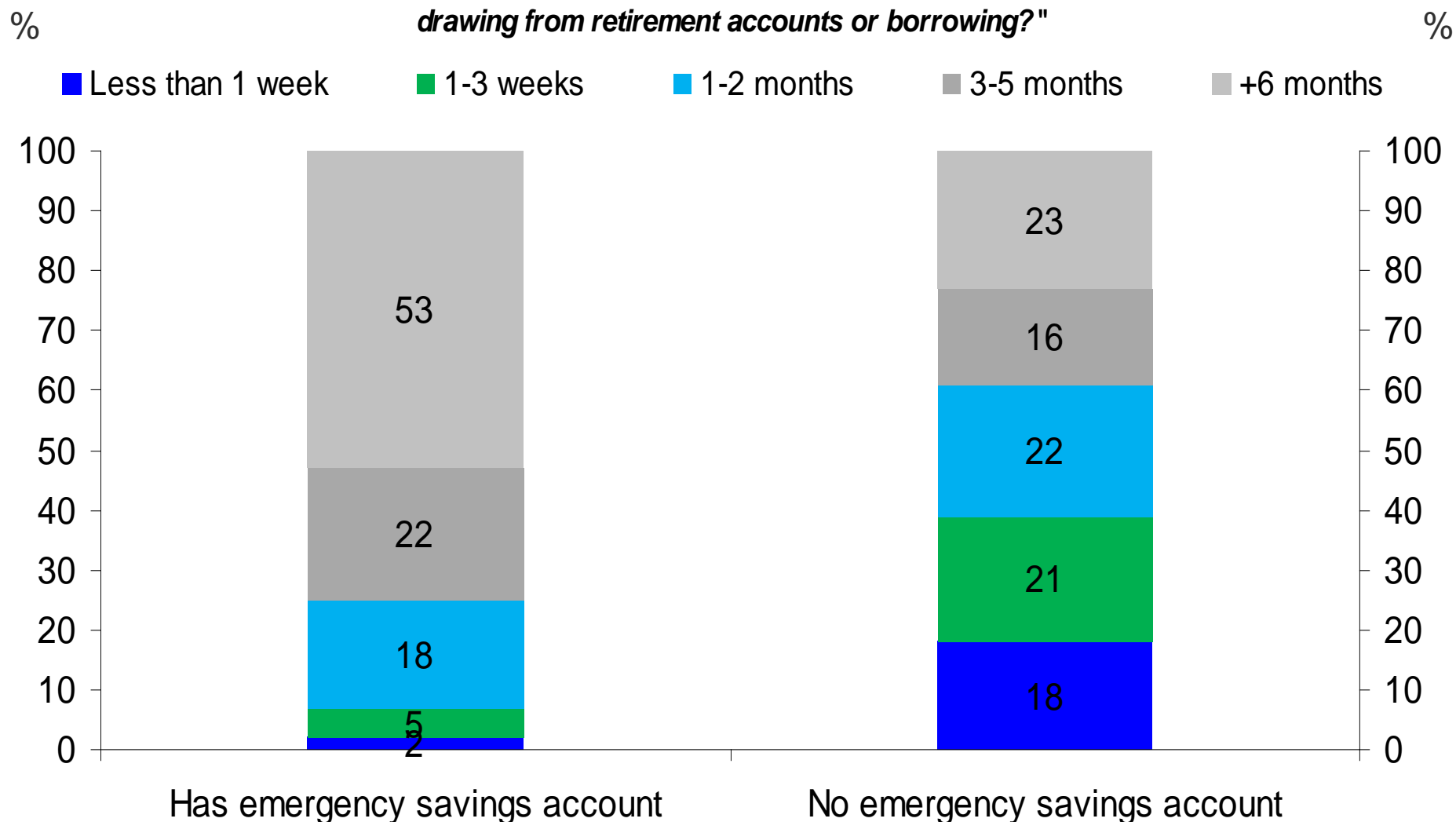


Source: AARP, DB Global Research

# Length of time households could cover expenses with existing money



**Question: "At current level of spending, how long could you afford to cover expenses, if you and your household had to live off only the money you have readily available without drawing from retirement accounts or borrowing?"**

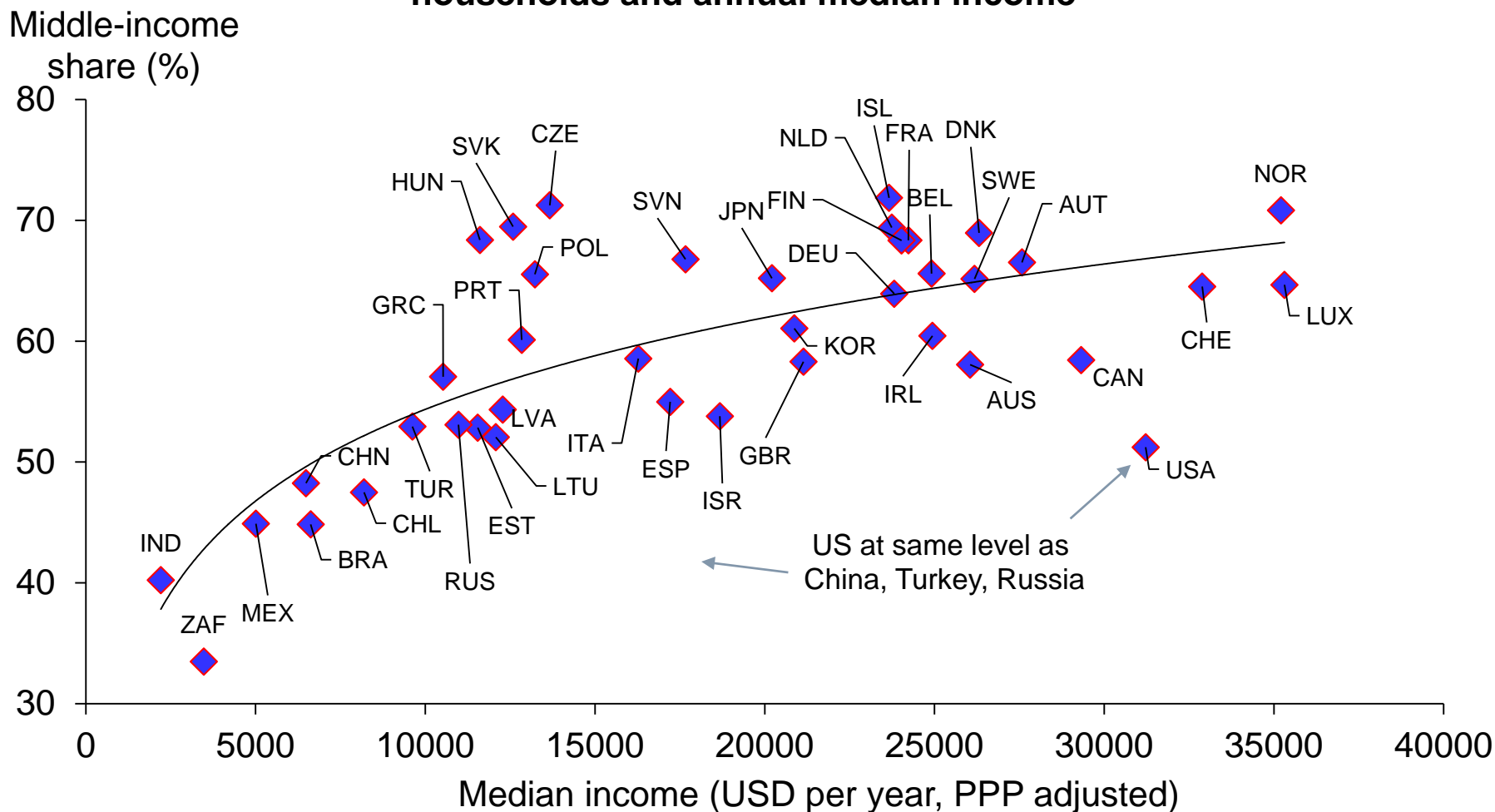


Source: AARP, DB Global Research



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

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

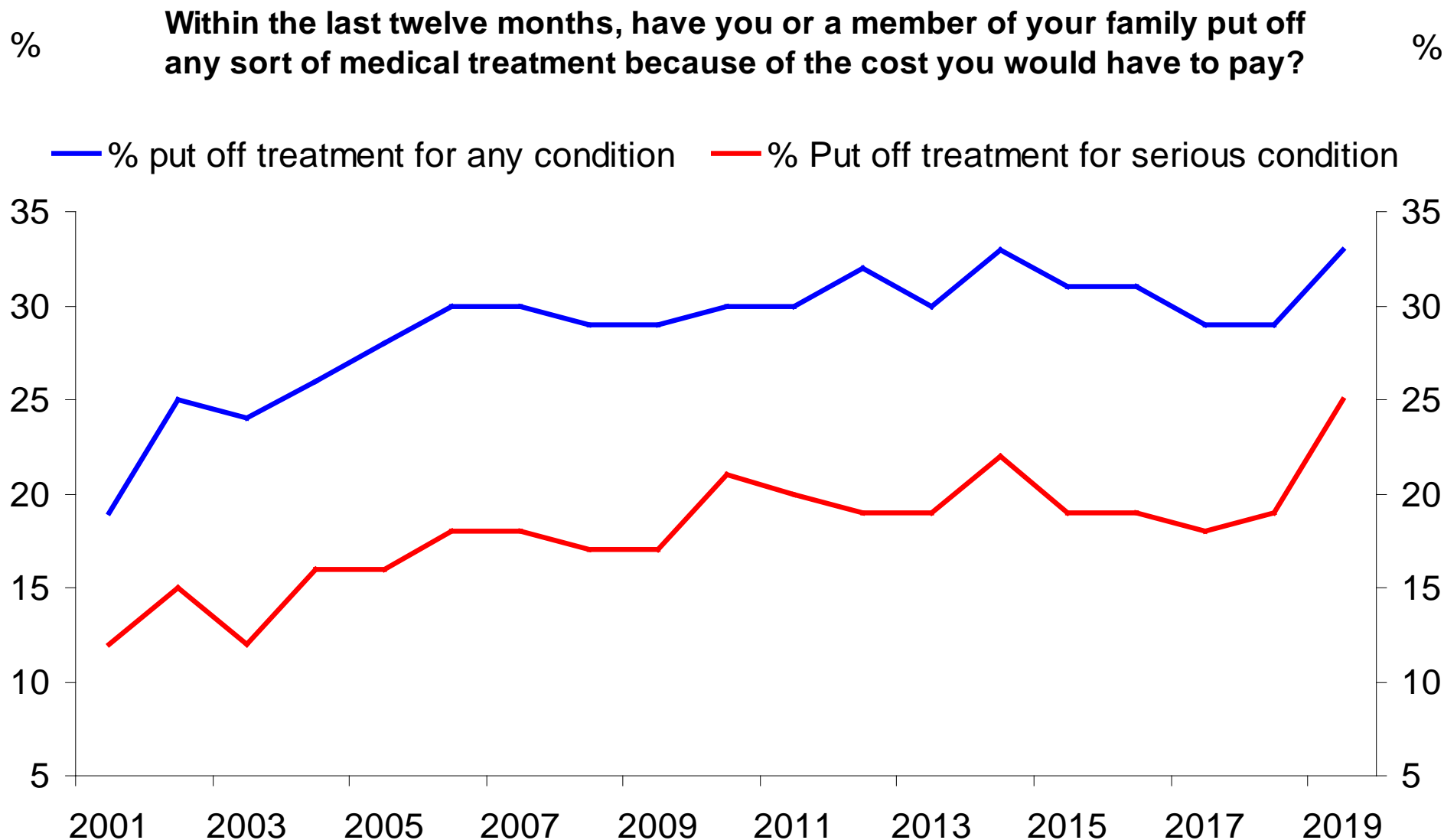


Note: Middle-income classes and median incomes are defined relative to equivalised household disposable income. The middle-income class comprises individuals in households with incomes that are between 75% and 200% of the median.

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



# More people delaying medical treatment for financial reasons



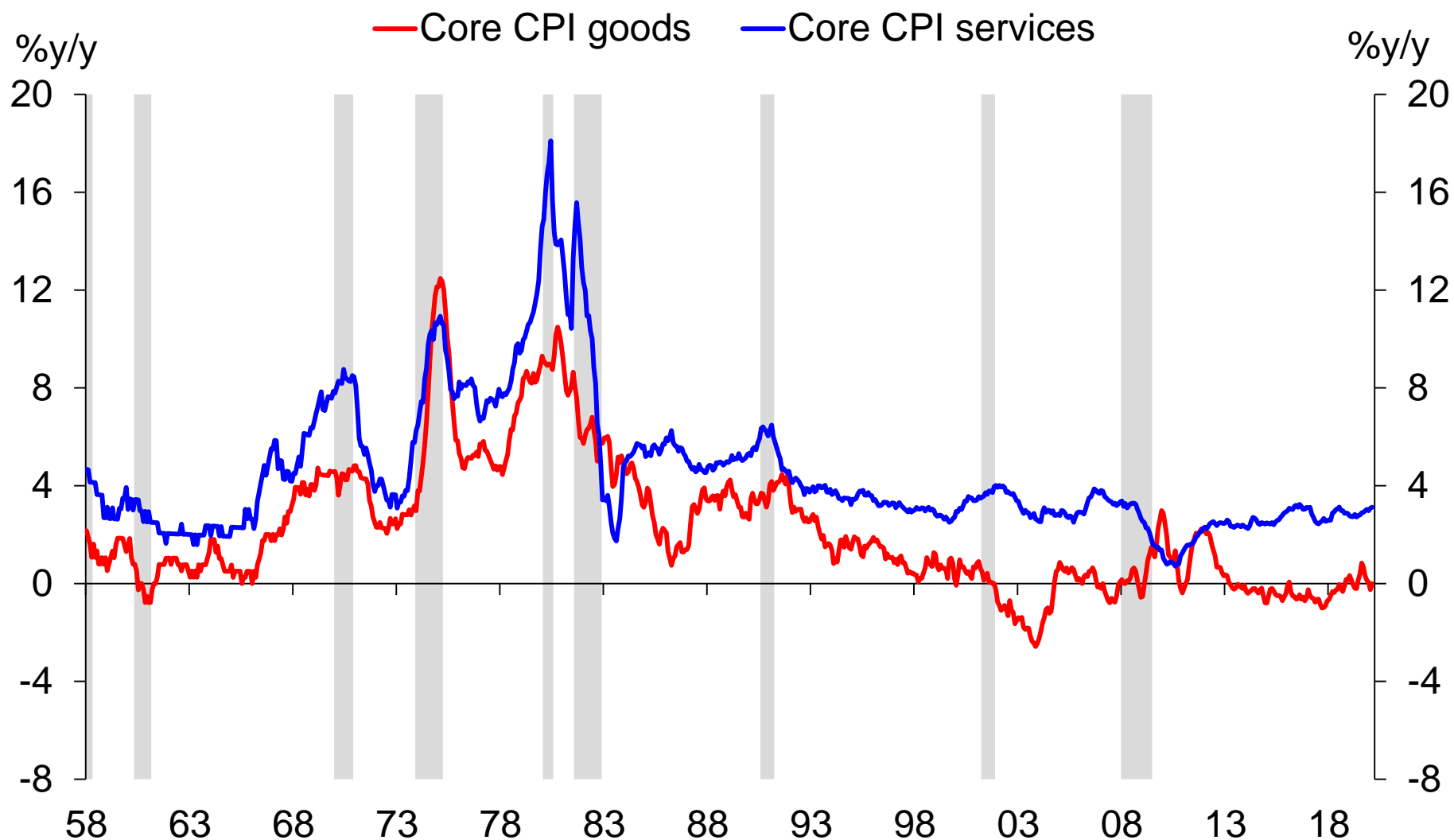
Source: Gallup Survey, DB Global Research



# Investment implications



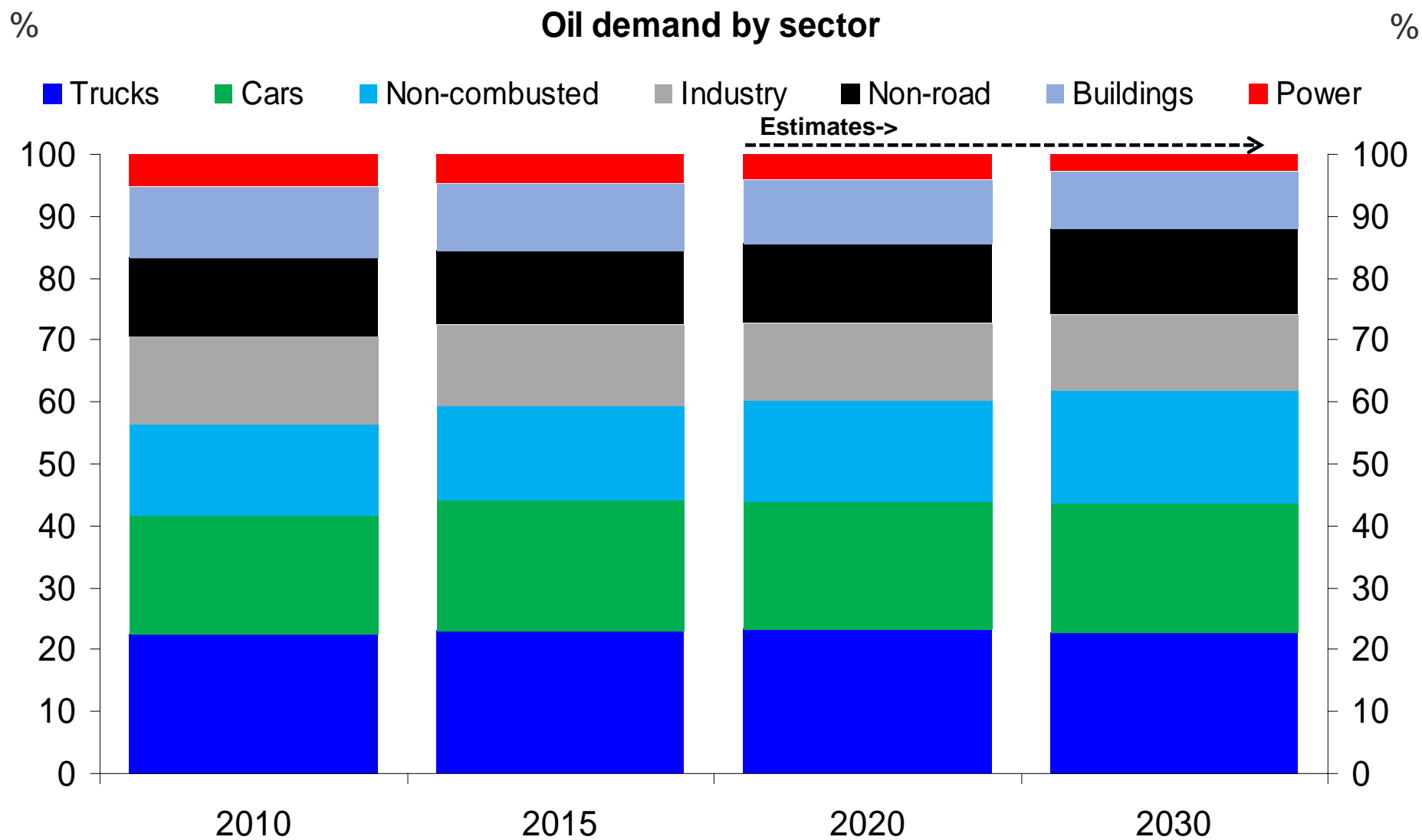
# US: Basically no goods inflation since the mid-1990s



Source: BLS, Haver Analytics, DB Global Research



# 40% of oil demand comes from cars and trucks



Source: BP Energy Outlook 2019, DB Global Research

# Investment implications summarized

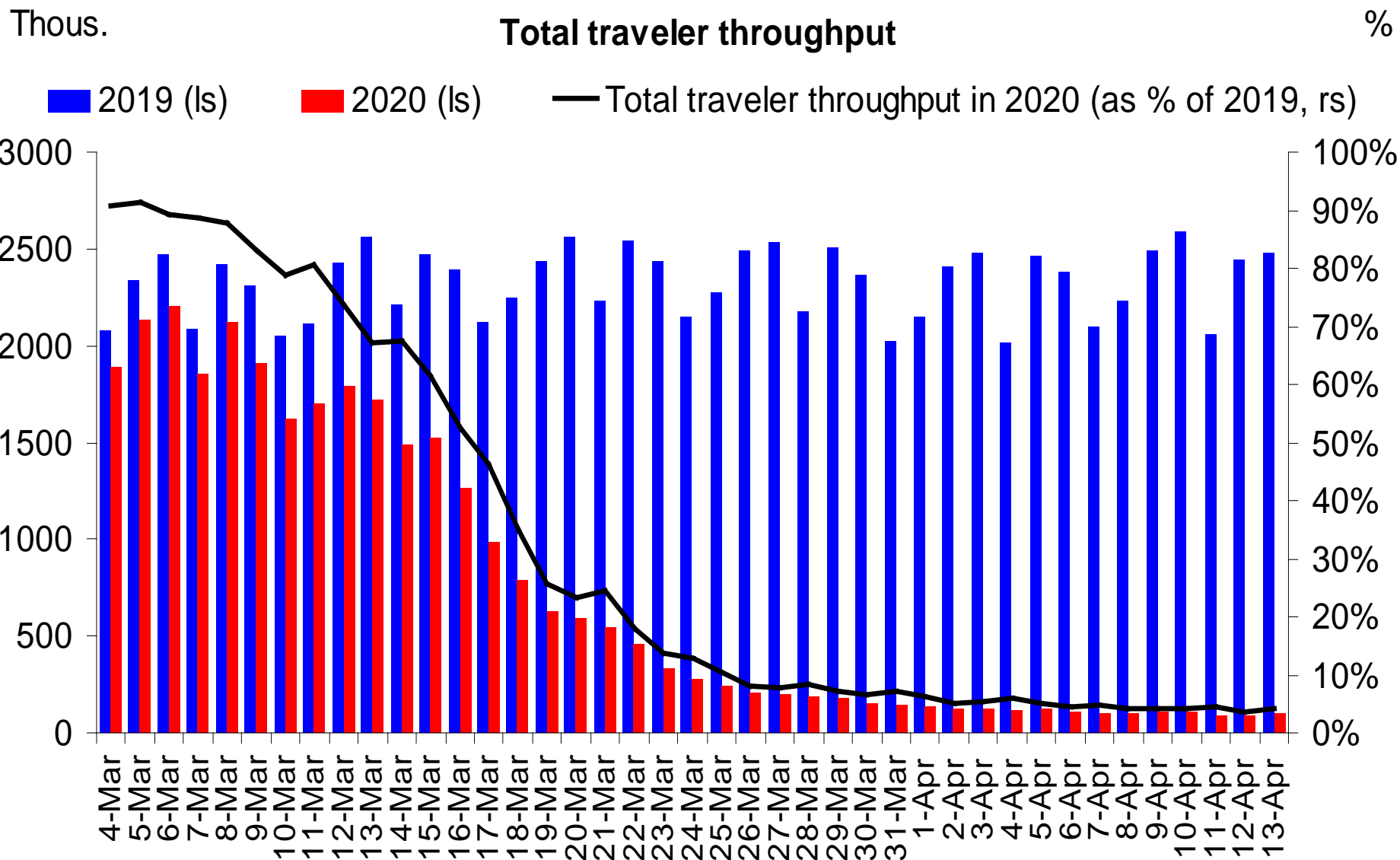


Fed outlook – <b>Fed on hold</b>	GDP will decline 33% in Q2. The unemployment rate will be 11.6% in Q2 and 8.1% in Q3 and 6.0% in Q4.
Bond markets - <b>Long rates higher by end of year</b>	Fed action holding long rates down. Better economic outlook and bigger fiscal deficits pushing long rates higher.
Credit - <b>Credit spreads narrower</b>	Fed support and more liquid markets will narrow IG and HY spreads over the coming quarters
Stock markets - <b>Flatter epi curve and recession curve</b>	As the economy gradually rebounds equities will move higher.
FX - <b>Dollar down</b>	EURUSD at 1.20 by year-end
Commodities - <b>Coronavirus and slower global growth</b>	Oil prices to remain low
Emerging markets - <b>Hard hit by virus and low oil prices</b>	Coronavirus and low oil prices is negative for commodity exporters. Global recovery helpful for EM. Dovish Fed and ECB helpful for EM.

Source: DB Global Research



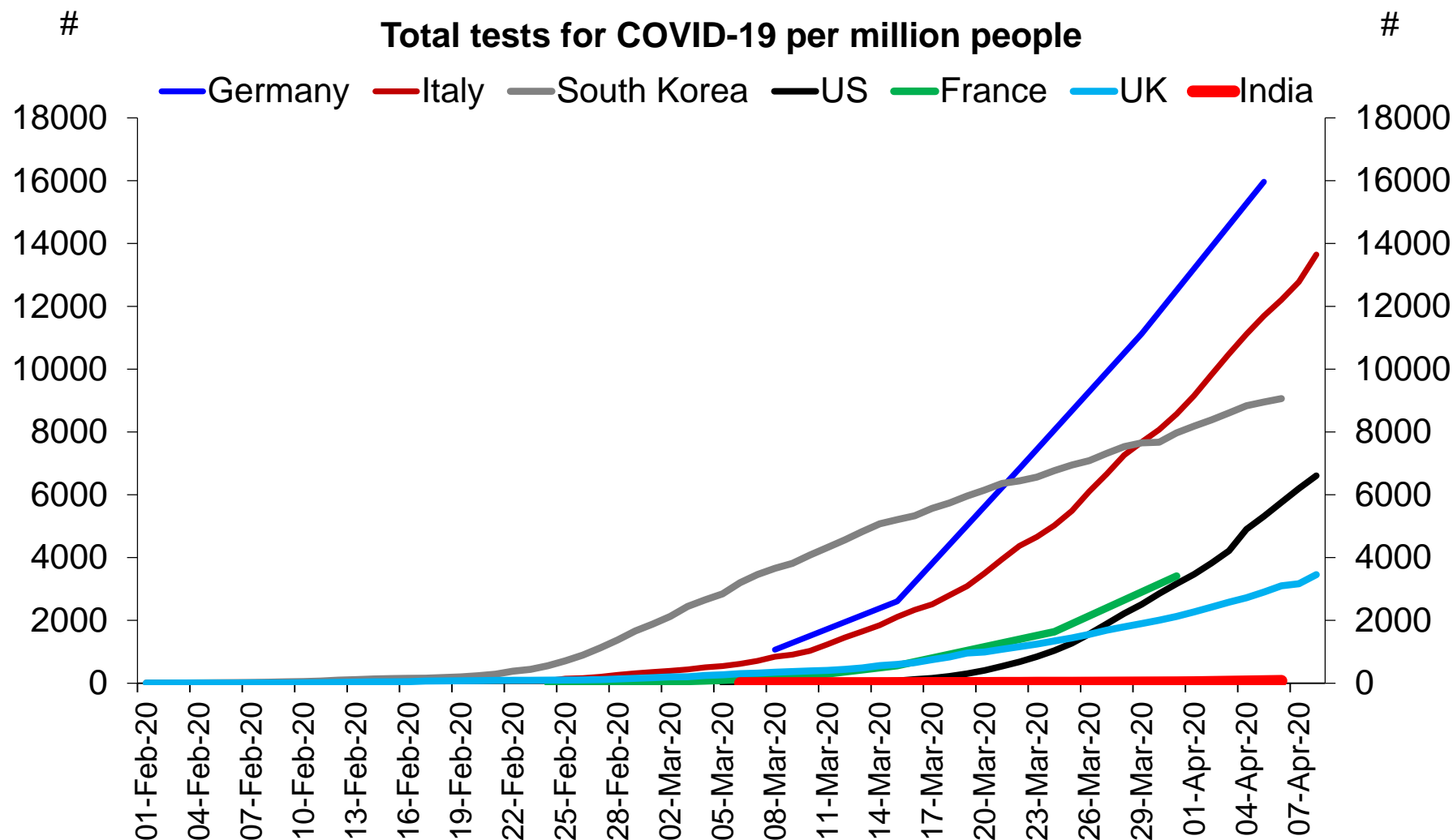
# US airline passenger traffic currently 10% of normal



Source: TSA, DB Global Research



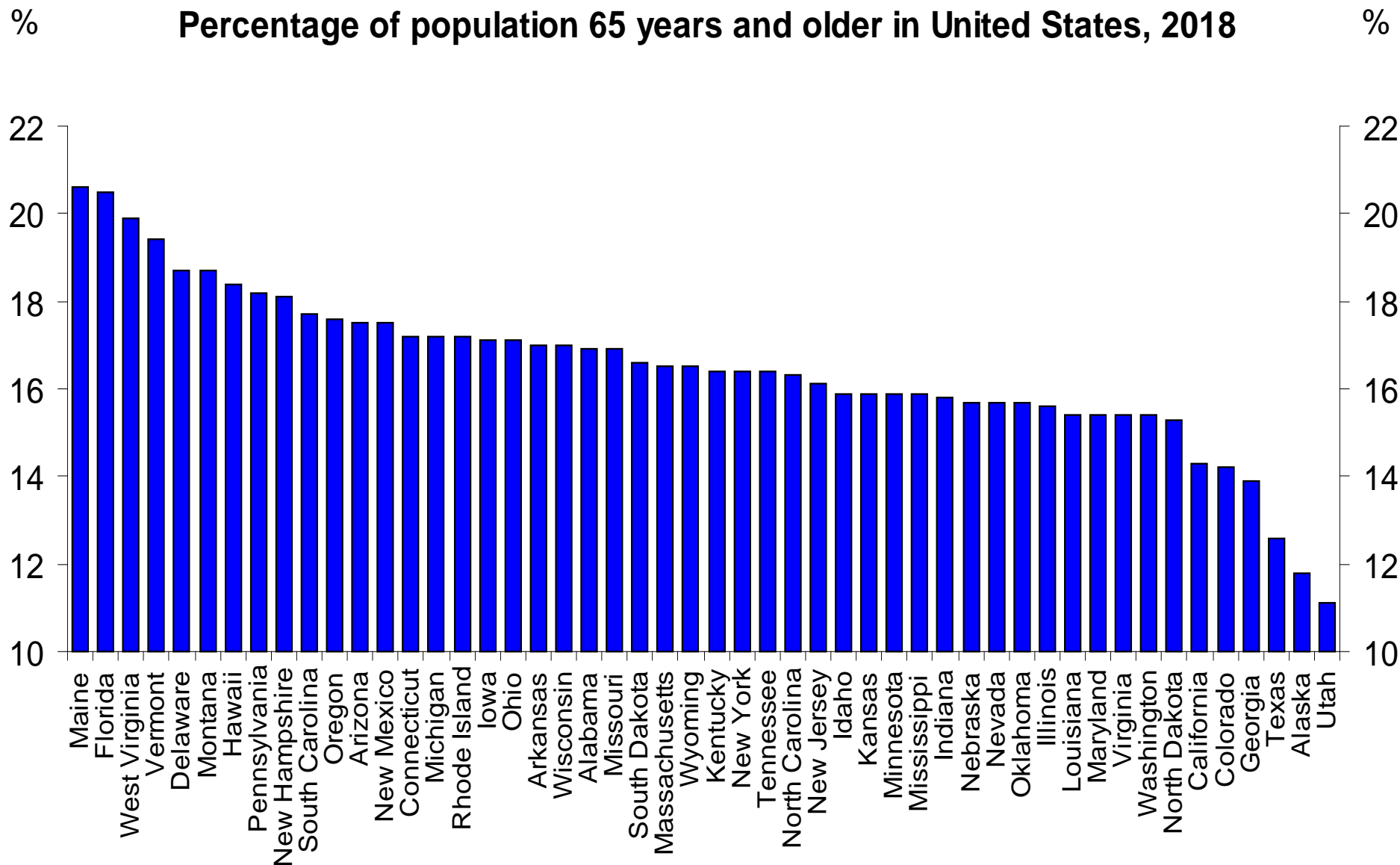
# Covid-19 tests per million population



Note: Germany figure is based on samples tested, Italy (units unclear), South Korea (cases tested), US (inconsistent units-COVID Tracking Project), France (units unclear), UK-people tested and India- samples tested, There are substantial differences across countries in terms of the units, whether or not all labs are included, the extent to which negative and pending tests are included and other aspects.

