

# Global Macro Outlook: Virus curve flattening, markets stabilizing, slow recovery



June 2020

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

Distributed on: 30/06/2020 13:10:16 GMT

DISCLOSURES AND ANALYST CERTIFICATIONS ARE LOCATED IN APPENDIX 1. MCI (P) 064/04/2020.

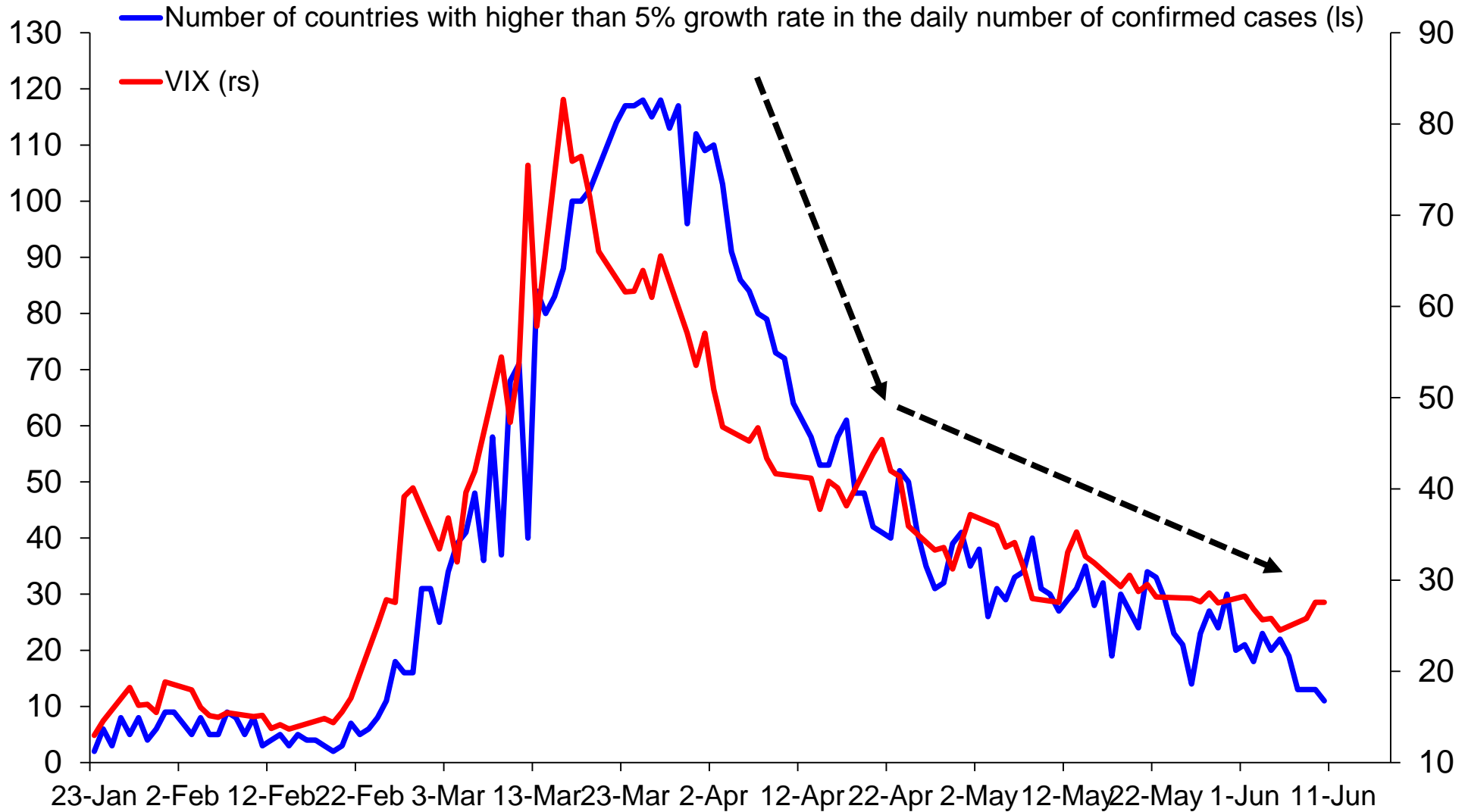
# Virus peaked two months ago and market stress is going away but speed of progress is slowing



# of countries

## Growth in new COVID-19 cases and VIX

Index



Source: JHU, Bloomberg Finance LP, DB Global Research

# Outline



1. COVID-19: Virus curve flattening
2. COVID-19: Financial markets stabilizing
3. COVID-19: The swoosh-shaped economic recovery
4. Higher risk of deflation than inflation
5. Energy prices
6. The US fiscal expansion and long rates
7. 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

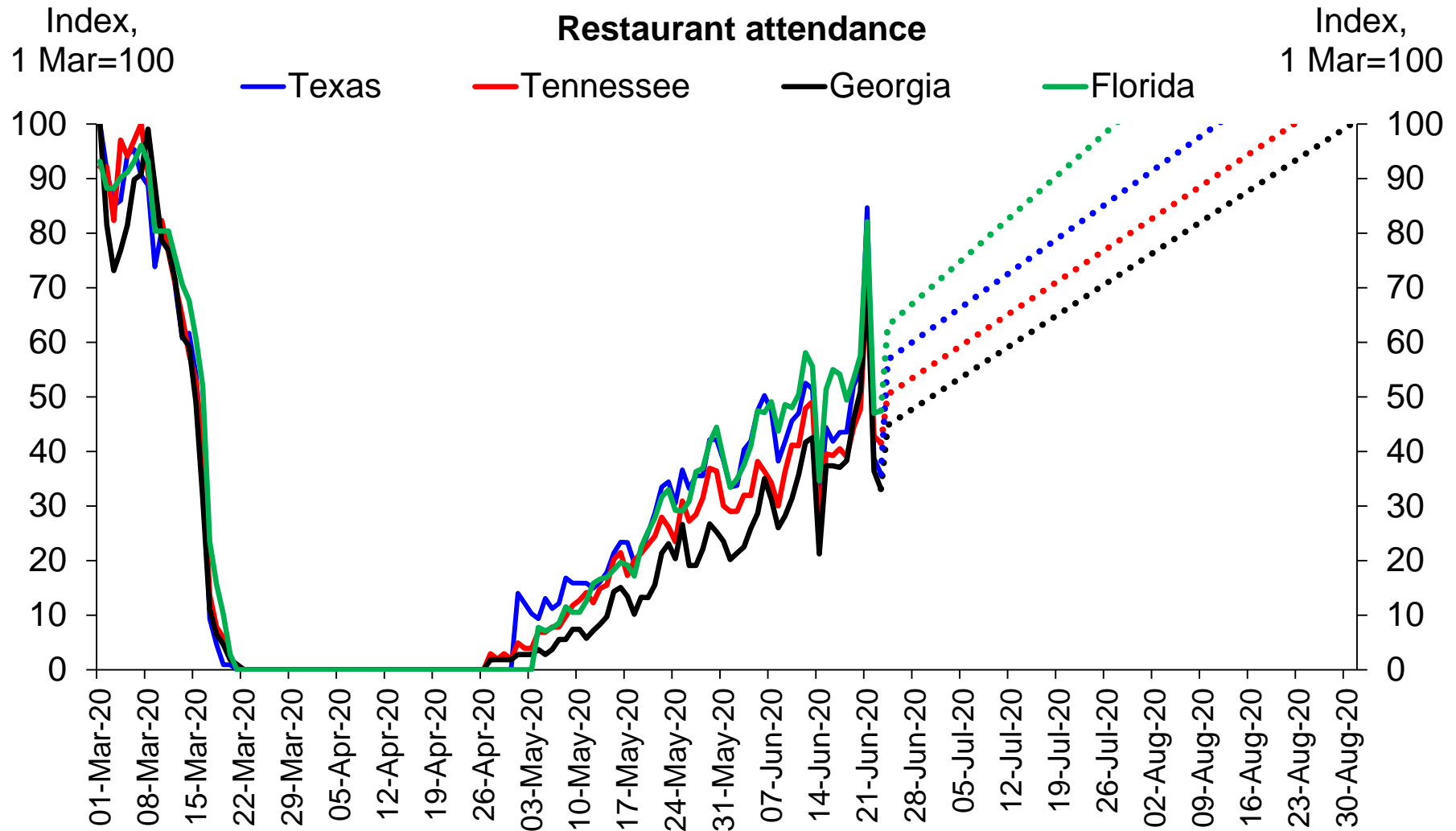
- Less business travel globally, more video conferencing
- Staggered work schedules, more distance between seats in offices, fewer cubicles
- More permanent work from home solutions, more disaster planning
- Fewer buybacks, lower dividend payouts
- Health insurance costs going up, higher insurance premiums
- 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



# Will restaurants be back to normal by September?



Note: Dotted lines are linear trend regressed on time from April 27.

Source: OpenTable State of the Industry, DB Global Research



# 1. COVID-19: Virus curve flattening

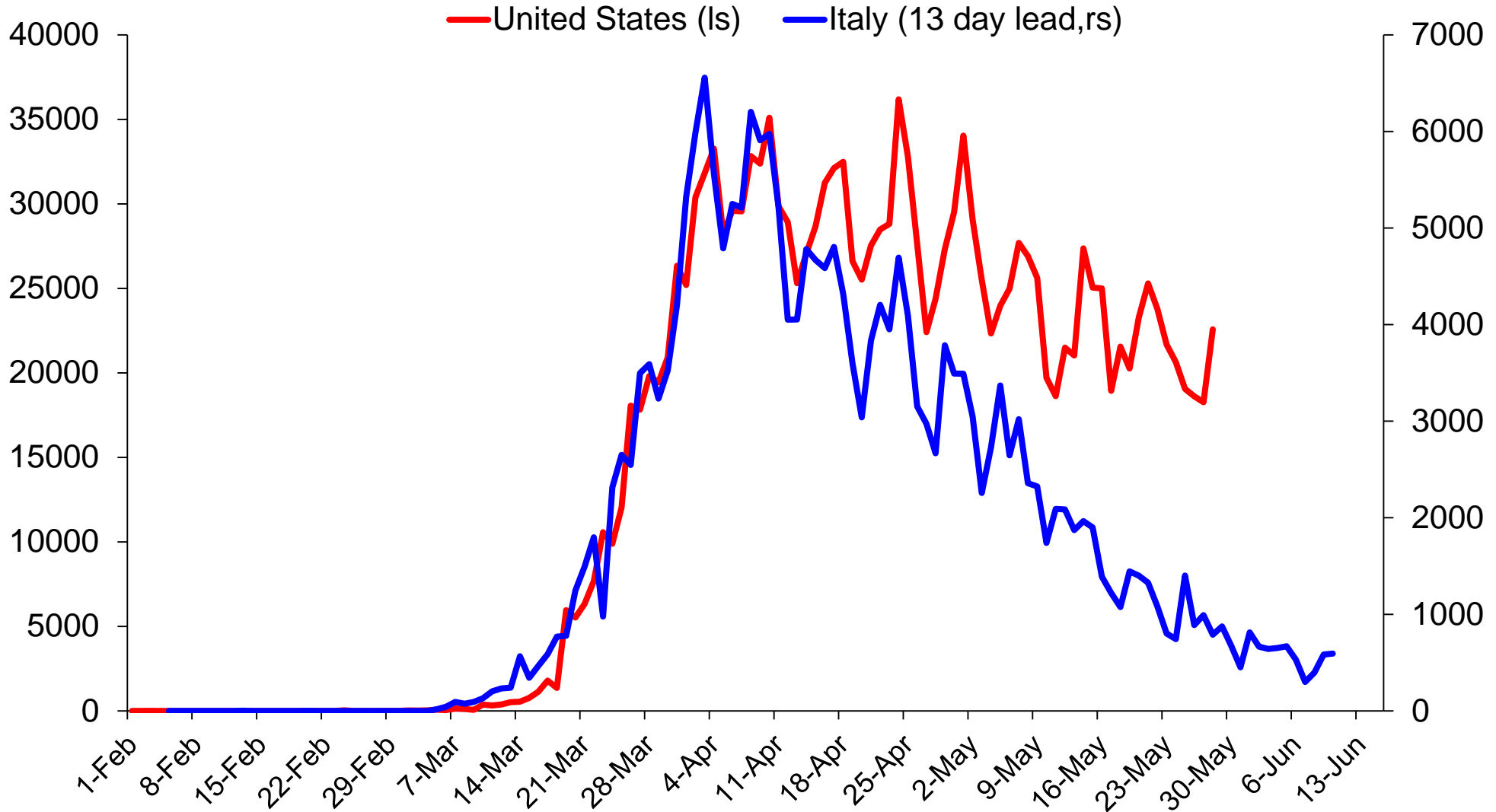
# Lack of social distancing means the US is now more than two weeks behind Italy



# of cases

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

# of cases

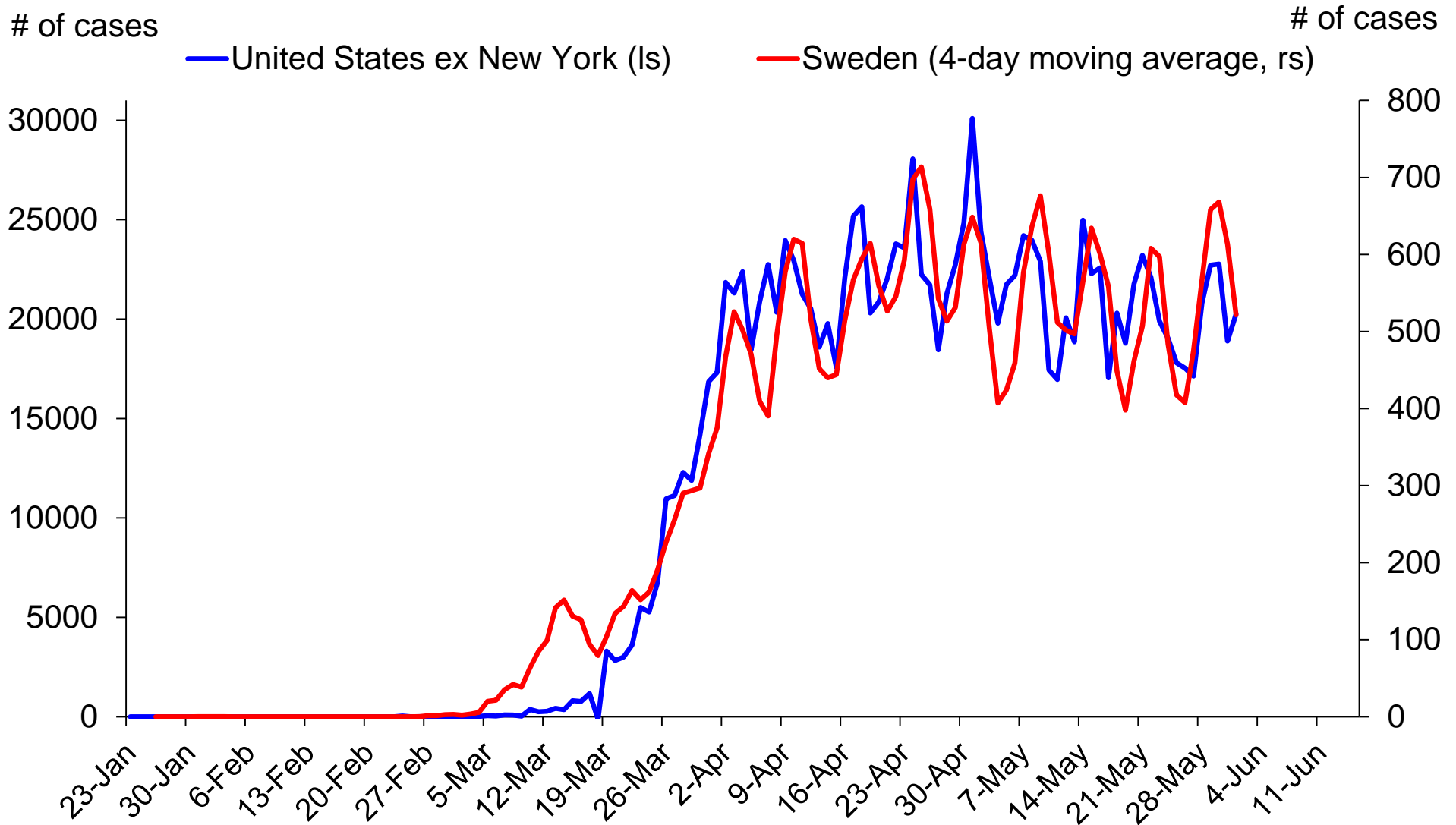


Source: JHU, WHO, DB Global Research

# Sweden never had a lockdown. US ex New York looking very similar



## New Confirmed cases of COVID-19 in United States ex New York and Sweden



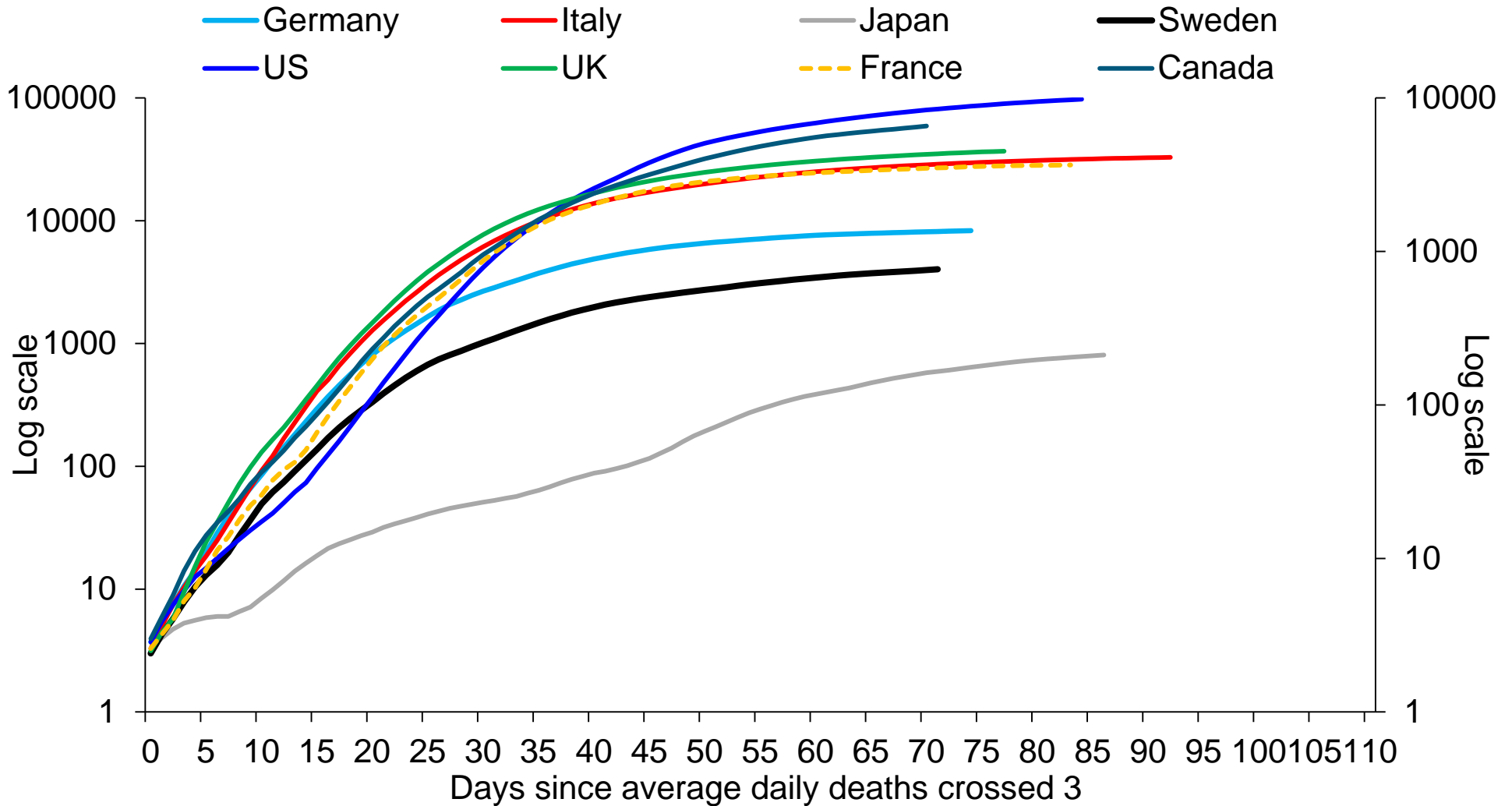
Source: JHU, DB Global Research



# Sweden kept stores and schools open and still saw a flattening out of the virus curve

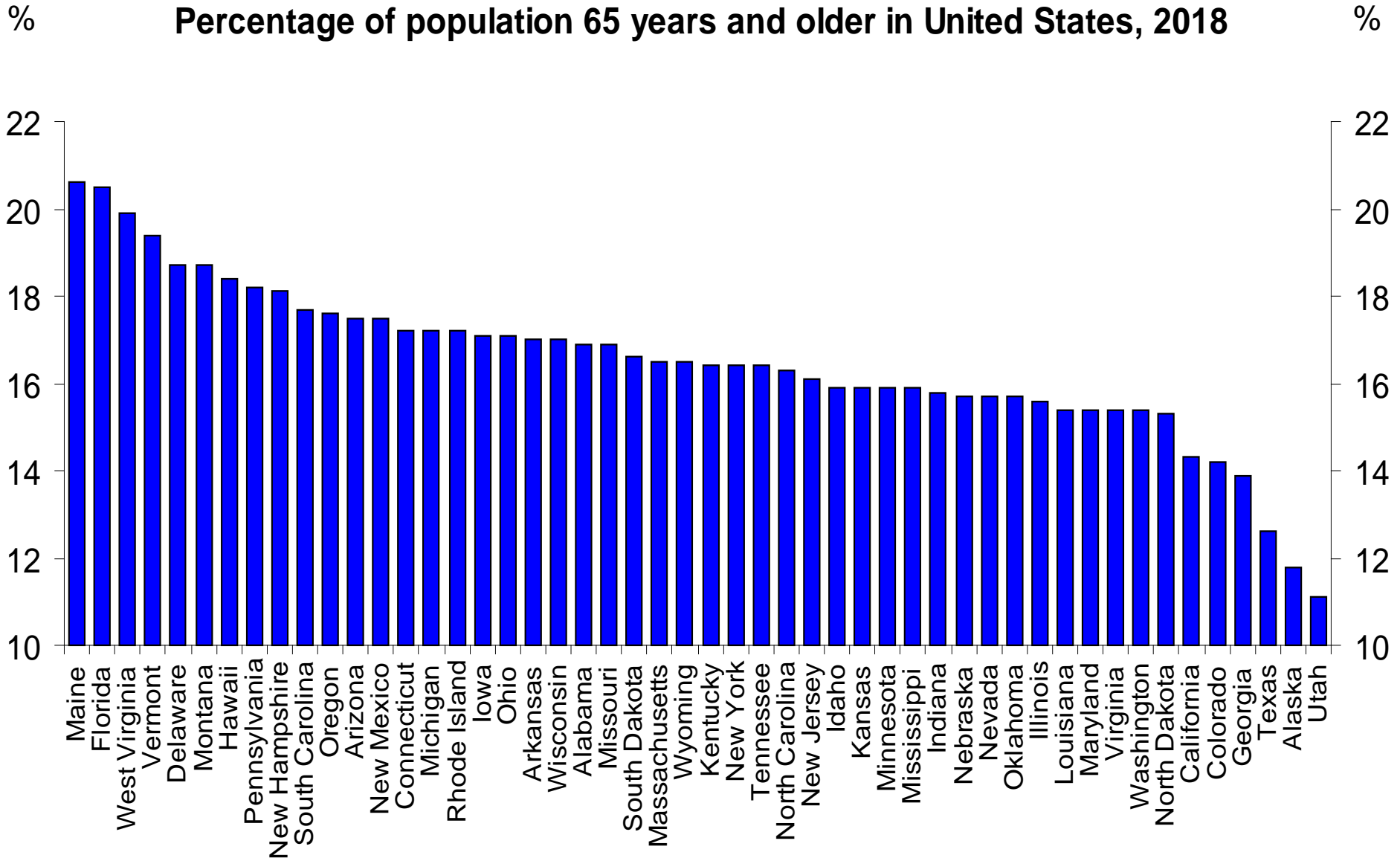


### Cumulative deaths from COVID-19 in G7 and Sweden, 7-day moving average



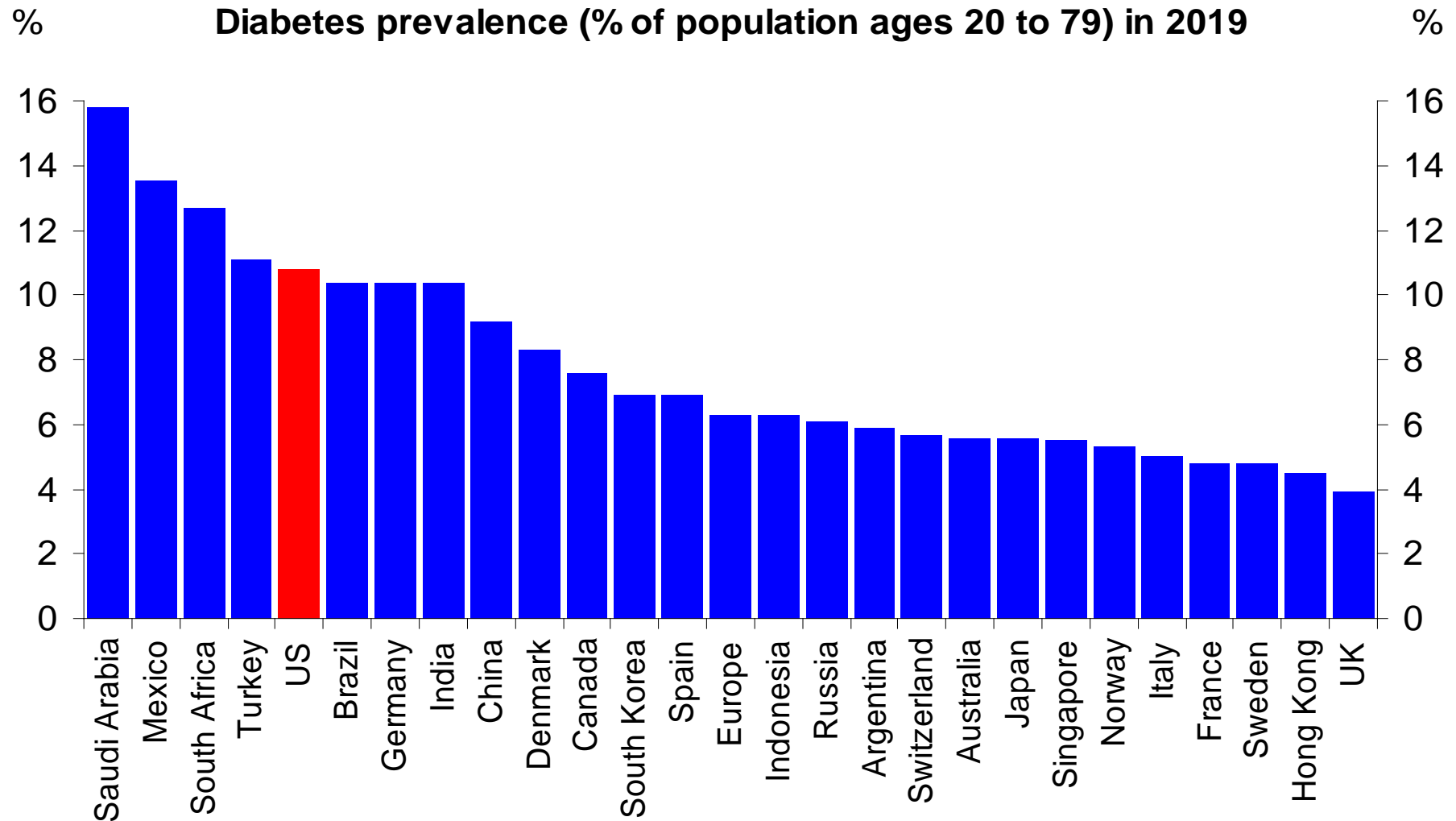
Source: JHU, DB Global Research

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



Source: US Census Bureau, 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



# 2. COVID-19: Financial markets stabilizing

# Central bank responses to COVID-19 in G7 and China



	FRA	DEU	ITA	GBR	CAN	USA	JPN	CHN
<b>Monetary Policies</b>								
1. Policy rate cuts (basis points)	-	-	-	65	150	150	-	30
2. Central bank liquidity support	Y	Y	Y	Y	Y	Y	Y	Y
3. Central bank swap lines	Y	Y	Y	Y	Y	Y	Y	-
4. Central bank asset purchase schemes	Y	Y	Y	Y	Y	Y	Y	-
<b>External Policies</b>								
1. Foreign currency intervention	-	-	-	-	-	-	-	-
2. Capital flow measures	-	-	-	-	-	-	-	-
<b>Financial Policies for Banks</b>								
1. Easing of the countercyclical capital buffer	Y	Y	-	Y	-	-	-	-
2. Easing of systemic risk or domestic capital buffer	-	-	-	-	Y	-	-	-
3. Use of capital buffers	Y	Y	Y	Y	Y	Y	Y	-
4. Use of liquidity buffers	Y	Y	Y	Y	Y	Y	Y	Y
5. Adjustments to provisioning requirements	Y	Y	Y	Y	-	Y	-	Y
<b>Financial Policies for Borrowers</b>								
1. State loans or credit guarantees	Y	Y	Y	Y	Y	Y	Y	Y
2. Restructuring of loan terms or moratorium on payments	Y	-	Y	Y	Y	Y	Y	Y

Source: IMF, DB Global Research

# G3 central bank actions to support credit markets

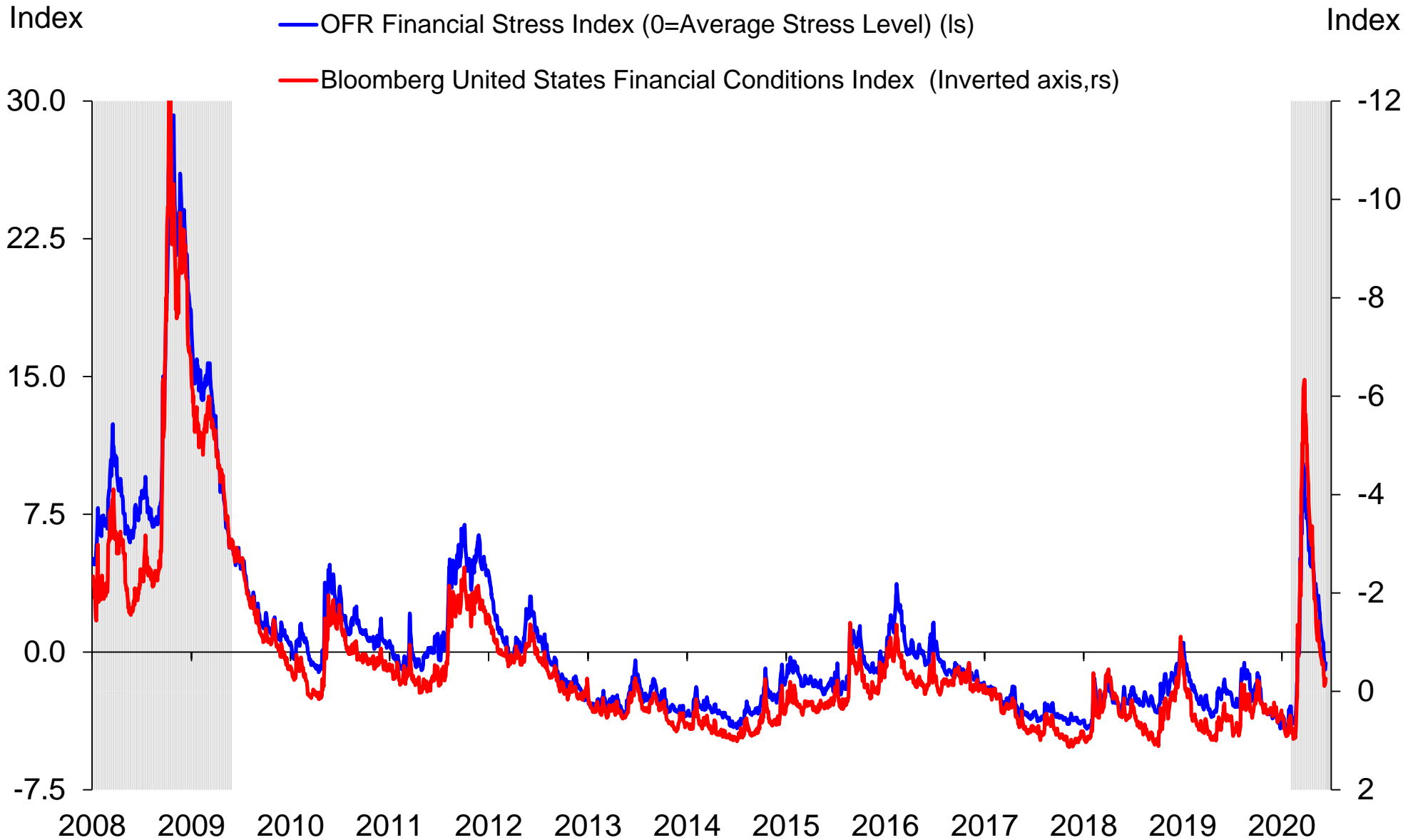


## Facilities introduced since February 2020

	Money Markets and Government Securities	Corporate Bonds	Other Markets
<b>US Federal Reserve</b>	<p><b>Primary Dealer Credit Facility</b> Provision of credit to primary dealers in exchange for a broad range of collateral for term funding with maturities up to 90 days.</p> <p><b>Commercial Paper Funding Facility</b> Purchases from eligible issuers, via a Special Purpose Vehicle (SPV), of three-month US dollar-denominated commercial paper.</p> <p><b>Money Market Mutual Fund Facility</b> Provision of liquidity to eligible money market mutual funds.</p>	<p><b>Primary Market Corporate Credit Facility</b> Purchases of investment-grade bonds and some bonds recently downgraded from investment grade from eligible issuers, via an SPV, and loans to eligible borrowers.</p> <p><b>Secondary Market Corporate Credit Facility</b> Purchases of investment-grade corporate bonds and some bonds recently downgraded from investment grade in the secondary market from eligible issuers. Purchases of investment grade exchange-traded funds (ETFs) along with the remaining funds allocated to high-yield ETF purchases.</p>	<p><b>Term Asset-Backed Securities Loan Facility</b> Loans to holders of certain AAA rated asset-backed securities, including collateralized loan obligations and commercial mortgage backed securities, based on newly and recently originated consumer and small business loans.</p> <p><b>Municipal Liquidity Facility</b> Purchases of short-term notes issued by US states, counties, and cities.</p>
<b>European Central Bank</b>	<p><b>Pandemic Emergency Purchase Program</b> Purchases of private and public sector securities, until the end of 2020, up to a total amount of EUR 750 billion. Expanded European Central Bank Asset Purchase Program, with additional EUR 120 billion in asset purchases focusing on the corporate sector. The collateral eligibility was amended to promote inclusion of corporate sector securities.</p>		
<b>BoJ</b>	<p><b>Outright purchases of commercial paper and corporate bonds</b> A temporary (until the end of September 2020) increase in holdings of corporate bonds and commercial paper, moving from reinvesting proceeds of maturing assets into making net purchases.</p> <p><b>Policy actions to enhance the liquidity and functioning of short-term funding Markets</b> The Bank of Japan announced funds-supplying operations against pooled collateral and purchases of Japanese government securities with repurchase agreements. In addition, it conducted unscheduled outright purchases of Japanese government bonds and expanded its Securities Lending Facility.</p>		<p><b>Purchase of Exchange Traded Funds and Real Estate Investment Trusts</b> A doubling in the pace of exchange traded fund (ETF) purchases.</p>

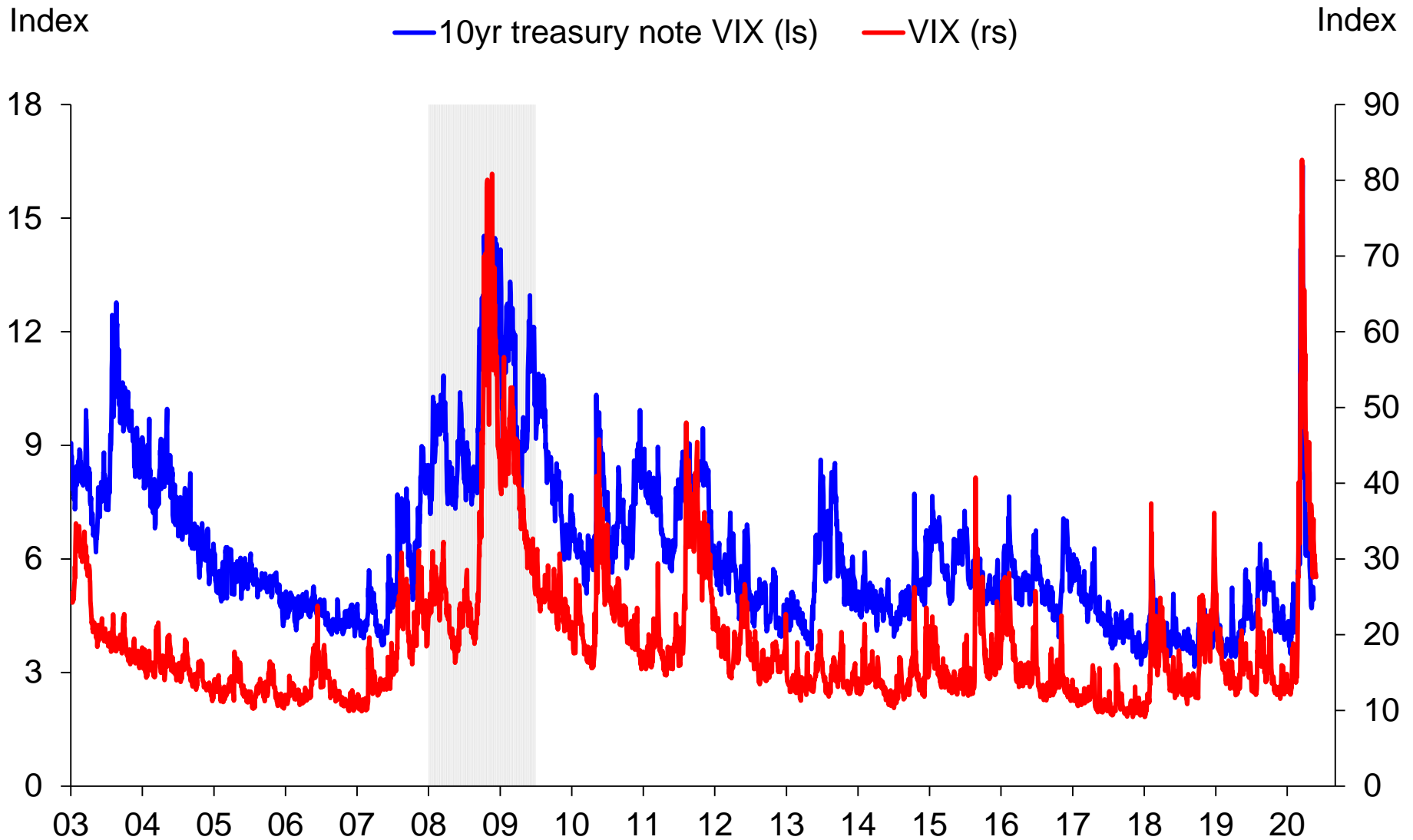
Source: IMF, DB Global Research

# US financial stress coming down from recent peak



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

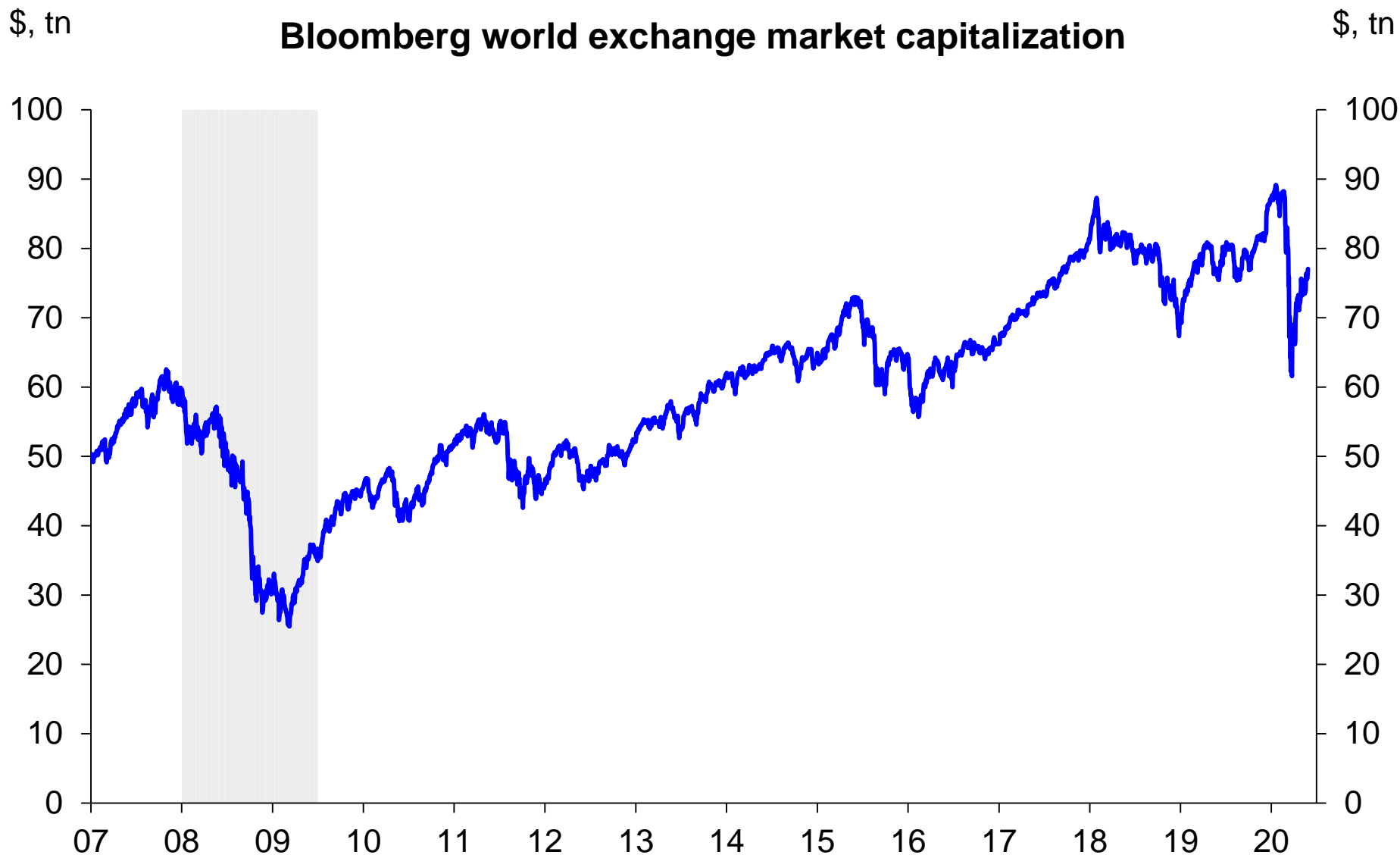
# Rates and equity vol coming down from record highs



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

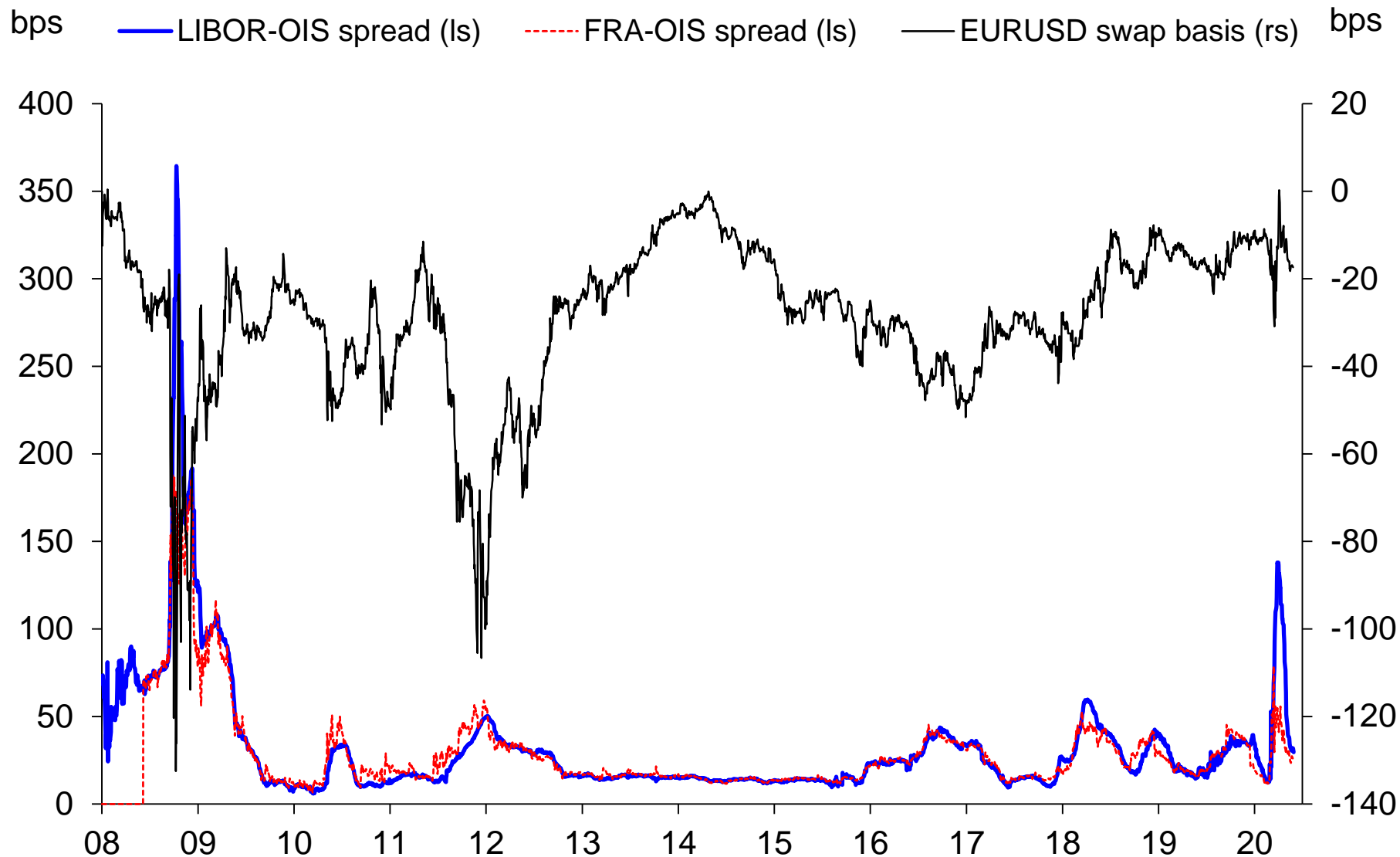


# Global stock markets coming back



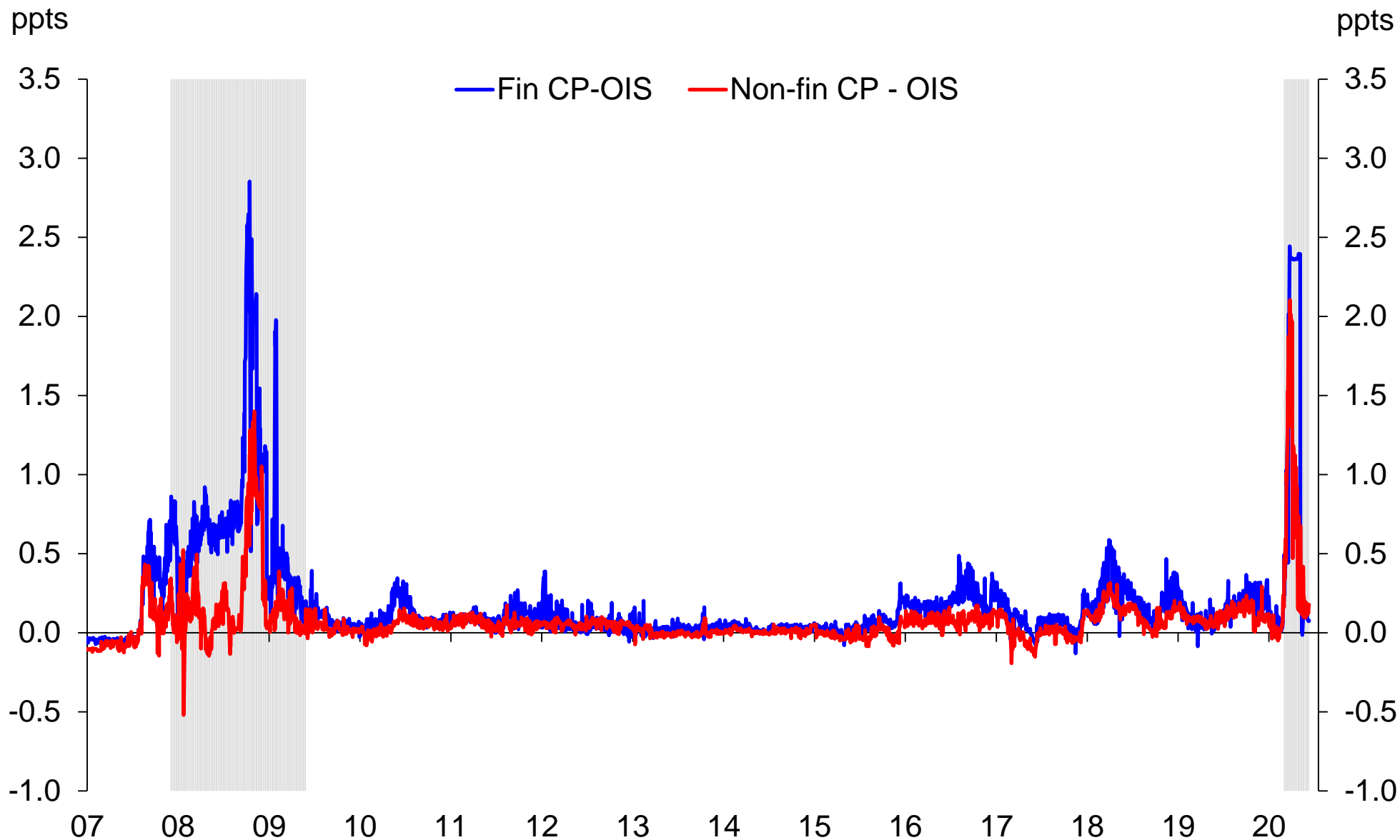
Source: Bloomberg Finance LP, DB Global Research

# Fed and ECB support easing strains in funding markets



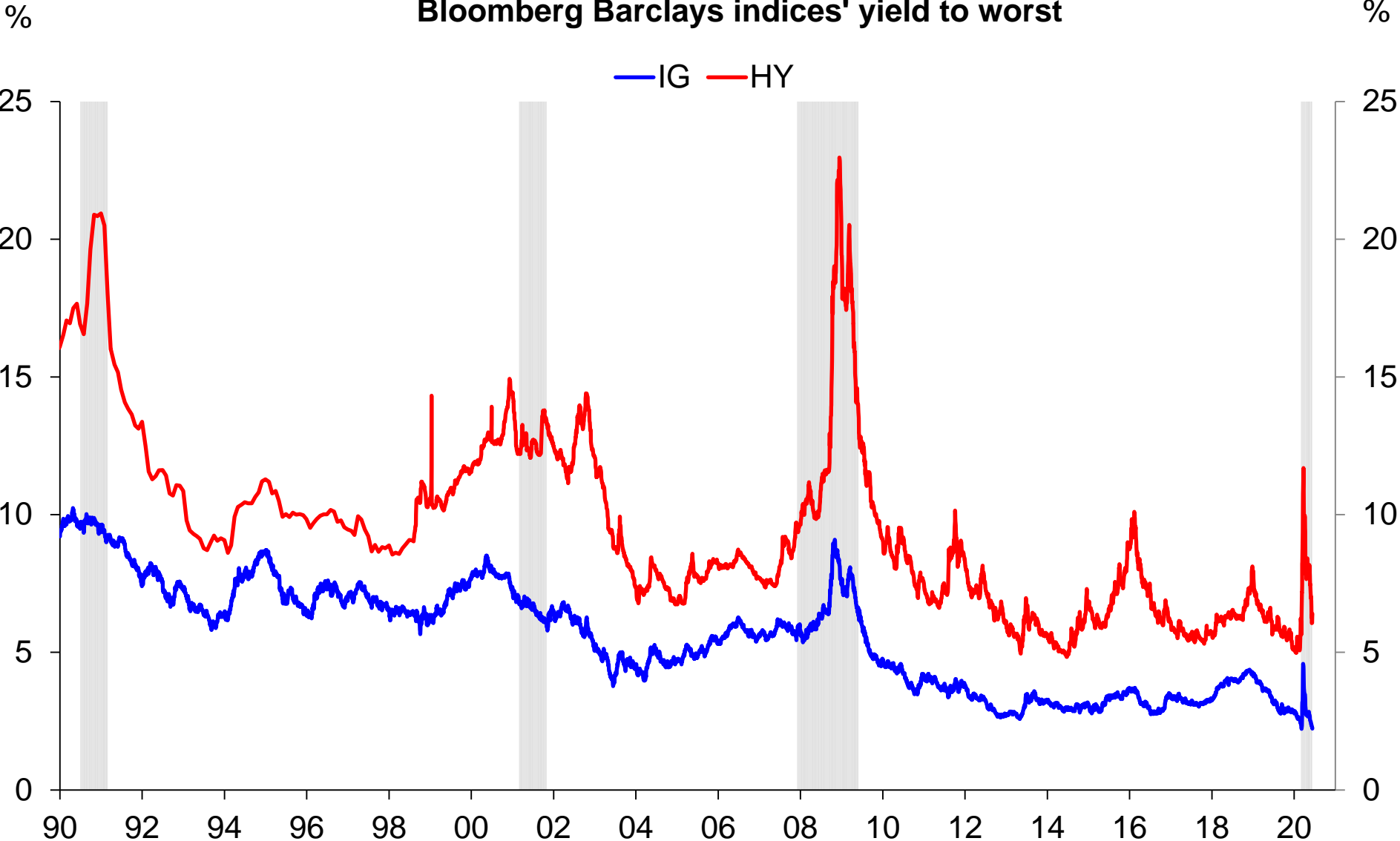
Source: Bloomberg Finance LP, DB Global Research

# CPFF helping commercial paper markets



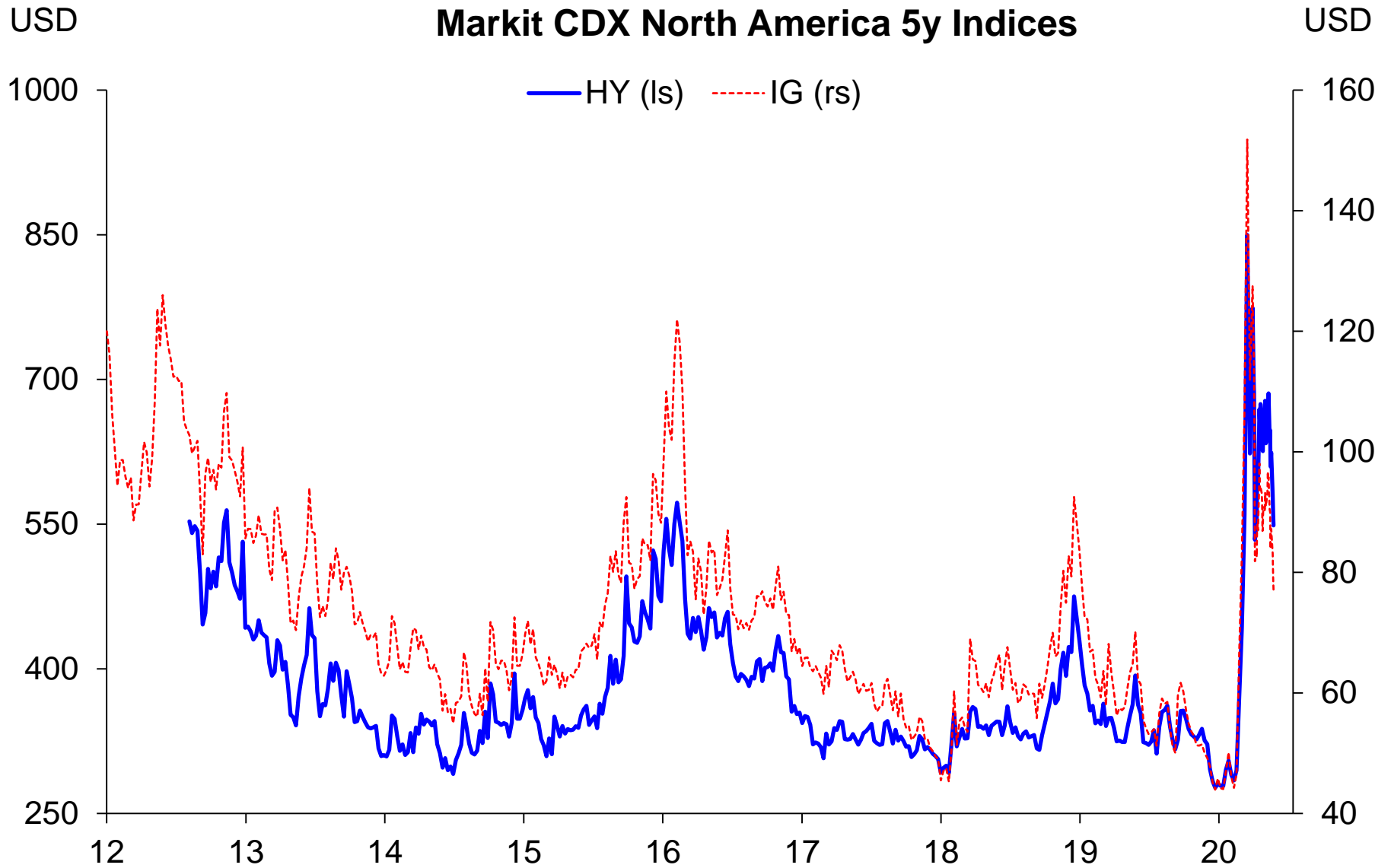
Source: Bloomberg Finance LP, DB Global Research

# Yields on IG and HY corporate bonds coming down



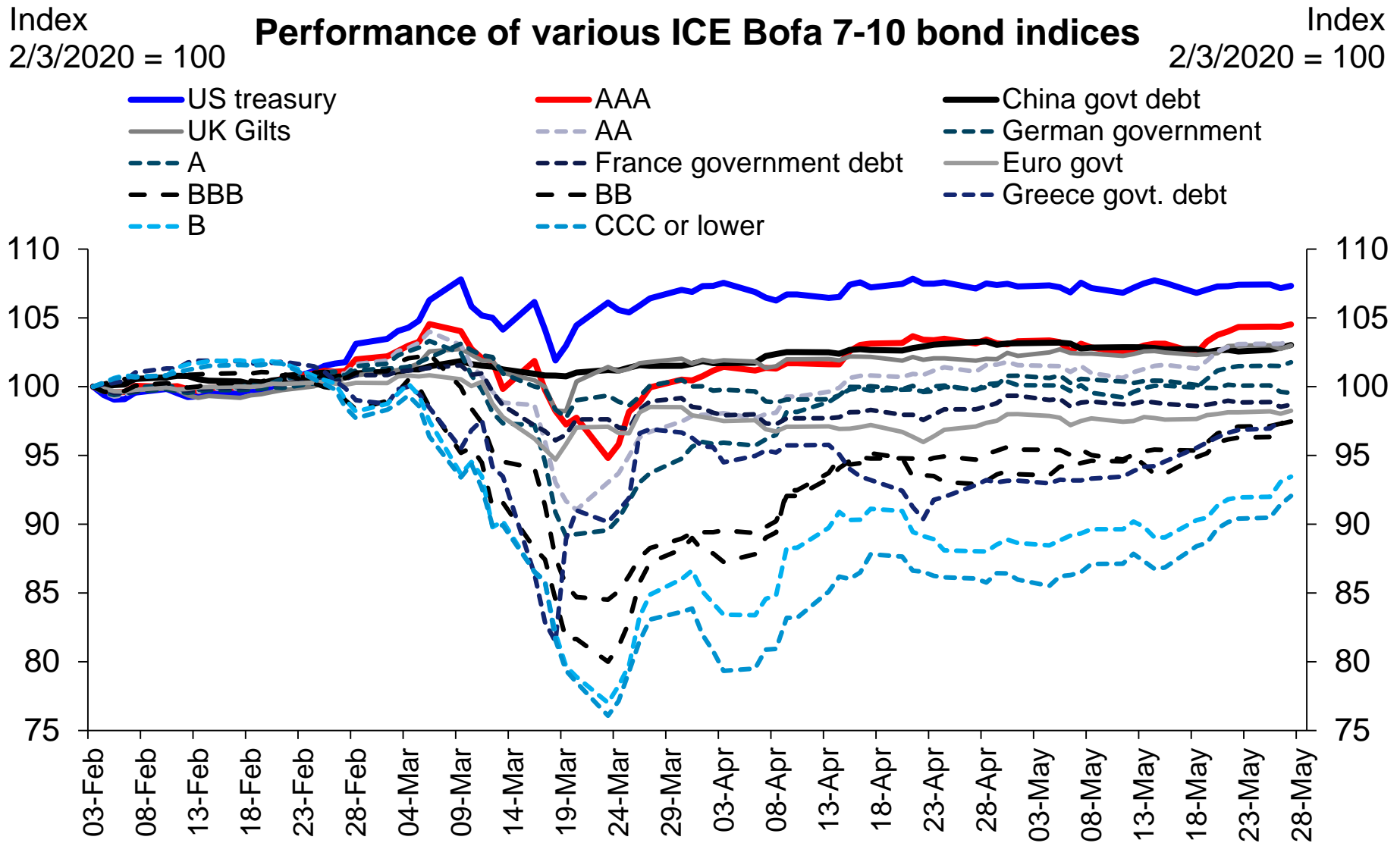
Source: Bloomberg Finance LP, DB Global Research

# IG and HY CDS coming down



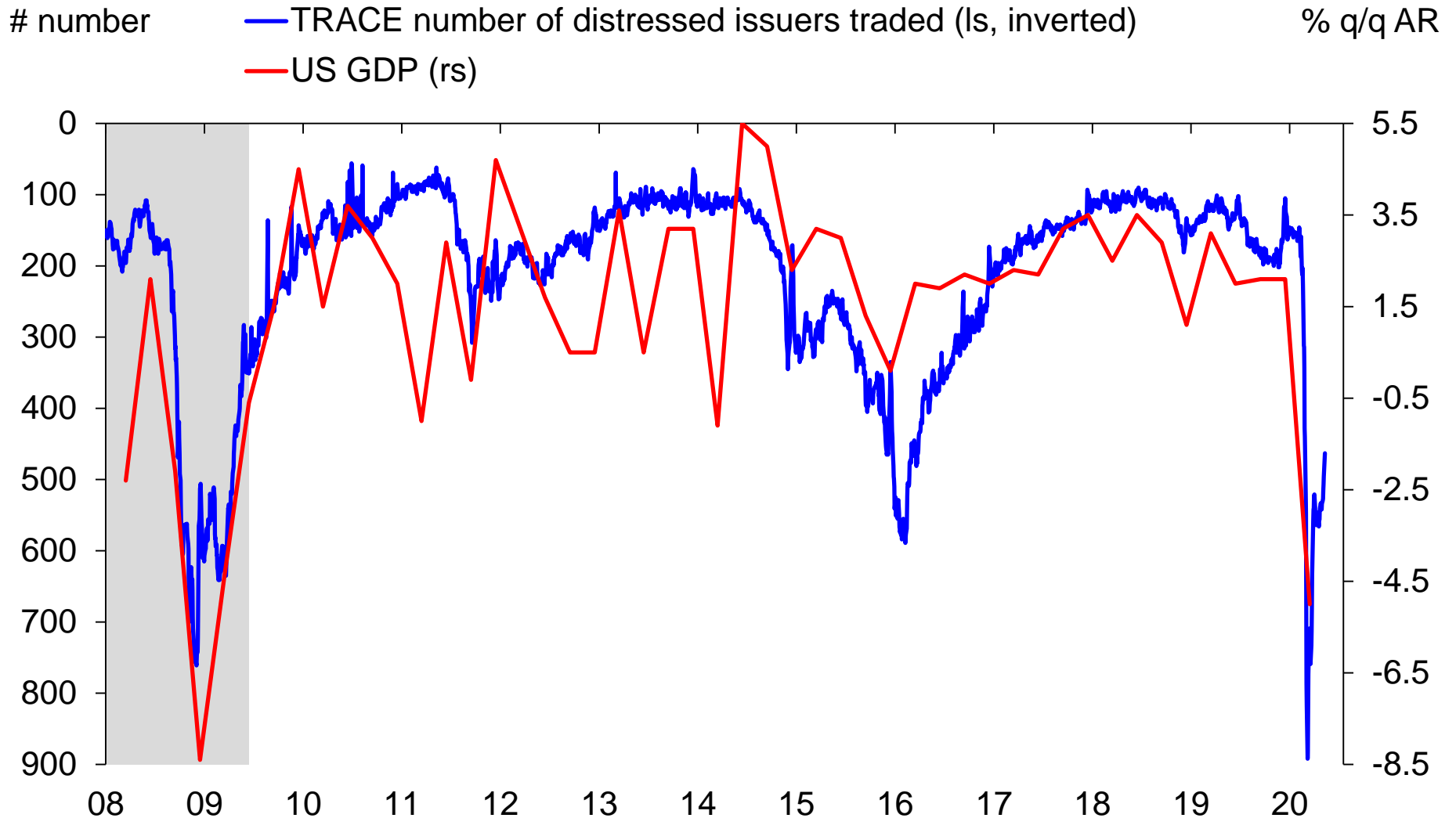
Source: Markit, Bloomberg Finance LP, DB Global Research

# Less stress in credit markets



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

# Number of distressed issuers traded



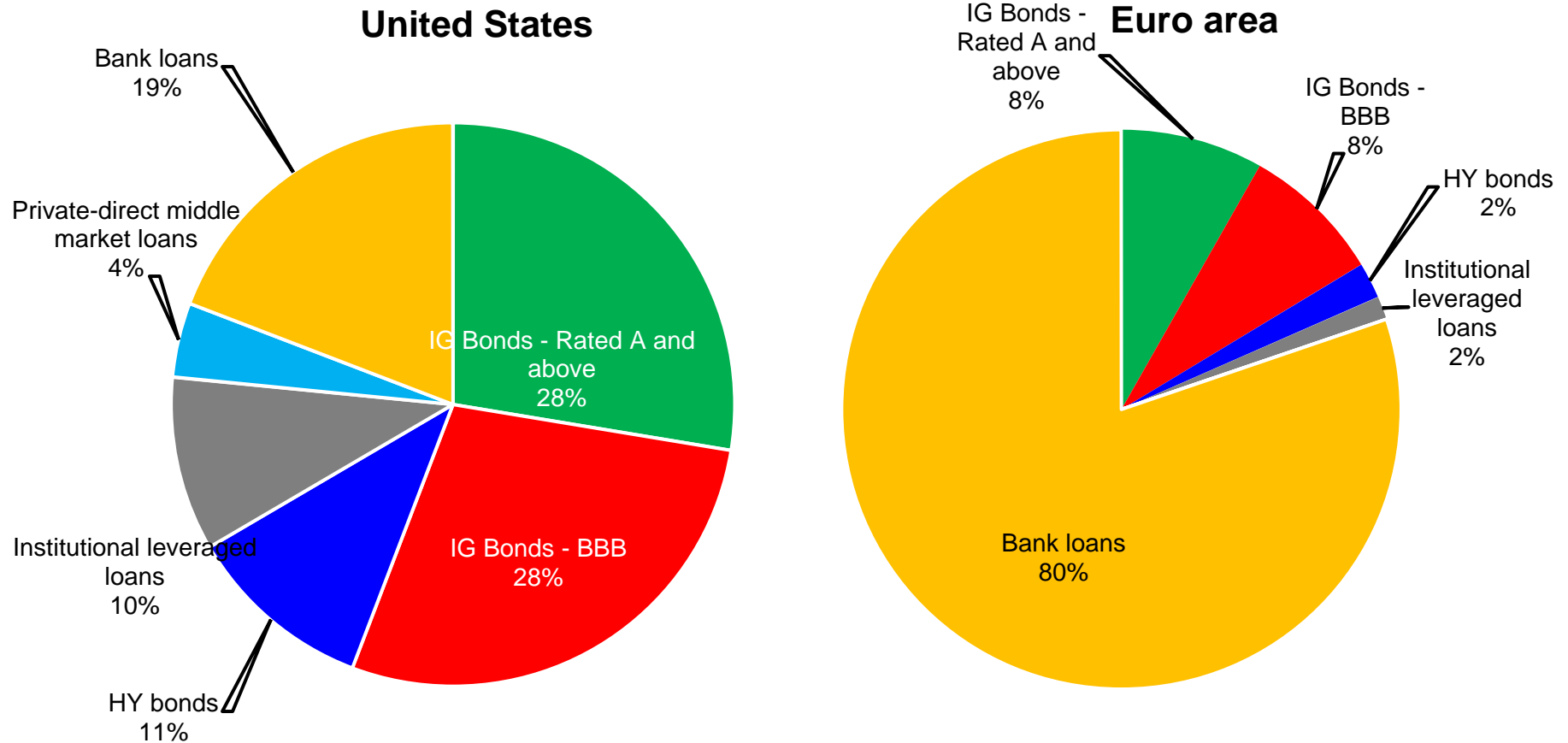
Note: Distressed bonds are bonds trading at more than 1000 basis points over the benchmark Treasury.

Source: BEA, Bloomberg Finance LP, DB Global Research

# US and European companies financed differently



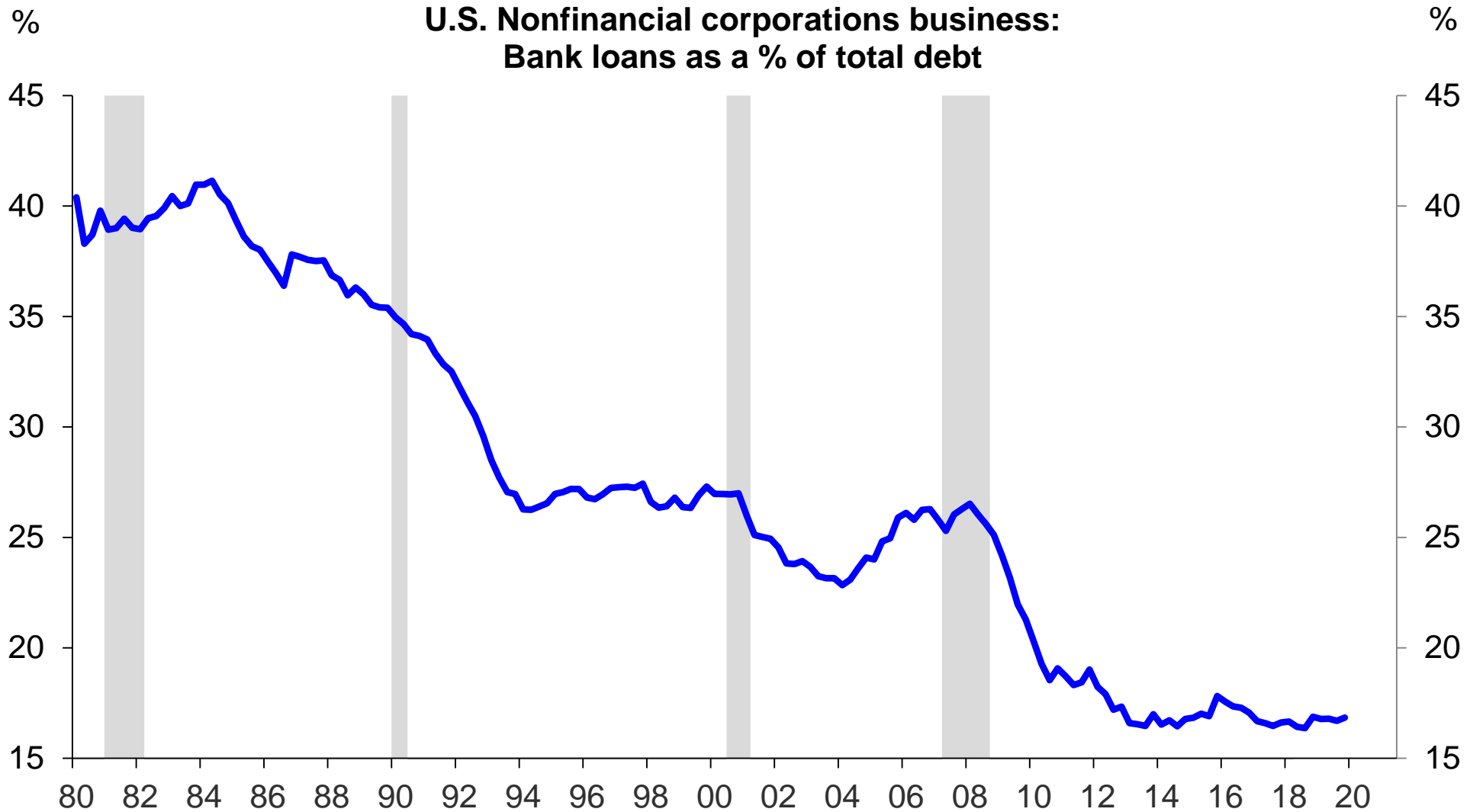
## Sources of financing for the corporate sector



Source: Bloomberg Finance LP, IMF, DB Global Research



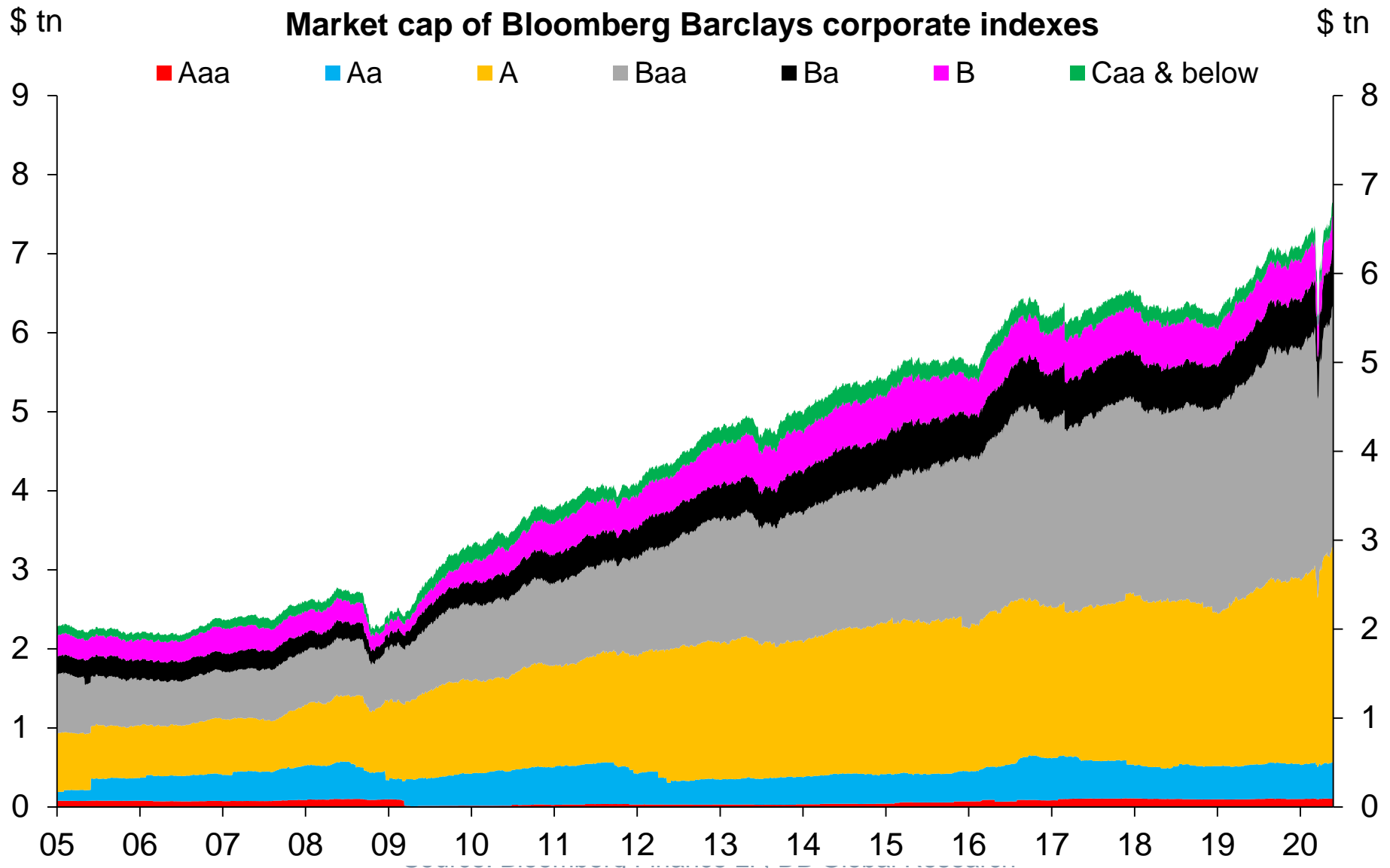
# US corporates getting financing other places than in banks



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



# Duration of IG and HY indexes

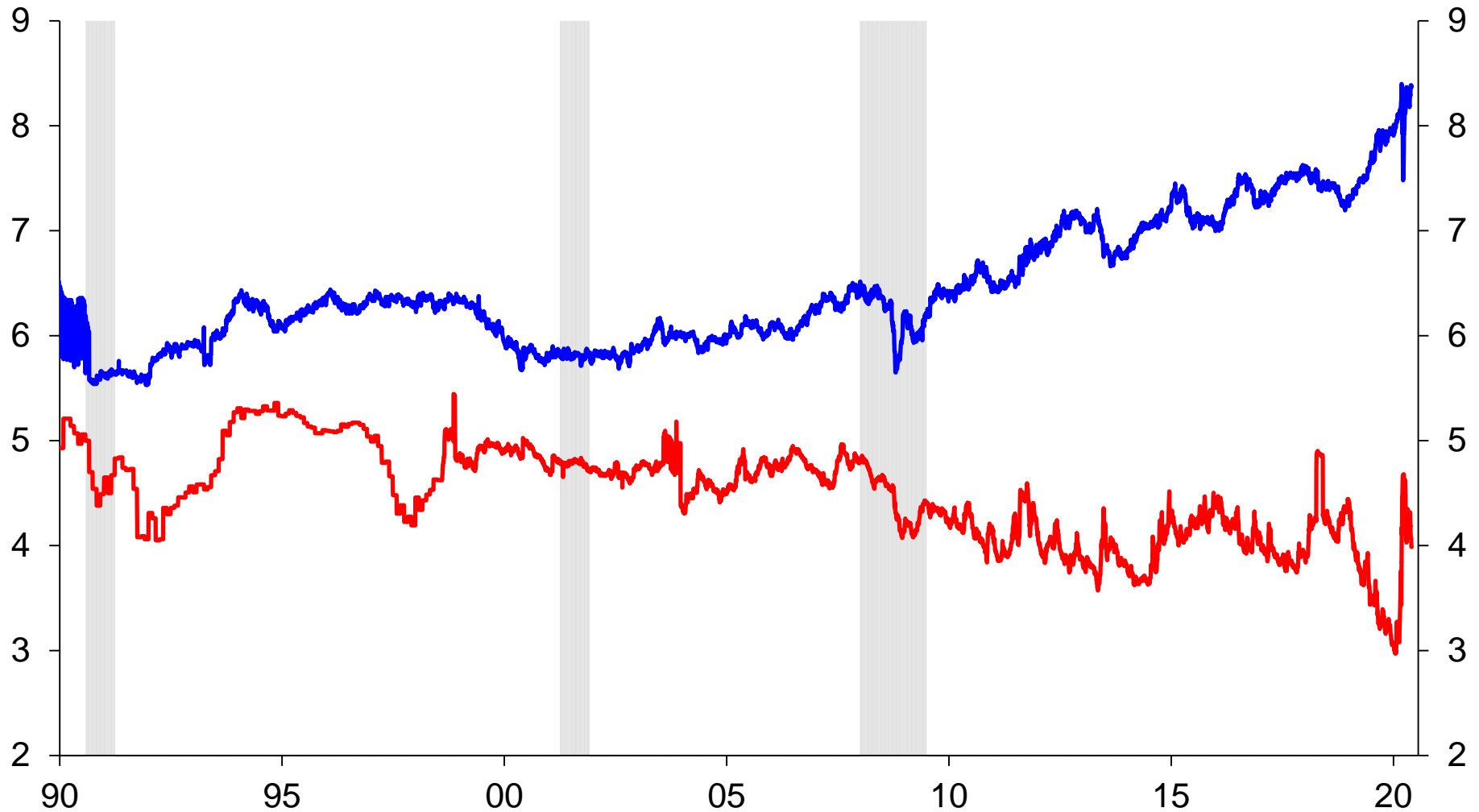


# years

## Macaulay duration of Bloomberg Barclays corporate indices

# years

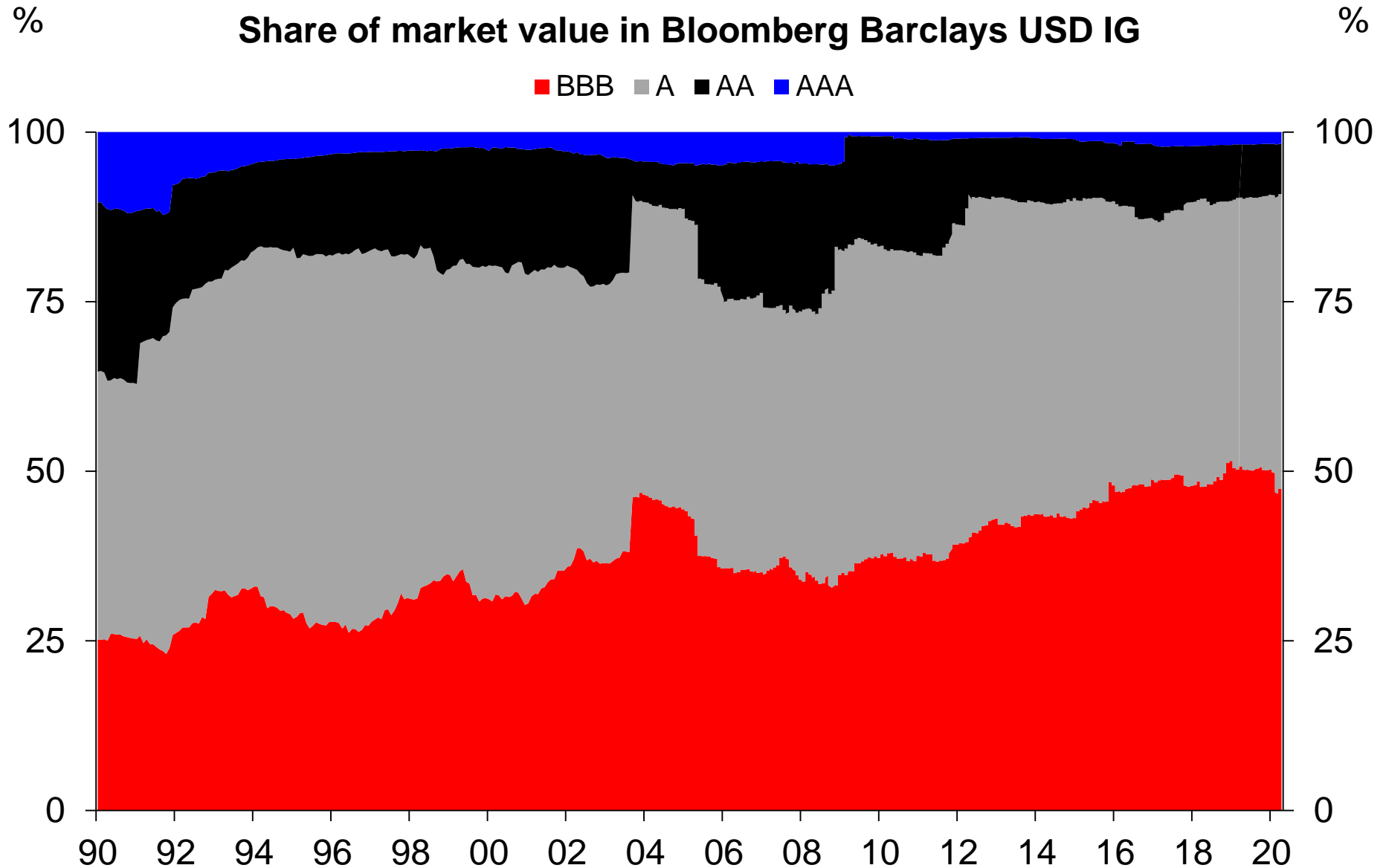
— IG — HY



Source: Bloomberg Finance LP, DB Global Research

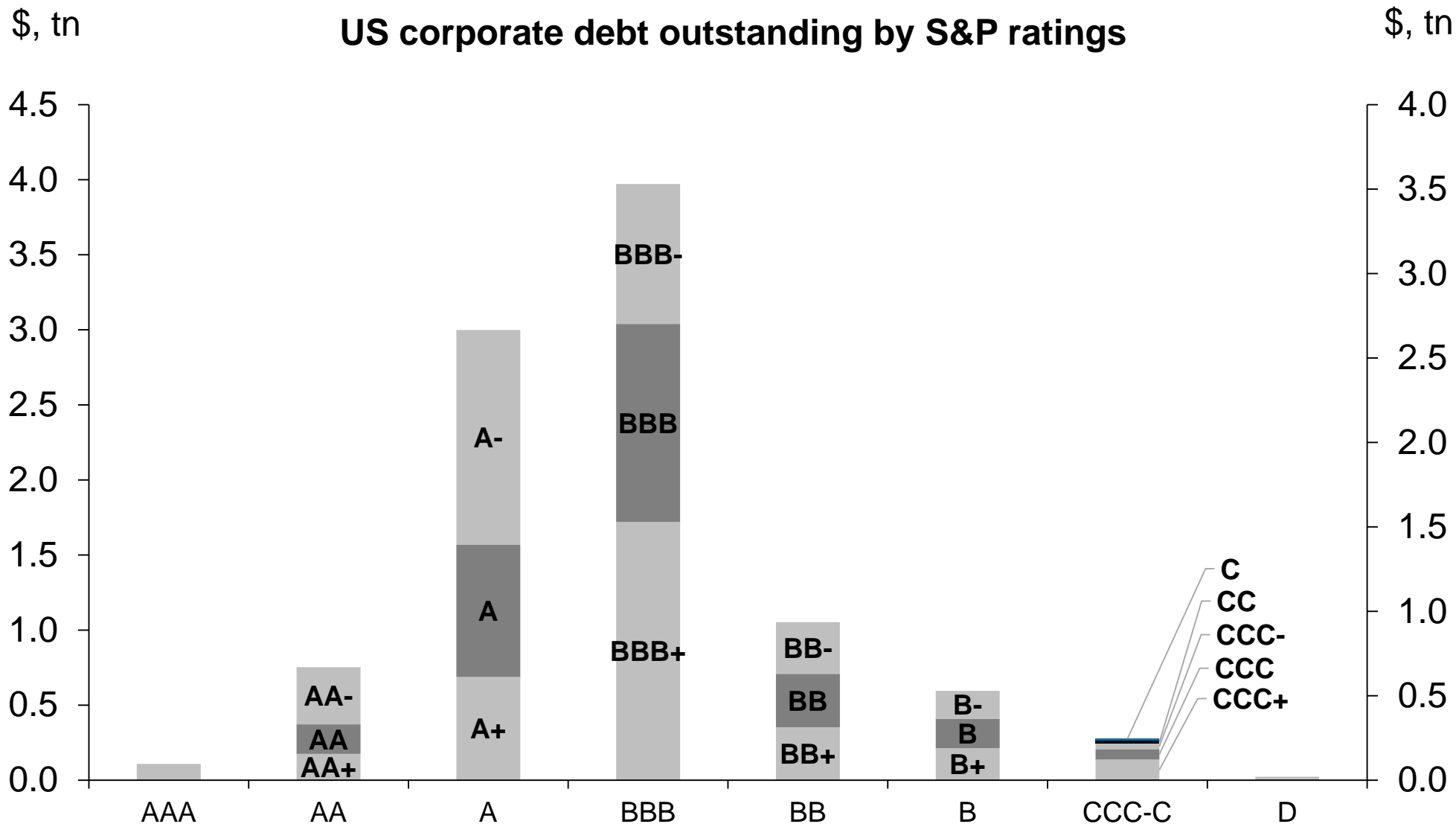


# 50% of the IG index is BBB



Source: Bloomberg Finance LP, DB Global Research

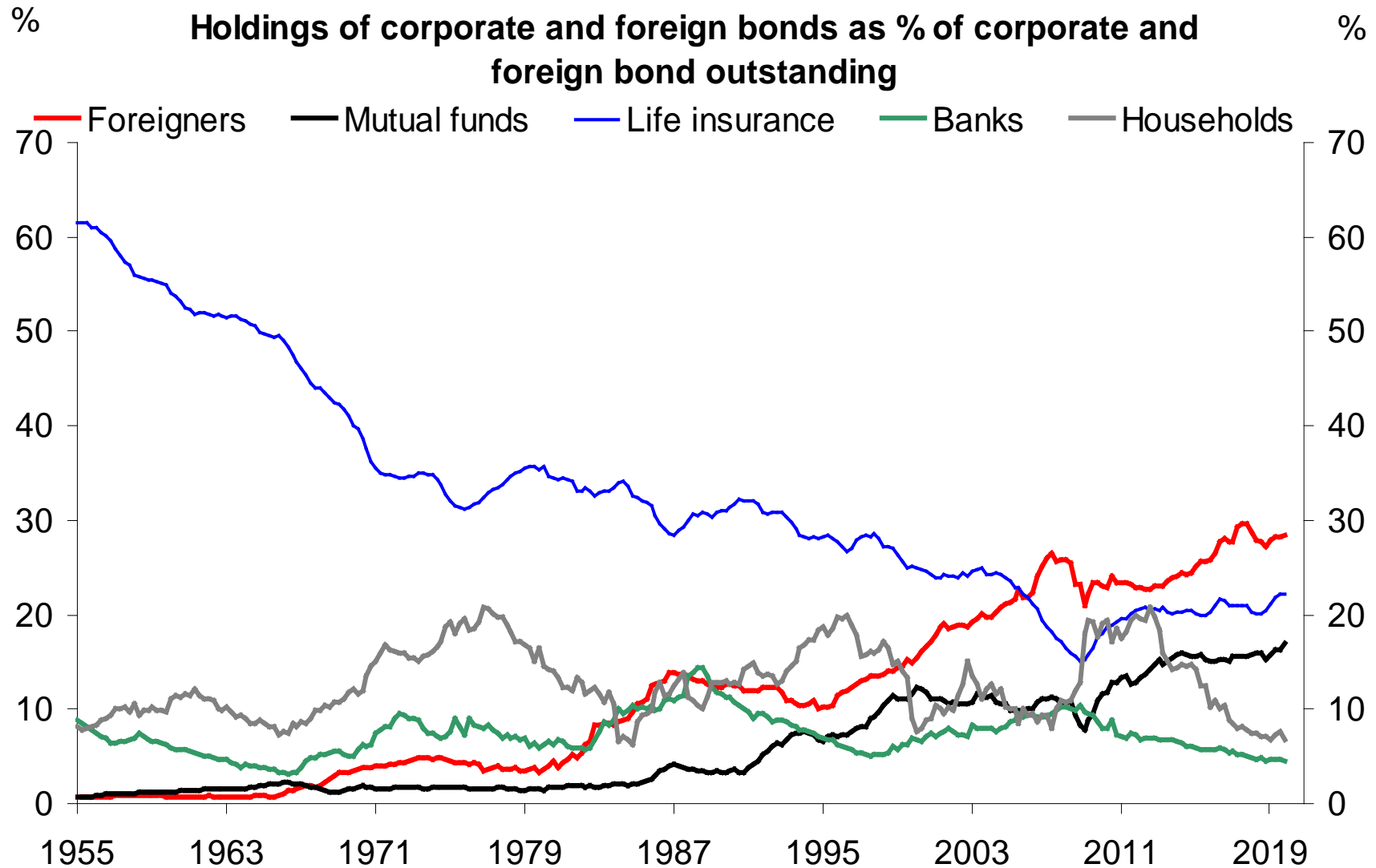
# Stock of corporate bonds outstanding, in USD



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

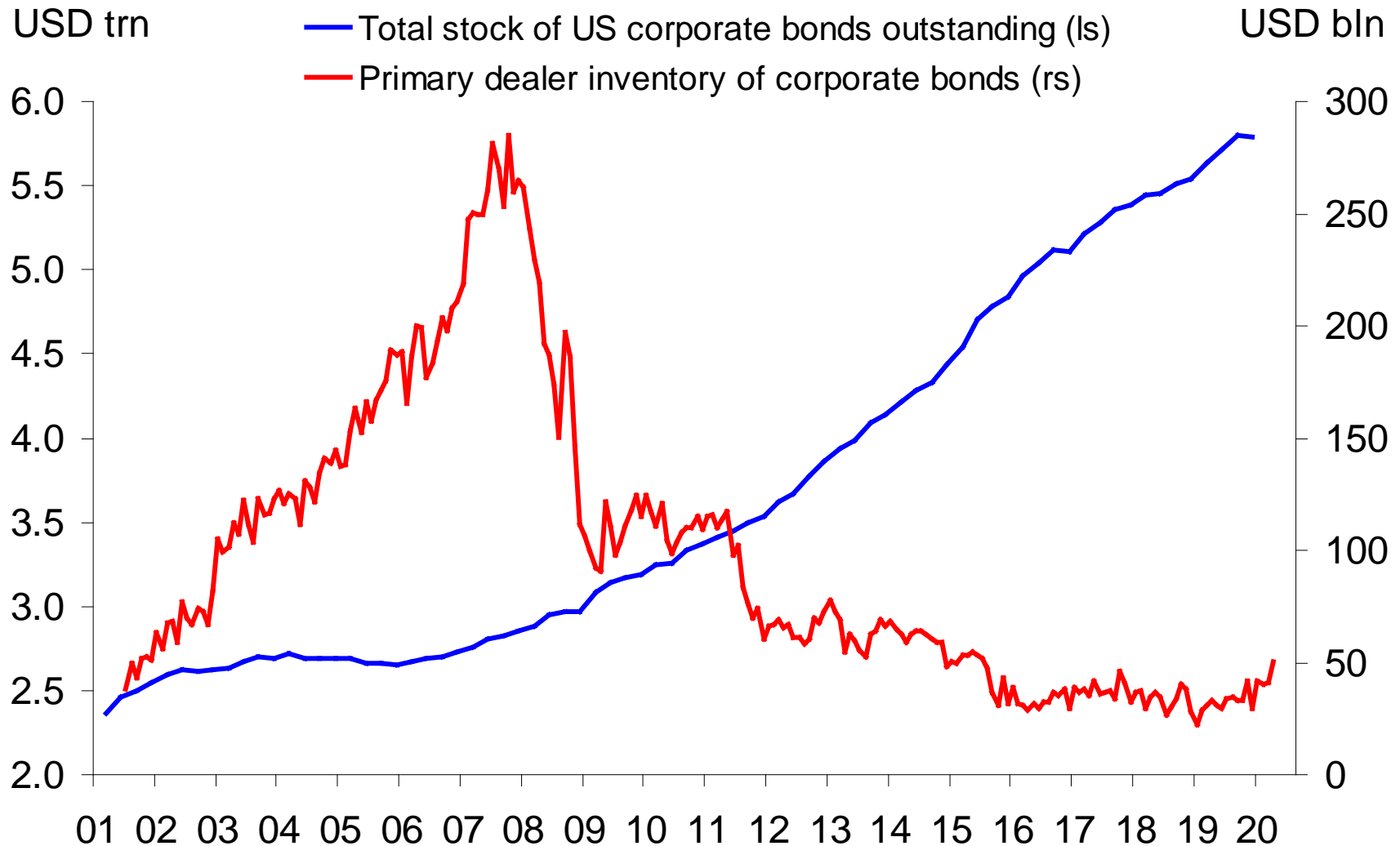


# Foreign appetite for US IG and HY



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

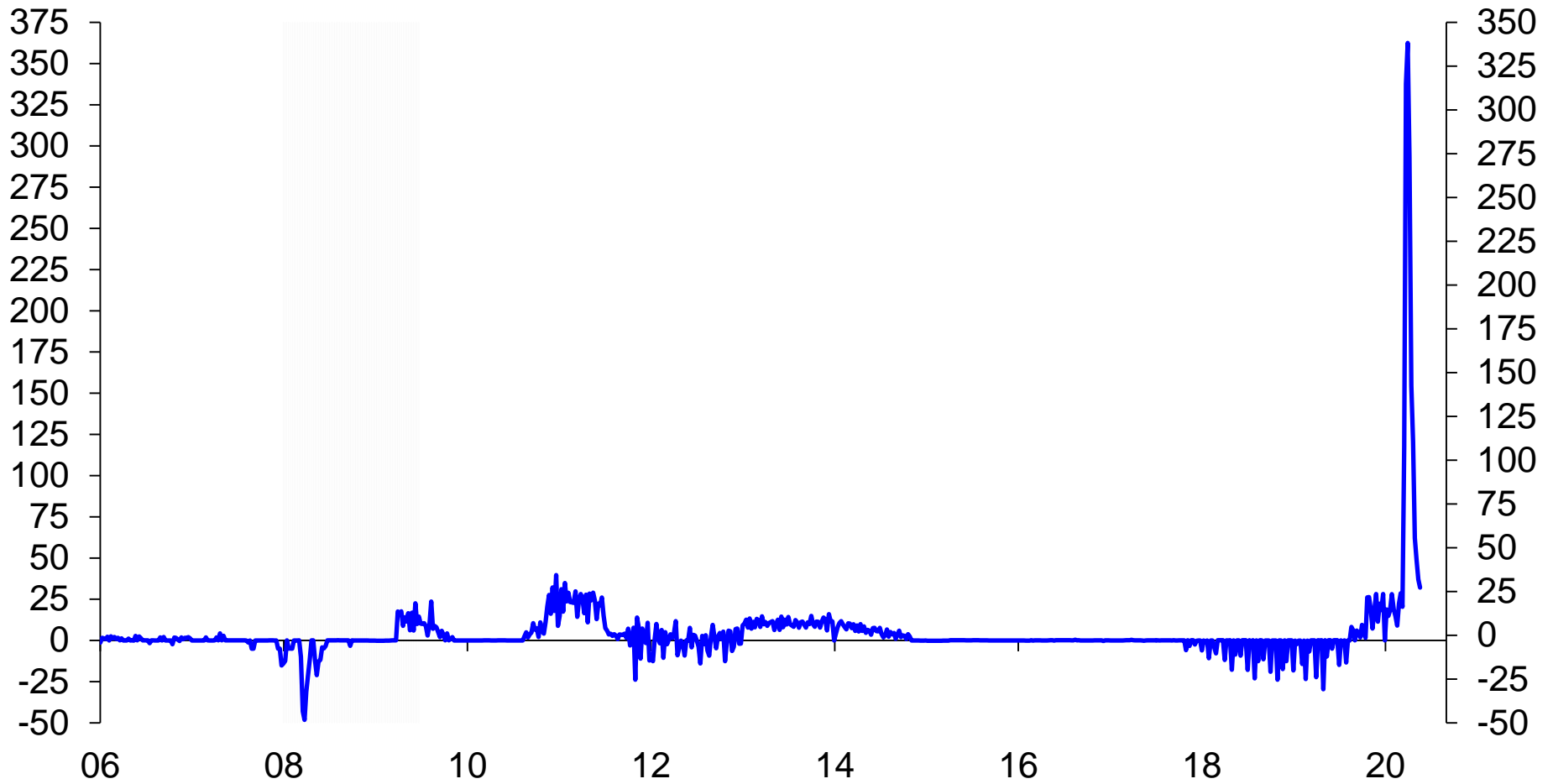


# Fed Treasury purchases slowing down

\$ bn,  
weekly chg.

## Treasury securities held outright by the Fed

\$ bn,  
weekly chg.



Source: Federal Reserve, Haver Analytics, DB Global Research



# Key vulnerabilities in HY, loan, and private credit markets

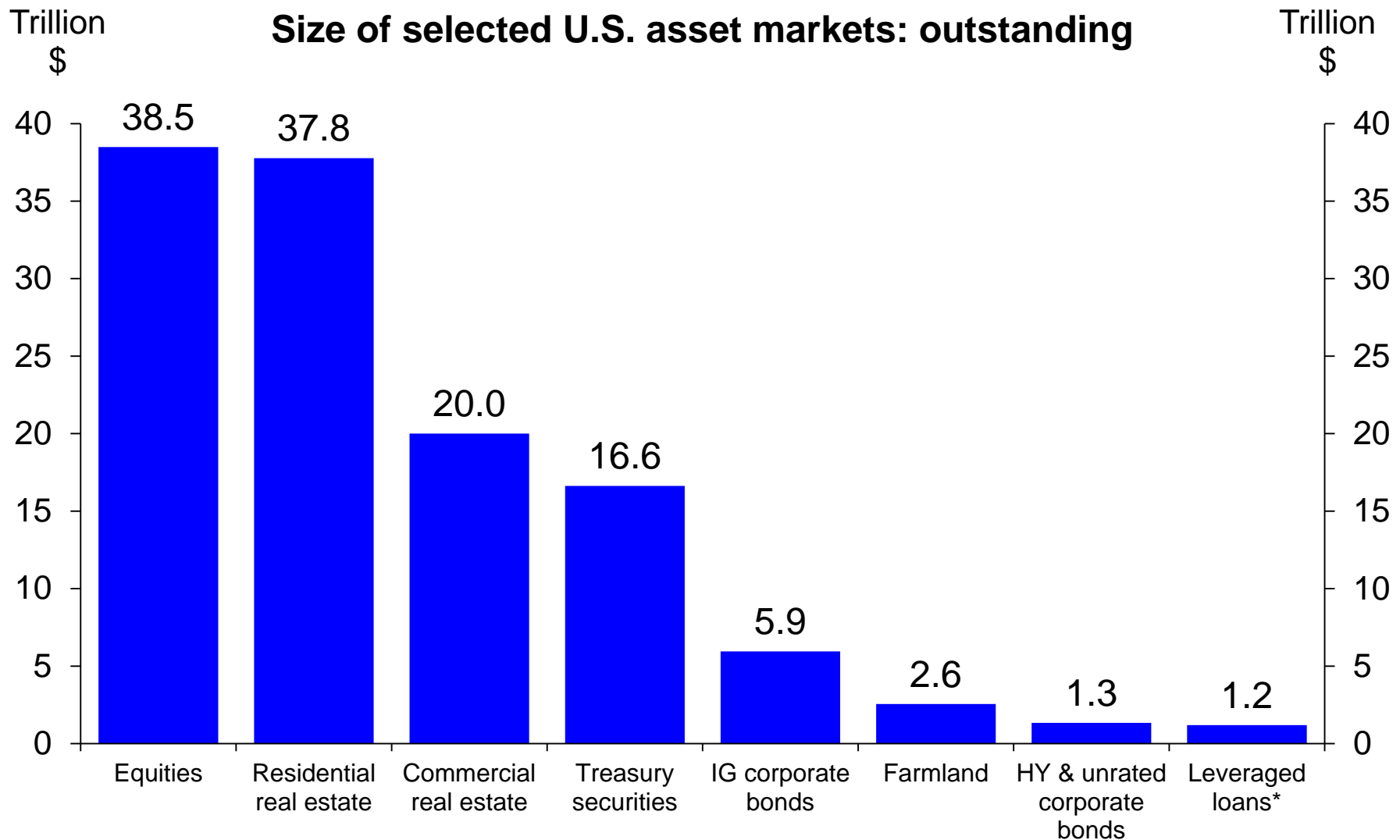


## Vulnerabilities in global risky credit markets

	Size	Valuations	Borrower's Leverage	Embedded and Financial Leverage	Liquidity, Maturity, FX Mismatches	Concentration	Interconnectedness	Complexity and Opacity
<b>High-Yield Bond Market</b>	\$1.9 trillion	High valuations before the COVID-19 outbreak	<ul style="list-style-type: none"> <li>High firm leverage</li> <li>EBITDA add-backs</li> <li>Large share of B credit</li> <li>LBO activity</li> </ul>	Active CDX market	Fund outflows can be sizable	Top borrowers represent a sizable share of the market	<ul style="list-style-type: none"> <li>Borrowers in both HY and LL markets</li> <li>Correlations of HY and LL credit</li> <li>Crossover funds' investments in both HY and LL</li> </ul>	Low transparency of the riskiness of investors' exposures
<b>Leveraged Loan Market</b>	\$4.0 trillion			<ul style="list-style-type: none"> <li>Repo, TRS, CLO warehouse lines have declined</li> <li>Bank credit lines can be quickly repriced</li> </ul>				
<b>Private Debt Market</b>	\$0.7 trillion			<ul style="list-style-type: none"> <li>Limited data on prices</li> <li>High return targets</li> </ul>	Capital call lines of credit	Large locked-in capital and HTM positions		

Source: IMF, DB Global Research

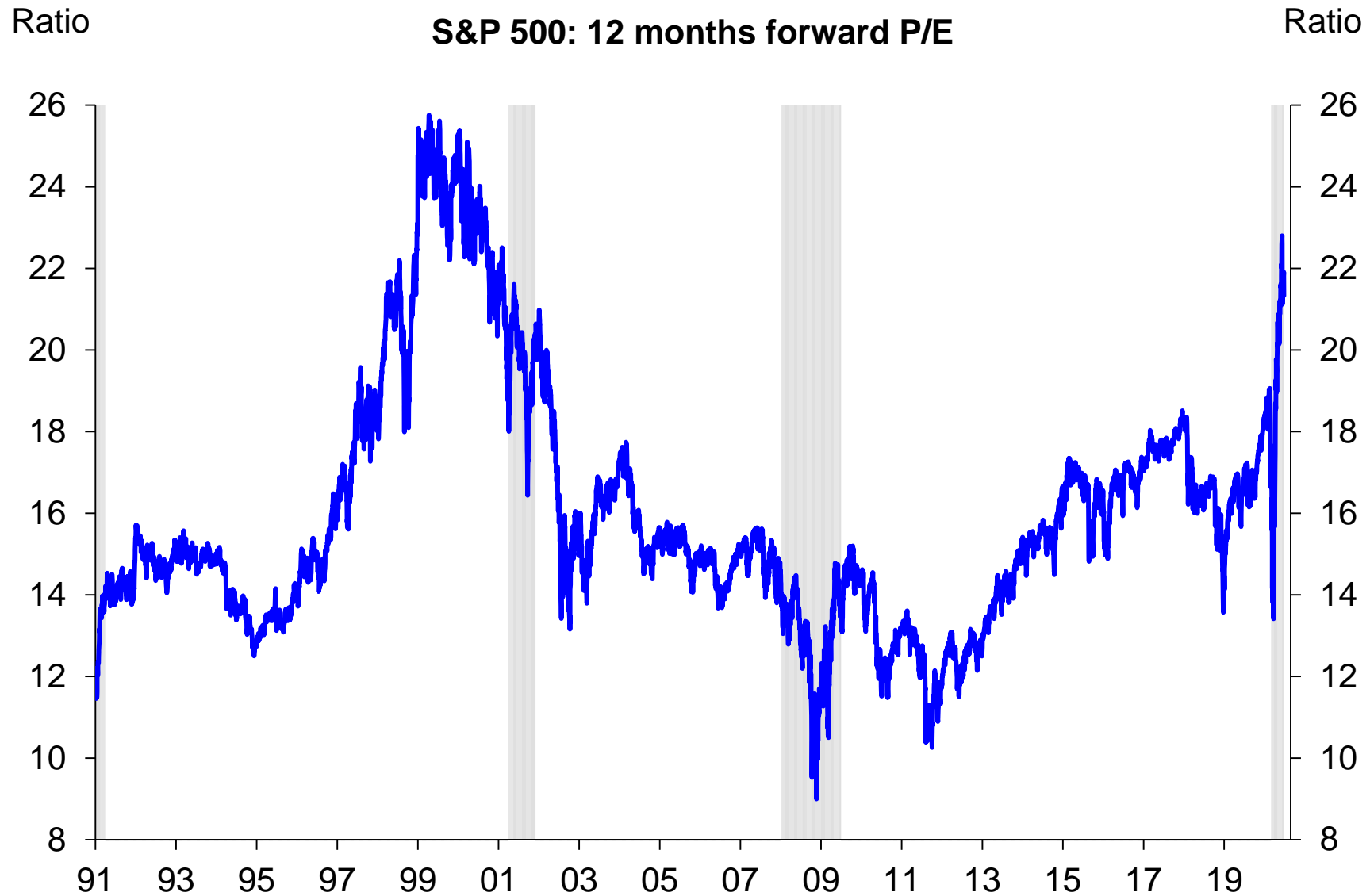
# The potential max size of the Fed's balance sheet depends on what they buy



Note: Data for 2019Q4.\* The amount outstanding shows institutional leveraged loans and generally excludes loan commitments held by banks.

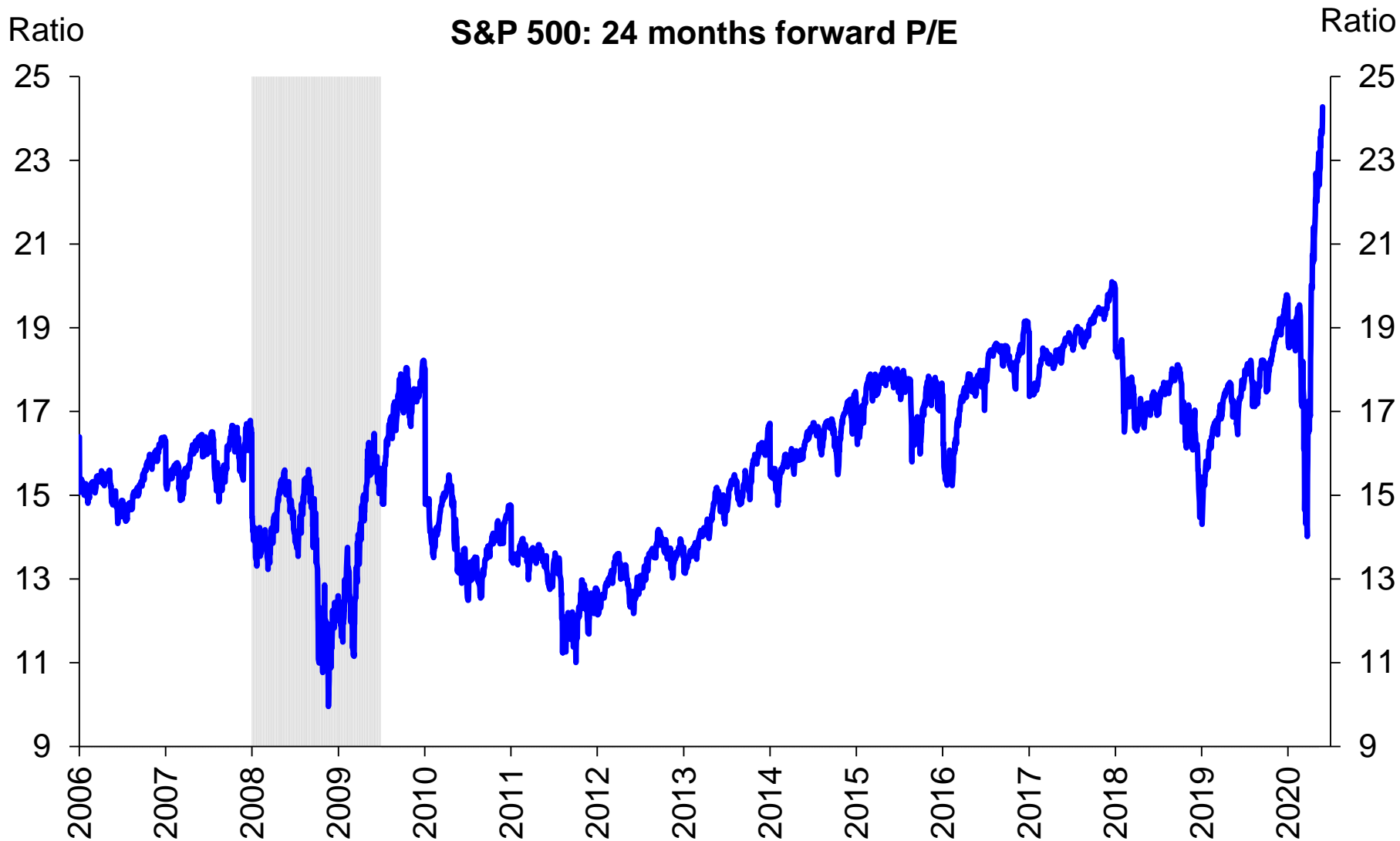
Source: Fed, DB Global Research

# S&P500 12 month forward multiple now at 21.3



Source: Bloomberg Finance LP, DB Global Research

# S&P500 24 month forward P/E ratio at 24

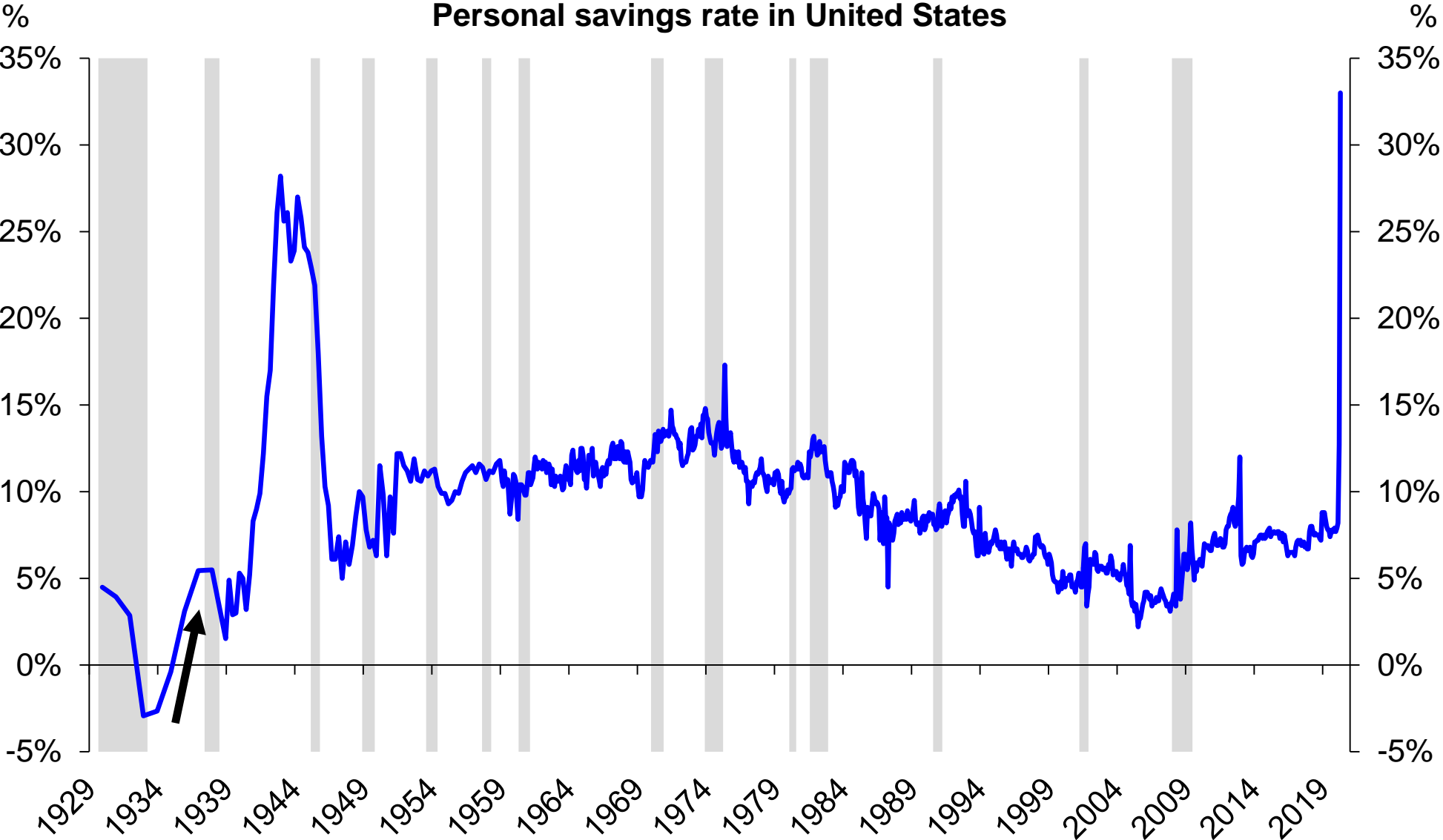


Source: Bloomberg Finance LP, DB Global Research



# 3. COVID-19: The swoosh-shaped economic recovery

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

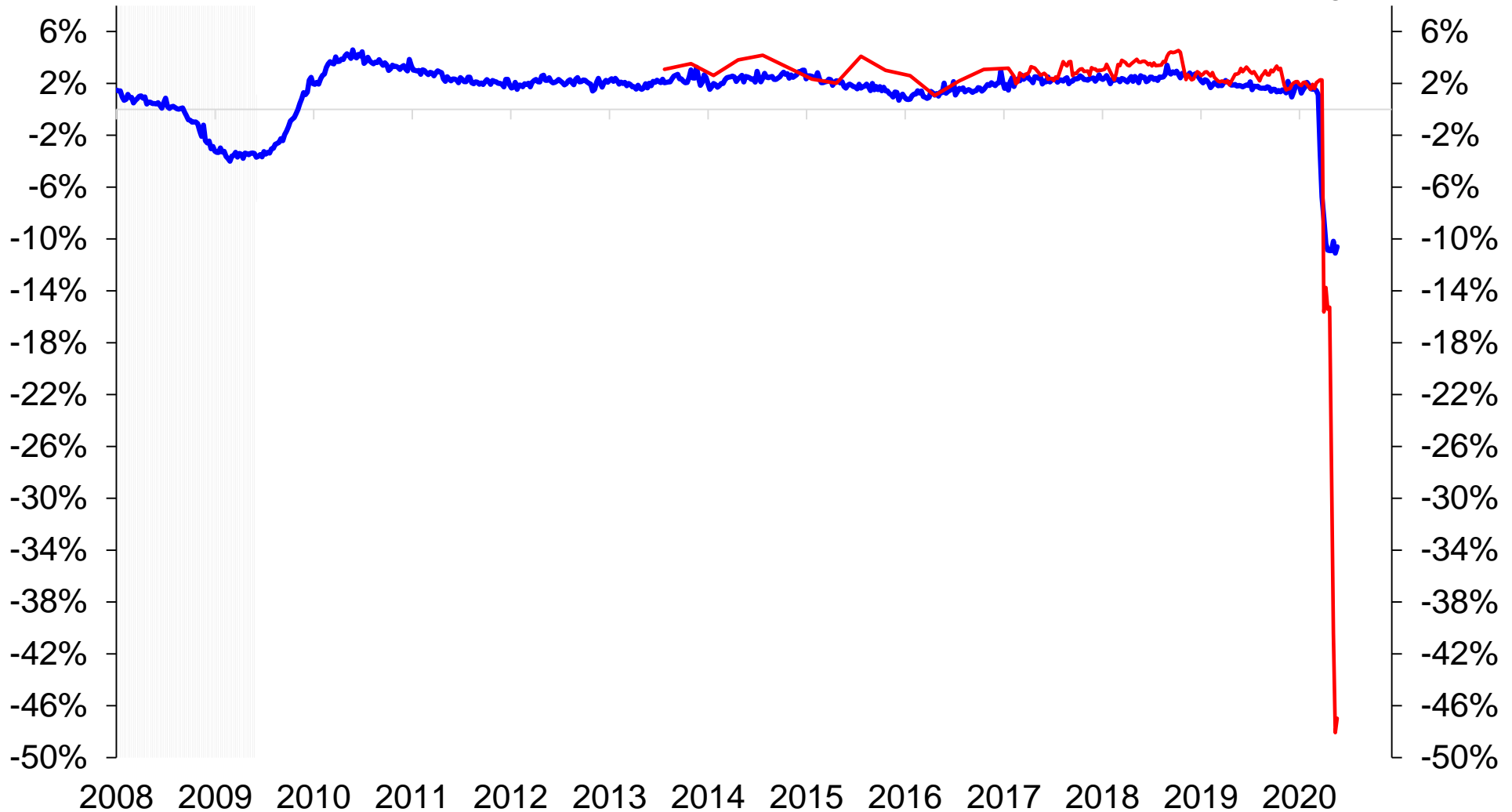


Source: Historical Statistics of United States US Census Bureau, BEA, FRED, Haver Analytics, DB Global Research

# 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

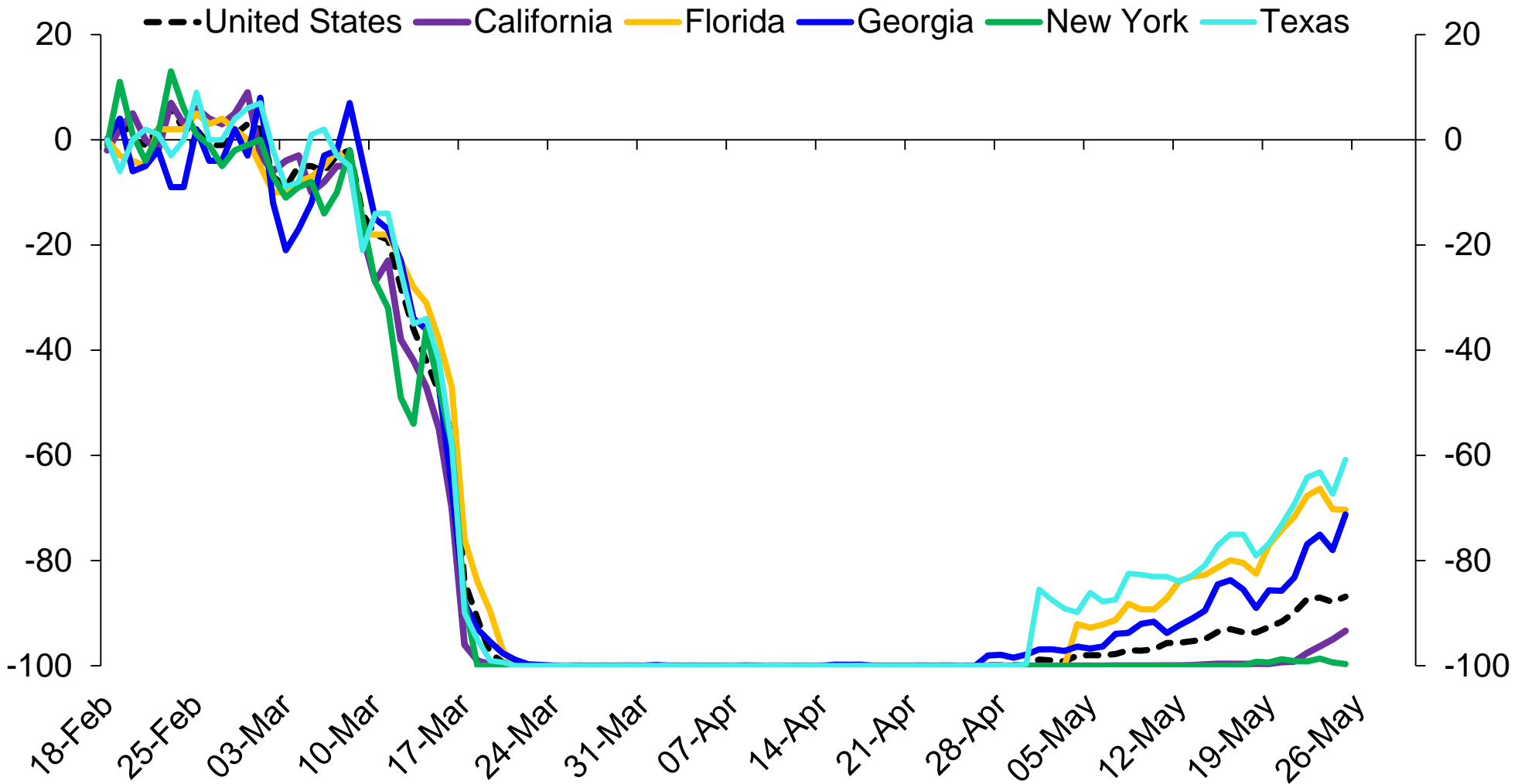


# Green shoots in restaurant bookings?

%y/y

**OpenTable network : year-over-year change in seated diners at restaurants in United States**

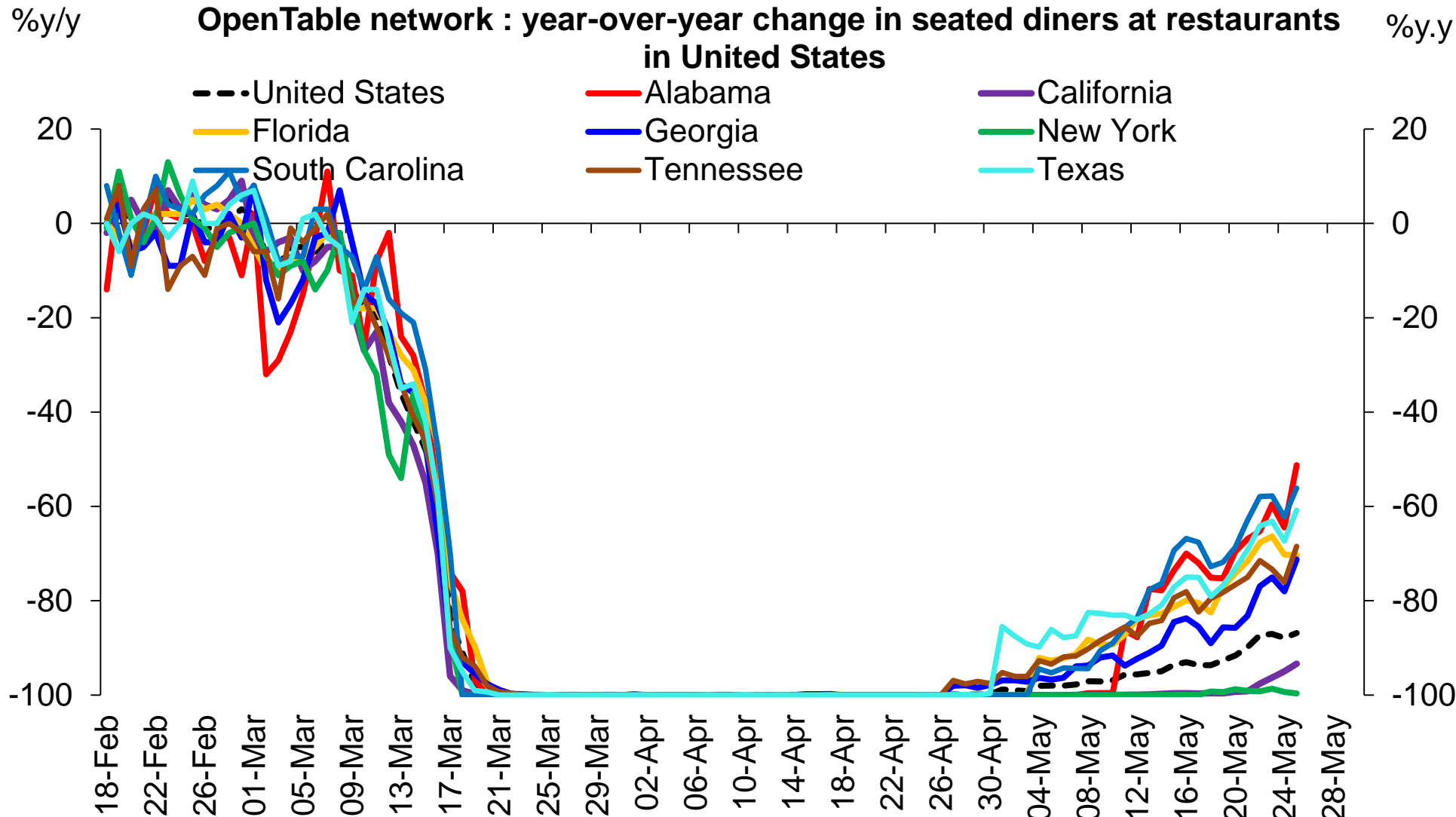
%y.y



Source: OpenTable, DB Global Research



# Restaurant bookings up significantly in Alabama and South Carolina

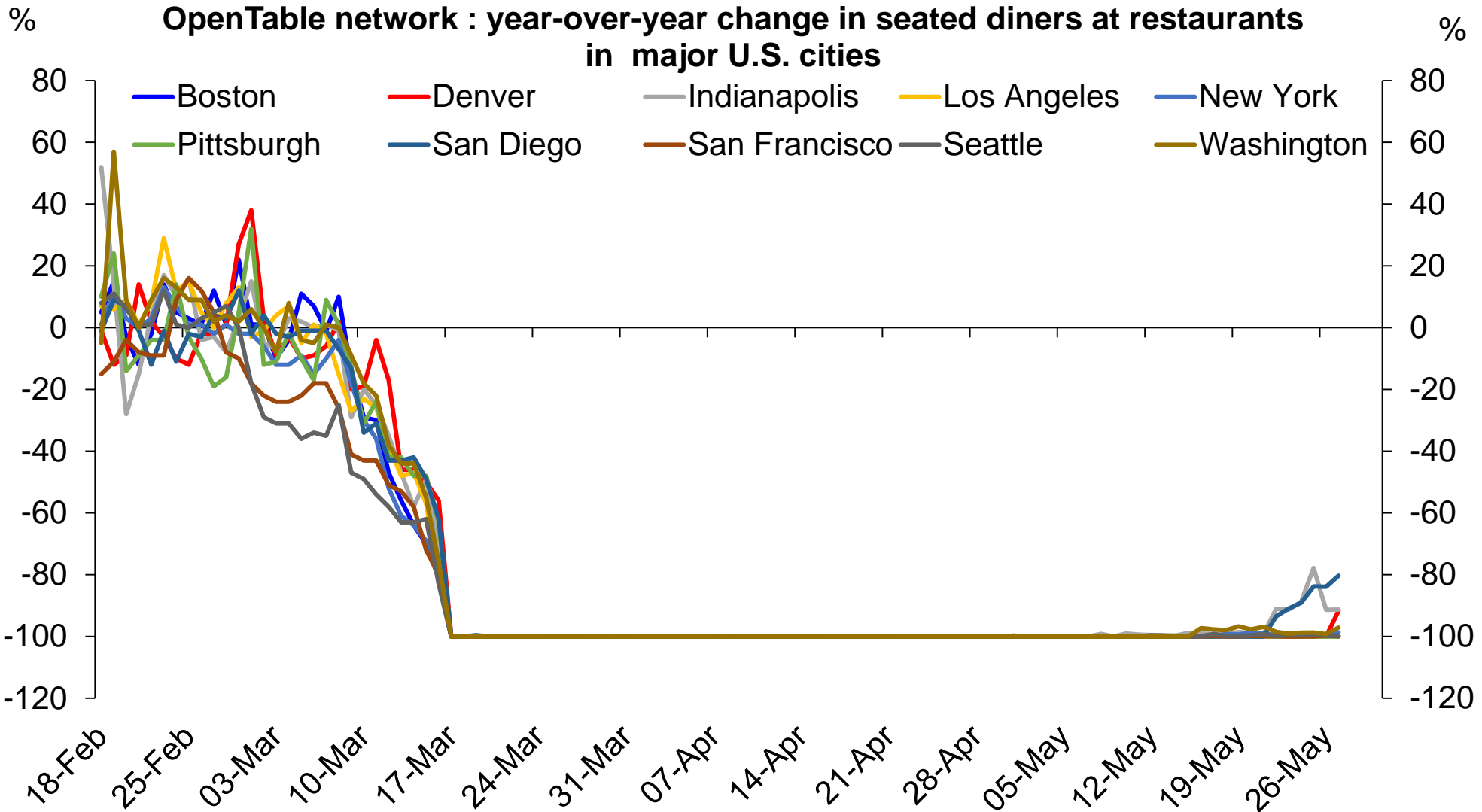


Note: This data shows year-over-year seated diners at restaurants on the OpenTable network across all channels: online reservations, phone reservations, and walk-ins. For year-over-year comparisons by day, we compare to the same day of the week from the same week in the previous year.

Source: OpenTable , DB Global Research



# Restaurant bookings up in Indianapolis and San Diego

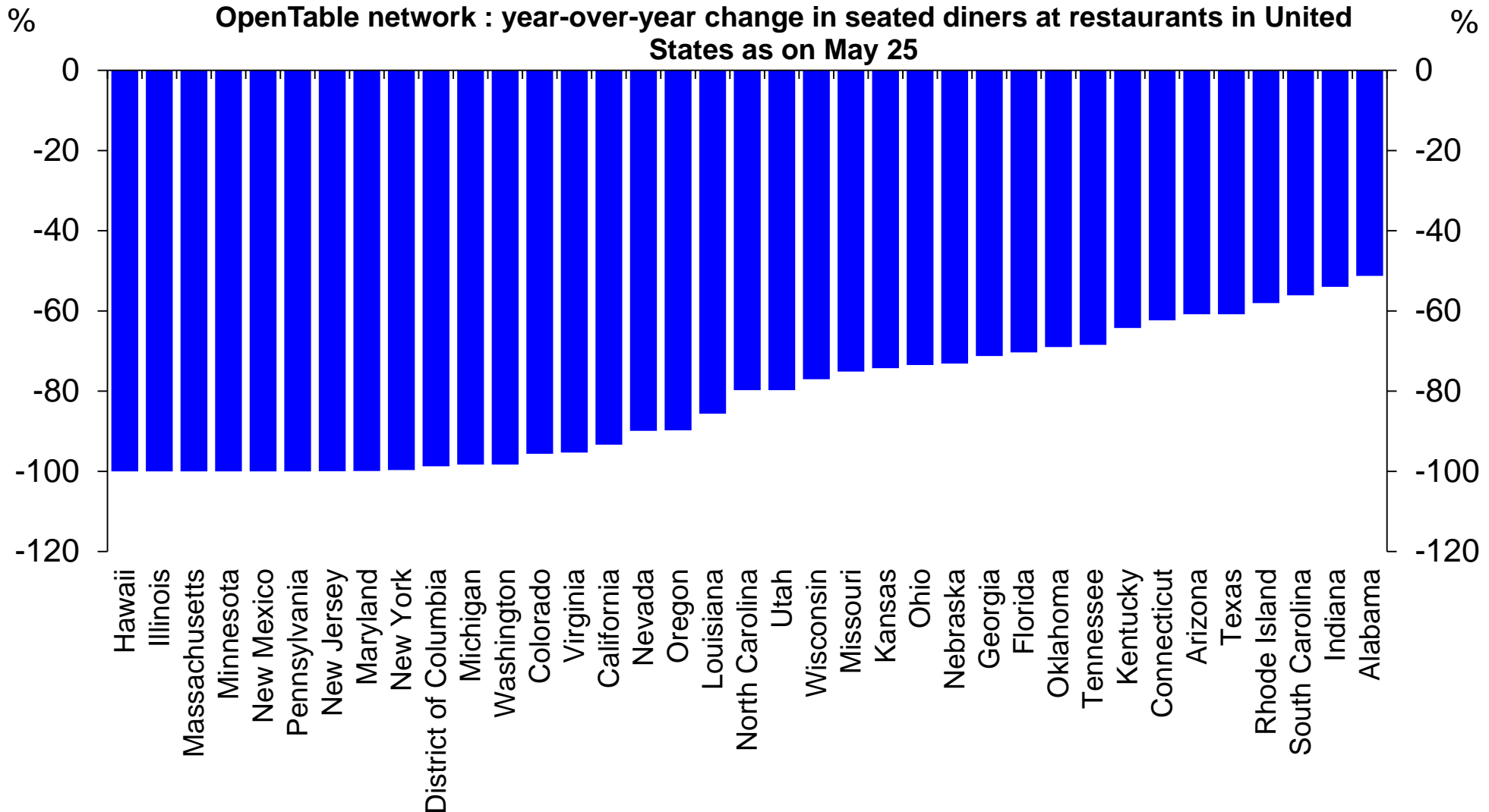


Note: This data shows year-over-year seated diners at restaurants on the OpenTable network across all channels: online reservations, phone reservations, and walk-ins. For year-over-year comparisons by day, we compare to the same day of the week from the same week in the previous year.

Source: OpenTable , DB Global Research



# Restaurant bookings across states



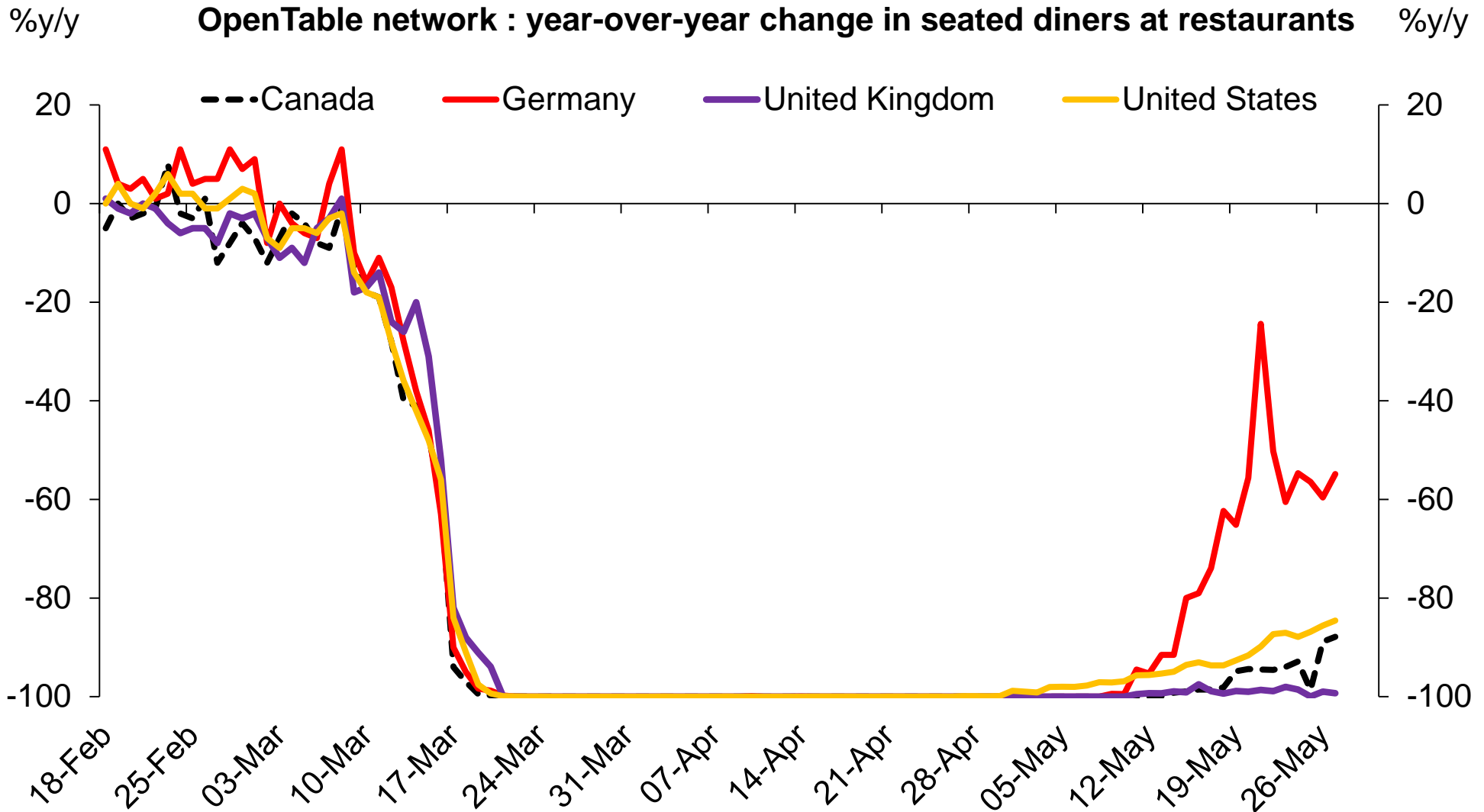
Note: This data shows year-over-year seated diners at restaurants on the OpenTable network across all channels: online reservations, phone reservations, and walk-ins. For year-over-year comparisons by day, we compare to the same day of the week from the same week in the previous year.

Source: OpenTable , DB Global Research



# Restaurant bookings up in Germany

OpenTable network : year-over-year change in seated diners at restaurants

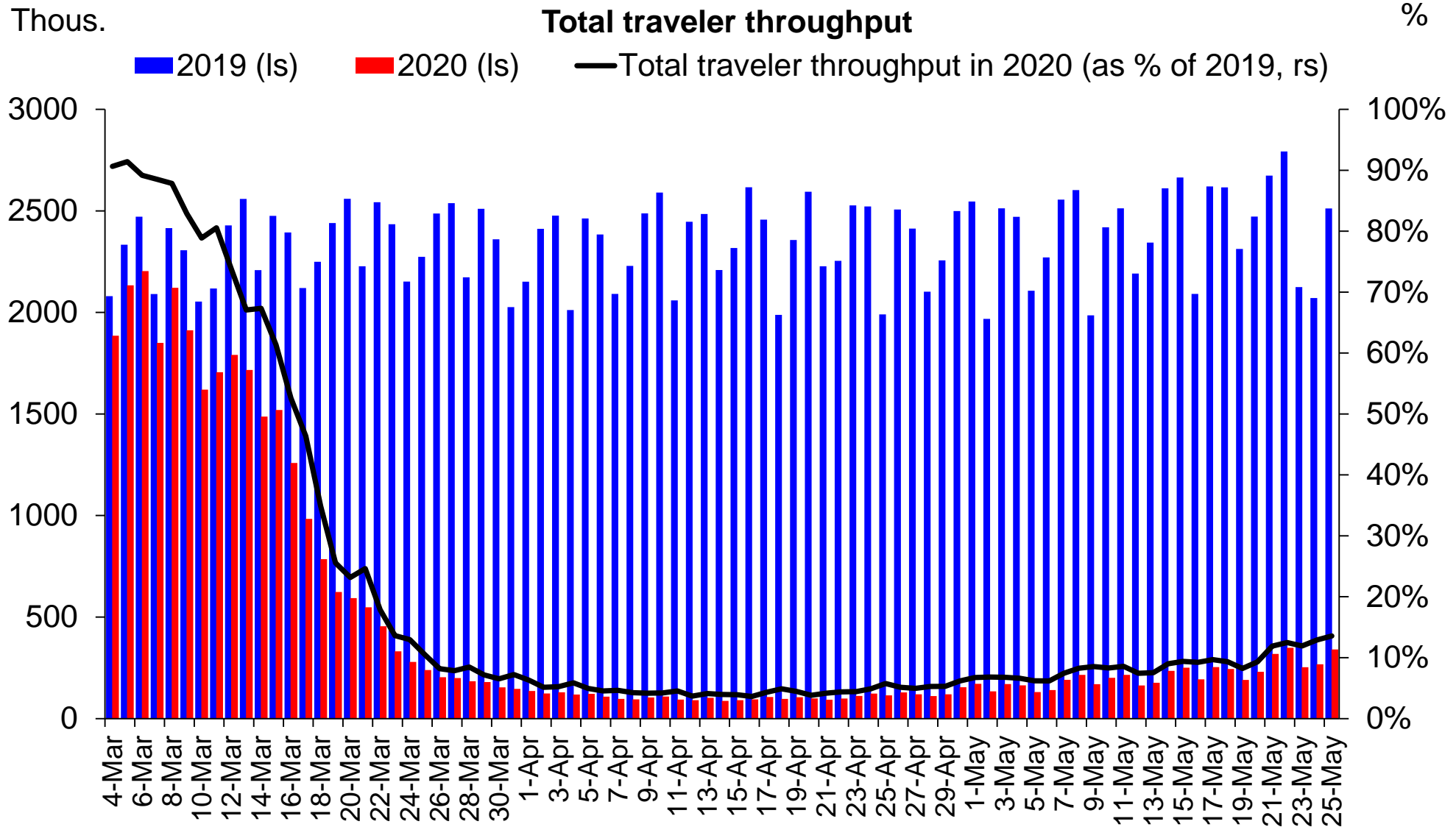


Note: This data shows year-over-year seated diners at restaurants on the OpenTable network across all channels: online reservations, phone reservations, and walk-ins. For year-over-year comparisons by day, we compare to the same day of the week from the same week in the previous year.

Source: OpenTable , DB Global Research

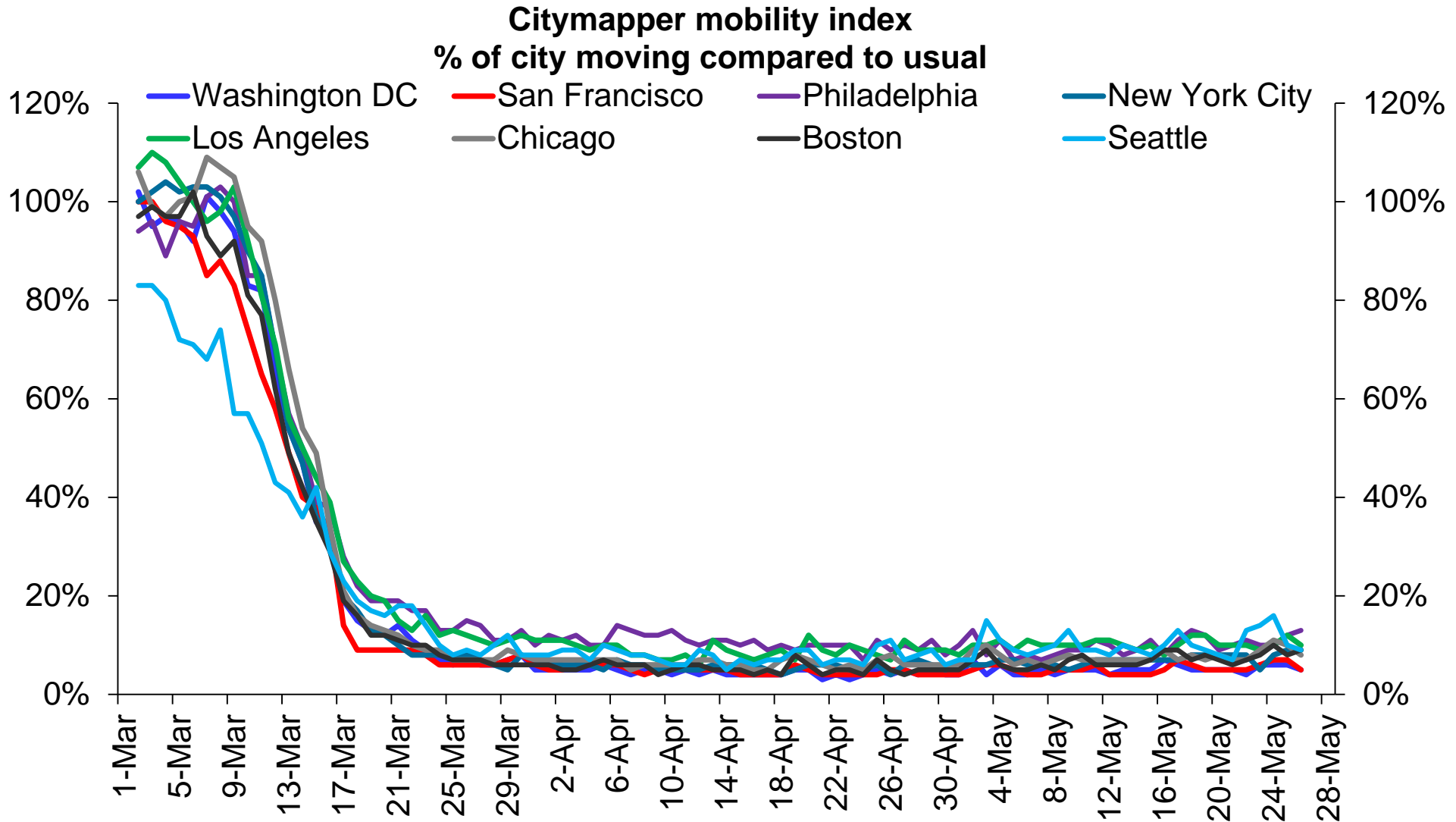


# US airline traffic currently 13% of normal



Source: Transport Security Administration, DB Global Research

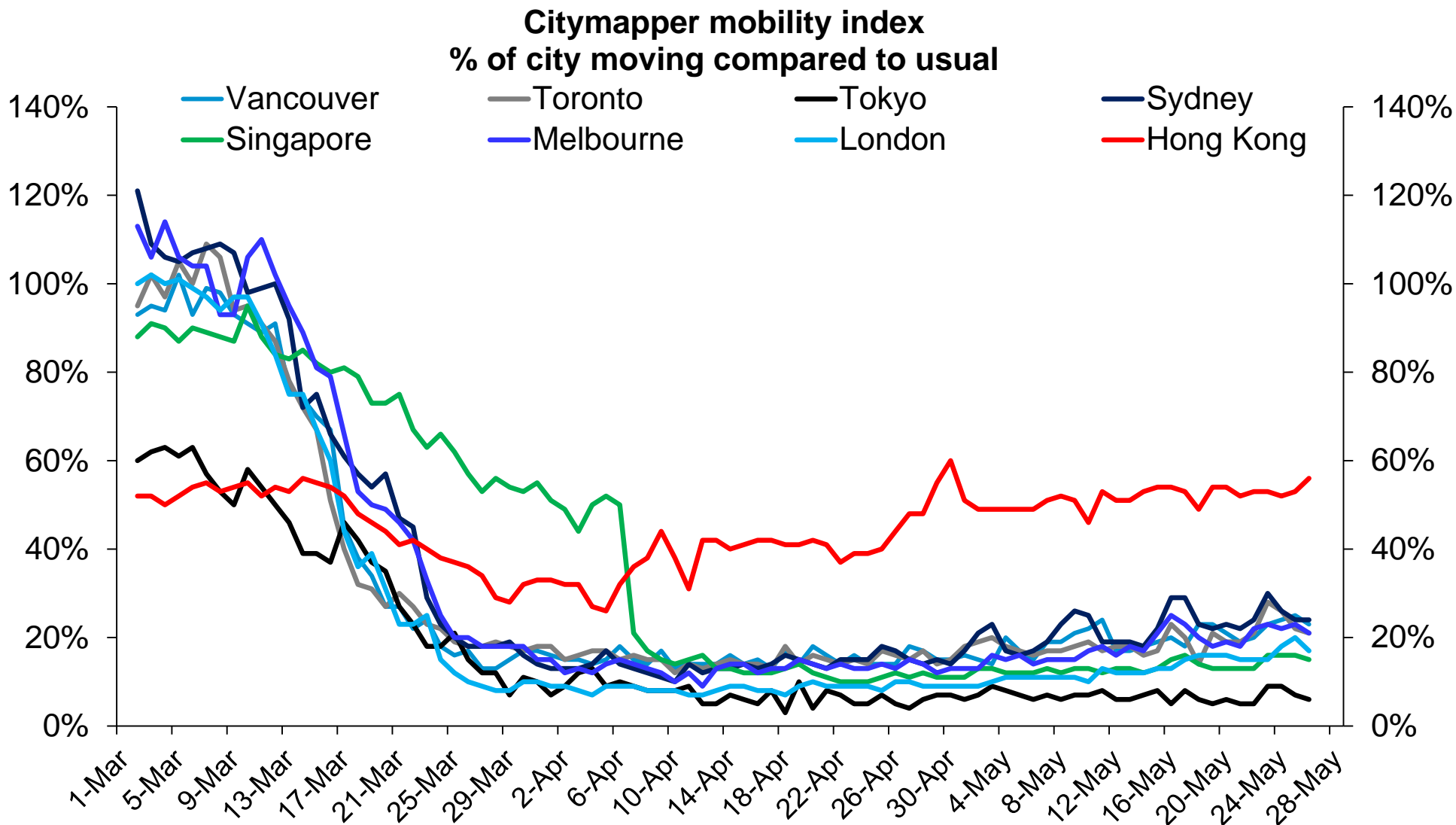
# US: Citymapper mobility index



Note: The Citymapper Mobility Index is calculated by comparing trips planned in the Citymapper app to a recent typical usage period. Trips planned ('Get Me Somewhere' and related) are correlated to trips taken (GO mode). Typical usage period is defined as 4 weeks between Jan 6th and Feb 2nd, 2020.