Source: Our World in Data, DB Global Research

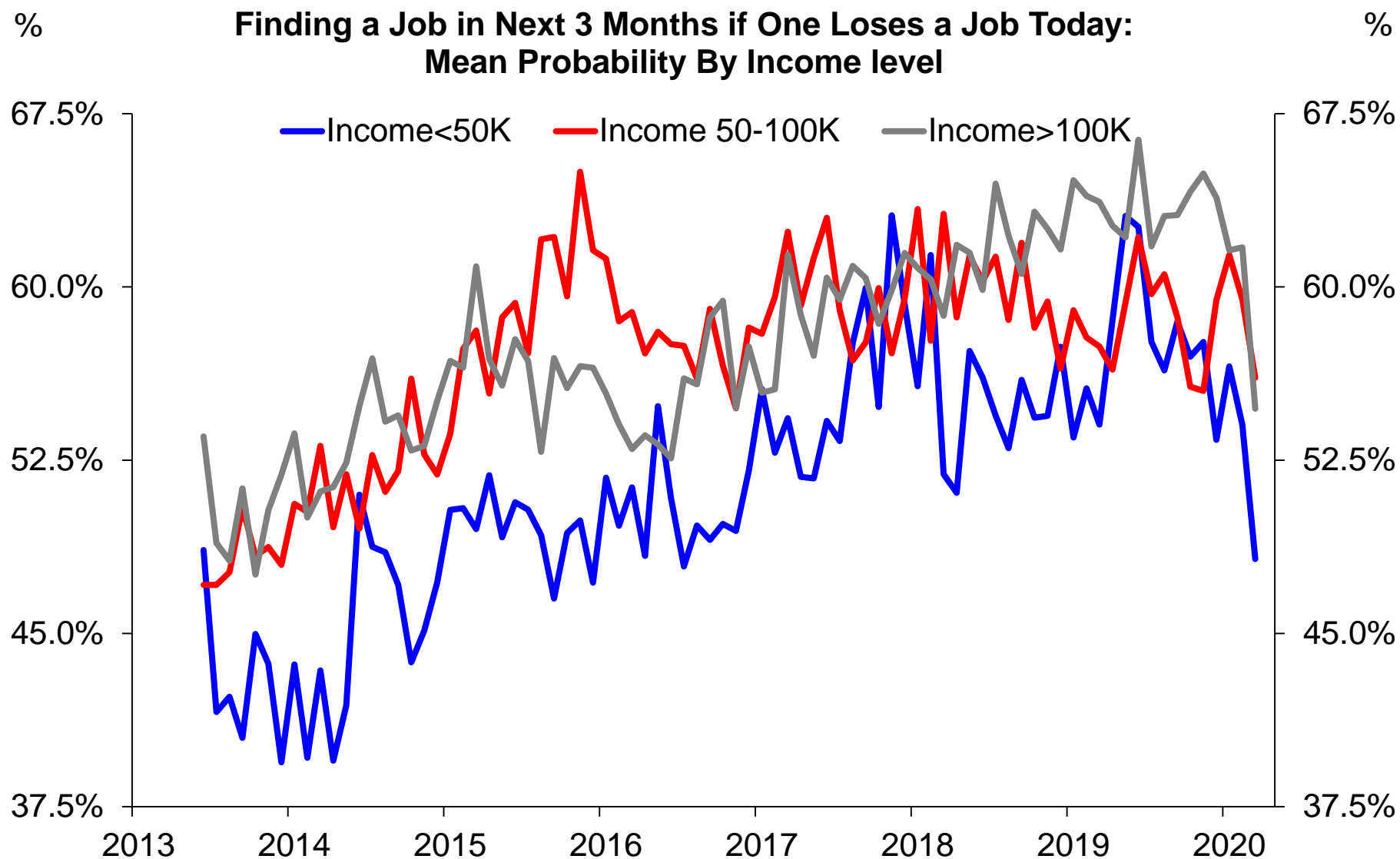
# Higher concentration of older people in Maine, Florida, and West Virginia



Source: US Census Bureau, DB Global Research

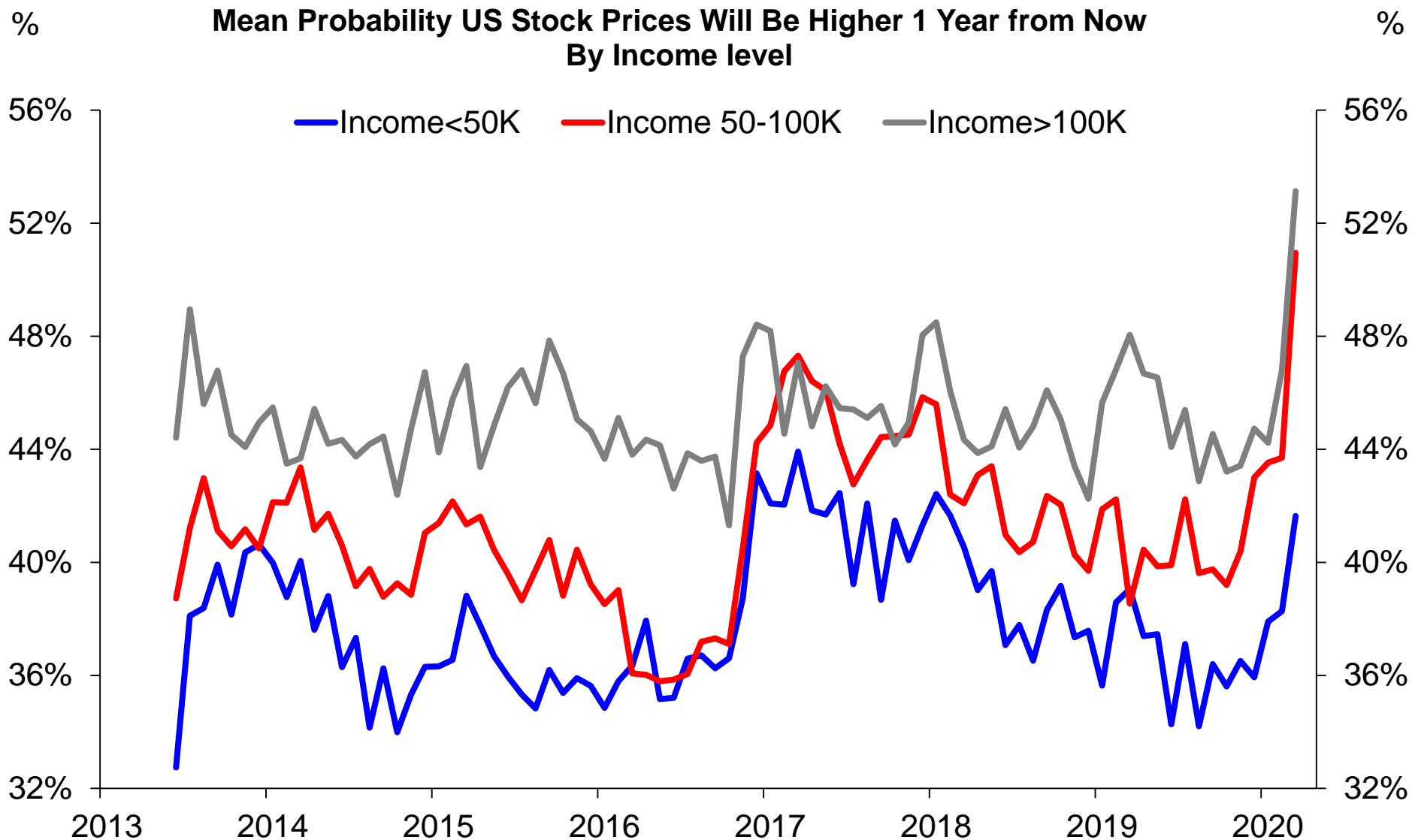


# Consumers with lower incomes more worried about not finding a new job in the next three months if they lose their job today



Source: FRBNY, Haver Analytics, DB Global Research

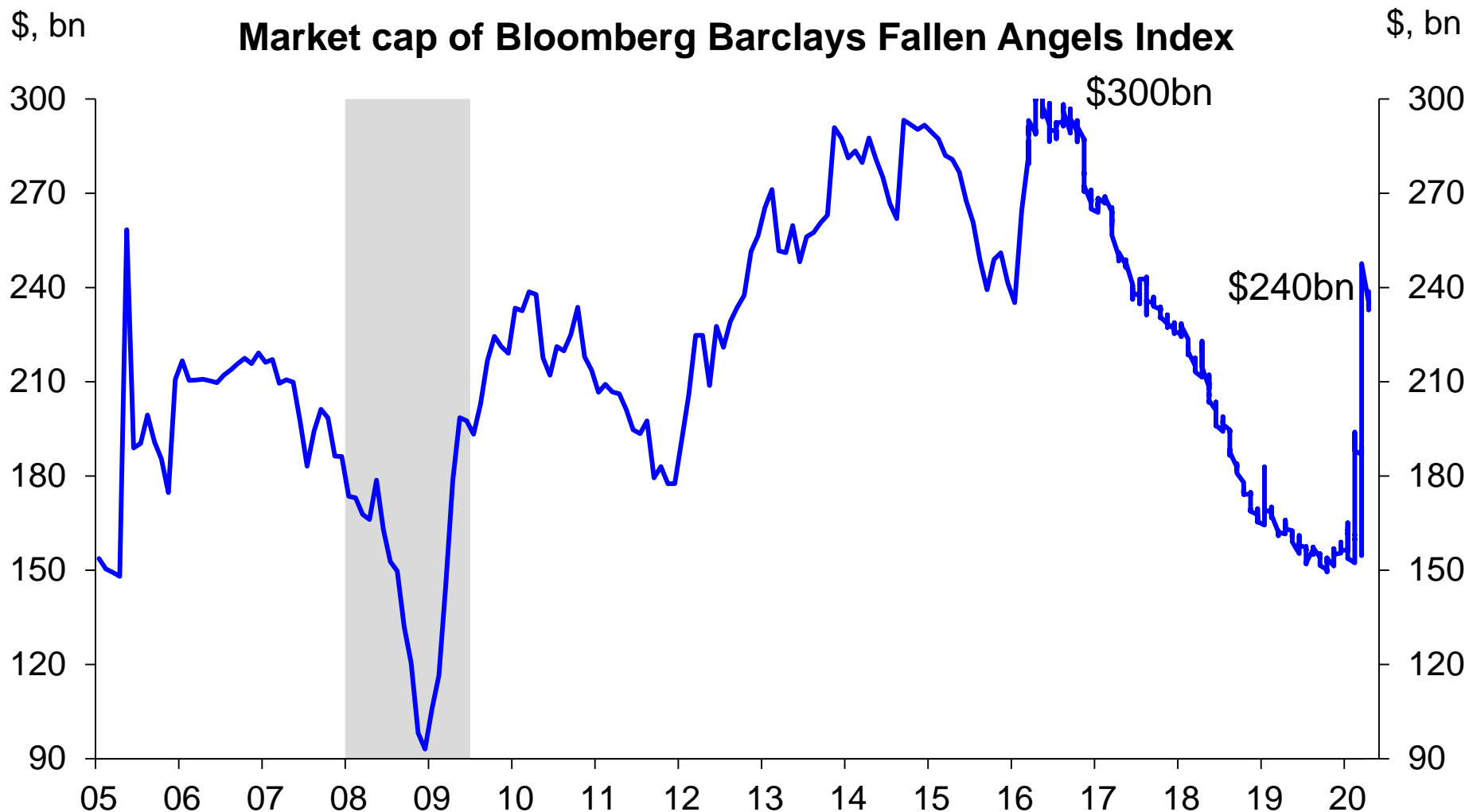
# Increase in the share of consumers thinking stock prices will be higher one year from now



Source: FRBNY, Haver Analytics, DB Global Research



# Market cap of the US Fallen Angels Index



Note: The Bloomberg Barclays USD Global Corporate ex EM Fallen Angels 3% Issuer Capped Index tracks bonds that are issued in developed markets and are rated High Yield & were rated Investment Grade either at issuance or at least once since issuance.

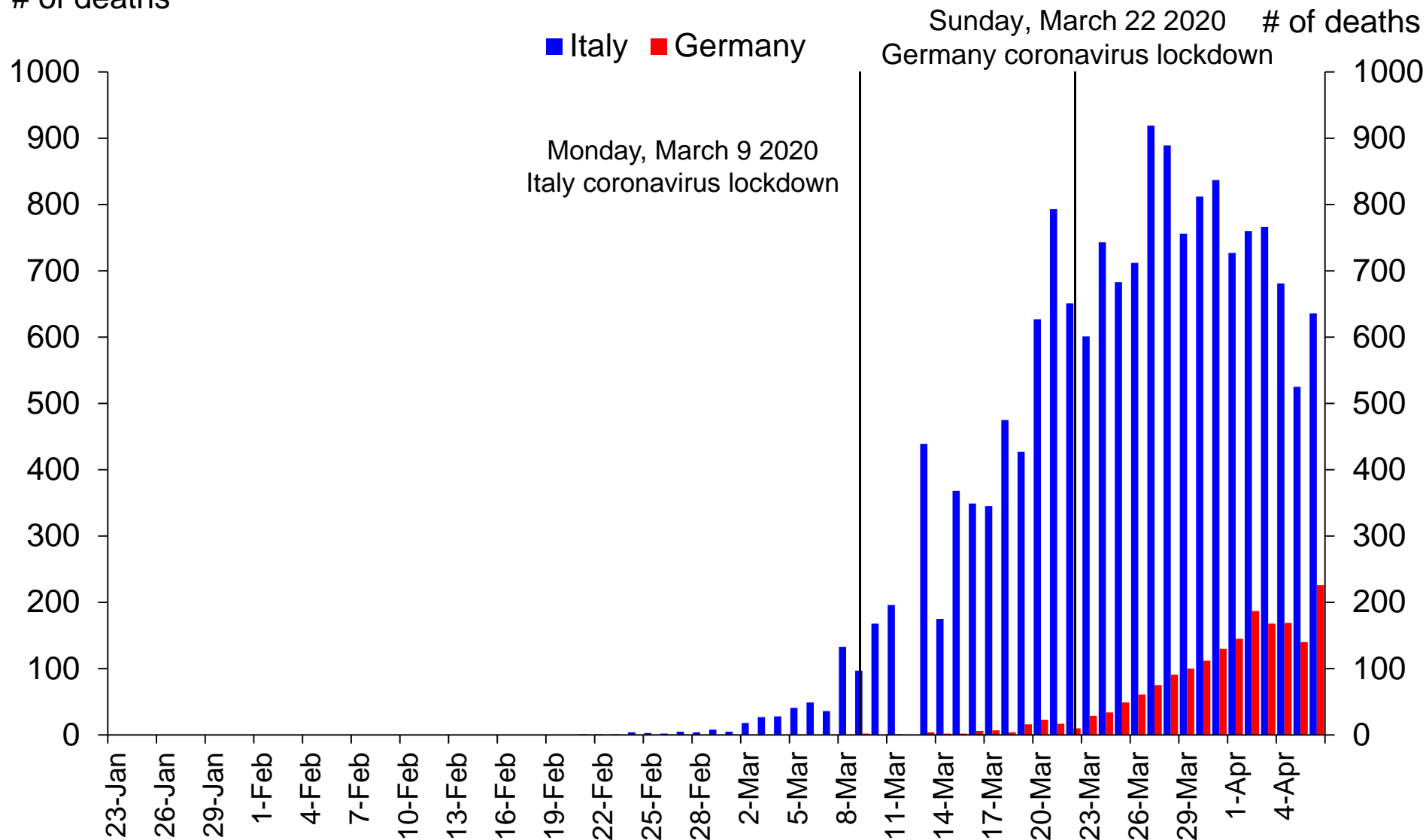
Source: Bloomberg Finance LP, DB Global Research



# Lockdown works

## Daily Change in Confirmed Deaths from COVID-19 in Italy and Germany

# of deaths

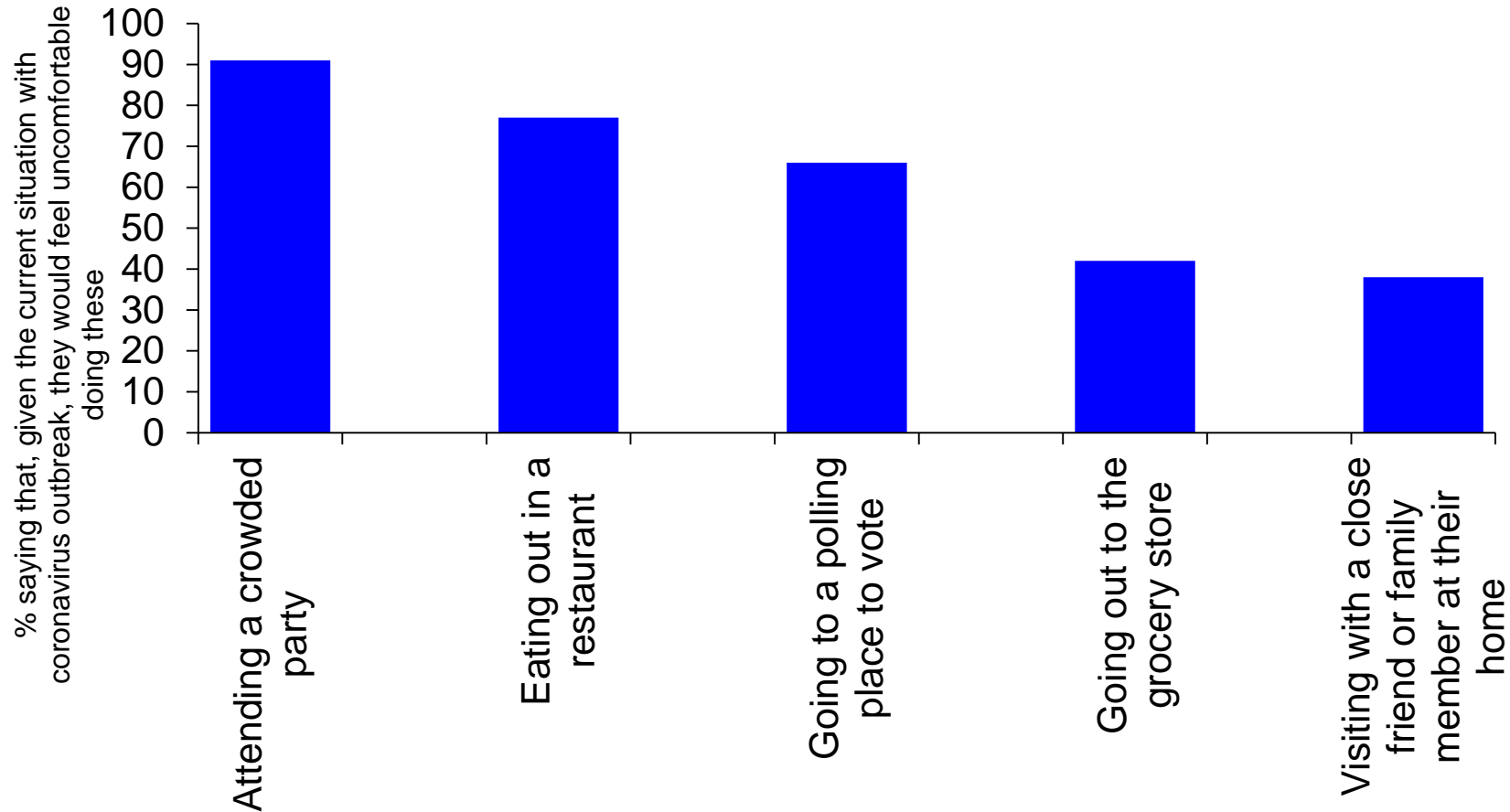


Source: JHU, DB Global Research



# Consumer behaviors are changing

**Amid coronavirus outbreak, most Americans uncomfortable going to a party, restaurant or polling place**



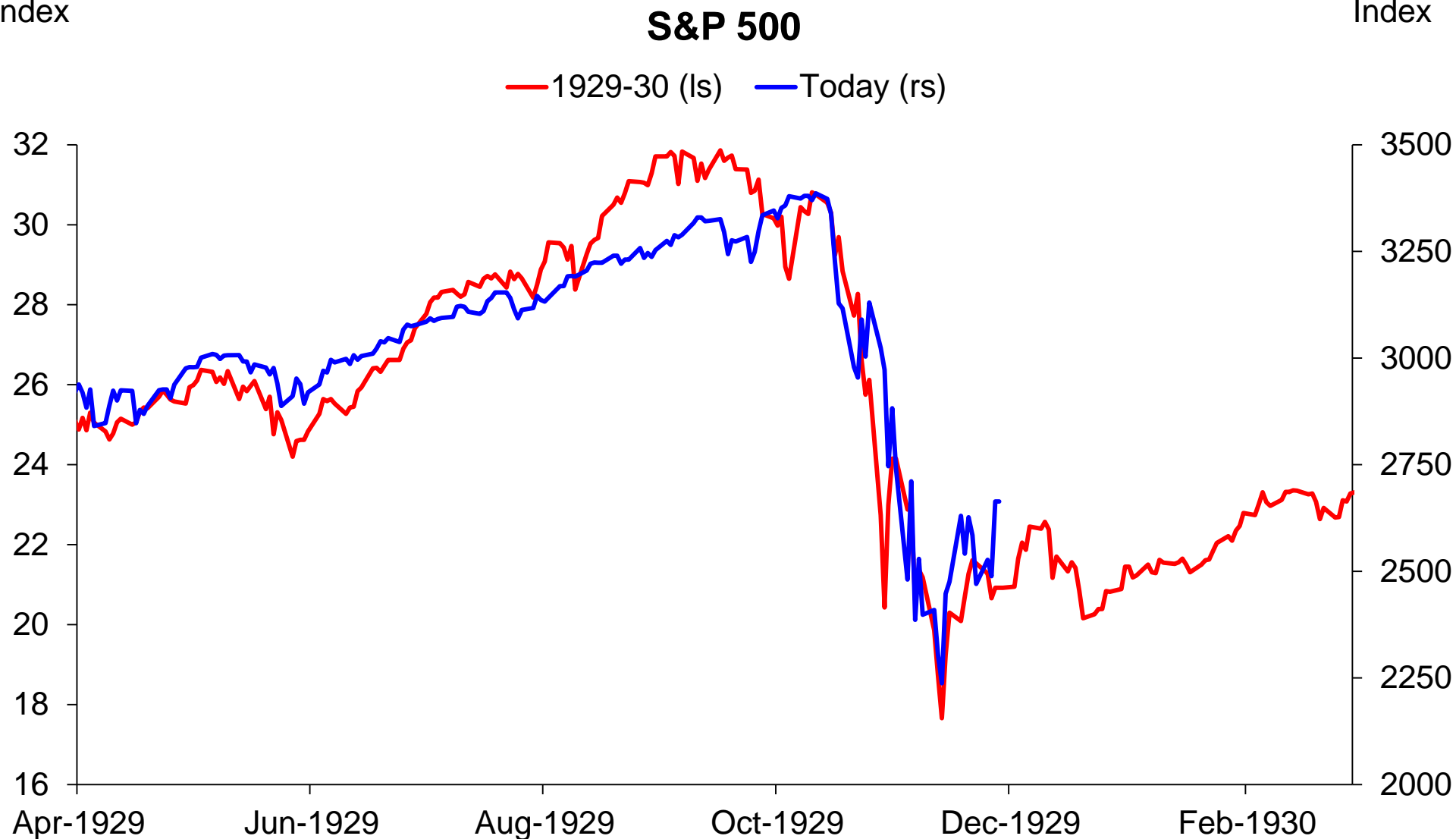
Source: Pew Research Centre- Survey of U.S. adults conducted March 19-24, 2020, DB Global Research



# Today compared with 1929

Index

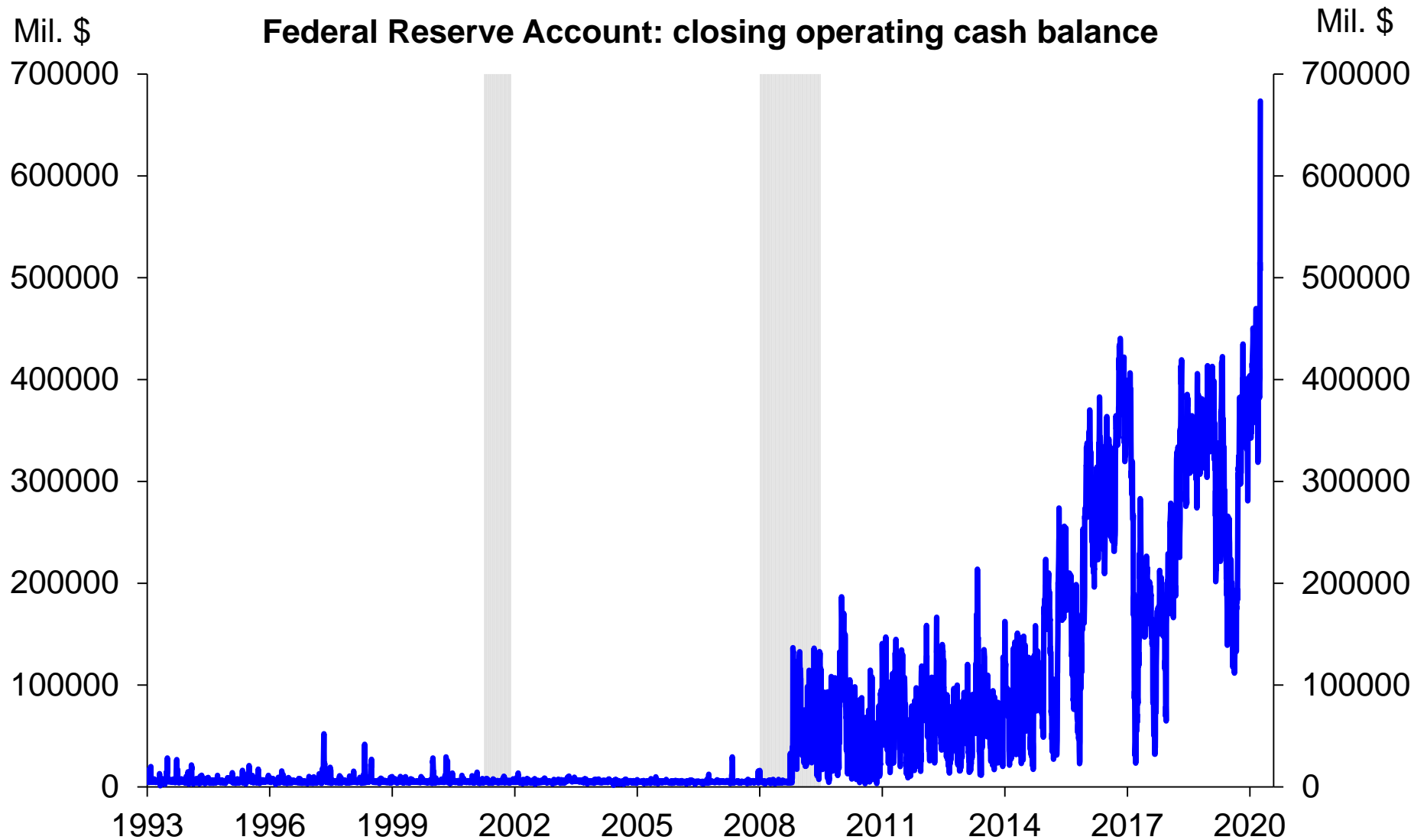
Index



Source: Bloomberg Finance LP, DB Global Research

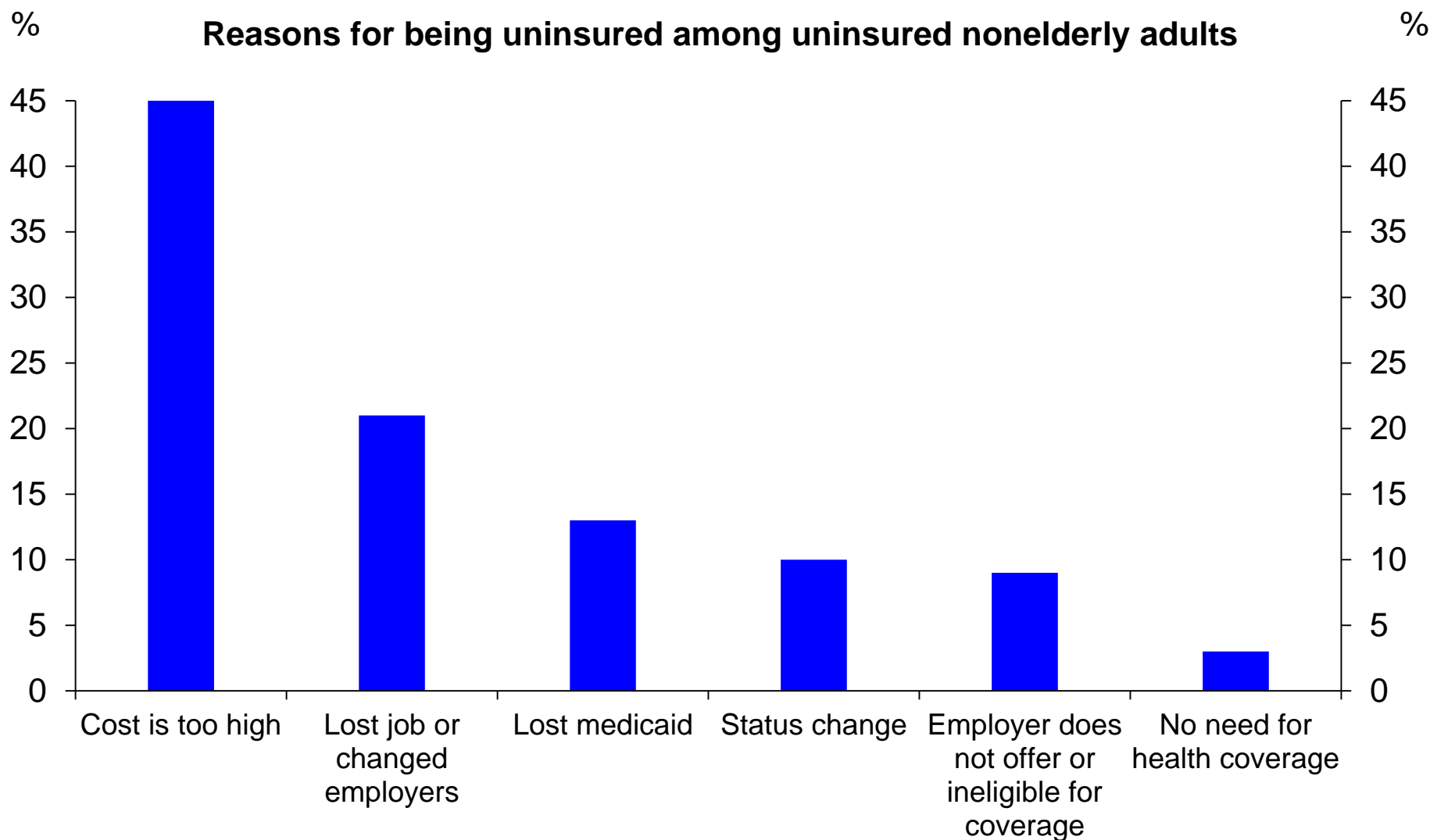


# Treasury building up cash balances for fiscal stimulus



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

# US: Reasons why uninsured don't have health insurance



Note: Status change includes marital status change, death of spouse or parent, or ineligible due to age or leaving school.

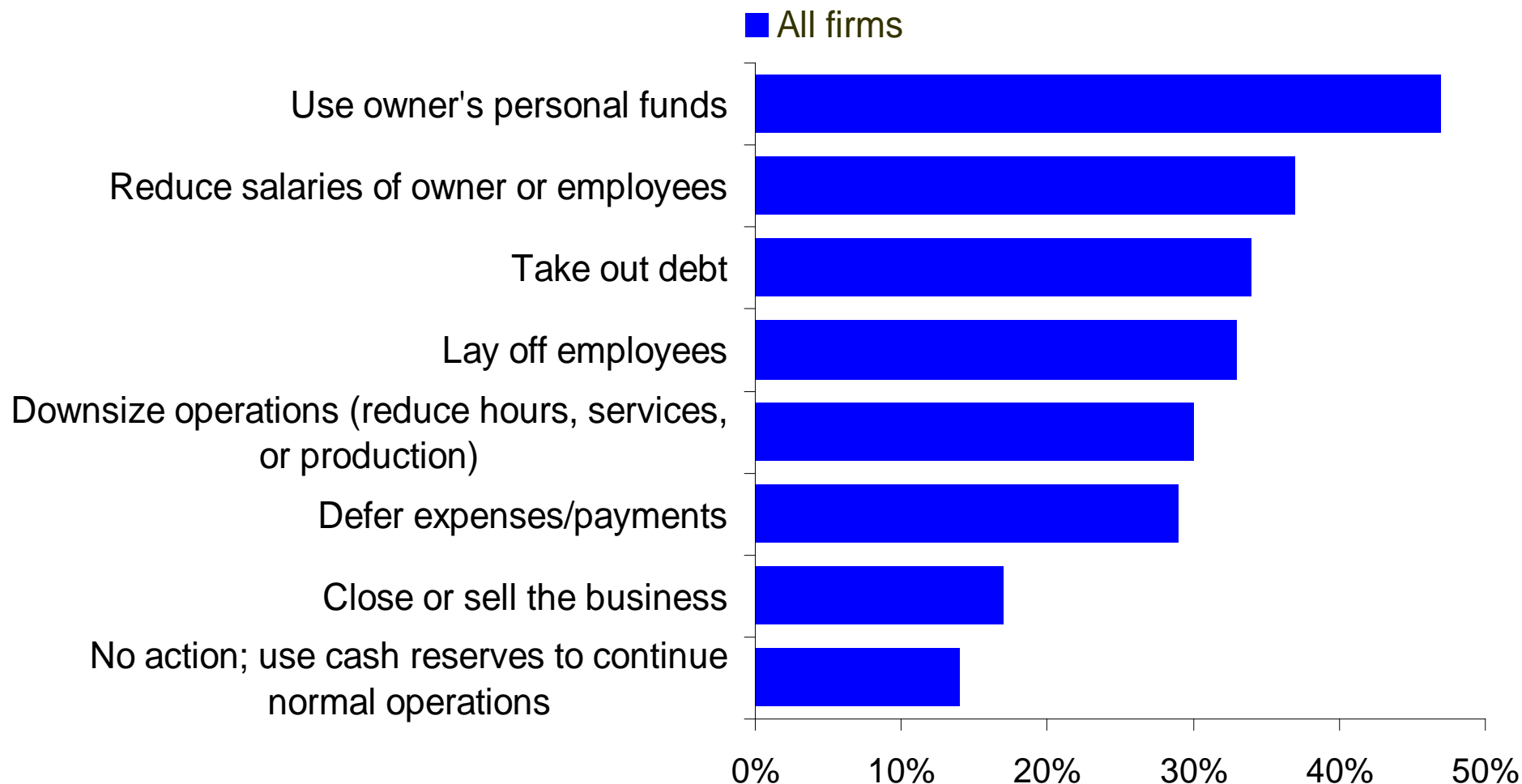
Source: Kaiser Family Foundation analysis of 2018 National Health Interview Survey, DB Global Research





# Actions small businesses would take in response to a 2-month revenue loss

## Actions business would take in response to a 2-month revenue loss

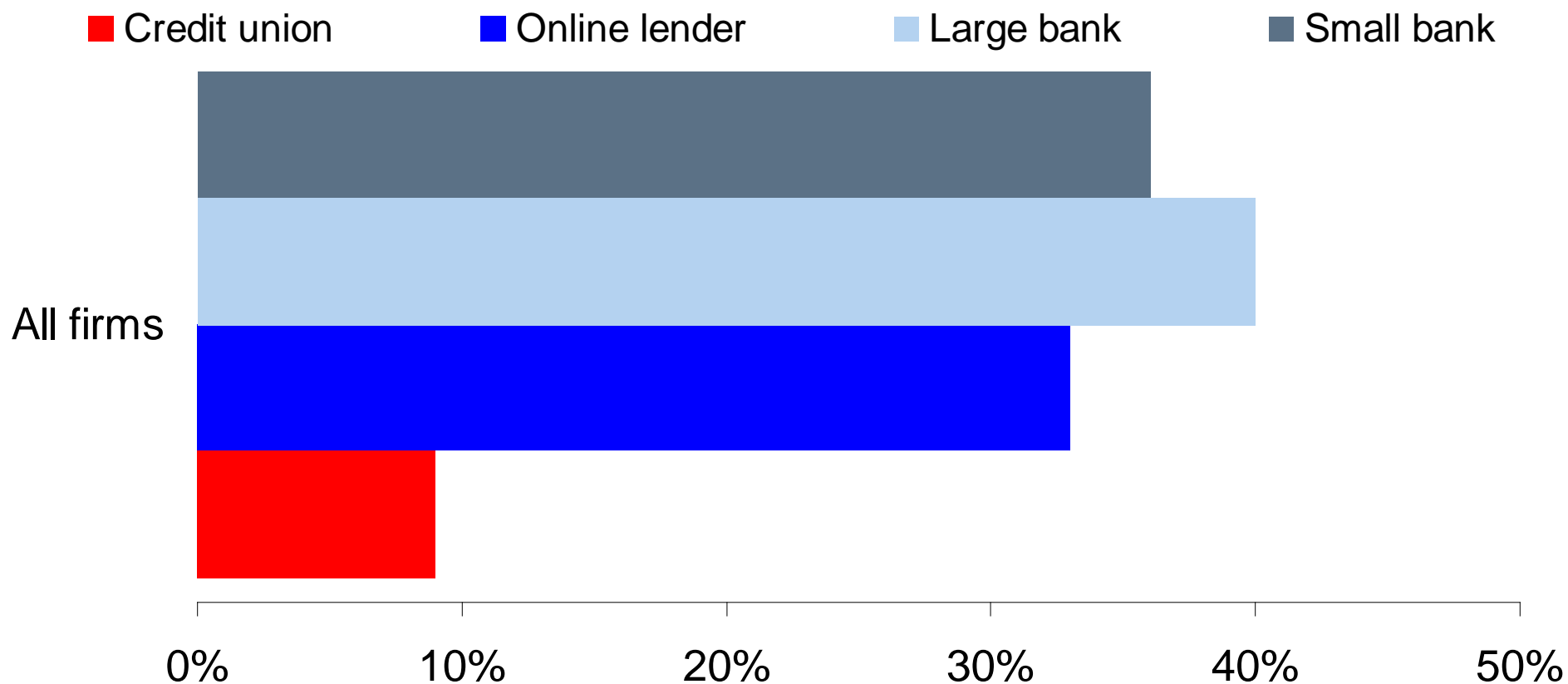


Source: FRBNY 2020 Small Business Credit Survey, DB Global Research



# Sources of borrowing for small businesses

## Credit sources applied to (% of loan/line of credit and cash advance applicants)

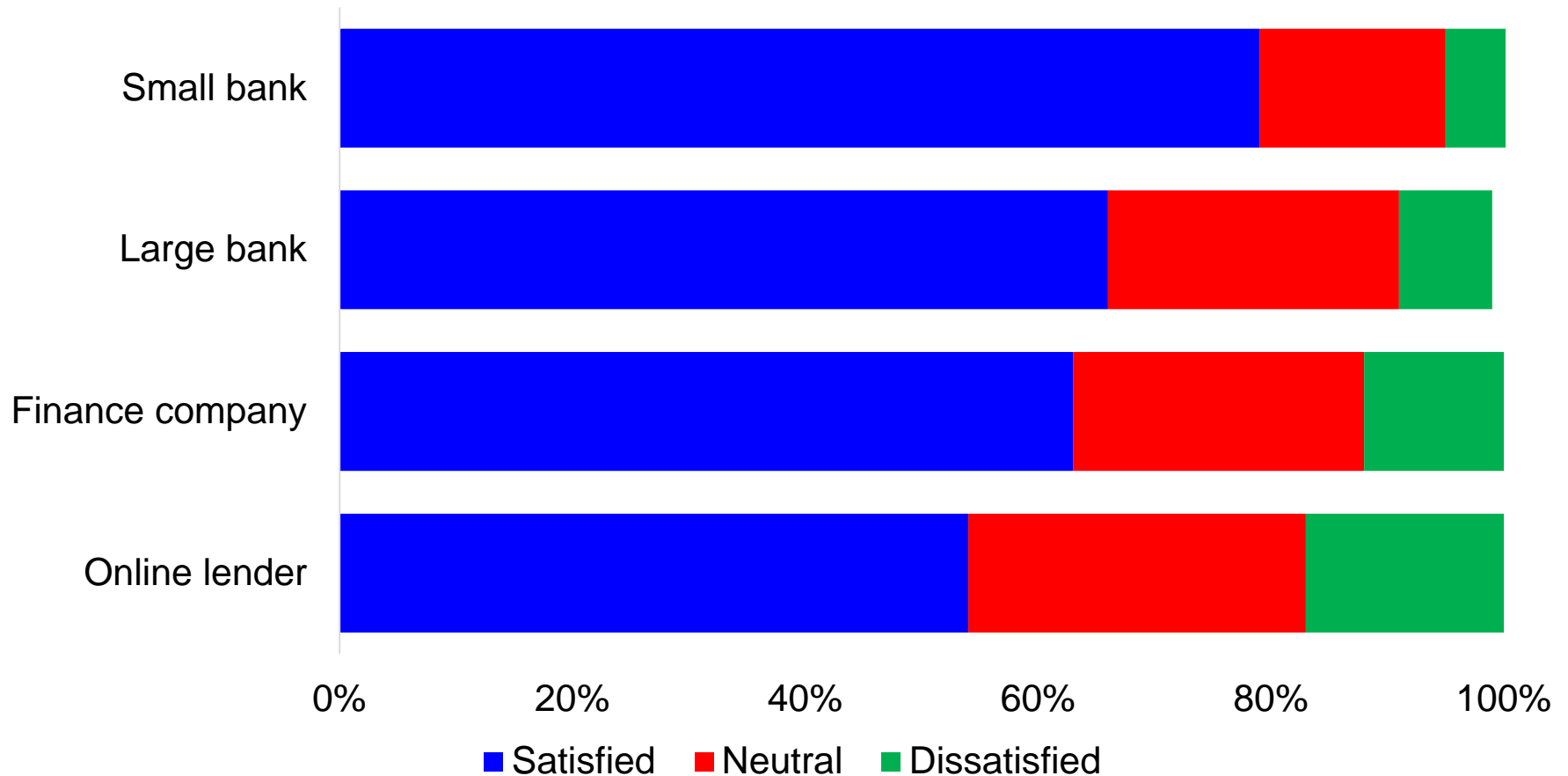


Source: FRBNY 2020 Small Business Credit Survey, DB Global Research



# Small businesses more satisfied with service at small banks

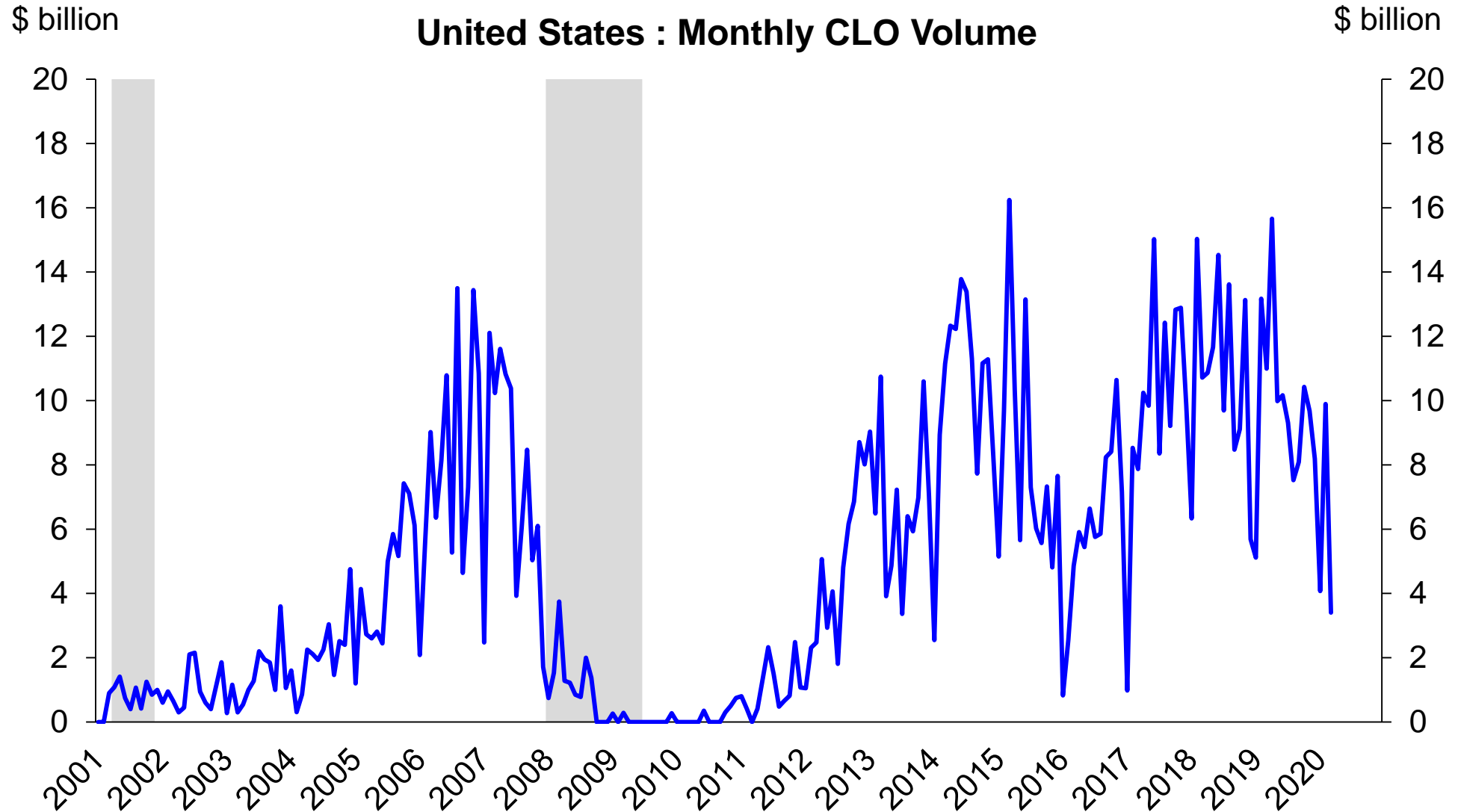
**Lender Satisfaction (% of applicants at least partially approved at source)**