Source: Citymapper , DB Global Research

# Citymapper mobility index



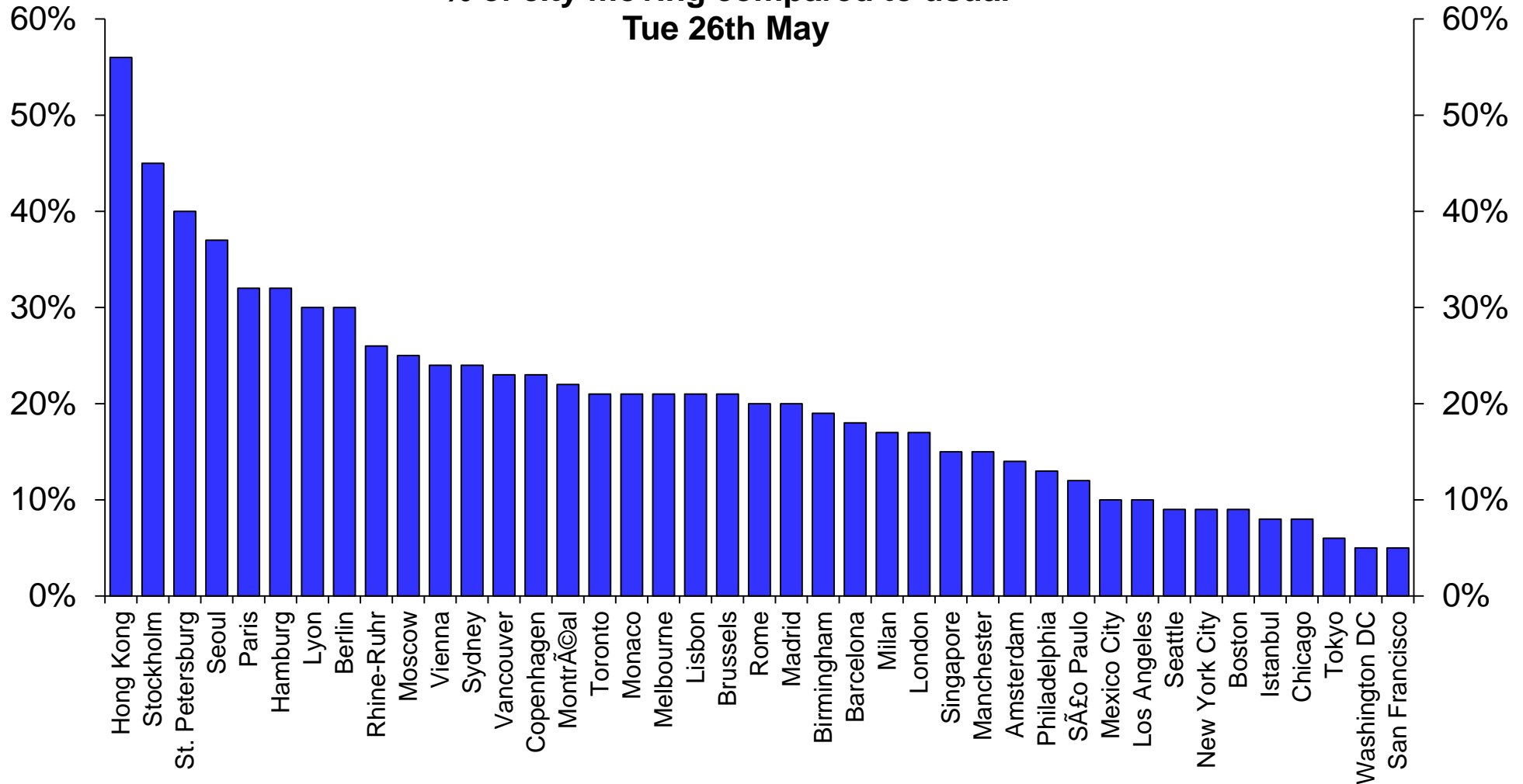
Note: The Citymapper Mobility Index is calculated by comparing trips planned in the Citymapper app to a recent typical usage period. Trips planned ('Get Me Somewhere' and related) are correlated to trips taken (GO mode). Typical usage period is defined as 4 weeks between Jan 6th and Feb 2nd, 2020.

Source: Citymapper , DB Global Research

# % of city moving compared to usual



## Citymapper Mobility Index % of city moving compared to usual Tue 26th May



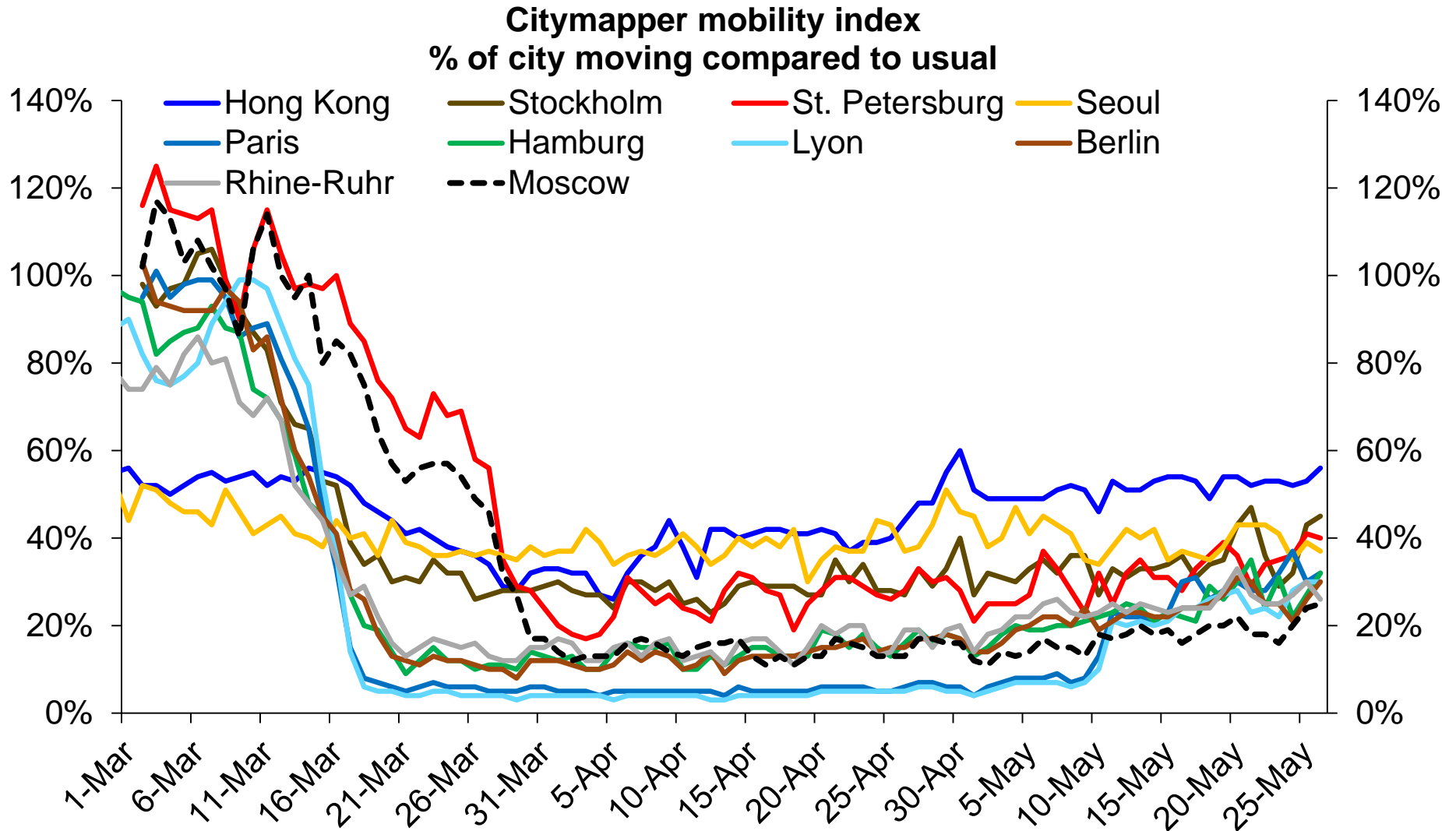
Note: The Citymapper Mobility Index is calculated by comparing trips planned in the Citymapper app to a recent typical usage period. Trips planned ('Get Me Somewhere' and related) are correlated to trips taken (GO mode). Typical usage period is defined as 4 weeks between Jan 6th and Feb 2nd, 2020.

Source: Citymapper , DB Global Research





# % of city moving compared to usual



Note: The Citymapper Mobility Index is calculated by comparing trips planned in the Citymapper app to a recent typical usage period. Trips planned ('Get Me Somewhere' and related) are correlated to trips taken (GO mode). Typical usage period is defined as 4 weeks between Jan 6th and Feb 2nd, 2020.

Source: Citymapper , DB Global Research

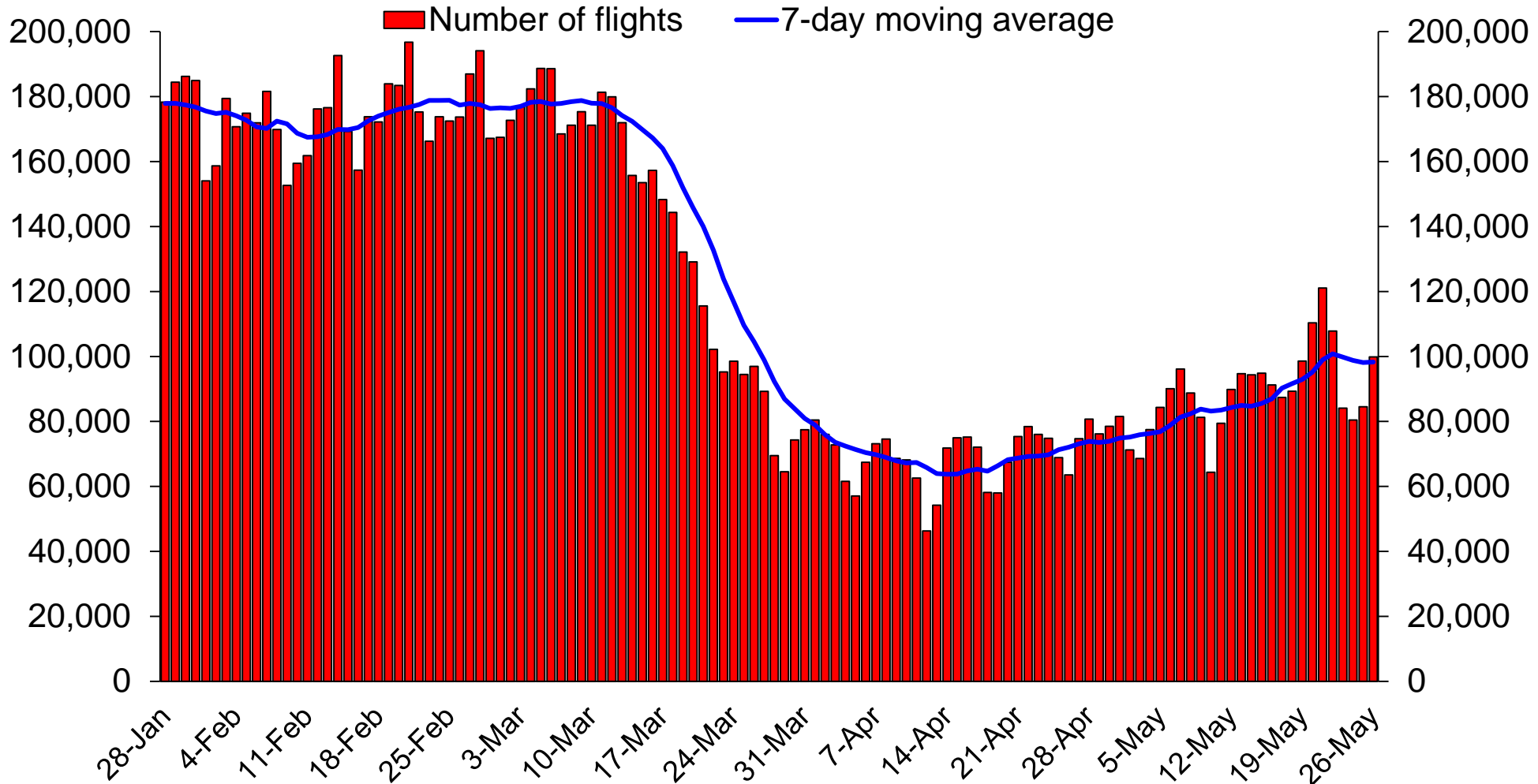


# Global airline traffic slowly moving up

# of flights

**Total number of flights tracked by Flightradar24, per day (UTC time), last 120 days**

# of flights



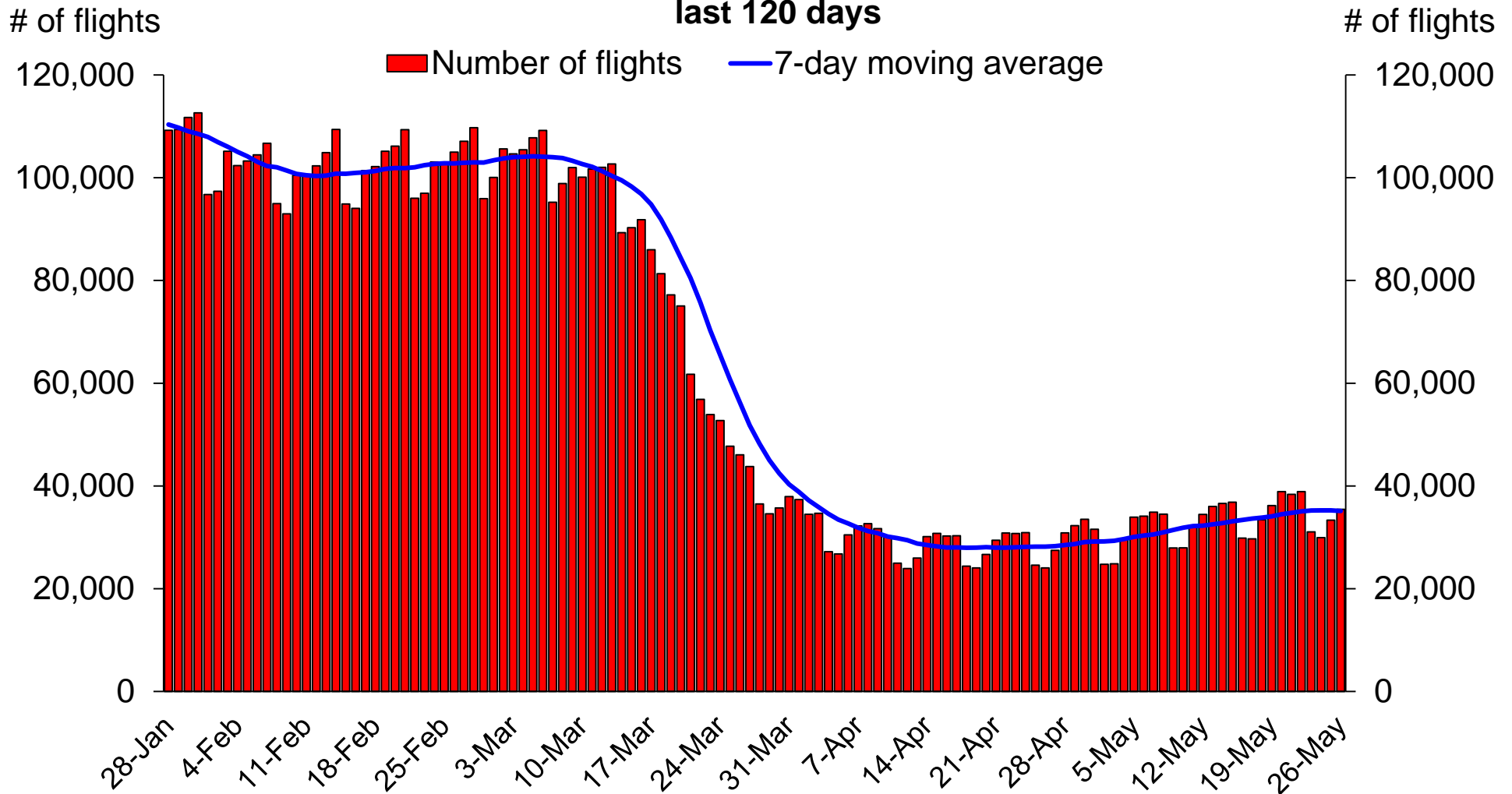
Note: Total flights: Commercial flights above + rest of business jet flights + private flights + gliders + most helicopter flights + most ambulance flights + government flights + some military flights + drones

Source: Flightradar24, DB Global Research



# Global commercial airline traffic still low

Number of commercial flights tracked by Flightradar24, per day (UTC time)  
last 120 days



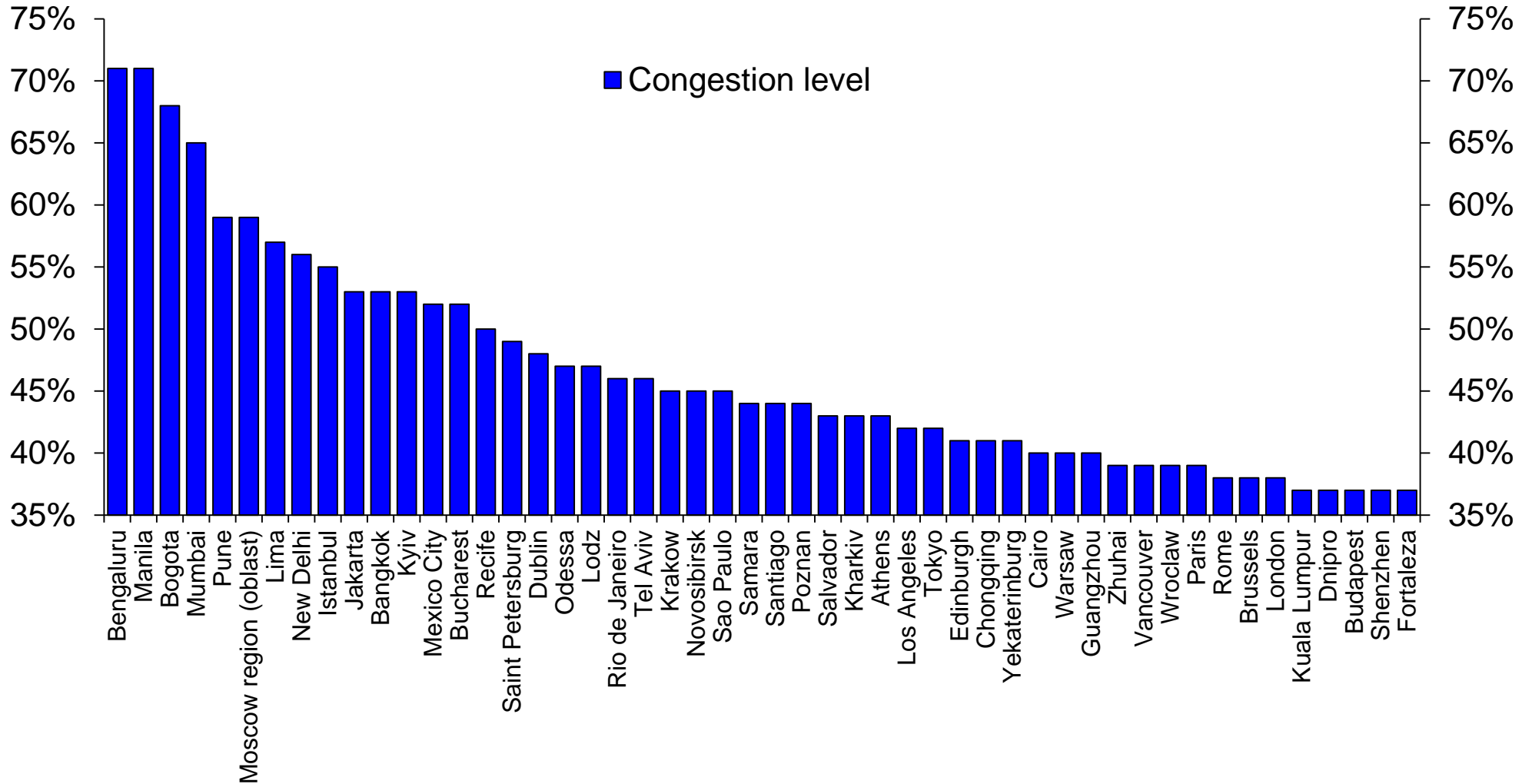
Note: Commercial flights : Commercial passenger flights + cargo flights + charter flights + some business jet flights.

Source: Flightradar24, DB Global Research



# Congestion levels around the world

## TomTom Traffic Index ranking 2019 : Top 50 City in world



Note: A 71% congestion level in Bengaluru, for example, means that a 30-minute trip will take 71% more time than it would during Bengaluru's baseline uncongested conditions. The baseline per city is calculated by analyzing free-flow travel times of all vehicles on the entire road network – recorded 24/7, 365 days a year.

Source: TomTom Traffic Index, DB Global Research

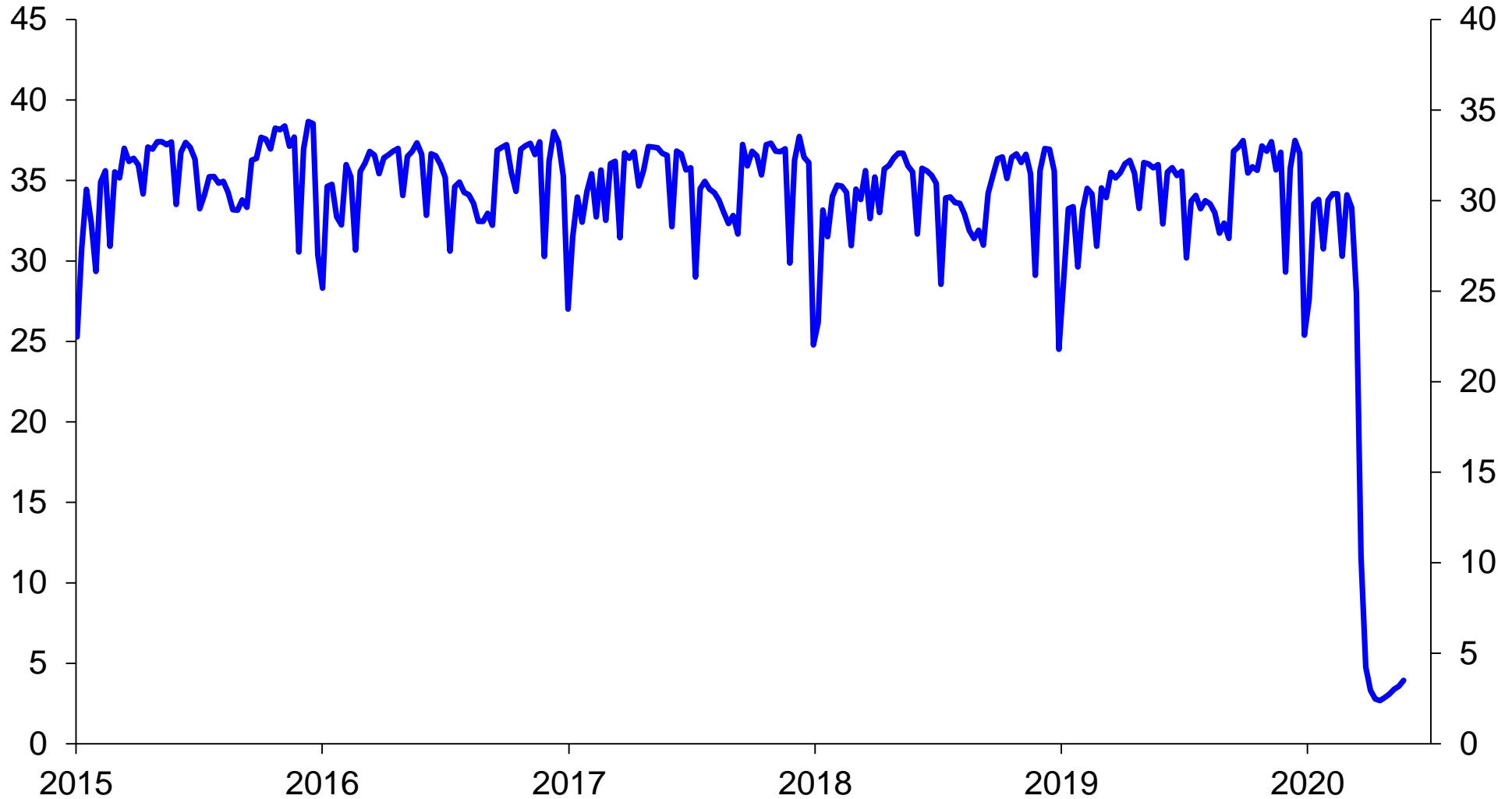
# Weekly NYC subway turnstile entries



Millions

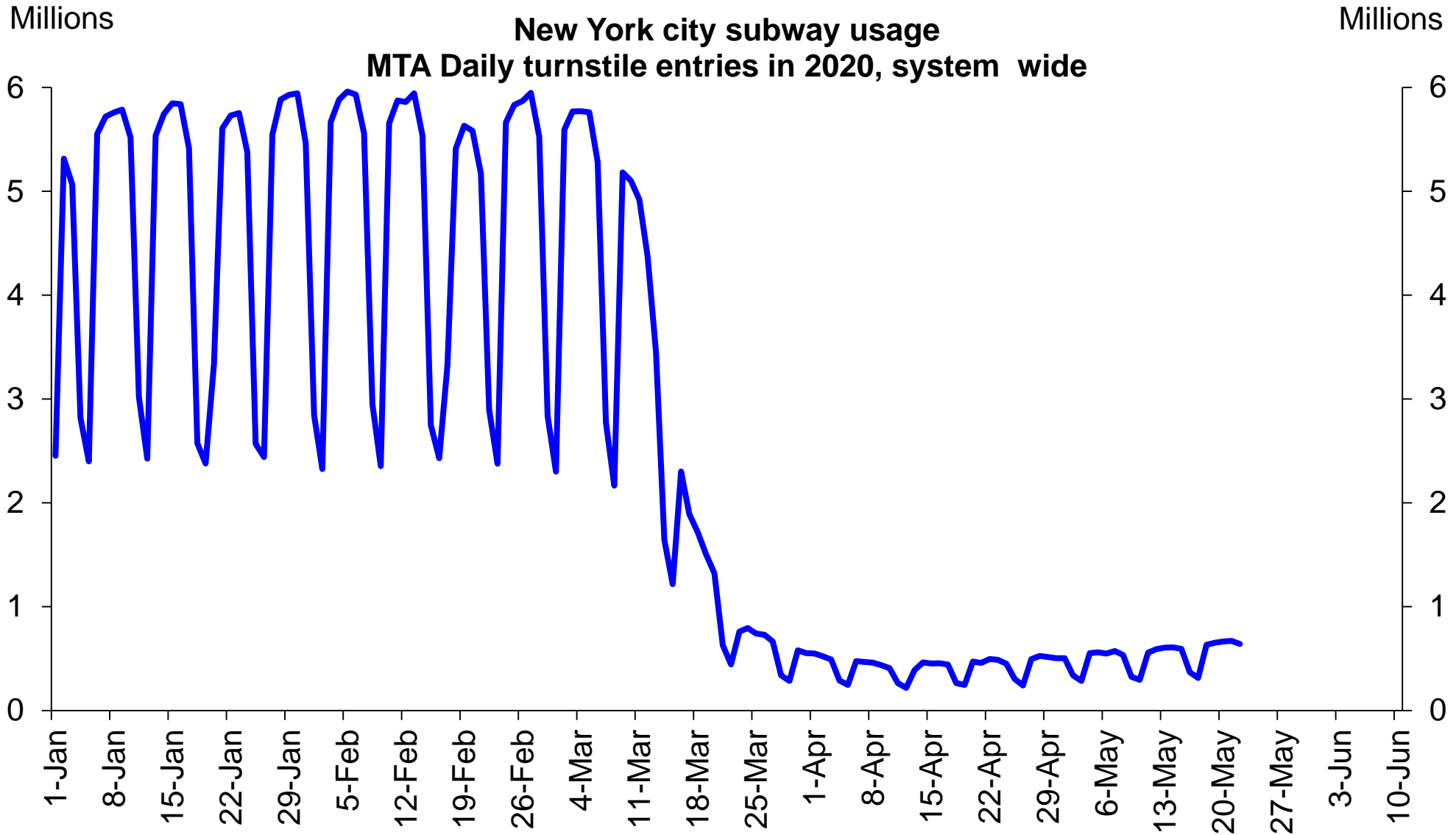
Millions

**New York city subway usage**  
**MTA Weekly turnstile entries, system wide**



Source: MTA, Bloomberg Finance LP, DB Global Research

# Daily NYC subway turnstile entries in 2020

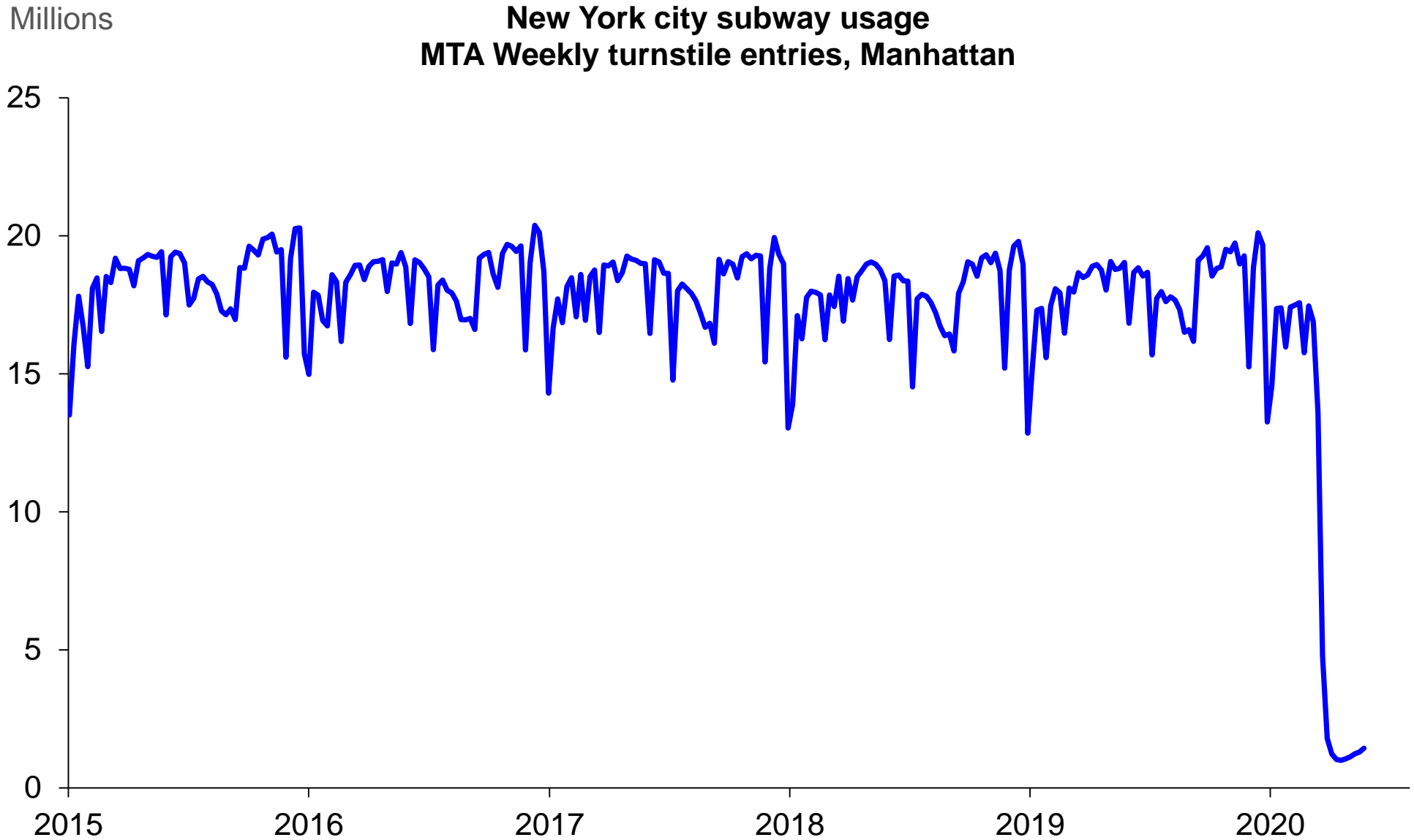


Source: MTA, Bloomberg Finance LP, DB Global Research



# Weekly Manhattan subway turnstile entries

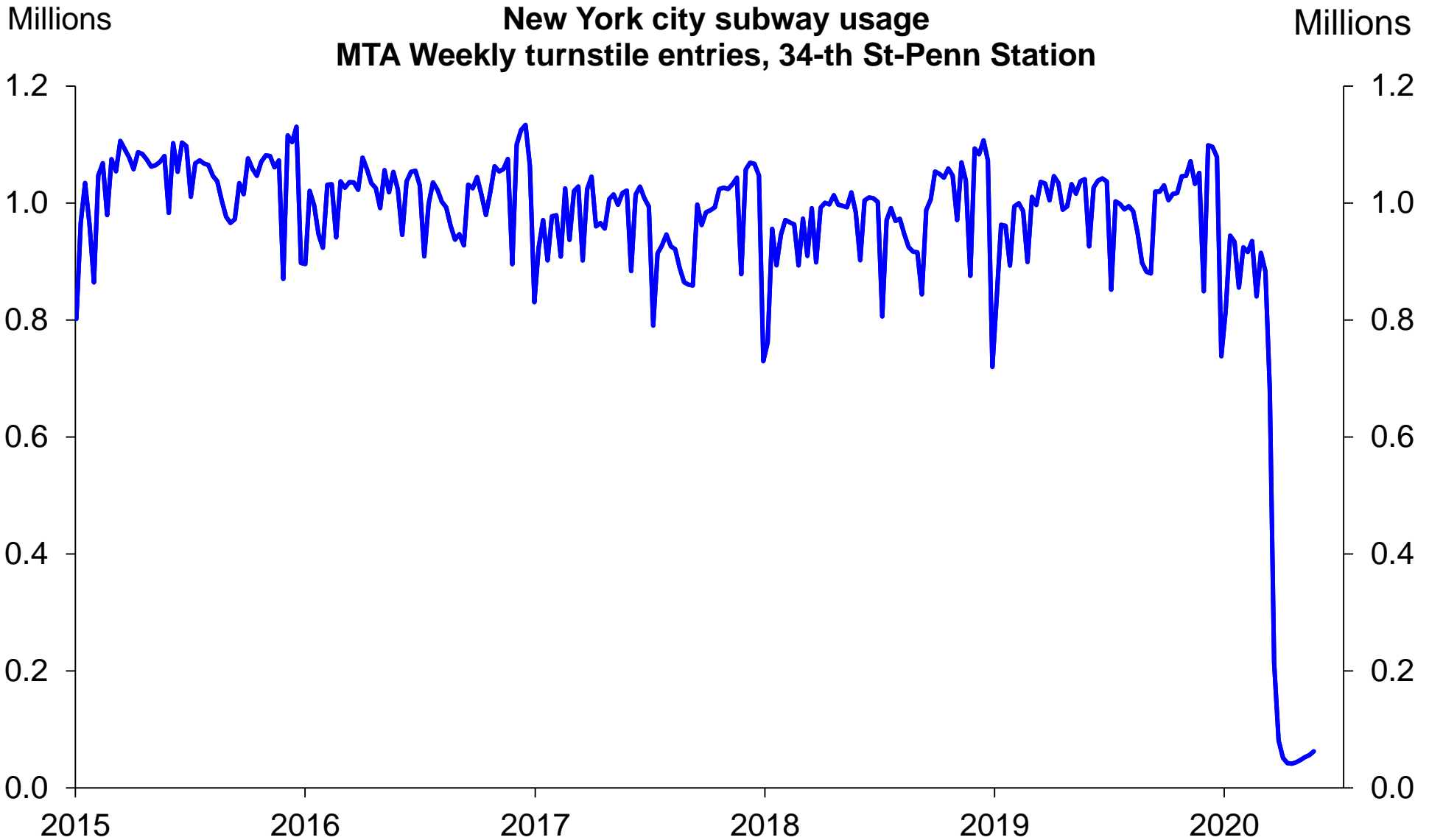
## New York city subway usage MTA Weekly turnstile entries, Manhattan



Source: MTA, Bloomberg Finance LP, DB Global Research



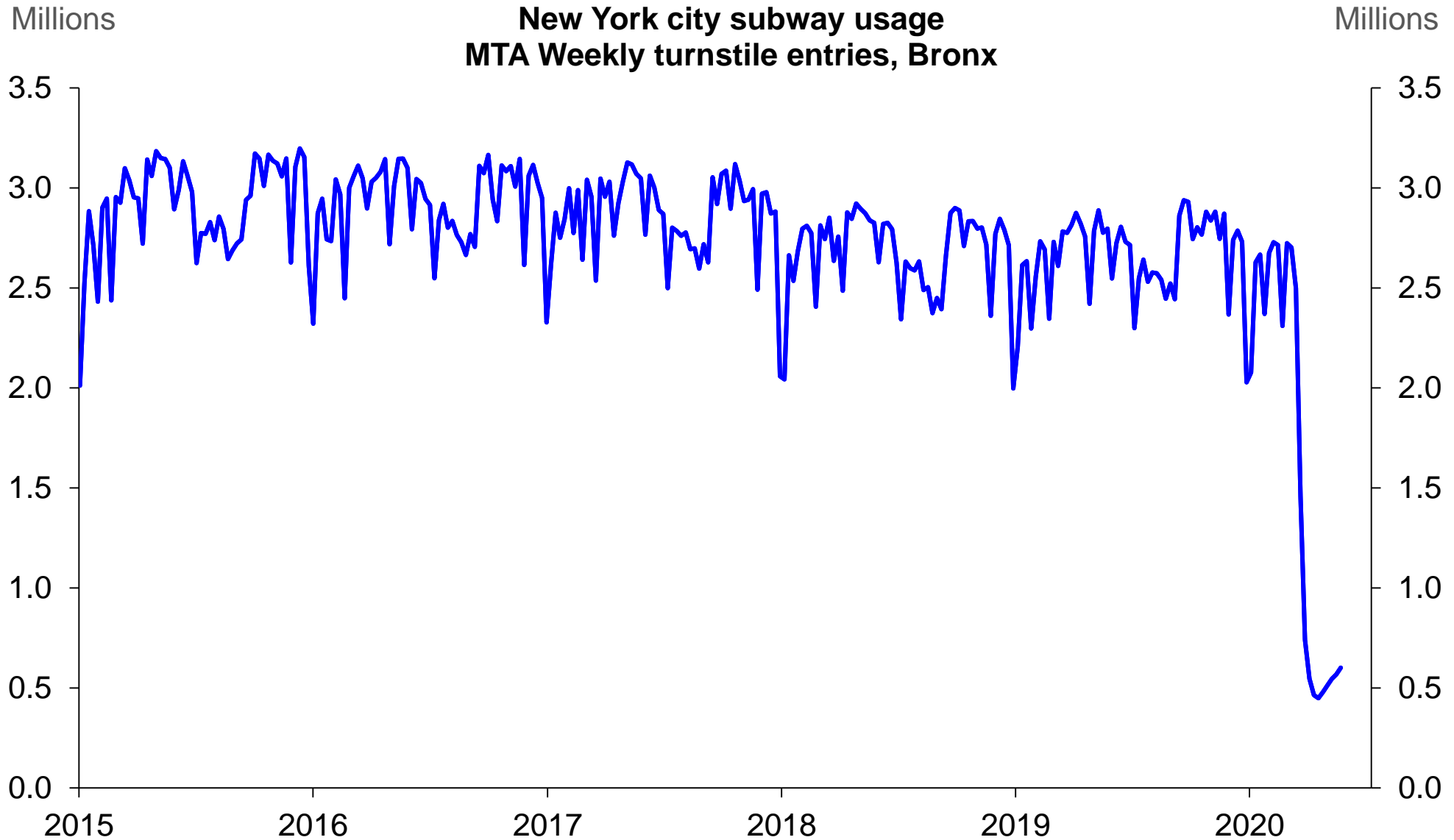
# Weekly 34<sup>th</sup> Street-Penn Station subway turnstile entries



Source: MTA, Bloomberg Finance LP, DB Global Research



# Weekly Bronx subway turnstile entries

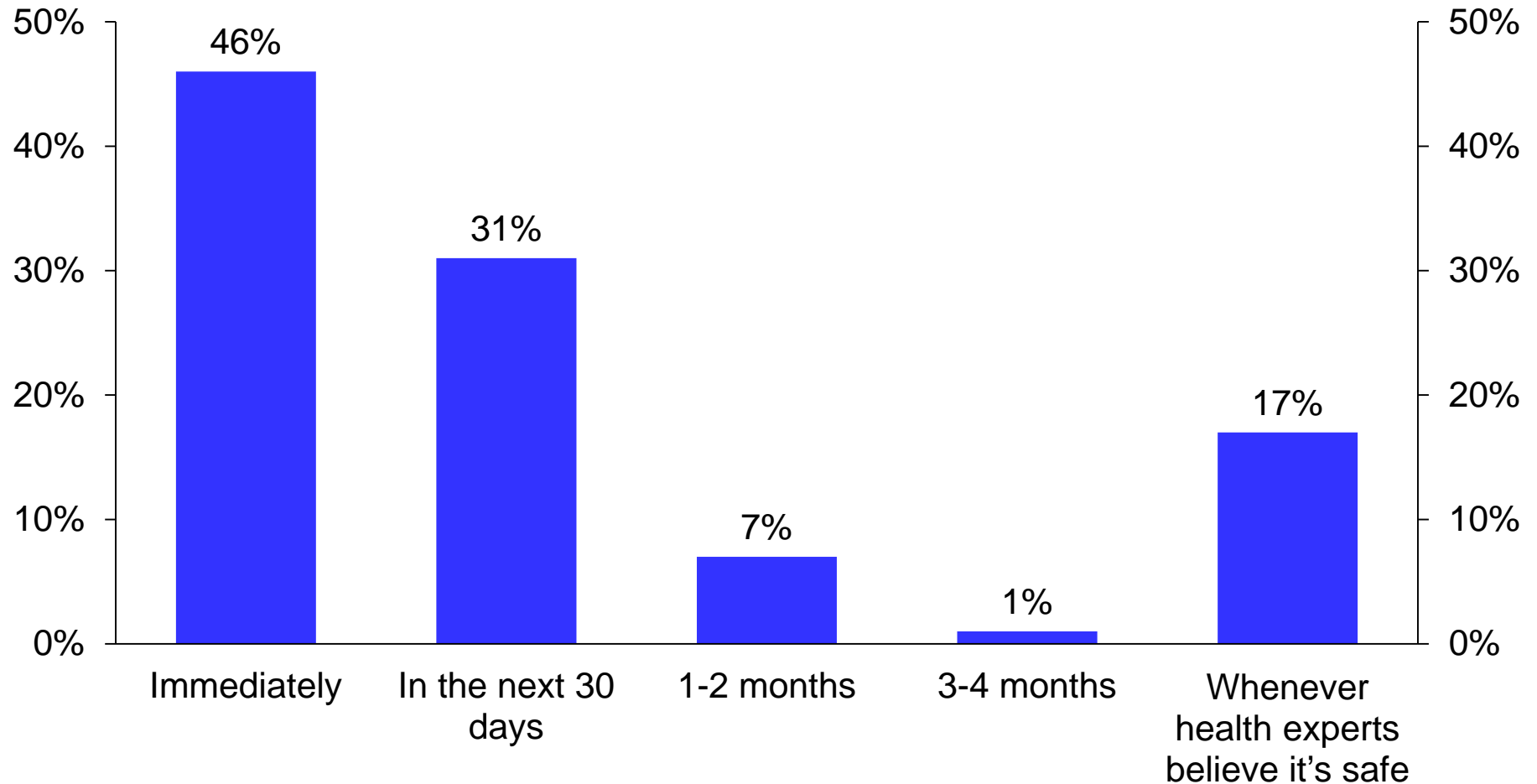


Source: MTA, Bloomberg Finance LP, DB Global Research

# Small businesses want to reopen the economy immediately



**When do you think is the appropriate time to lift the non-essential business and stay-at home restrictions in your state or city?**



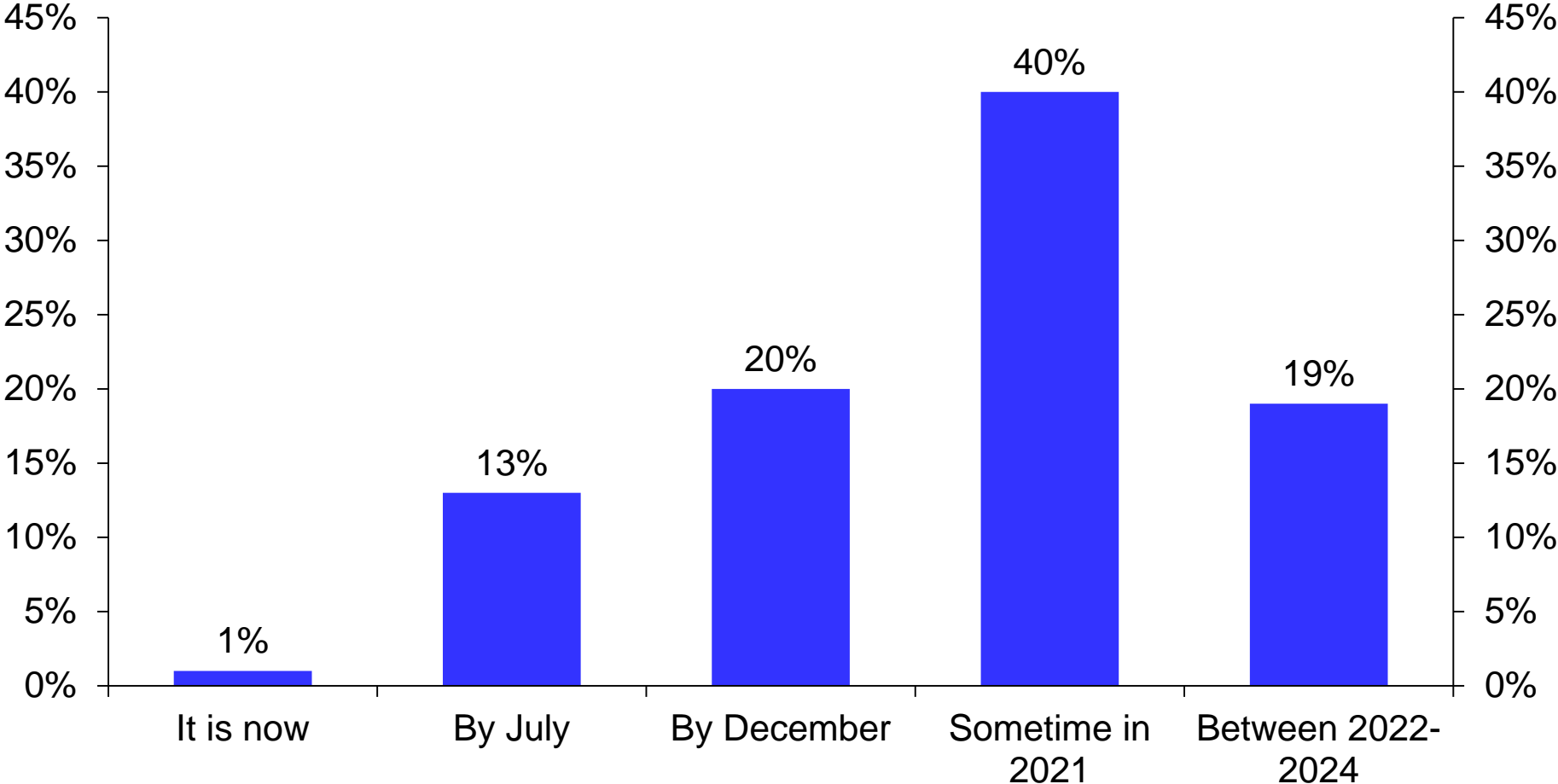
This NFIB Small Business Loan Programs and Re-Opening survey was conducted with a random sample of NFIB's membership database of about 300,000 small business owners. The survey was conducted by email on May 1, 2020. NFIB collected 842 usable responses.

Source: NFIB, DB Global Research

# Small businesses very bearish about the economic outlook



**How long do you think it will take before your local economy is back to near pre-crisis levels of economic activity?**



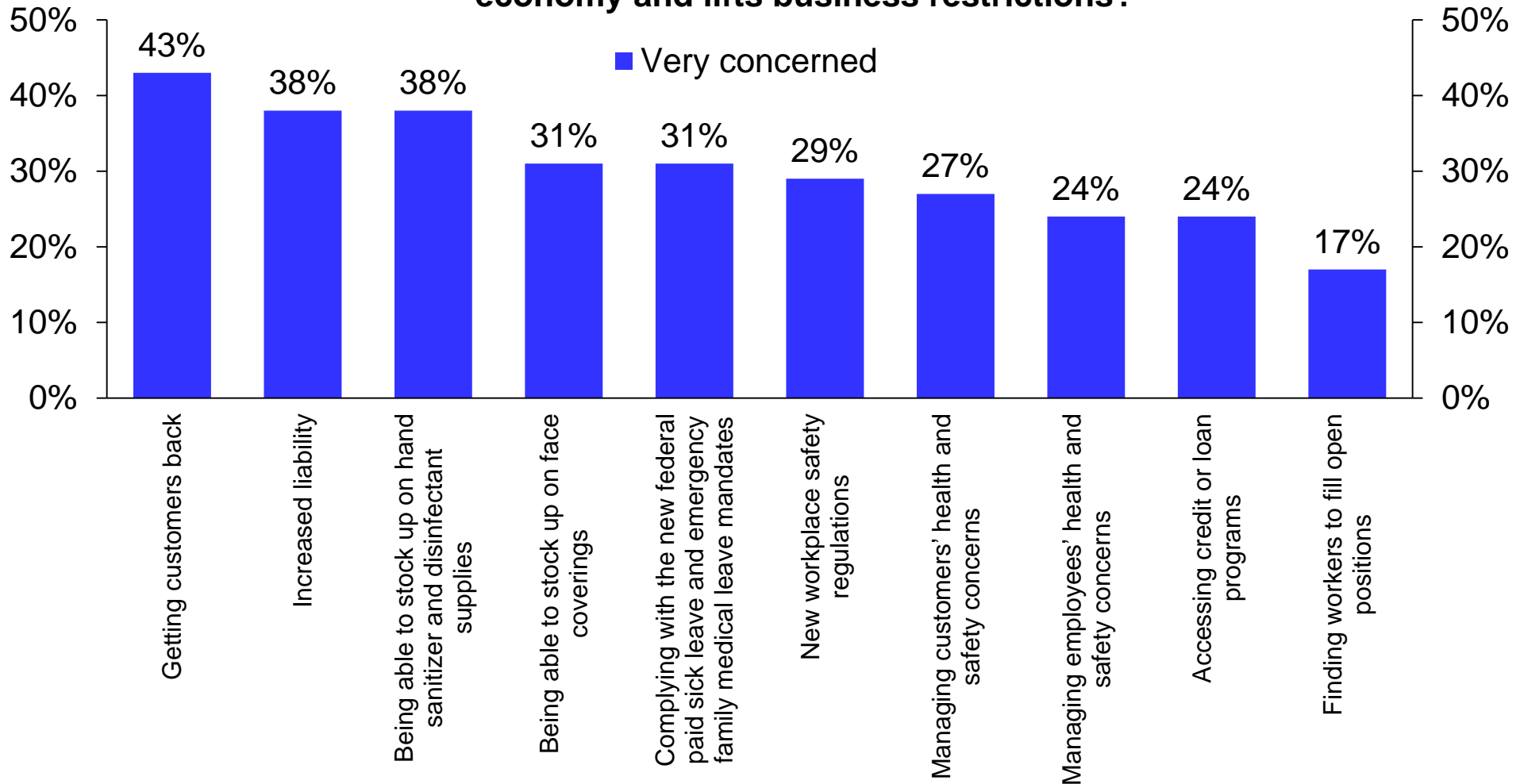
This NFIB Small Business Loan Programs and Re-Opening survey was conducted with a random sample of NFIB’s membership database of about 300,000 small business owners. The survey was conducted by email on May 1, 2020. NFIB collected 842 usable responses.

Source: NFIB, DB Global Research

# Small businesses most worried about getting customers back



How concerned are you about the following when your state re-opens the economy and lifts business restrictions?



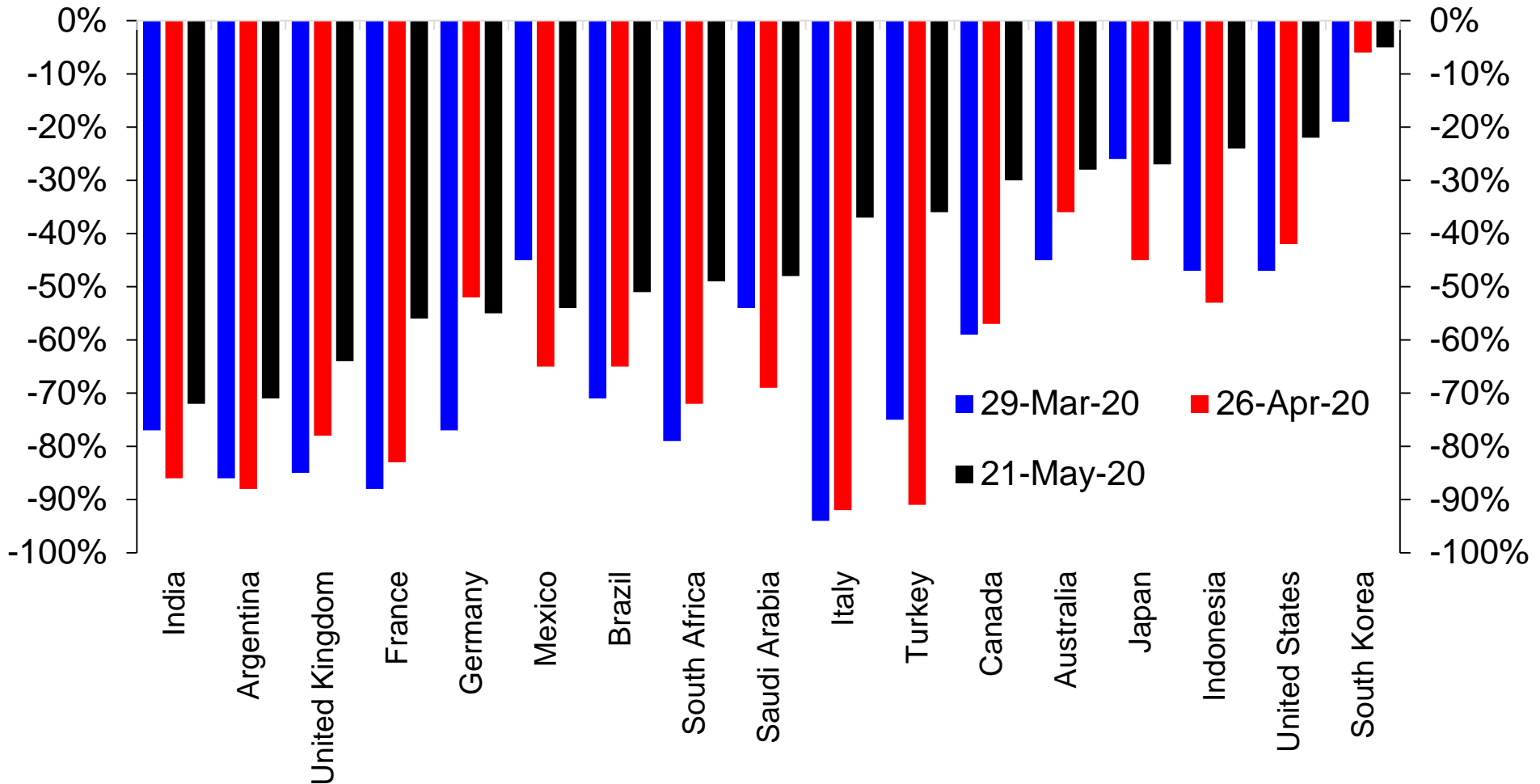
This NFIB Small Business Loan Programs and Re-Opening survey was conducted with a random sample of NFIB's membership database of about 300,000 small business owners. The survey was conducted by email on May 1, 2020. NFIB collected 842 usable responses.

Source: NFIB, DB Global Research

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



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



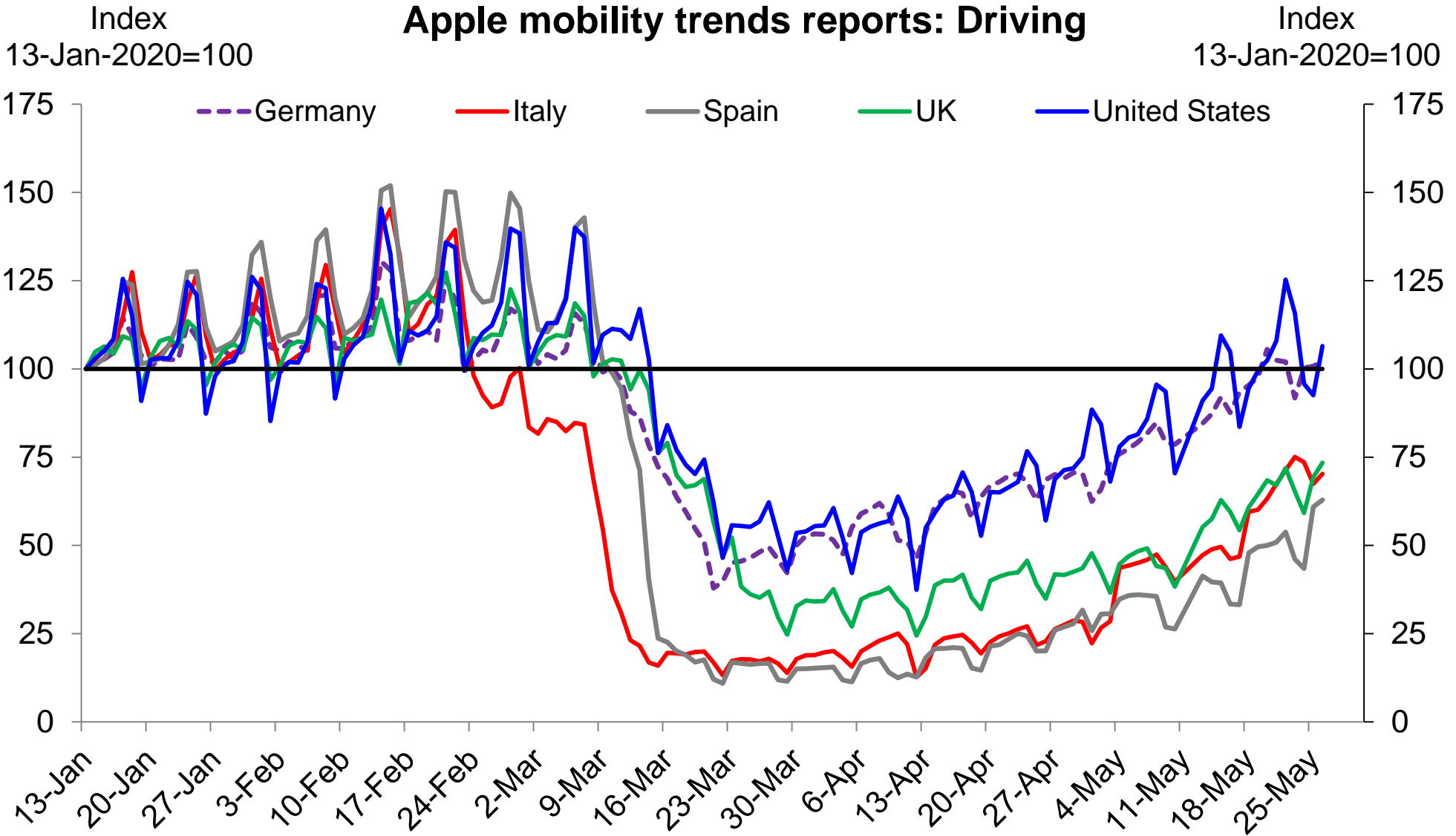
\*Mobility trends for places like restaurants, cafes, shopping centers, theme parks, museums, libraries, and movie theaters. \*\*Changes for each day are compared to a baseline value for that day of the week. The baseline is the median value, for the corresponding day of the week, during the 5-week period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

Source: Google, DB Global Research

# US and Germany car traffic back to January and February levels



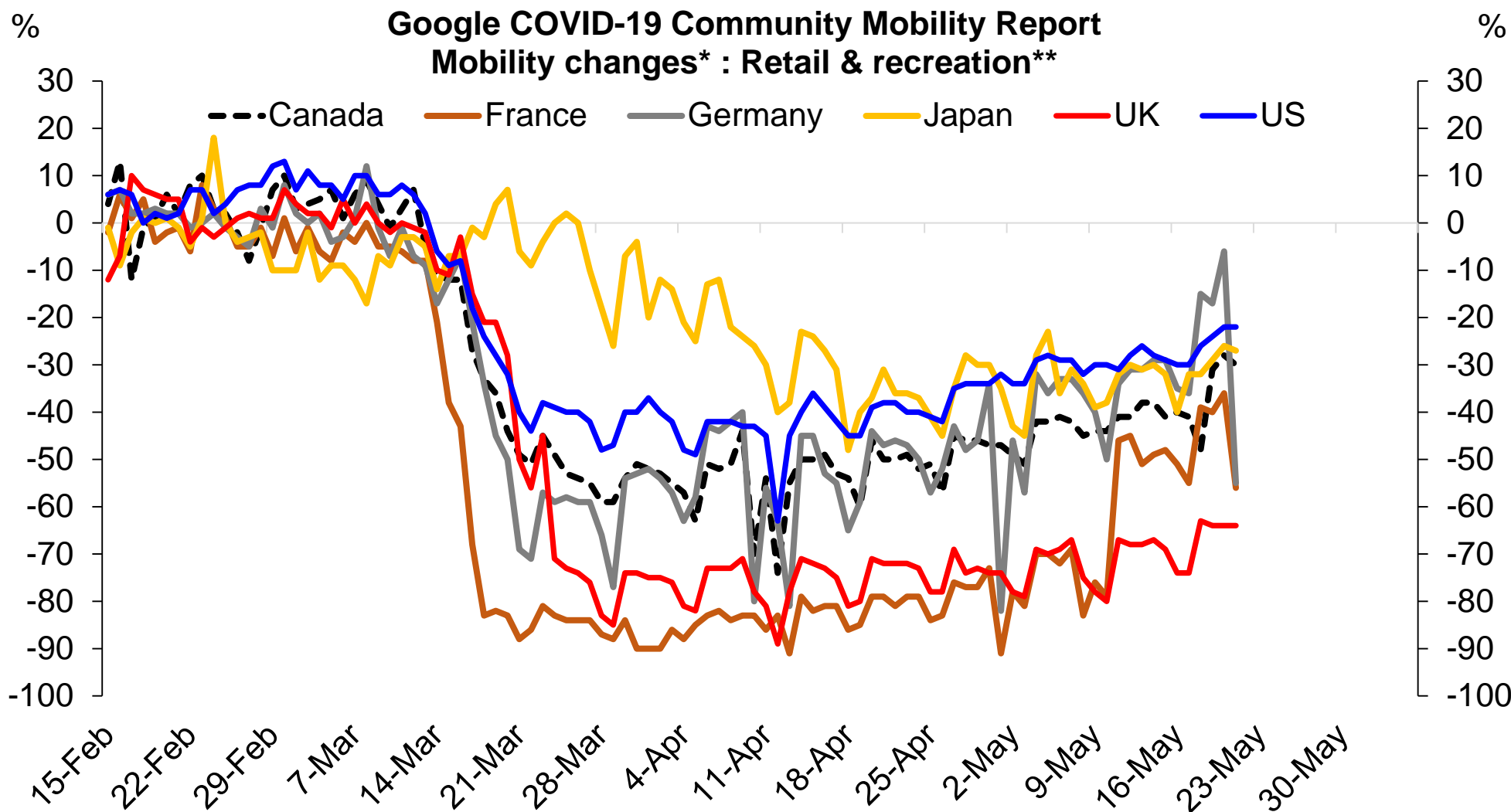
## Apple mobility trends reports: Driving



The data shows a relative volume of directions requests per country compared to a baseline volume on January 13th, 2020.

Source: Apple, DB Global Research

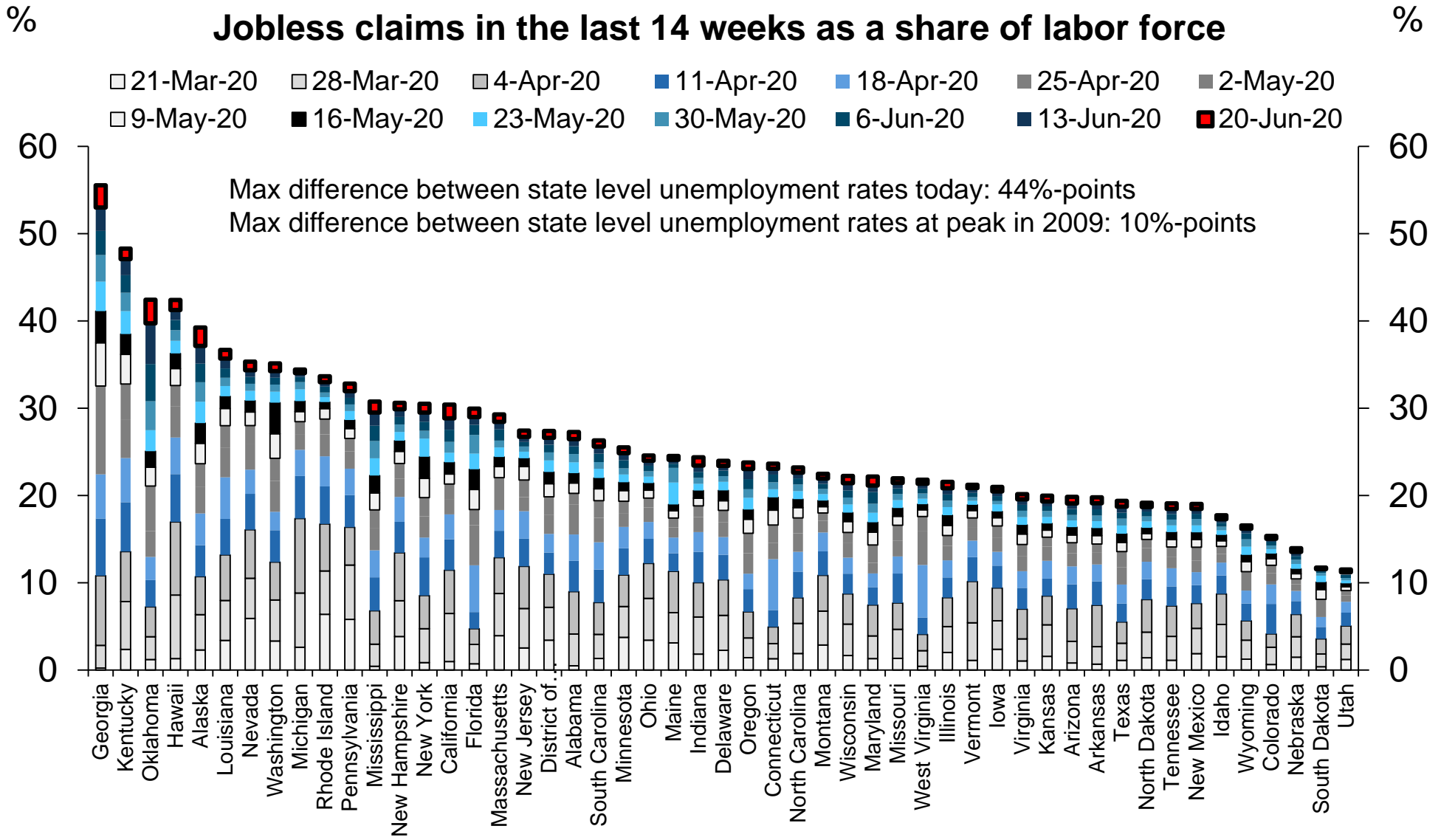
# Still a lot of people moving around in the US relative to other countries



\*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

# In some states the unemployment rate is between 30% and 60%. In other states it is less than 20%



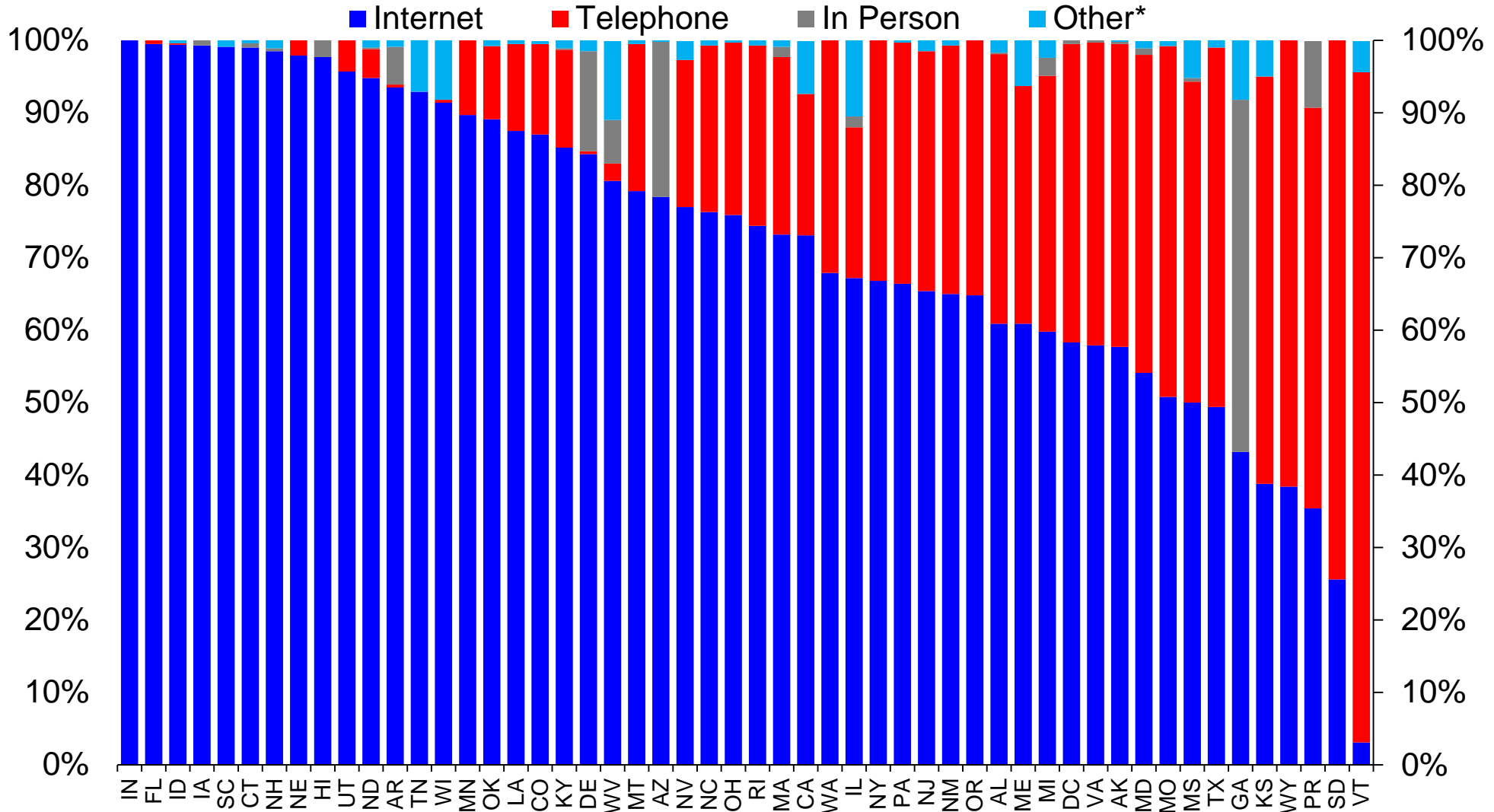
Source: Department of Labor, BLS, DB Global Research



# Filing method for unemployment claims: Some states all by telephone, other states all via internet



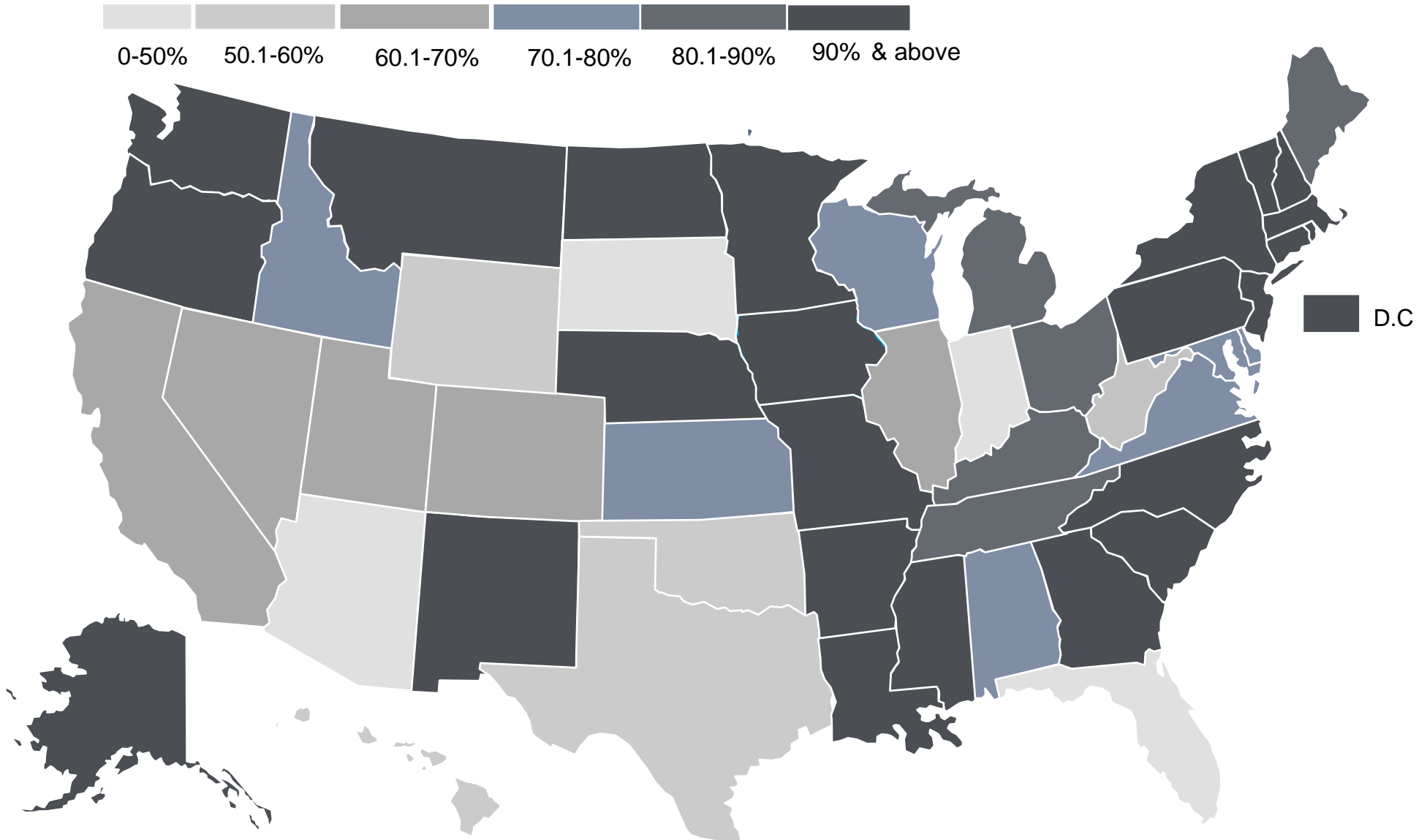
## Unemployment Insurance Initial Claims Filing Method



Other includes Mail, Employer, Other and Missing. This report is based on Benefit Accuracy Measurement data for UI claimants with benefit years beginning in the period from CY 2019 QTR 1 to CY 2019 QTR 4. These percentages are estimated from sample data and are subject to sampling and non-sampling error.

Source: United States Department of Labor, DB Global Research

# April 2020: Percentage of unemployed receiving unemployment benefits in each state



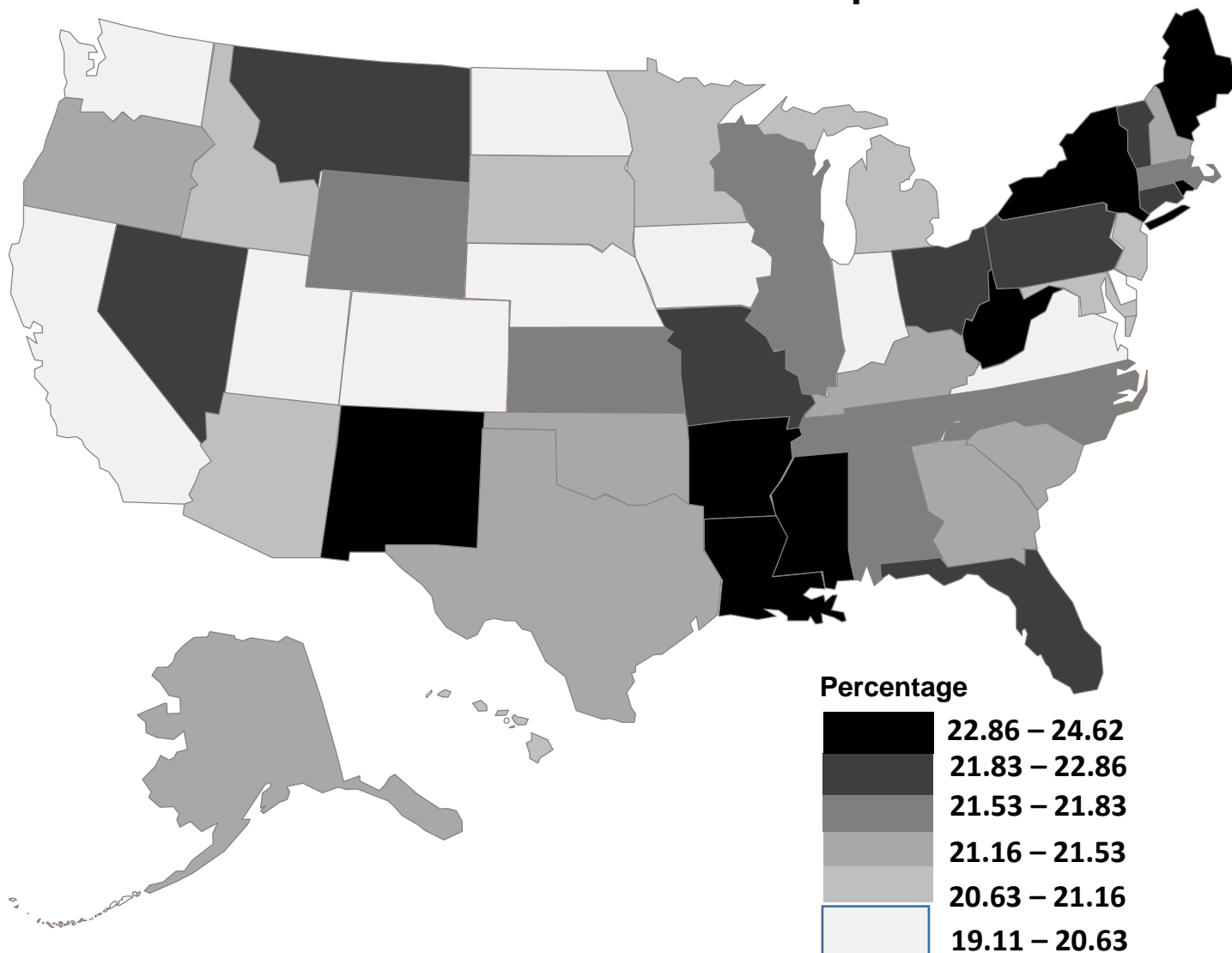
We calculated states' percentage share by taking the continued-claims figures for the same week as the reference week for the BLS's household survey, then dividing it by the total unemployment figure.

Source: DOL, BLS, Haver Analytics, 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

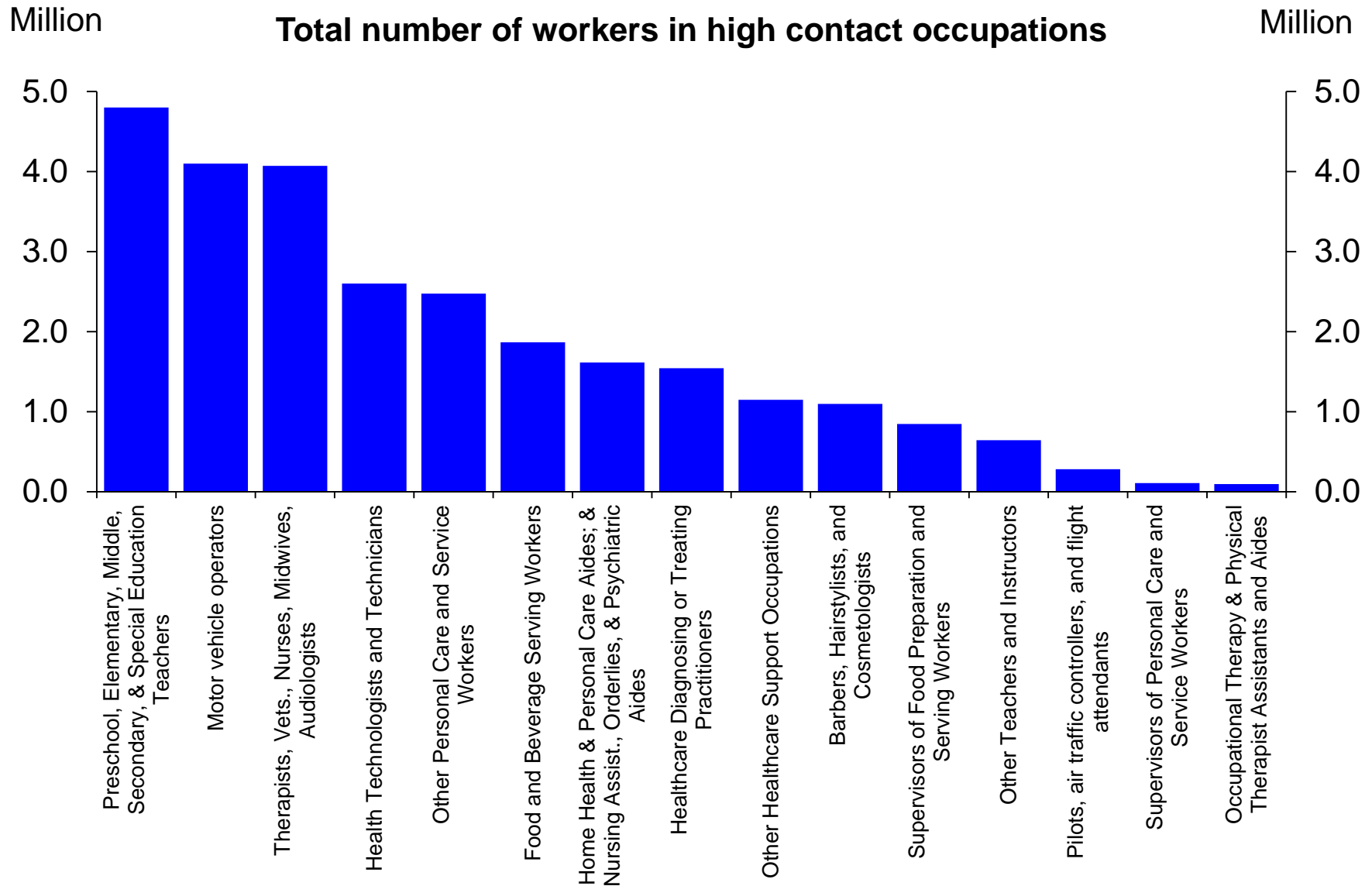


## Share of contact intensive occupations



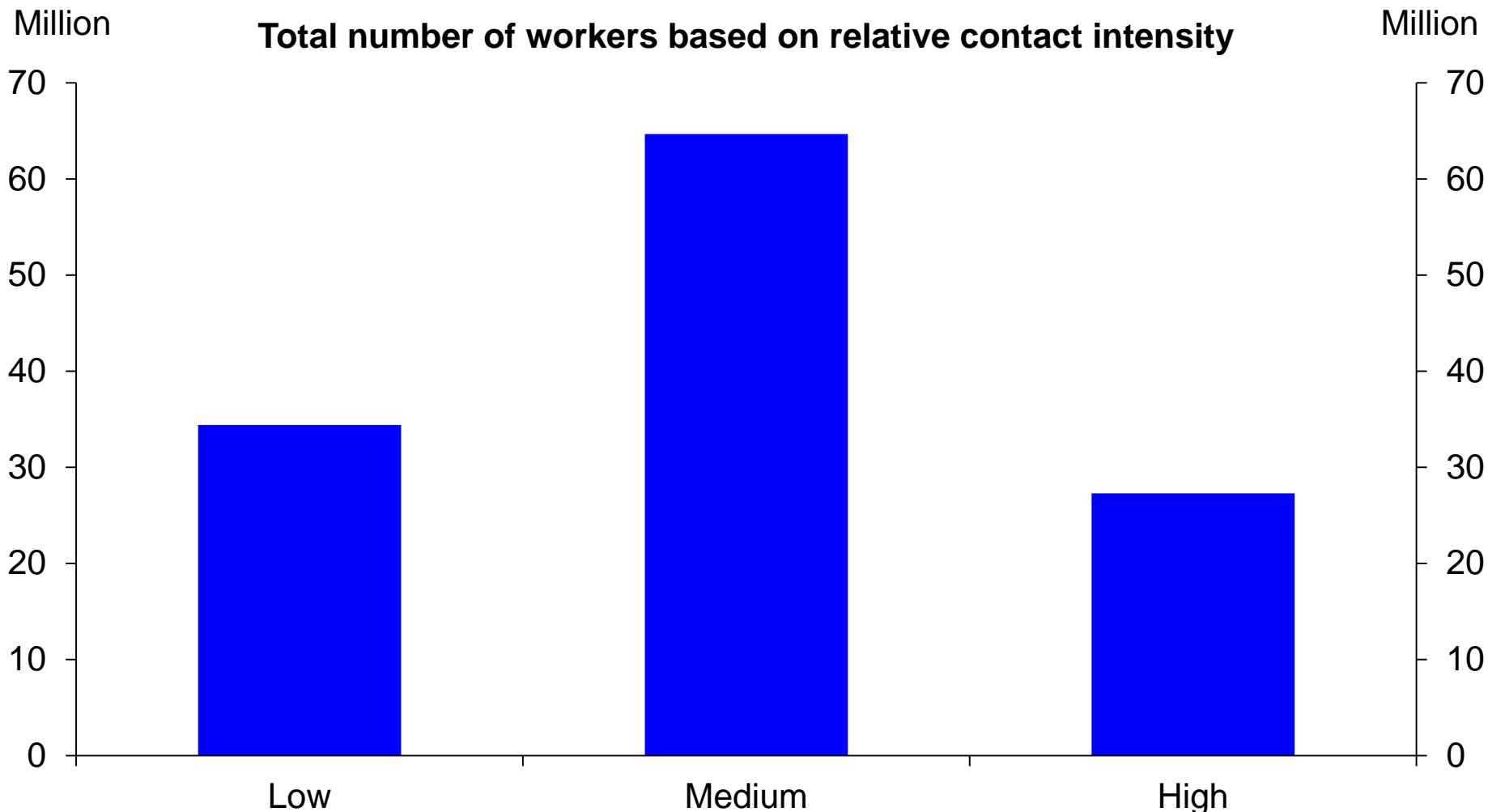
Source: St. Louis Fed, DB Global Research

# 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

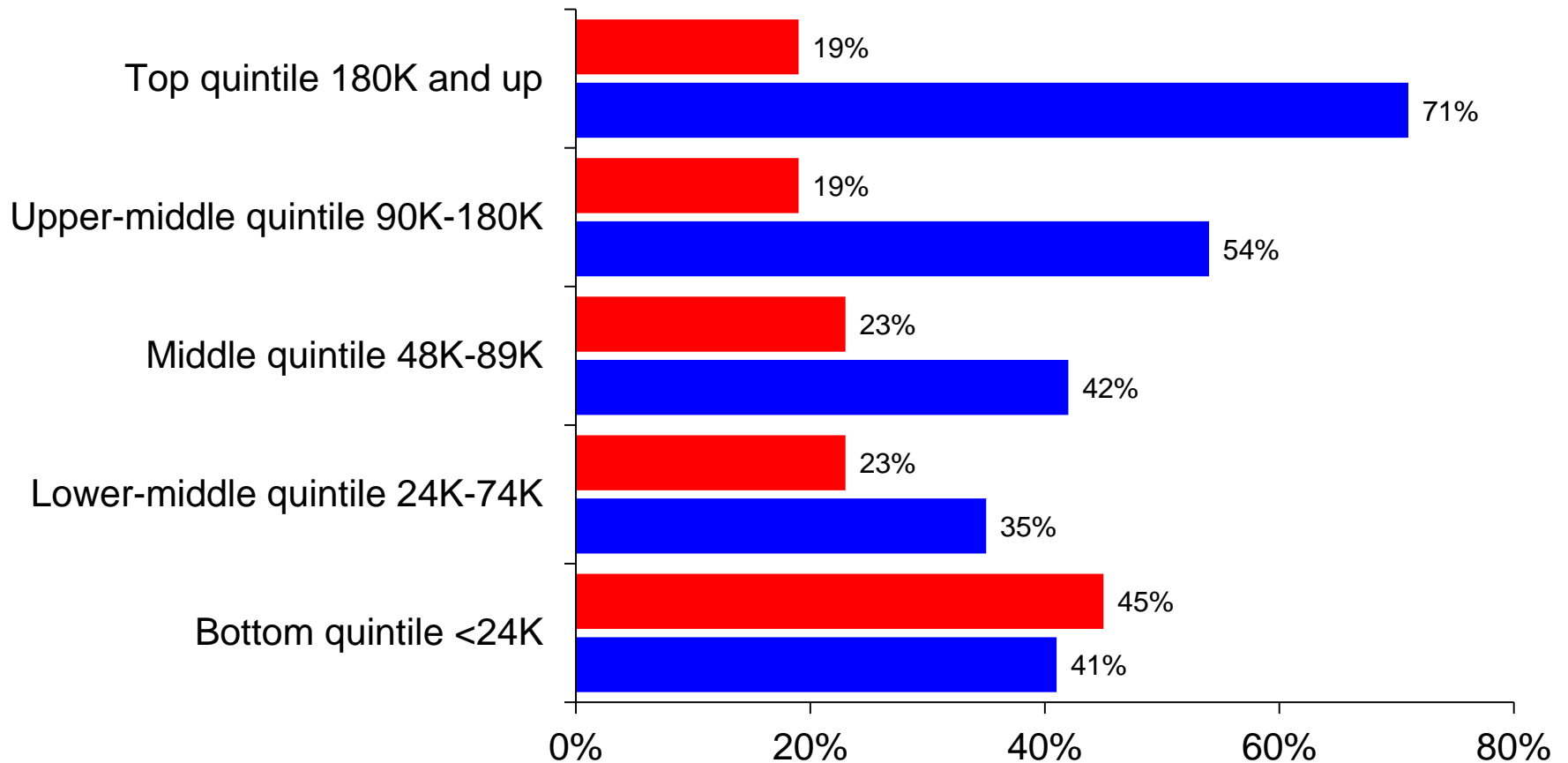
Source: St. Louis Fed, 2017 American Community Survey, O\*NET, DB Global Research

# More difficult for lower income groups to work from home



## Working from home by income group in the United States

■ Stayed home from work and unable to work ■ Worked from home



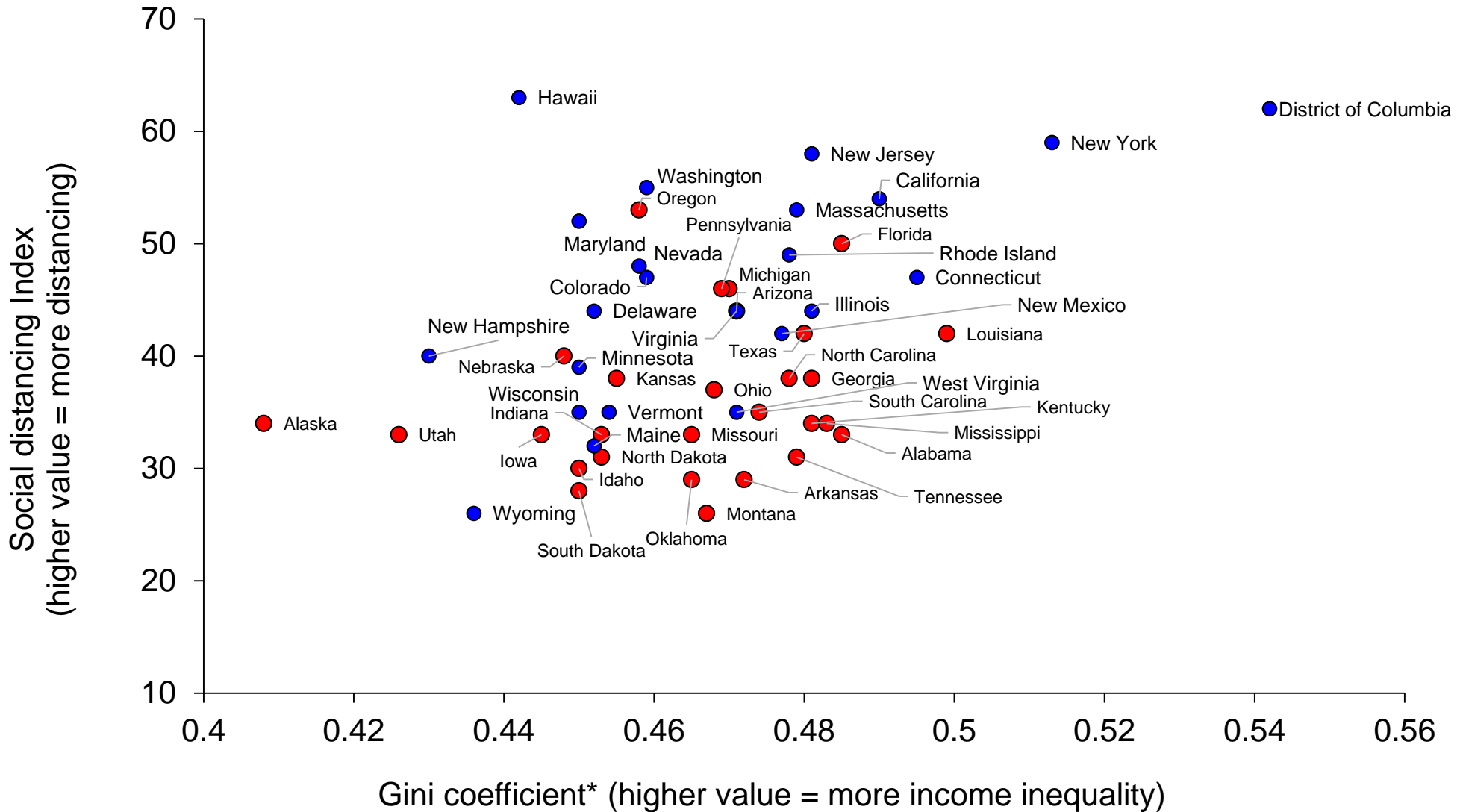
Sample of 8572 randomly selected adults from the Gallup Panel, interviewed over the phone from March 16 to March 22

Source: Reeves, Richard V. and Jonathan Rothwell, "Class and COVID: How the less affluent face double risks,"  
Brookings Institution March 2020 DB Global Research

# Social distancing and income inequality



## United States: Social distancing vs income inequality



\* US Census American Community Survey 2016

Source: Census, University of Maryland COVID-19 Impact Analysis Platform, DB Global Research

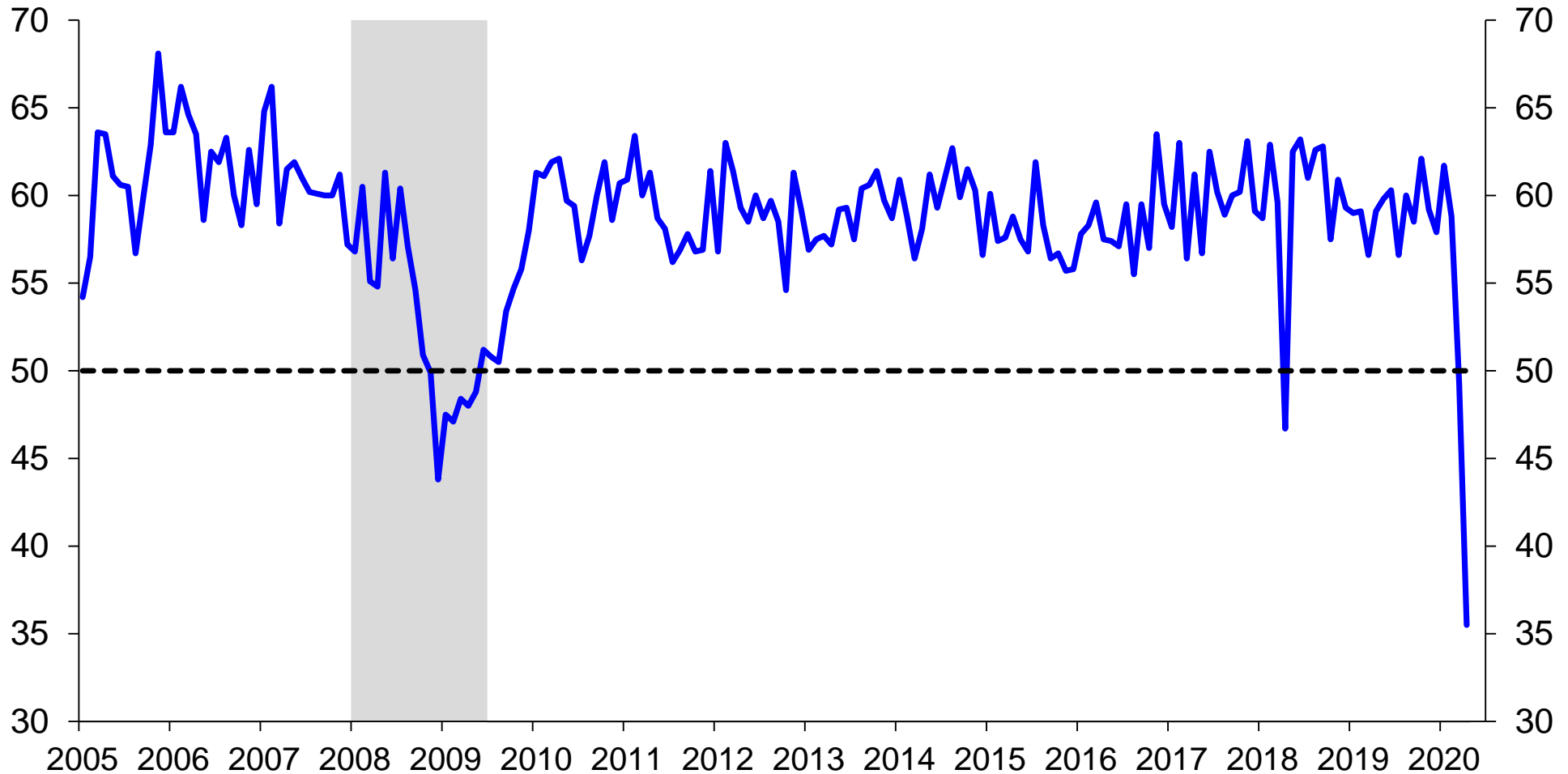
# Credit managers seeing more distress



Index

## NACM US Credit Managers Combined Sector Dollar Collections

Index



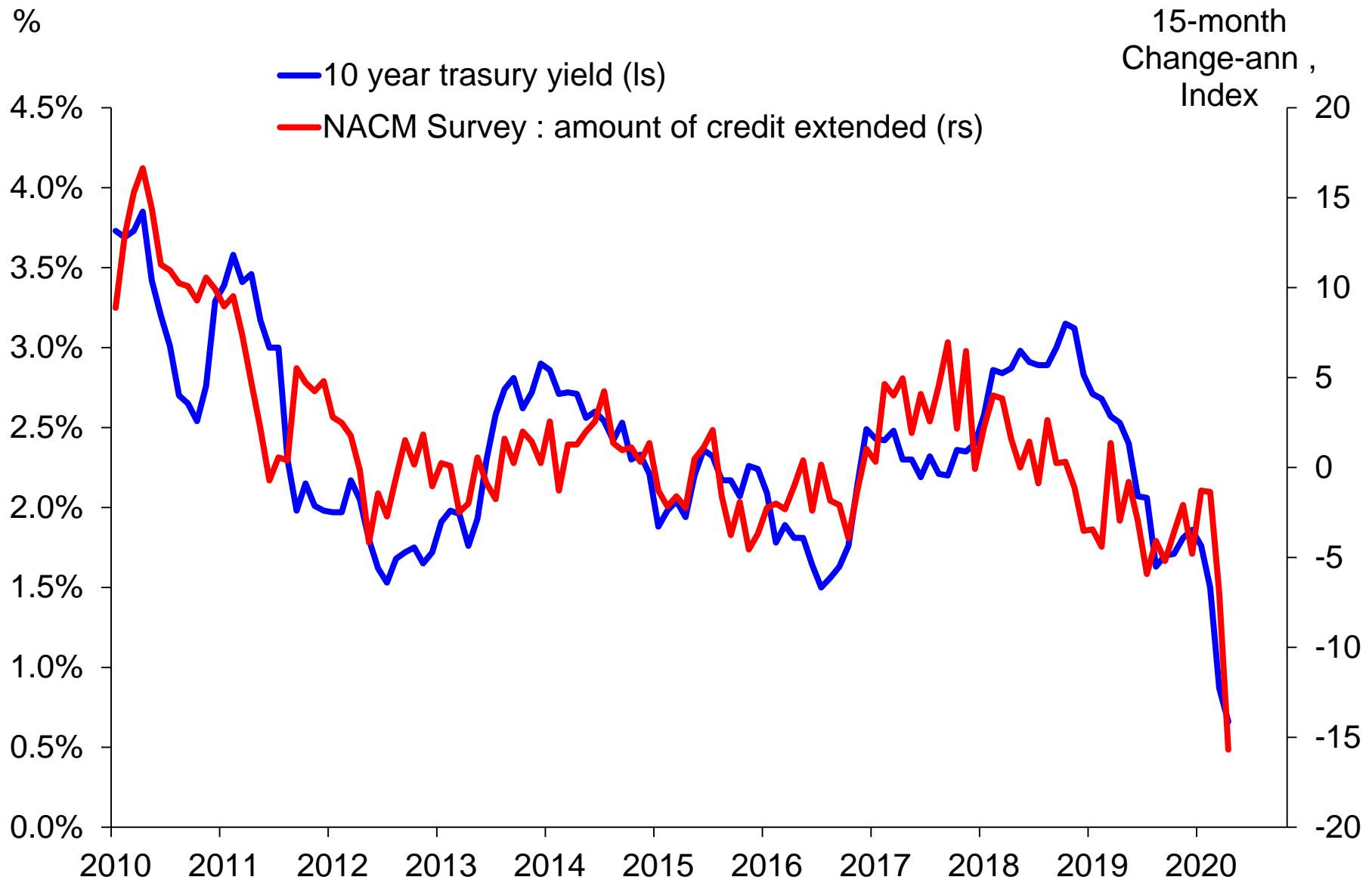
The Credit Manager Survey (CMI) index, published is based on a survey of approximately 1,000 trade credit managers in the second half of each month, with about equal representation between the manufacturing and service sectors. The survey asks respondents to comment whether they are seeing improvement, deterioration or no change for various favorable and unfavorable factors. "Dollar collections" is one of such favorable factors. Higher dollar collections represent improved cash flow for the selling firm and the ability of buying firms to pay.

Source: National Association of Credit Management , Bloomberg Finance LP, DB Global Research



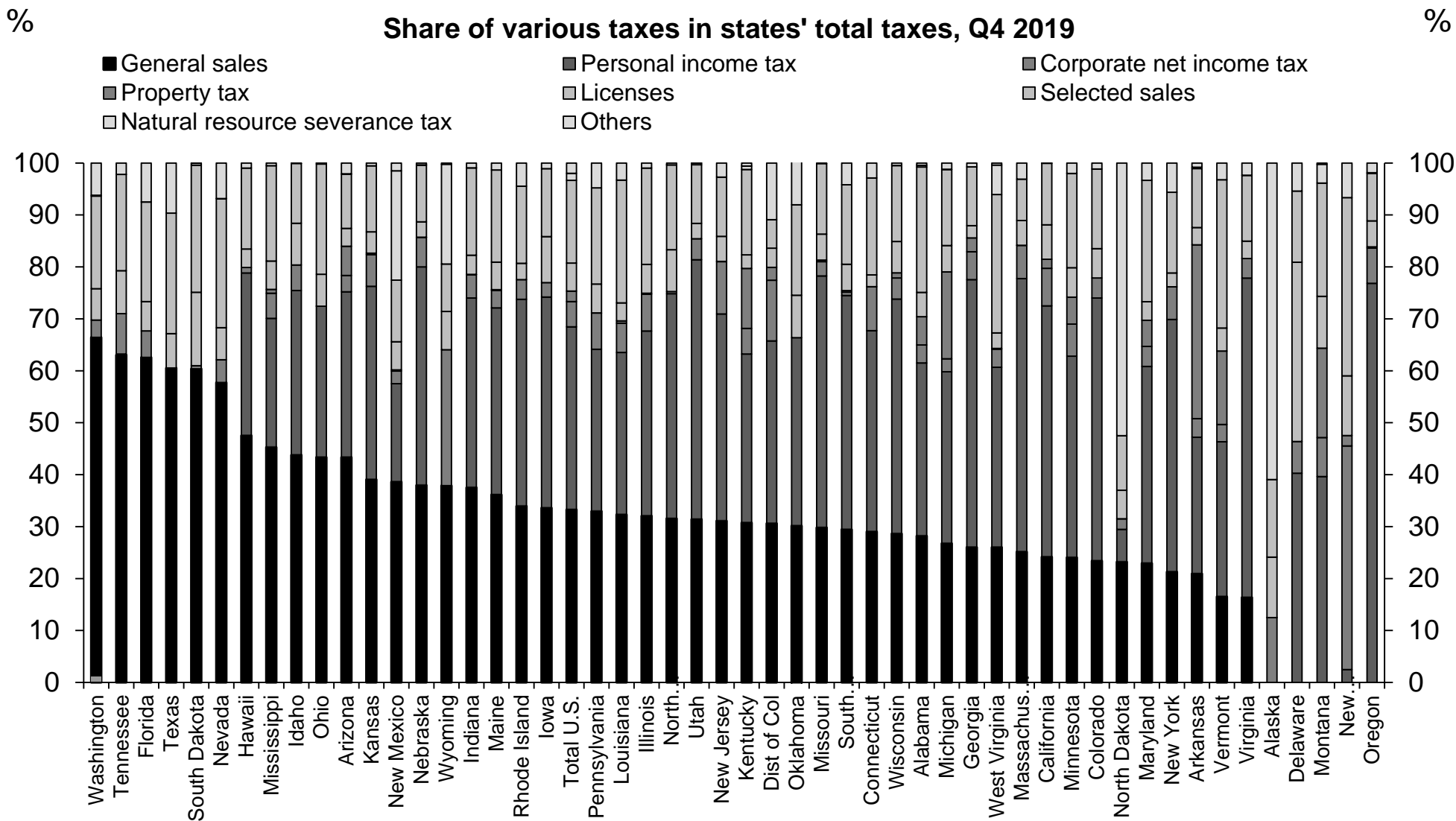


# 10s vs credit managers' index



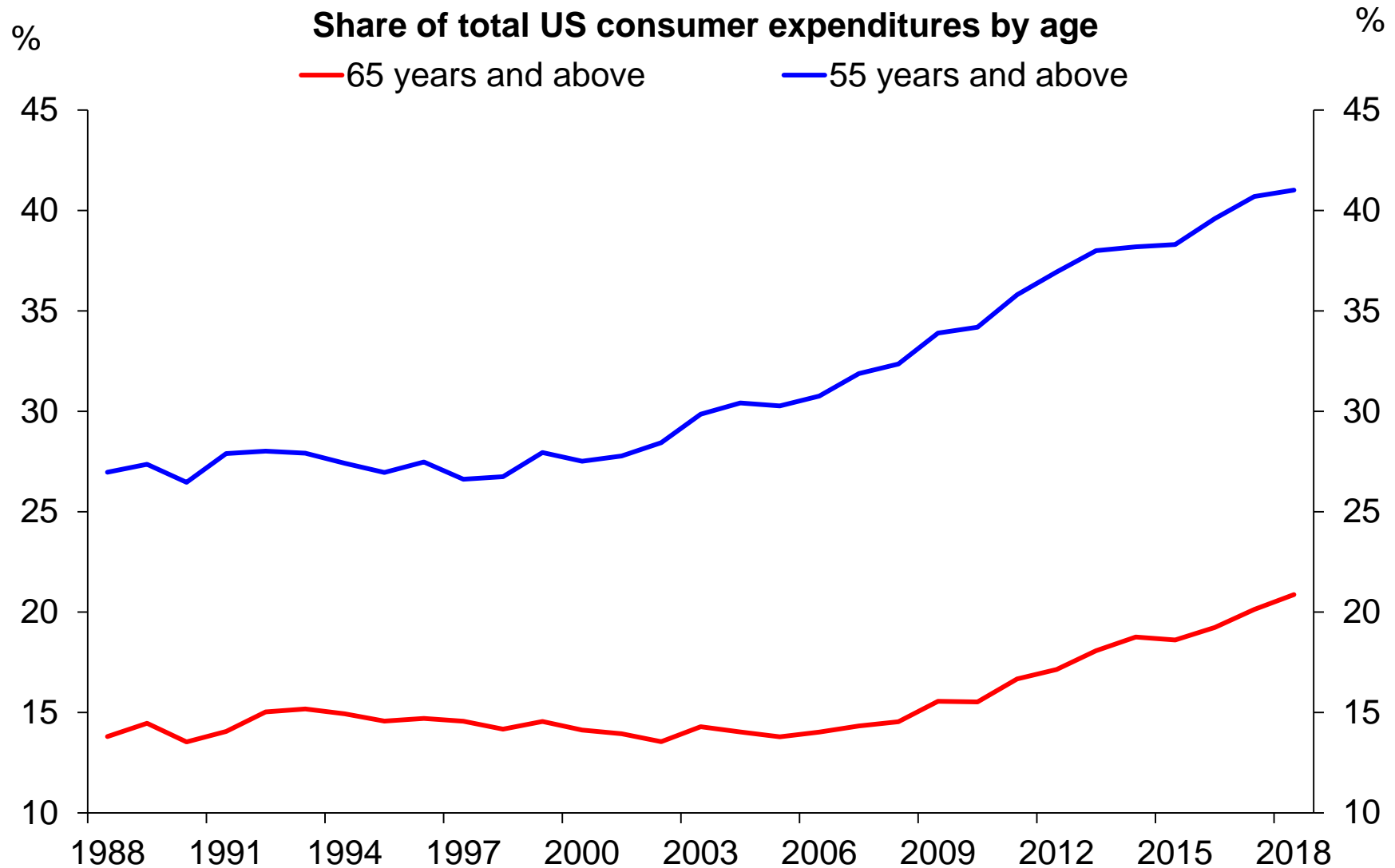
Source: NACM, FRB, Haver Analytics, DB Global Research

# Local government: Sales taxes as a share of total tax collections



Source: Census, Haver Analytics, DB Global Research

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

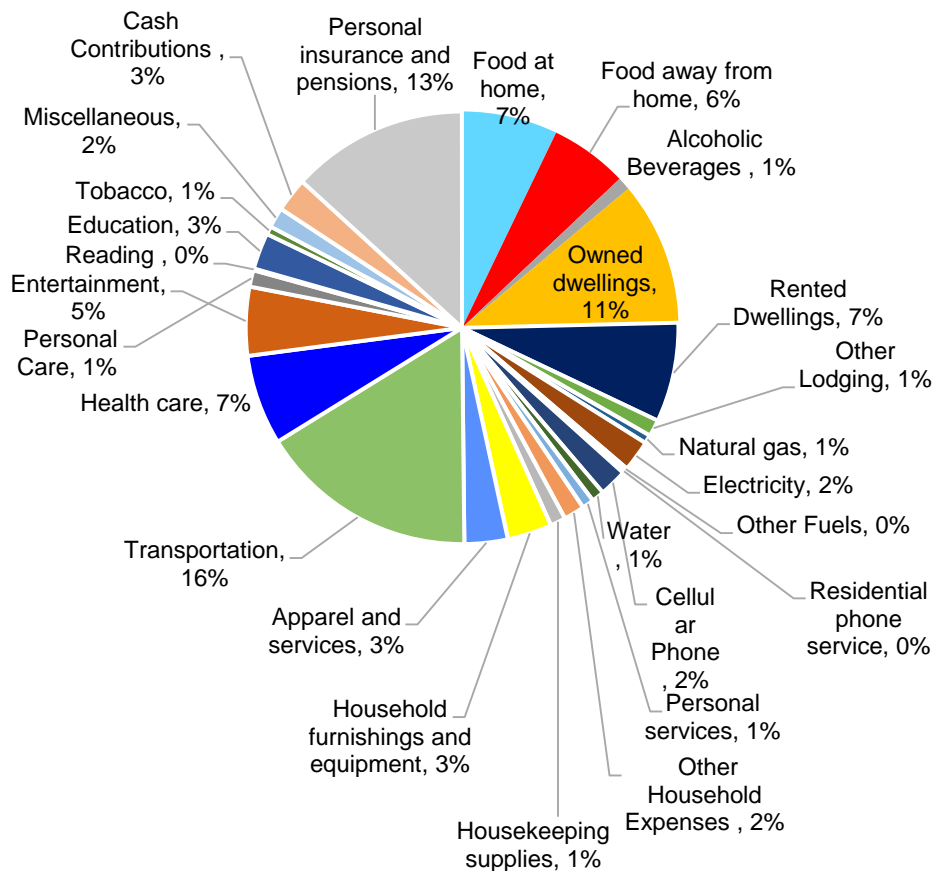


Source: BLS, Haver Analytics, DB Global Research

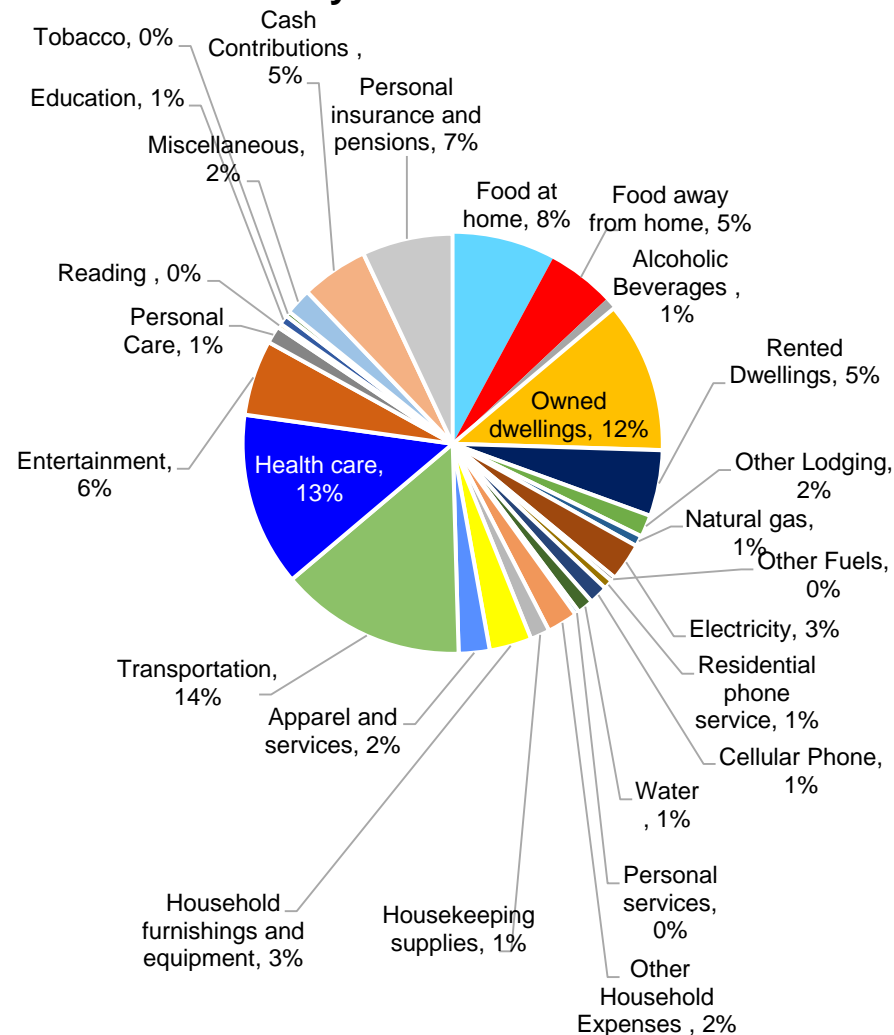
# Consumption patterns of US consumers above and below 65 years old



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

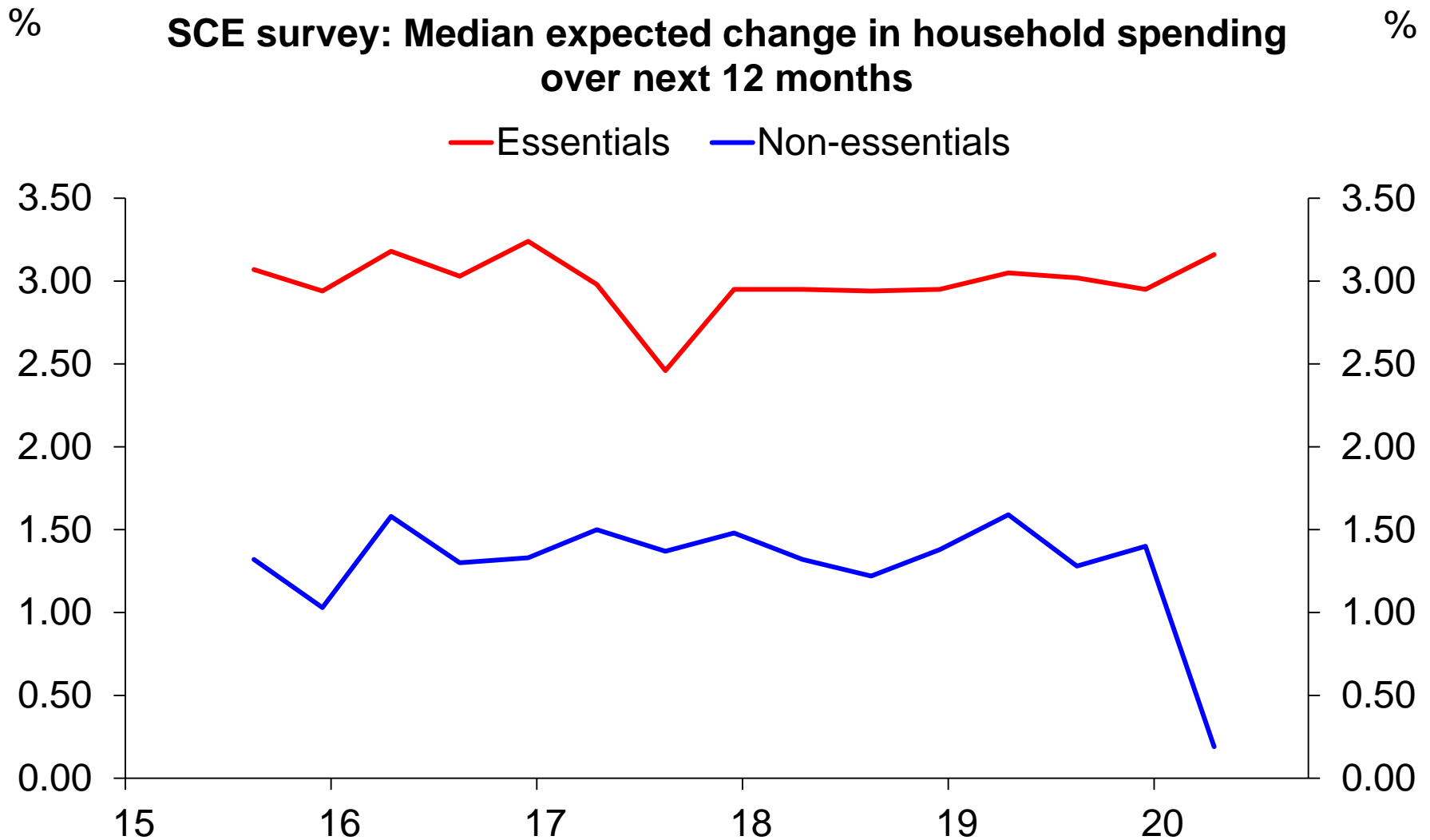


**Consumer expenditure by category :  
65 years and older**



Note: Data for 2018. Source: BLS, Haver Analytics, DB Global Research

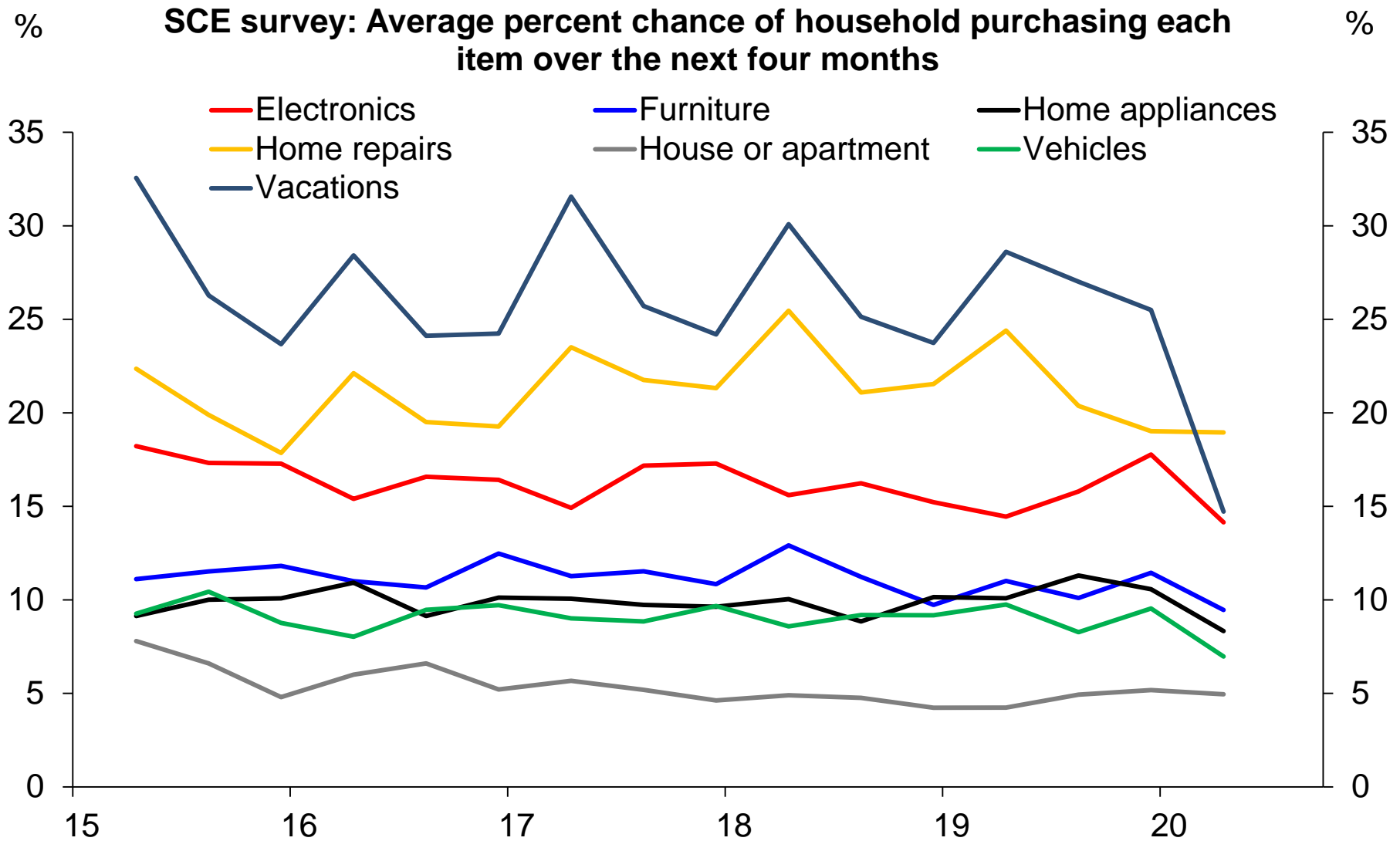
# Households scaling back purchases of non-essentials



Source: NY Fed SCE Household Spending Survey, Haver Analytics, DB Global Research

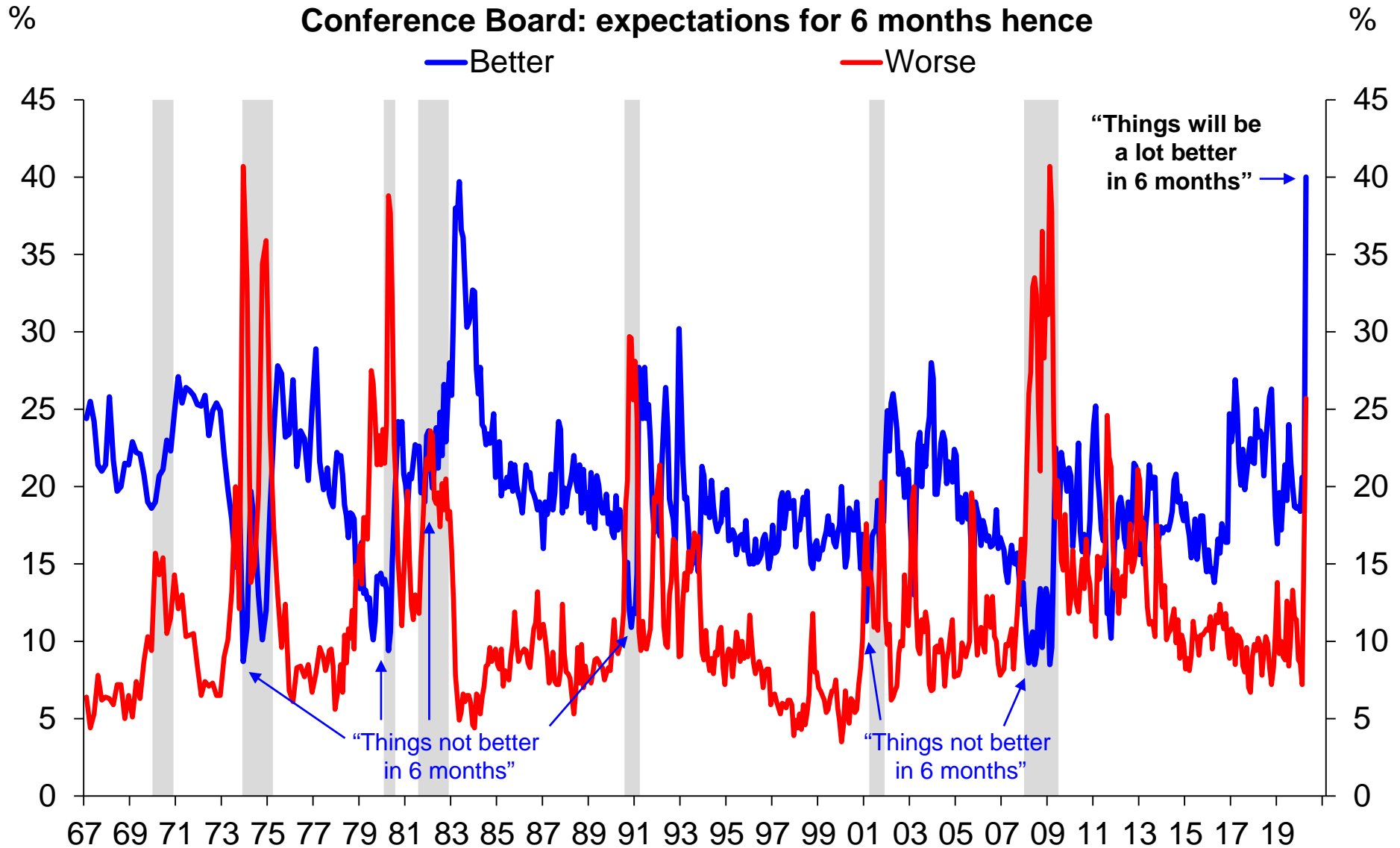


# Households scaling back spending on vacations



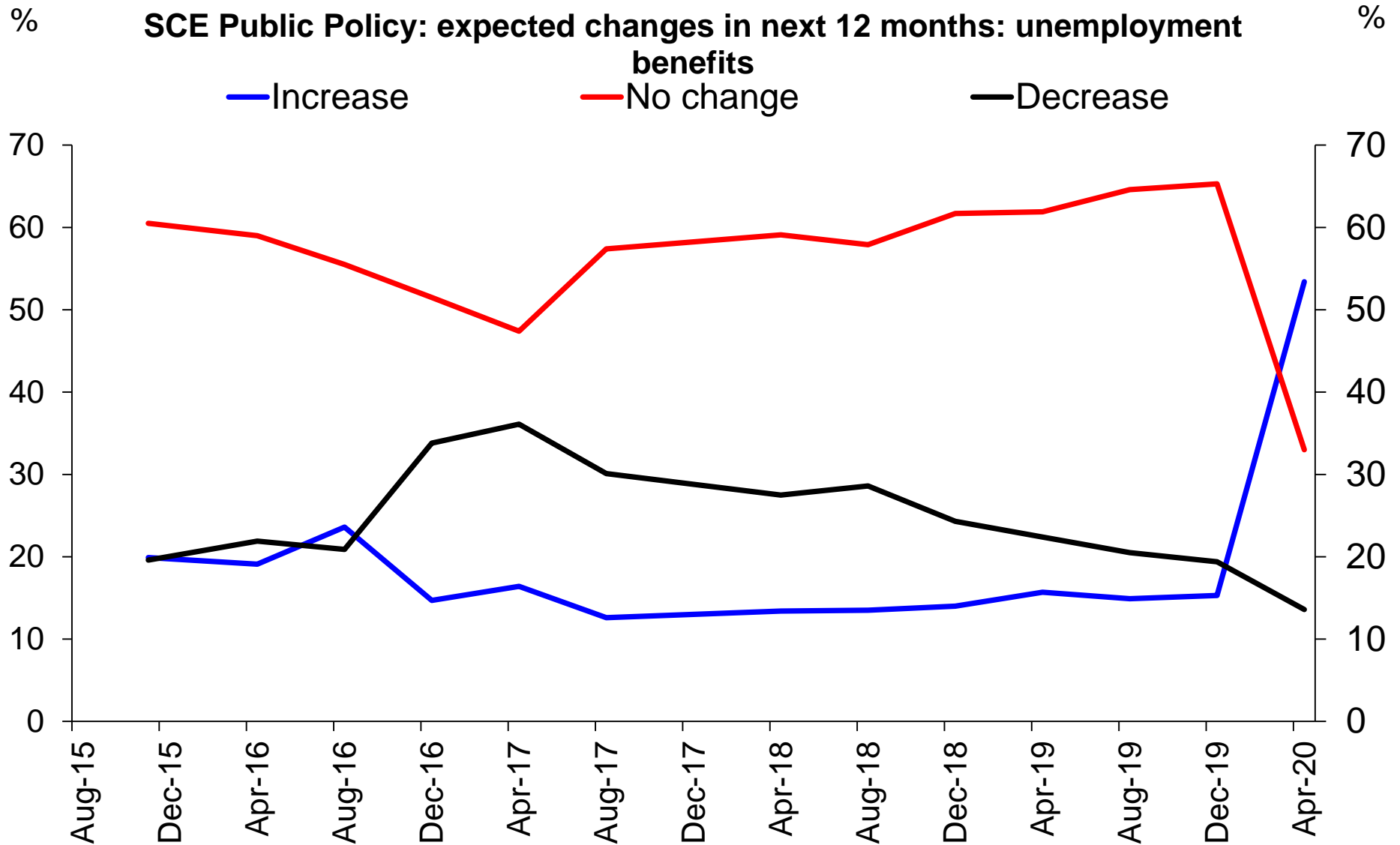
Source: NY Fed SCE Household Spending Survey, Haver Analytics, DB Global Research

# Normally during recessions consumers don't believe things will get better in six months time



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

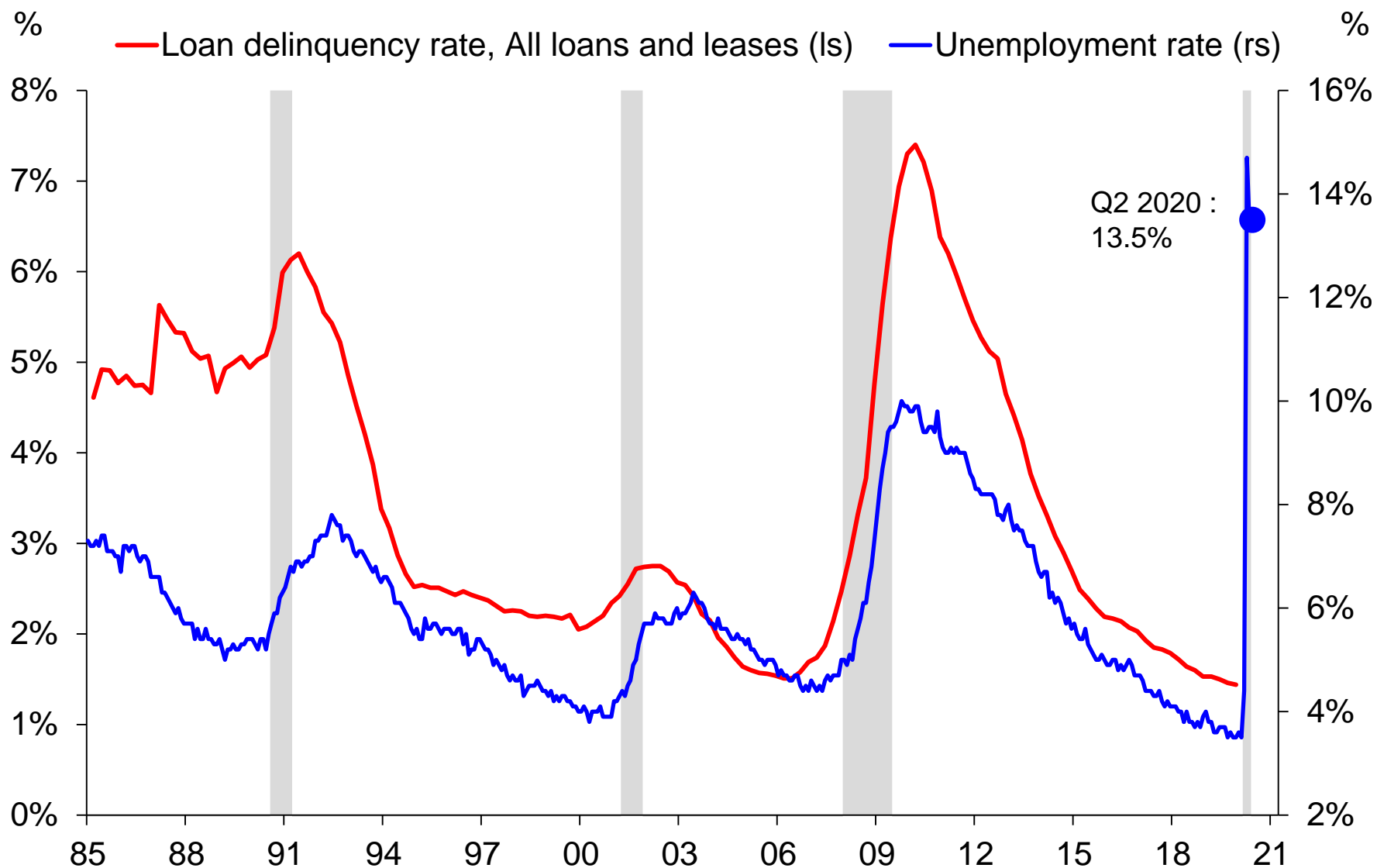
# US: Expected change in unemployment benefits



Source: FRB New York, Haver Analytics, DB Global Research

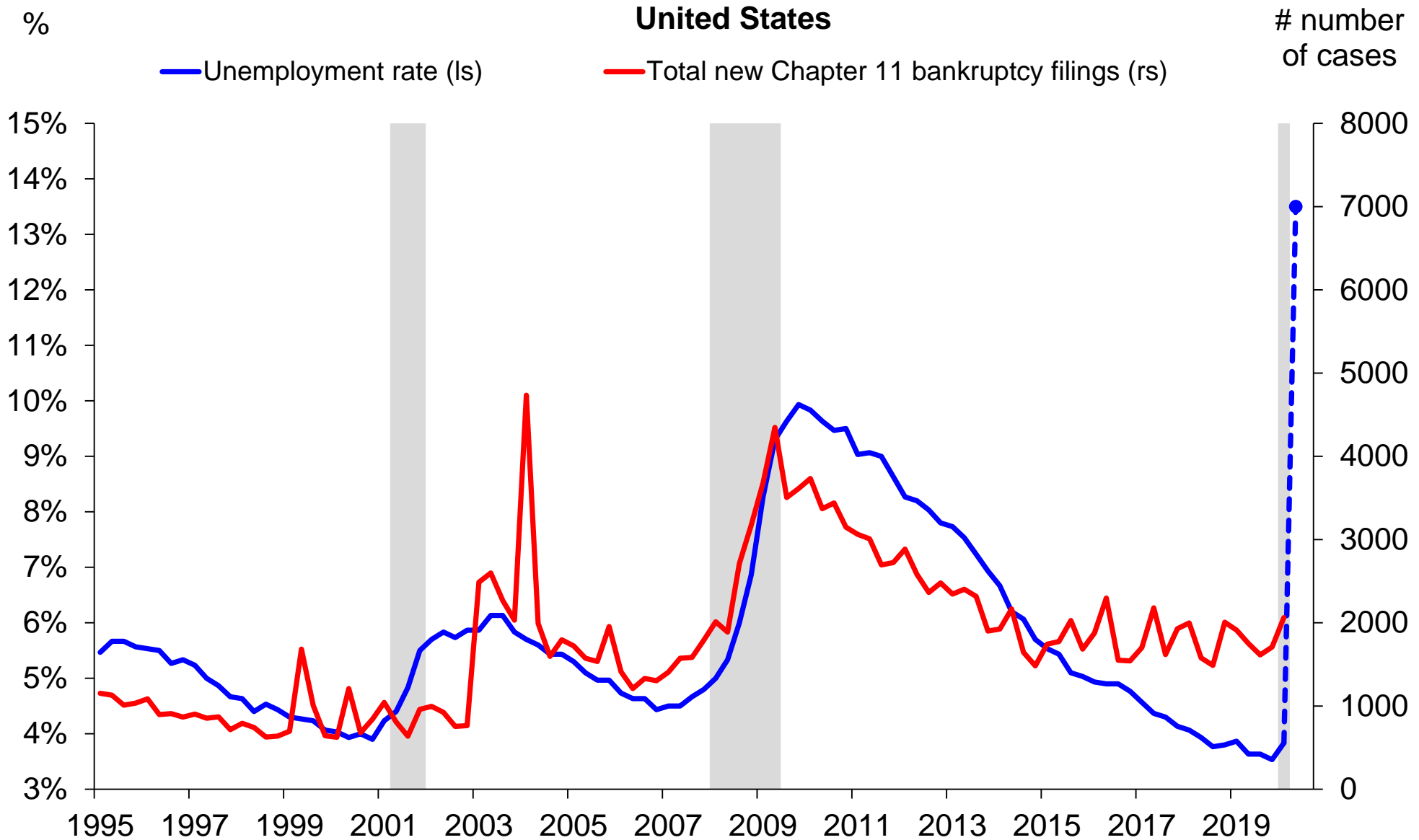


# US: Commercial bank loan delinquency rate highly correlated with the unemployment rate



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

# Conversation is changing from liquidity to solvency



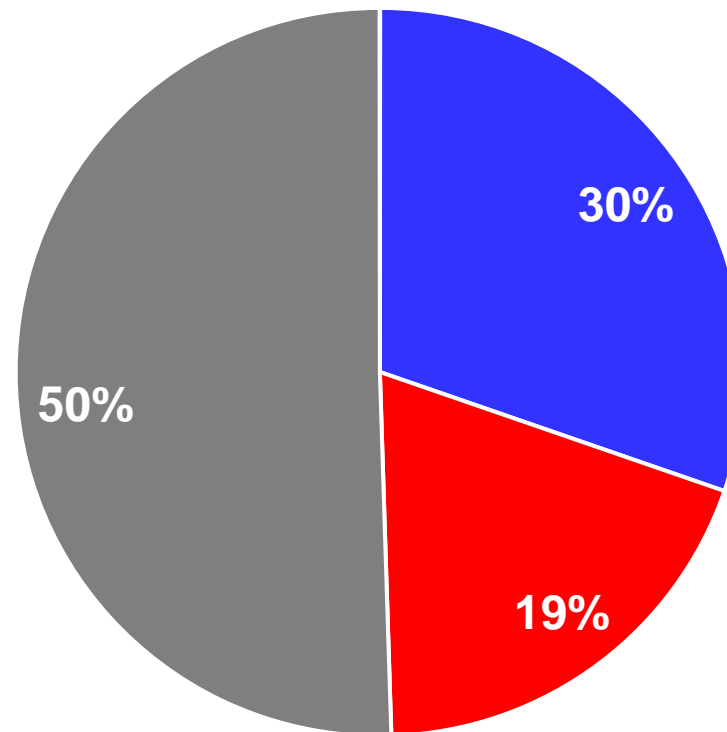
Source: BLS, Administrative Office of US Courts, Haver Analytics, Bloomberg Finance LP, DB Global Research



# Households withdrawing money from retirement accounts

**“In the last 60 days, have you taken any money out of your retirement savings account due to coronavirus-related circumstances?”**

■ Yes ■ No, but plan to ■ No, and don't plan to



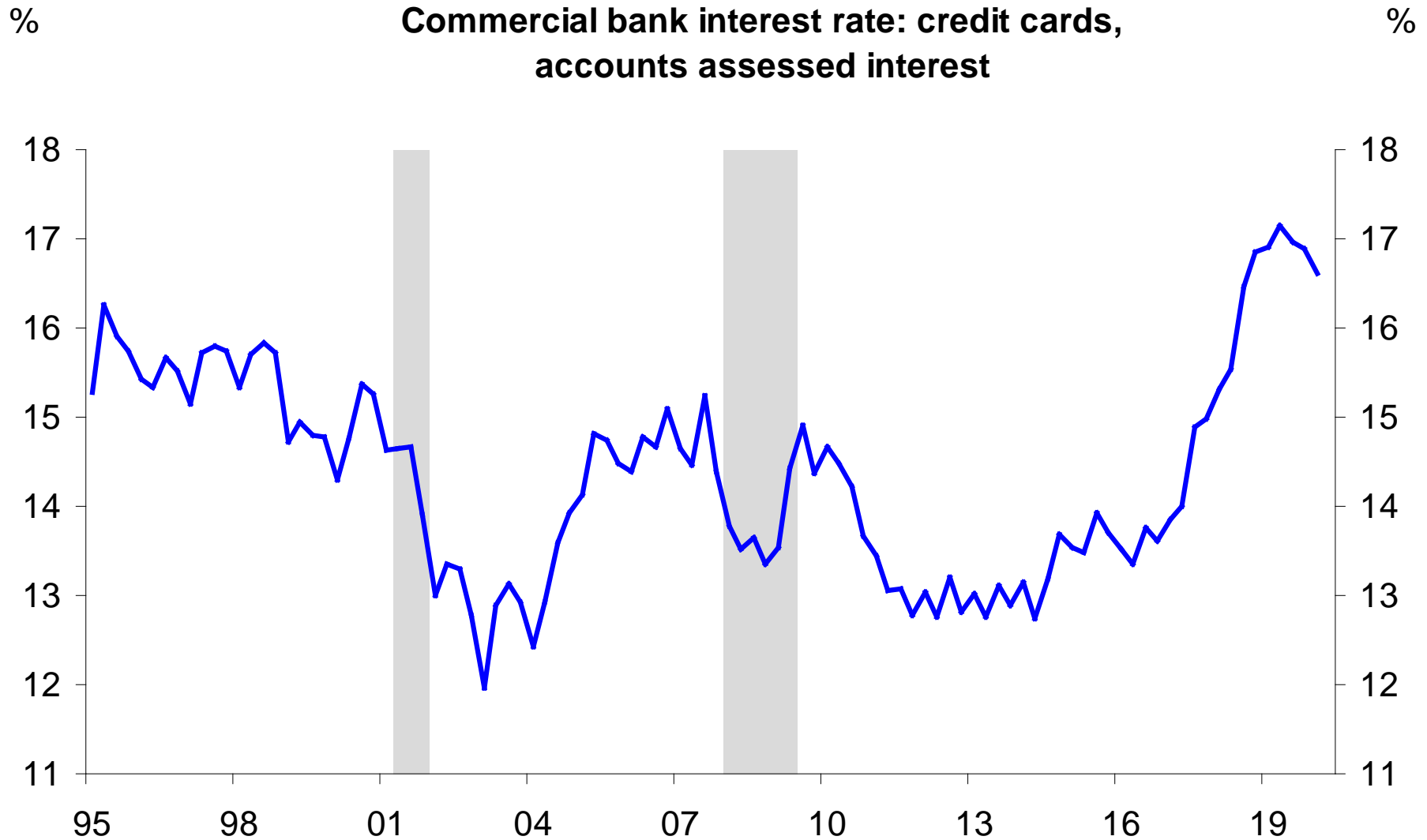
MagnifyMoney conducted an online survey of 1,239 Americans with a retirement savings account. The sample base was proportioned to represent the overall population, and the survey was fielded April 28-May 1, 2020.