Source: FRBNY 2020 Small Business Credit Survey, DB Global Research



# Monthly CLO volume coming down

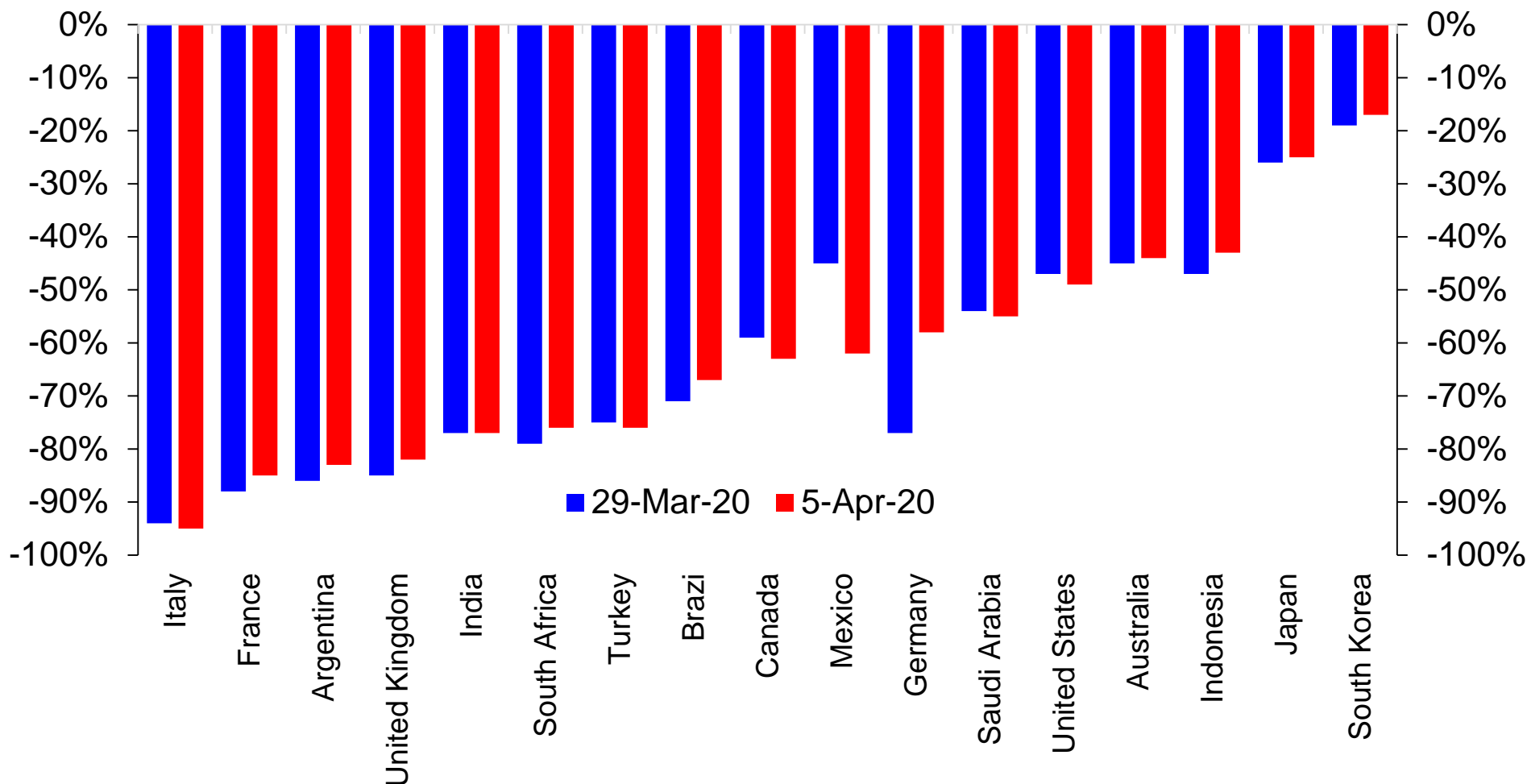


Source: Keyur-B Vyas , S&P LCD, DB Global Research

# Lockdown effectiveness: Still a lot of people moving around in the US



## COVID-19 Community Mobility Report Mobility changes\*: Retail & recreation\*\*



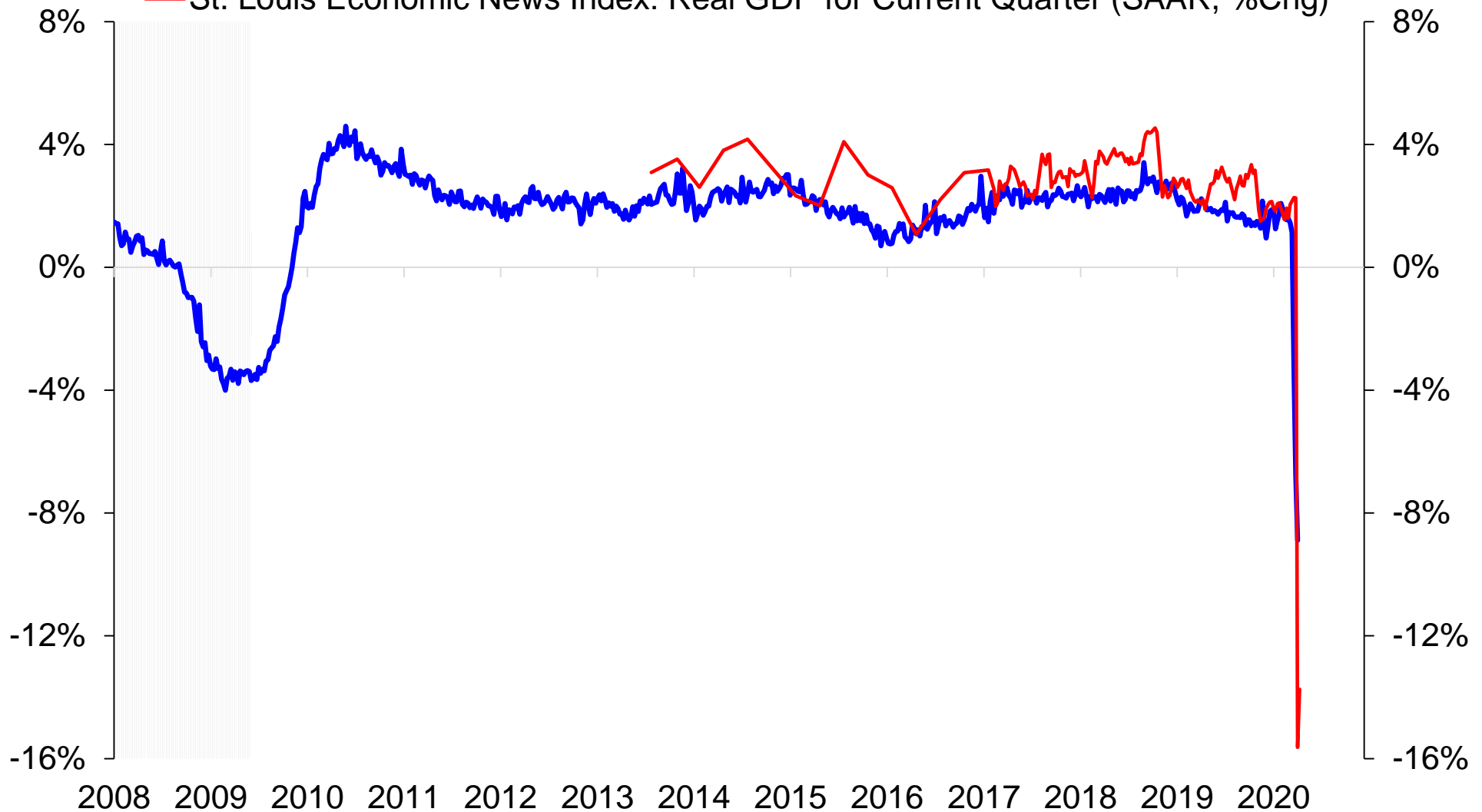
\*Mobility trends for places like restaurants, cafes, shopping centers, theme parks, museums, libraries, and movie theaters. \*\*Changes for each day are compared to a baseline value for that day of the week: The baseline is the median value, for the corresponding day of the week, during the 5- week period Jan 3–Feb 6, 2020

Source: Google, DB Global Research



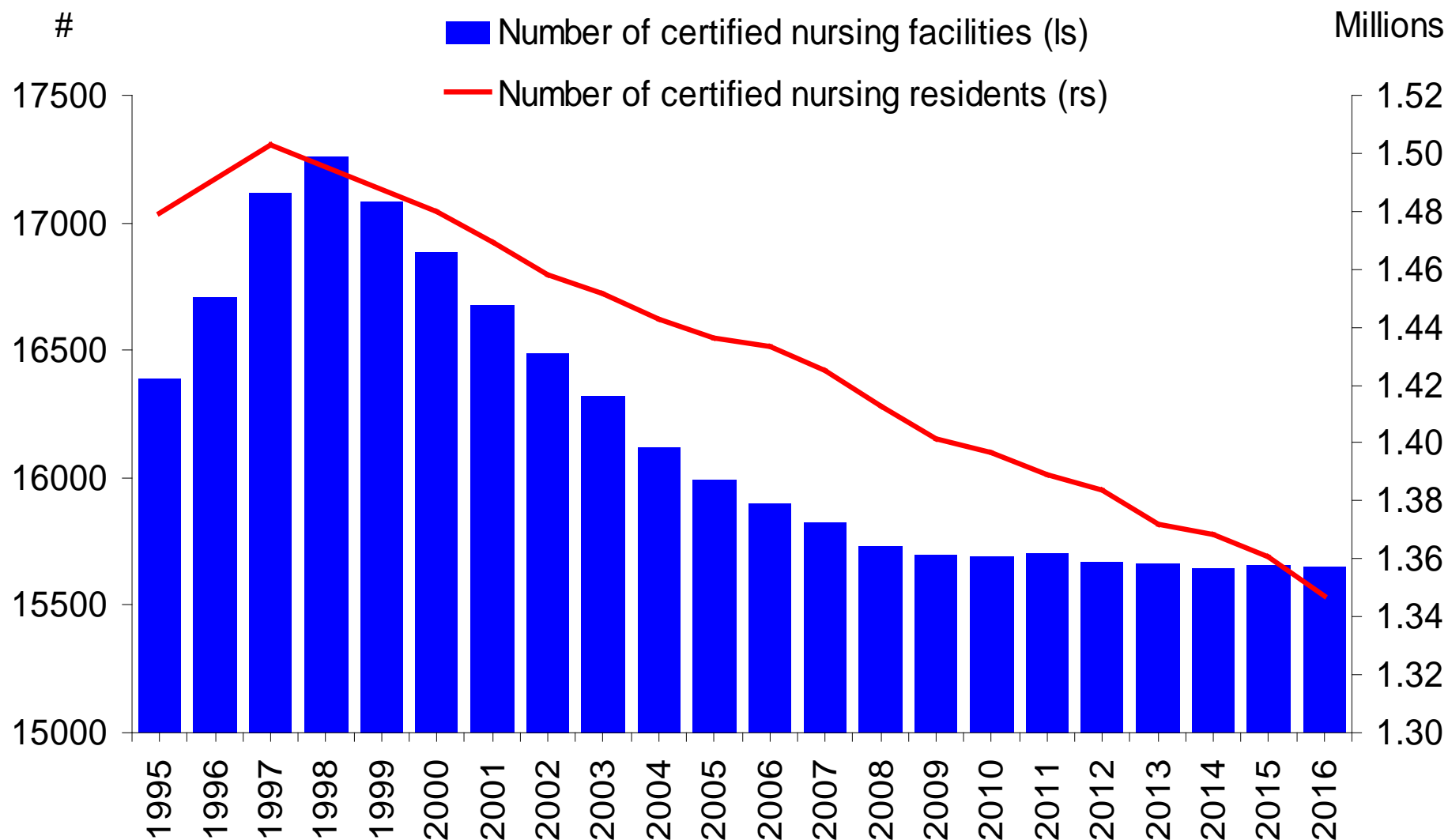
# Fed's weekly GDP index points to sharp drop in Q2

- Lewis Mertens Stock Weekly Economic Index (Scaled to 4-quarter GDP Growth)
- St. Louis Economic News Index: Real GDP for Current Quarter (SAAR, %Chg)



Source: LMS, FRBSTL, Haver Analytics, DB Global Research

# There are 15500 nursing homes in the US with 1.34mn residents



Source: Cowles CM. Nursing home statistical yearbook (2016), CDC, DB Global Research

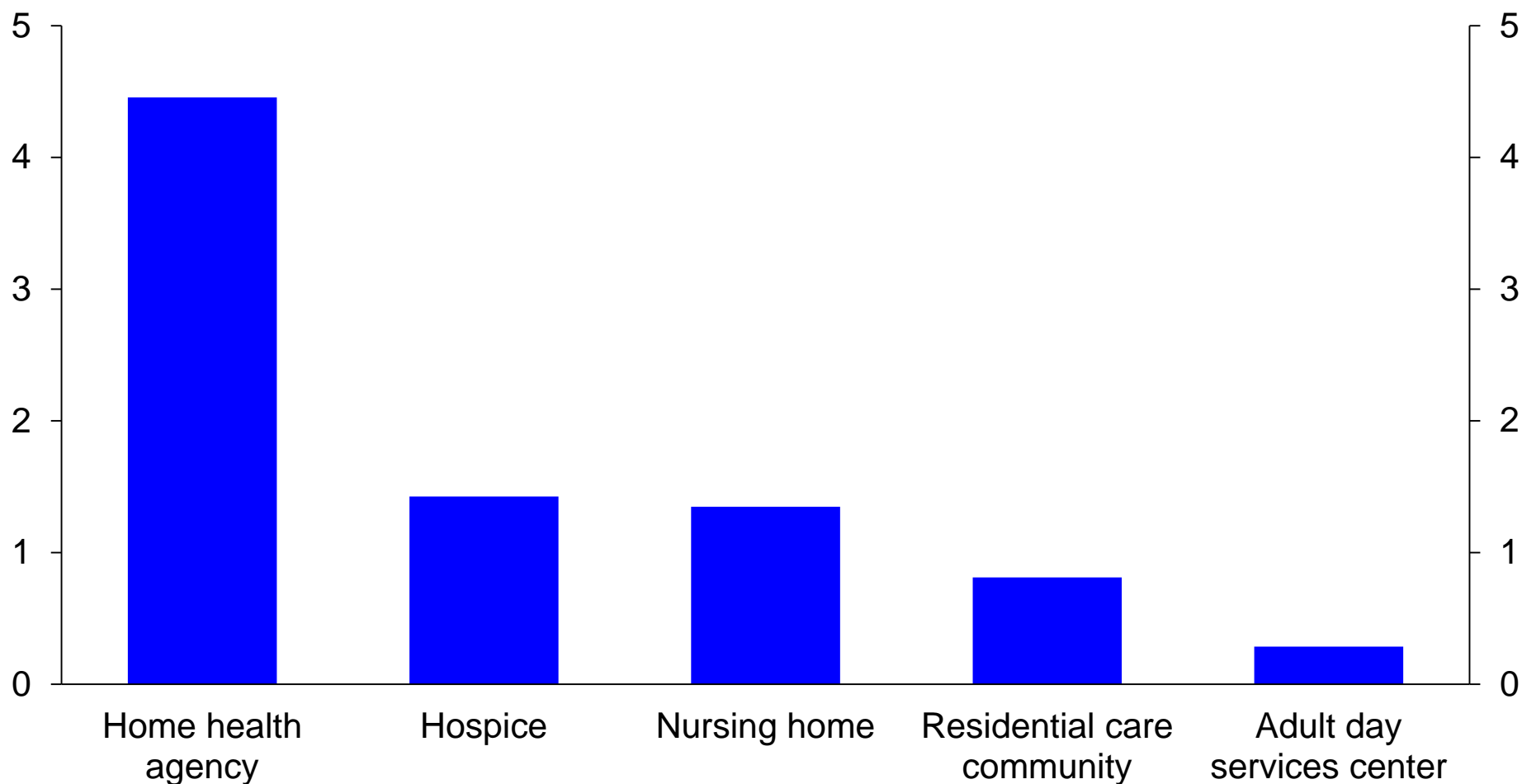


# The number of long-term care users

Millions

**Long-term care services users by selected characteristics :  
United States, 2015-2016**

Millions

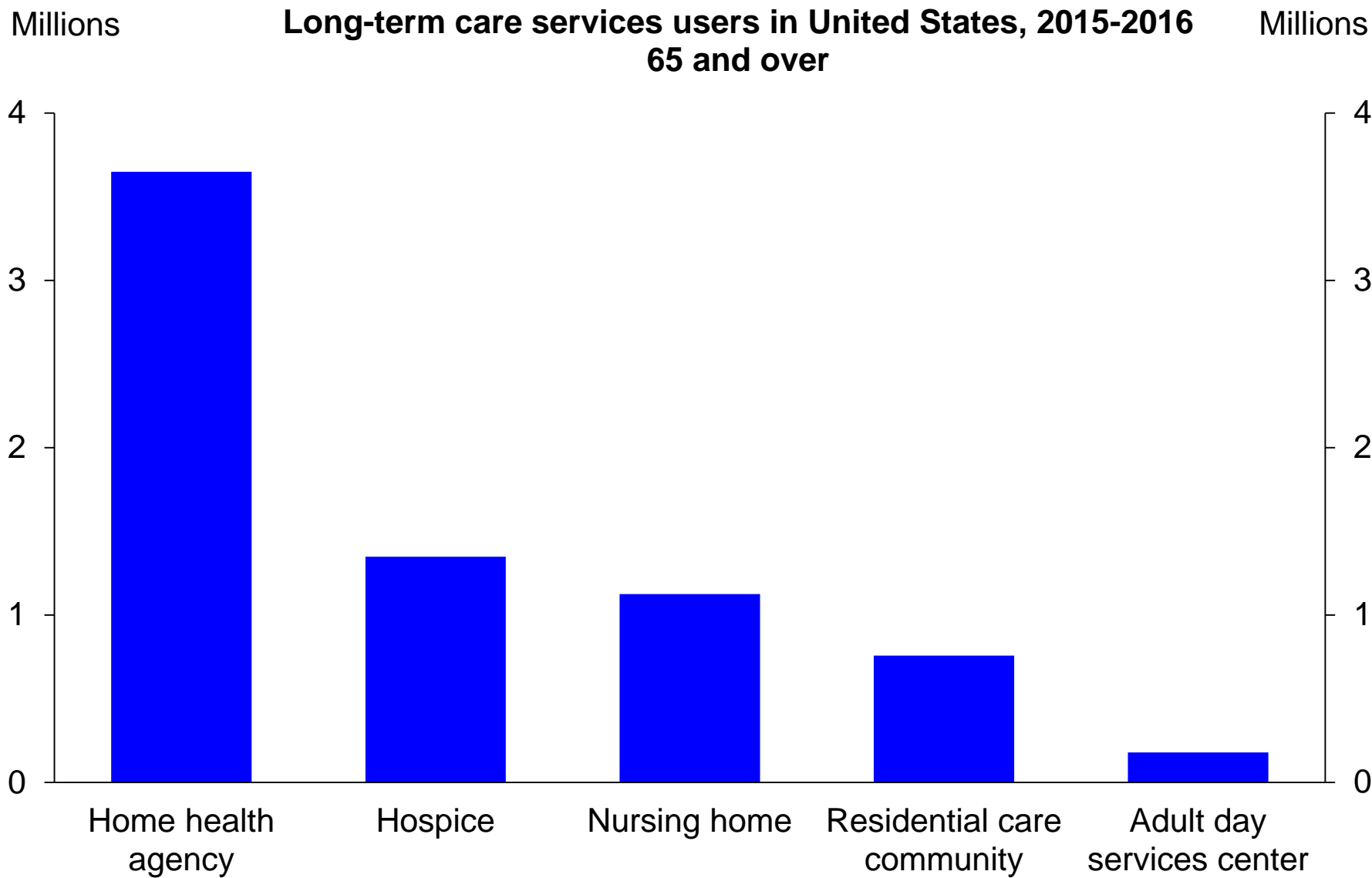


Source: NCHS, "Long-term Care Providers and Services Users in the United States: 2015–2016,, DB Global Research





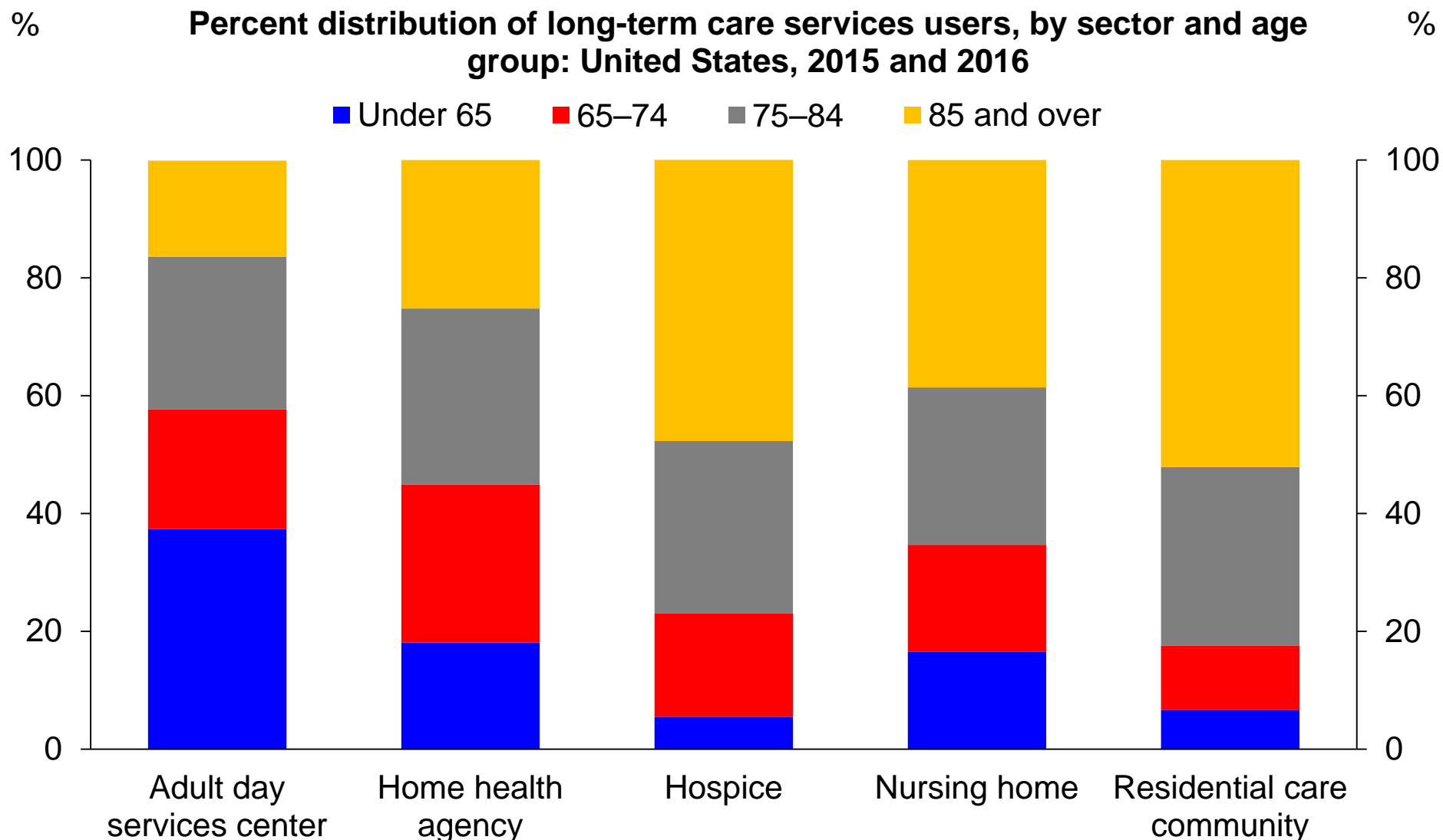
# The number of long-term care users, 65 years and older



Source: NCHS, "Long-term Care Providers and Services Users in the United States: 2015–2016,, DB Global Research



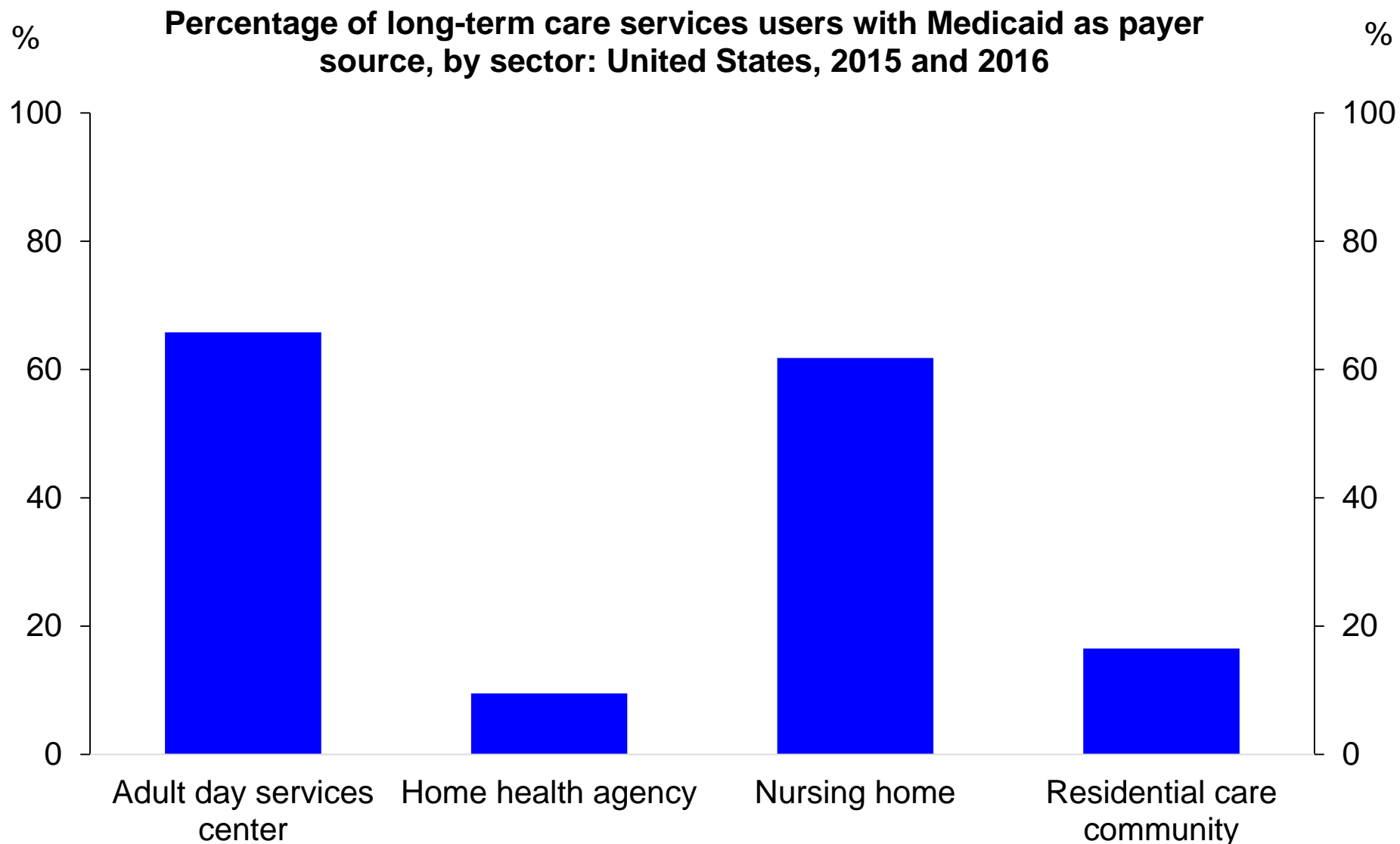
# Age distribution of long-term care users



Source: NCHS, “Long-term Care Providers and Services Users in the United States: 2015–2016,, DB Global Research



# Long-term care users with Medicaid as payer source

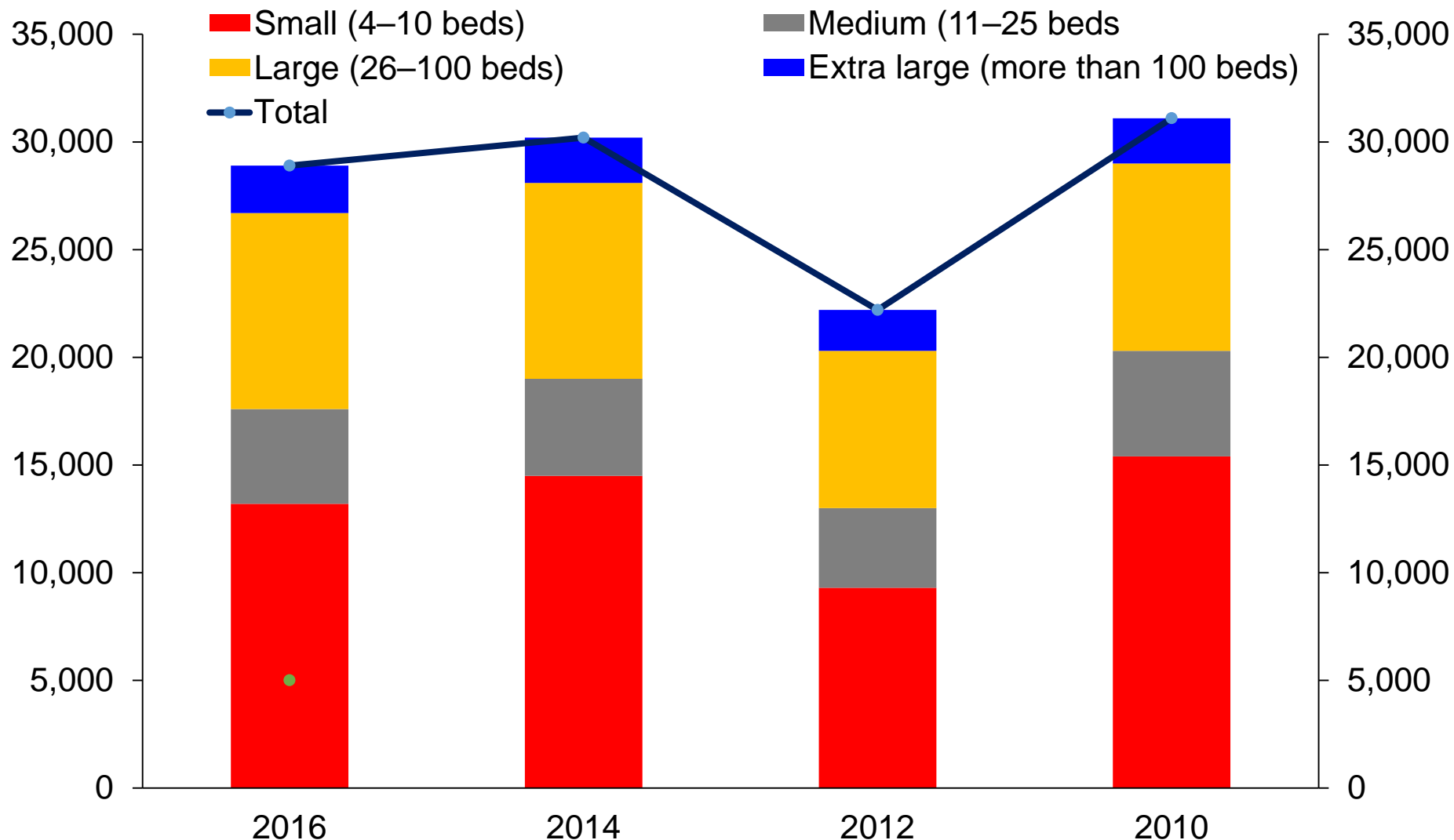


Source: NCHS, "Long-term Care Providers and Services Users in the United States: 2015–2016,, DB Global Research



# Number of residential care communities, by number of beds

Number of residential care communities, by survey year



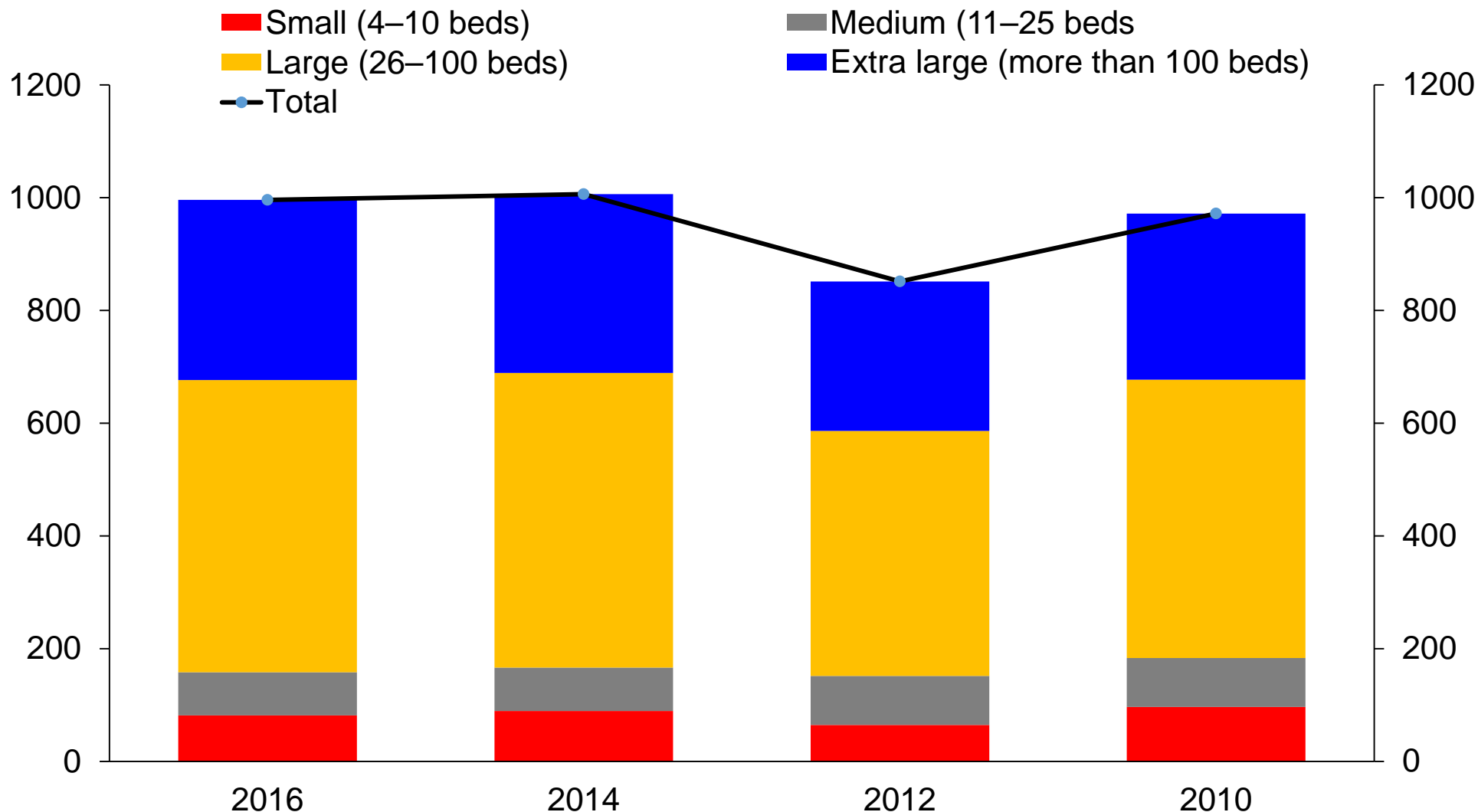
Source: NCHS, "Long-term Care Providers and Services Users in the United States: 2015–2016,, DB Global Research



# Number of beds in residential care communities

Thousands

**Number of beds in residential care communities, by survey year**



Source: NCHS, “Long-term Care Providers and Services Users in the United States: 2015–2016,, DB Global Research

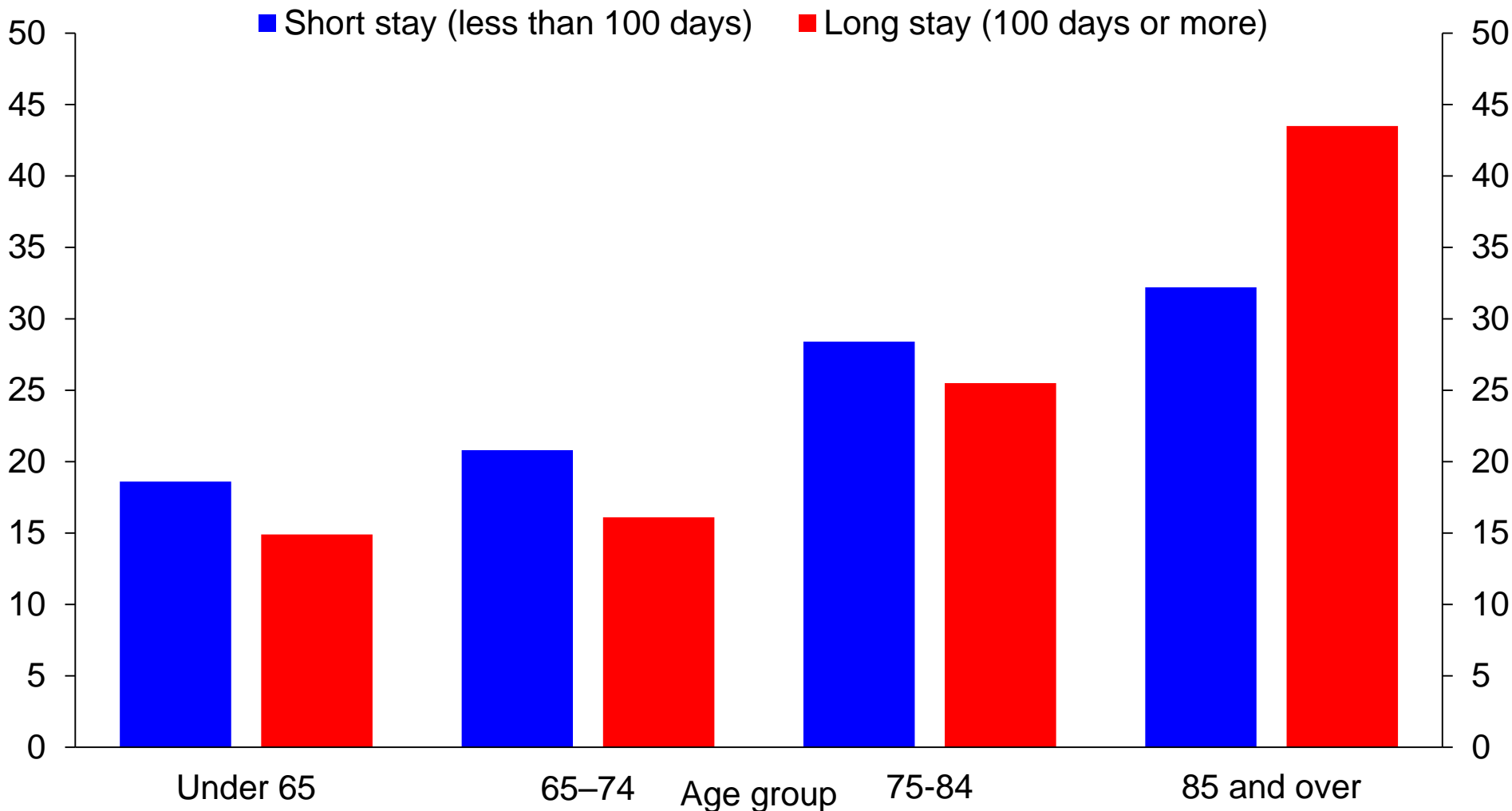


# Nursing home residents by length of stay

**Nursing home residents, by length of stay: United States, 2016**

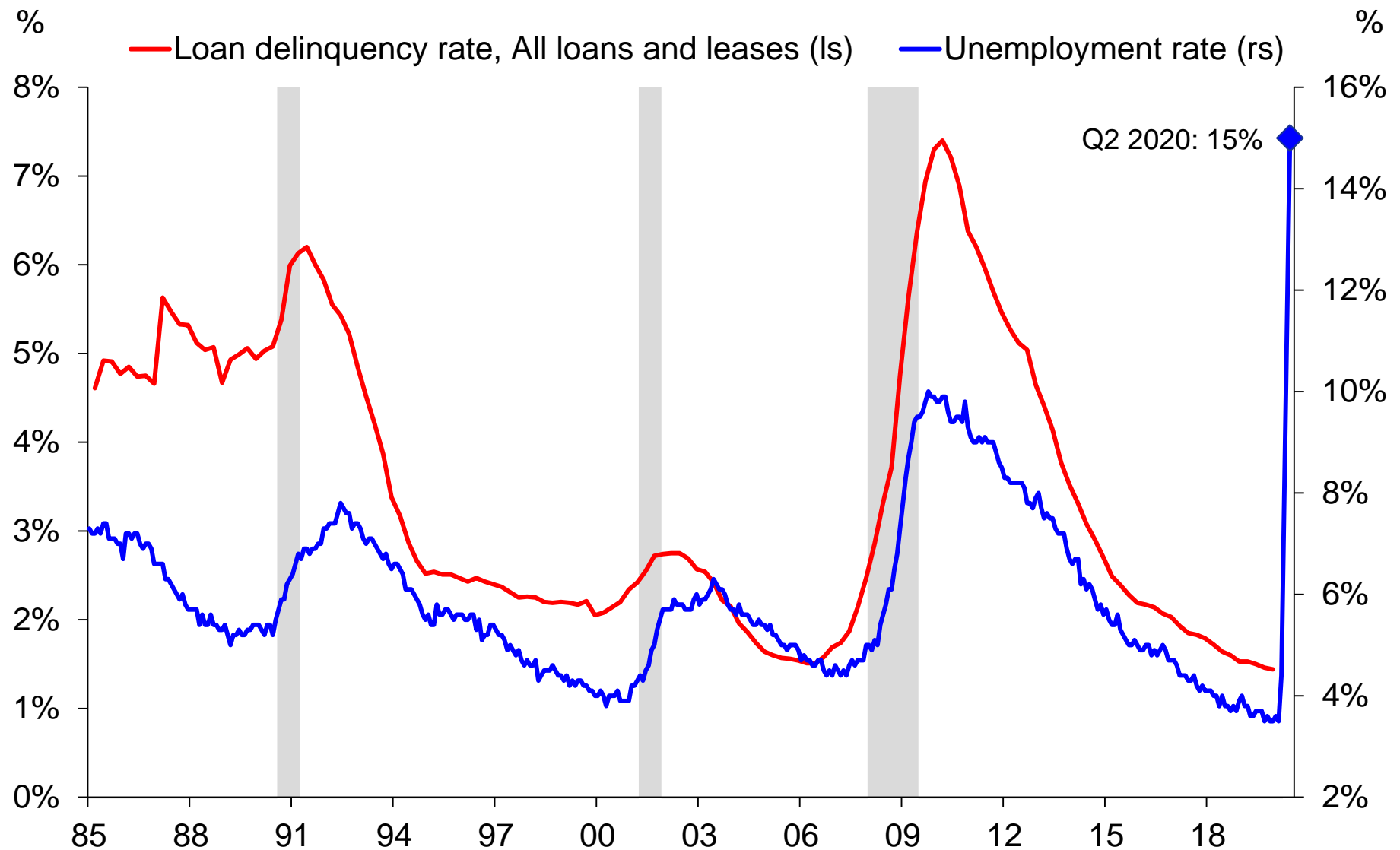
%

%



Source: NCHS, “Long-term Care Providers and Services Users in the United States: 2015–2016,, DB Global Research

# US: Commercial bank loan delinquency rate highly correlated with the unemployment rate



Source: BLS, FRB Loan charge-offs and delinquencies, Haver Analytics, DB Global Research

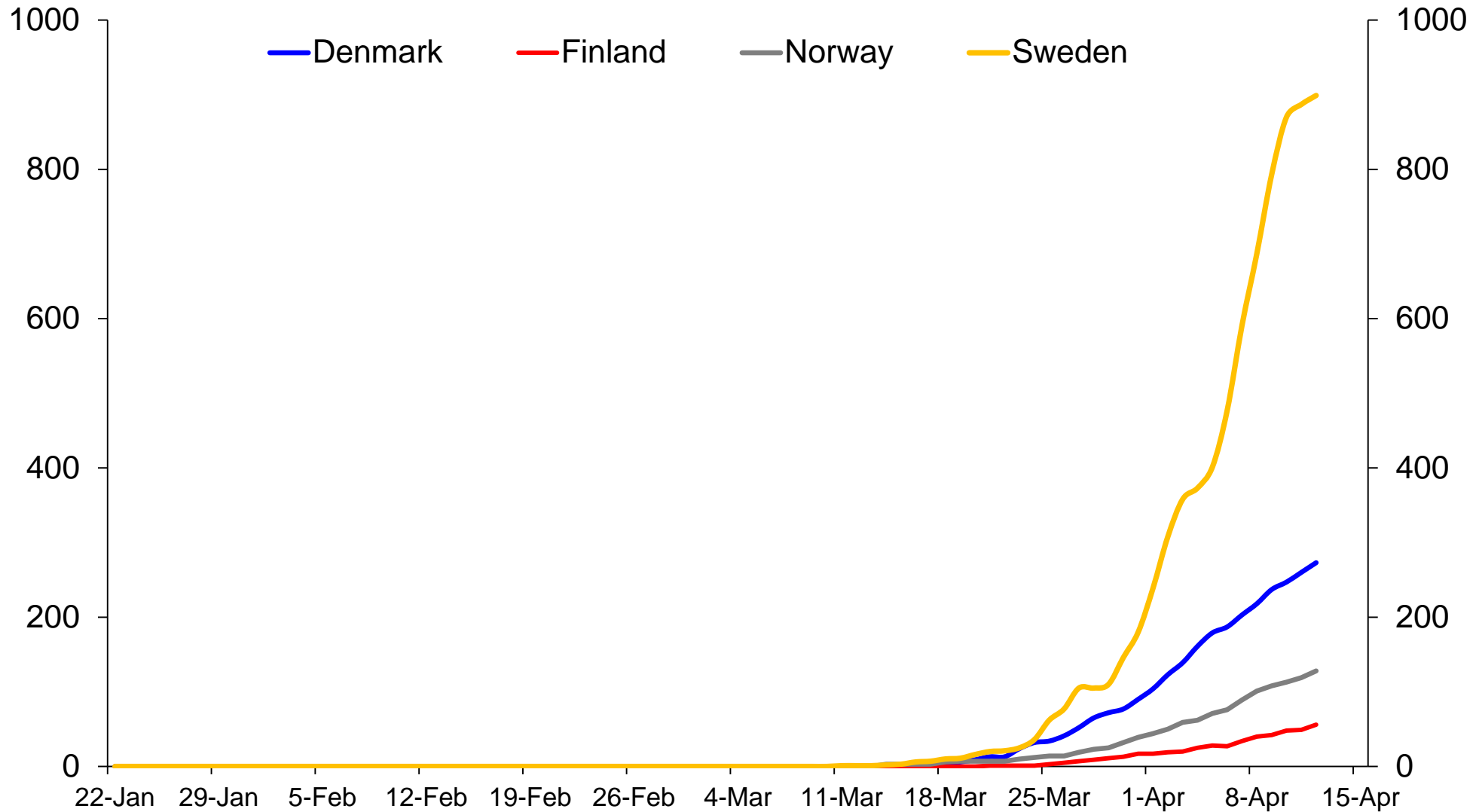


# Sweden on a different path

# of deaths

**Cumulative number of deaths in COVID-19**

# of deaths



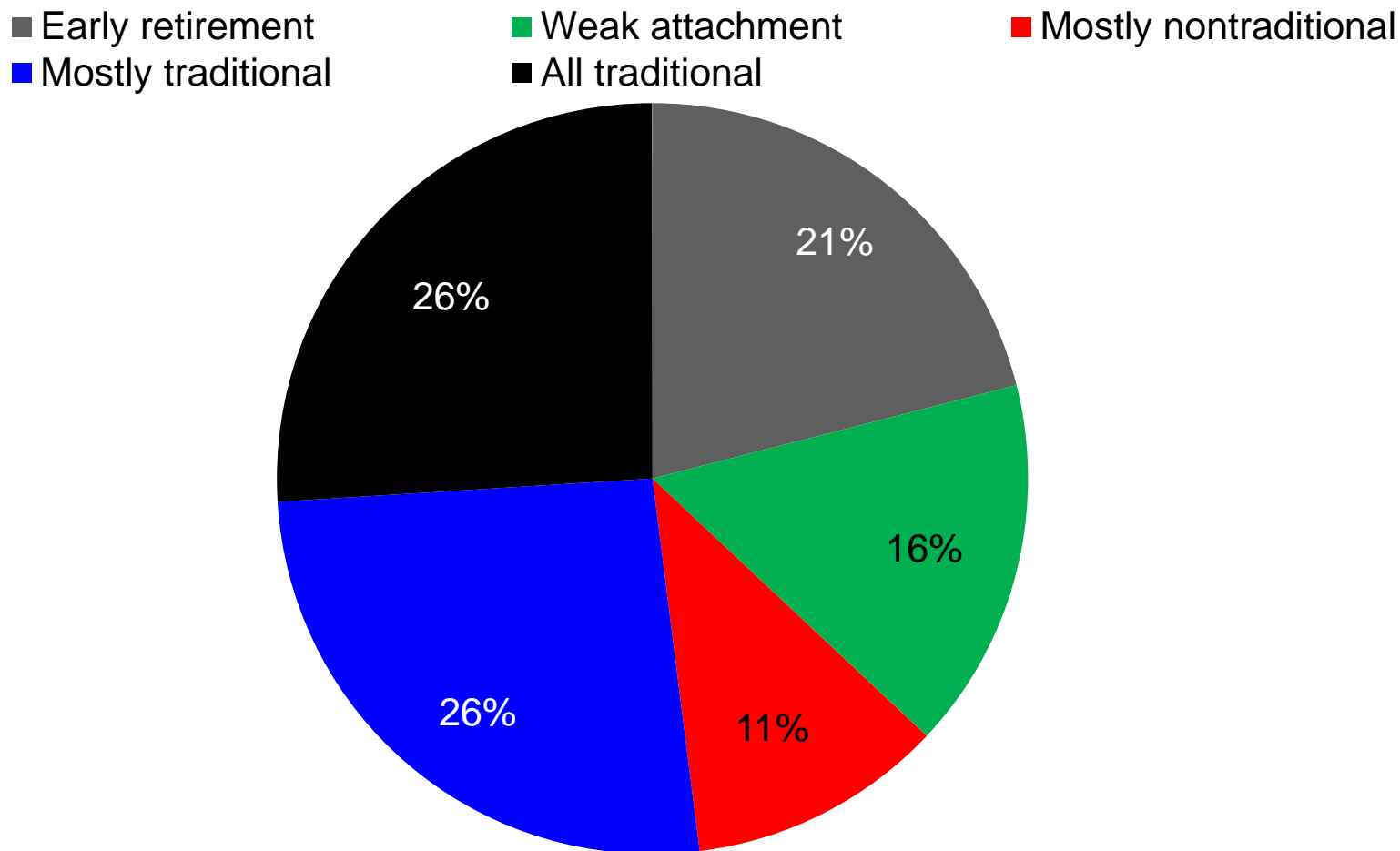
Source: John Hopkins University, DB Global Research



# US: Only 26% of workers throughout their 50s and early 60s work in jobs with both health and retirement benefits



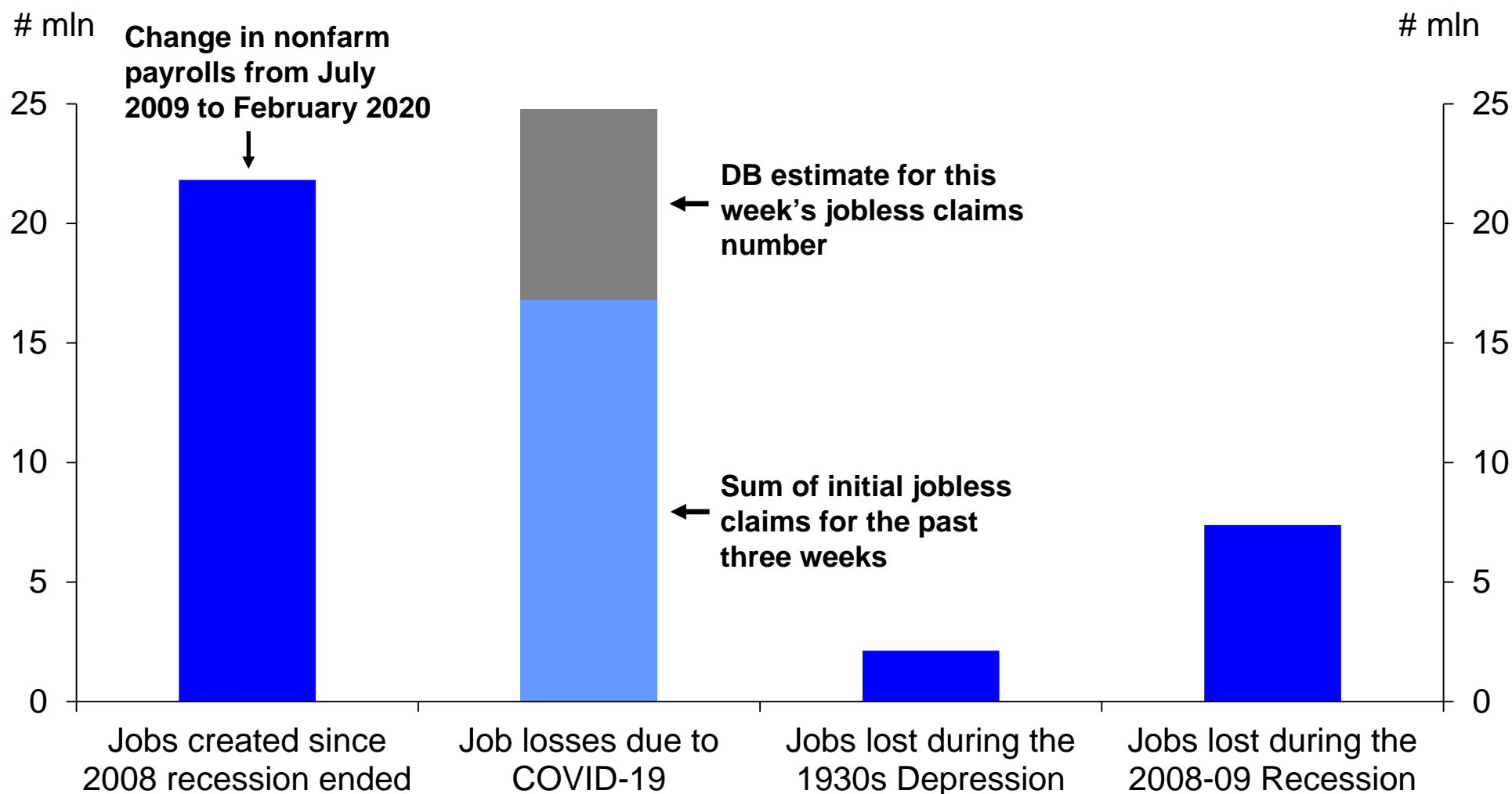
## Demographics at ages 50-62 based on a benefits only definition of nontraditional work



Source: Center for Retirement Research at Boston College, DB Global Research

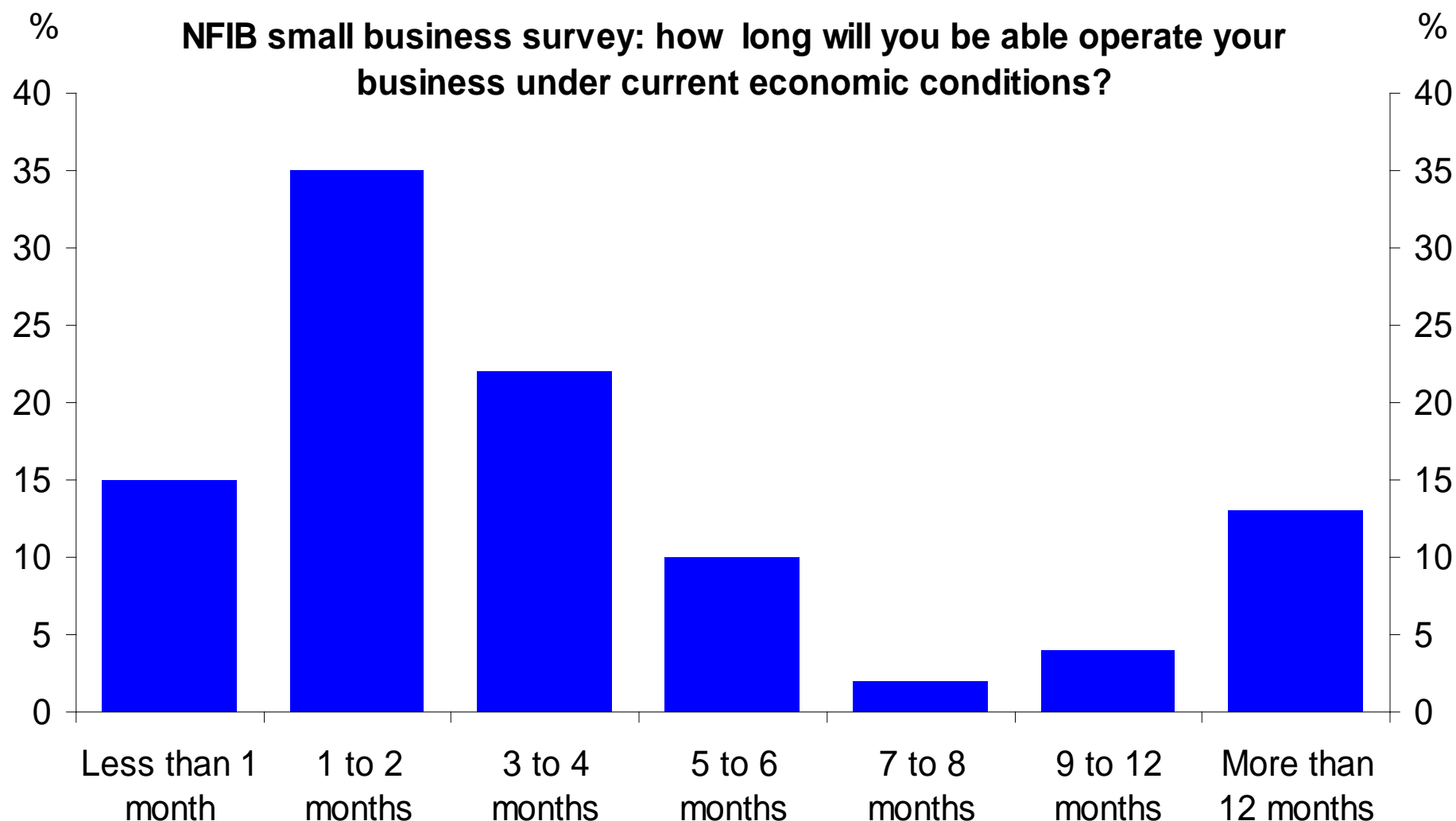


# More jobs lost over the past four weeks than were created since the 2008-2009 financial crisis



Source: BLS, Dept. of Labor, CRS, Haver Analytics, DB Global Research

# Many small businesses in the US only able to operate 1 to 2 months under current economic conditions



Note: This survey was conducted with a random sample of NFIB's membership database of about 300,000 small business owners. The survey was conducted by email on March 30, 2020. NFIB collected 1,172 usable responses, all small employers with 1-465 employees.

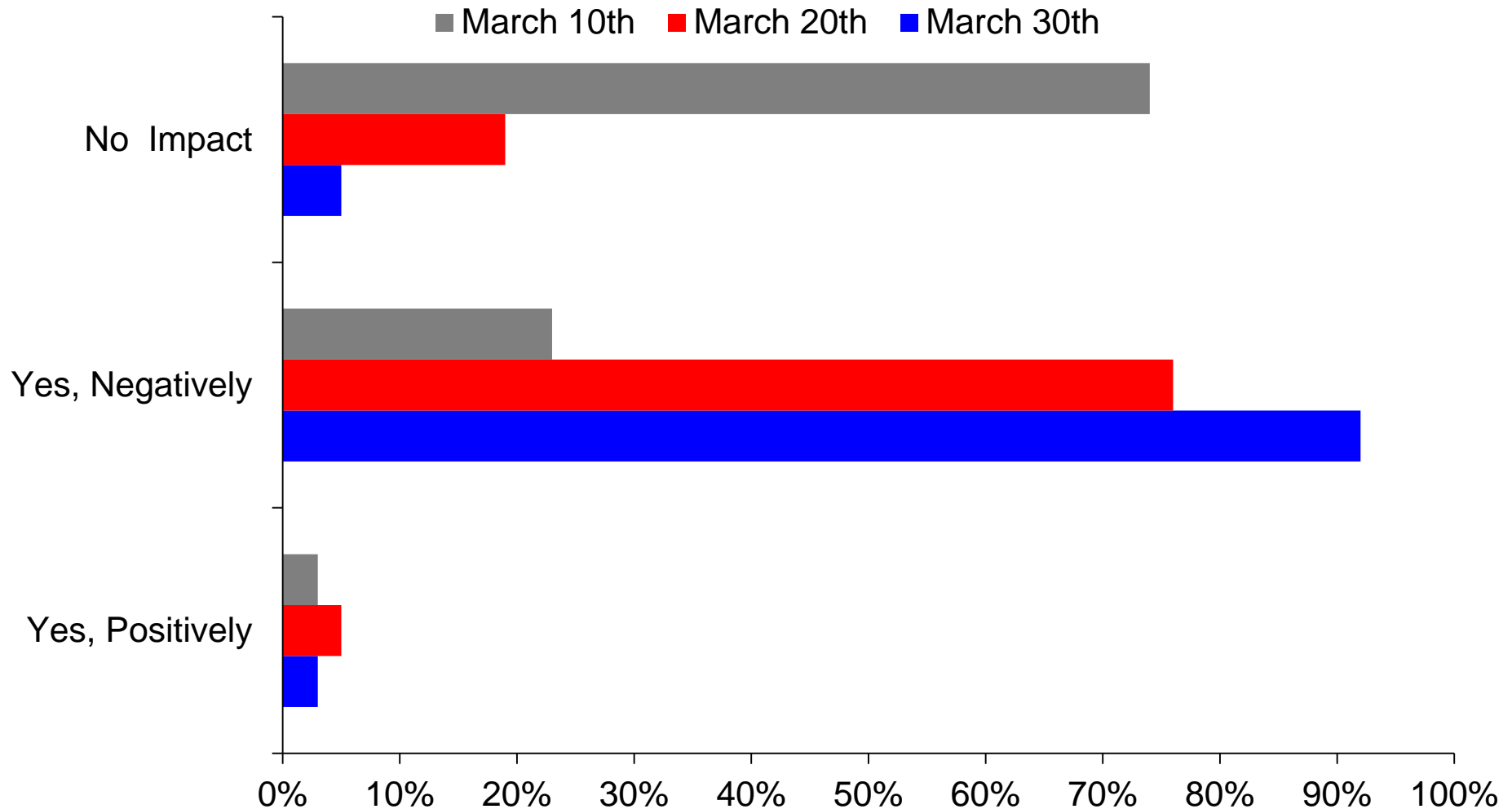
Source: NFIB, DB Global Research

# COVID-19 having big impact on small businesses



## NFIB Survey on COVID-19 impact on Small Business

Has the recent outbreak of the coronavirus (covid-19) directly impacted your business?



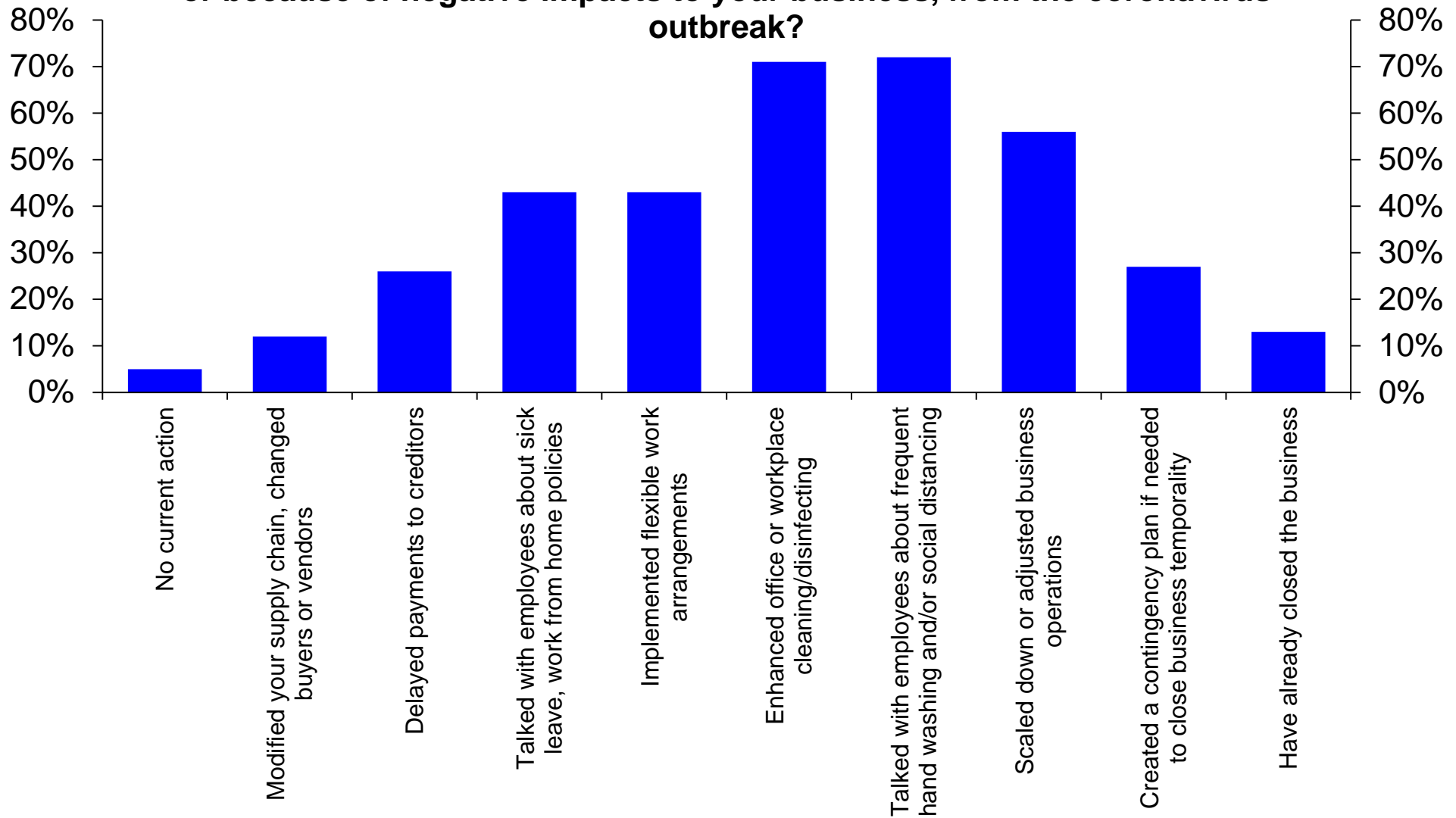
Source: NFIB, DB Global Research

# COVID-19 having big impact on small businesses



## NFIB Survey on COVID-19 impact on Small Business

**Have you taken any measurable steps, in either preparing your business or because of negative impacts to your business, from the coronavirus outbreak?**

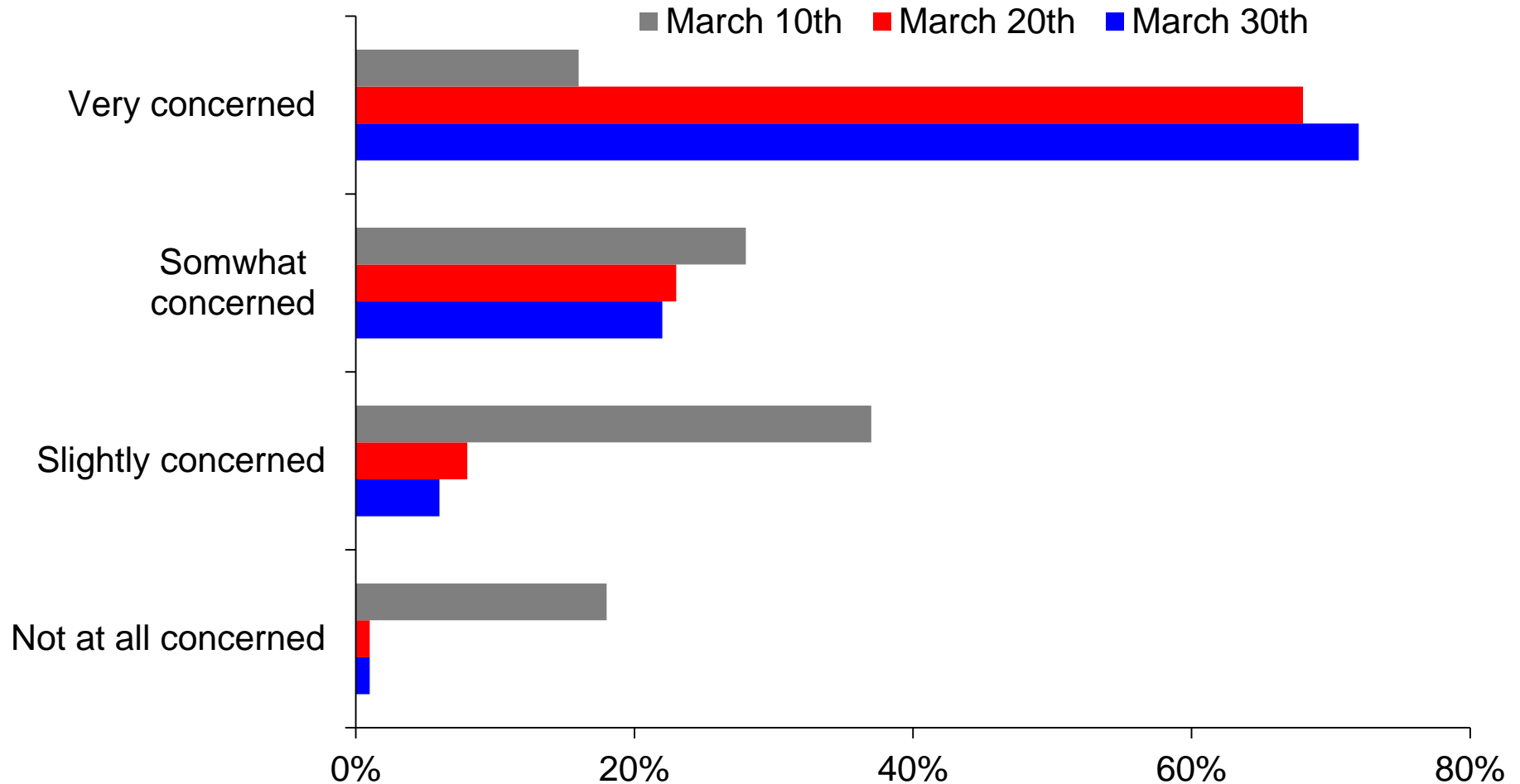


Source: NFIB, DB Global Research

# COVID-19 having big impact on small businesses



## NFIB Survey on COVID-19 impact on Small Business How concerned are you about the spread of the coronavirus impacting or further impacting your business?