Data comes for here <https://www.magnifymoney.com/blog/news/early-withdrawal-coronavirus/>

Source: MagnifyMoney, DB Global Research



# Credit card interest rate near highest levels in decades

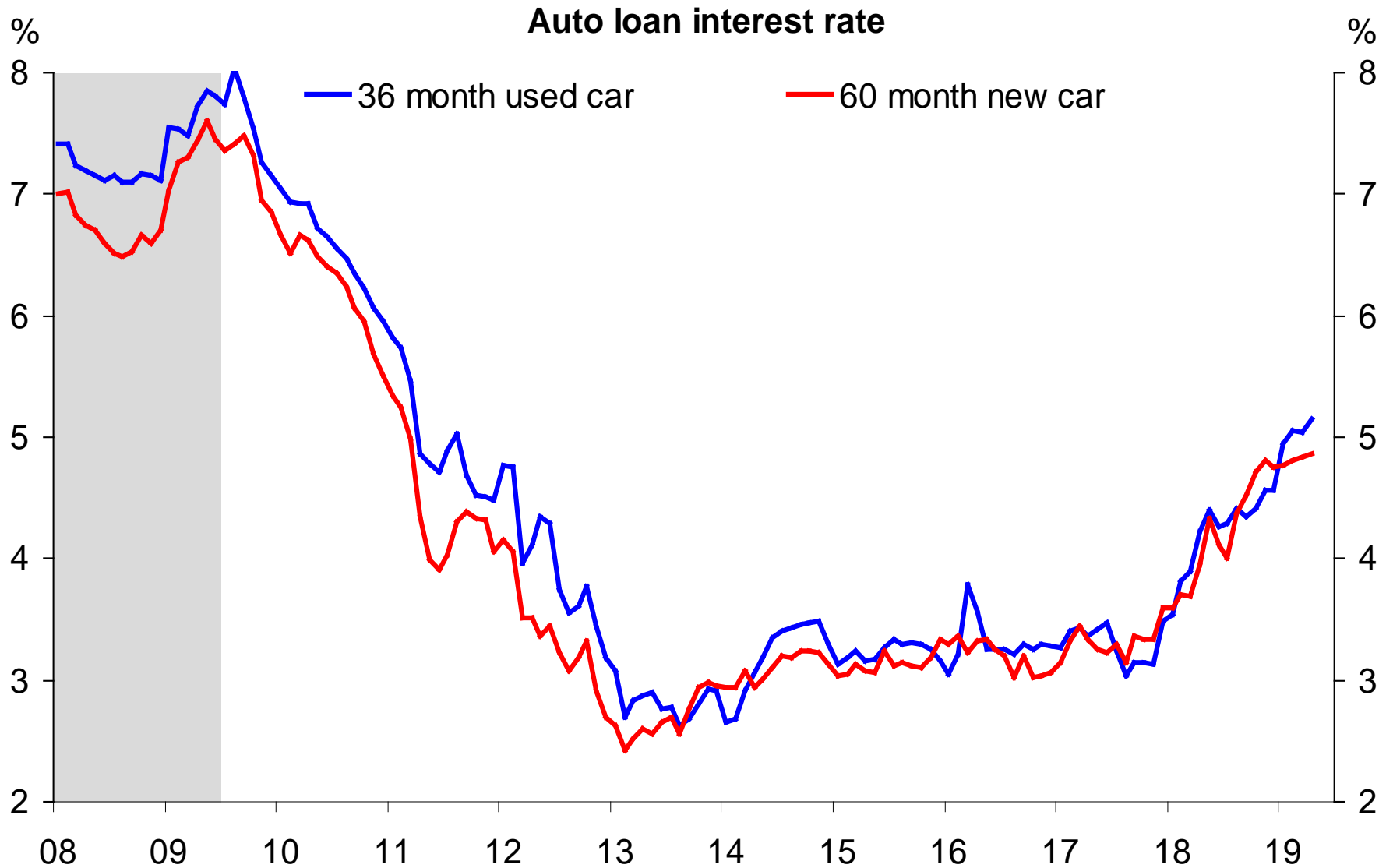


Note: This rate is the annualized ratio of total finance charges at all reporting banks to the total average daily balances against which the finance charges were assessed

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

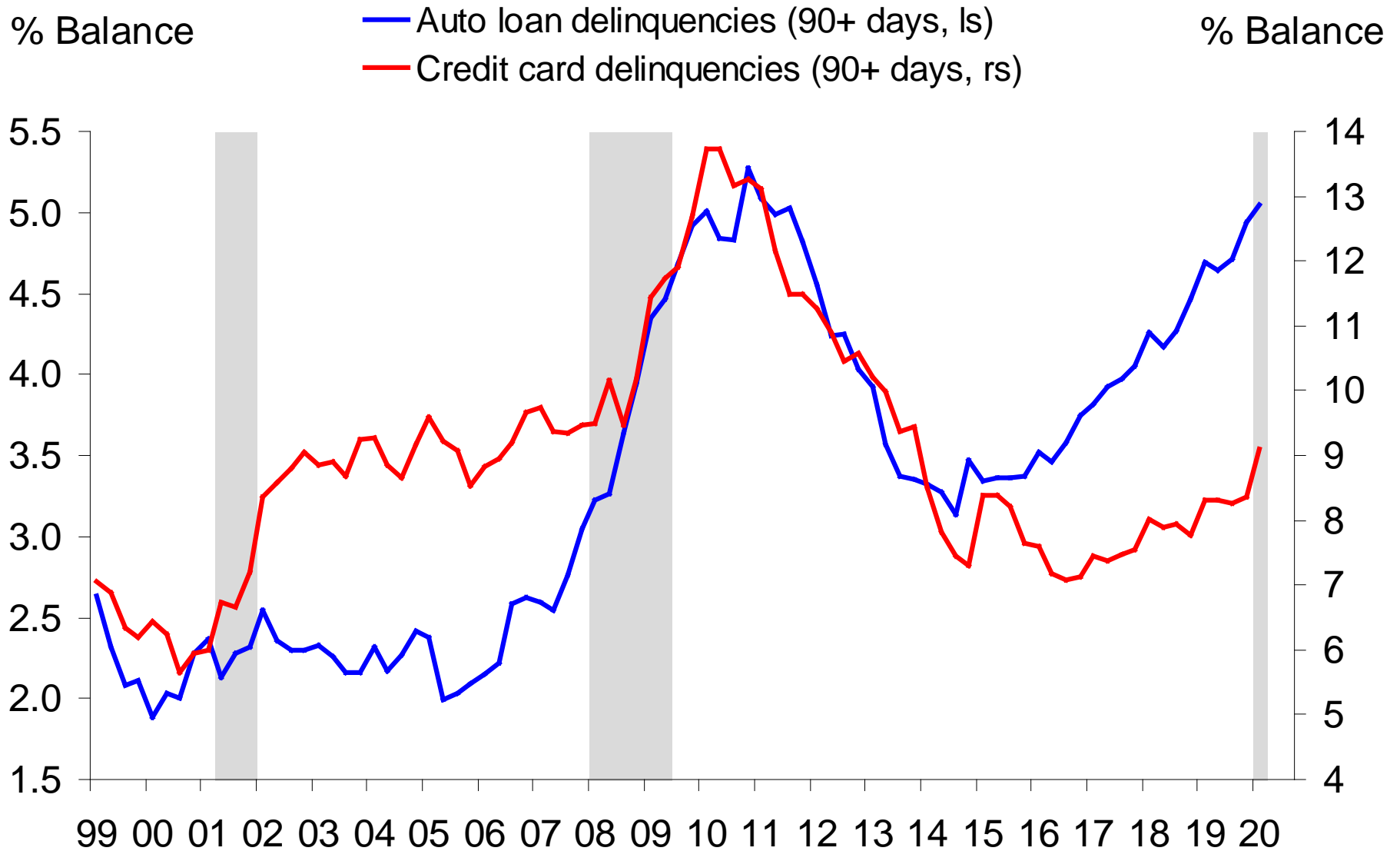


# Auto loan interest rates increased by 2%-points in 2018



Source: FRB, Haver Analytics, DB Global Research

# Delinquency rates moving up for consumers

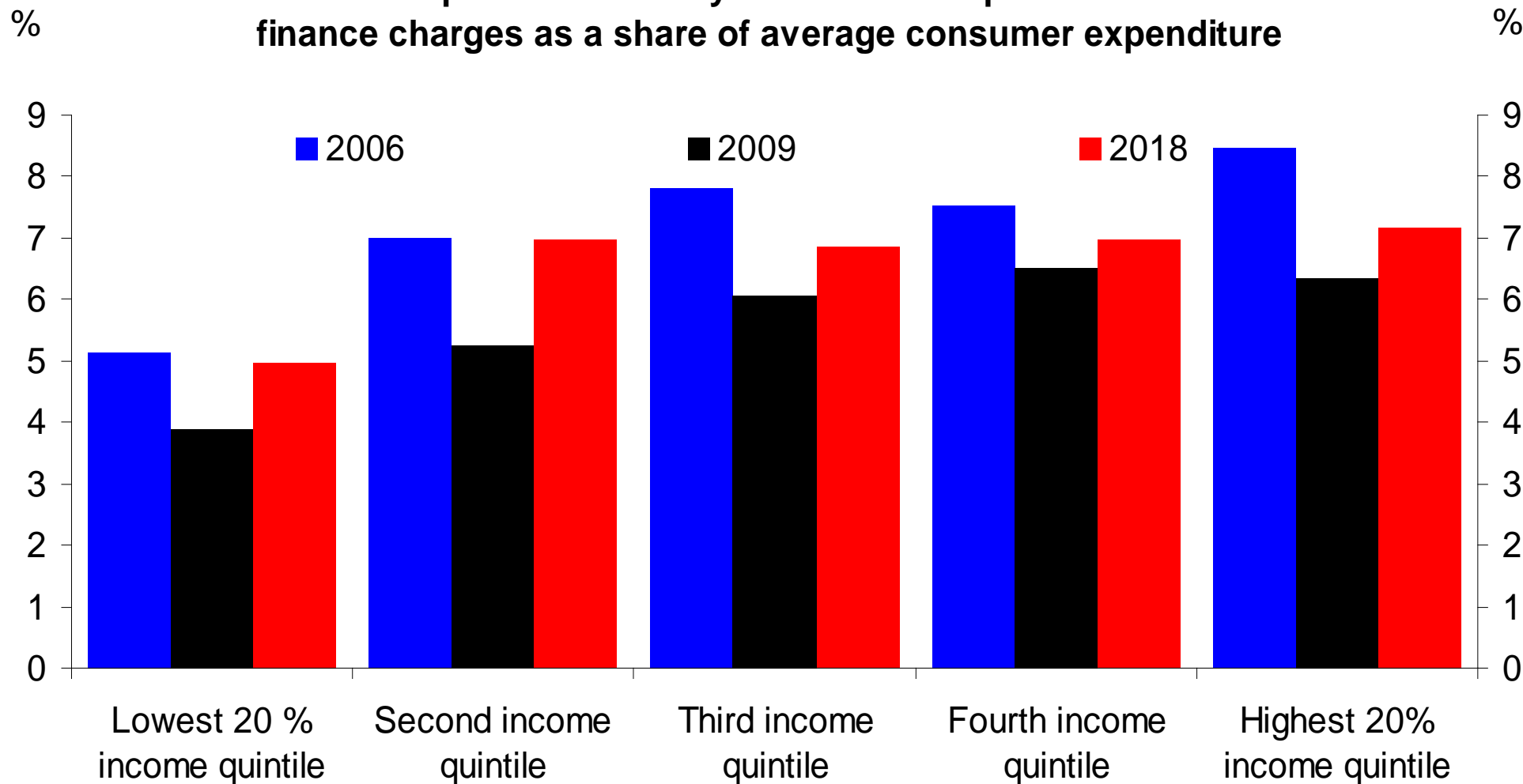


Source: FRB, Haver Analytics, DB Global Research

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

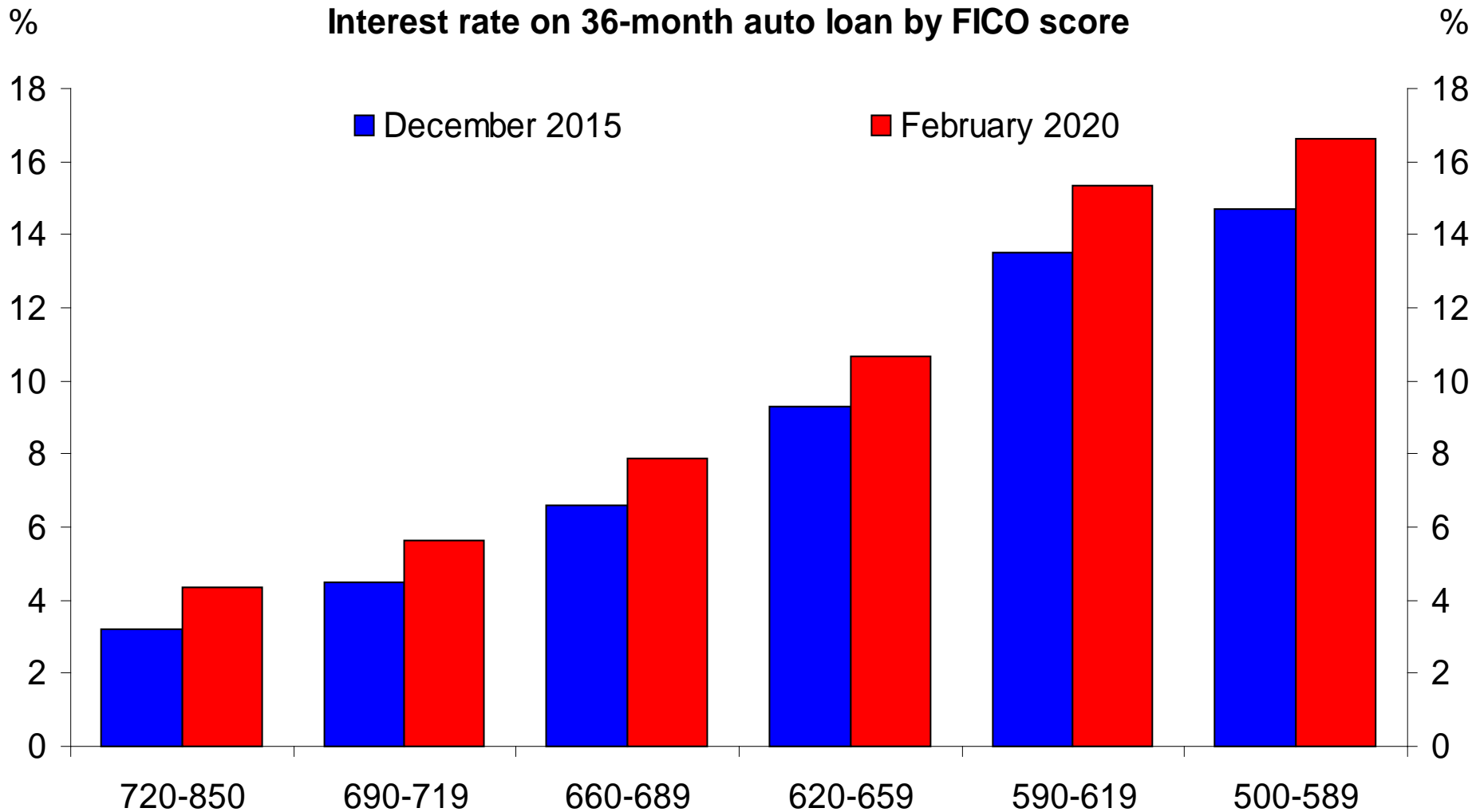


## Consumer Expenditure Survey: Motor vehicle purchases & vehicle finance charges as a share of average consumer expenditure



Source: BLS, Haver Analytics, DB Global Research

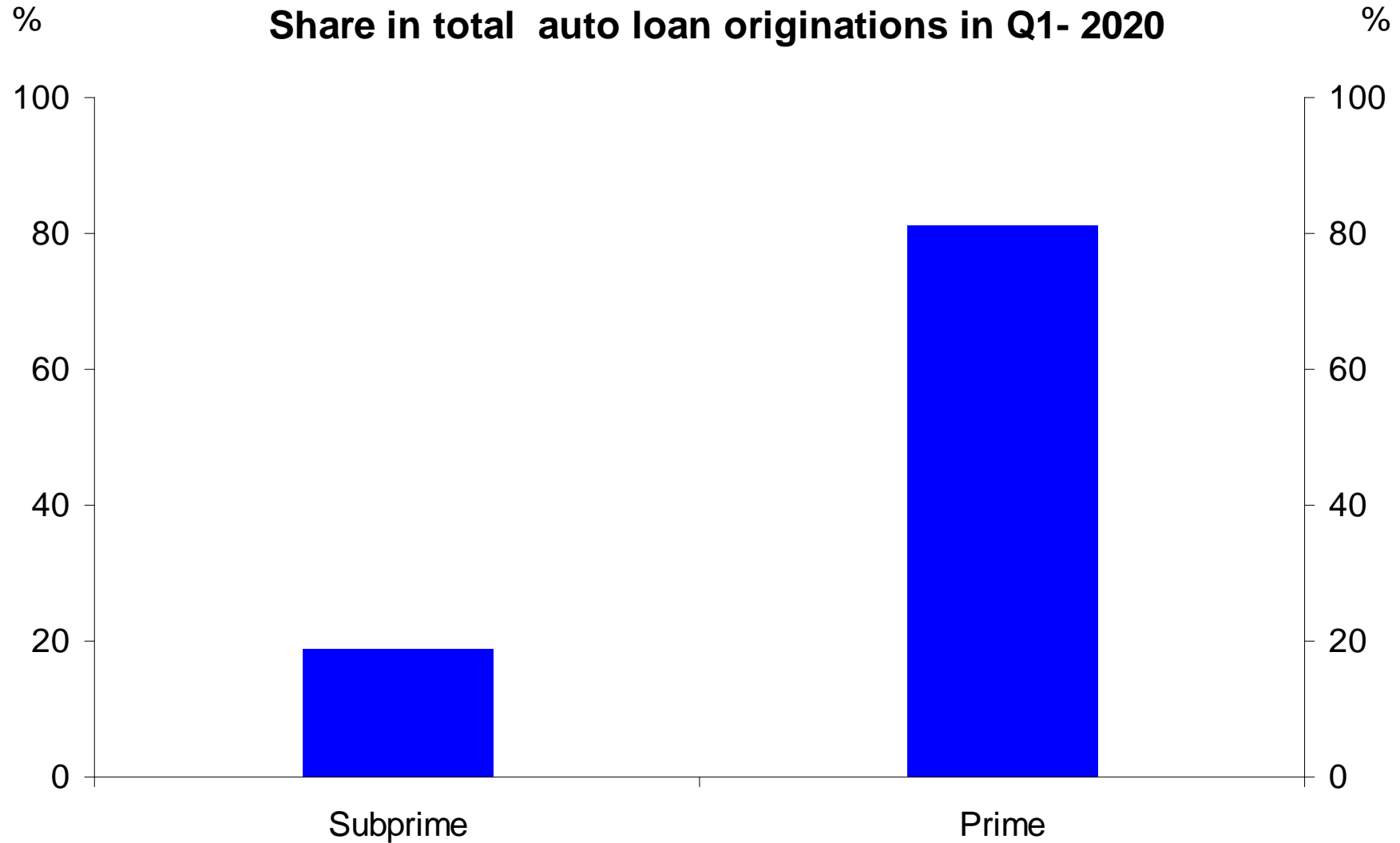
# US: Auto loan interest rates higher across all FICO scores



Source: myfico.com, DB Global Research

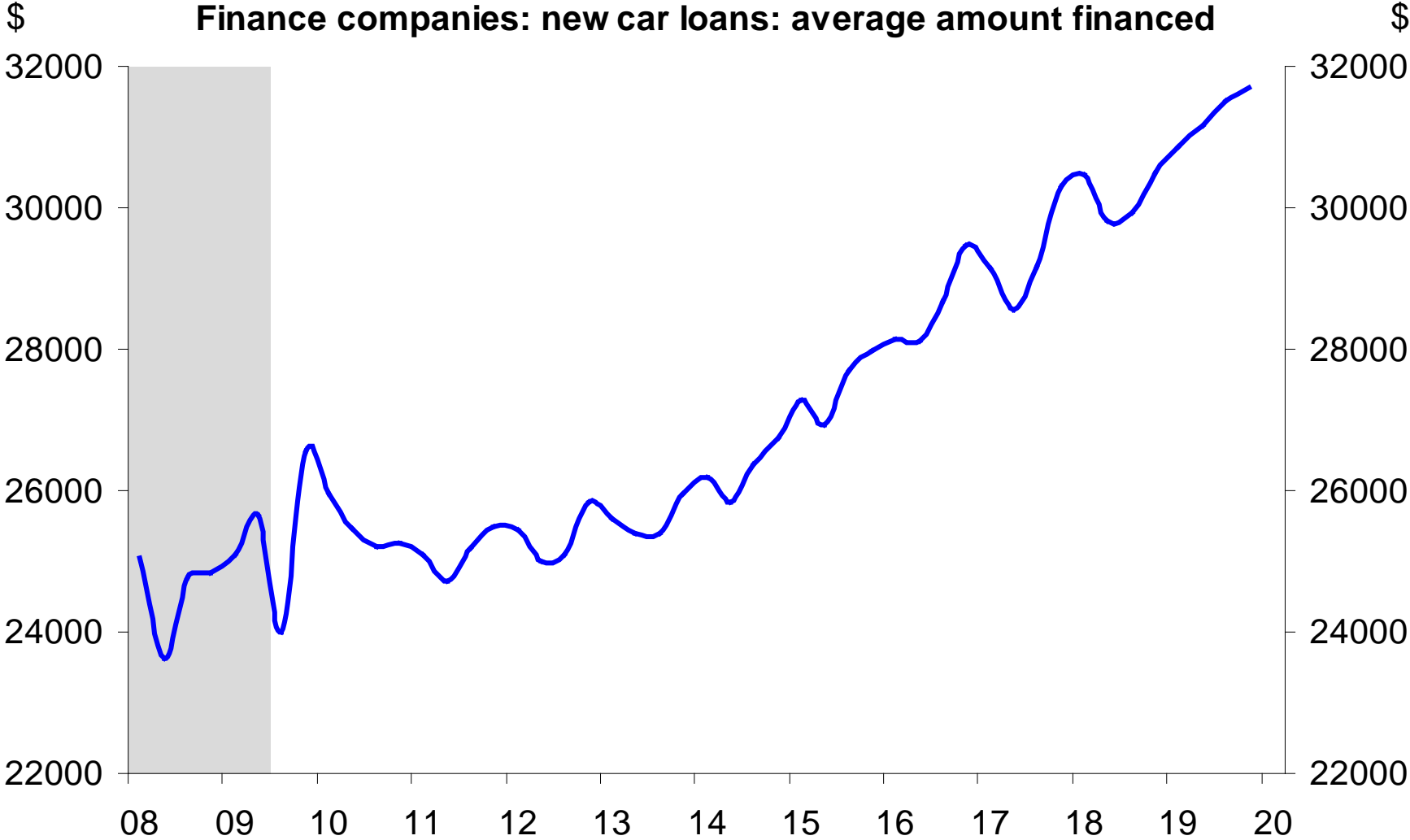


80% of cars sold are financed.  
And 20% of car sales are subprime



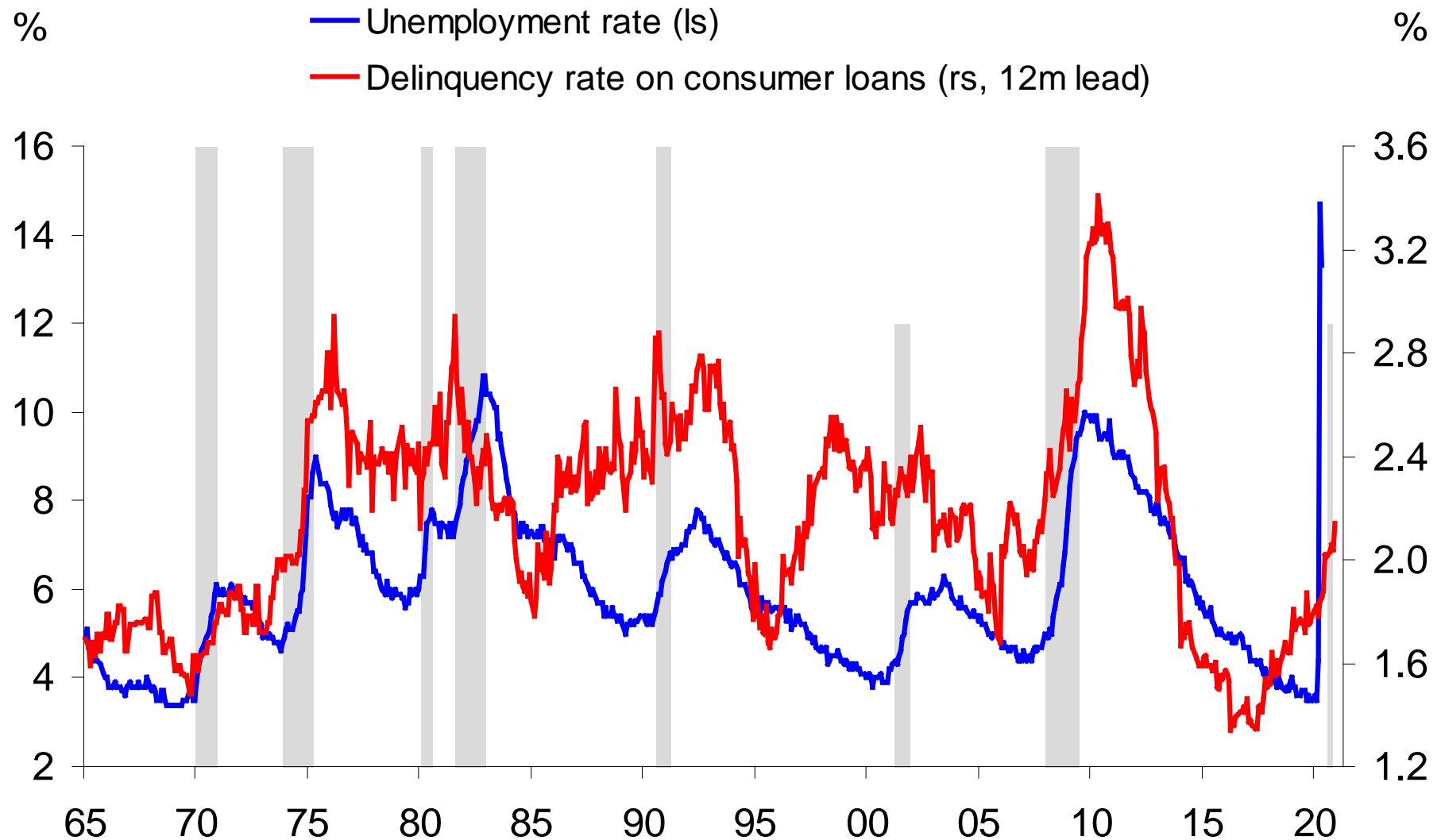
Source: New York Fed Consumer Credit Panel/Equifax, DB Global Research

# Average amount financed on new car loans moving higher



Source: FRB, Haver Analytics, DB Global Research

# More households falling behind on their auto loans, credit card loans, and mortgages



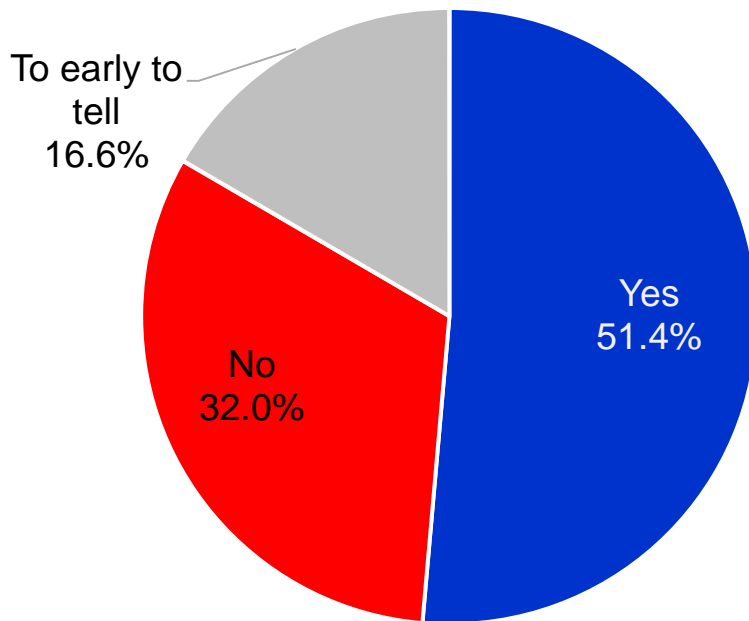
Note: Composite consumer loans consists of eight loan types: personal, automobile direct & indirect, mobile homes, recreational vehicles, marine financing loans, property improvement and home equity and second mortgage loans.

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

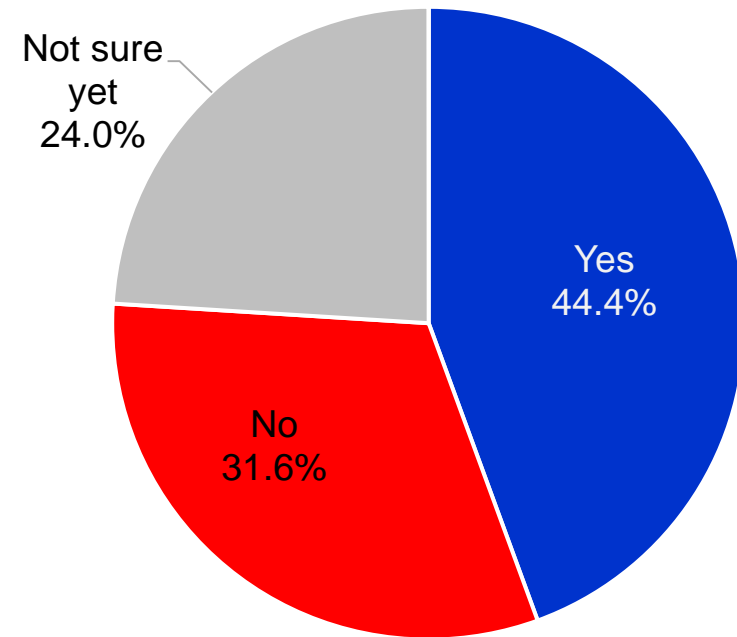
# More people would prefer to work from home permanently



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

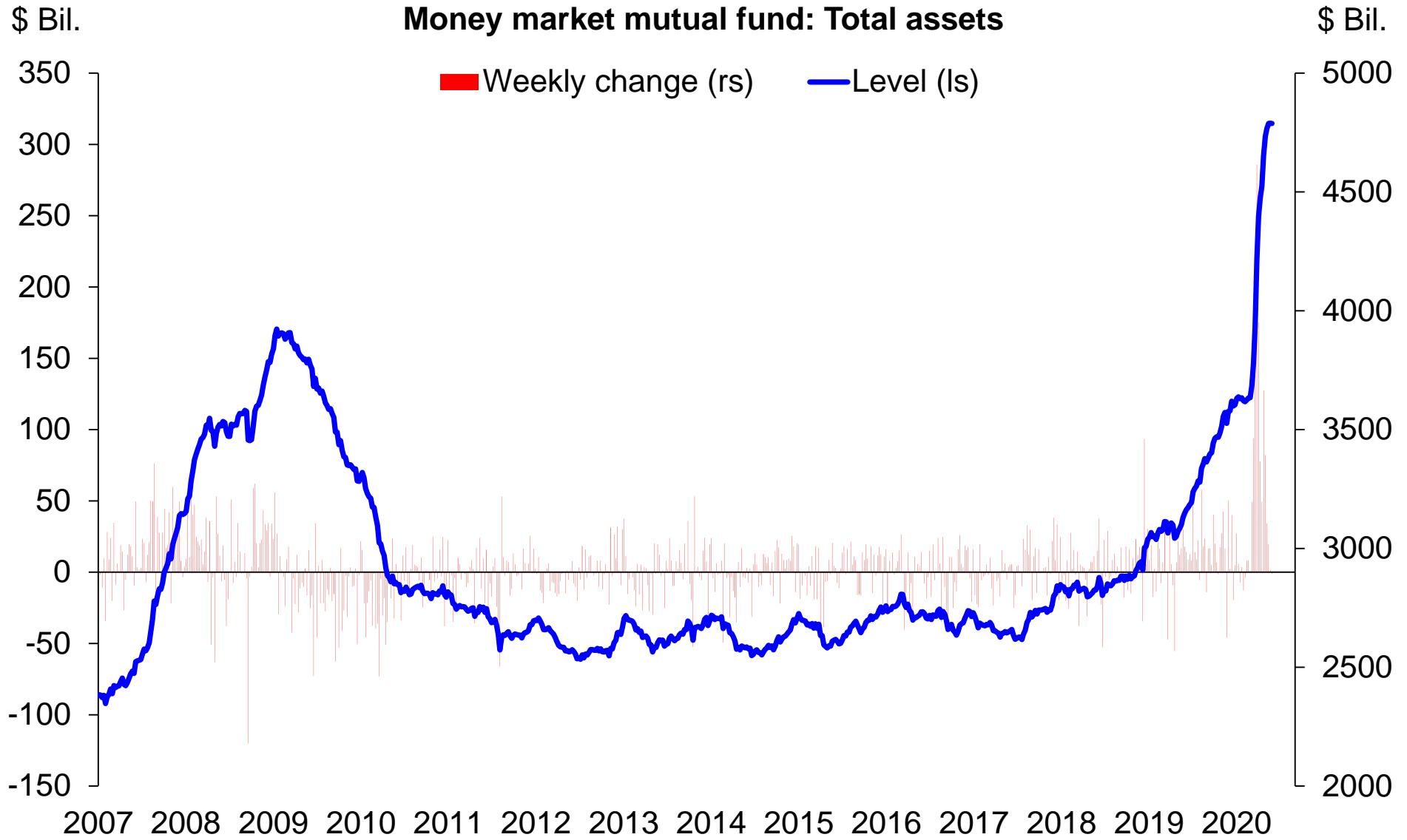


**Survey: Are you more productive working from home**



Source: Zippia Poll Survey , DB Global Research

# Pent-up demand: A lot of money on the sidelines for consumer spending and buying stocks and credit



Source: ICI, Haver Analytics, DB Global Research

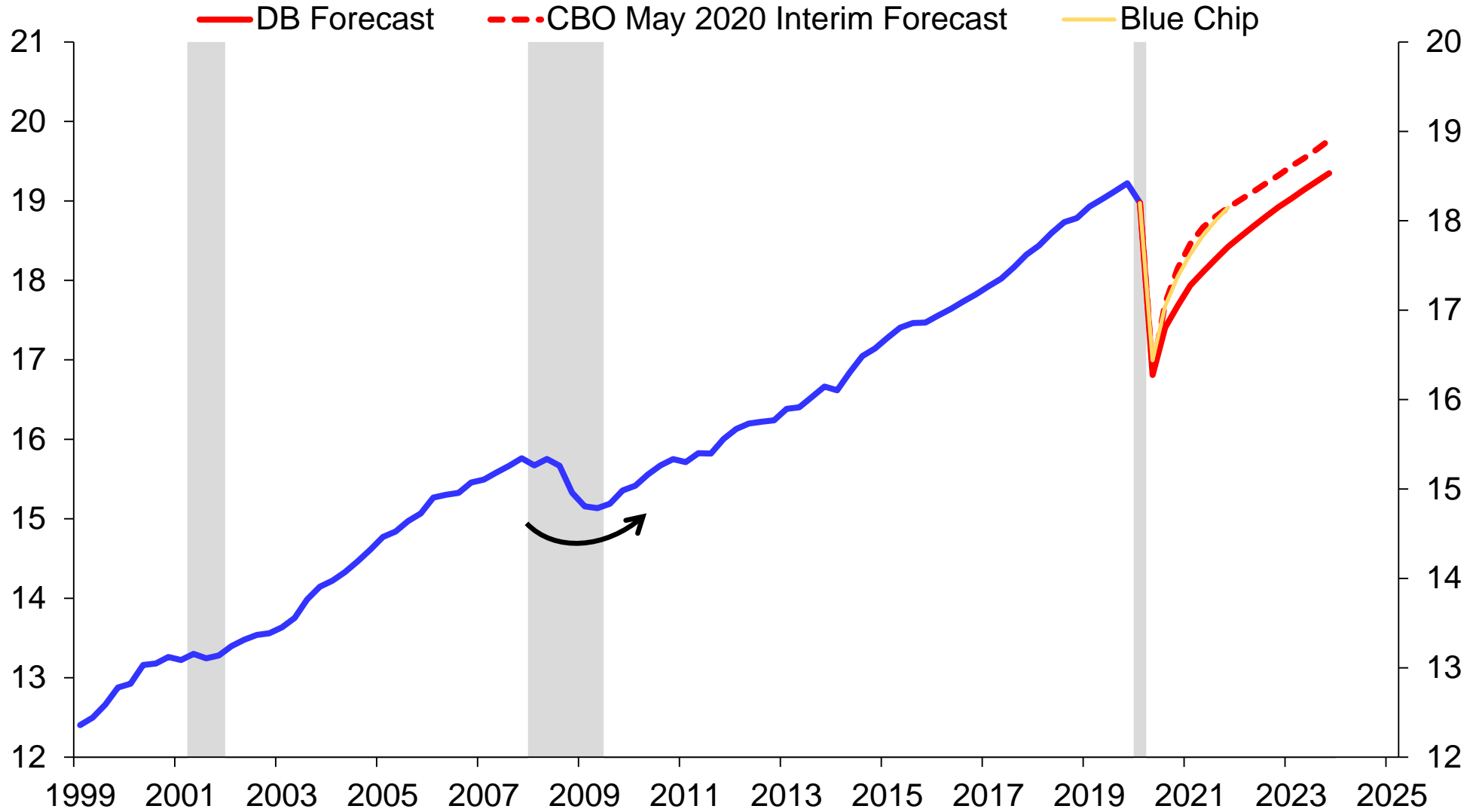
# Not U or L but deep V



\$ Trillion

## Real GDP in United States

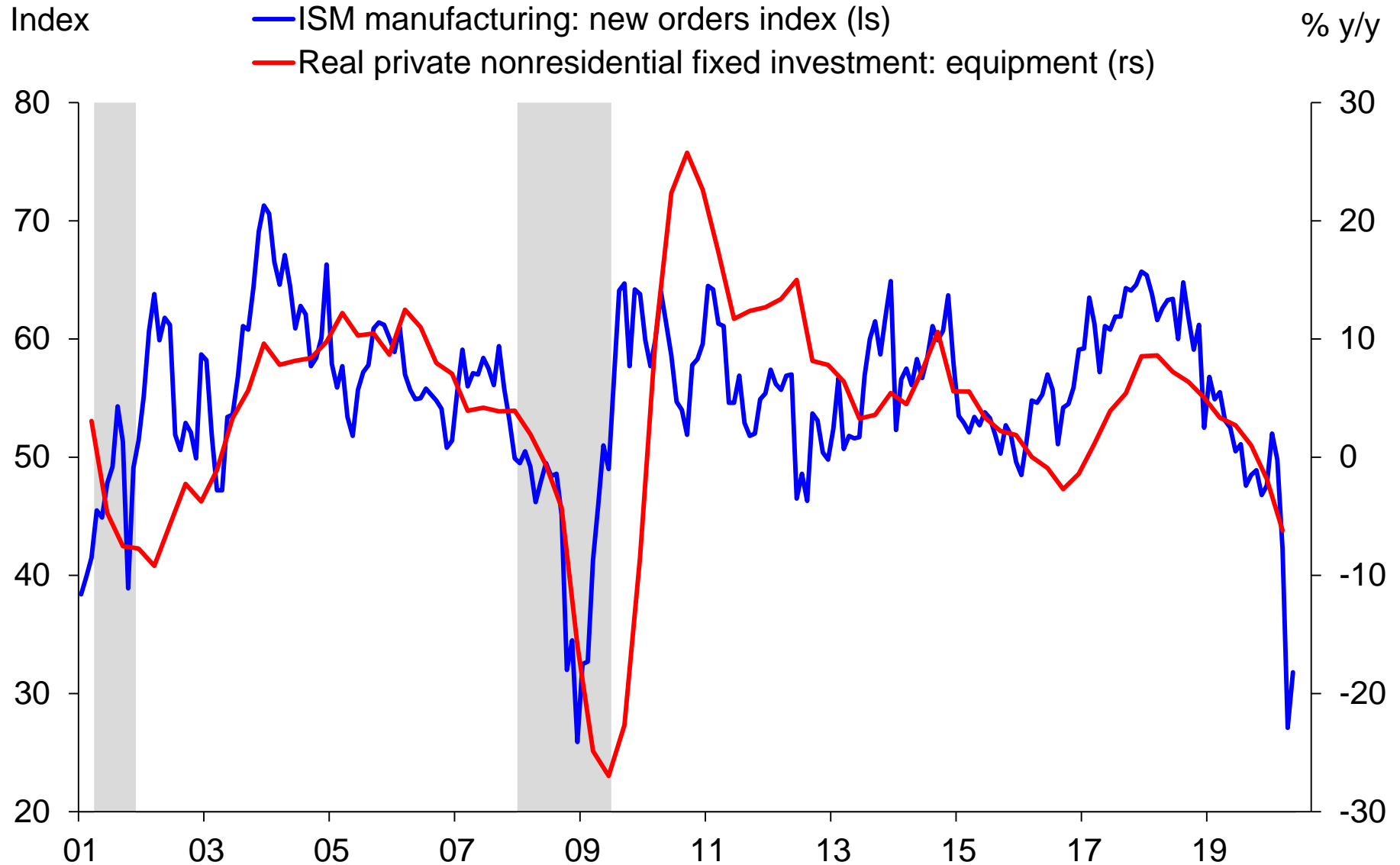
\$ Trillion



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



# Sharp decline in capex



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



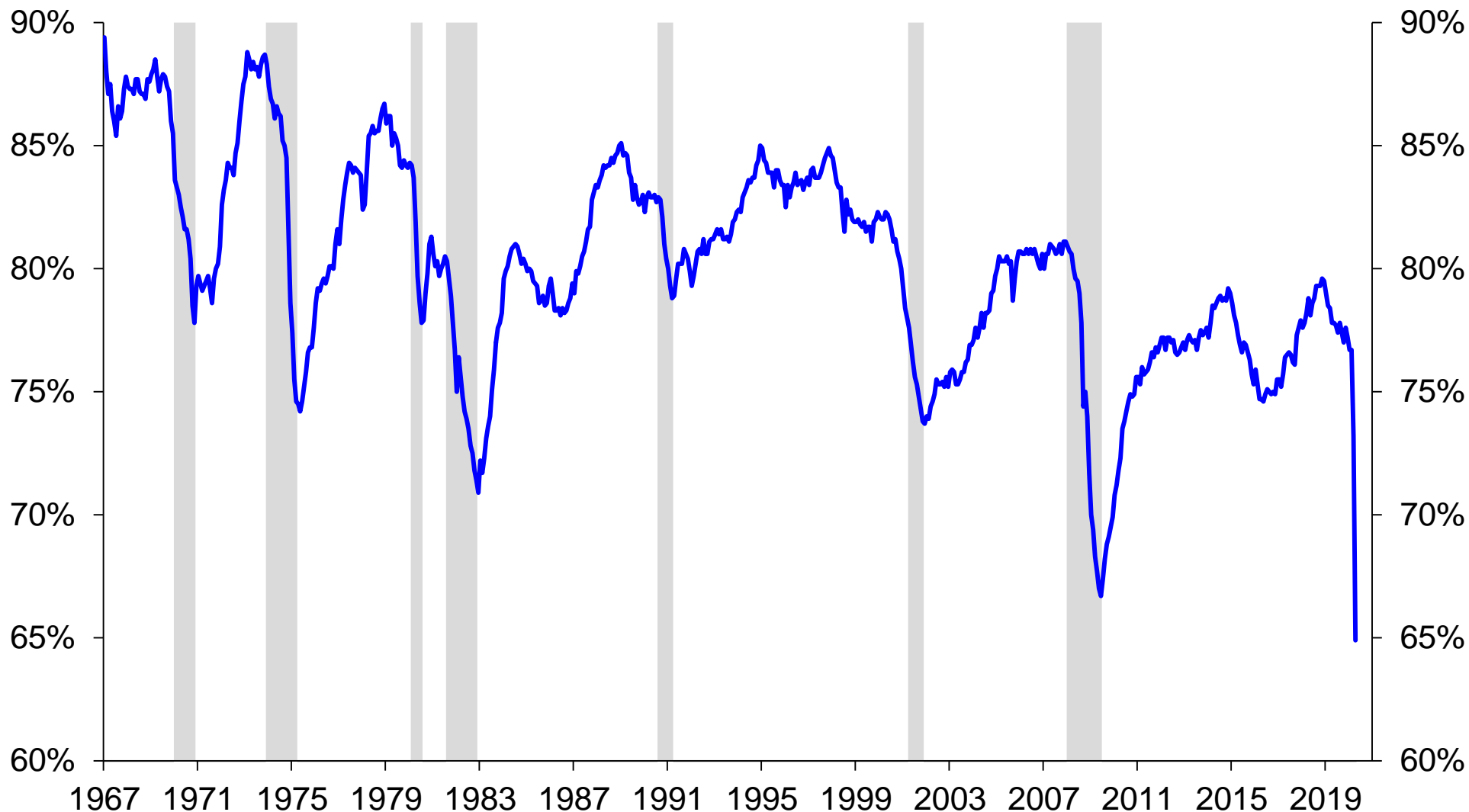
# 4. Higher risk of deflation than inflation



# Inflation will not be a problem for many, many years

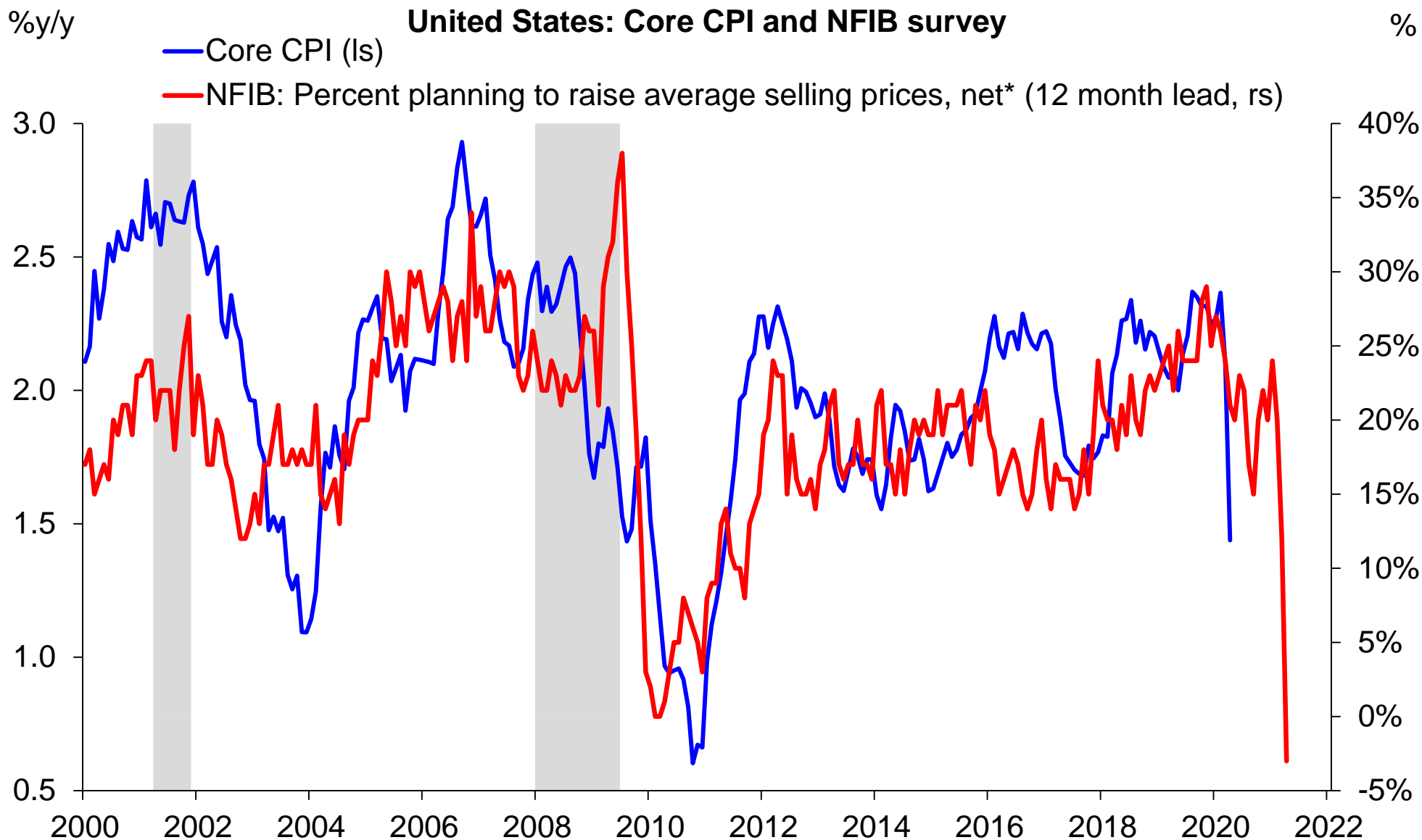


## Capacity utilization: Total industry



Source: FRB, Haver Analytics, DB Global Research

# Inflation not a problem anytime soon

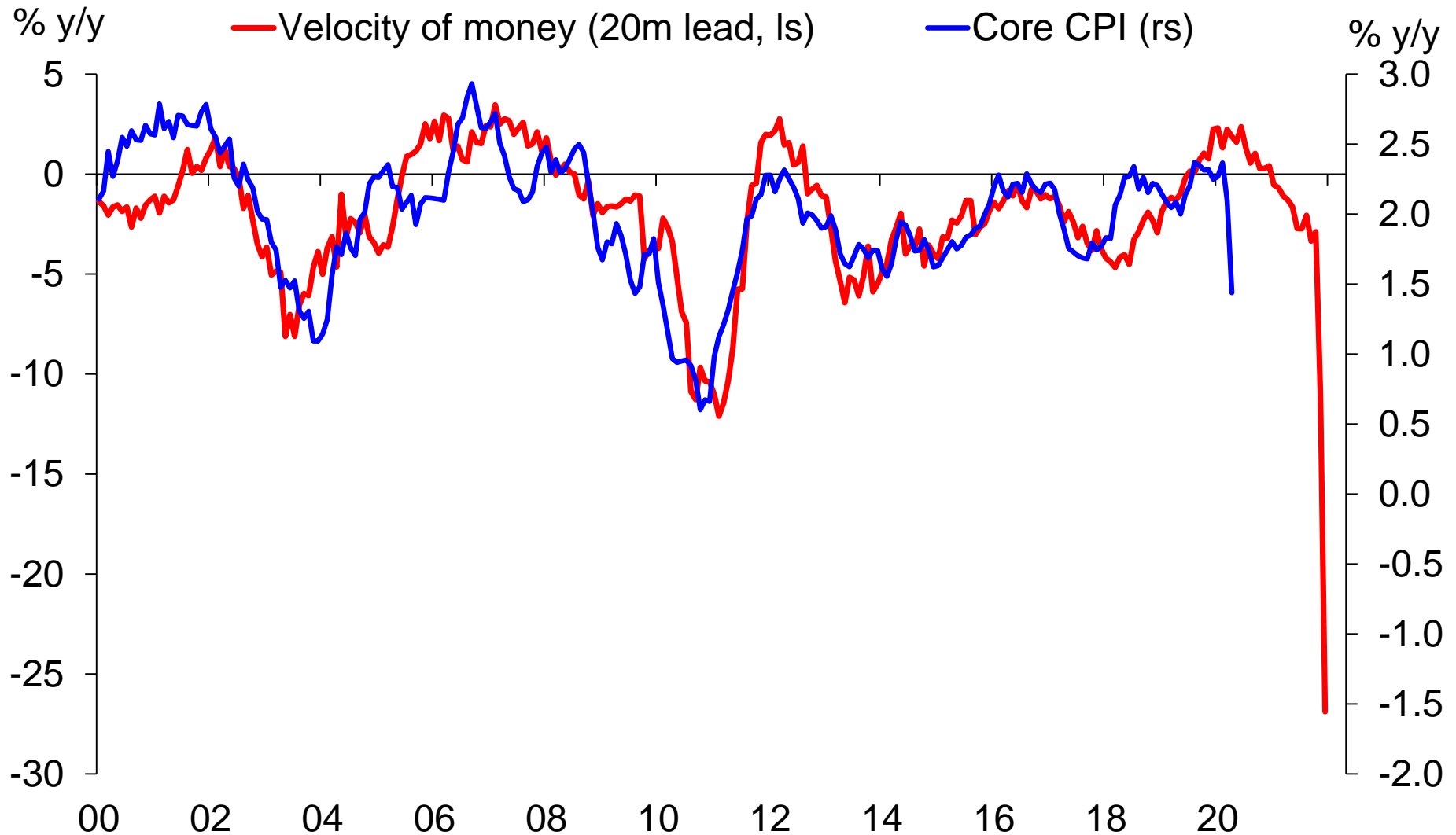


\*Less percent planning reduction

Source: BLS, NFIB, Haver Analytics DB Global Research



# US: Velocity is positively correlated with inflation



Note: Velocity of money is nominal GDP divided by M2.

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

# Supply chain disruptions have very small weight in CPI basket



Items	CPI weights in Apr-20 (Percent)
New Vehicles	3.8
Meats, Poultry, Fish, & Eggs	1.8
Information Tech, Hardware, & Services	1.3
Prescription Drugs	1.2
Lodging Away from Home	0.9
Furniture and Bedding	0.9
Airline Fare	0.6
Sporting Goods	0.6
Spices, Seasonings, Condiments, Sauces	0.3
Frozen & Freeze Dried Prepared Foods	0.3
Appliances	0.2
Medical Equipment and Supplies	0.1
<b>Sum</b>	<b>12.0</b>
Memo, three biggest weights in CPI index:	
<b>Housing</b>	<b>42.5</b>
<b>Food &amp; Beverages</b>	<b>15.2</b>
<b>Transportation</b>	<b>14.7</b>

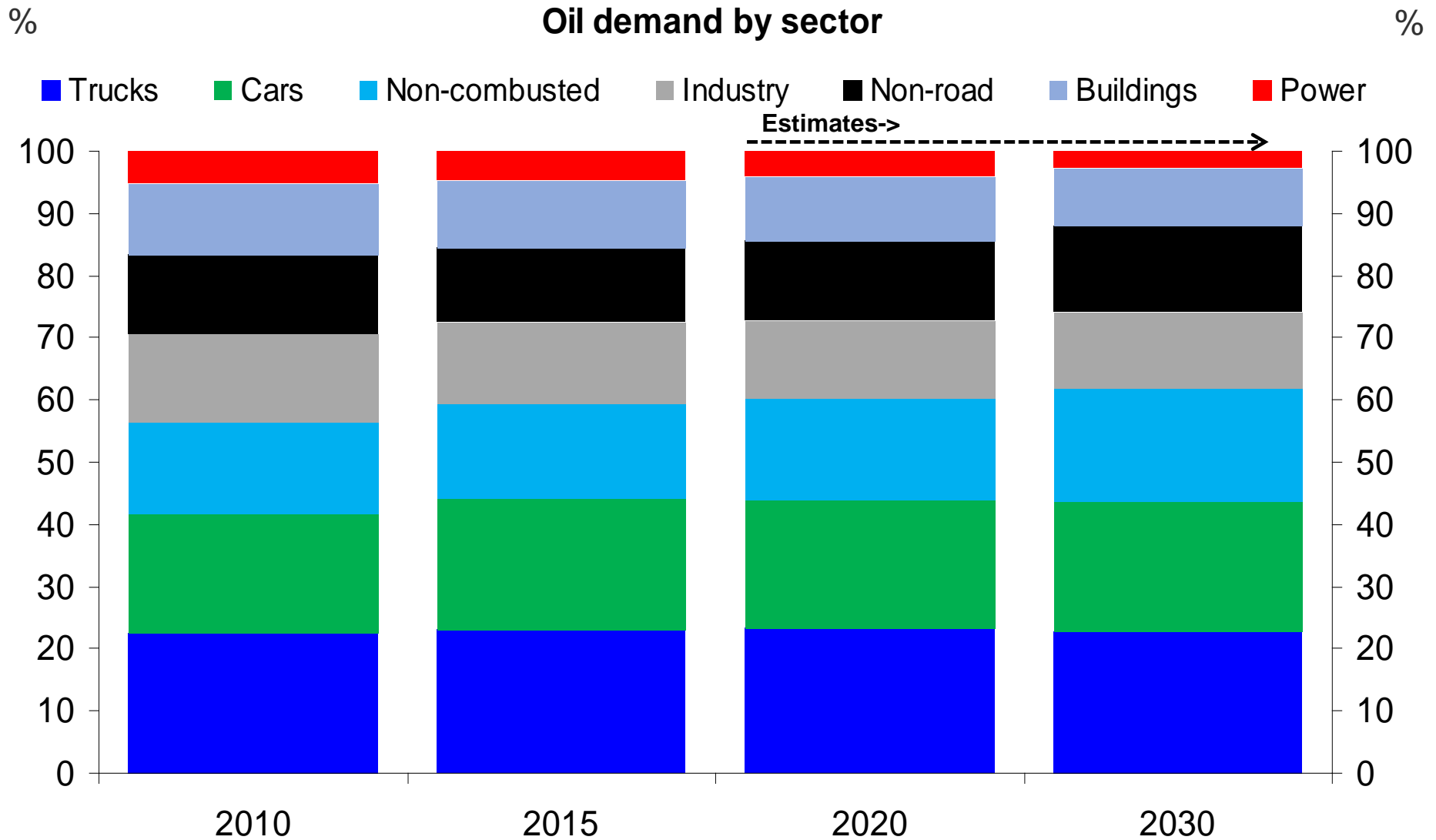
Source: BLS, Haver Analytics, DB Global Research



# 5. Energy prices



# 40% of oil demand comes from cars and trucks



Source: BP Energy Outlook 2019, DB Global Research

# Dramatic decline in US oil consumption

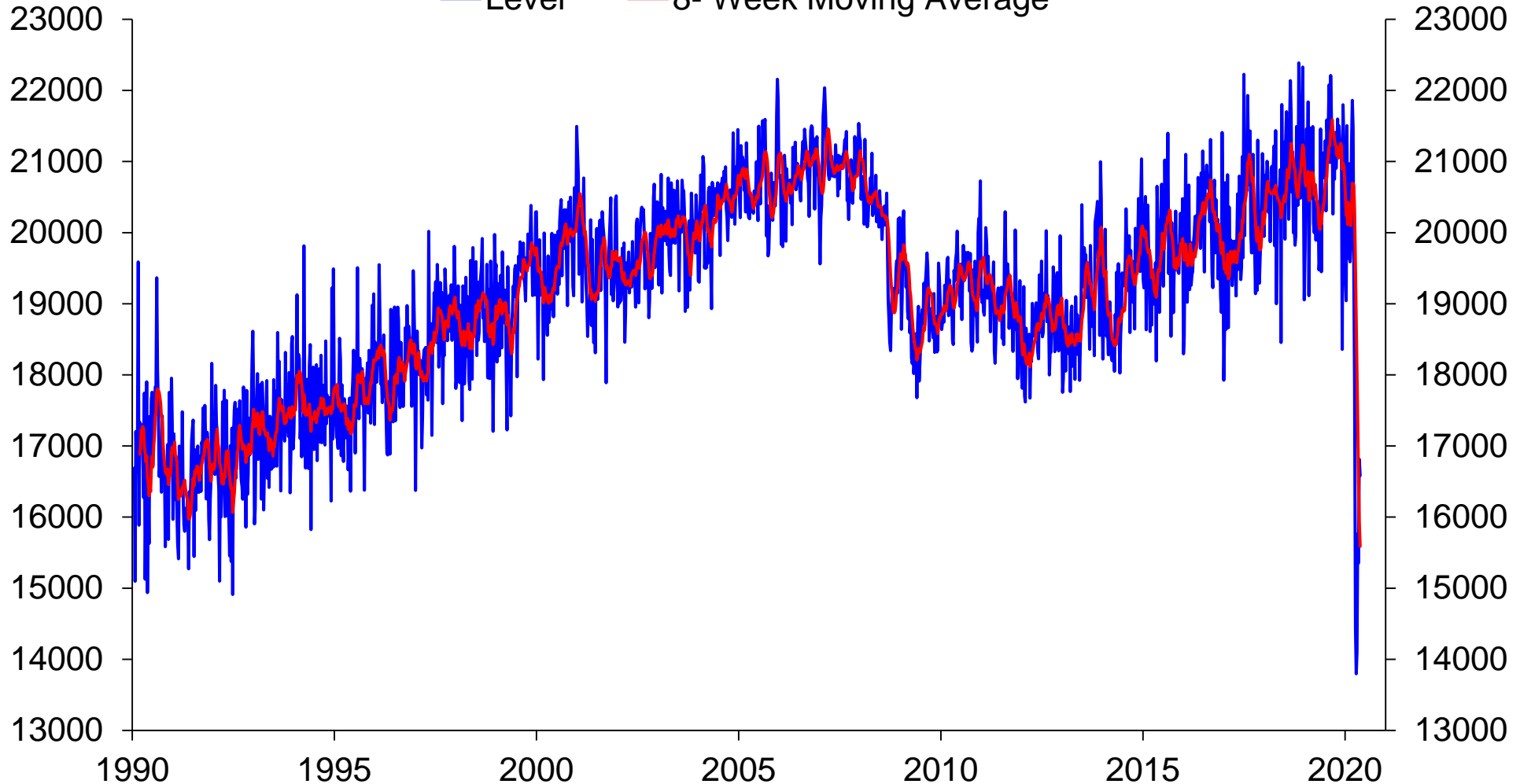


'000 barrels a day

## United States: Total oil consumption

'000 barrels a day

— Level    — 8- Week Moving Average



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

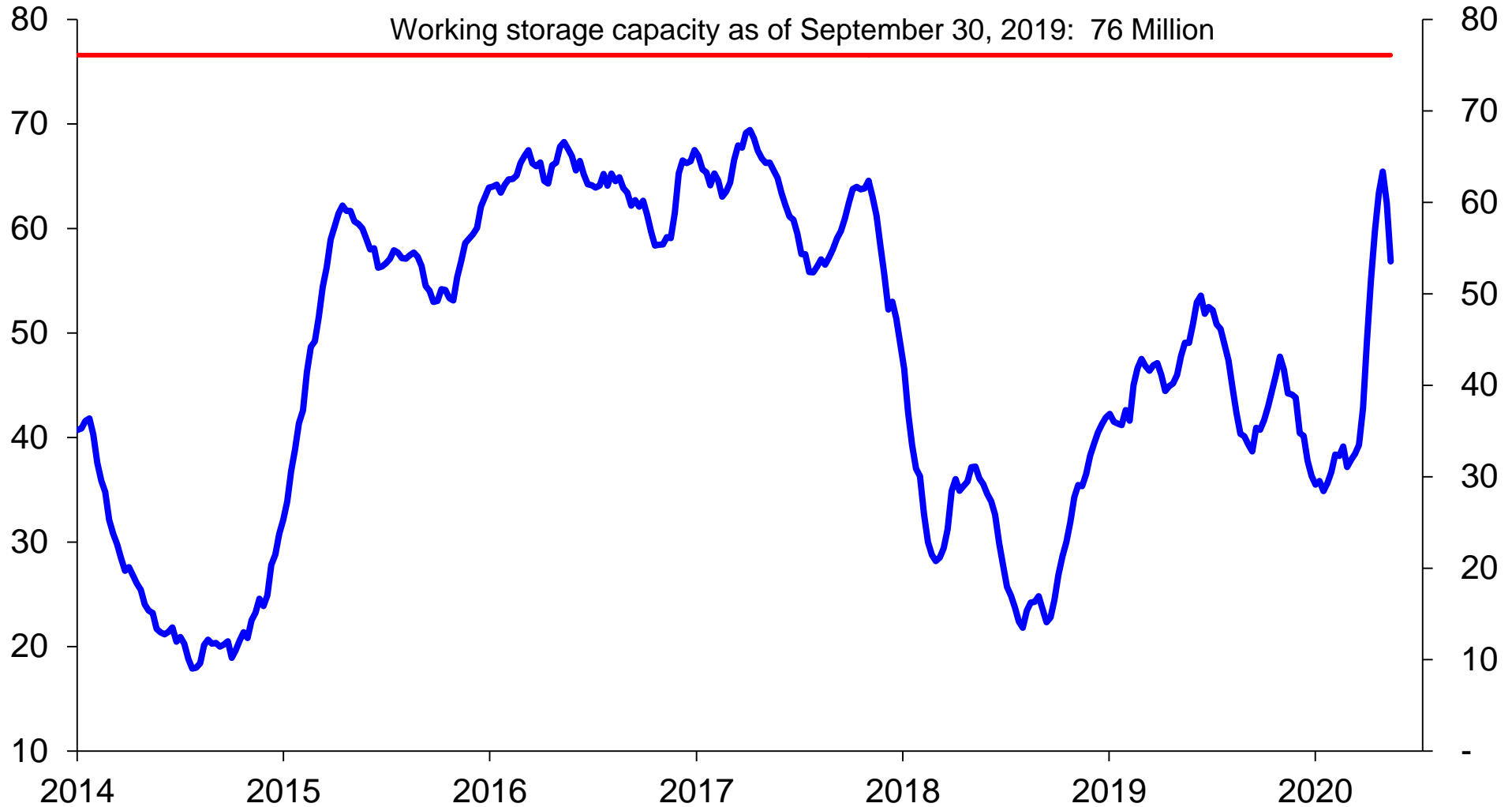
# Cushing crude oil stock versus storage capacity