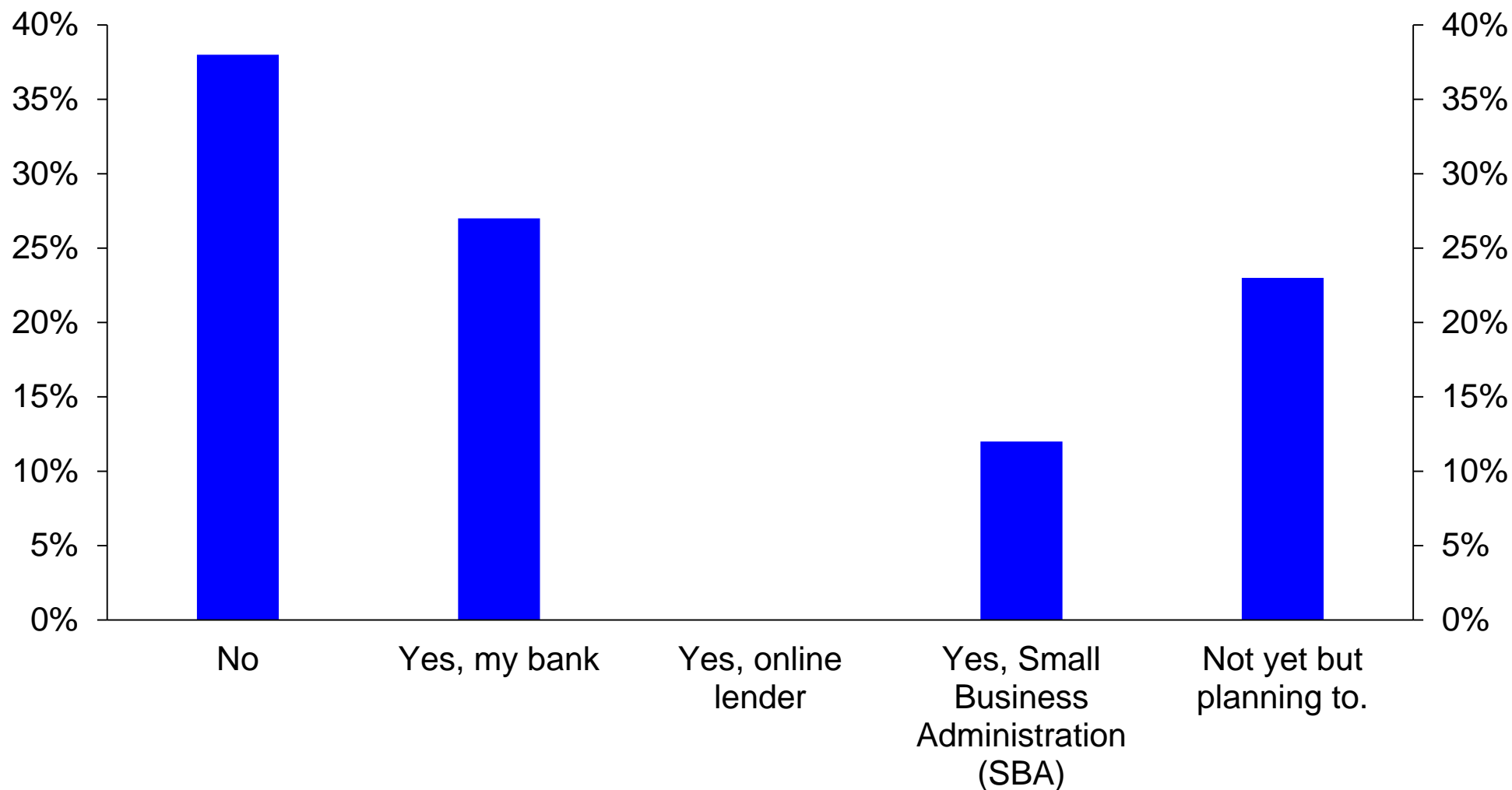
Source: NFIB, DB Global Research

# COVID-19 having big impact on small businesses



## NFIB Survey on COVID-19 impact on Small Business

**Have you talked with your bank or other financial institution about available credit or lending resources for your business due to the coronavirus outbreak?**

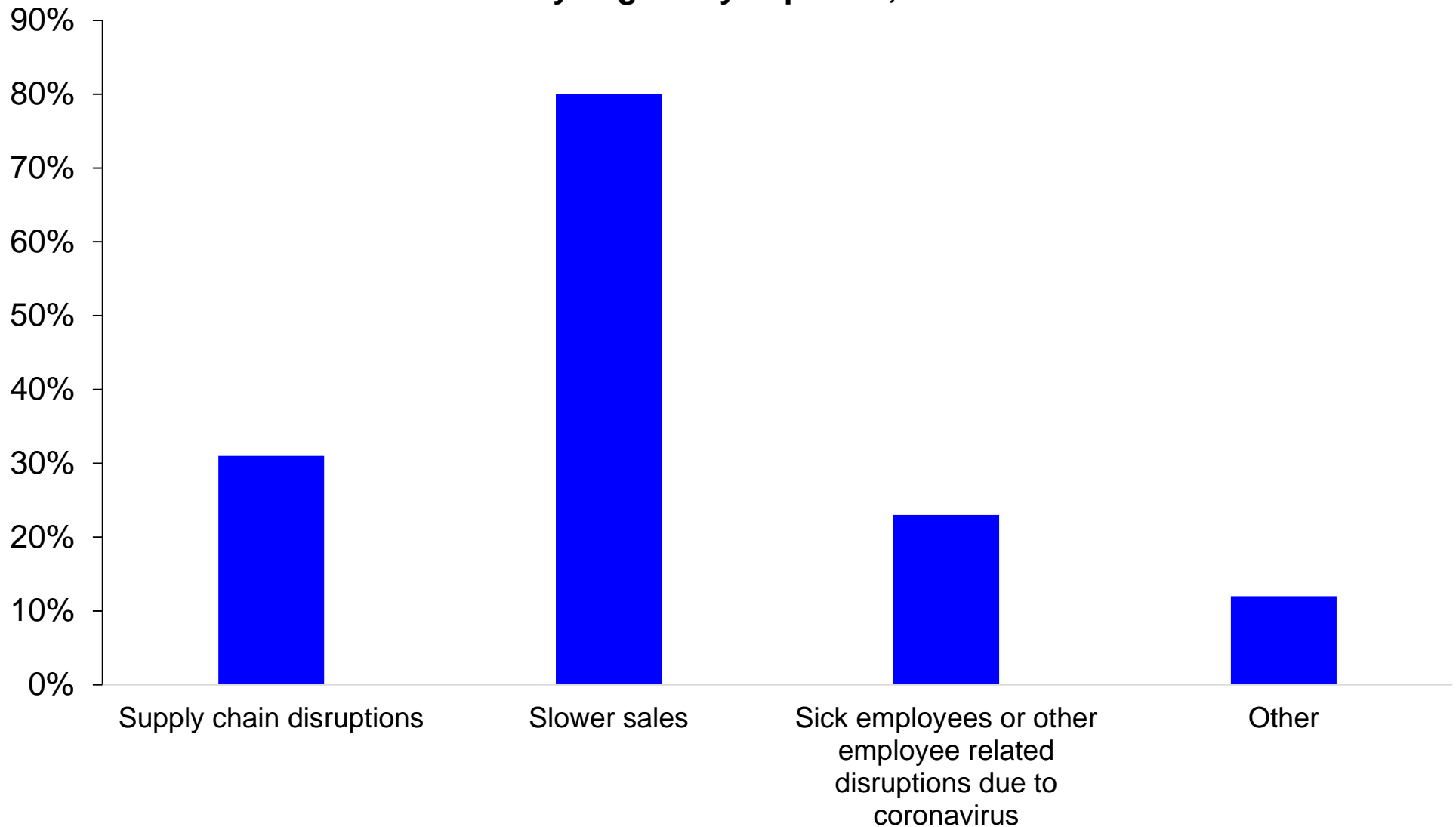


Source: NFIB, DB Global Research

# COVID-19 having big impact on small businesses



## NFIB Survey on COVID-19 impact on Small Business If currently negatively impacted, is it due to



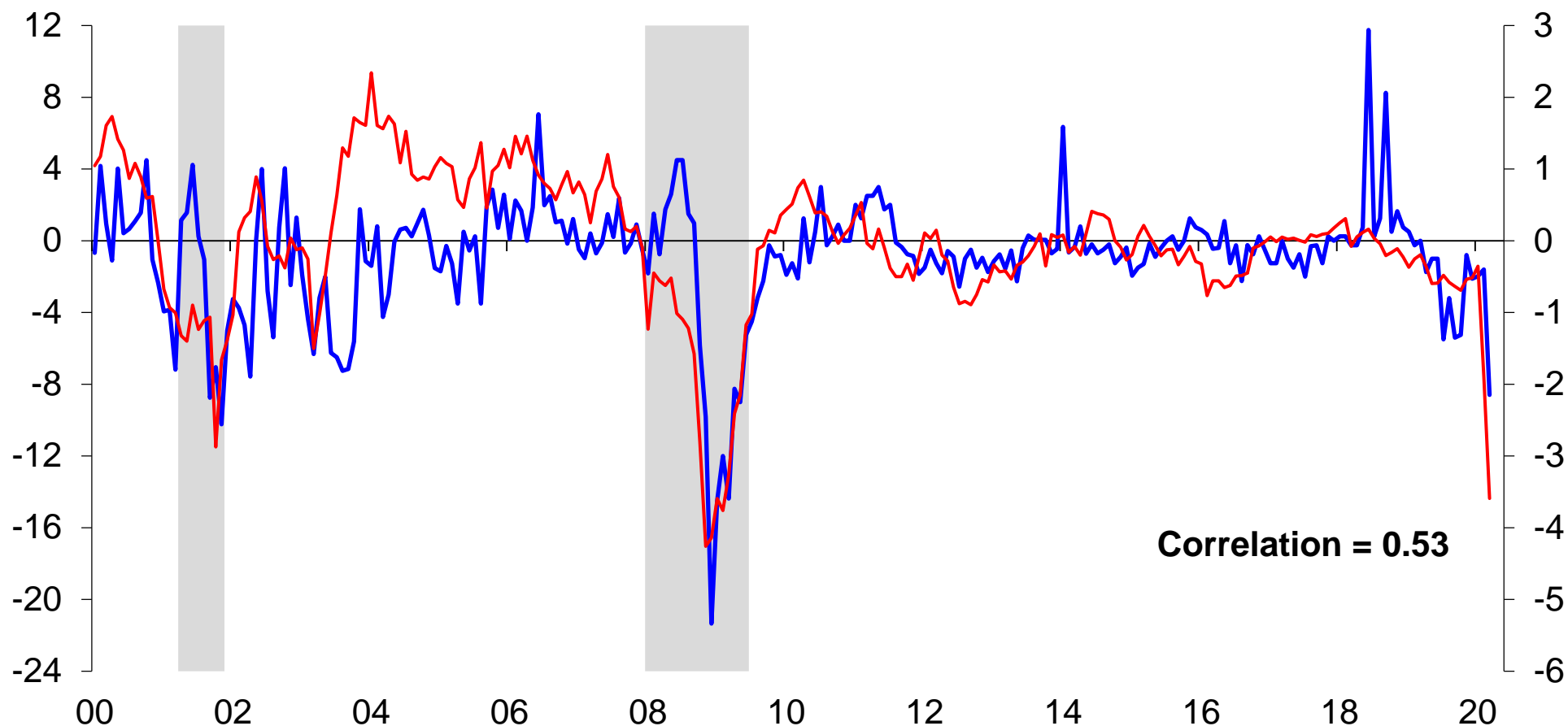
Source: NFIB, DB Global Research



# Central banks cutting rates in response to slowdown



Ppts. — Net cumulative interest rate movements in 31 central banks (3 month lead, lrs) z score  
 — Global PMI (rs)



Note: Central Banks considered are Euro area, US, UK, Denmark, Norway, Sweden, Switzerland, Canada, Japan, Iceland, Australia, New Zealand, South Africa, Brazil, Chile, Colombia, Peru, Israel, Saudi Arabia, Hong Kong, India, Indonesia, South Korea, Malaysia, Philippines, Thailand, China, Czech Republic, Hungary, Poland, Romania

Source: BIS, JP Morgan, Markit, DB Global Research

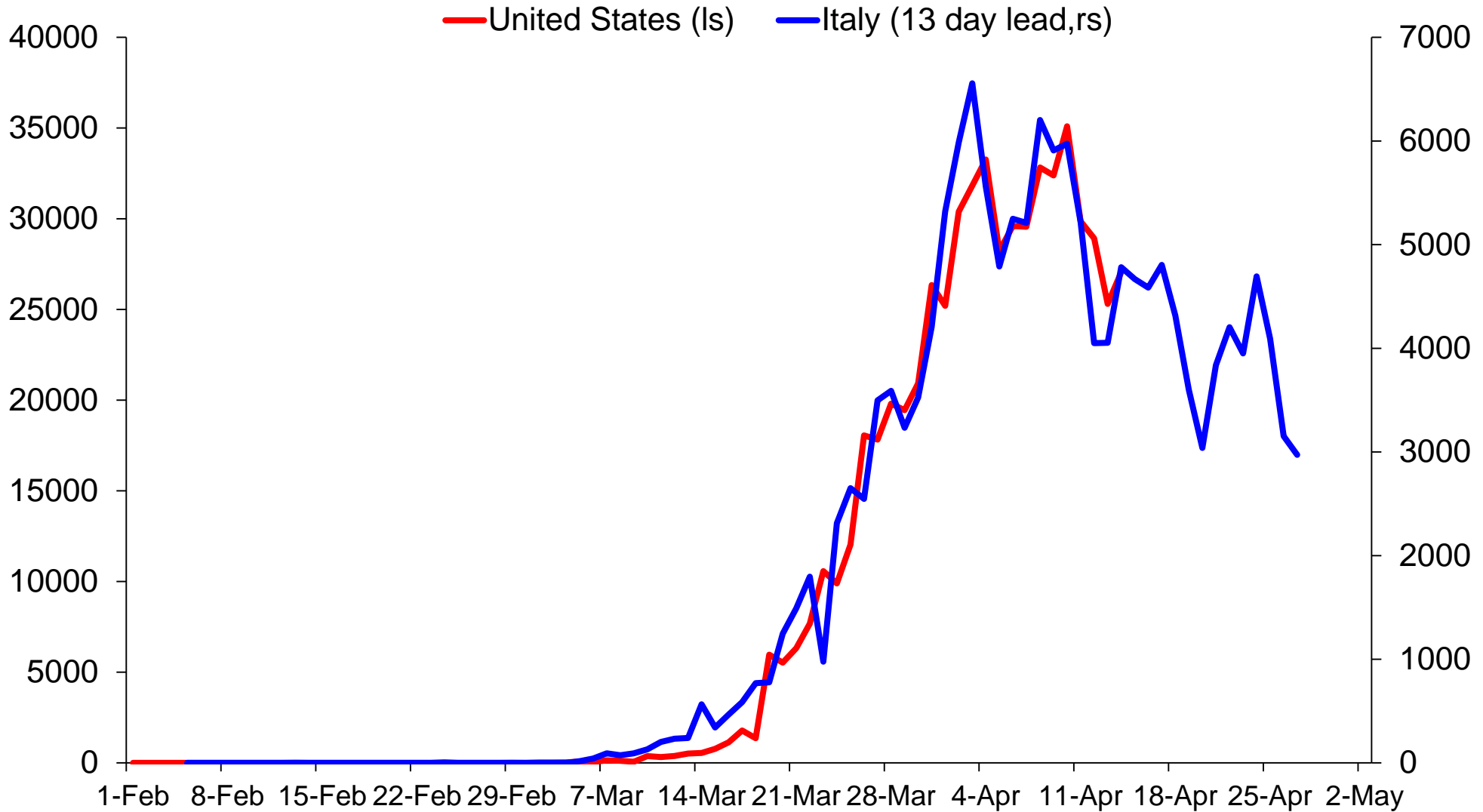
# US is two weeks behind Italy



# of cases

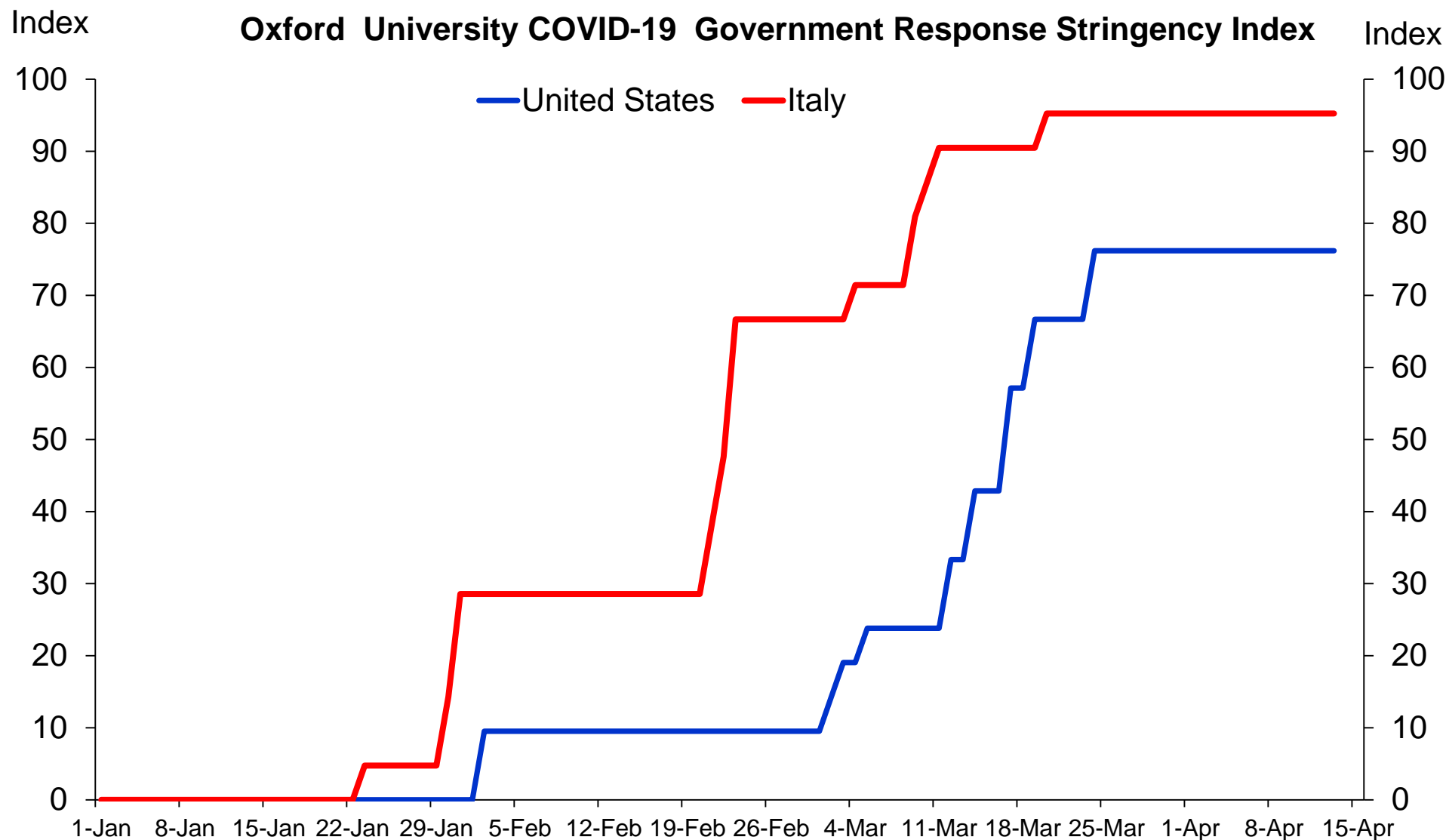
## New Confirmed cases of COVID-19 in United States and Italy

# of cases



Source: JHU, WHO, DB Global Research

# More stringent mitigation measures in place in Italy

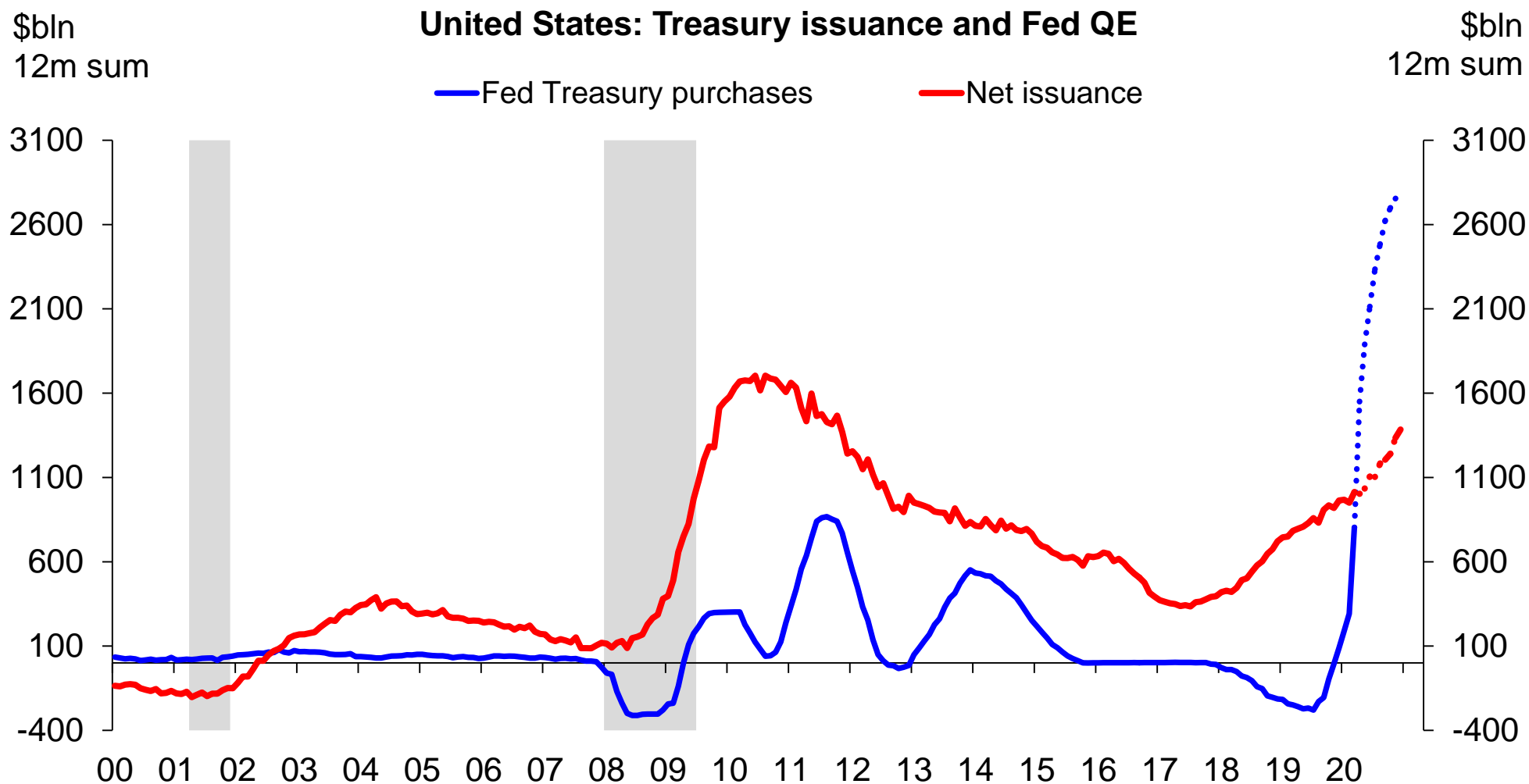


Note: The Stringency Index is a composite measure. It is a simple additive score of seven indicators measured on an ordinal scale, rescaled to vary from 0 to 100. These indicators are 1. School closing, 2. Workplace closing, 3. Cancel public event, 4. Close public transport, 5. Public info campaign, 6. Restrictions on internal movement and 7. International travel controls.

Source: University of Oxford, DB Global Research



# Demand and supply in Treasury markets

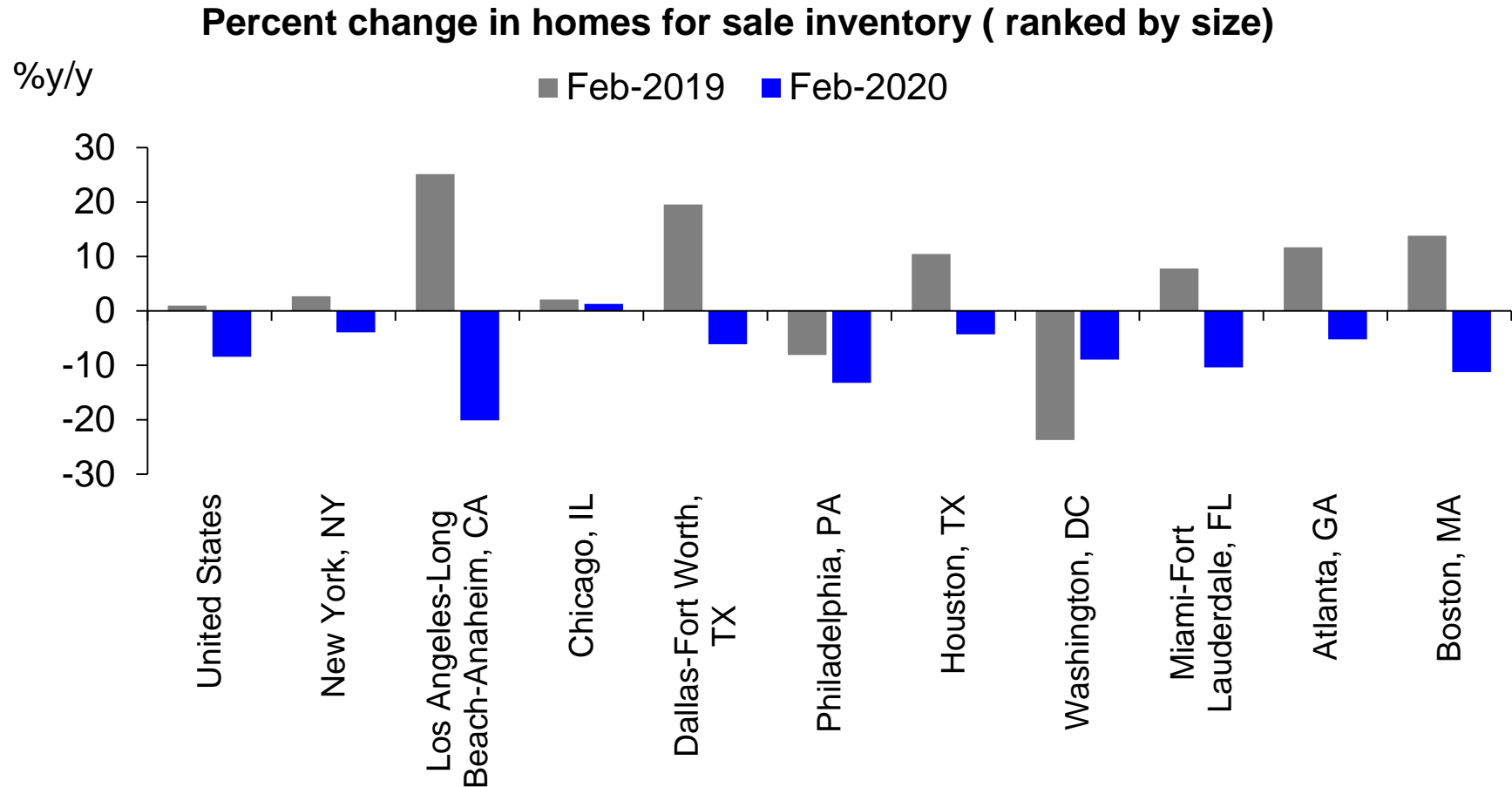


Note: Fed purchases shown are only for coupon bearing securities; Net issuance forecasts are adjusted for settlement cash flows to account for original month of issuance