Million barrel

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

Million barrel



Source: EIA, DB Global Research



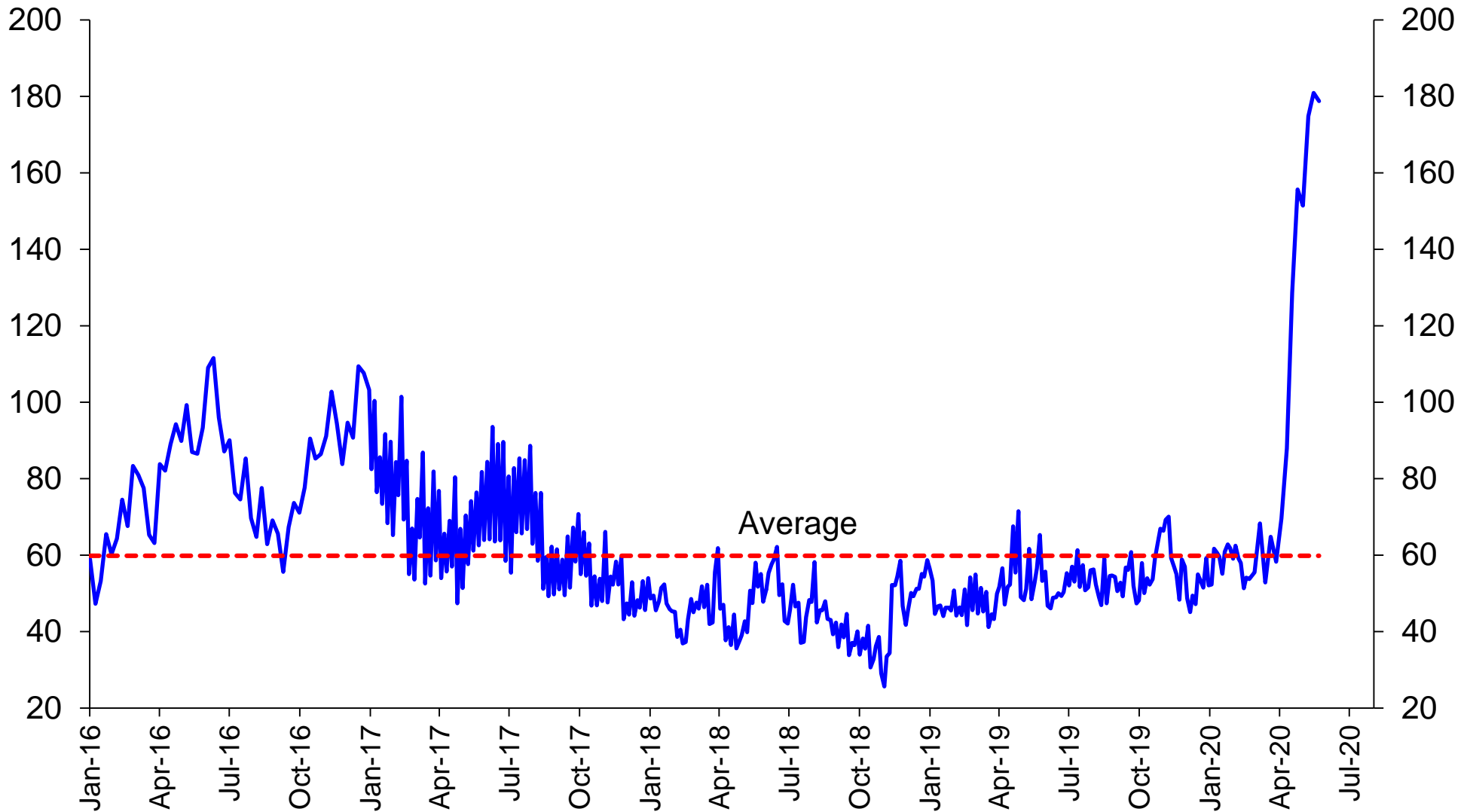


# Oil floating storage at record high

Million barrel

## Global crude oil floating storage

Million barrel



Source: VORTEXA, Bloomberg Finance LP, DB Global Research

# Lower WTI pushing retail gas prices down

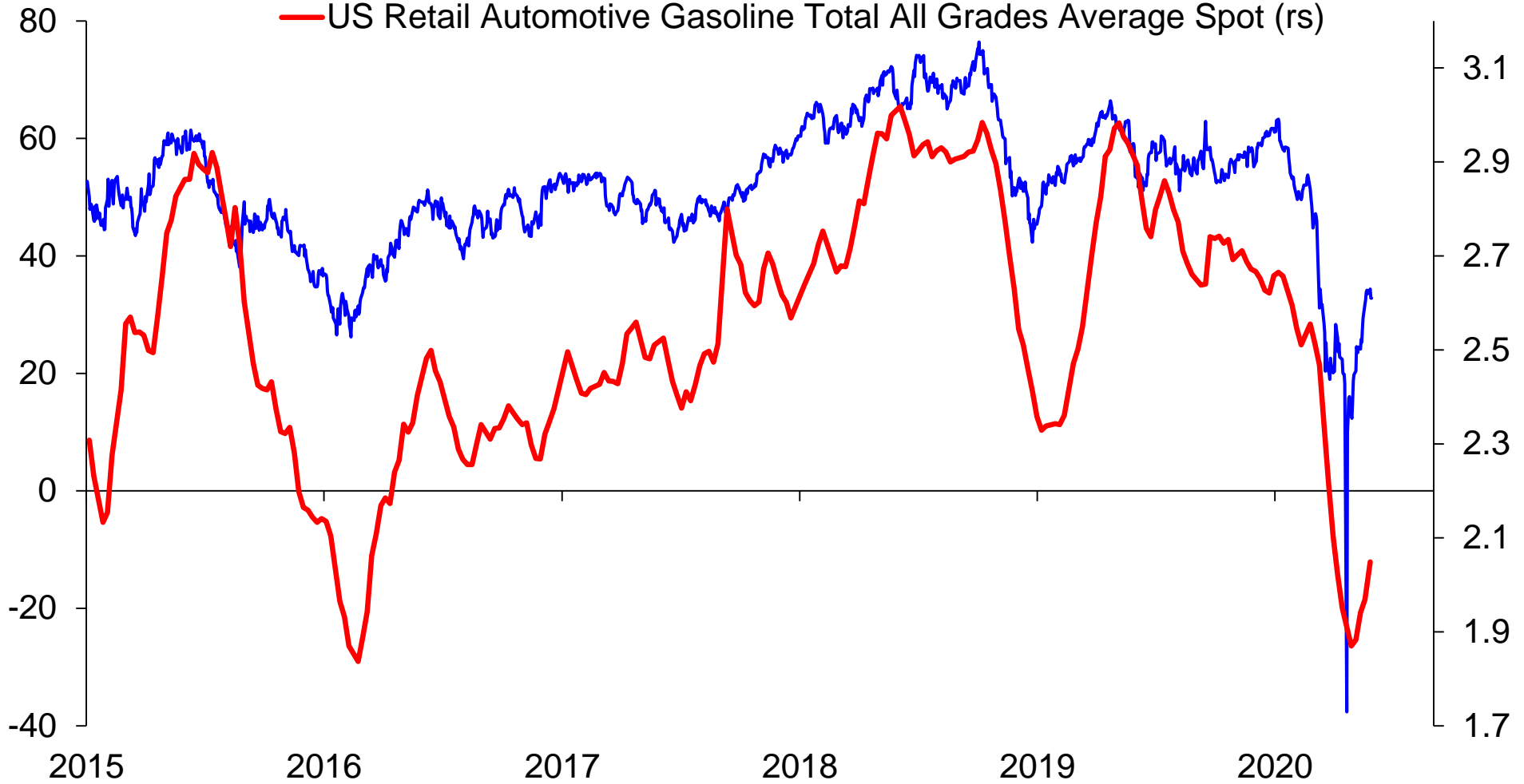


\$/barrel

## WTI Crude Oil Cushing and Gasoline price

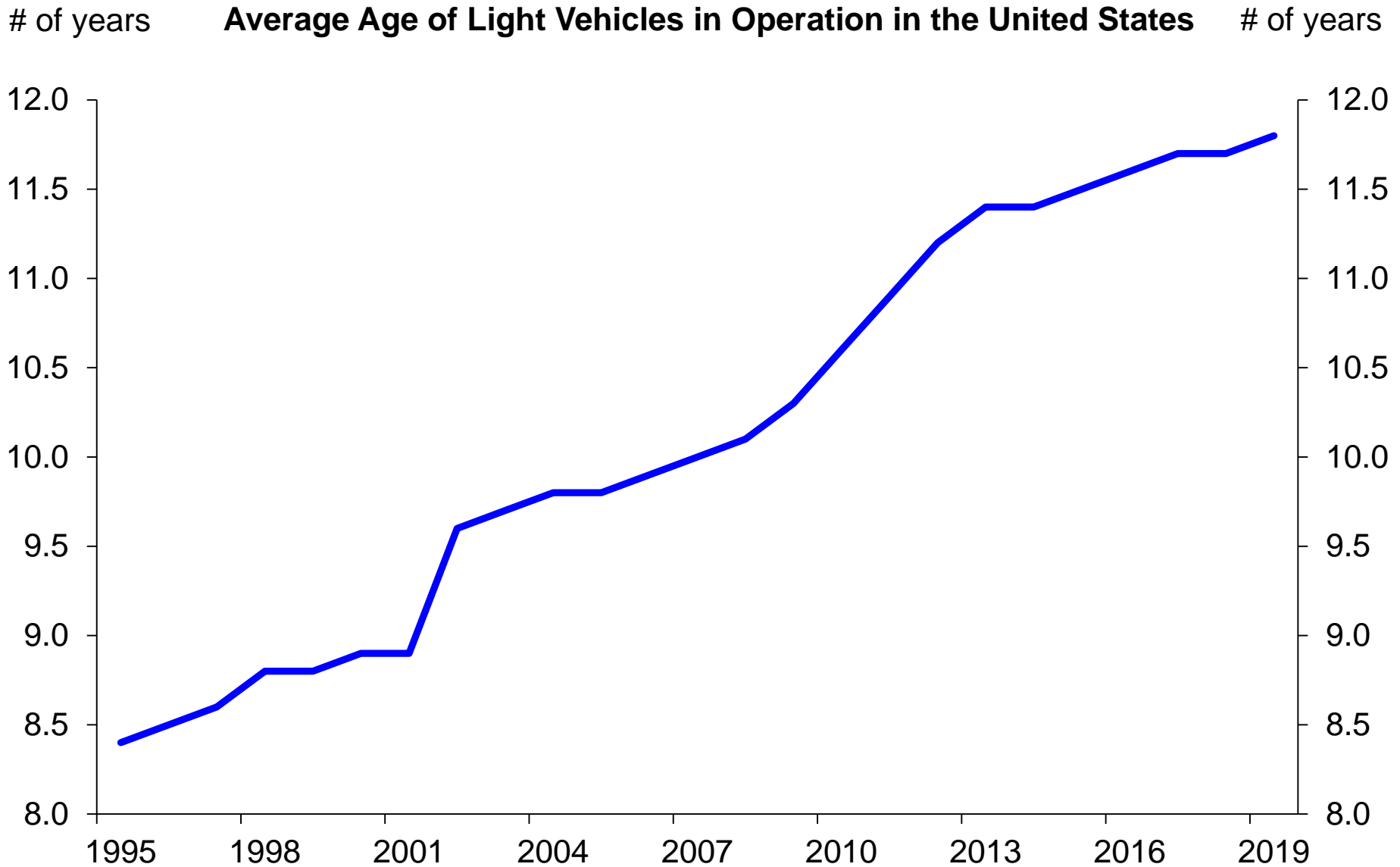
\$/gallon

- 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

# Cars on the roads in the US are on average 12 years old



Source: United States Department of Transportation , DB Global Research

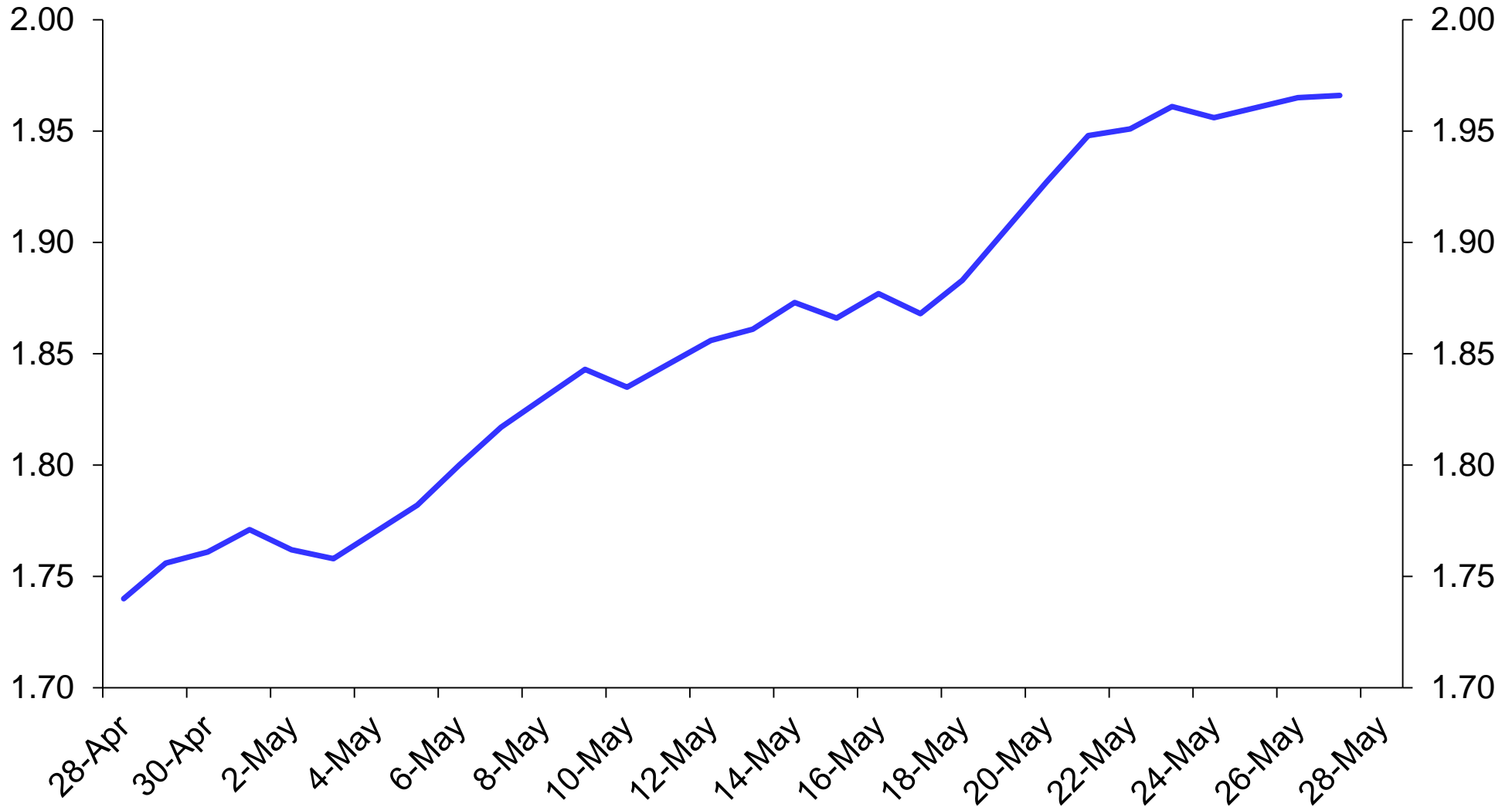


# Gas price at the pump

## United States : Regular Fuel price

US\$ per Gallon

US\$ per Gallon



Note: Regular Unleaded Gas Prices

Source: GasBuddy, DB Global Research

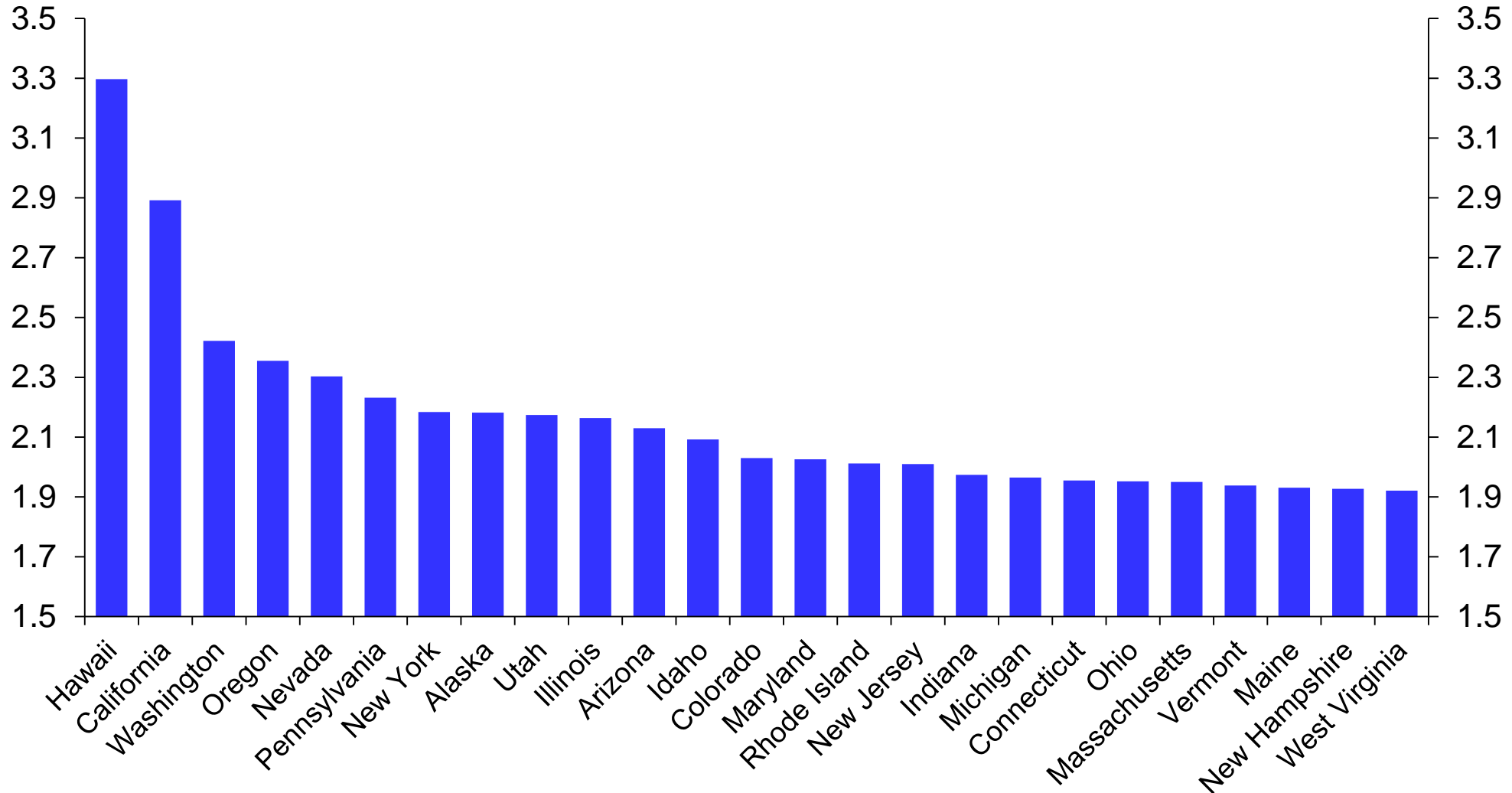


# Most expensive states to buy fuel

## Most Expensive Fuel price by state: Top 25

US\$ per Gallon

US\$ per Gallon



Note: Regular Unleaded Gas Prices as of May 27, 2020

Source: GasBuddy, DB Global Research

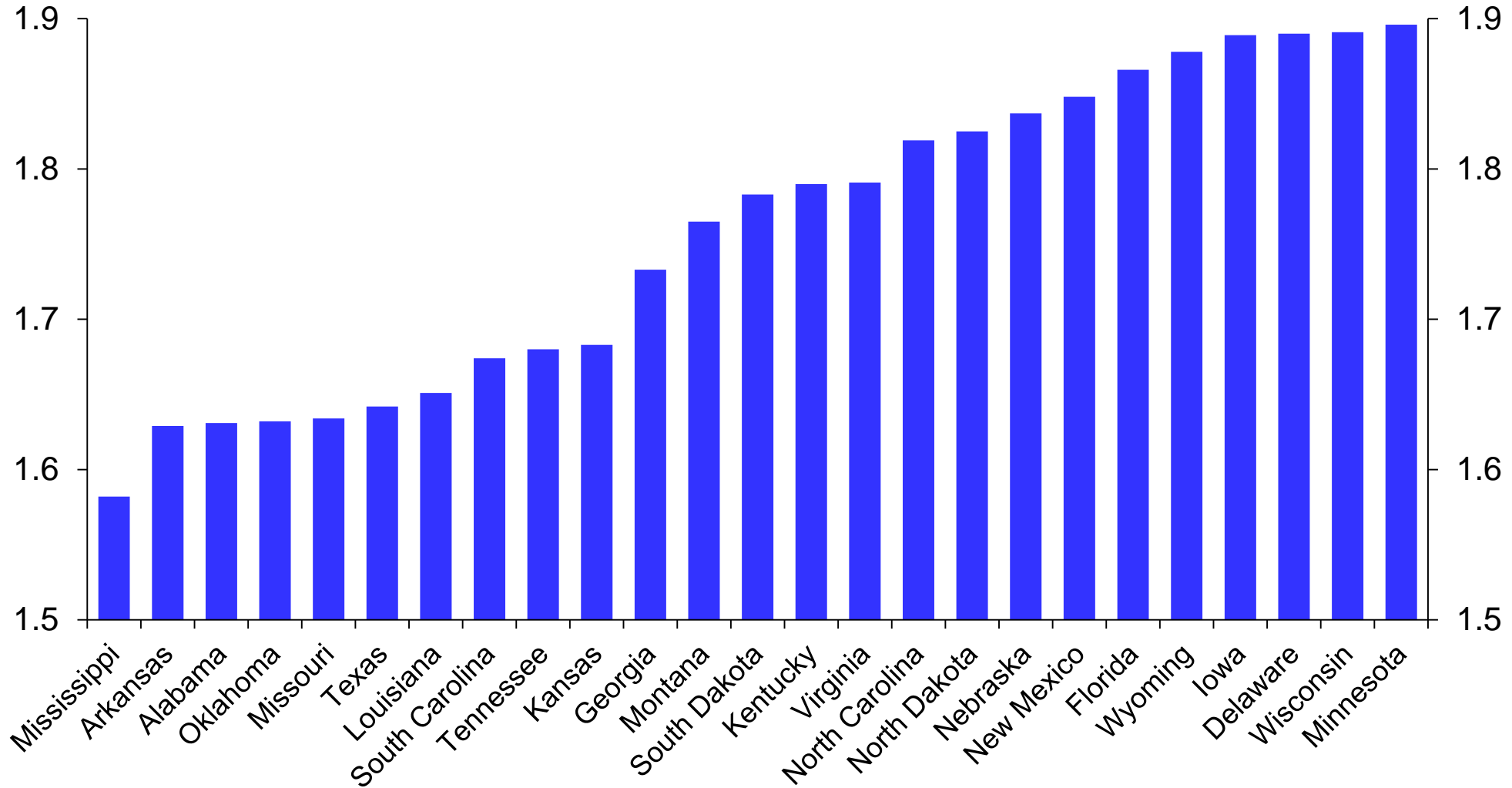


# States with lowest fuel prices

US\$ per Gallon

Least Expensive Fuel price by state: Top 25

US\$ per Gallon

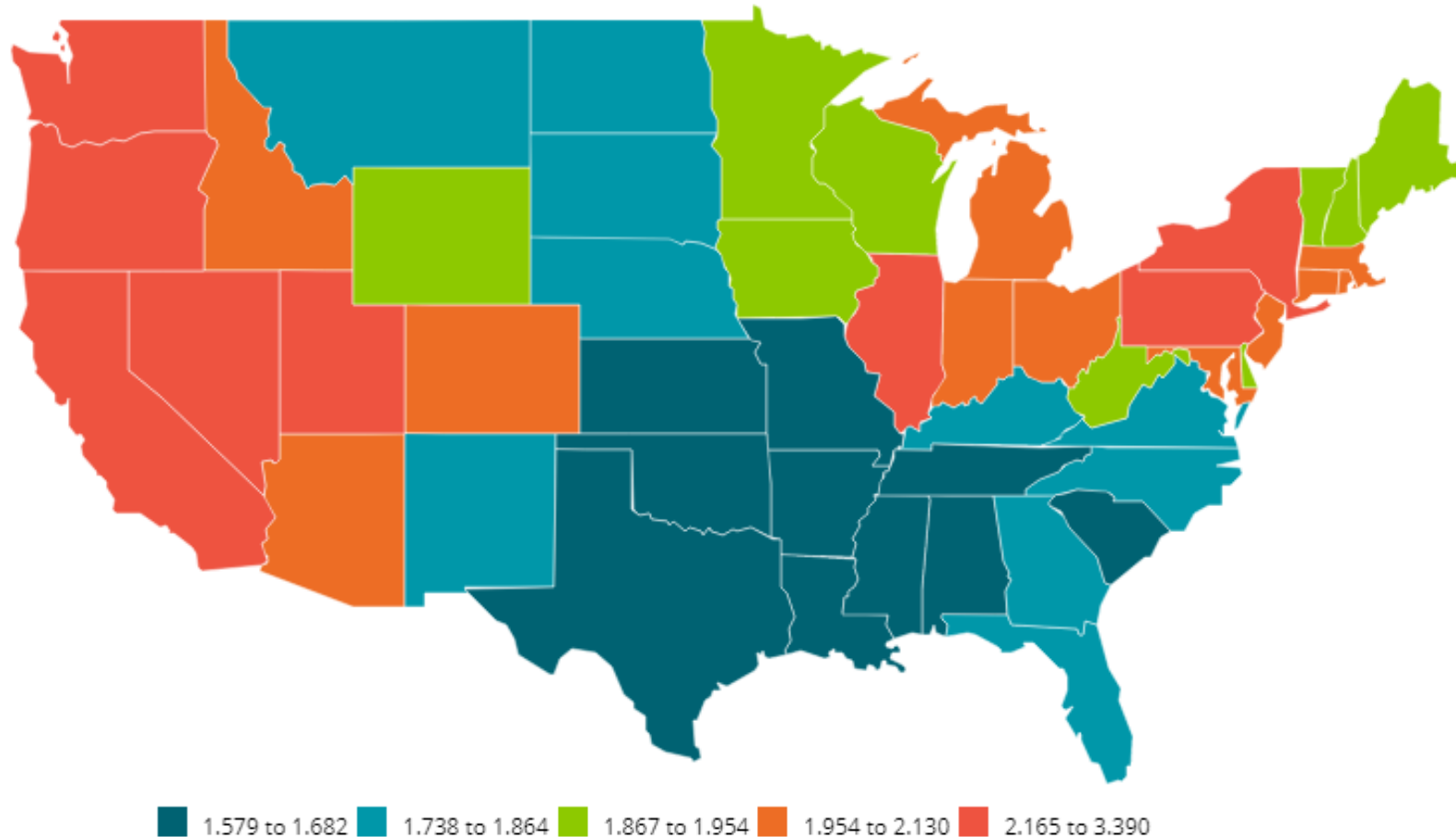


Note: Regular Unleaded Gas Prices as of May 27, 2020

Source: GasBuddy, DB Global Research



# Gas prices at the pump: Regular fuel



Note: Regular Unleaded Gas Prices as of May 27, 2020

Source: GasBuddy, DB Global Research

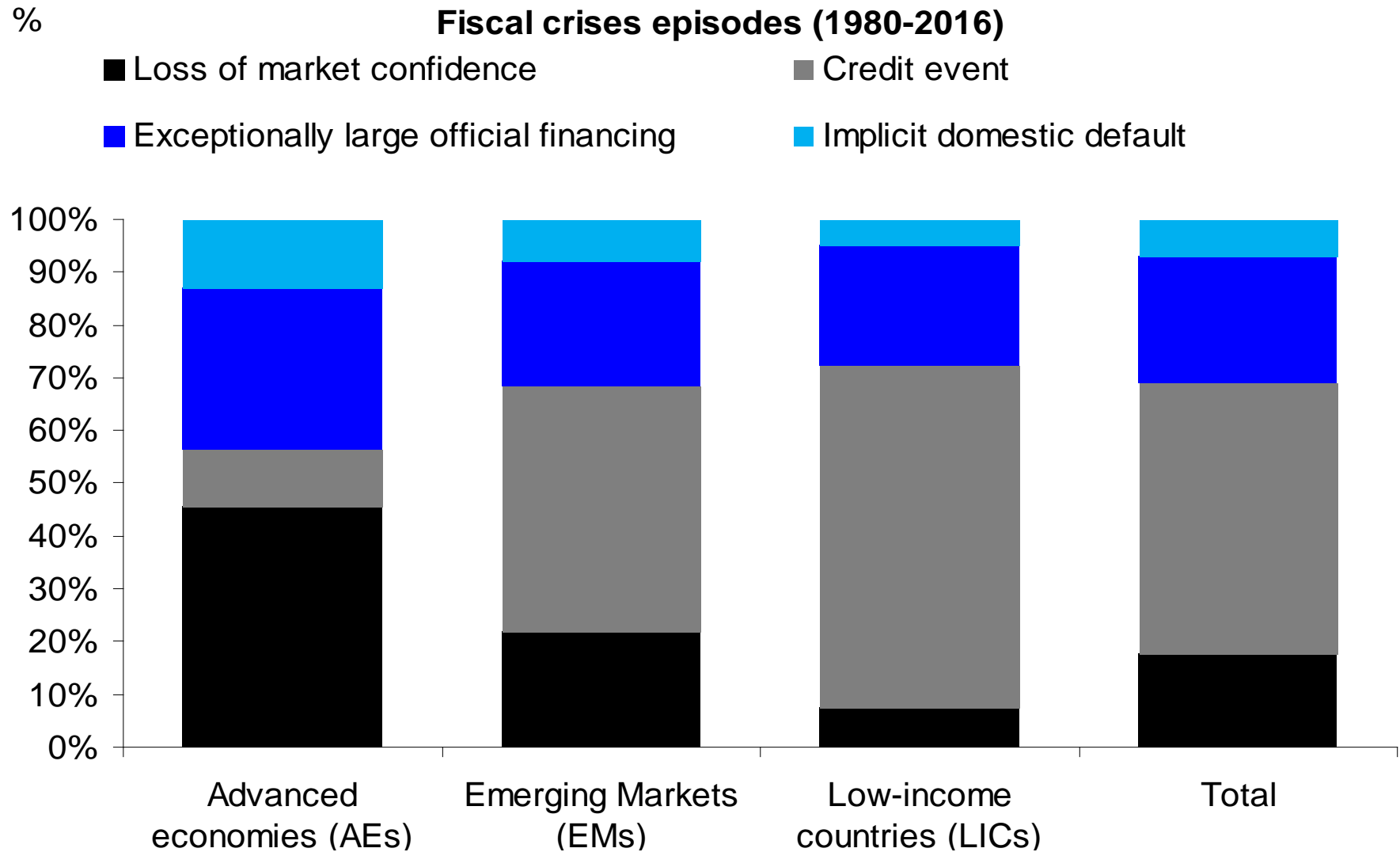


# 6. The US fiscal expansion and long rates



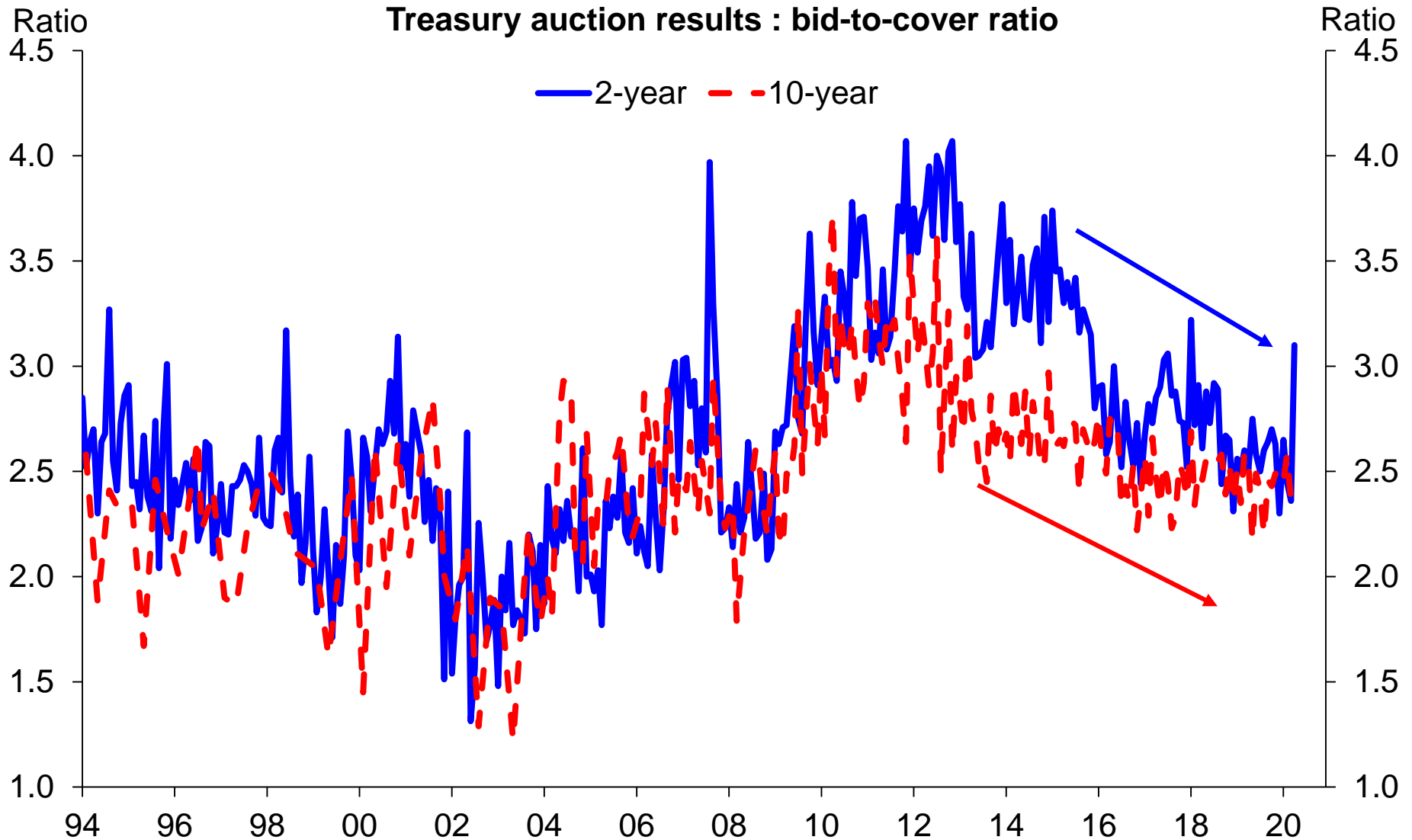


# Fiscal crises in advanced economies normally triggered by a sudden loss of market confidence or large increases in government bond auctions



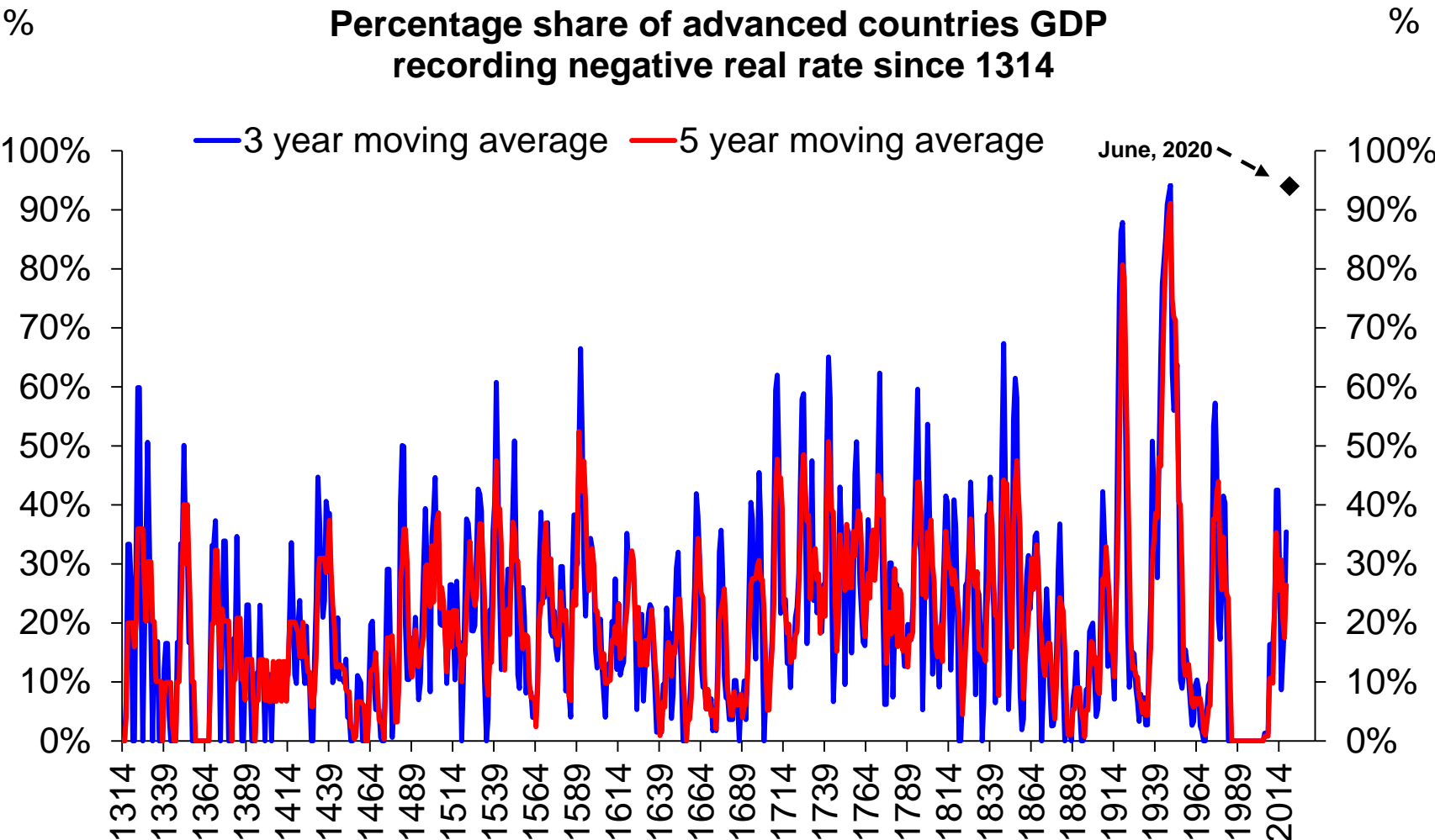
Source: Debt Is Not Free (IMF, 2020), DB Global Research

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



Source: Bloomberg Finance LP, DB Global Research

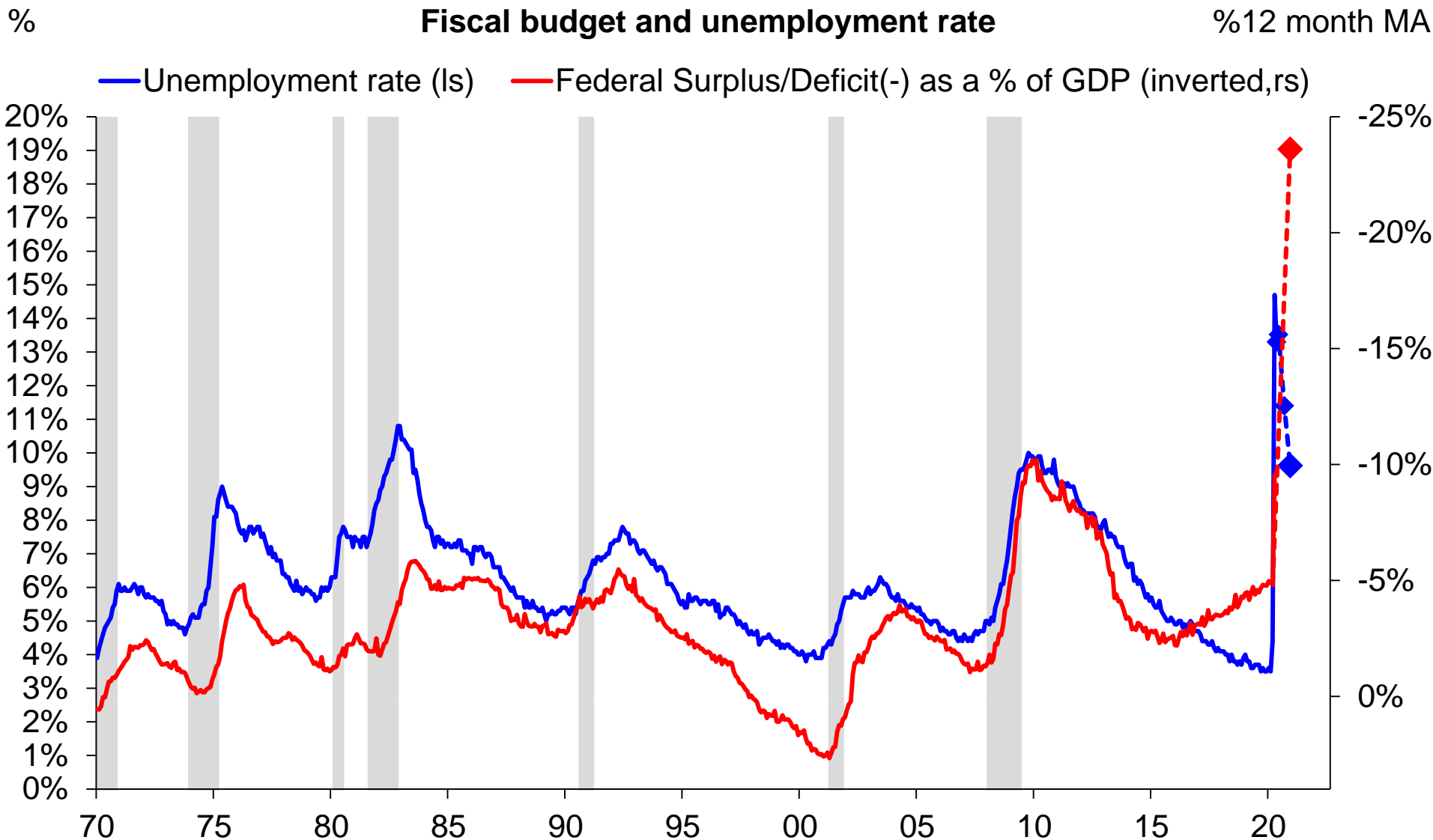
# Record high level of world GDP experiencing negative real interest rates



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

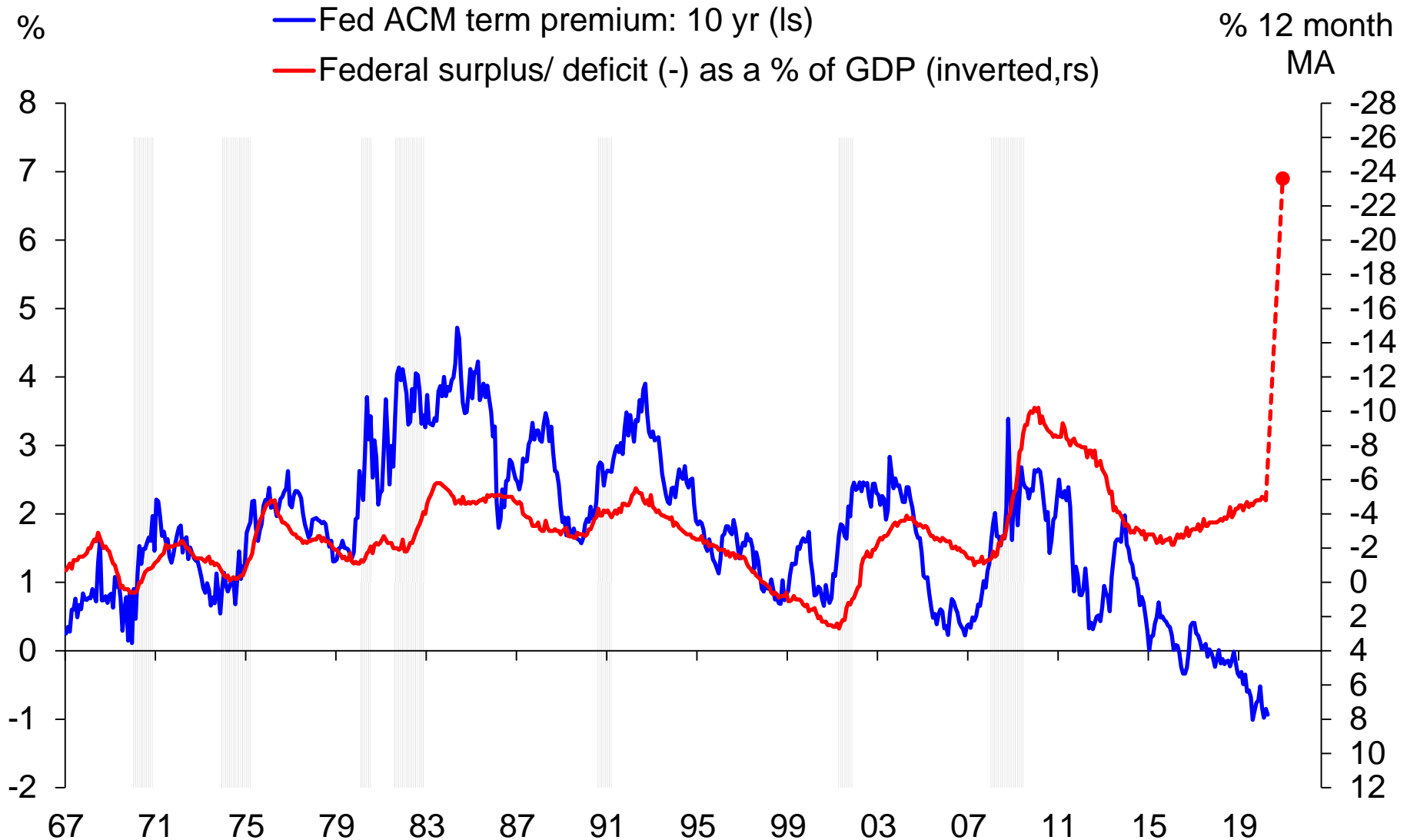
Source: National sources, Paul Schmelzing (BoE, January 2020, DB Global Research

# Big jump in budget deficit and unemployment rate



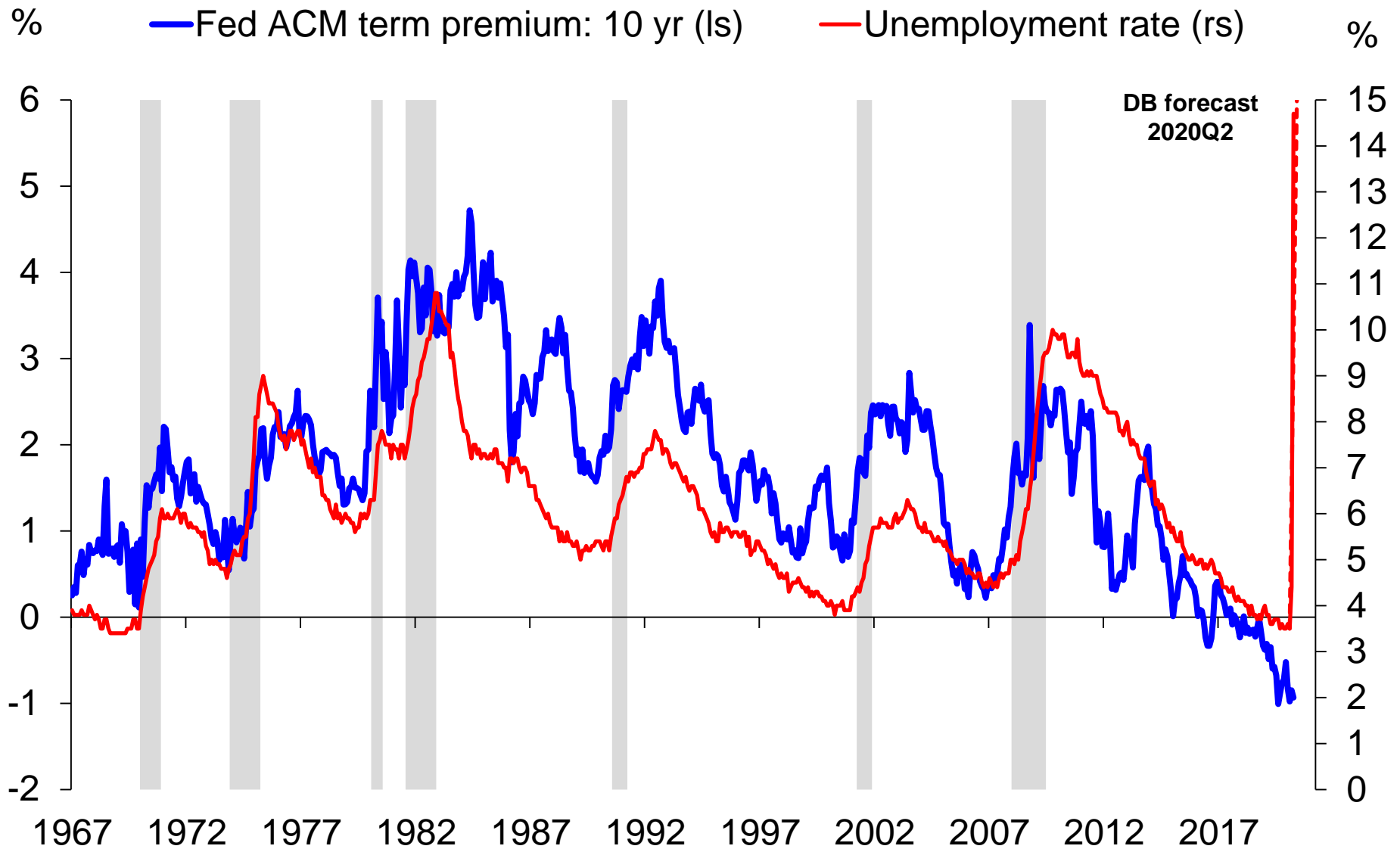
Source: BLS, US Treasury, BEA, Haver Analytics, DB Global Research

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



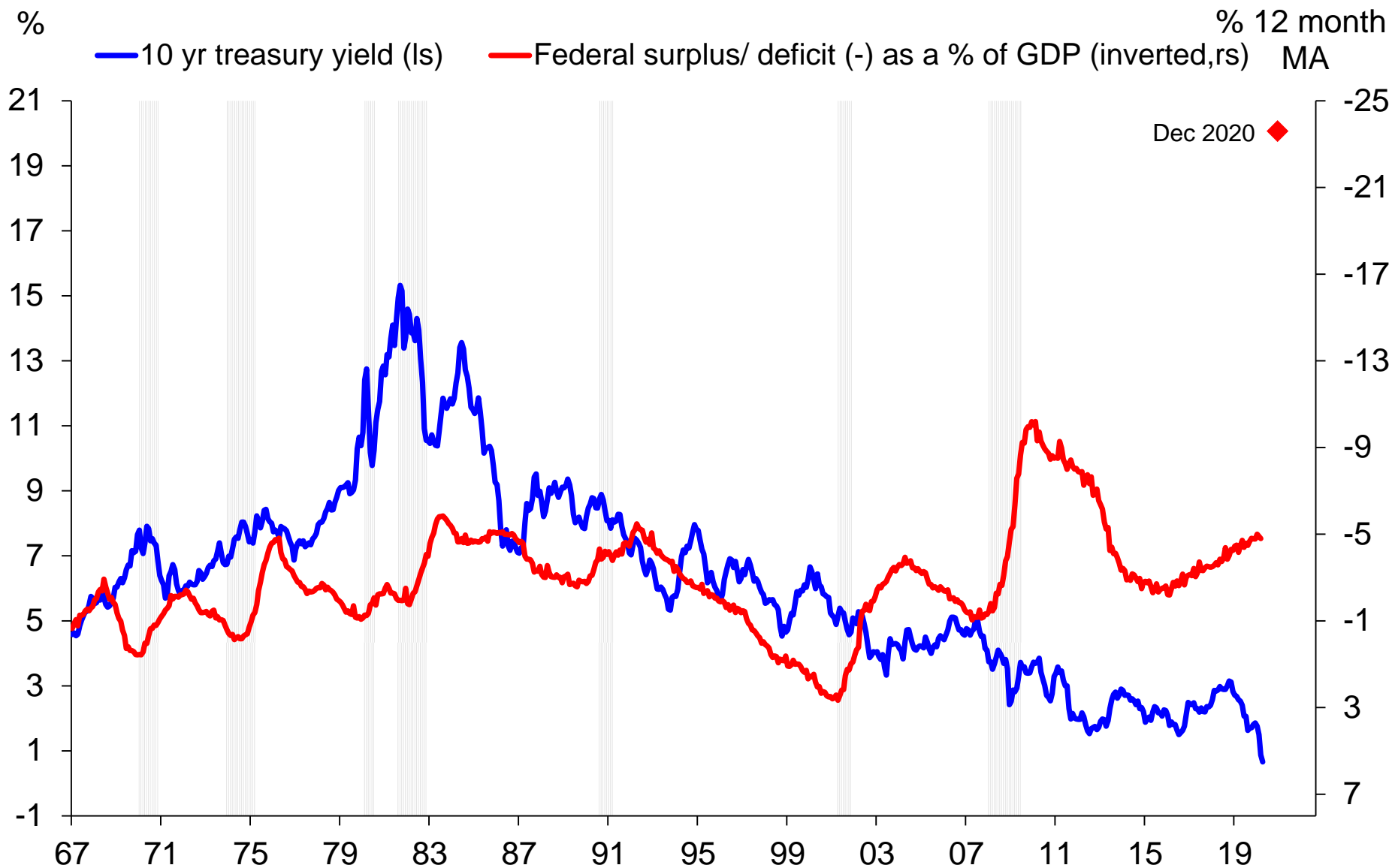
Source: FRBNY, US Treasury, BEA, Haver Analytics, DB Global Research

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



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

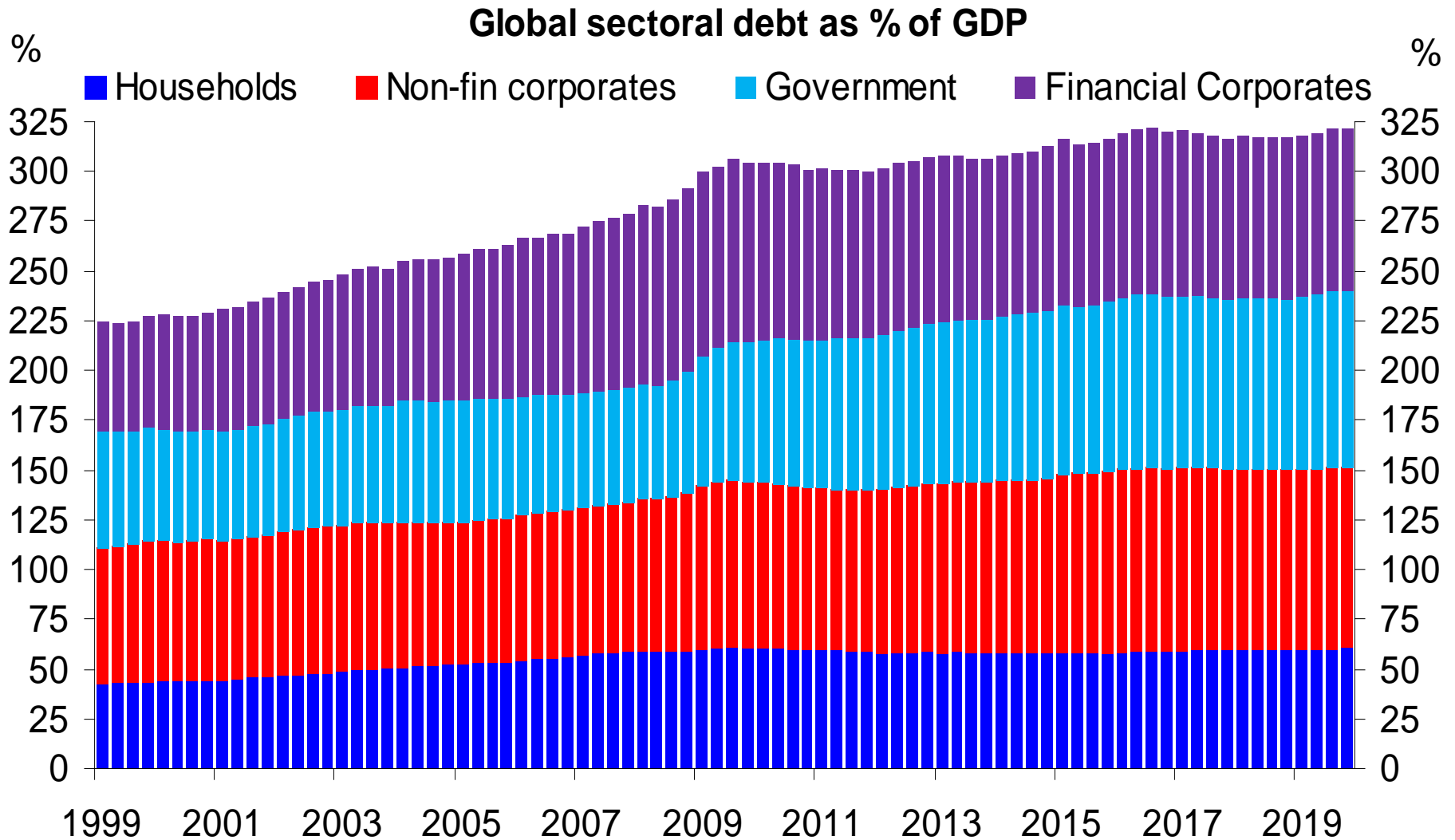
# Fiscal deficit and 10-year rates



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



# Demand and supply in Treasury markets

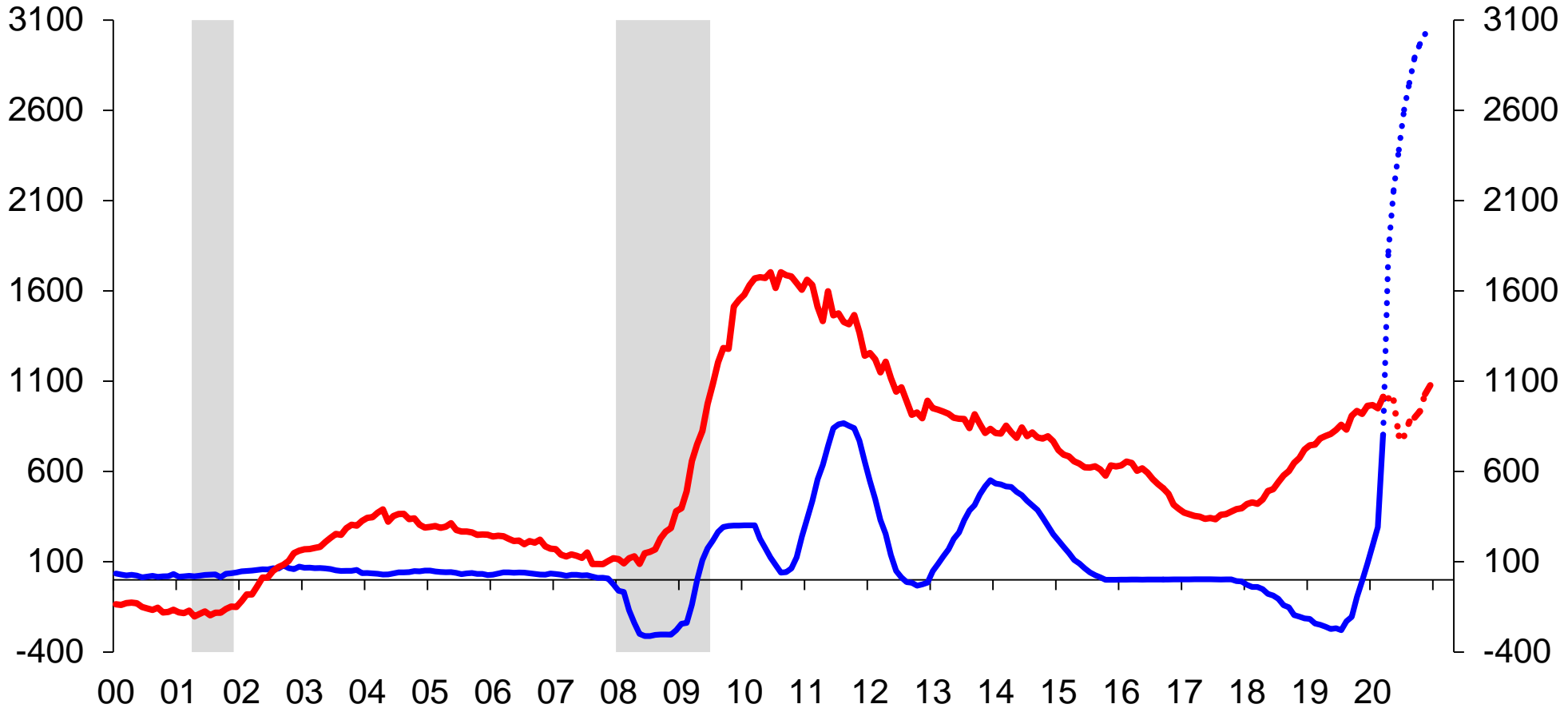


\$bln  
12m sum

## United States: Treasury issuance and Fed QE

\$bln  
12m sum

— Fed Treasury purchases      — Net issuance



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

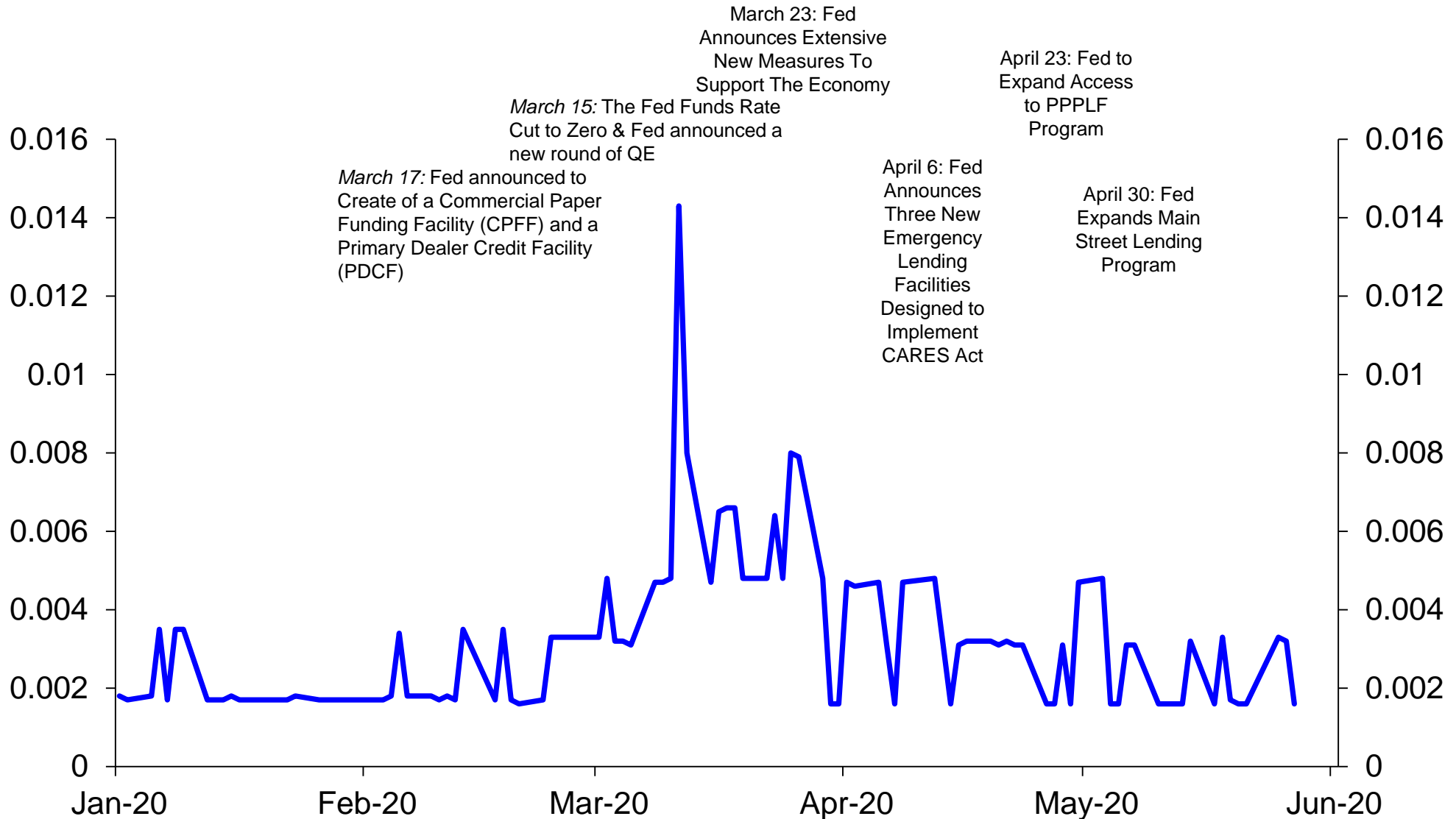
# Liquidity in US Treasury markets



% pt

## Bid-offer spread in US Treasuries

% pt

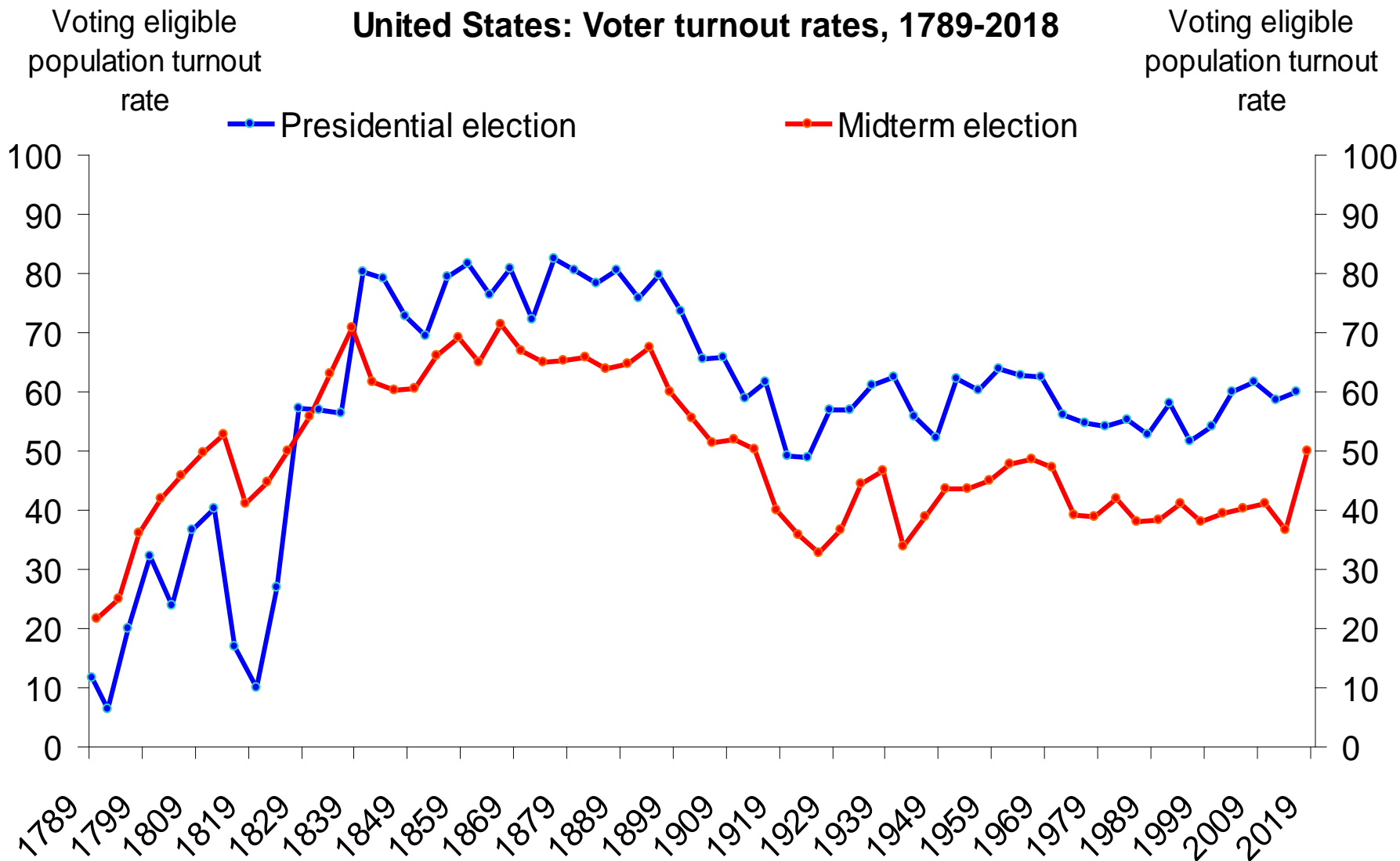


Source: Bloomberg Finance LP, DB Global Research



# 7. Election uncertainty

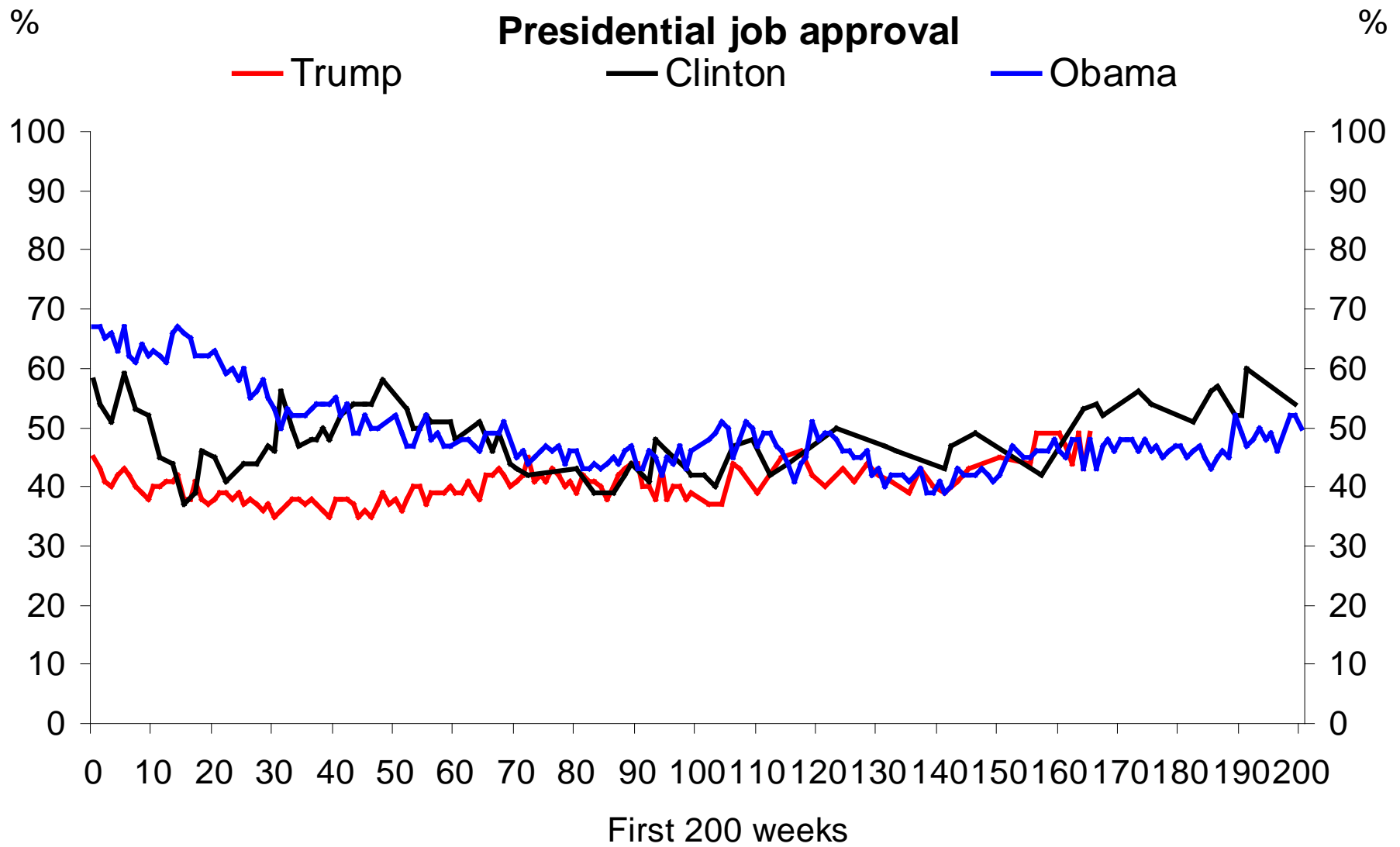
# Voter turnout in Midterm and Presidential elections since 1789



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

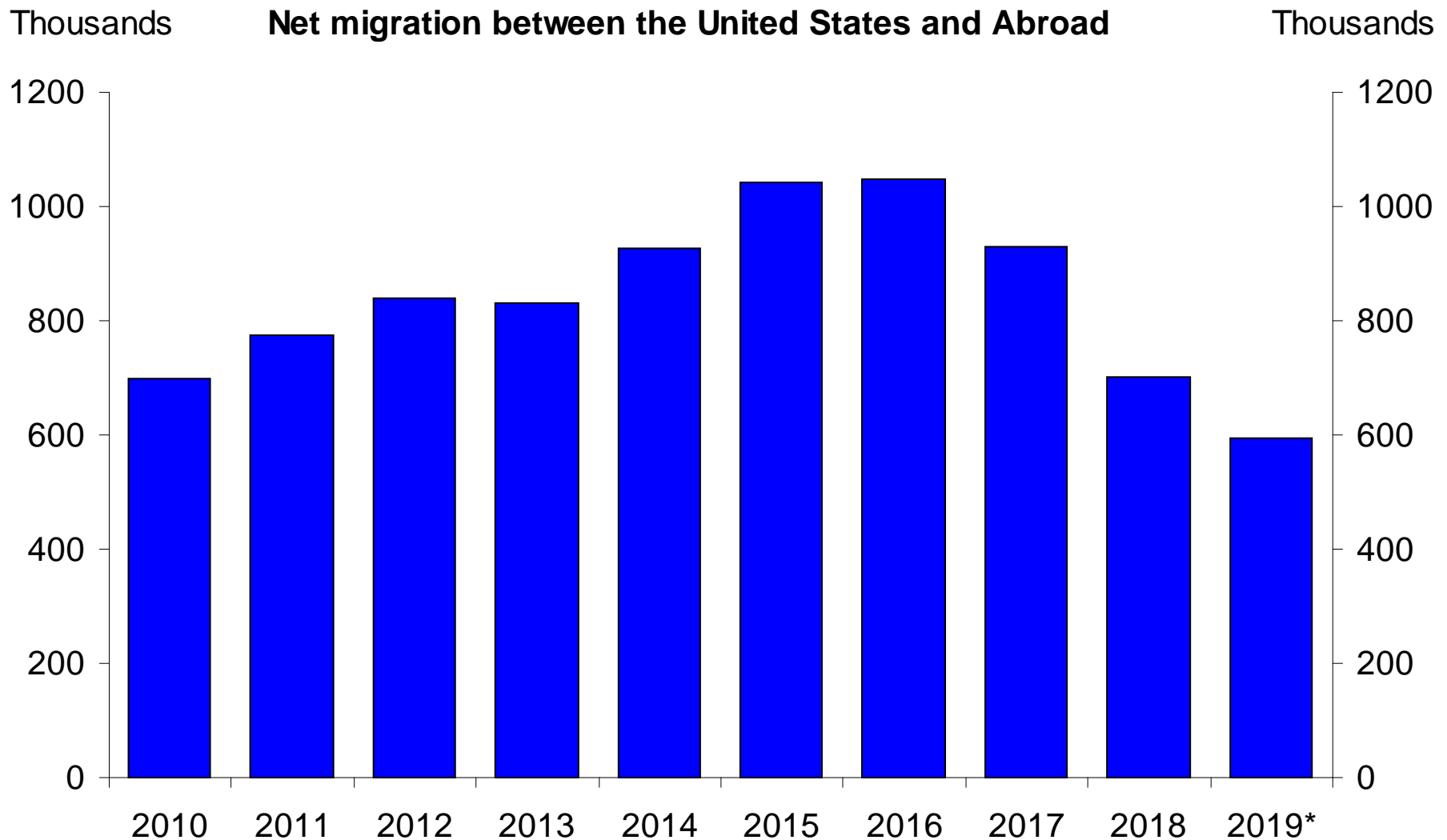
Source: <http://www.electproject.org/>, DB Global Research

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



Source: American Presidency Project, Gallup, DB Global Research

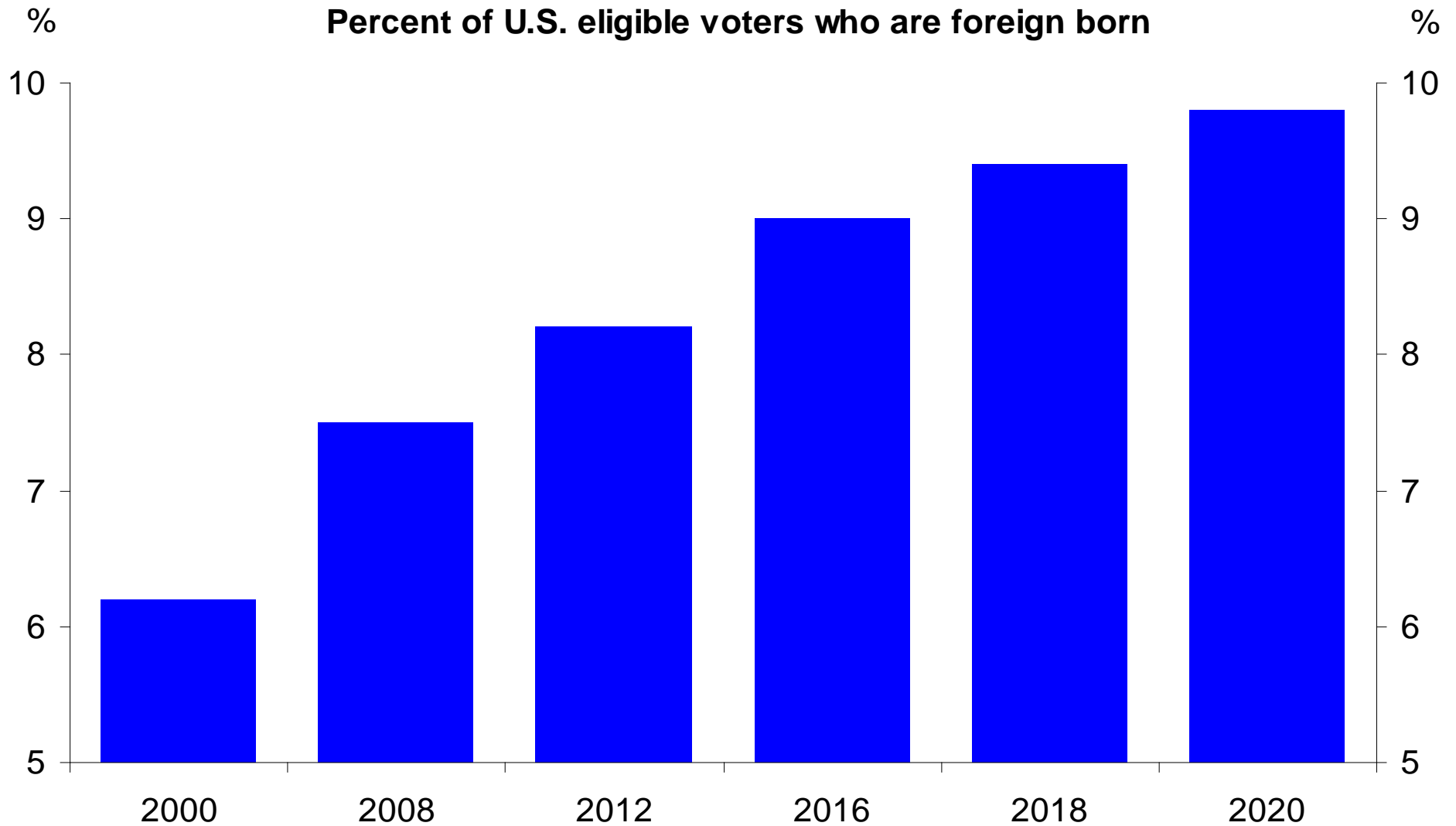
# Net migration into the US down 40% in recent years



\* 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

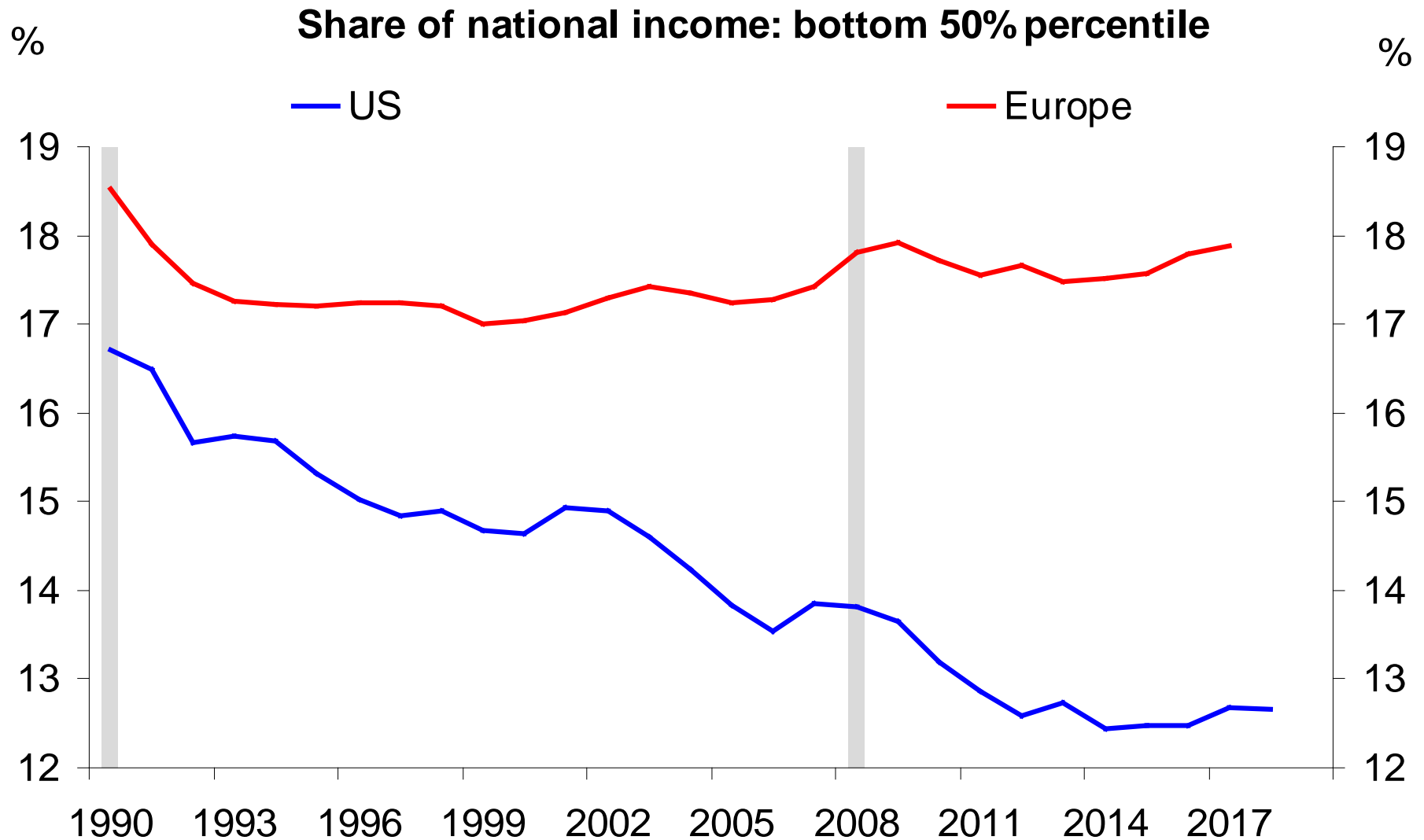
# 10% of voters in 2020 will be foreign born