Source: Steven Zeng, BPD, Fed, DB Global Research



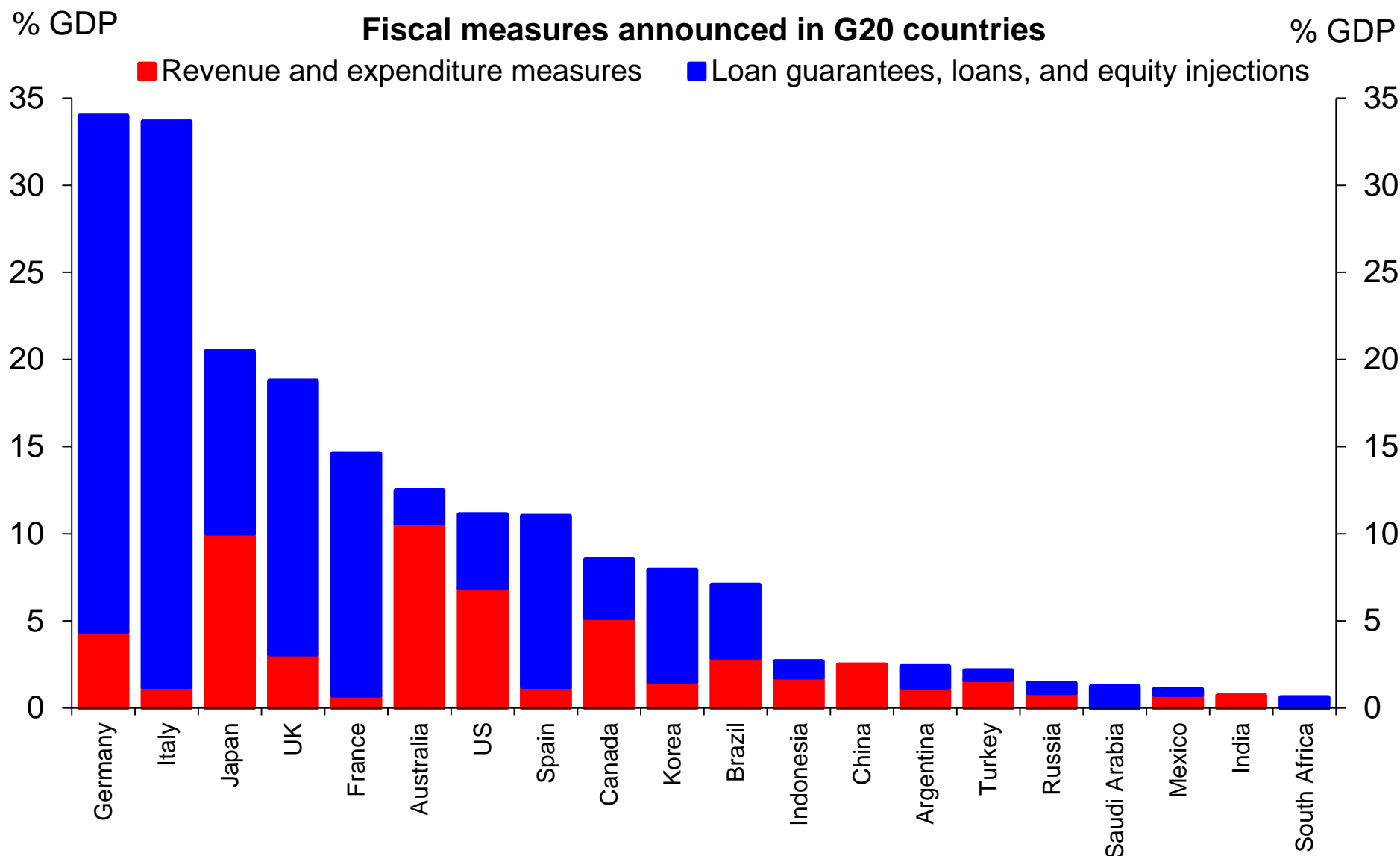
# Change homes for sale inventory



Source: Zillow.com, DB Global Research



# Much bigger fiscal response to covid-19 in Europe

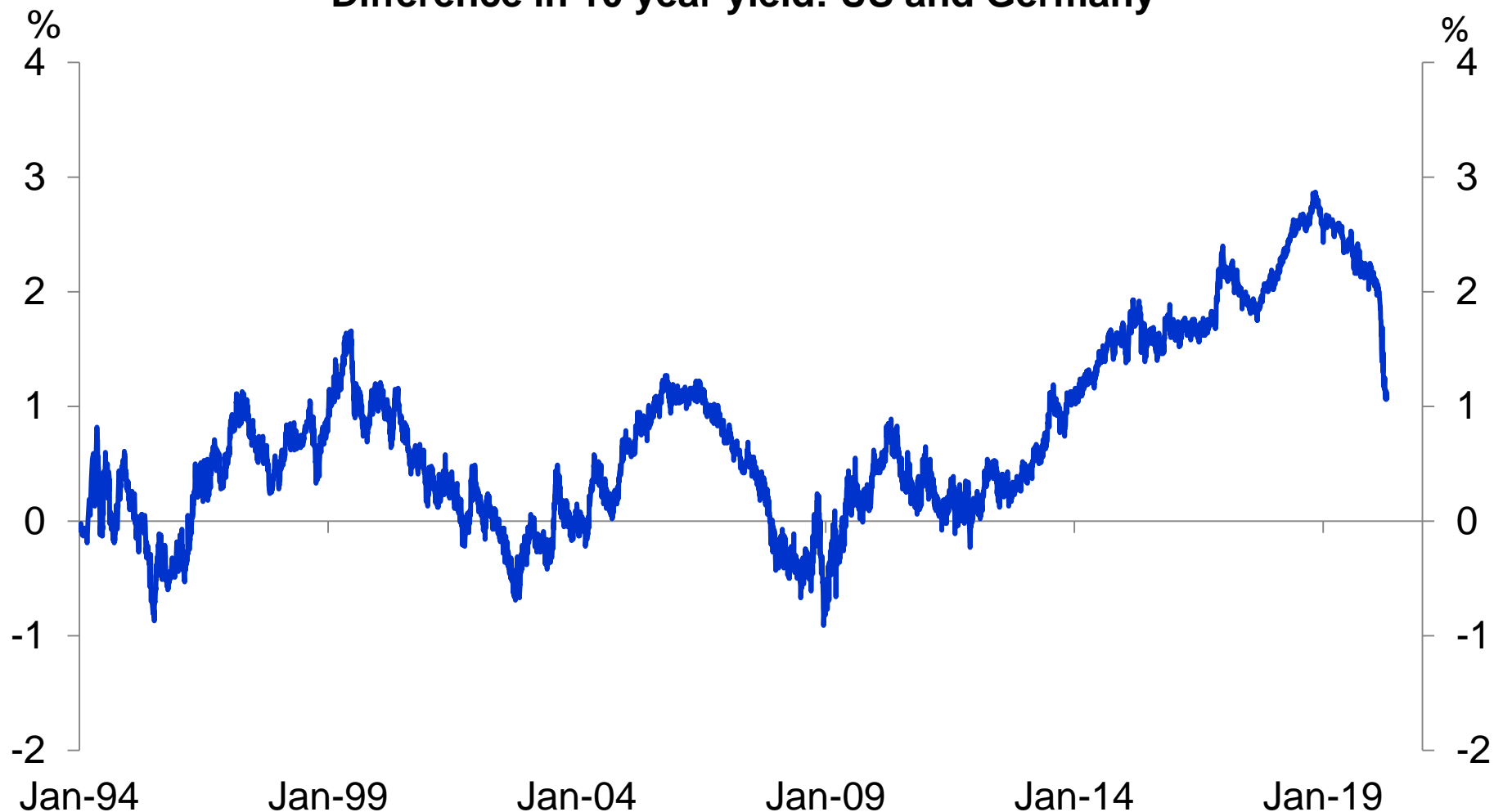


Source: National sources, IMF, DB Global Research

# Significant narrowing of spread between 10-year Treasuries and bunds



## Difference in 10 year yield: US and Germany

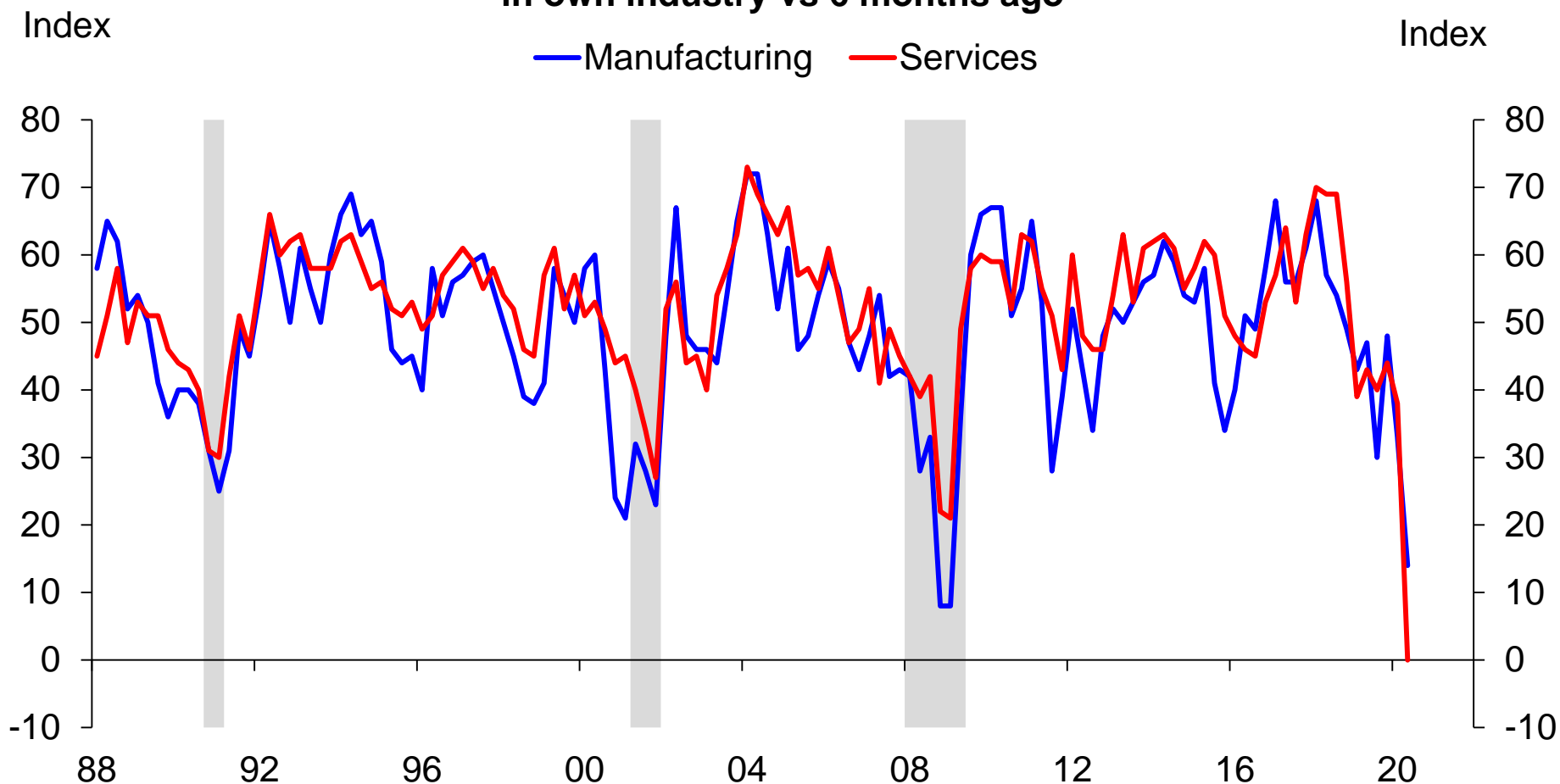


Source: Bundes Bank, US Treasury, Haver Analytics, DB Global Research



# CEO confidence declining across the board

## Conference Board CEO business confidence index: current conditions in own industry vs 6 months ago

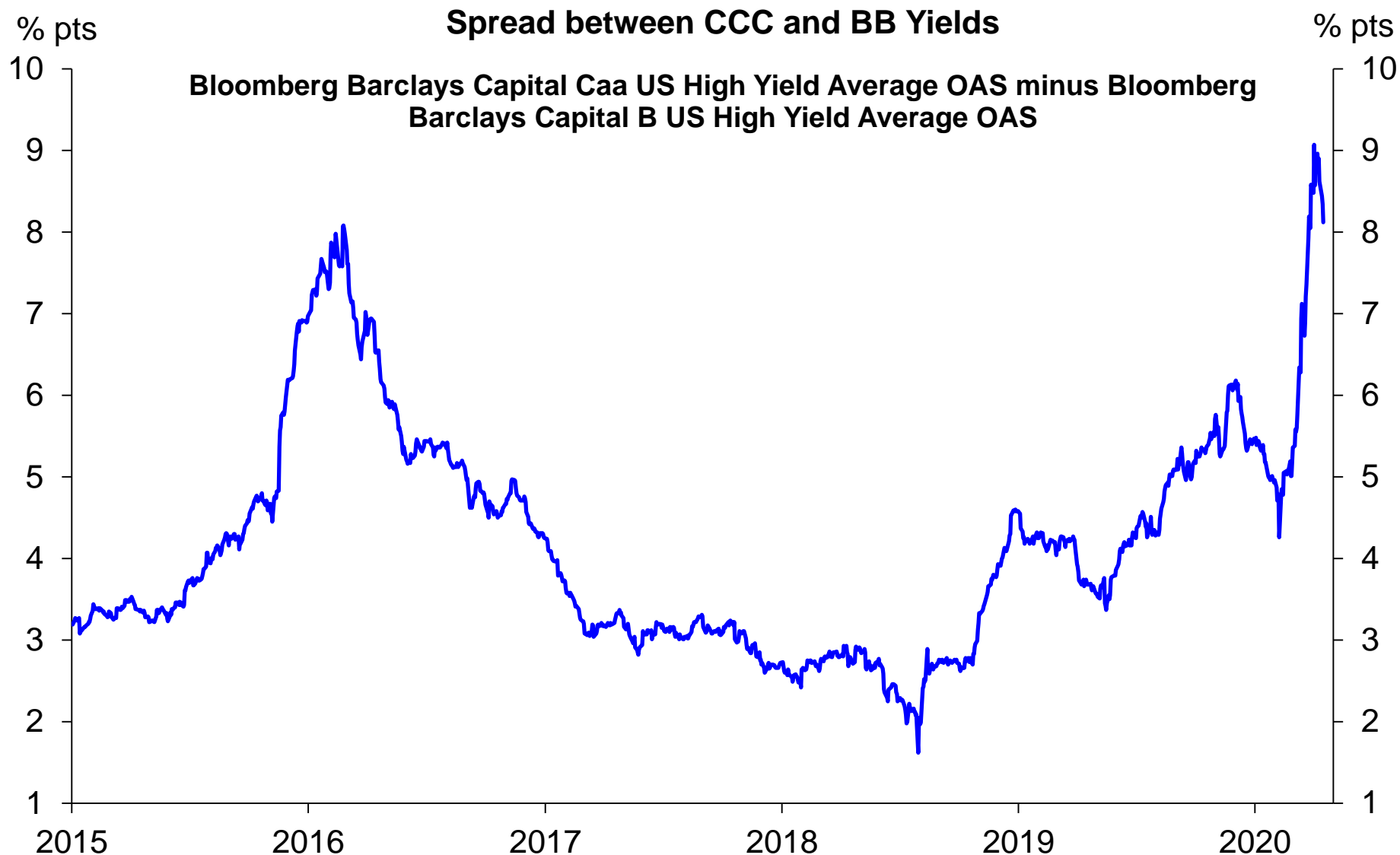


Source: Conference Board, Haver Analytics, DB Global Research





# Spread between CCC and BB corporate bond yields



Source: Bloomberg Finance LP, DB Global Research

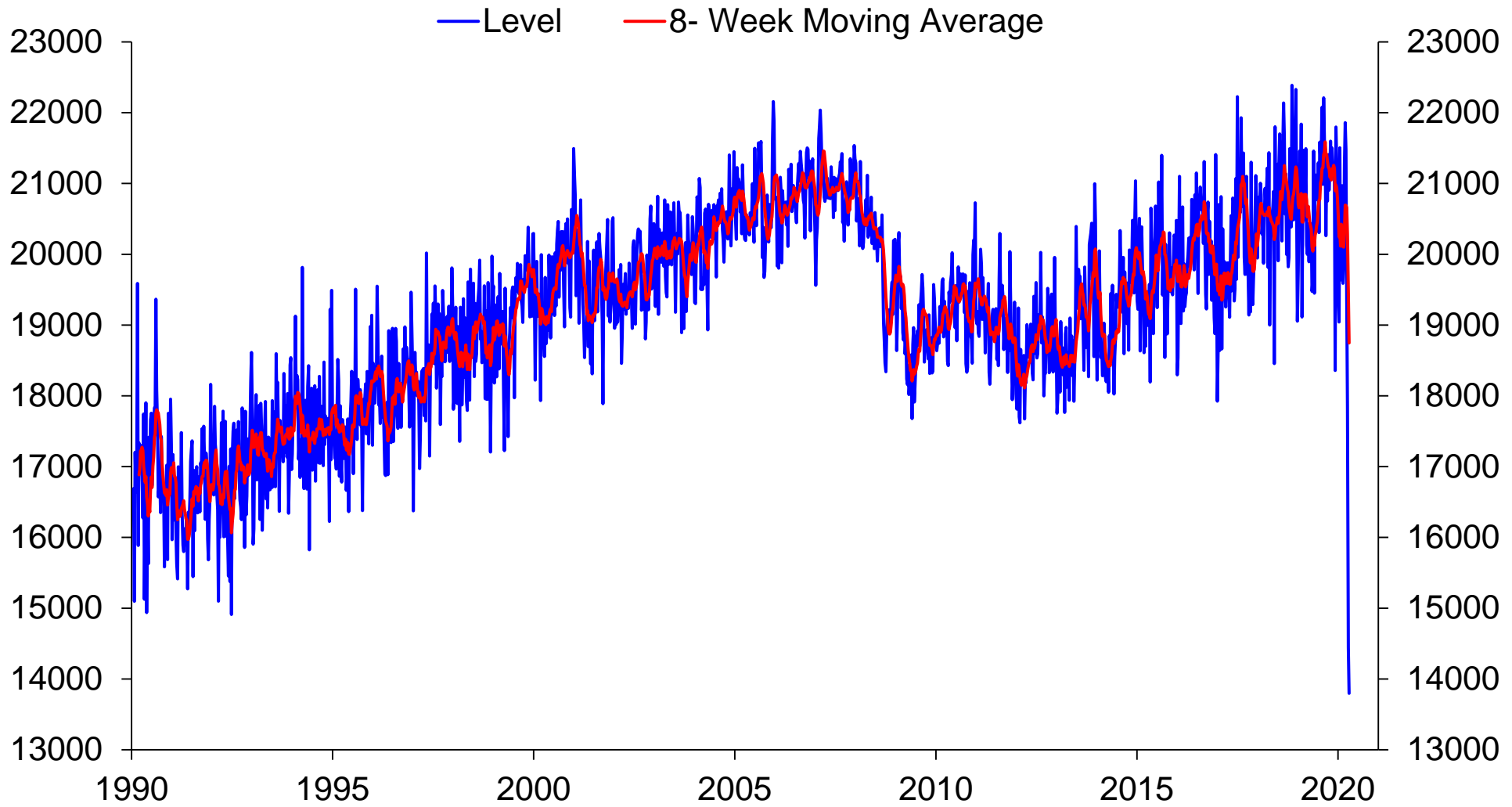


# Dramatic decline in US oil consumption

'000 barrels a day

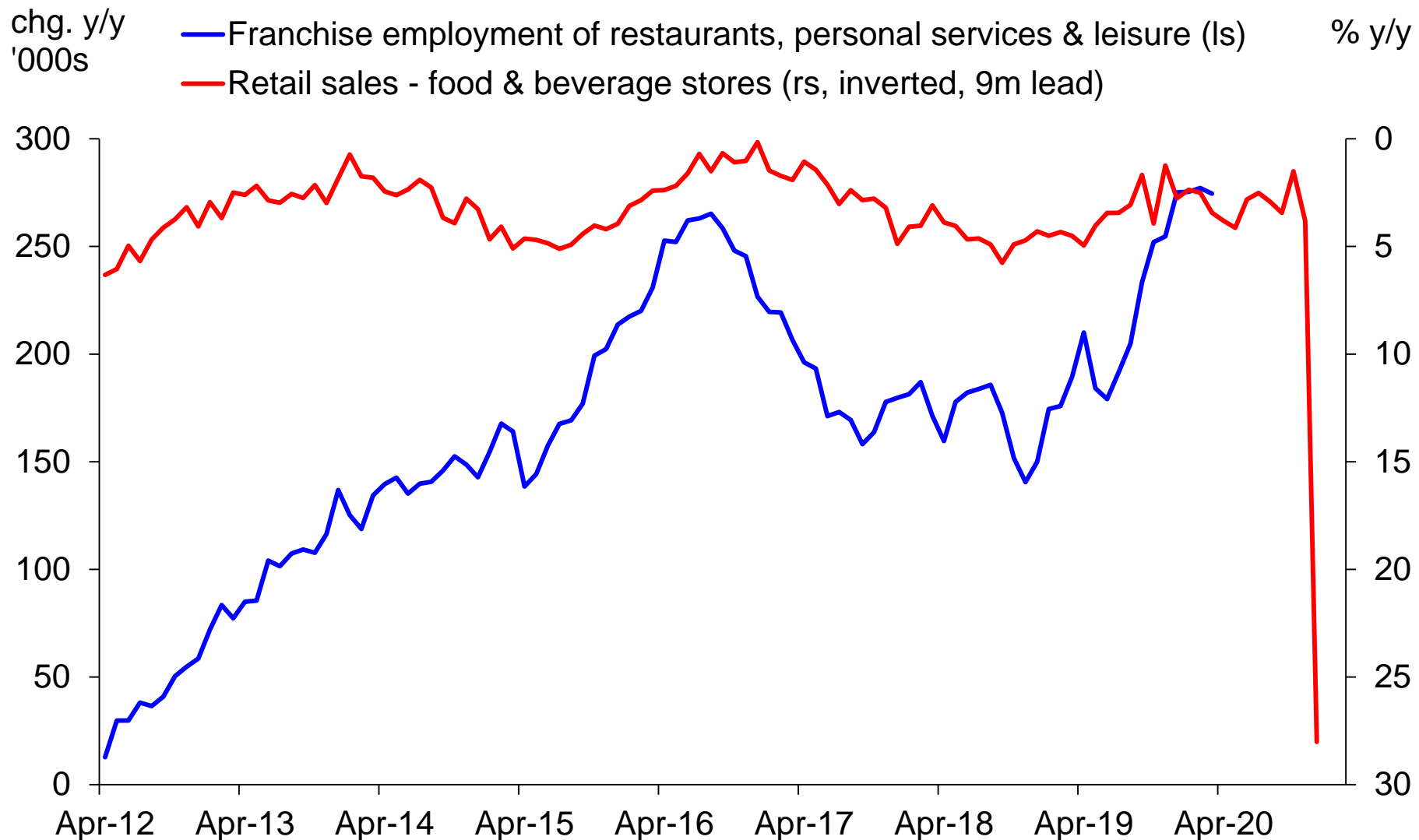
**United States: Total oil consumption**

'000 barrels a day



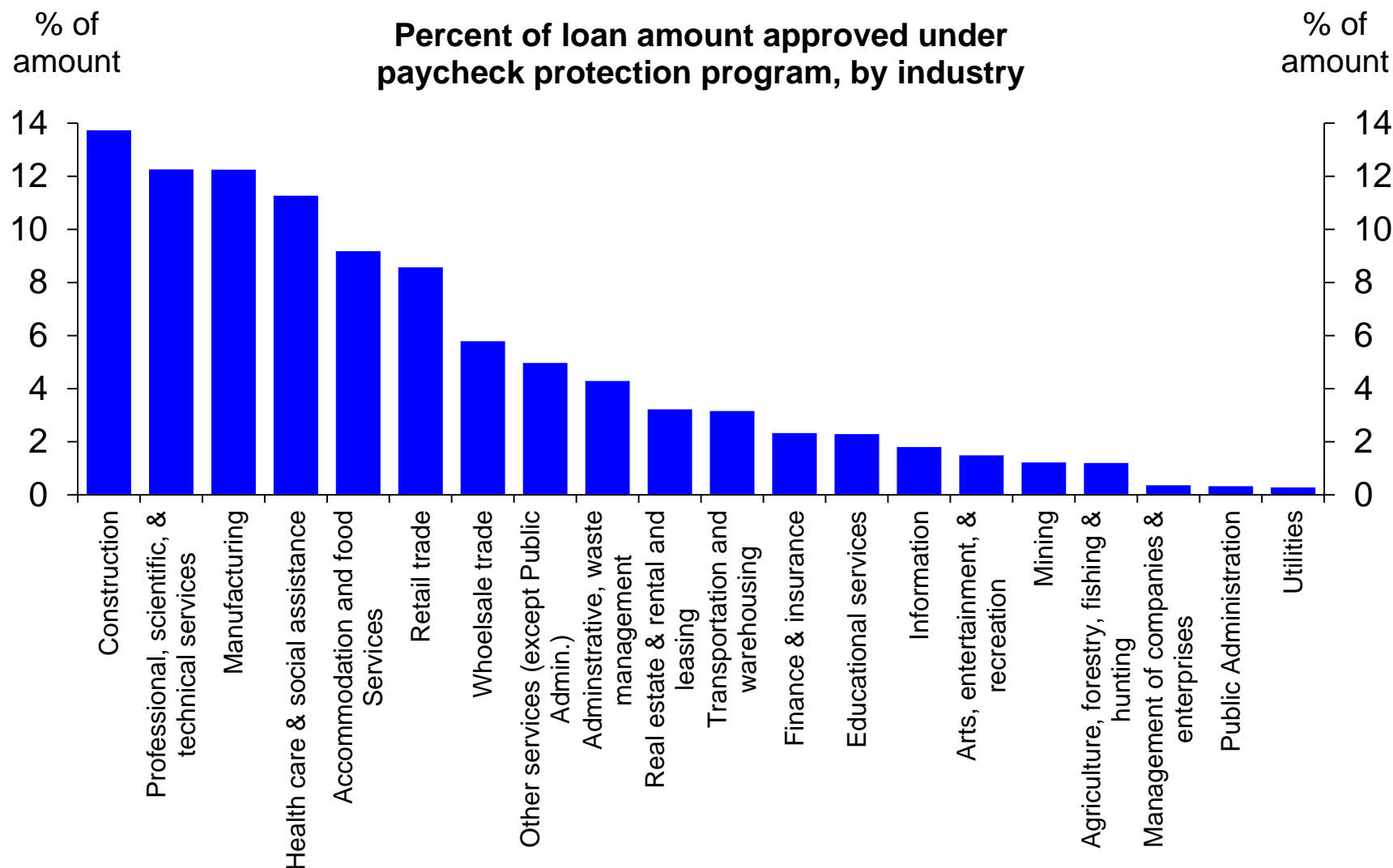
Source: US Department of Energy, Bloomberg Finance LP, DB Global Research

# Decline in retail sales points to big decline in retail employment



Source: ADP, Census, DB Global Research

# PPP money going to small businesses in construction, manufacturing, and professional, scientific, and technical services

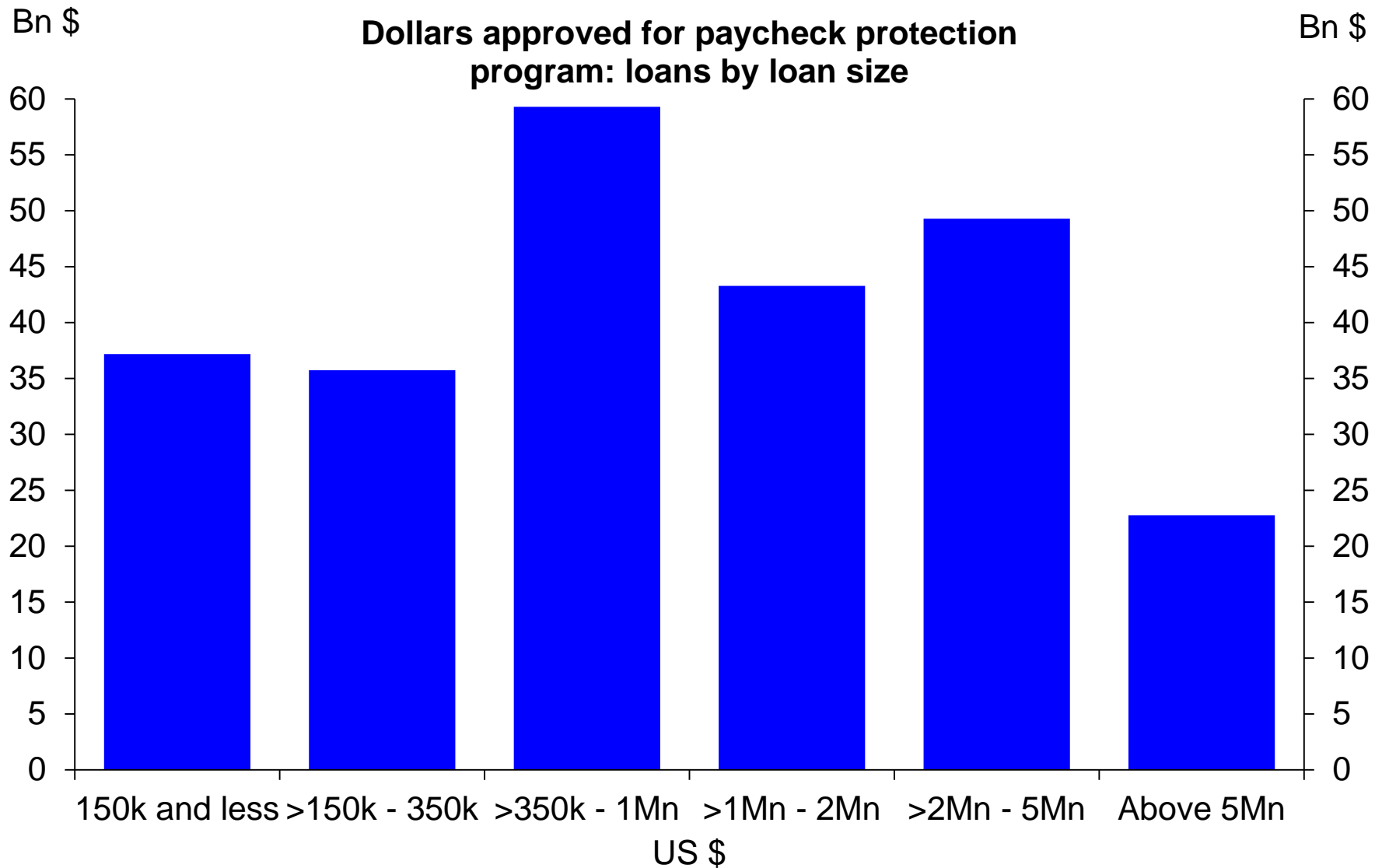


Note: Approvals through 13 April 2020.

Source: U.S. Small Business Administration, DB Global Research



# Many PPP loans between \$350K and \$1mn

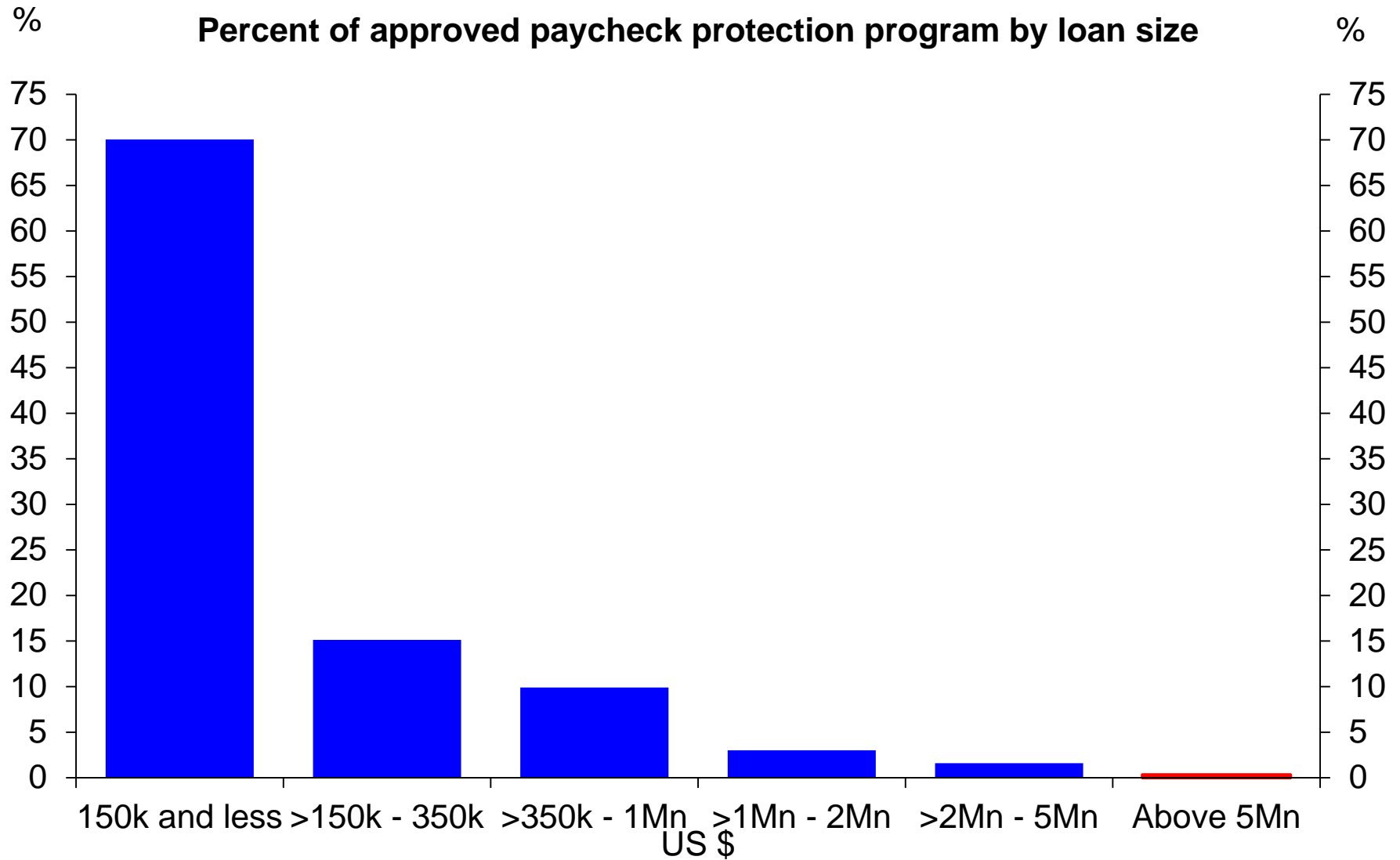


Note: Approvals through 13 April 2020.

Source: U.S. Small Business Administration, DB Global Research



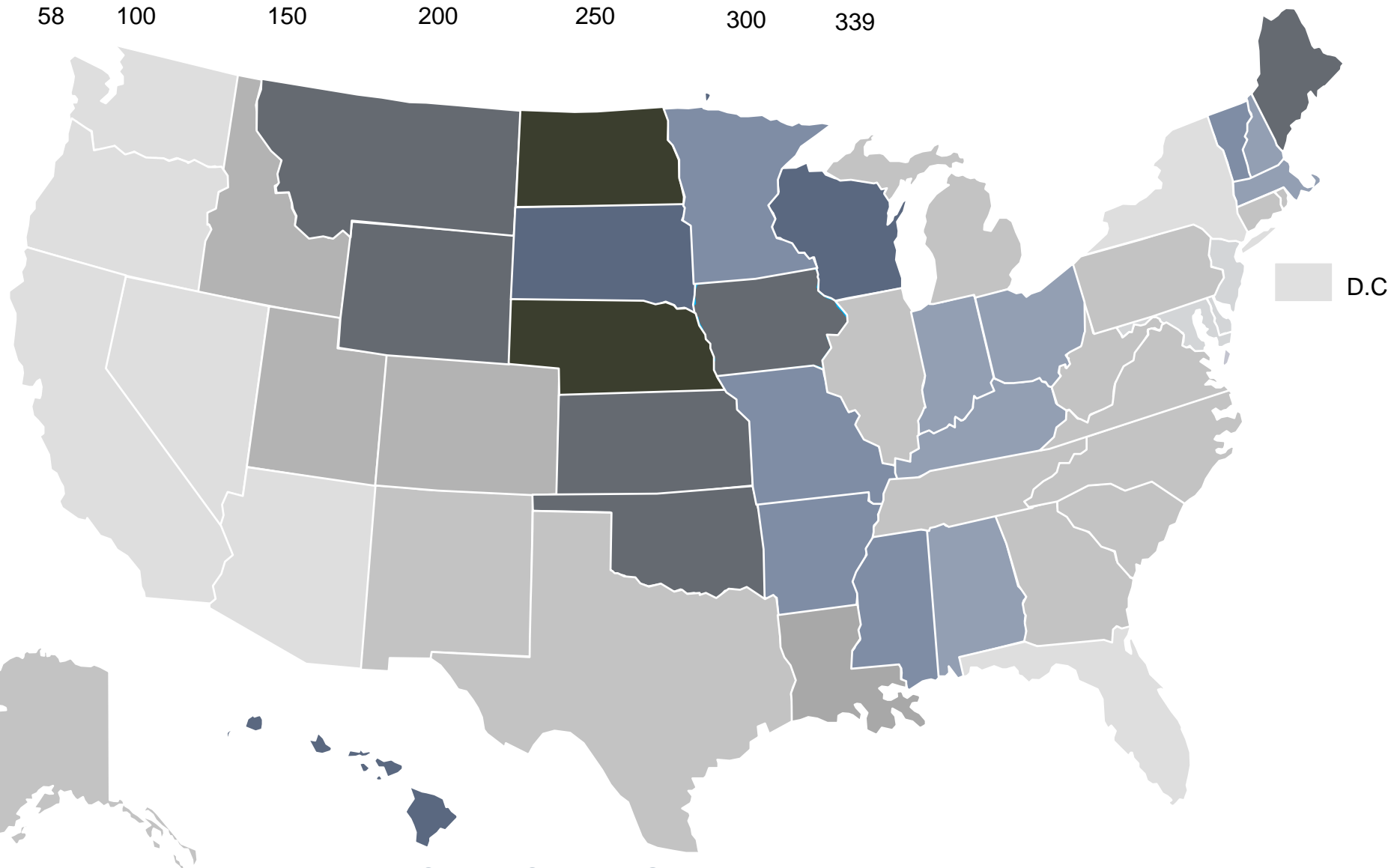
# 70% of PPP loans are less than \$150K



Note: Approvals through 13 April 2020.

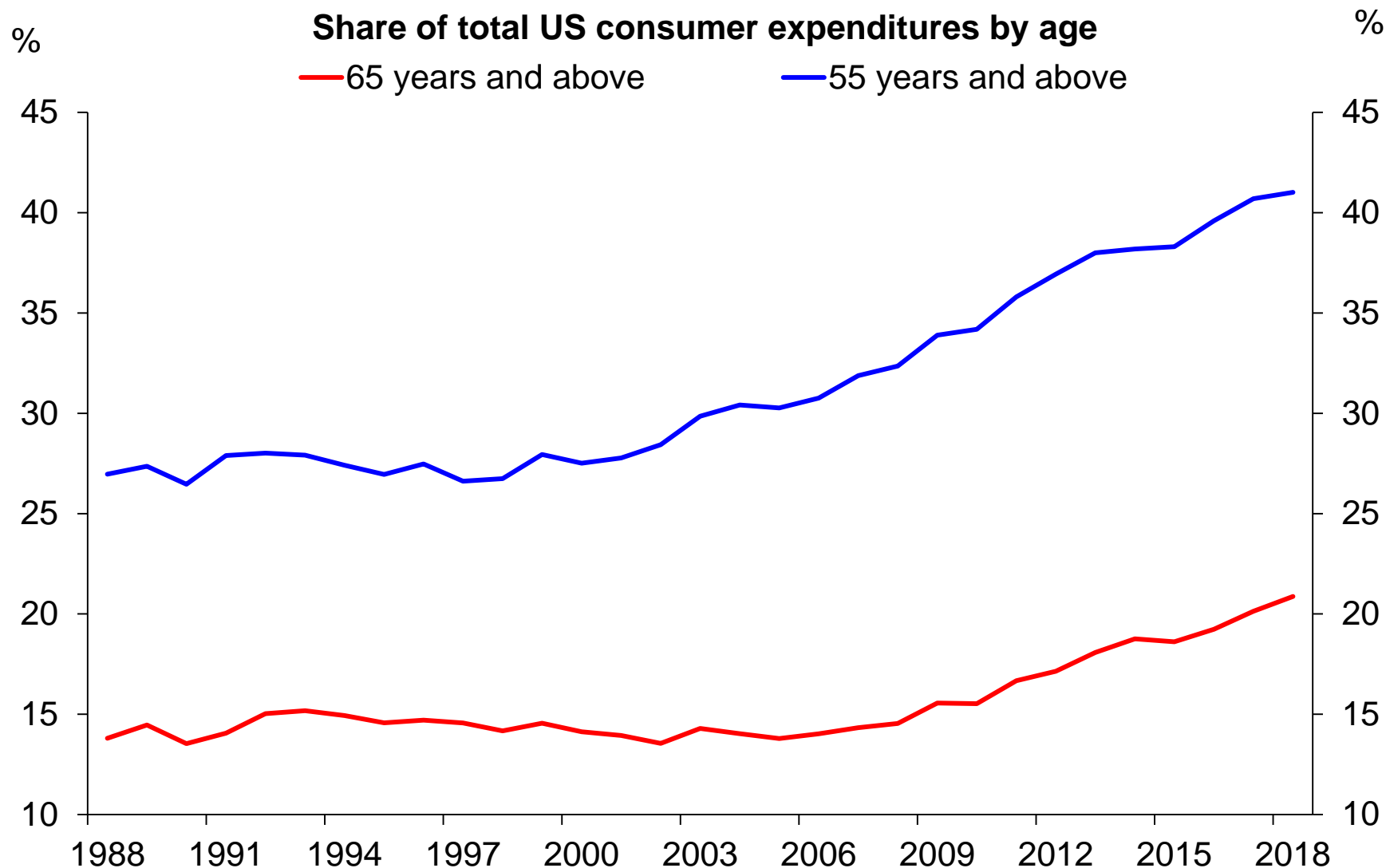
Source: U.S. Small Business Administration, DB Global Research

# Paycheck Protection Program loans per 1,000 businesses with fewer than 500 workers



Source: SBA, DB Global Research

# US: People over 55 years old account for 40% of consumer spending

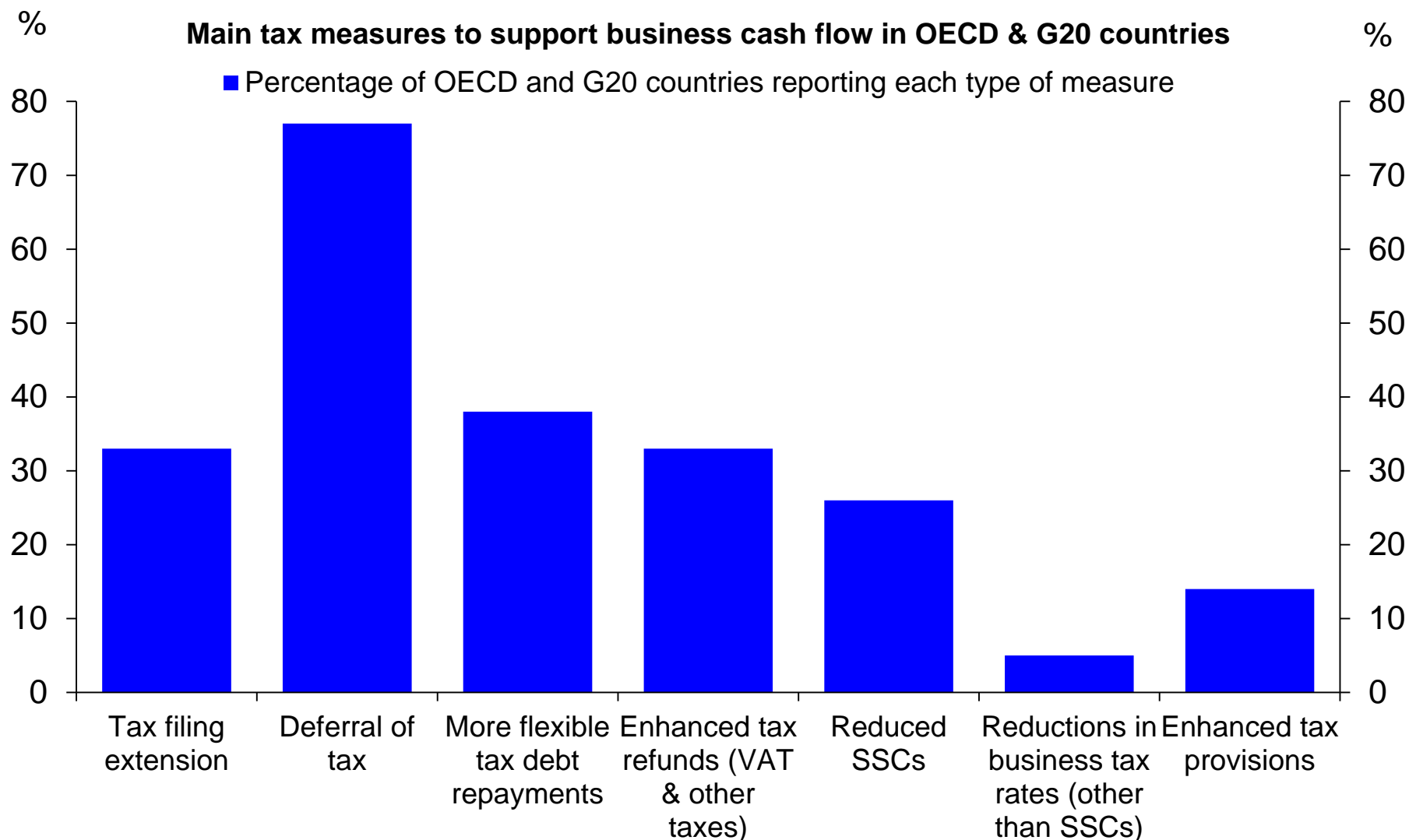


Source: BLS, Haver Analytics, DB Global Research





# Main tax measures to support the corporate sector

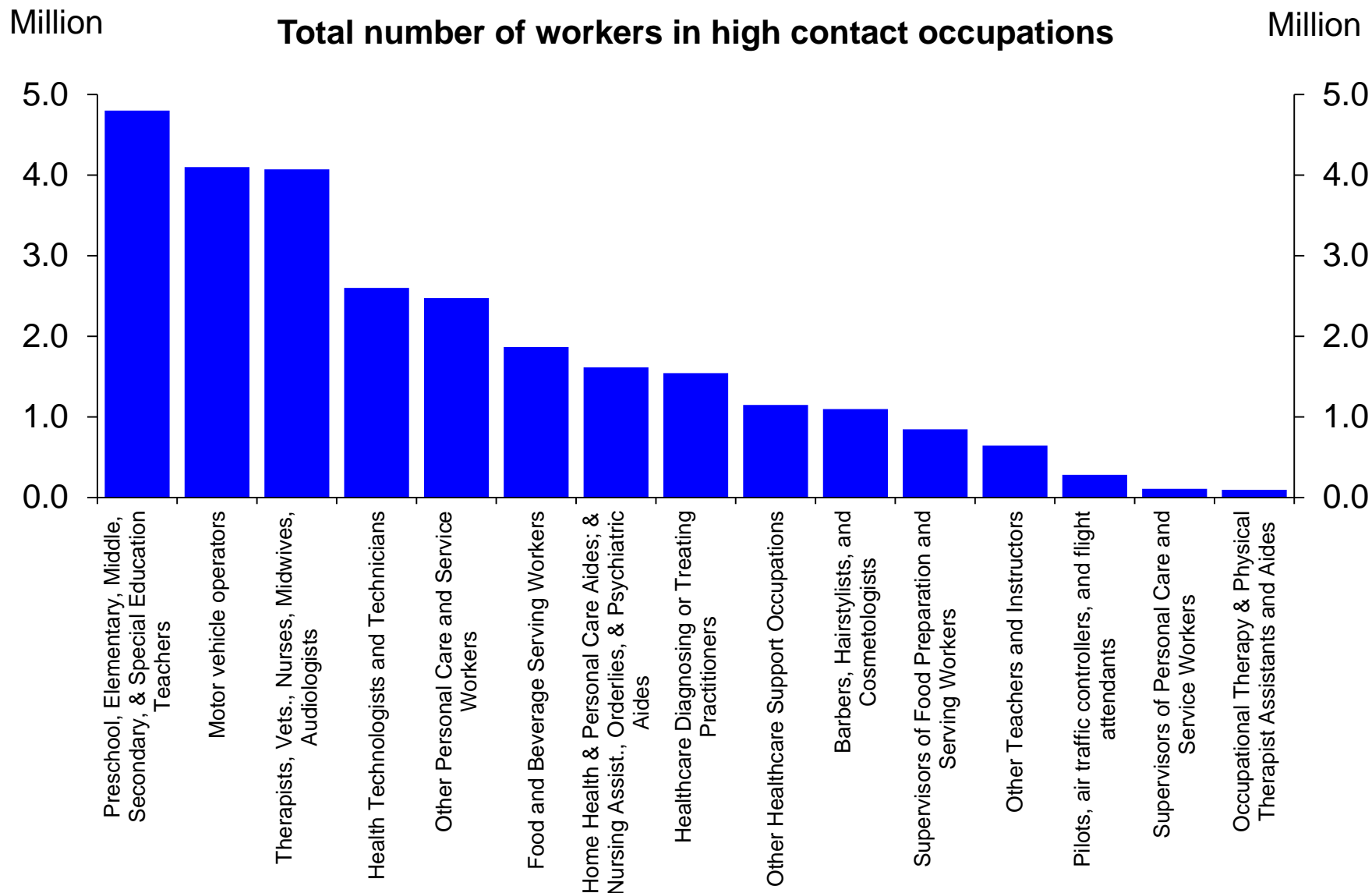


Note: Based on data up to 9 April 2020.