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

Source: PEW Research, DB Global Research

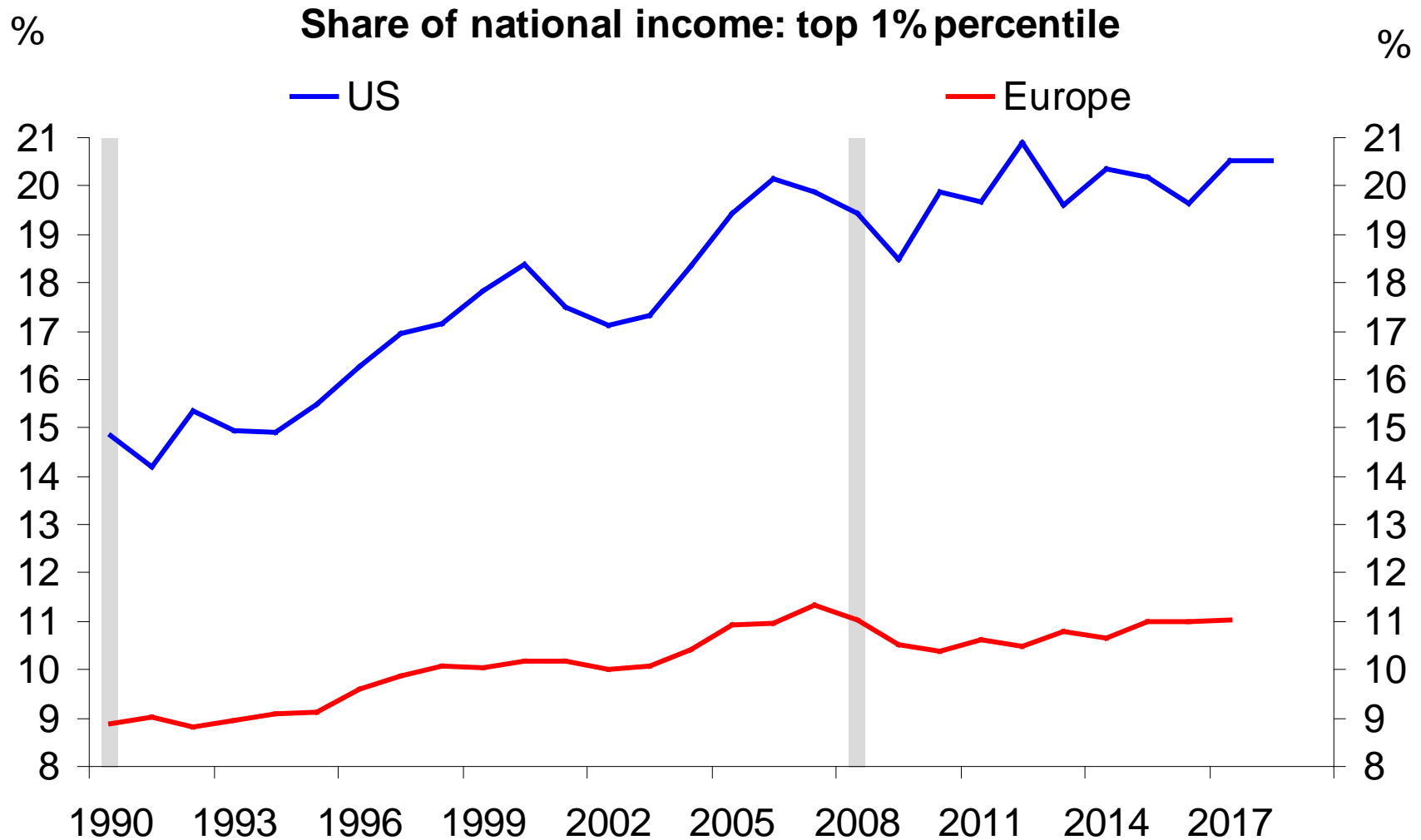
# The share of income going to the Bottom 50% of the population is down in the US and unchanged in Europe



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

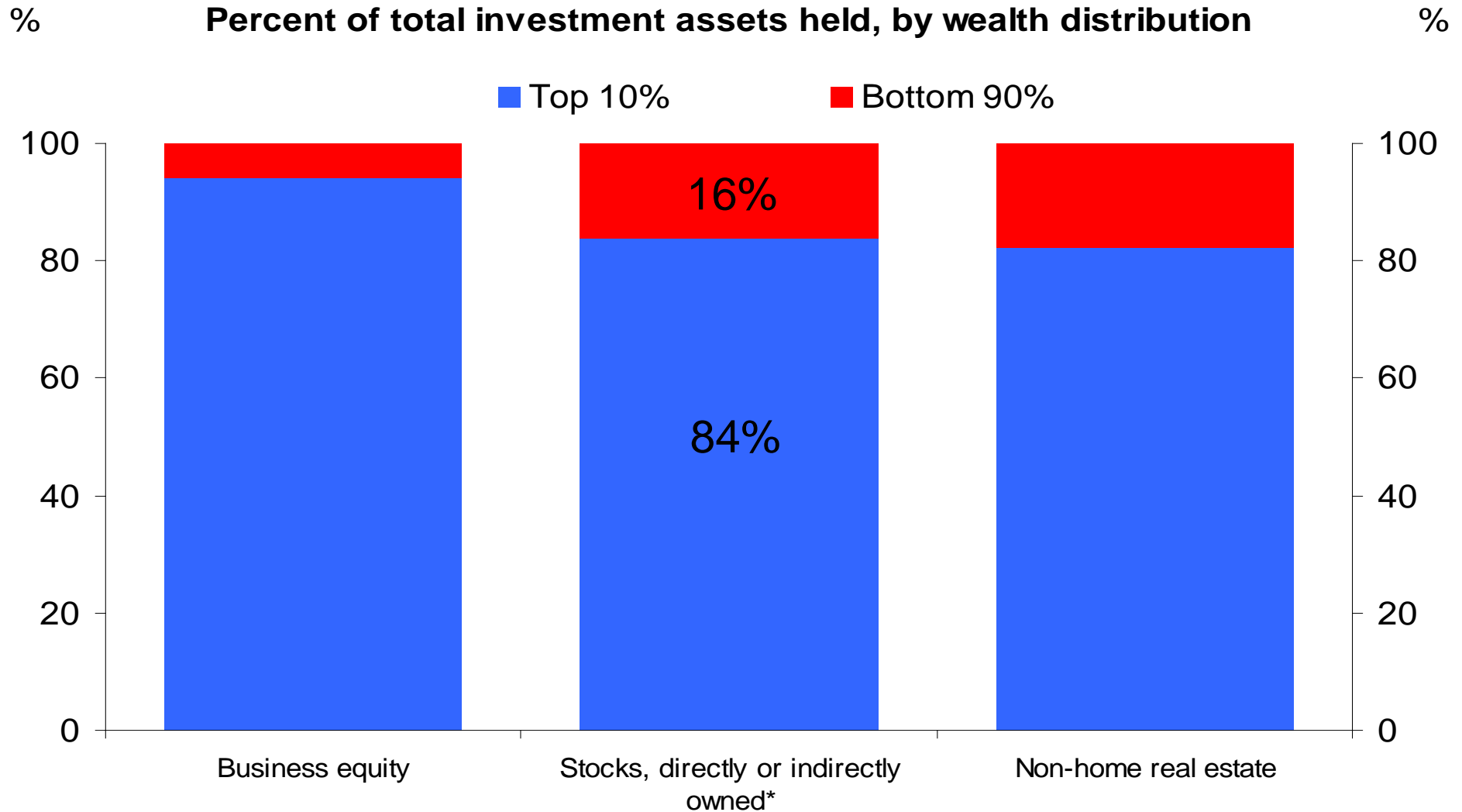


# The share of income going to the Top 1% is up 6%-points in the US and 2%-points in Europe



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



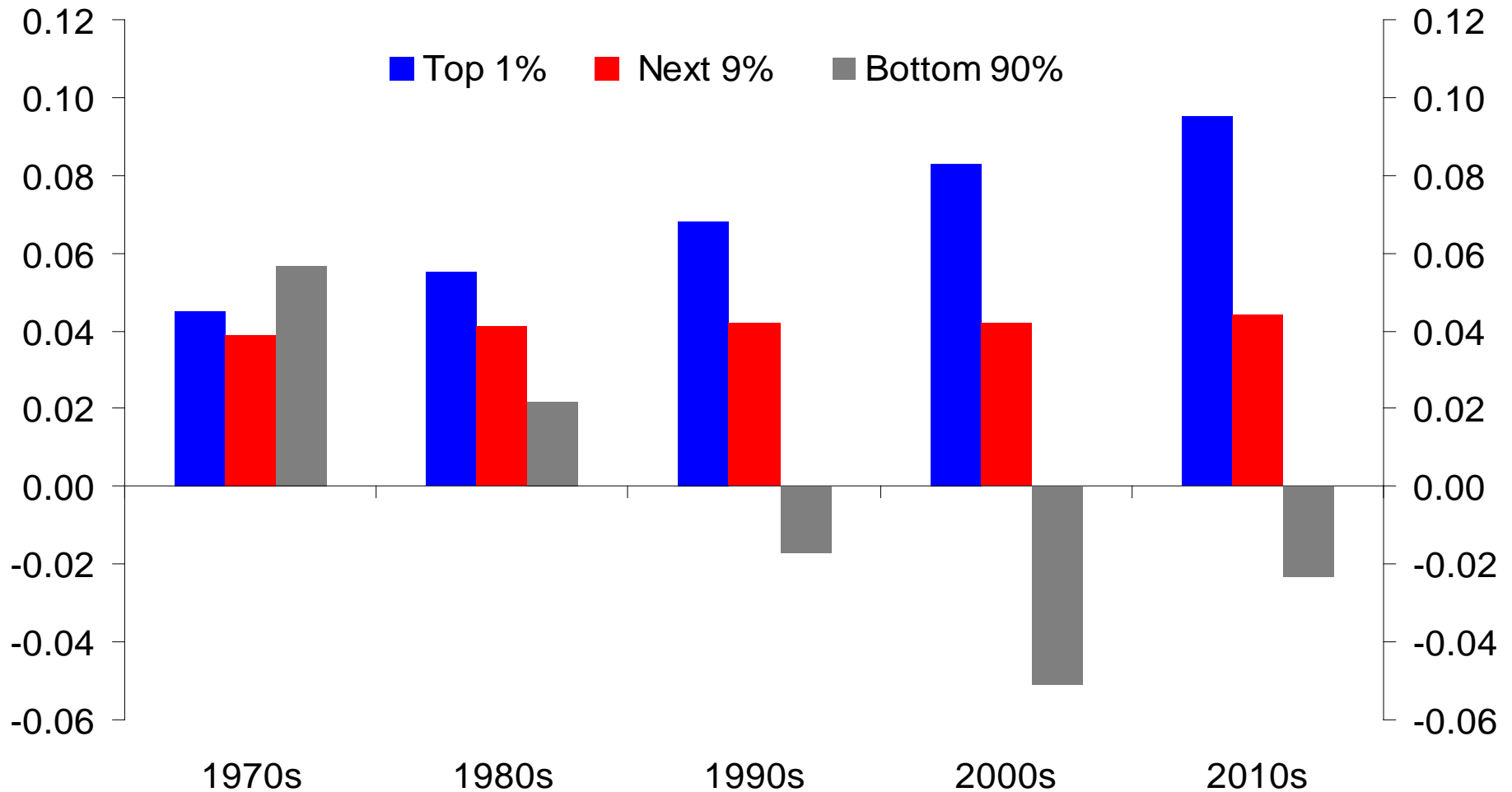
\* Includes direct ownership of stocks and indirect ownership through mutual funds, trusts, and IRAs, Keogh plans, 401(k) plans, and other retirement accounts

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

# US consumer outlook: Many low- and middle-income households have lost jobs and have little savings

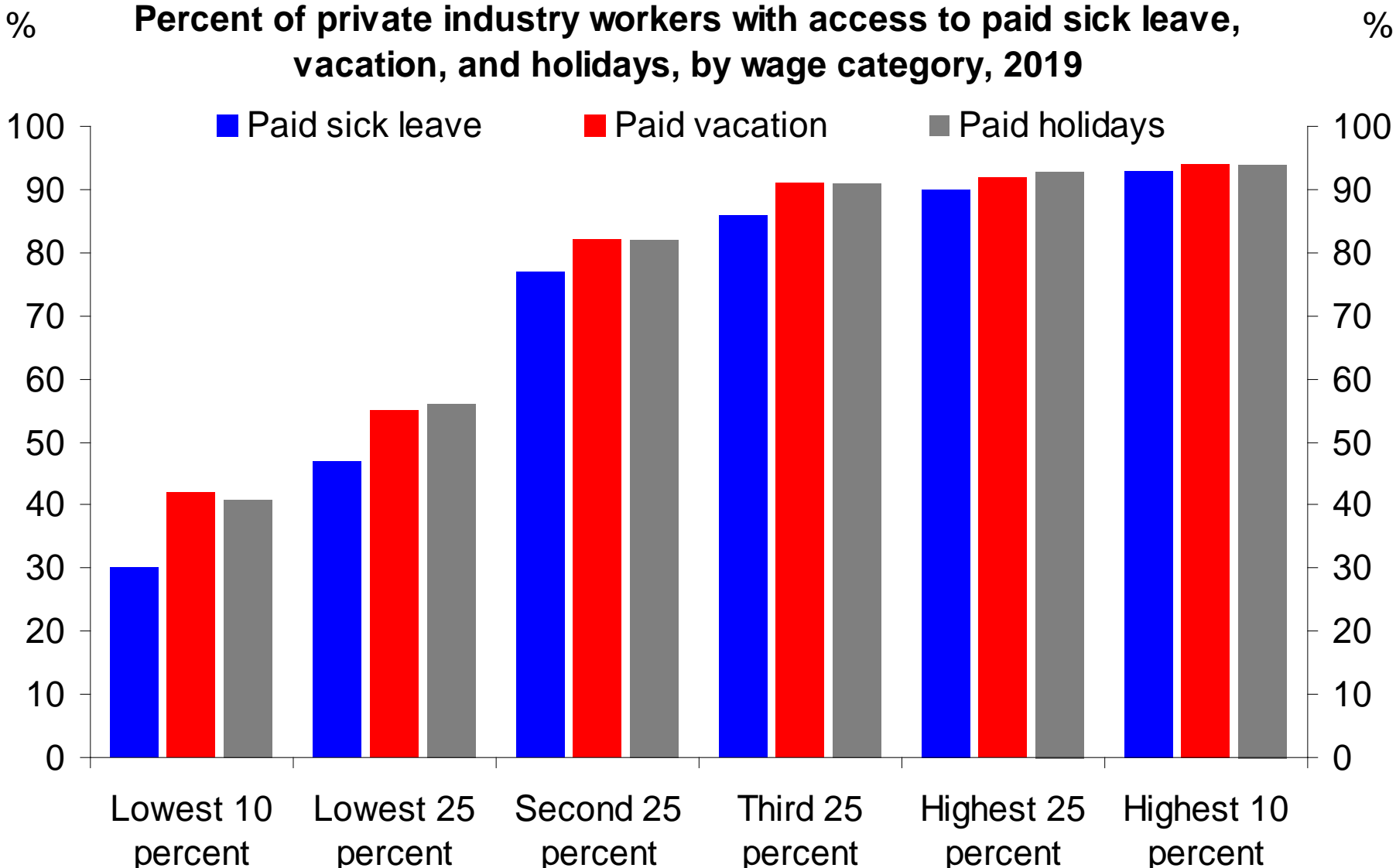


## Net saving rates across the income distribution



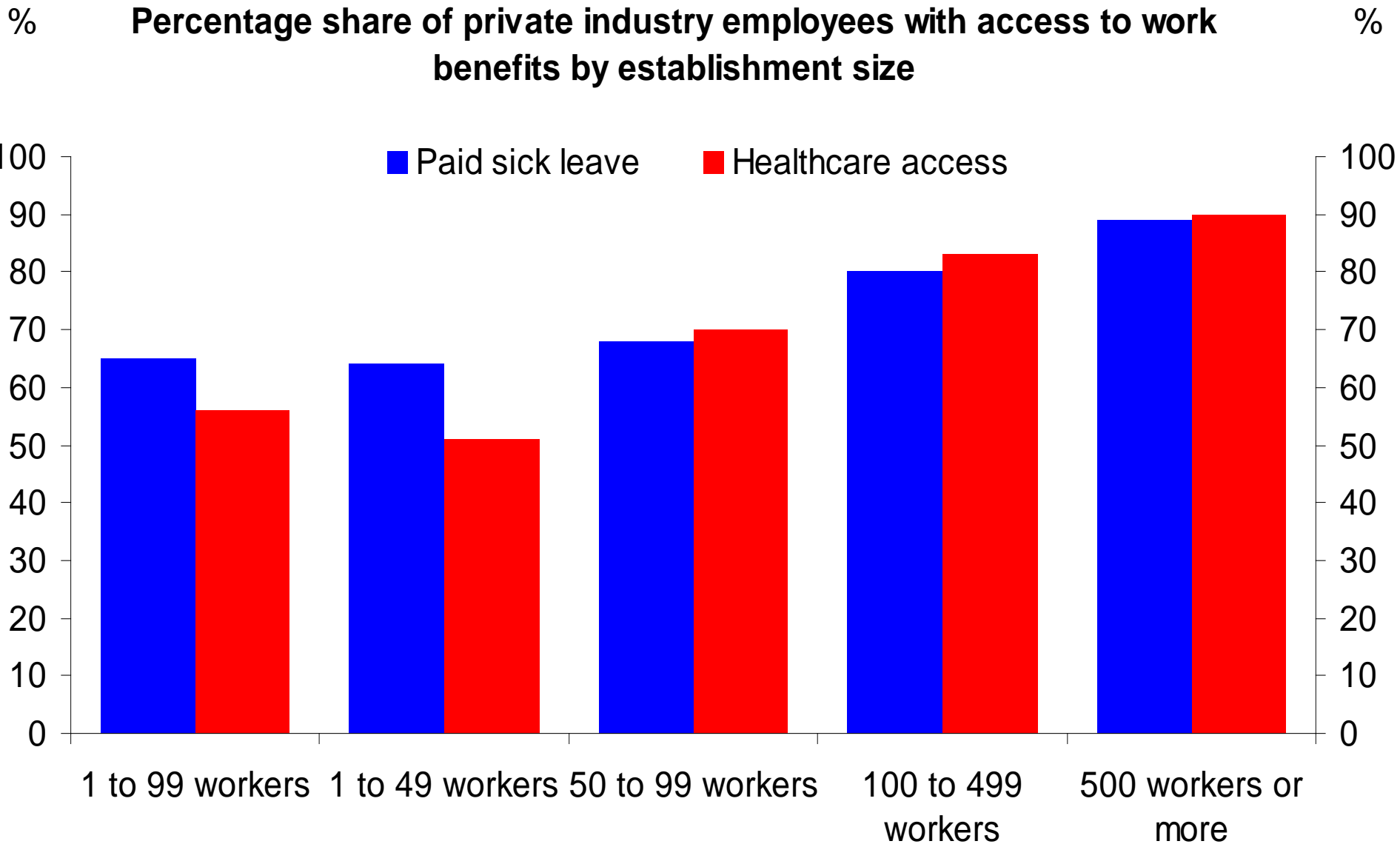
Source: Mian, Straub & Sufi "The Saving Glut of the Rich and the Rise in Household Debt," (Nov 2019), DB Global Research

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



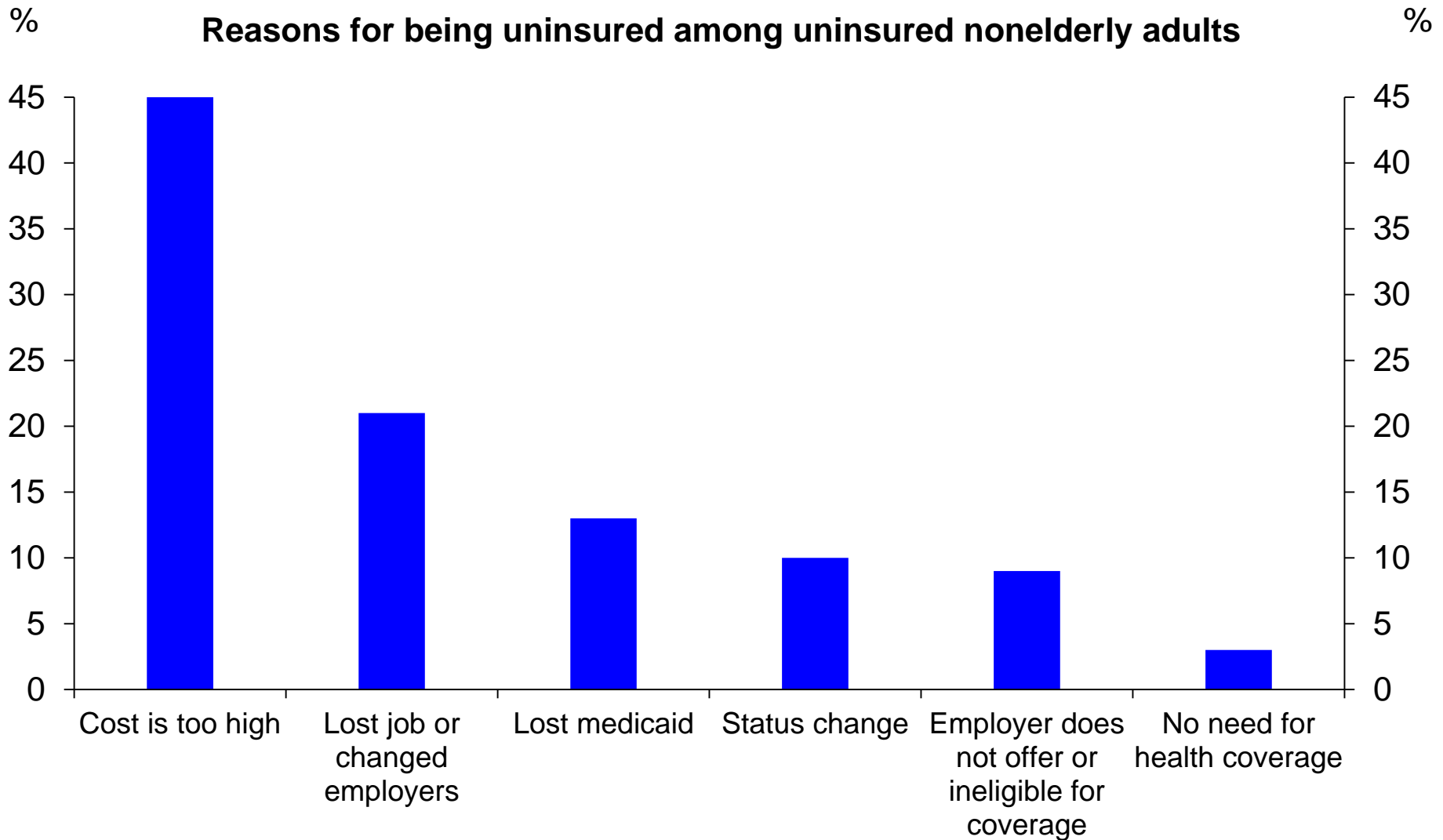
Source: Bureau of Labor Statistics, National Compensation Survey, DB Global Research

# Paid sick leave and healthcare access by establishment size



Source: BLS, DB Global Research

# 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.

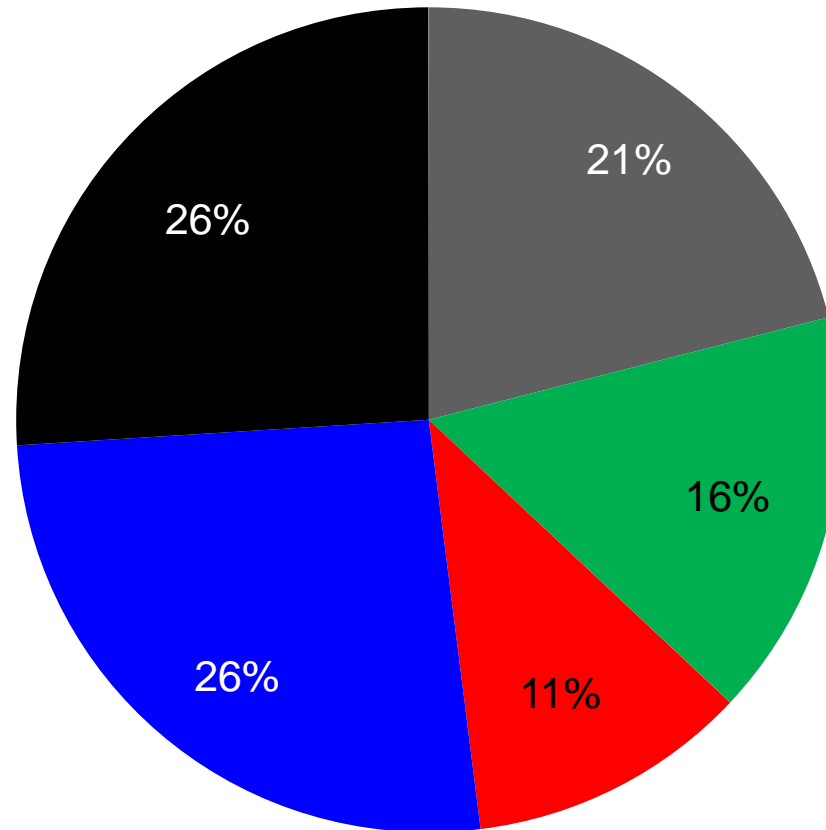
Source: Kaiser Family Foundation analysis of 2018 National Health Interview Survey, DB Global Research

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



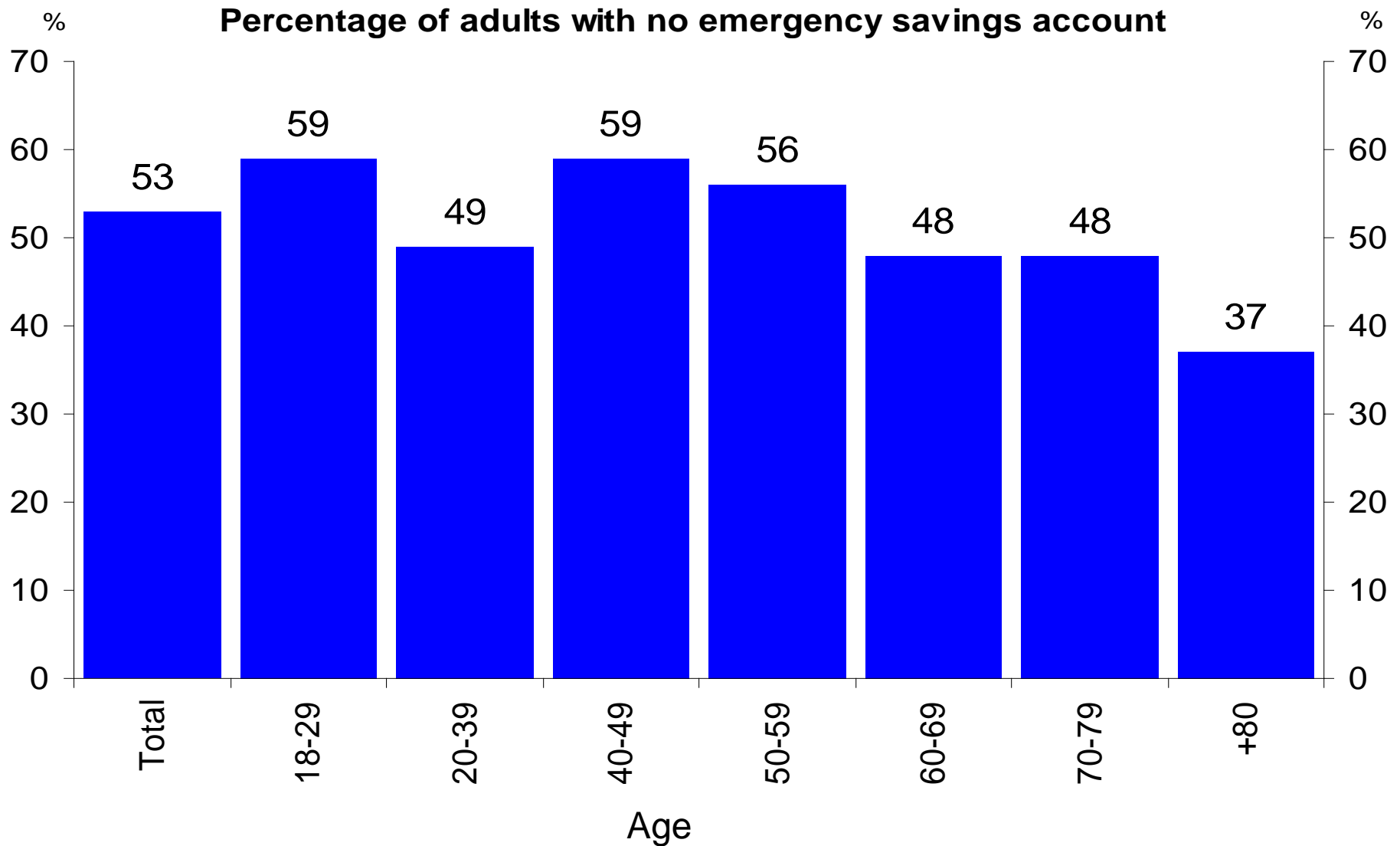
## Demographics at ages 50-62 based on a benefits only definition of nontraditional work

- Early retirement
- Weak attachment
- Mostly nontraditional
- Mostly traditional
- All traditional



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

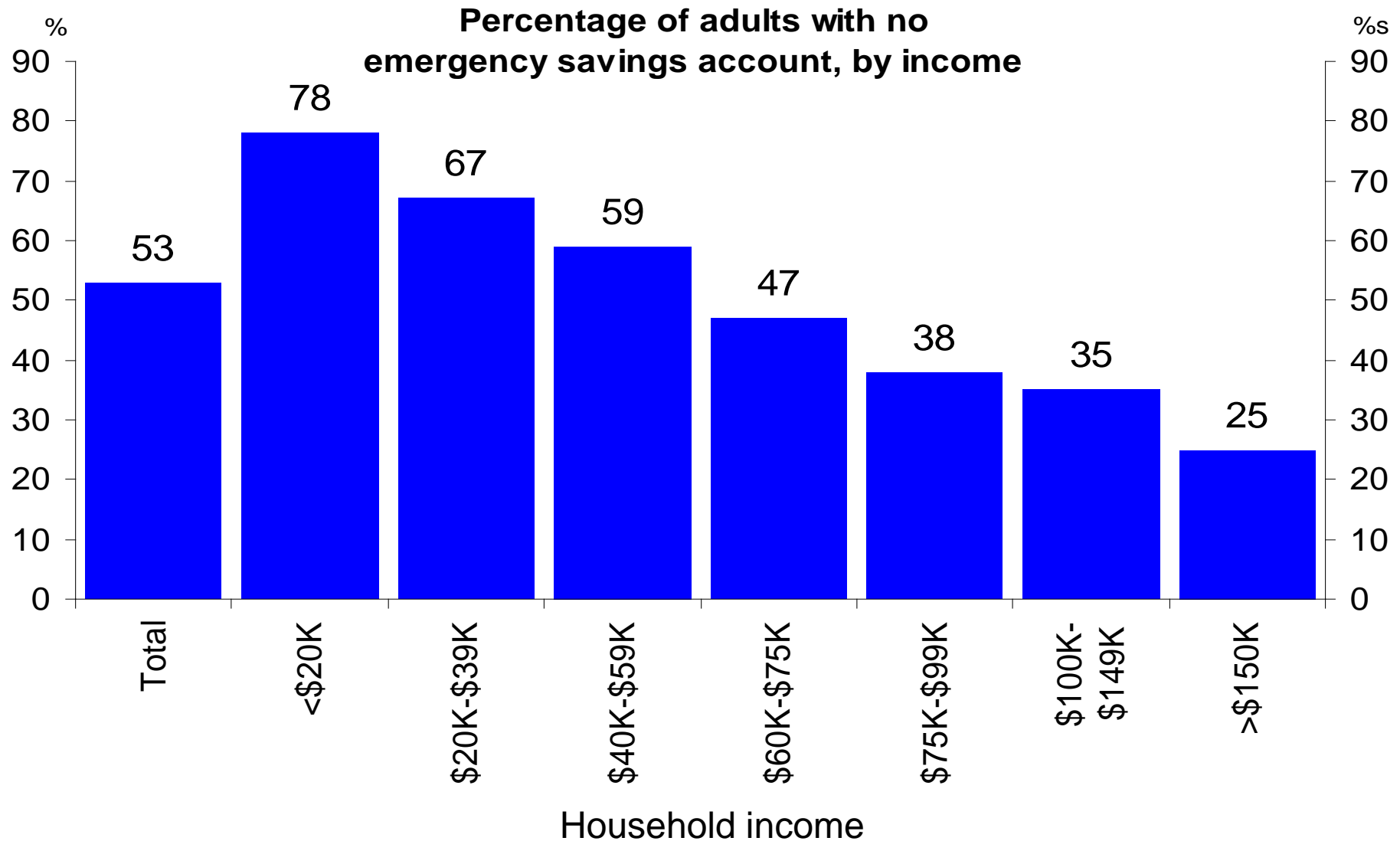
# 53% of US households don't have emergency savings



Source: AARP, DB Global Research



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

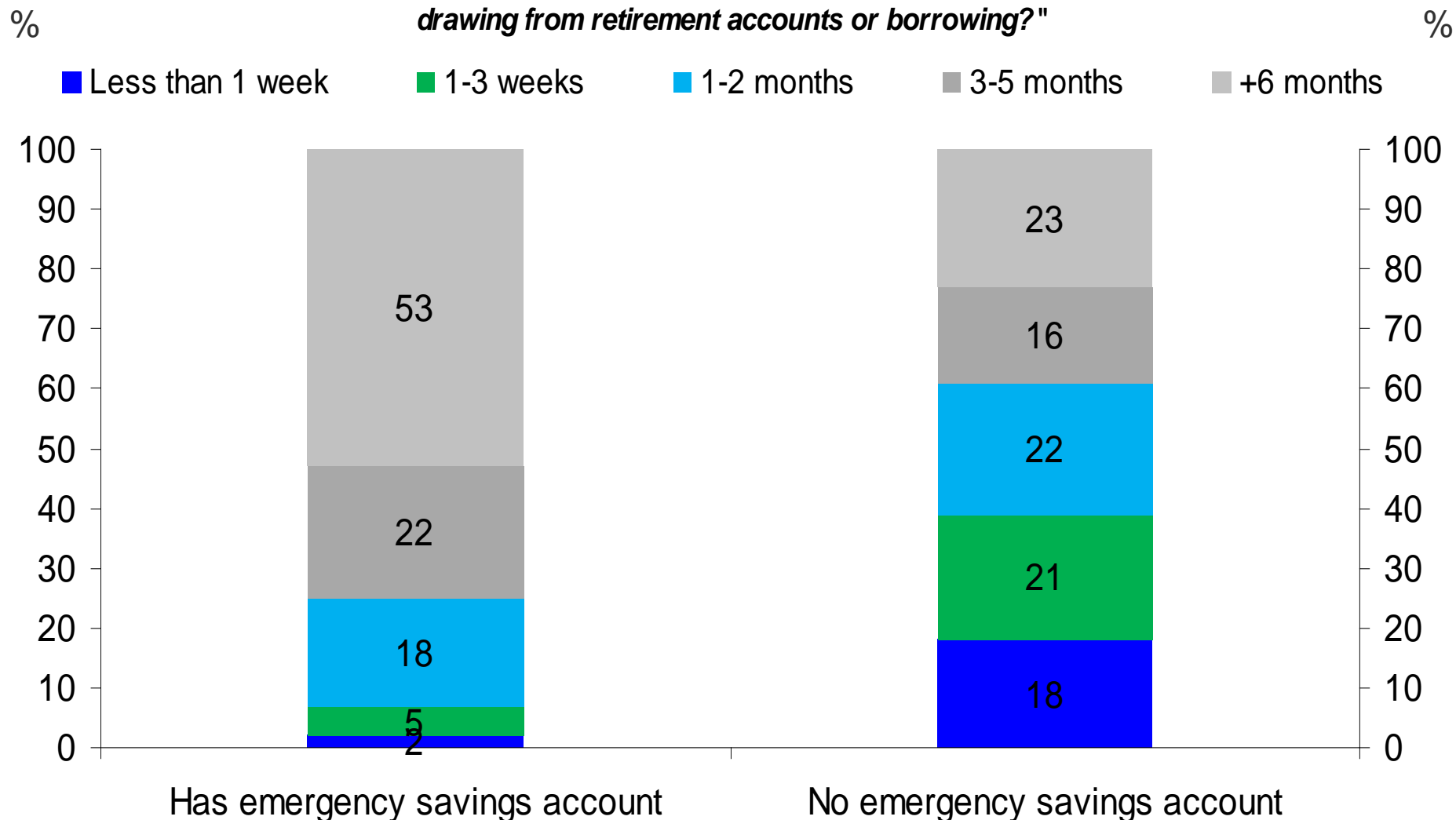


Source: AARP, DB Global Research

# 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?"**

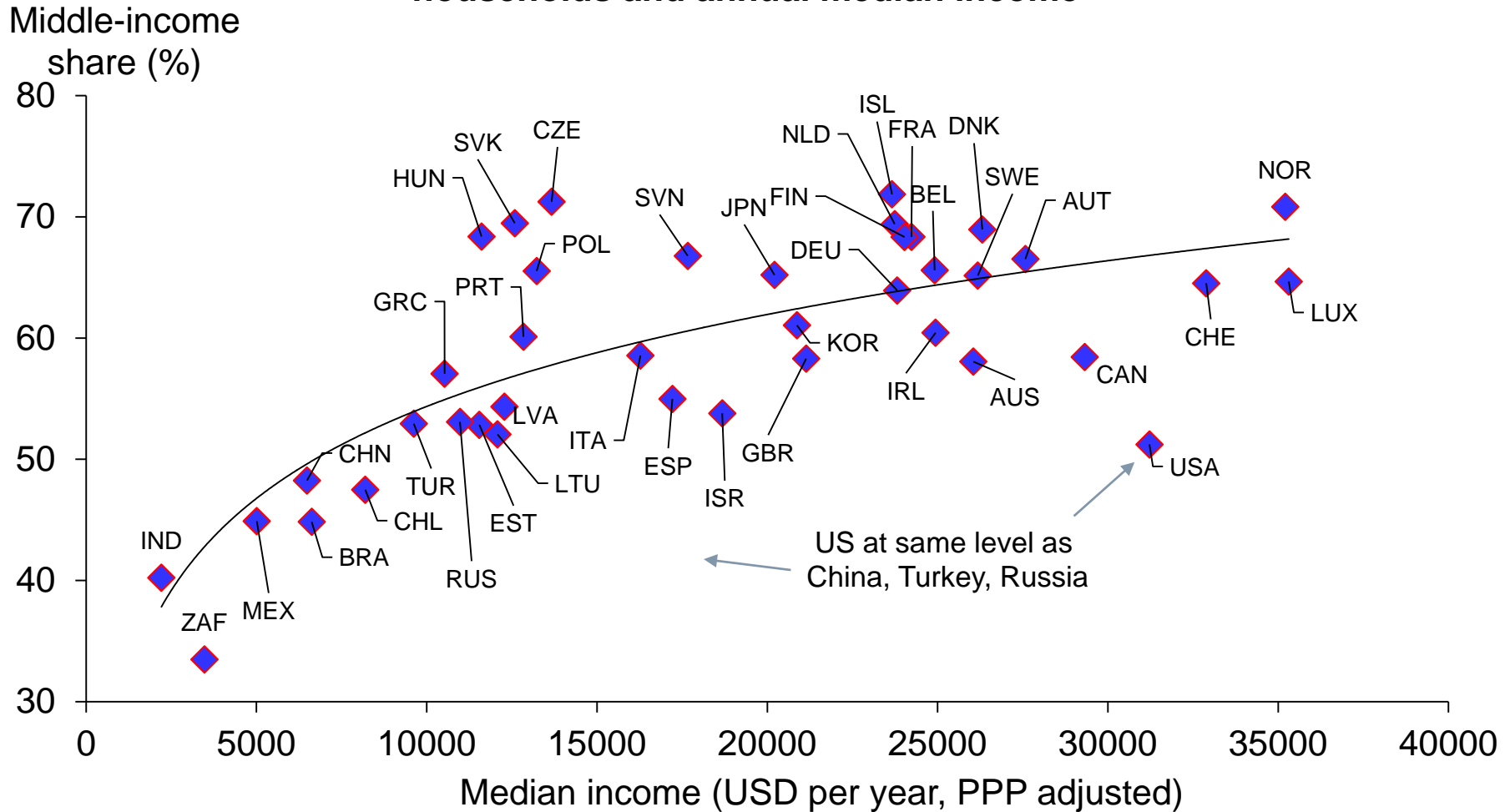


Source: AARP, DB Global Research



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

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



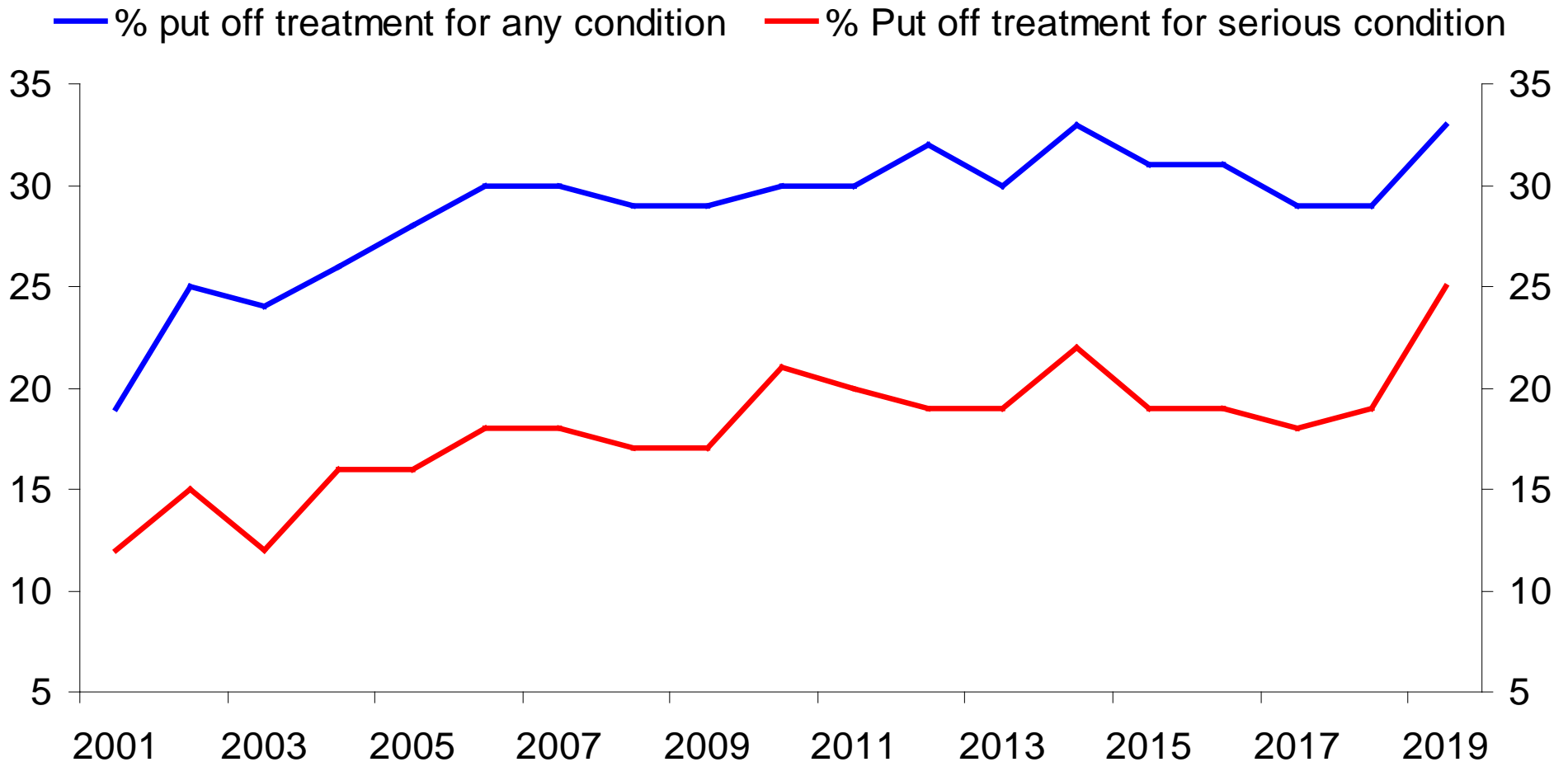
Note: Middle-income classes and median incomes are defined relative to equivalised household disposable income. The middle-income class comprises individuals in households with incomes that are between 75% and 200% of the median.

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

# More people delaying medical treatment for financial reasons

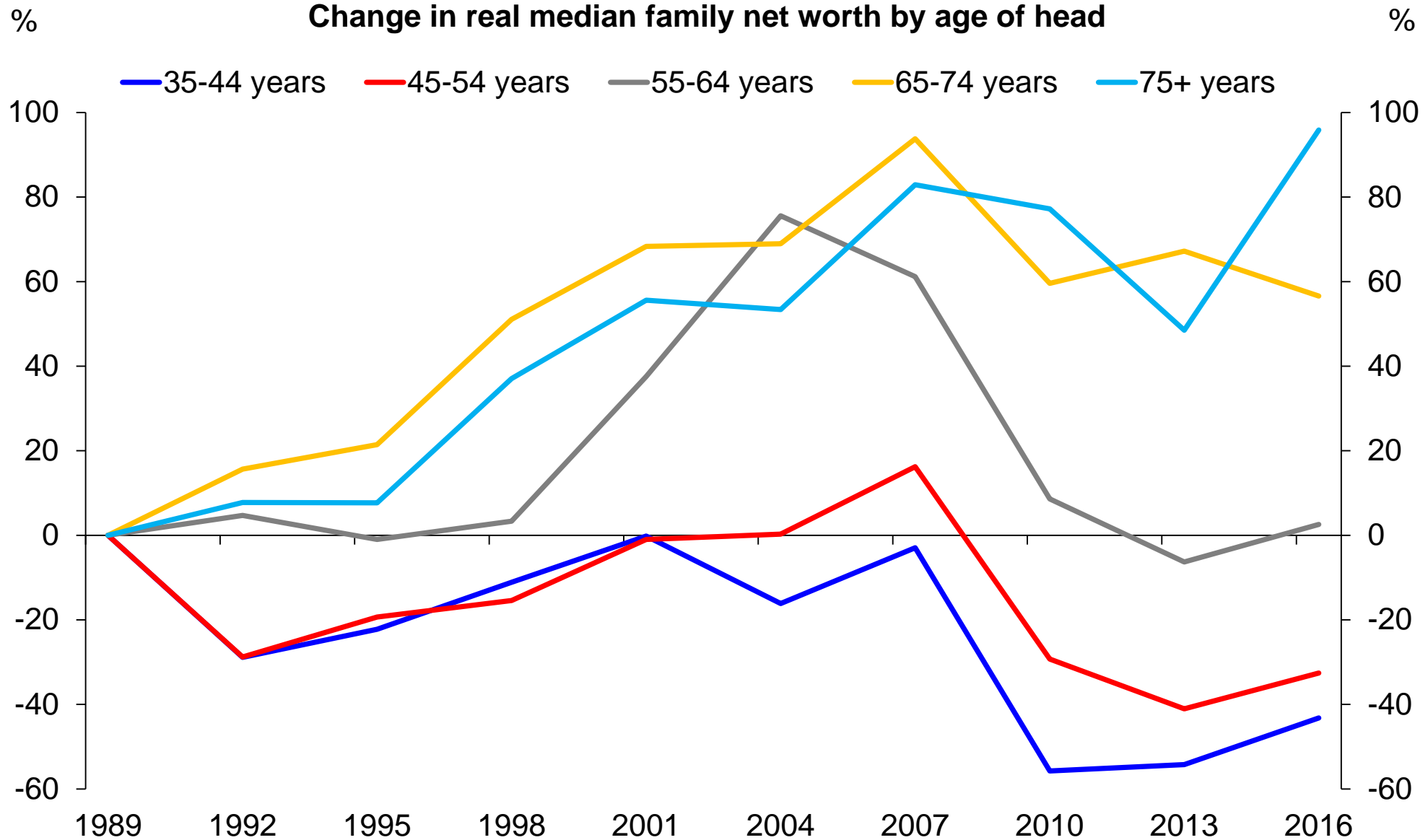


Within the last twelve months, have you or a member of your family put off any sort of medical treatment because of the cost you would have to pay?



Source: Gallup Survey, DB Global Research

# Older households richer. Younger households poorer



Source: FRB, Haver Analytics DB Global Research



# Investment implications

# Top 18 questions for markets



## The economy

1. How will different reopening strategies and very different levels of unemployment impact the shape of the recovery?
2. Many consumers and corporates have missed payments on debt on April 1 and May 1, what will happen if many also miss payments on June 1, and higher 90-day delinquency rates begin to trigger a wave of defaults?
3. The current deep recession will result in disinflation over the coming years, are there any valid arguments for inflation?
4. What behavioral changes will we see from consumers over the coming quarters?
5. What behavioral changes will we see from corporates over the coming quarters?
6. What behavioral changes will we see from banks and private buyers of corporate credit over the coming quarters?
7. What are the risks that the current liquidity crisis will turn into a solvency crisis?

## The policy reaction

8. Which countries will do additional fiscal stimulus?
9. What are the risks of doing massive fiscal policy?
10. What are the risks of doing massive monetary policy?
11. What are the consequences of the weighted average maturity of US government debt outstanding moving rapidly lower over the coming quarters, will the market pay attention and begin to worry about US fiscal sustainability?
12. What are the consequences of the Fed's unwillingness to do yield curve control in the long end of the curve, are they trying to draw a line between monetary and fiscal policy?
13. When will credit and equity markets again be driven by fundamentals?

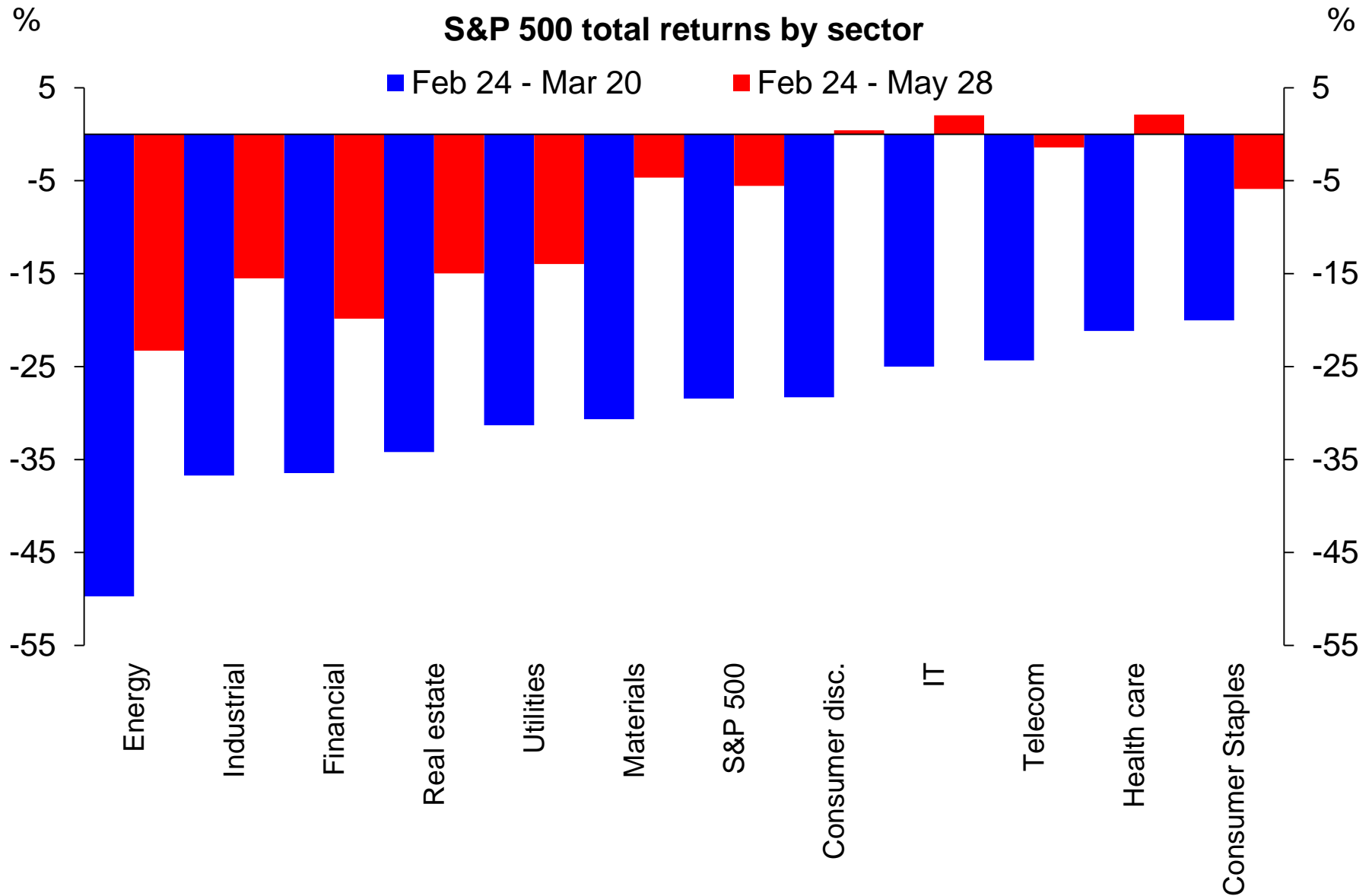
## The future

14. What are the policy options for fiscal policy and central banks if we get a second wave of infections?
15. Will we see new rules and regulations for households, small businesses, large businesses, and financial services?
16. What are the geopolitical consequences for the relationship between the US, Europe, and China?
17. What will happen when Fed Chair Powell's term ends in February 2022, this has to be decided in 2021?
18. COVID-19 and the associated fiscal policy response have magnified income inequality, wealth inequality, and health care inequality even further, what are the political consequences of these multi-decade trends accelerating?

Source: DB Global Research



# S&P500 performance since February 24



Source: Standard & Poor's, Haver Analytics, DB Global Research



# Time it takes from VIX crossing 40 until S&P500 reaches new all-time high



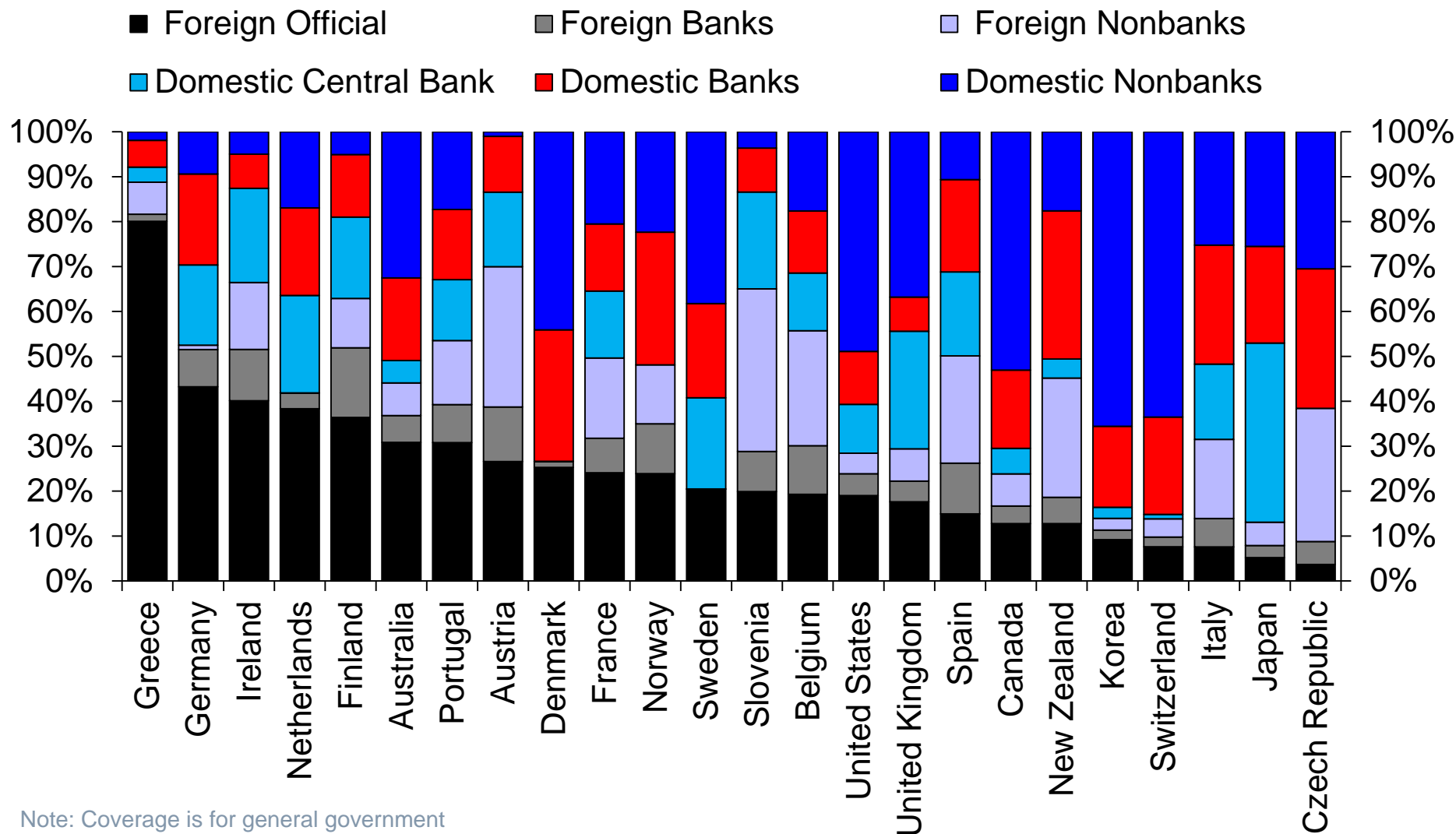
Date when VIX crossed 40	# months from VIX crossing 40 until S&P500 reached new all-time high
19-Oct-87	15 months
28-Aug-98	2 months
17-Sep-01	50 months
16-Jul-02	42 months
29-Sep-08	39 months
20-May-10	25 months
8-Aug-11	14 months
<b>Average</b>	<b>27 months</b>
<b>Median</b>	<b>25 months</b>

Source: WSJ, S&P, Haver Analytics, DB Global Research

# Who owns different countries' government bonds?



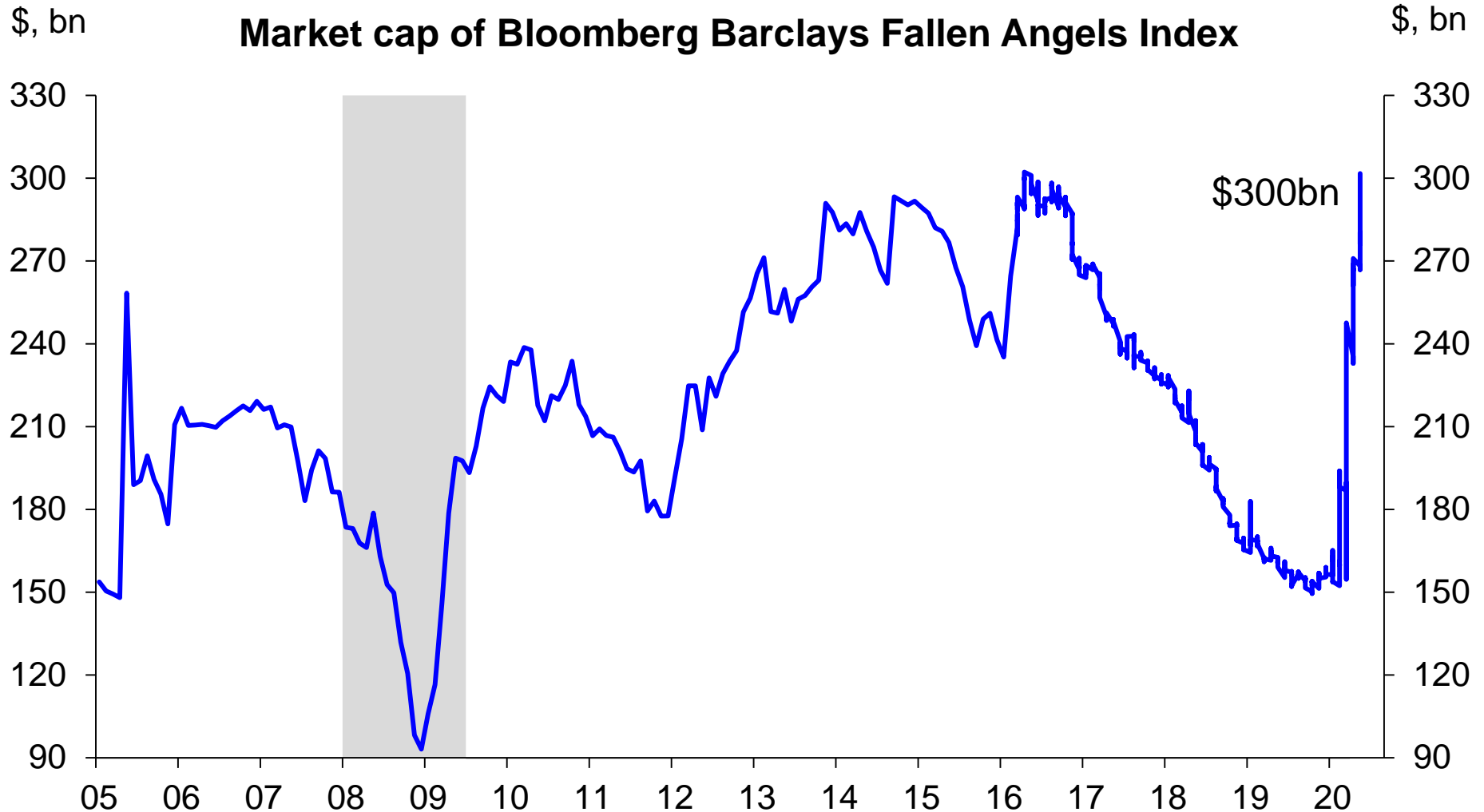
## Investorbase of advanced economies, 2019-Q4 (as % of total)



Note: Coverage is for general government

Source: IMF, Haver Analytics, DB Global Research

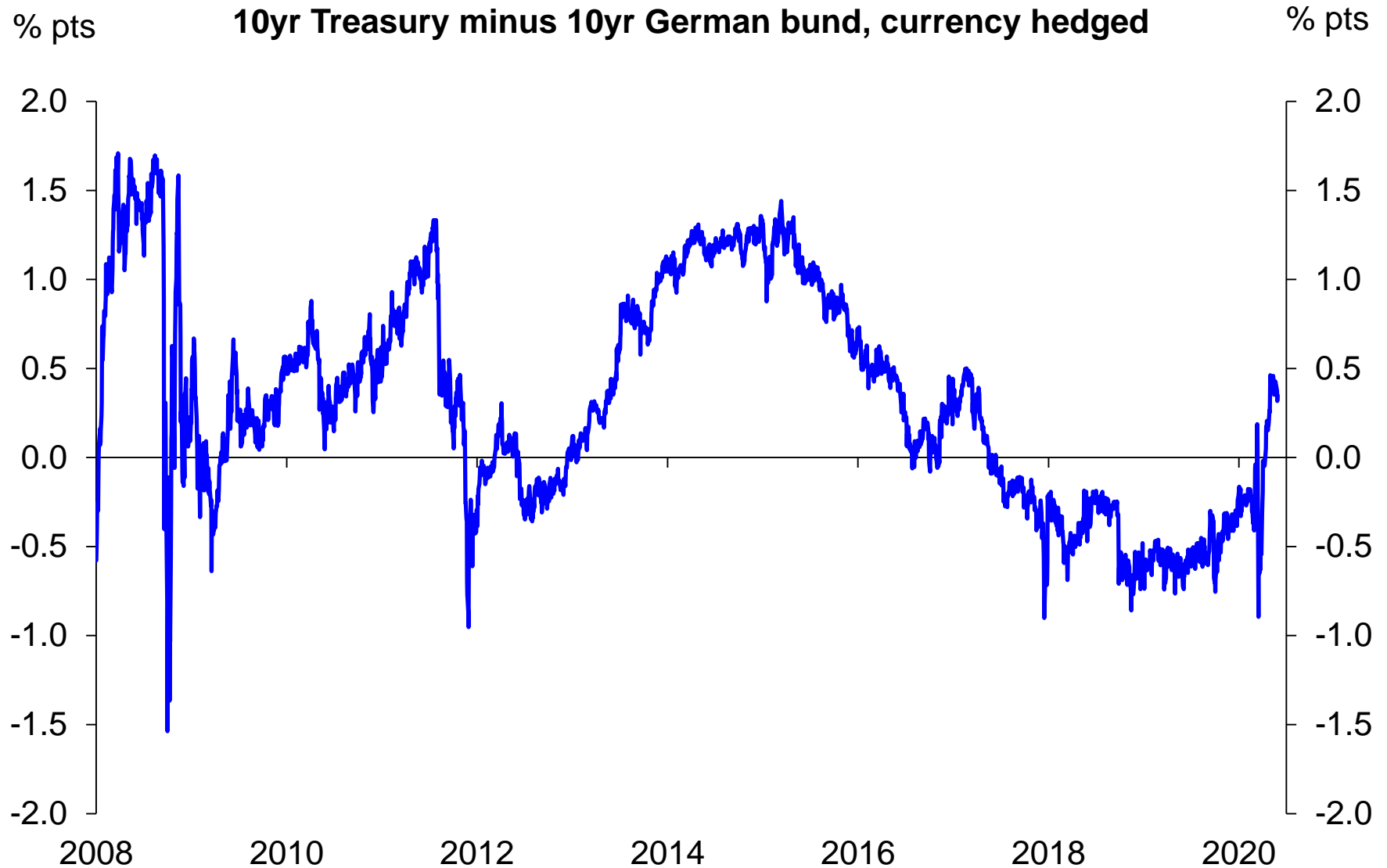
# Market cap of the US Fallen Angels Index



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.