Source: OECD database on Tax Policy Responses to COVID-19, DB Global Research

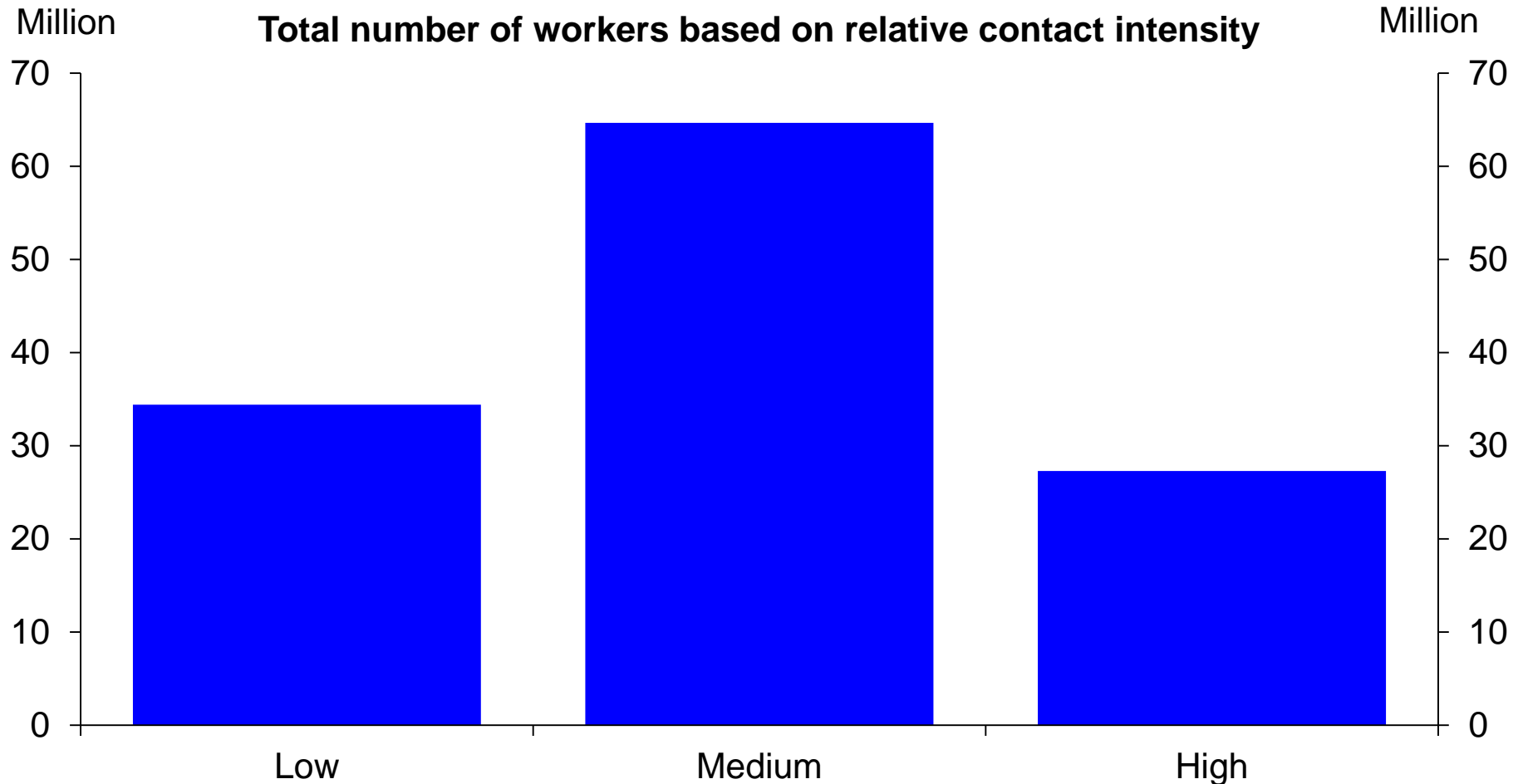


# Number of US workers in high contact intensity occupations



Source: St. Louis Fed, 2017 American Community Survey, O\*NET, DB Global Research

# There are 27mn US workers in high contact intensity occupations



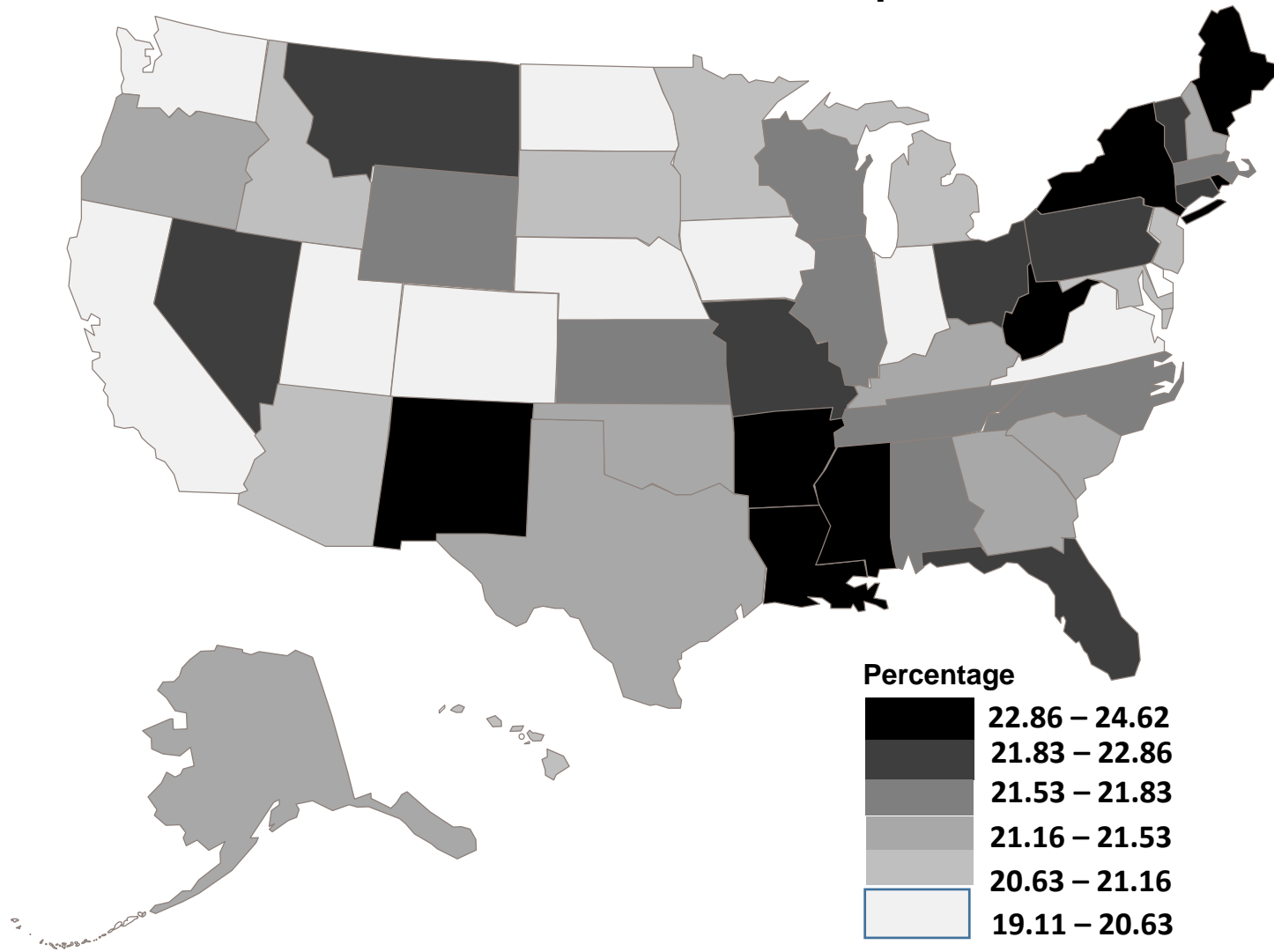
Note: Low, medium & high contact-intensity categories are classified according to index scores of 0 to 50, 50 to 75, and 75 and above. This index score is based on extent to which the job requires the worker to perform job tasks in close physical proximity to other people. The corresponding scores are defined as follows: •I don't work near other people (beyond 100 ft.): 0; •I work with others but not closely (e.g., private office): 25; •Slightly close (e.g., shared office): 50; •Moderately close (at arm's length): 75; •Very close (near touching): 100

Source: St. Louis Fed, 2017 American Community Survey, O\*NET, DB Global Research

# Once the US economy reopens social distancing will be more difficult in states with a large share of high contact intensity occupations



## Share of contact intensive occupations

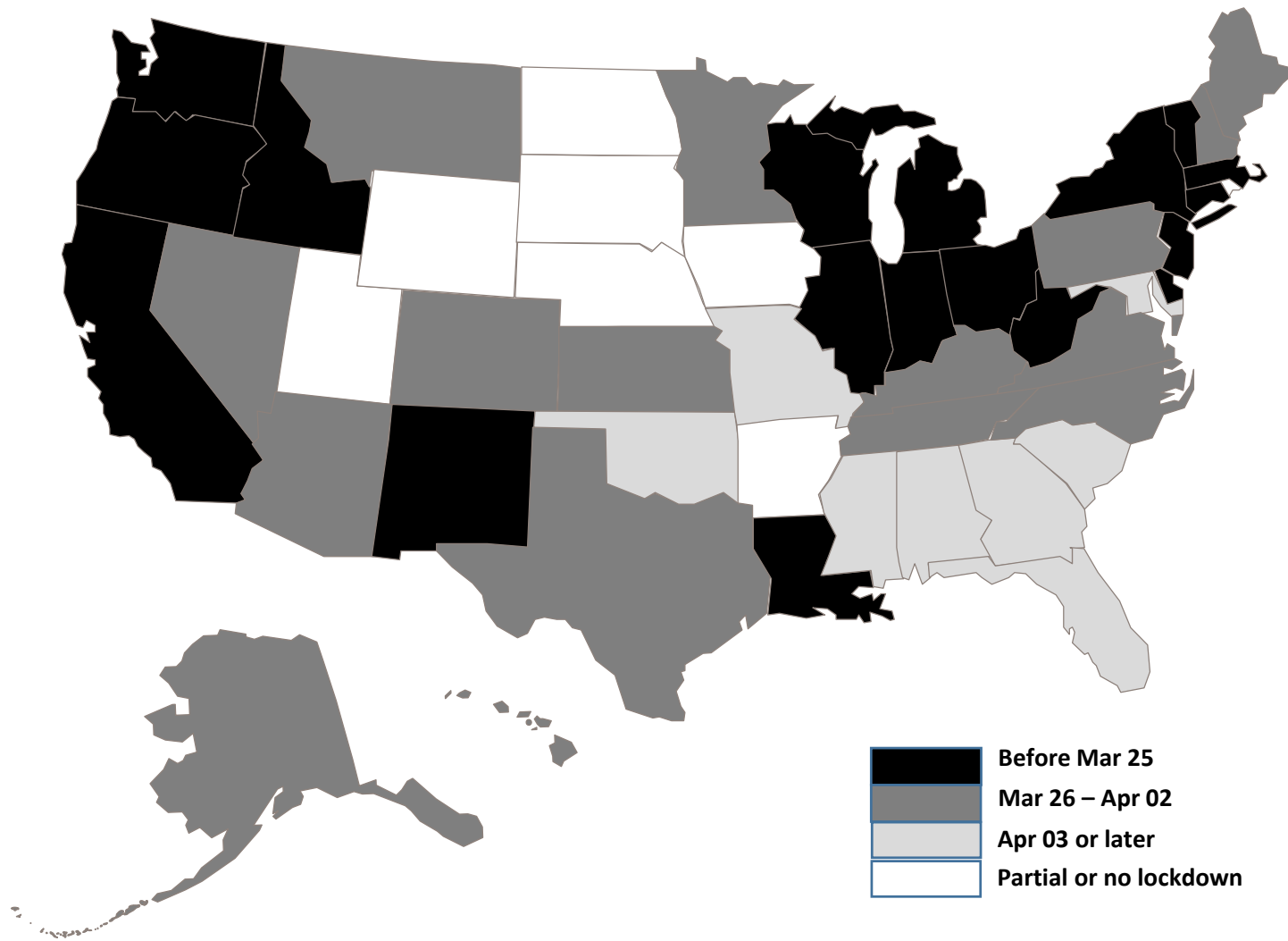


Source: St. Louis Fed, DB Global Research



# Different lockdown starting dates may complicate reopening

## Start date of lockdown in states

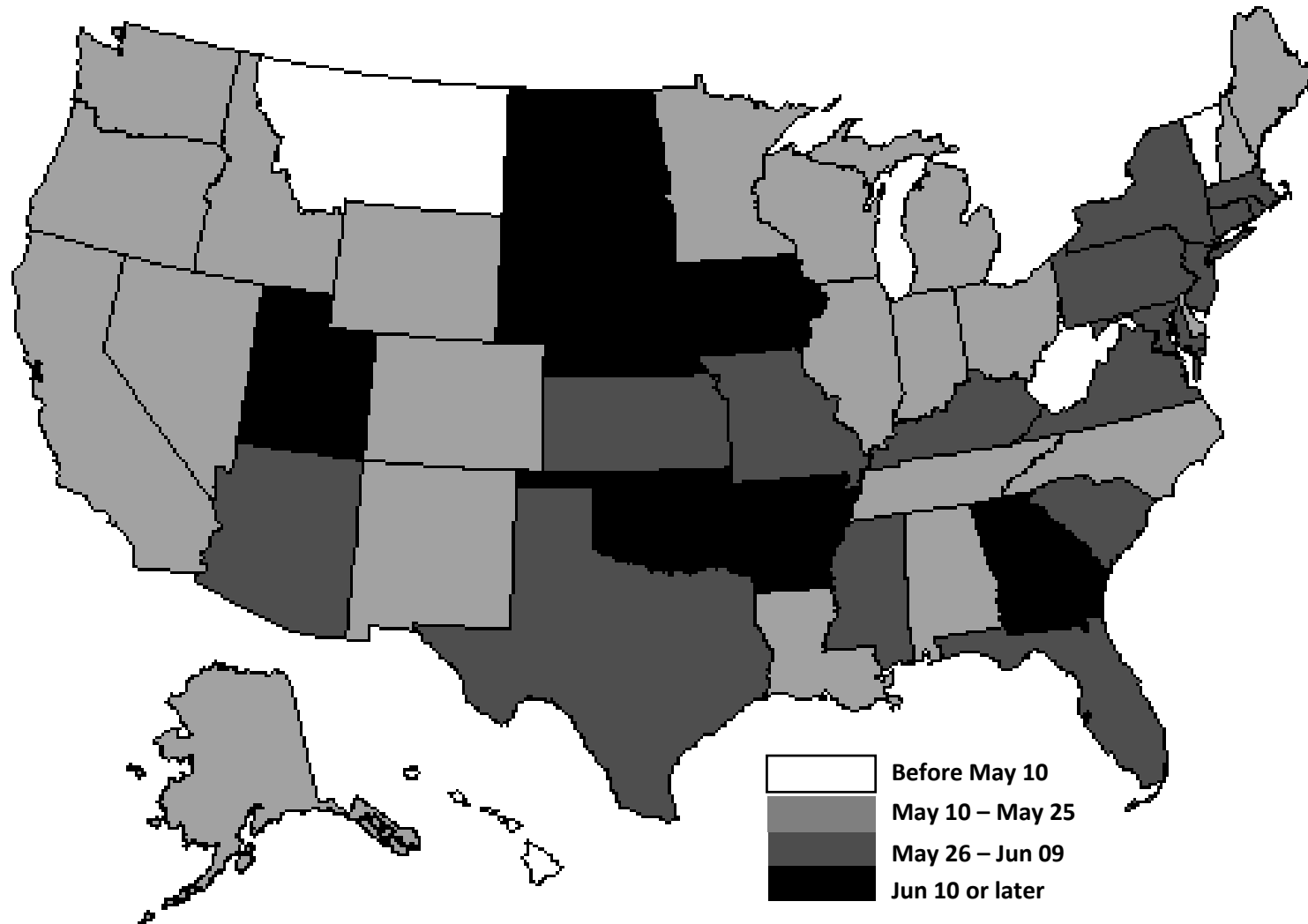


Source: CNN, The New York Times, DB Global Research

# U of Washington model predictions for when different states will reopen



## Ideal dates to relax social distancing according to IHME model

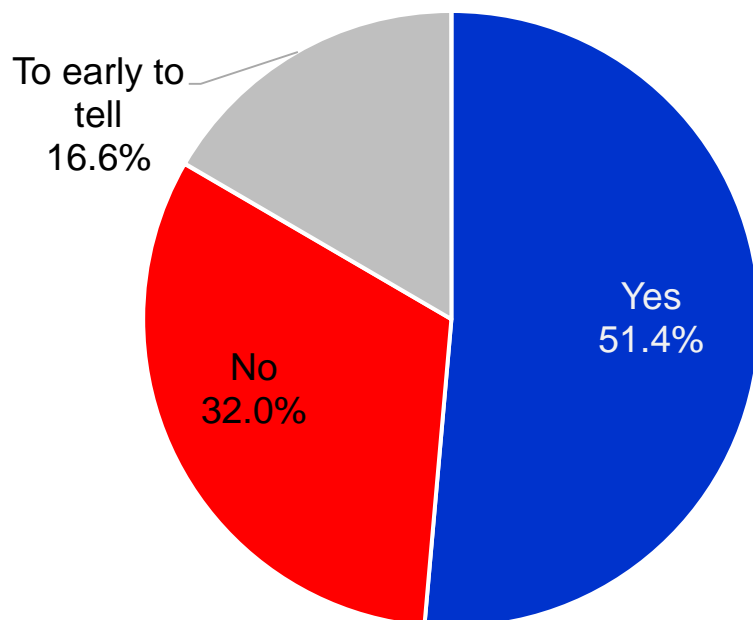


Source: The Institute for Health Metrics and Evaluation, DB Global Research

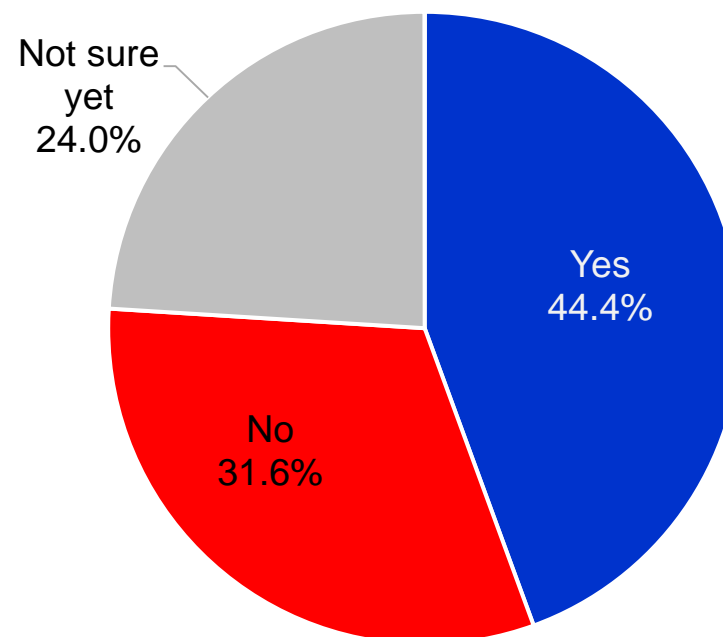


# More people would prefer to work from home permanently

**Zippia Poll Survey : Would you rather work from home full time moving forward**



**Zippia Poll Survey : Are you more productive working from home**



Source: Zippia Poll Survey , DB Global Research

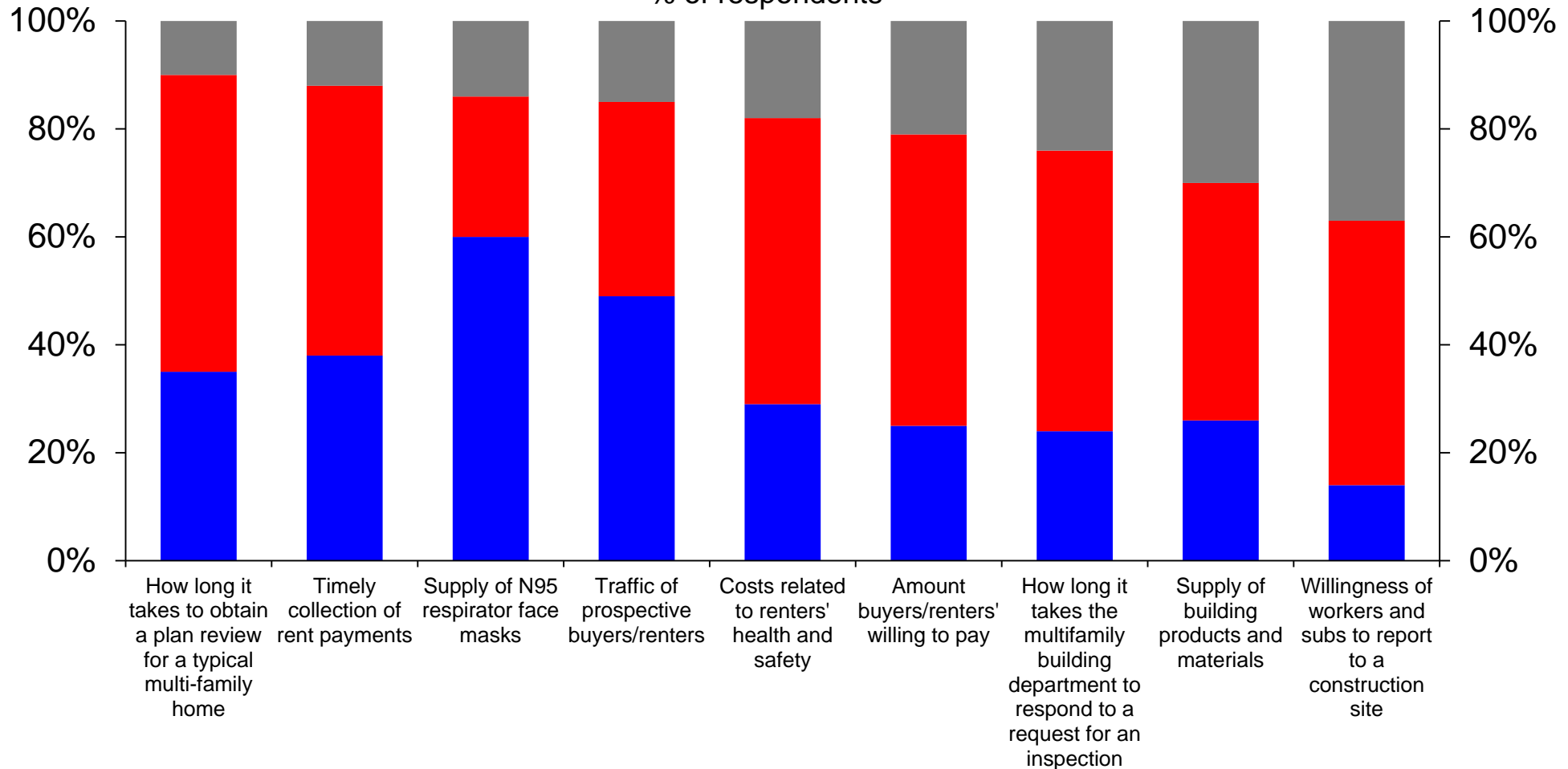


# NAHB homebuilder/developer survey

## NAHB Multifamily Builder/Developer Poll, April 3-9, 2020

As of this date, has the coronavirus had a noticeable, adverse effect on any of the following aspects of your business?

■ Yes, to a MAJOR extent ■ Yes, to a MINOR extent ■ No  
% of respondents



Source: NAHB, DB Global Research

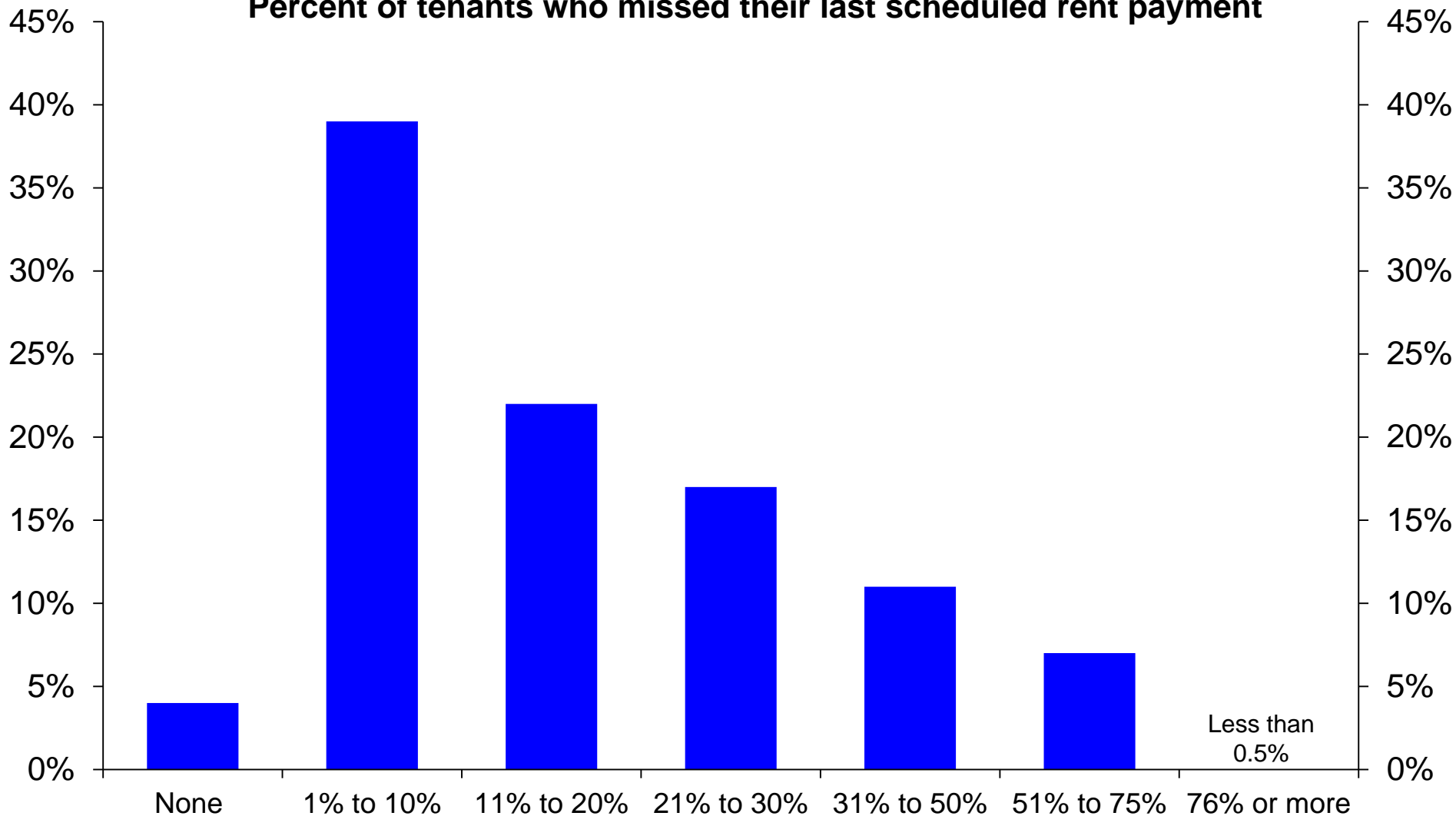




# US: Percentage of tenants who missed their April rent payment

## NAHB Multifamily Builder/Developer Poll, April 3-9, 2020

### Percent of tenants who missed their last scheduled rent payment



Source: NAHB, DB Global Research

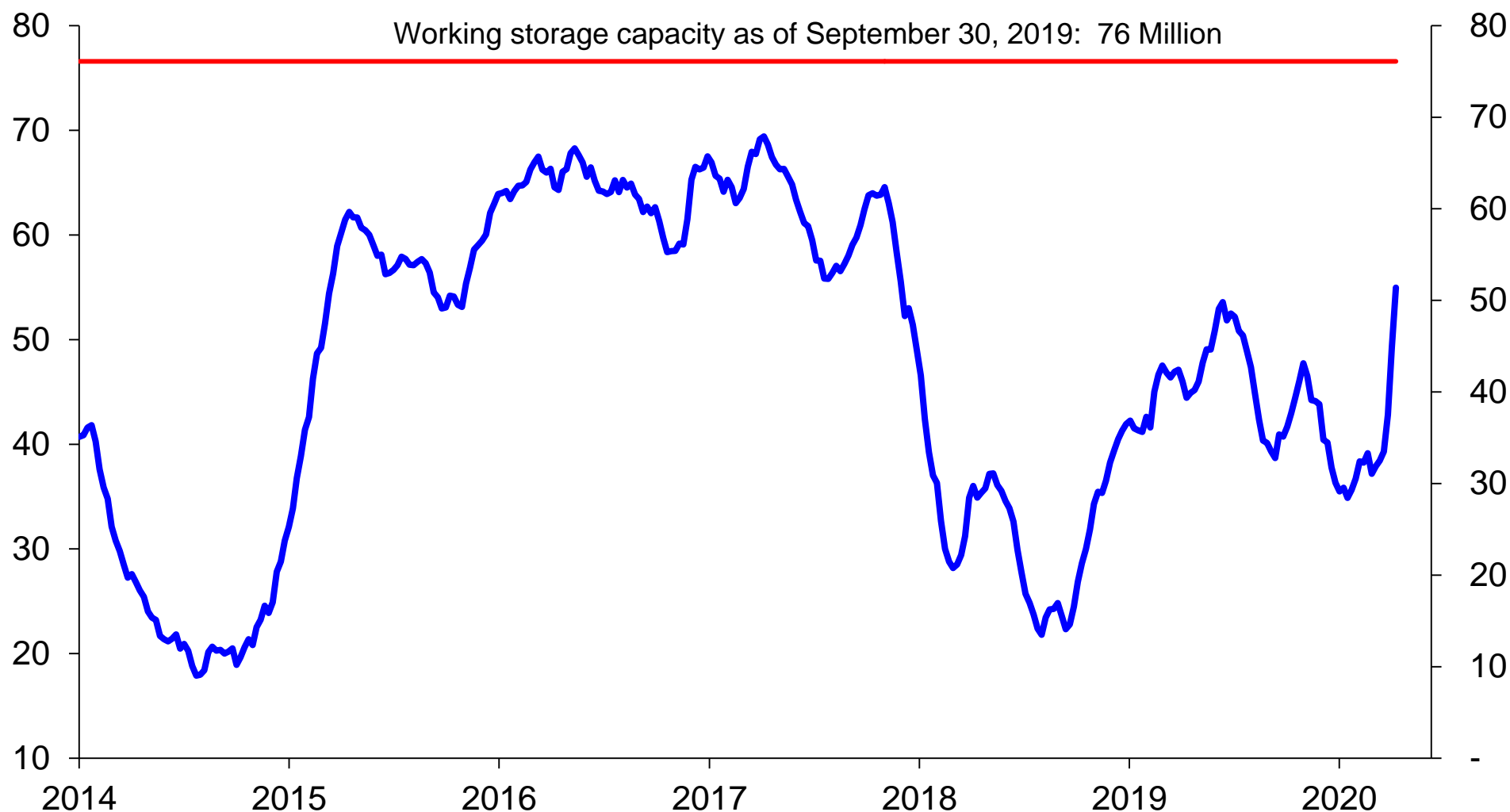


# Cushing crude oil stock versus storage capacity

Million barrel

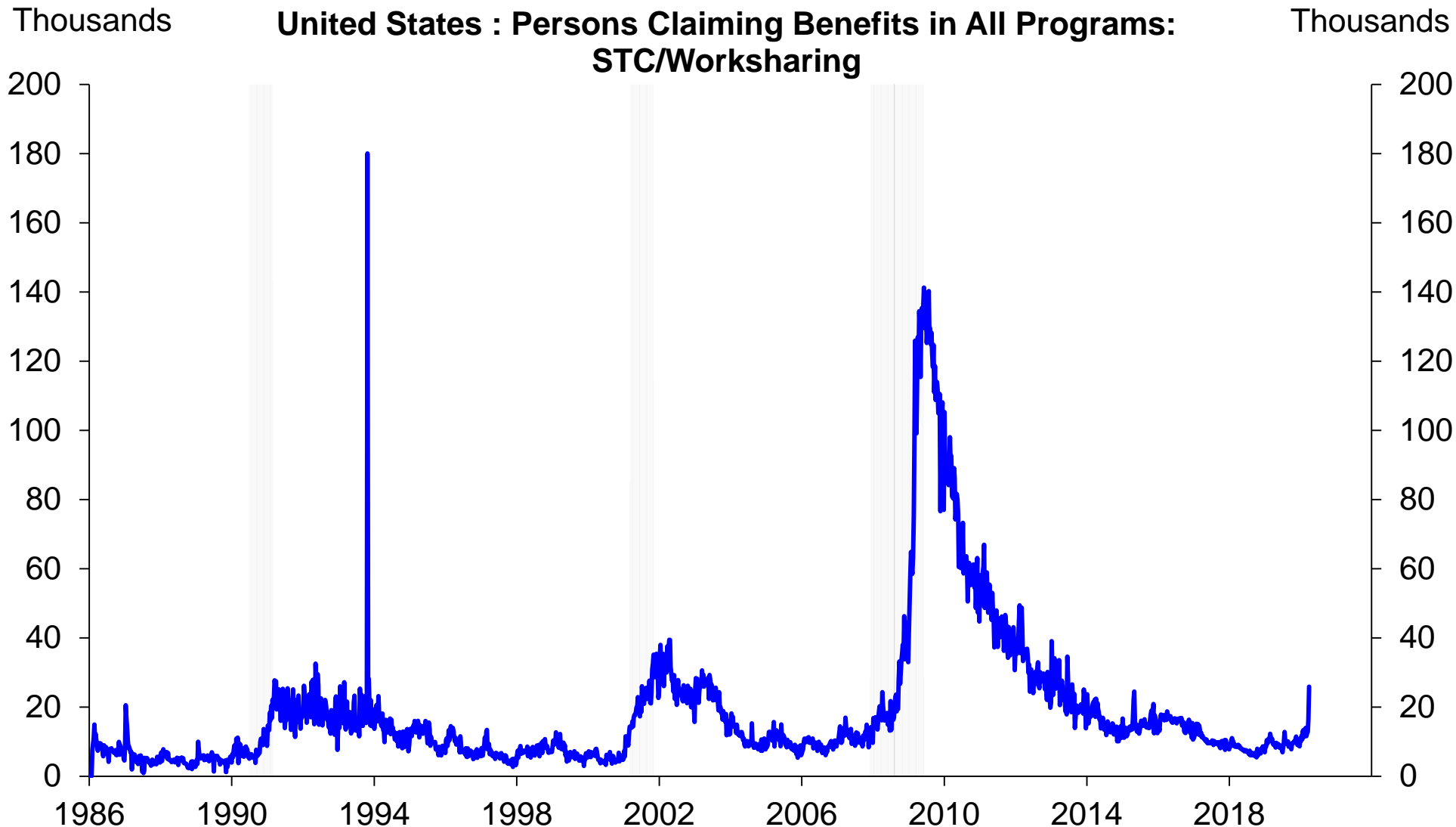
**United States : DOE Cushing Oklahoma Crude Oil  
Total Stock**

Million barrel



Source: EIA, DB Global Research

# US: Uptick in the number of people applying for work sharing benefits



Work Sharing (WS) is a voluntary Unemployment Insurance program that provides employers with an alternative to layoffs when they face a temporary and unexpected downturn in business. It allows employers to divide available hours of work among a group of employees instead of implementing a full layoff to a few employees. It allows employees to keep working but with fewer hours.

Source: DOL, Haver Analytics, DB Global Research



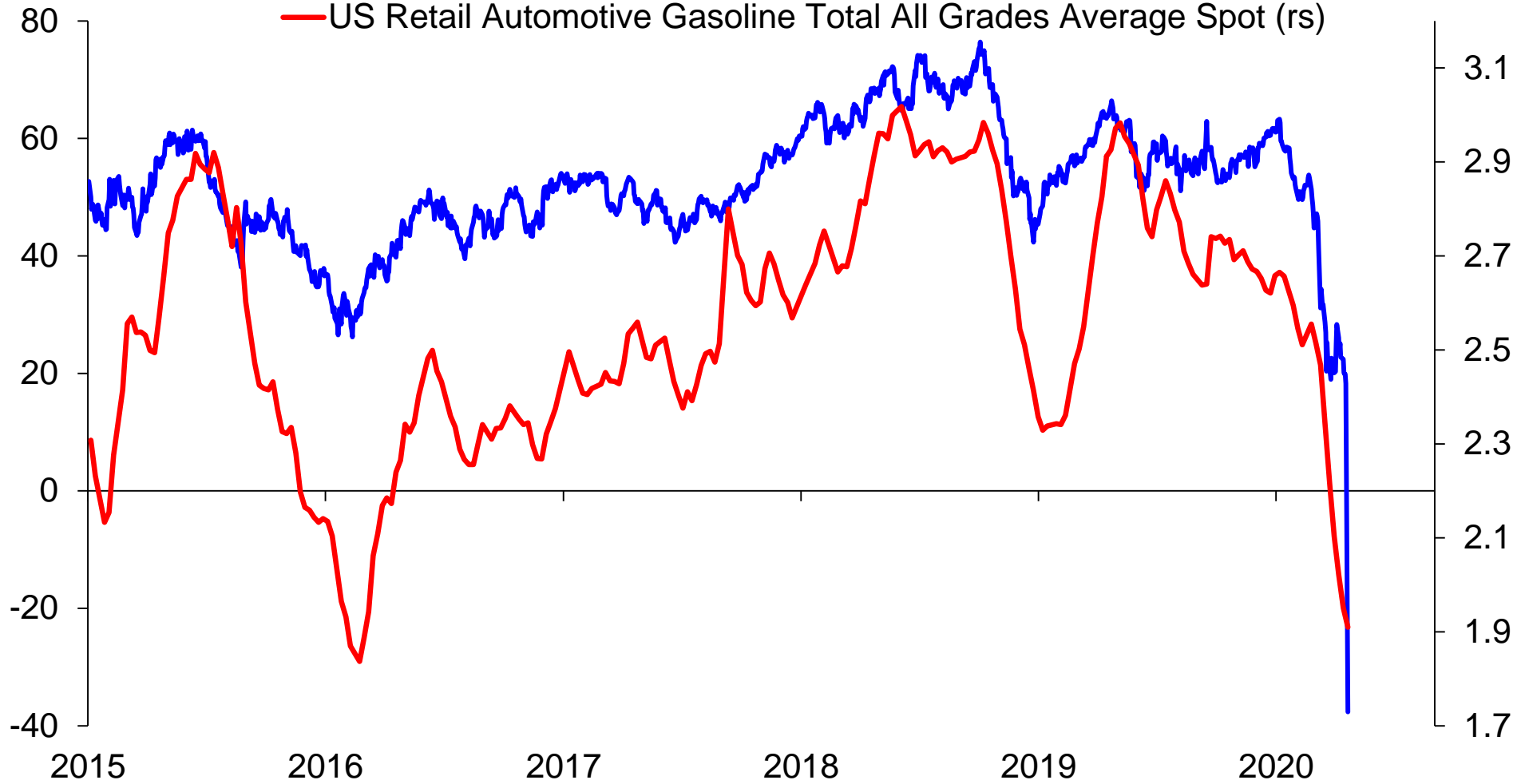
# Lower WTI pushing retail gas prices down

\$/barrel

## WTI Crude Oil Cushing and Gasoline price

\$/gallon

- US Crude Oil WTI Cushing OK Spot (ls)
- US Retail Automotive Gasoline Total All Grades Average Spot (rs)

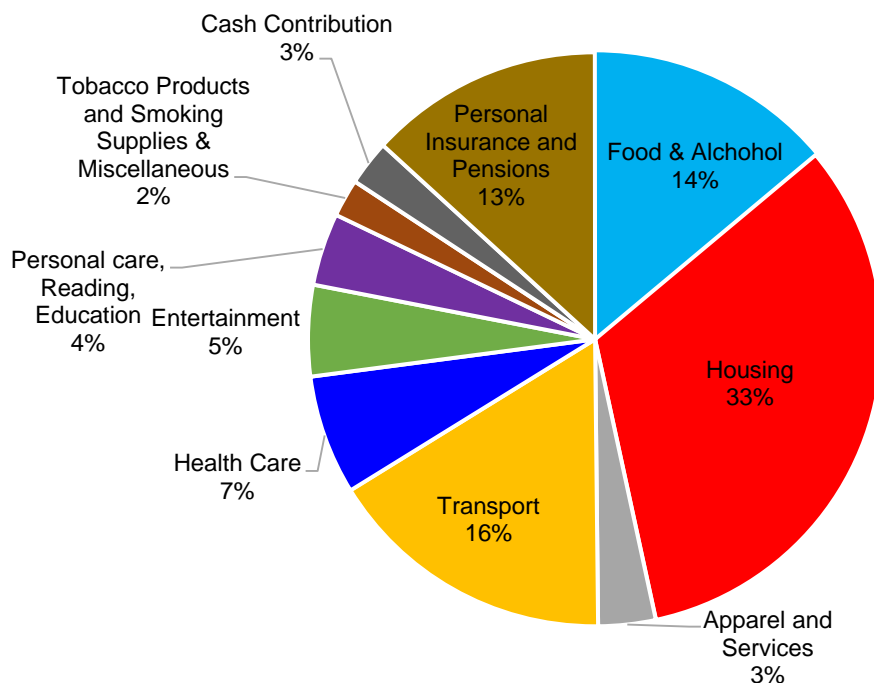


Source: US Department of Energy, Bloomberg Finance LP, DB Global Research

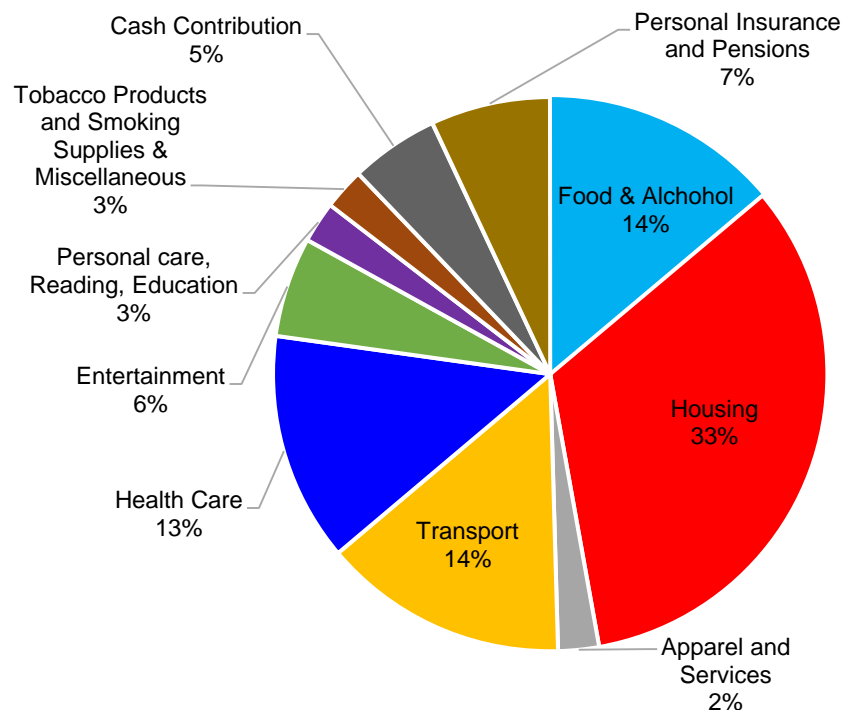


# Consumption patterns of people below and above 65 years old

**Consumer expenditure by category: Under 65 years 2018**



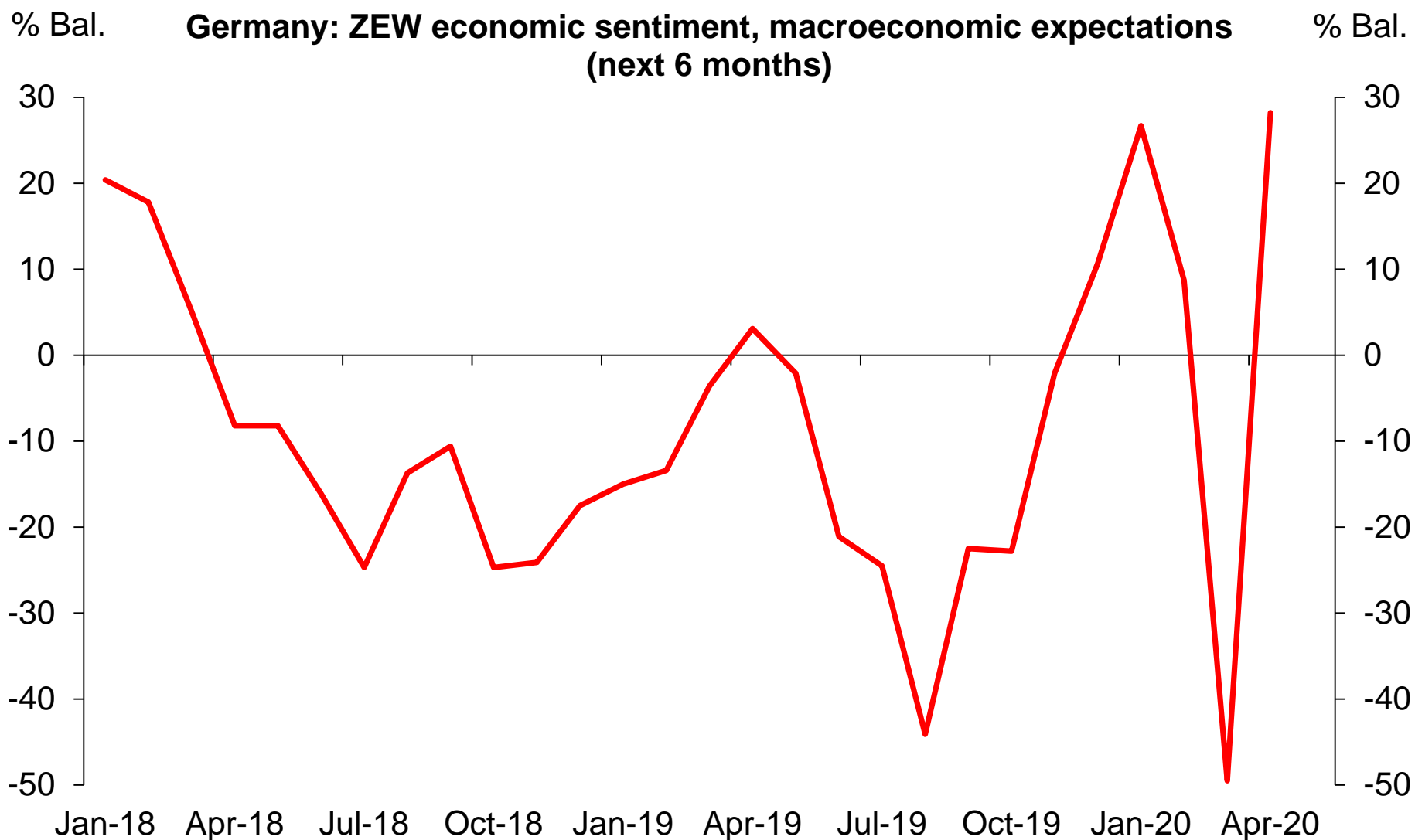
**Consumer expenditure by category: 65 years and Older 2018**



Source: BLS, Haver Analytics, DB Global Research



# V-shaped recovery in the German data?

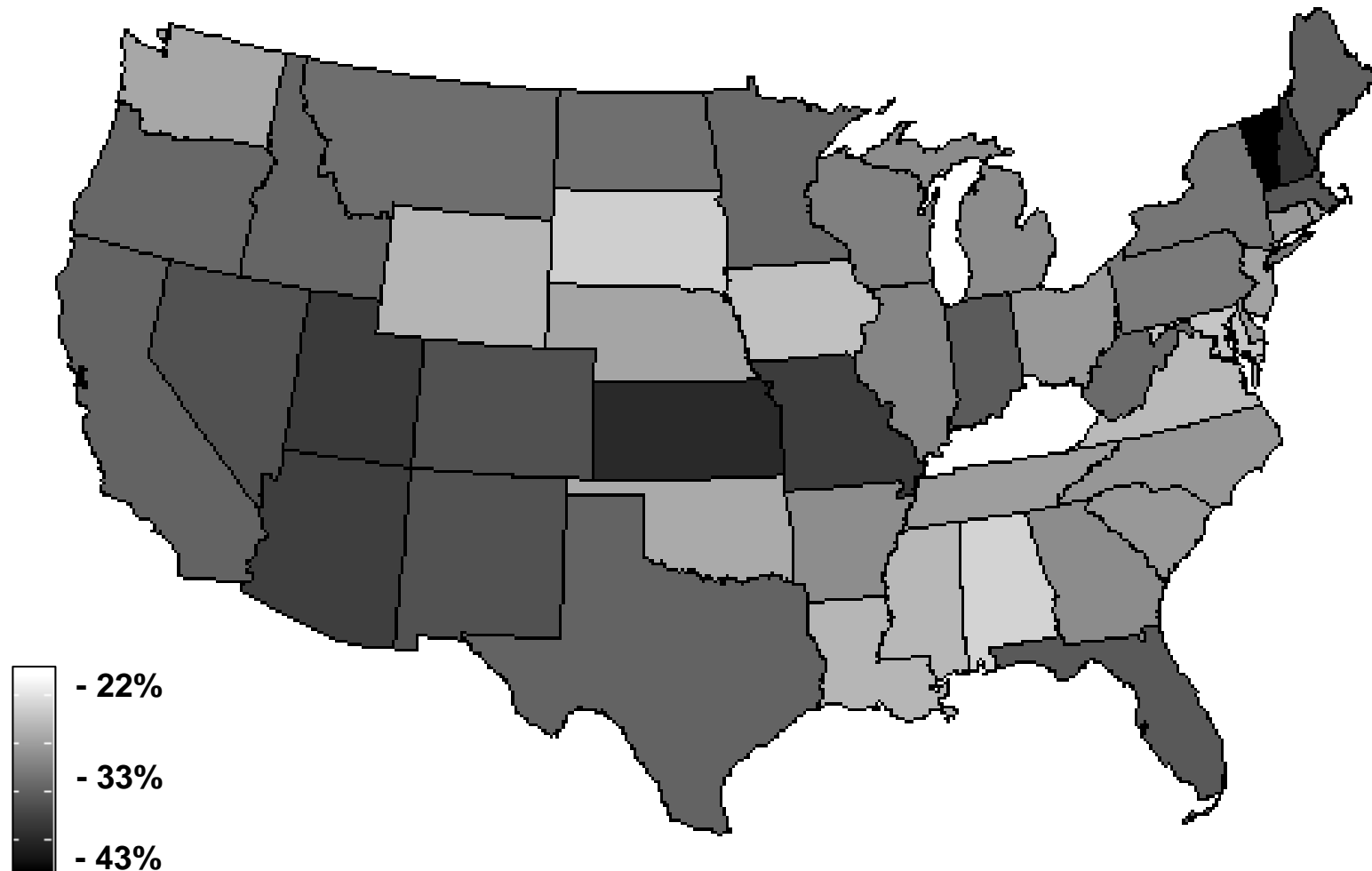


Source: ZEW, Haver Analytics, DB Global Research



# Geographical distribution of the decline in job postings

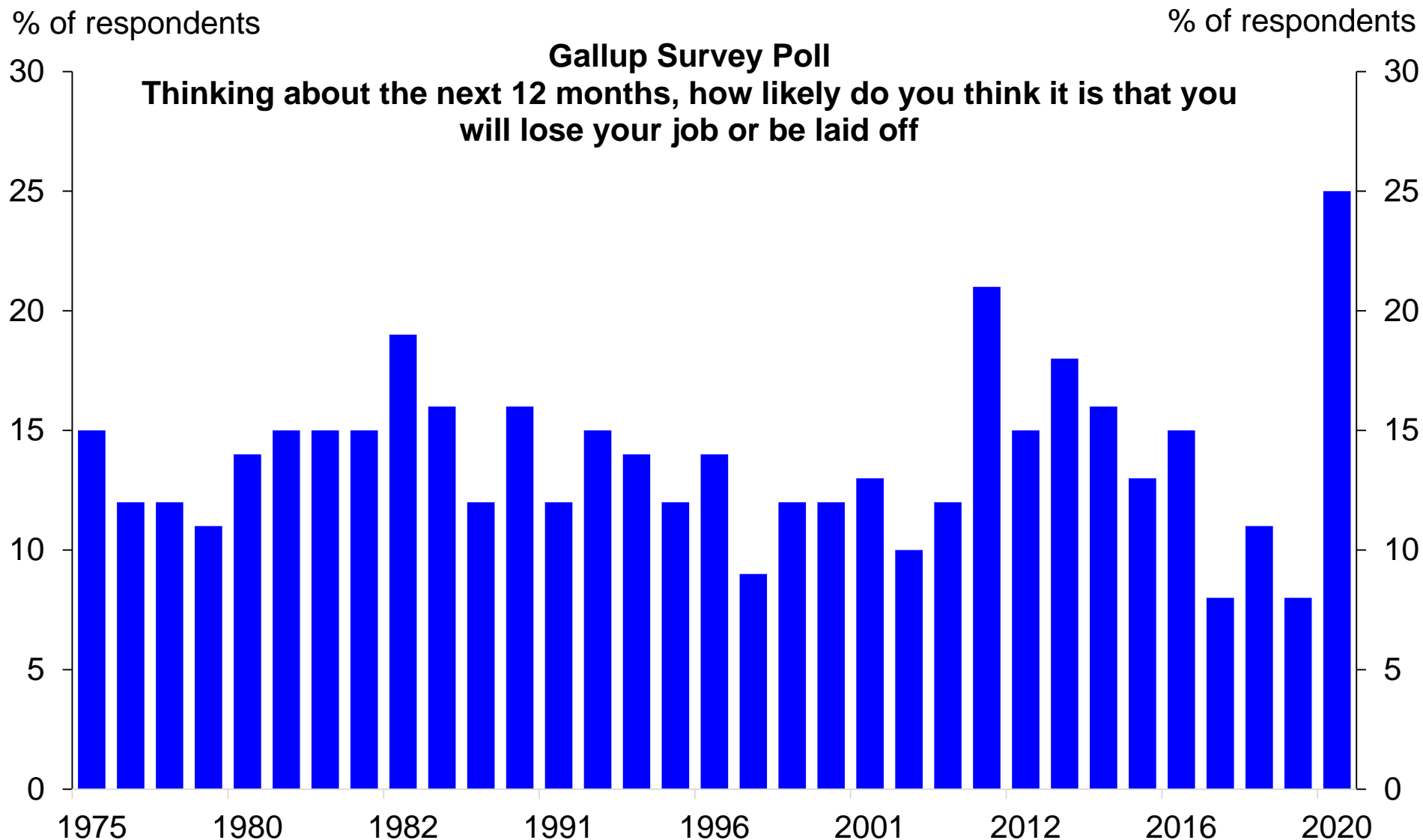
## Decline in job postings, Feb 01-Apr 10 2020 vs. 2019



Source: Indeed, DB Global Research



# Record high fears of losing your job



Note : Based on U.S. adults employed full or part time

Source: Gallup Survey, DB Global Research

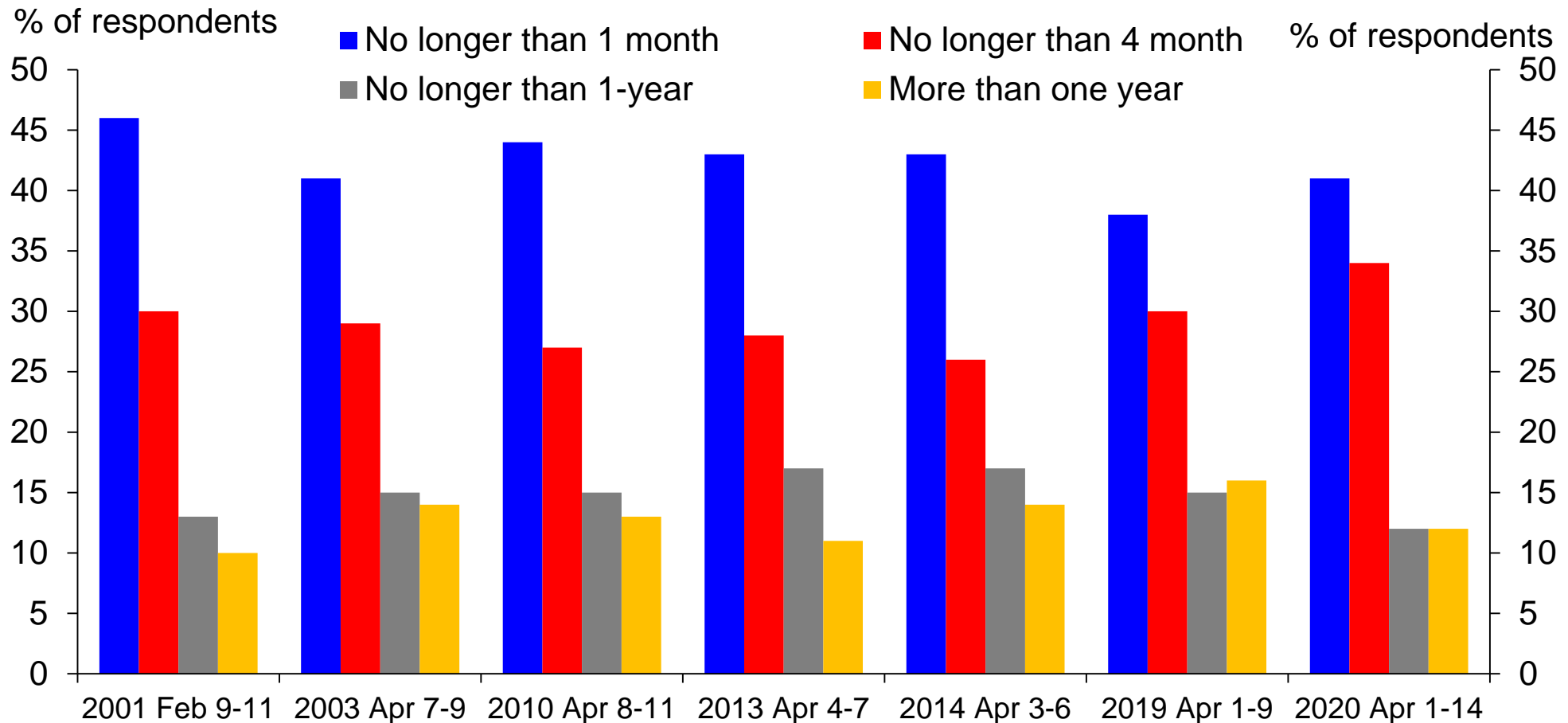


# How long time could you go without a job before experiencing significant financial hardship



## Gallup Survey

**If you were to lose your job, how long could you go without a job before experiencing significant financial hardship – up to one week, up to one month, up to four months, up to one year, (or) more than one year?**



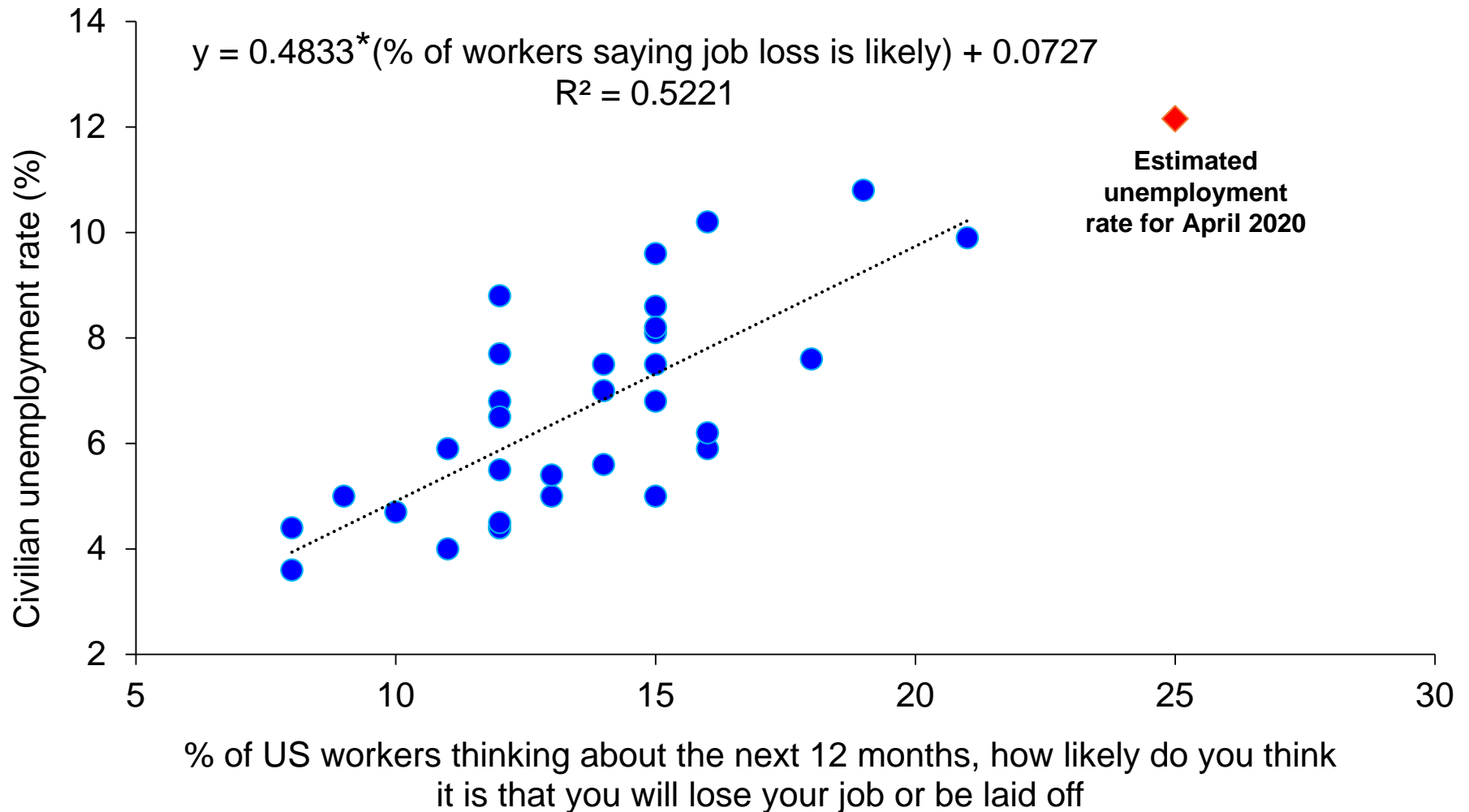
Note : Based on U.S. adults employed full or part time

Source: Gallup Survey, DB Global Research



# Fears of job losses correlated with unemployment rate

## Gallup Survey : U.S. Workers Saying Job Loss Is Likely Vs Civilian Unemployment rate, 1975-2020



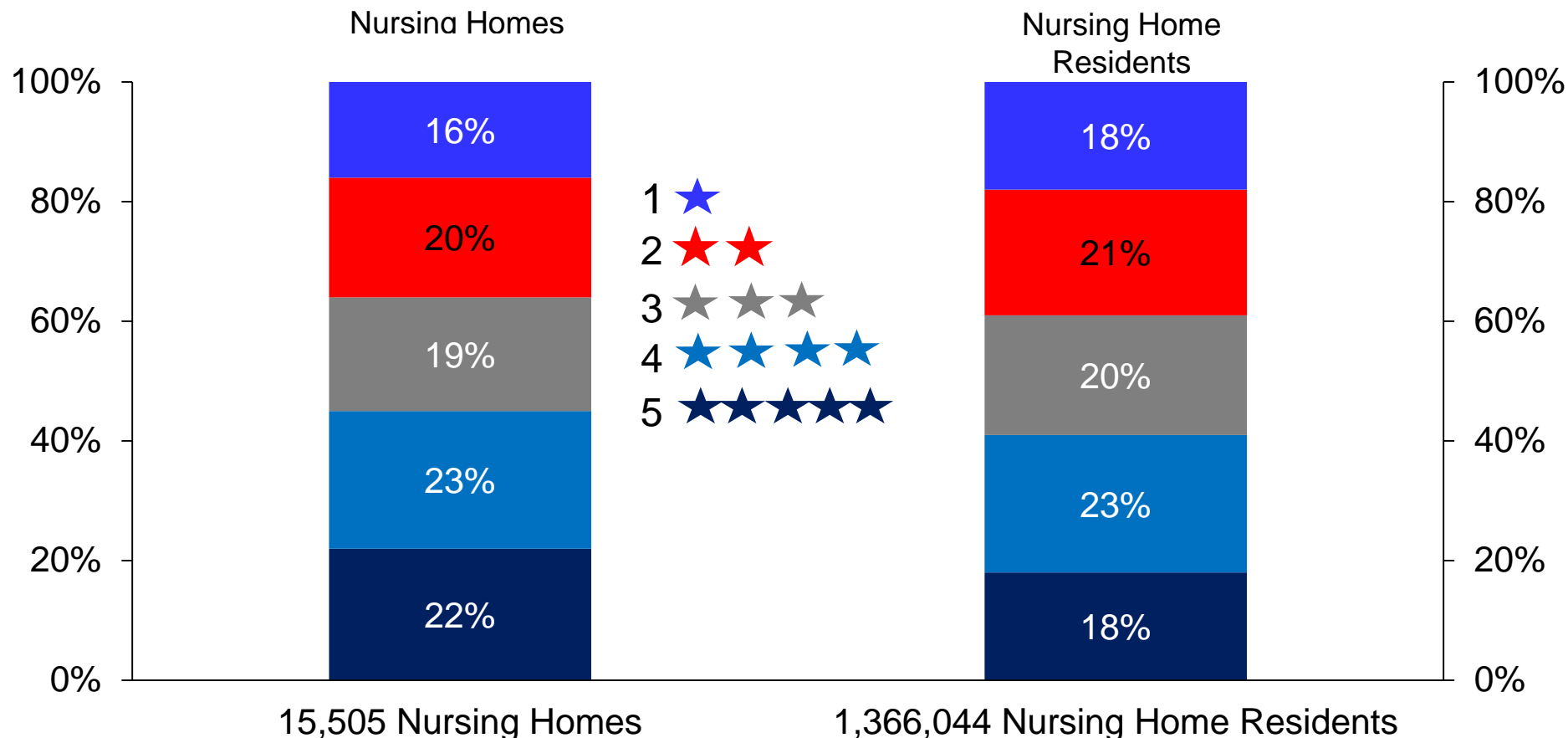
Note : Based on U.S. adults employed full or part time

Source: Gallup Survey, BLS, Haver Analytics, DB Global Research

# More than one-third of all US nursing homes have overall ratings of 1 or 2 stars, accounting for 39% of all nursing home residents



## US Nursing homes by Star Ratings



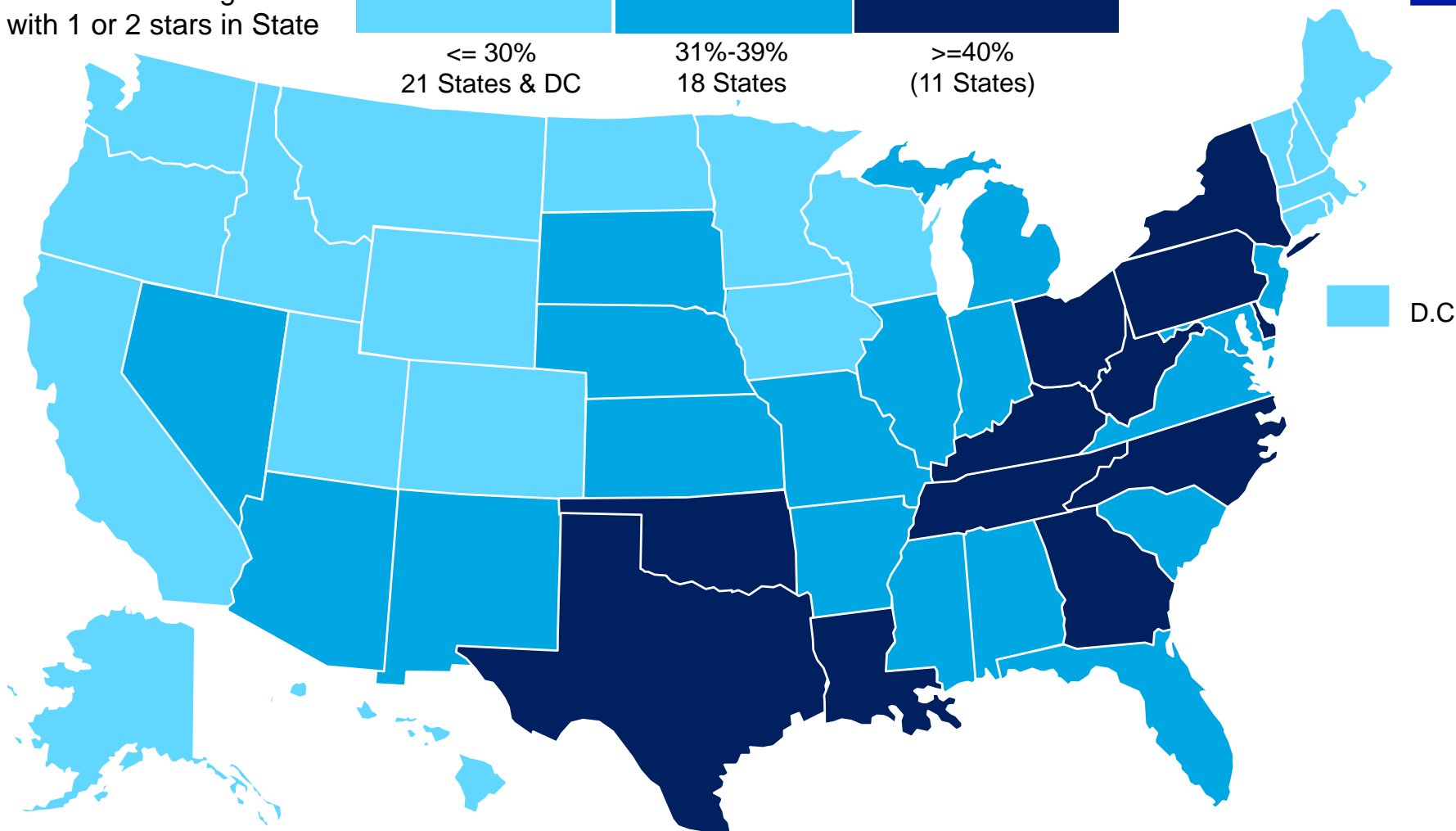
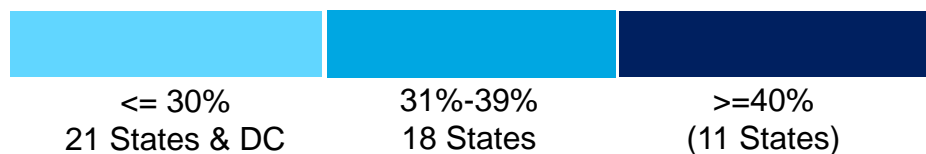
Note: CMS Five-Star Quality Rating System gives each nursing home a rating of between 1 and 5 stars. Nursing homes with 5 stars are considered to have much above average quality and nursing homes with 1 star are considered to have quality much below average. There is one Overall 5-star rating for each nursing home, based on the following three sources of information: (i) Health Inspections (ii) Staffing (iii) Quality Measures (QMs). These 3 parameters are important to measure the quality of a nursing homes. This information, combined in the star rating, gives a "snapshot" of the quality of each nursing home. Analysis is based on the overall composite star rating and includes only nursing homes certified by either Medicare or Medicaid and excludes nursing homes with unavailable star ratings.

Source: Kaiser Family Foundation analysis of Nursing Home Compare data, February 2015, DB Global Research

# Percentage of Nursing Homes with 1 or 2 Stars, by state



Percent of Nursing homes  
with 1 or 2 stars in State



Note: CMS Five-Star Quality Rating System gives each nursing home a rating of between 1 and 5 stars. Nursing homes with 5 stars are considered to have much above average quality and nursing homes with 1 star are considered to have quality much below average. There is one Overall 5-star rating for each nursing home, based on the following three sources of information: (i) Health Inspections (ii) Staffing (iii) Quality Measures (QMs). These 3 parameters are important to measure the quality of a nursing homes. This information, combined in the star rating, gives a "snapshot" of the quality of each nursing home. Analysis is based on the overall composite star rating and includes only nursing homes certified by either Medicare or Medicaid and excludes nursing homes with unavailable star ratings.

Source: Kaiser Family Foundation analysis of Nursing Home Compare data, February 2015, 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

## Important Disclosures

### \*Other Information Available upon Request

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Macroeconomic fluctuations often account for most of the risks associated with exposures to instruments that promise to pay fixed or variable interest rates. For an investor who is long fixed-rate instruments (thus receiving these cash flows), increases in interest rates naturally lift the discount factors applied to the expected cash flows and thus cause a loss. The longer the maturity of a certain cash flow and the higher the move in the discount factor, the higher will be the loss. Upside surprises in inflation, fiscal funding needs, and FX depreciation rates are among the most common adverse macroeconomic shocks to receivers. But counterparty exposure, issuer creditworthiness, client segmentation, regulation (including changes in assets holding limits for different types of investors), changes in tax policies, currency convertibility (which may constrain currency conversion, repatriation of profits and/or liquidation of positions), and settlement issues related to local clearing houses are also important risk factors. The sensitivity of fixed-income instruments to macroeconomic shocks may be mitigated by indexing the contracted cash flows to inflation, to FX depreciation, or to specified interest rates – these are common in emerging markets. The index fixings may – by construction – lag or mis-measure the actual move in the underlying variables they are intended to track. The choice of the proper fixing (or metric) is particularly important in swaps markets, where floating coupon rates (i.e., coupons indexed to a typically short-dated interest rate reference index) are exchanged for fixed coupons. Funding in a currency that differs from the currency in which coupons are denominated carries FX risk. Options on swaps (swaptions) the risks typical to options in addition to the risks related to rates movements.

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