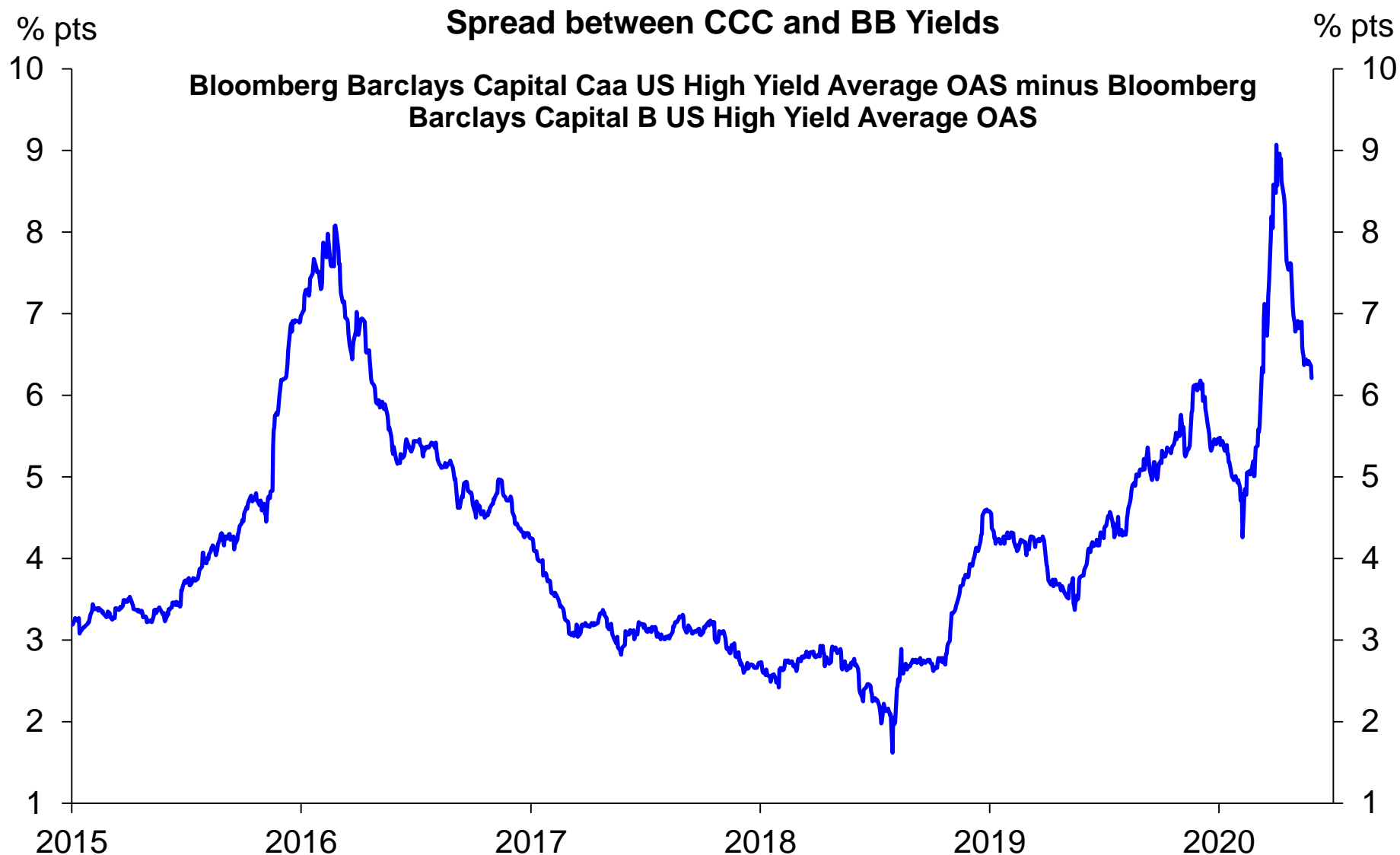
Source: Bloomberg Finance LP, DB Global Research

# Attractive again for Europeans to buy US Treasuries



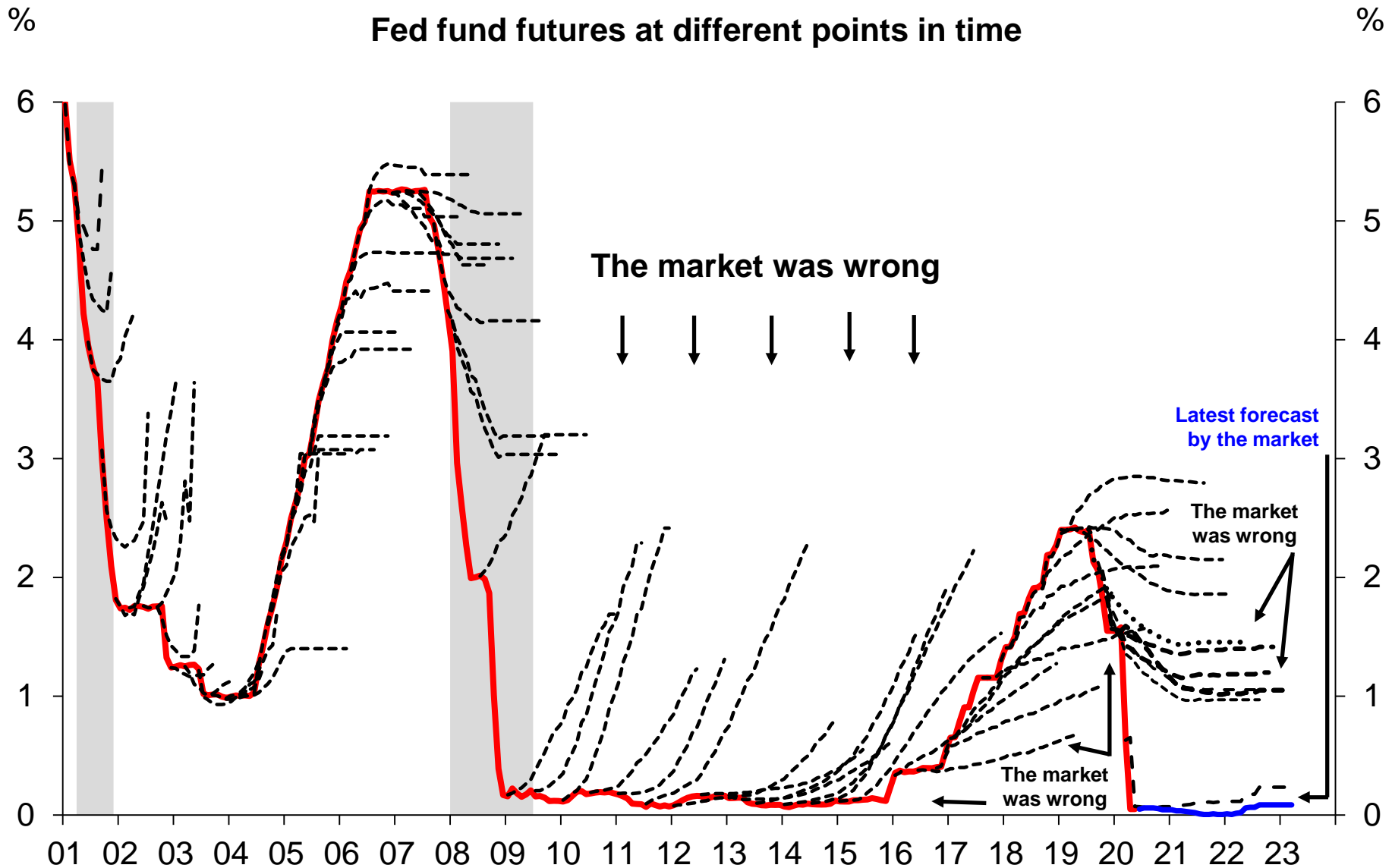
Source: Bloomberg Finance LP, DB Global Research

# Spread between CCC and BB corporate bond yields



Source: Bloomberg Finance LP, DB Global Research

# Fed funds versus market predictions of where Fed Funds is going



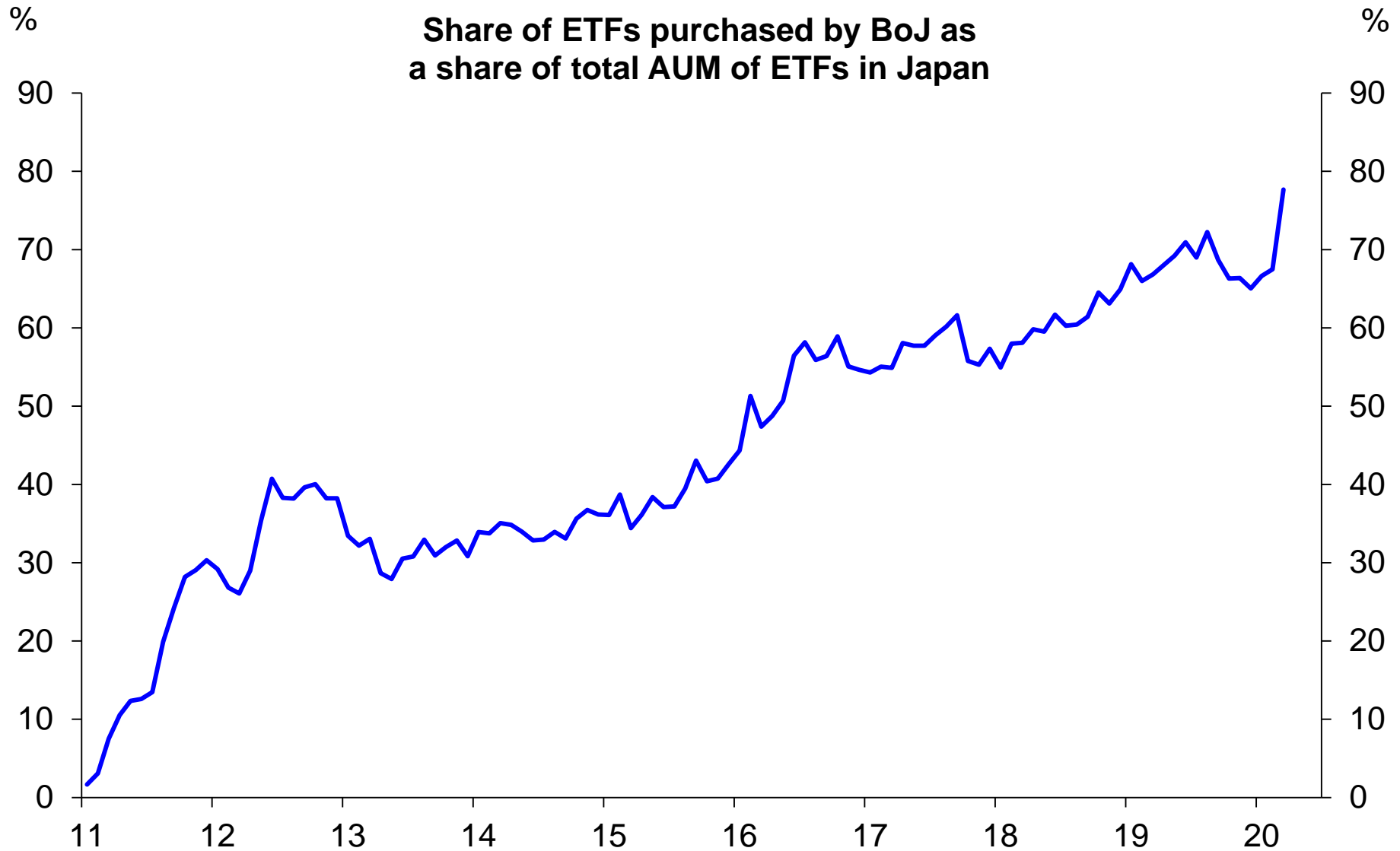
Source: Bloomberg Finance LP, DB Global Research

# Professional forecasters predicting higher rates again...



Source: FRB, Federal Reserve Bank of Philadelphia, Haver Analytics DB Global Research

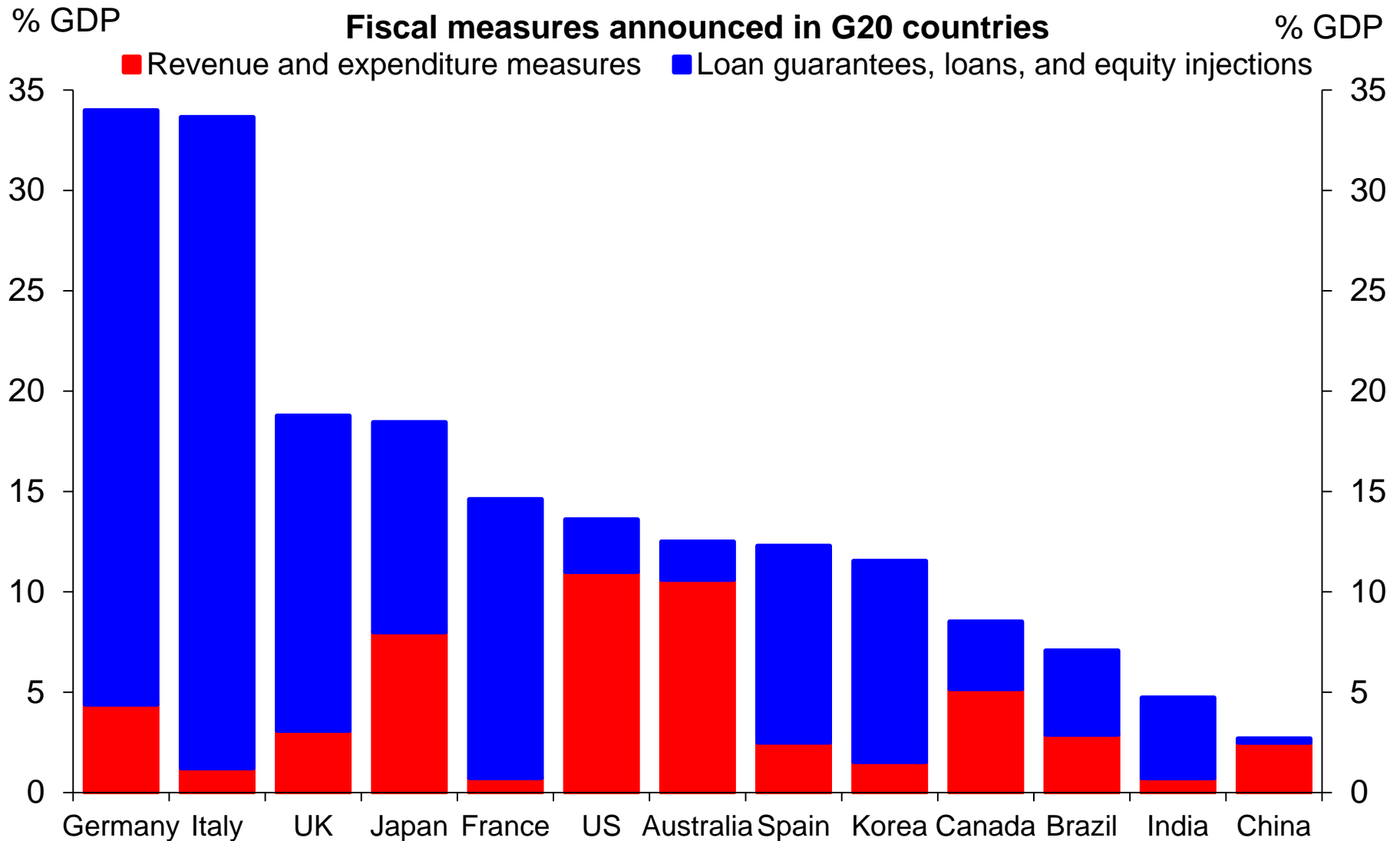
# Bank of Japan owns almost 80% of all ETFs domiciled in Japan



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



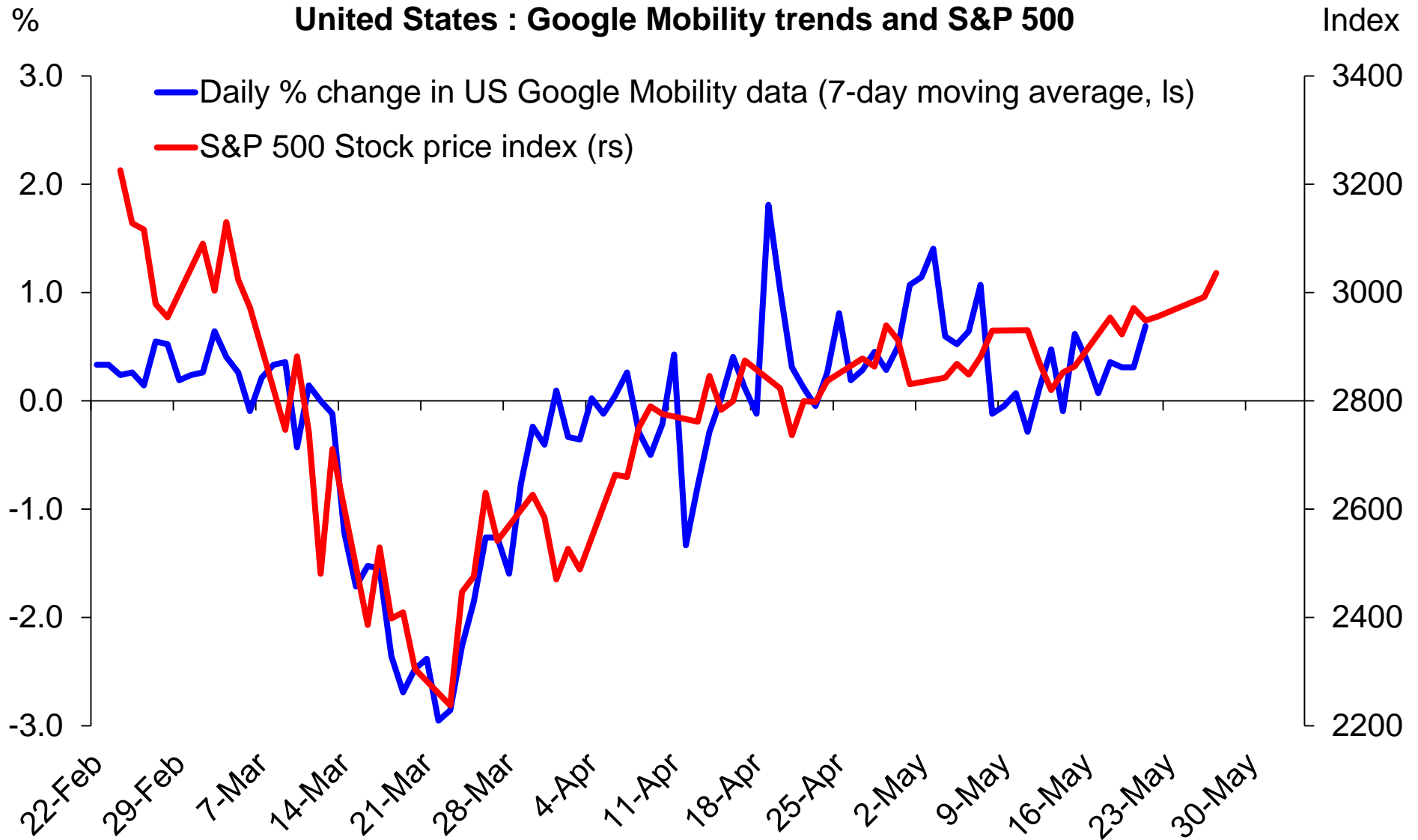
# Design and size of fiscal response to COVID-19 has been very different across countries



Note: Data as of May 13, 2020.

Source: IMF, DB Global Research

# Google Mobility and the S&P500

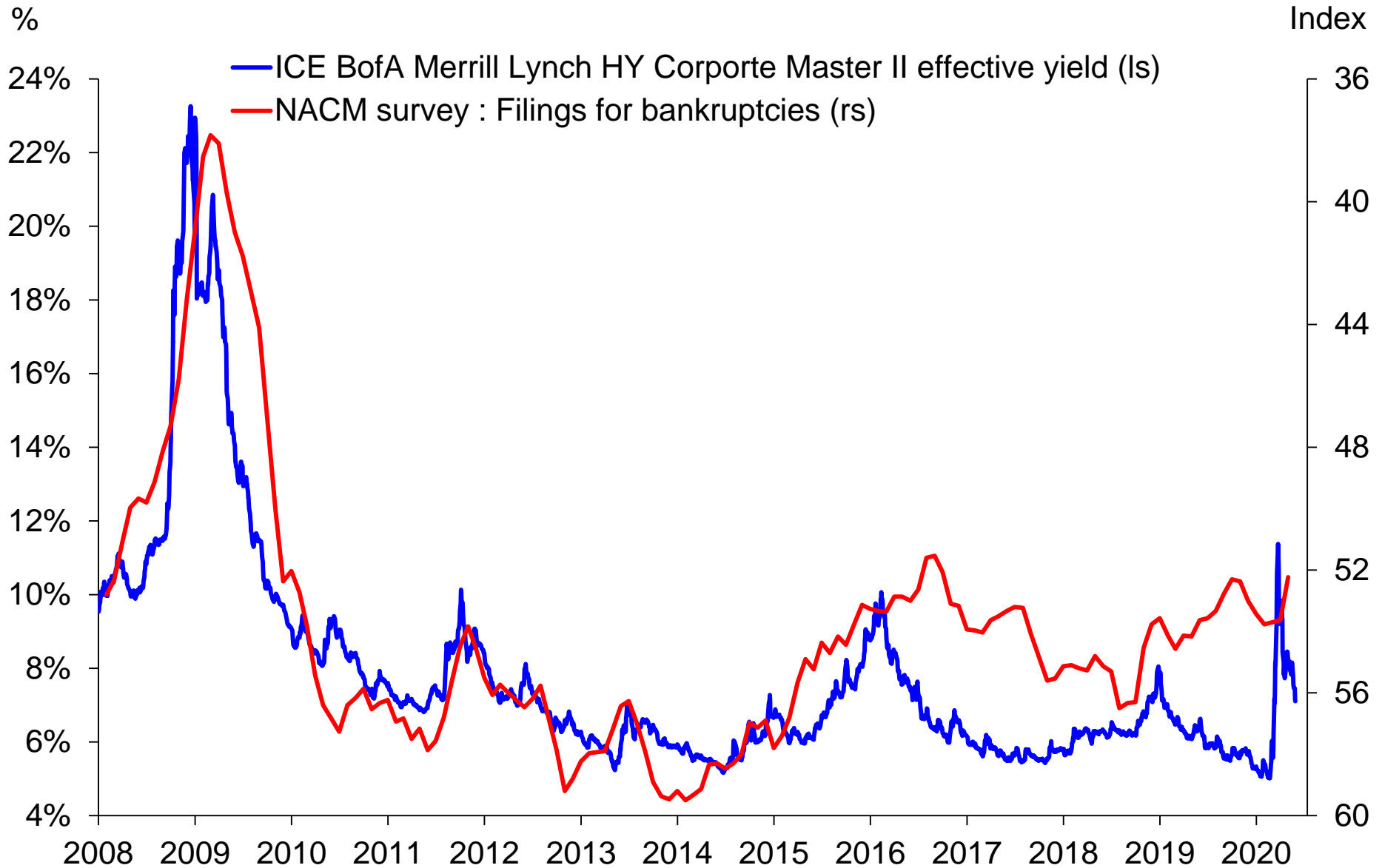


Source: Google, S&P, Haver Analytics, DB Global Research

# Bankruptcy filings vs. HY

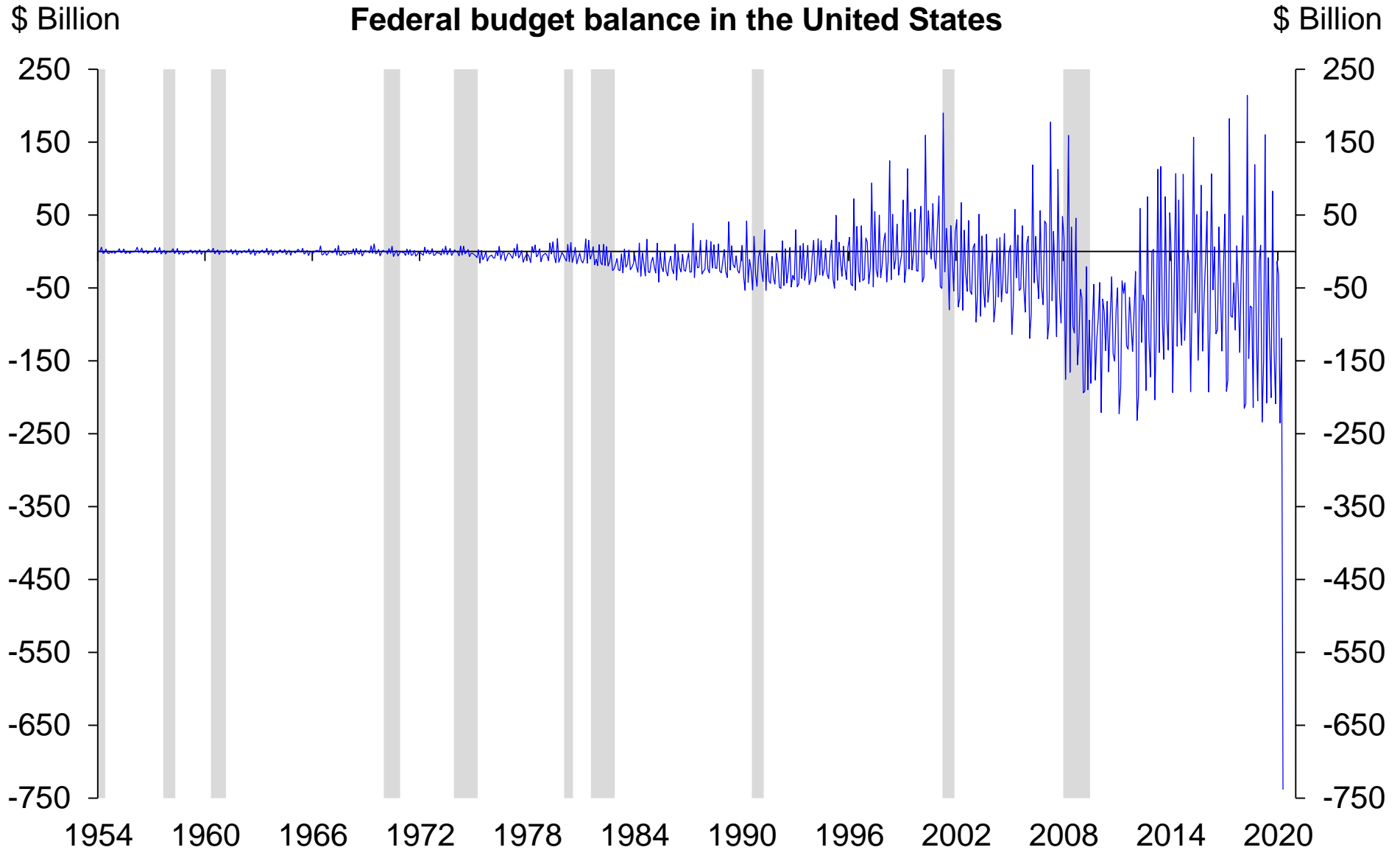


Index



Source: NACM, ICE/BAML, Haver Analytics, DB Global Research

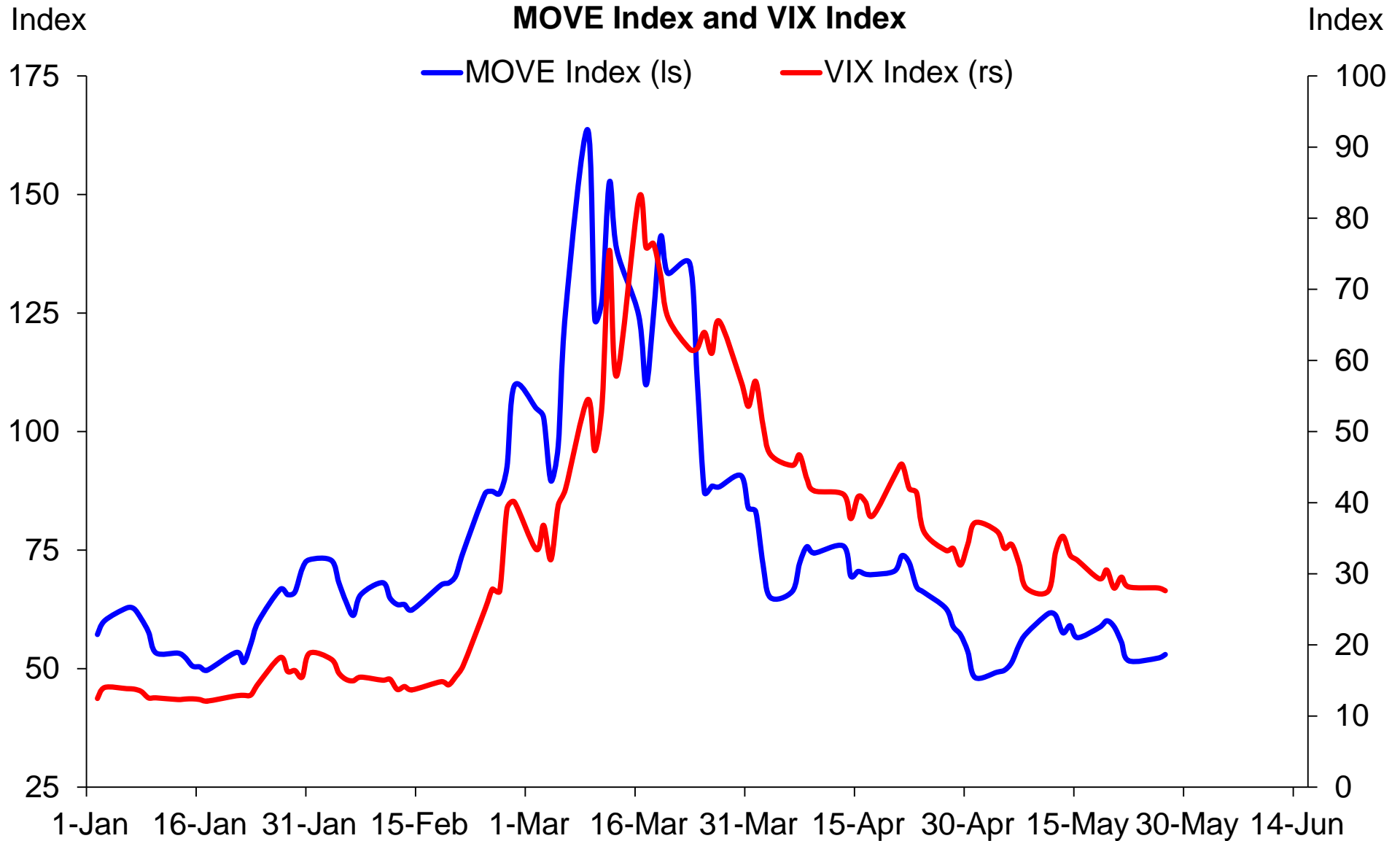
# Record-high US budget deficit



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

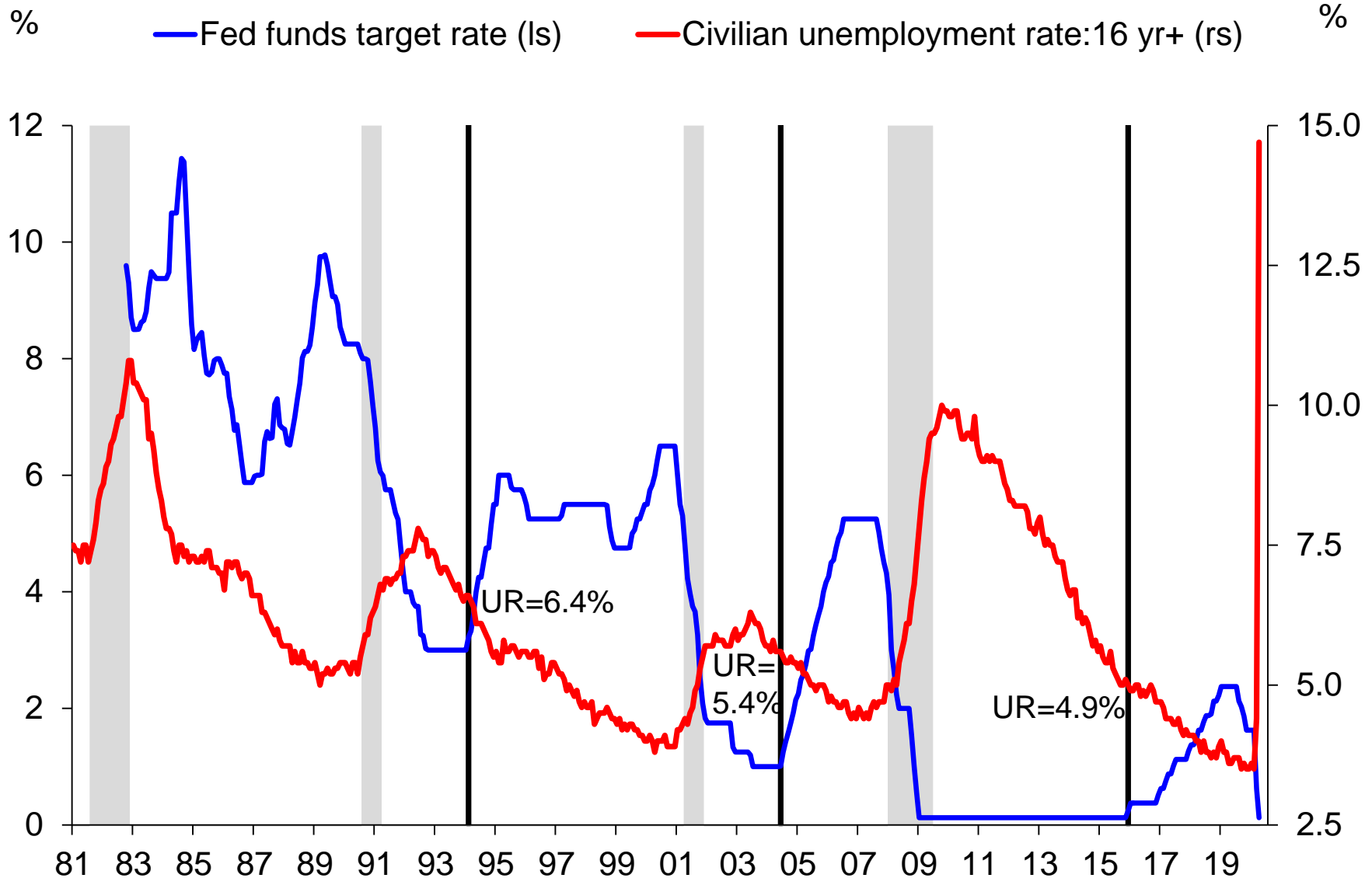


# Move and VIX coming down



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

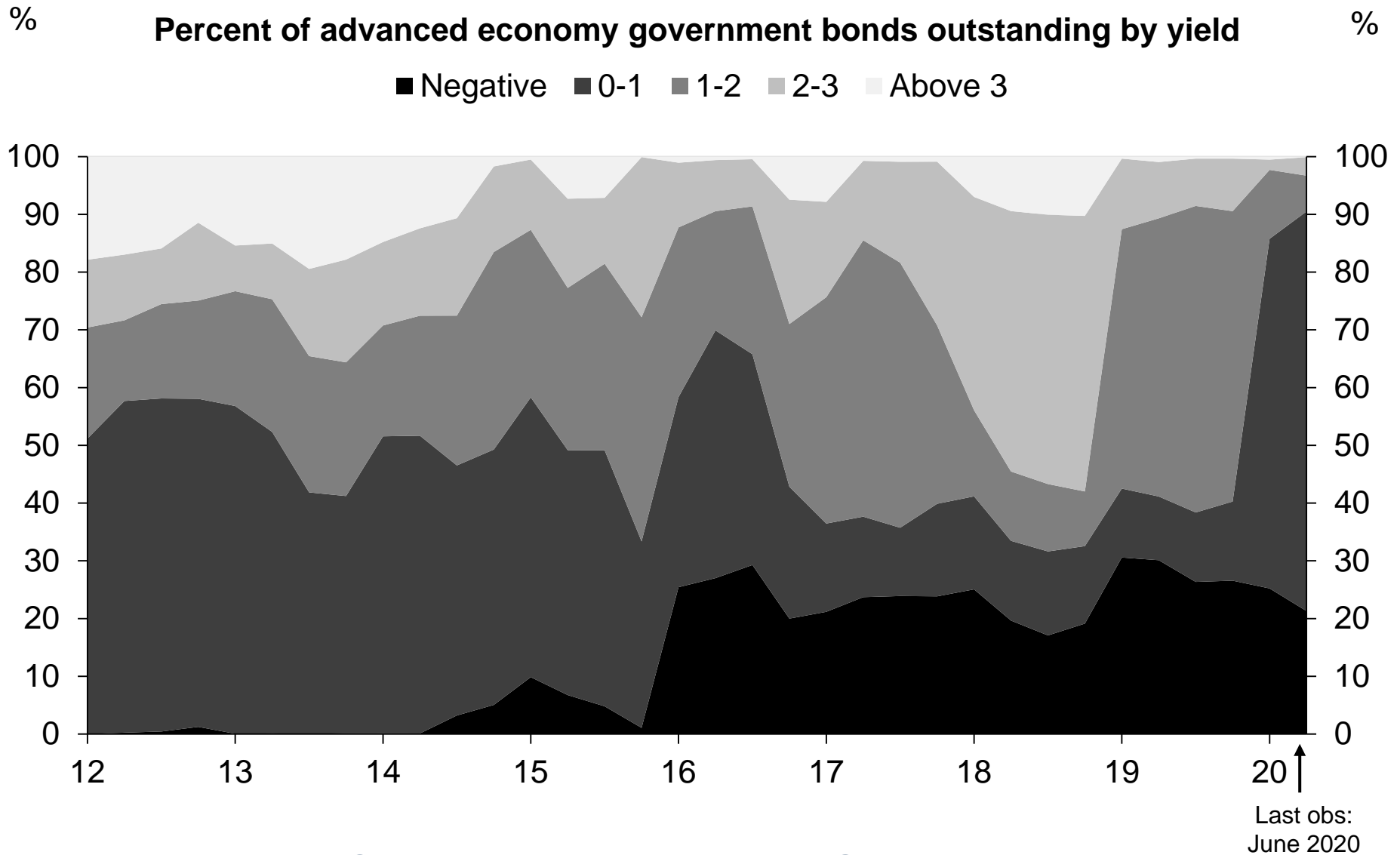
# Unemployment rate has to get down to 4% to 6% before the Fed will consider raising rates again



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



# 90% of government bonds trade at yields lower than 1%

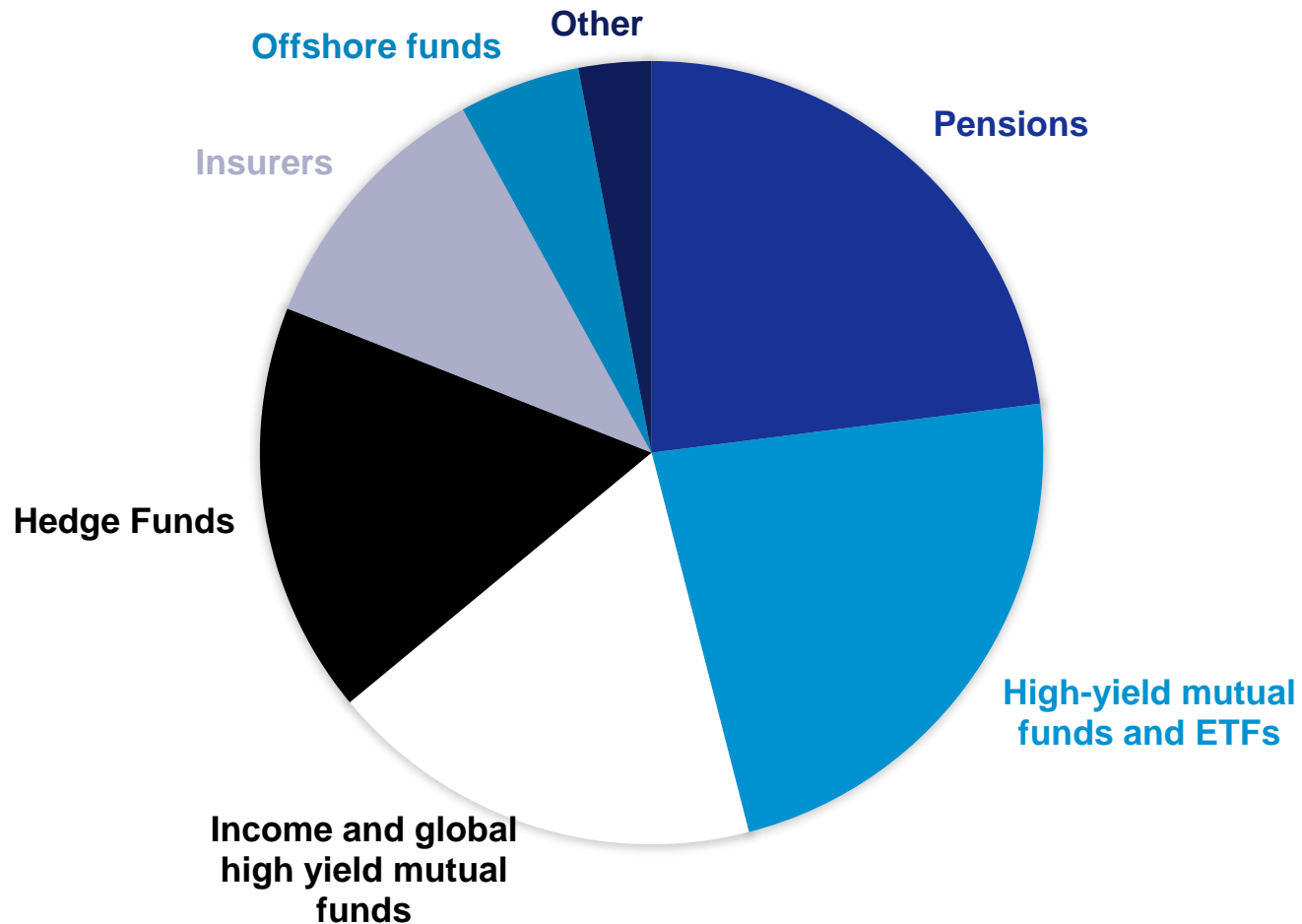


Source: IMF, Bloomberg Finance LP, DB Global Research



# Who owns US High Yield?

High yield bond investor base, 2019



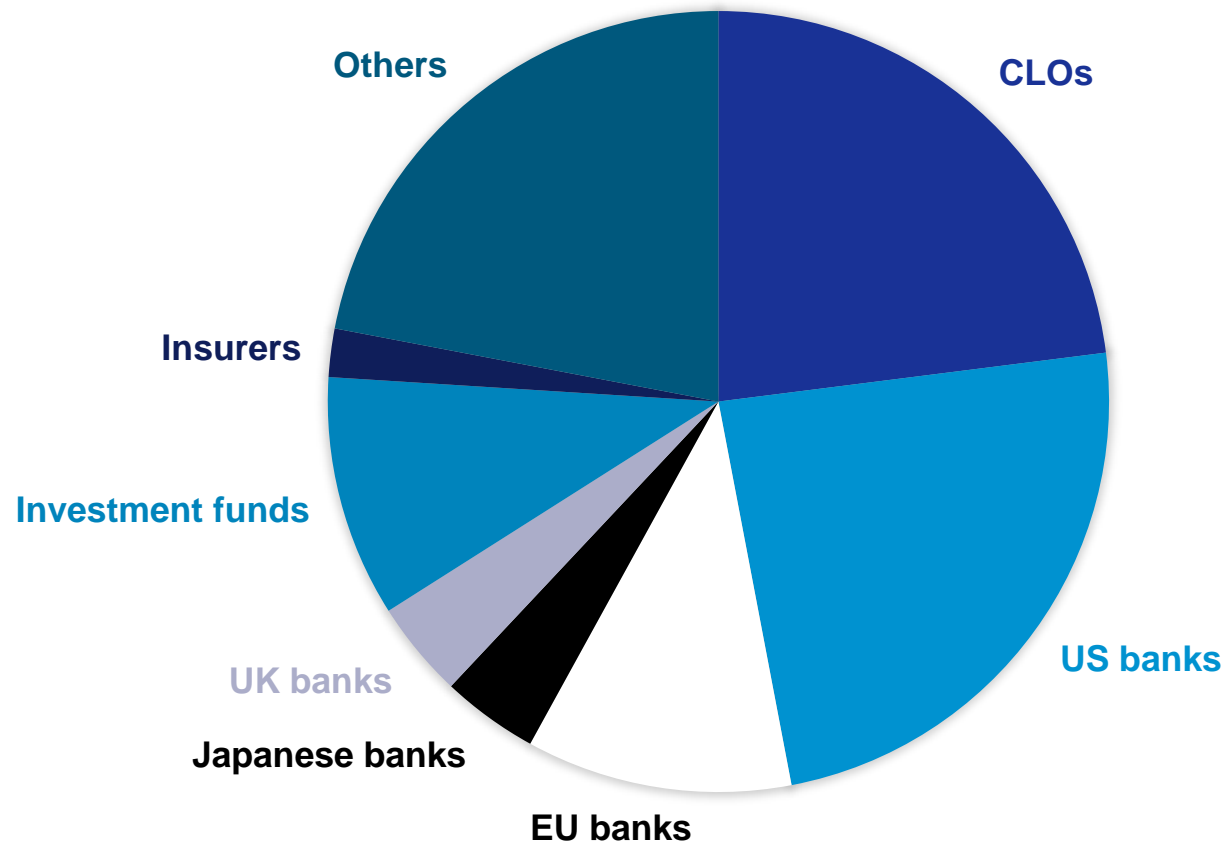
Source: IMF, DB Global Research





# Who owns leveraged loans?

Global holders of leveraged loans, 2018

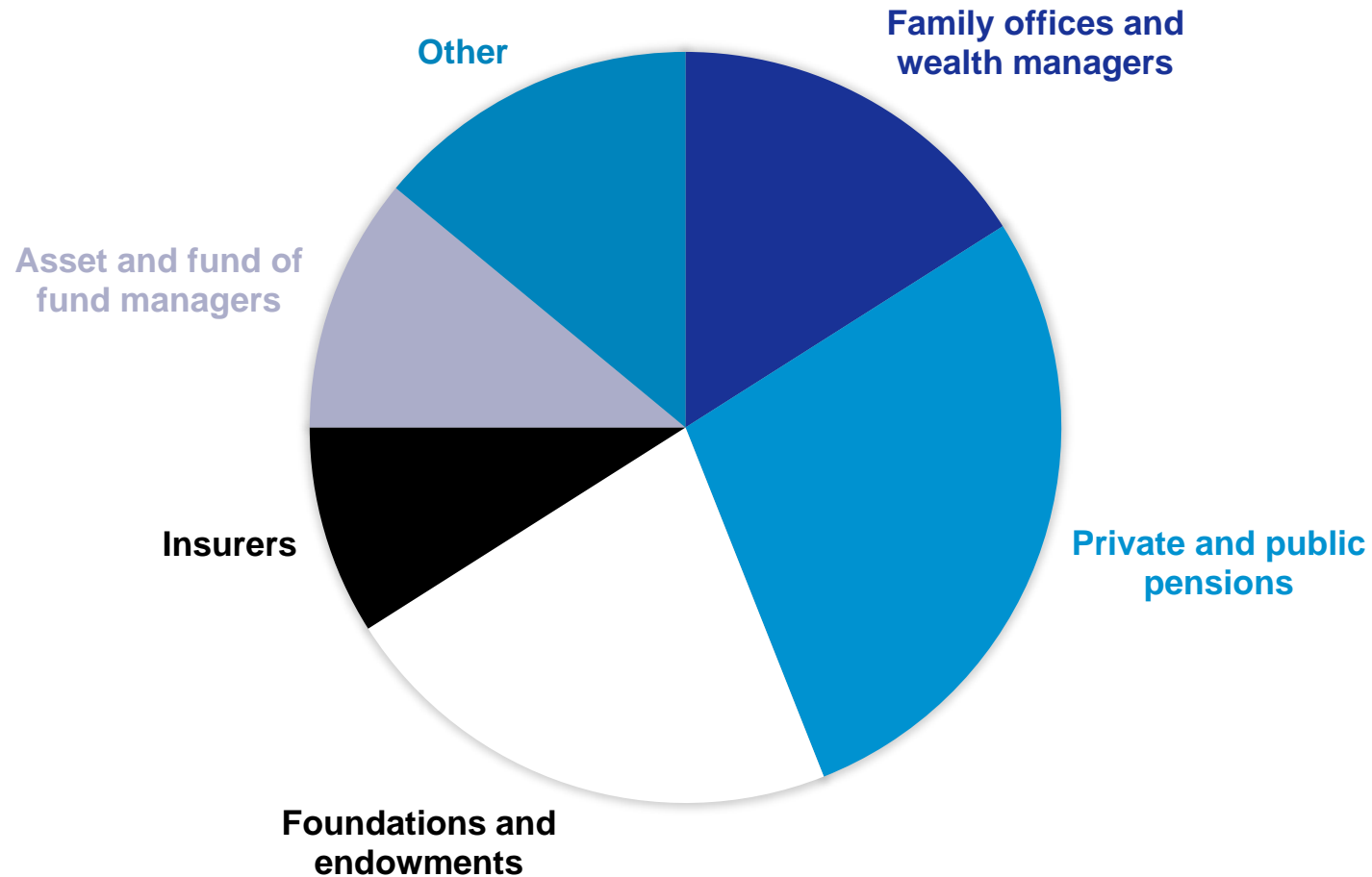


Source: IMF, DB Global Research



# Who owns US private credit?

## Institutional investors in US private debt funds, 2019

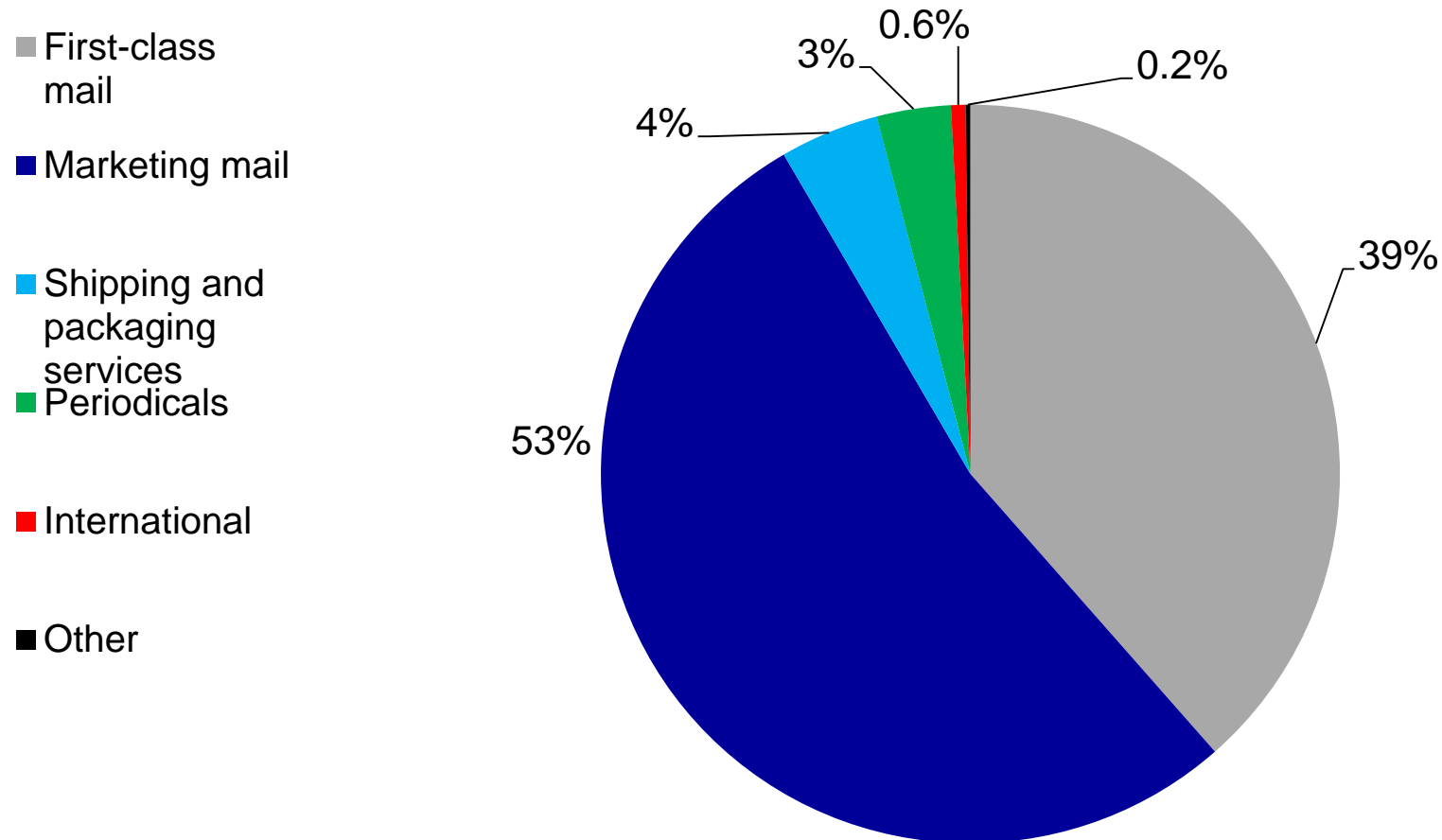


Source: IMF, DB Global Research

# More than half of mail delivered by US Postal Service is marketing



## Share of volume of different types of mail: 2019



Source: Postal Service Annual report, Postal regulatory Commission, DB Global Research

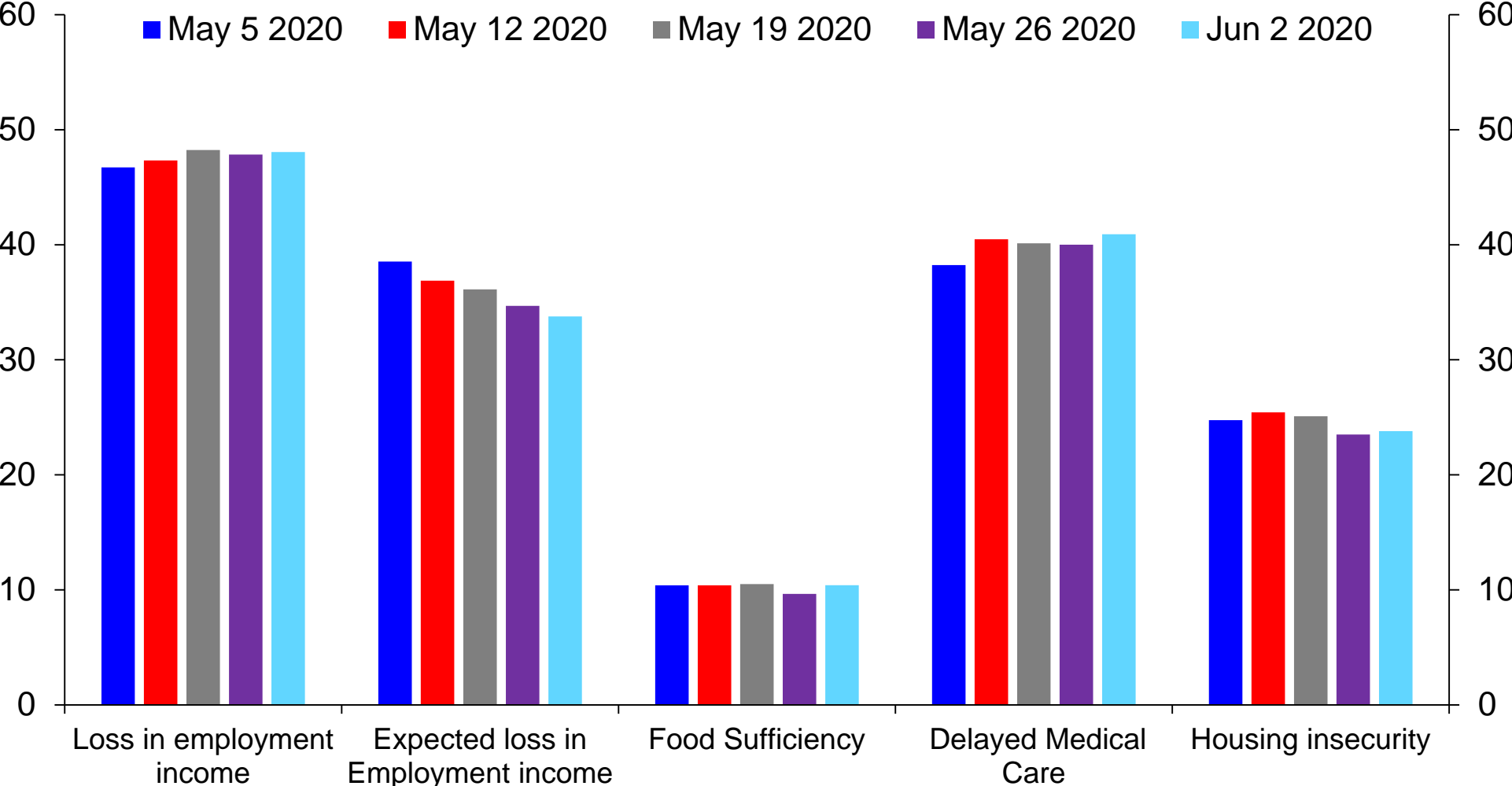
# Half of US households have experienced loss of income because of COVID-19



% of households

## US Census Household Pulse Survey

% of households



Note: Percentages are based on reporting distributions and do not include the populations that did not respond to specific items.

Source: Census, Haver Analytics, DB Global Research

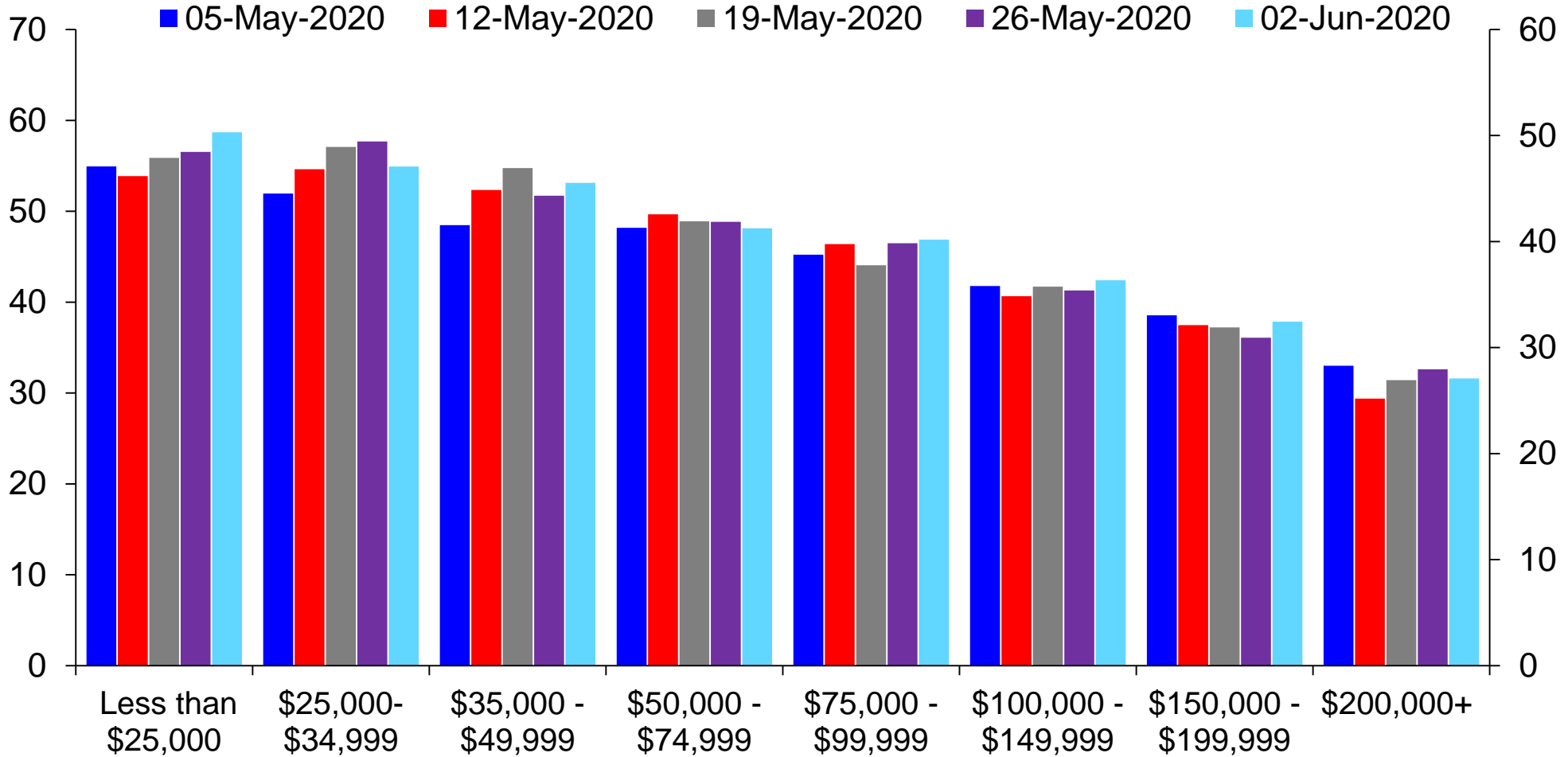
# Income losses more pronounced among low-income households



% of households

## US Census Household Pulse Survey Loss in employment income by household income

% of households



Note: Percentages are based on reporting distributions and do not include the populations that did not respond to specific items.

Source: Census, Haver Analytics, DB Global Research

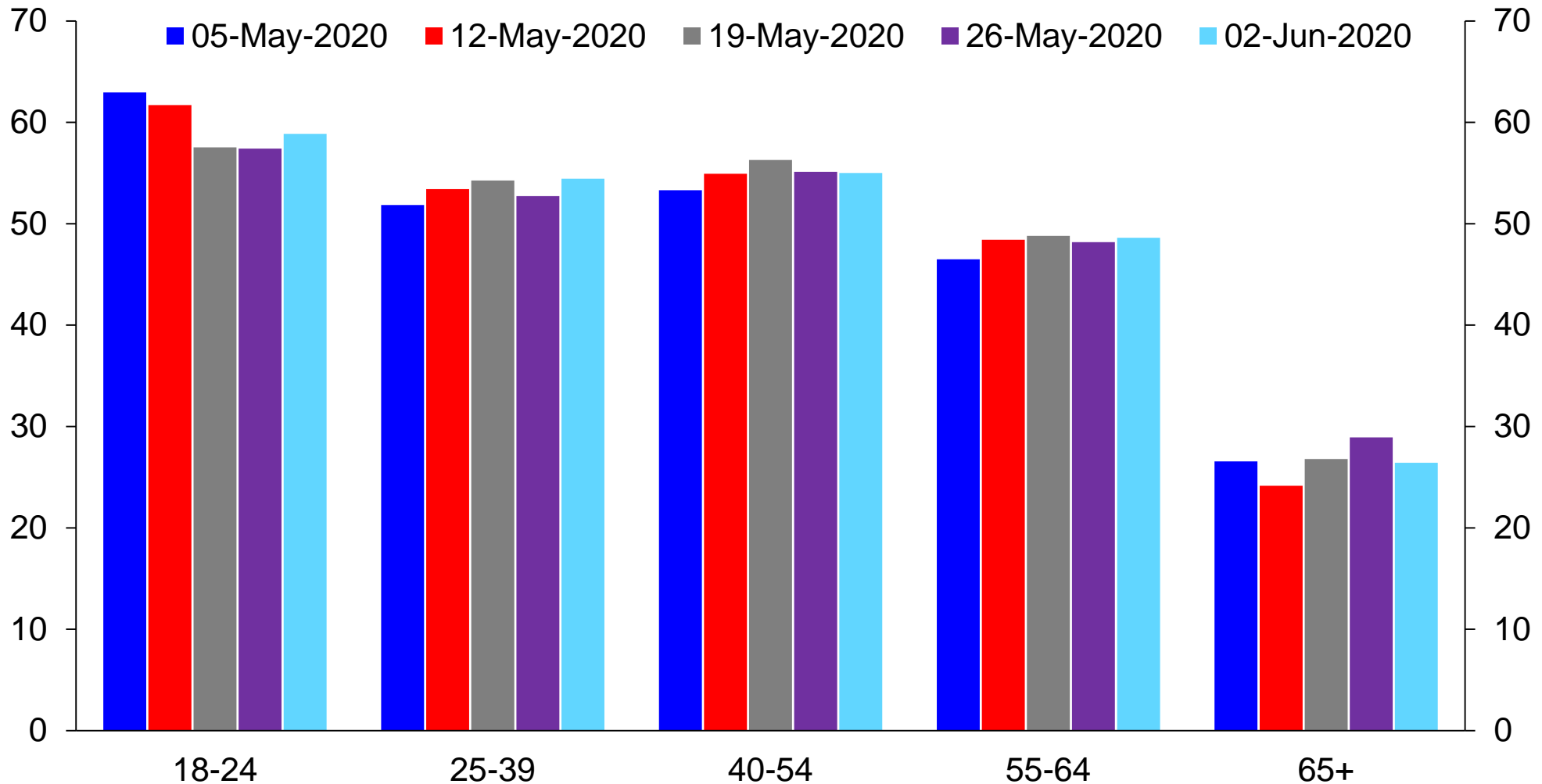
# Income losses in May 2020 higher among younger people



% of households

## US Census Household Pulse Survey Loss in employment income by age group

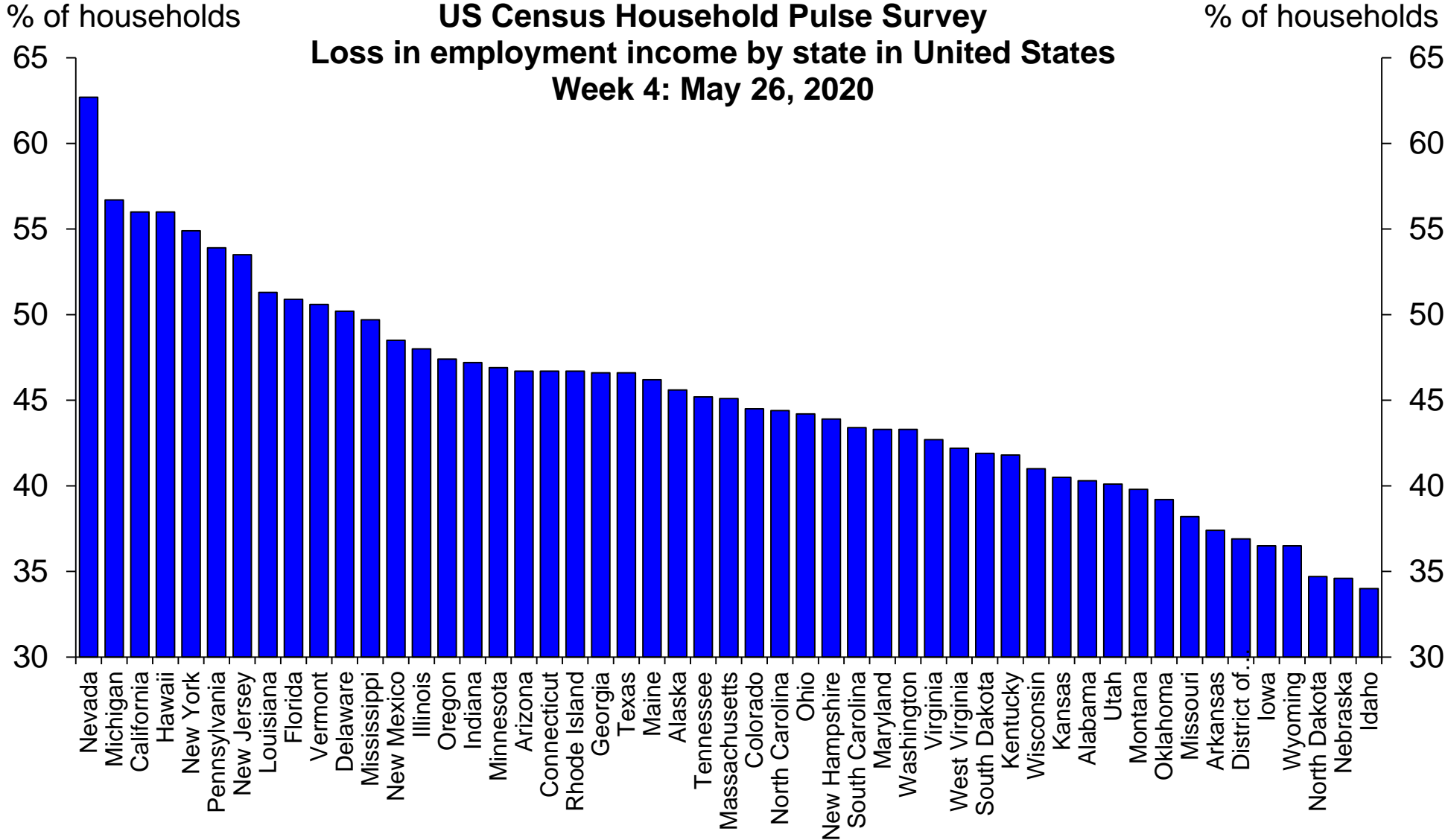
% of households



Note: Percentages are based on reporting distributions and do not include the populations that did not respond to specific items.

Source: Census, Haver Analytics, DB Global Research

More than 50% of households in Nevada, Michigan, California, Hawaii, NY, and Pennsylvania experiencing income loss because of COVID-19



Source: Census, DB Global Research

# Investment implications summarized

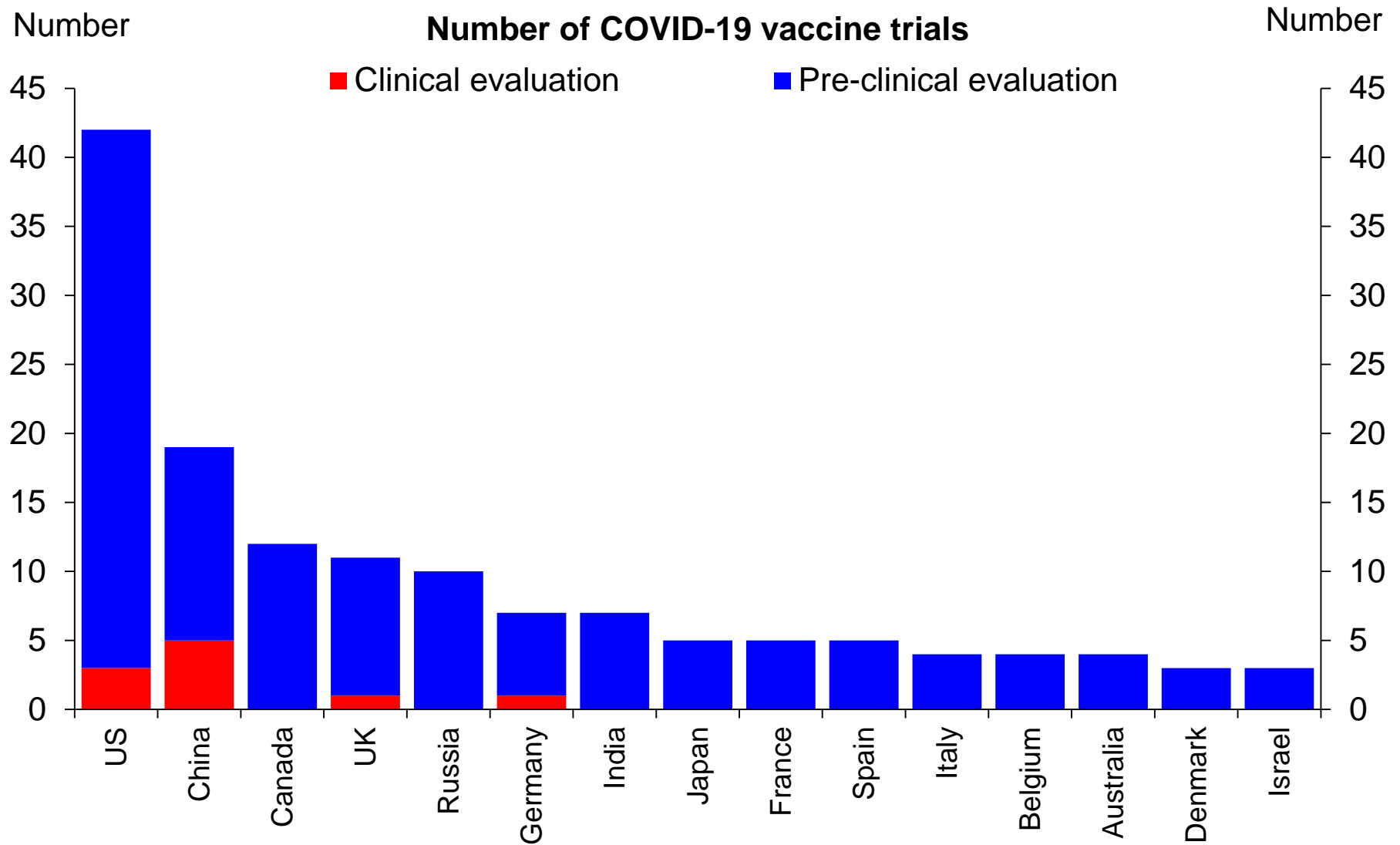


Fed outlook – <b>Fed on hold</b>	GDP will decline 39% in Q2. The CBO estimates the unemployment rate will be 10% in 2020Q4.
Bond markets - <b>10s slowly higher</b>	Fed tapering and exit from lockdown pushing long rates higher and curve steeper by end of 2020.
Credit - <b>Credit spreads narrower</b>	Fed 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>	Fed liquidity support and exit from lockdown will push equities higher. S&P500 will be 3250 by the end of 2020.
FX - <b>Dollar down</b>	EURUSD at 1.20 by year-end
Commodities - <b>Coronavirus and slower global growth</b>	40% of oil demand going to trucks and cars. Exit from lockdown pushing oil prices higher.
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



# Number of vaccine trials by country



Note: Data as of June 2020..

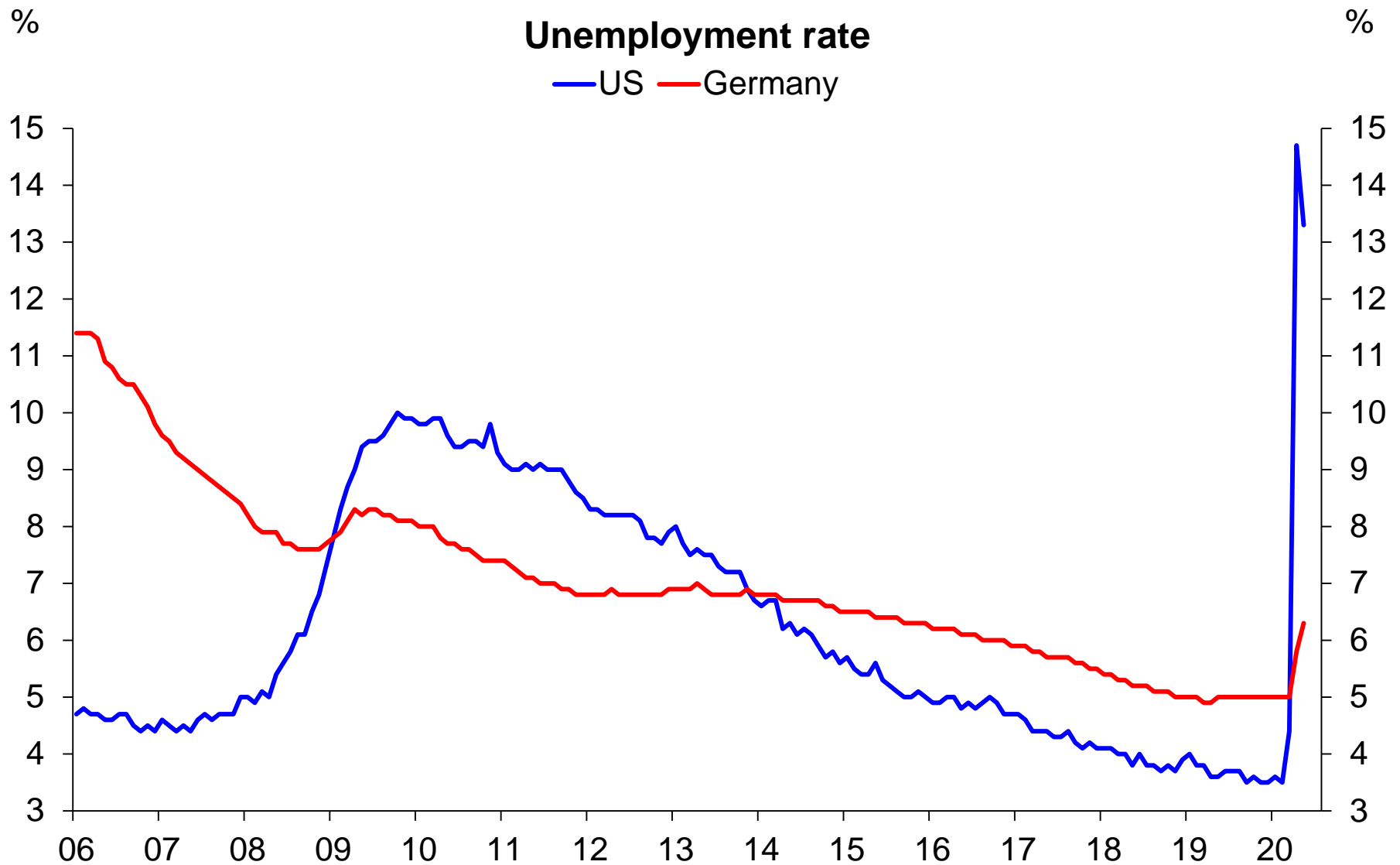
Source: WHO, DB Global Research

# Kurzarbeit



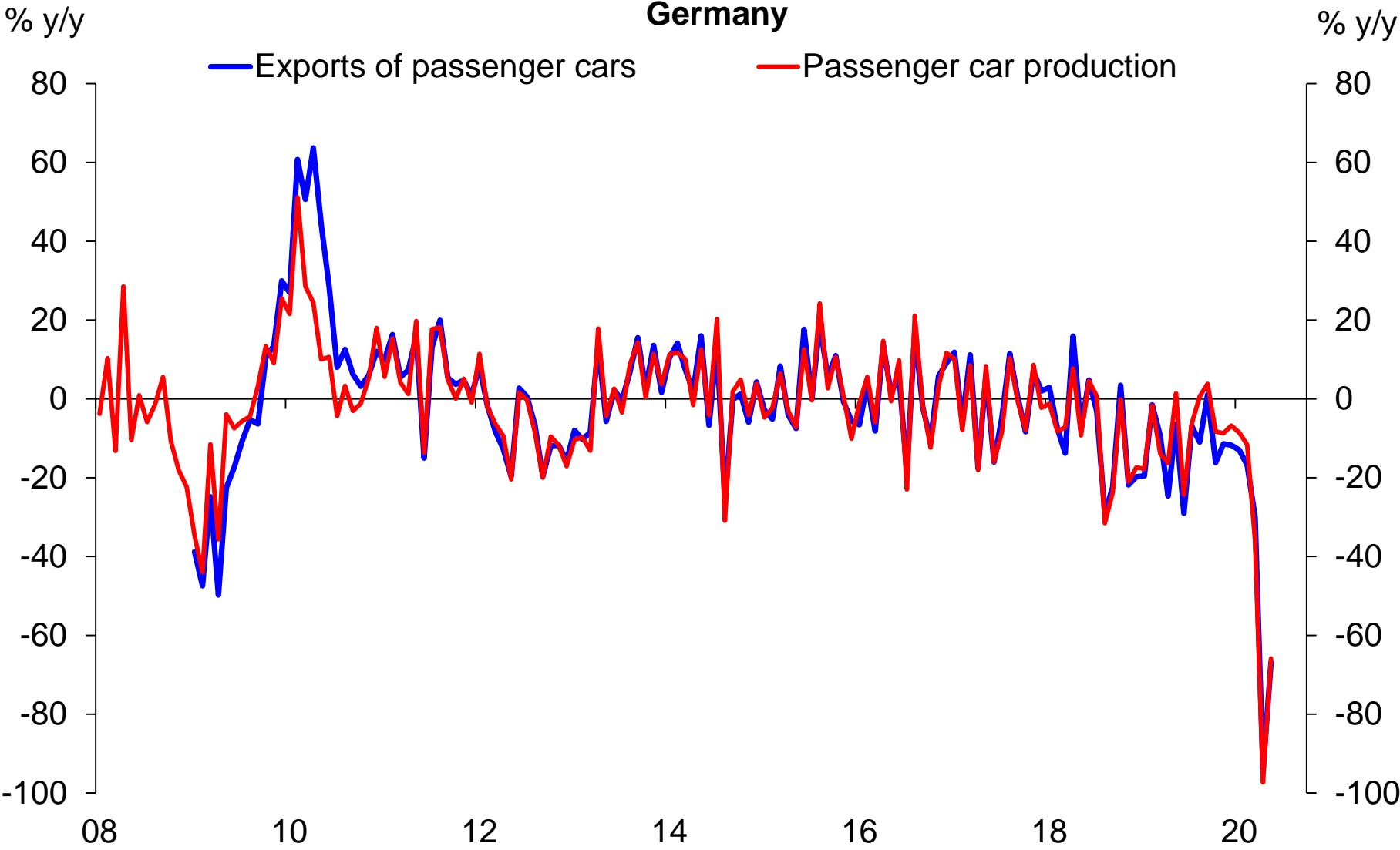
Source: Bundesbank, Federal Employment Agency, Haver Analytics, DB Global Research

# Labor market performance very different in US and Germany



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

# German auto industry coming back



Source: Verband der Automobilindustrie, Haver Analytics, DB Global Research

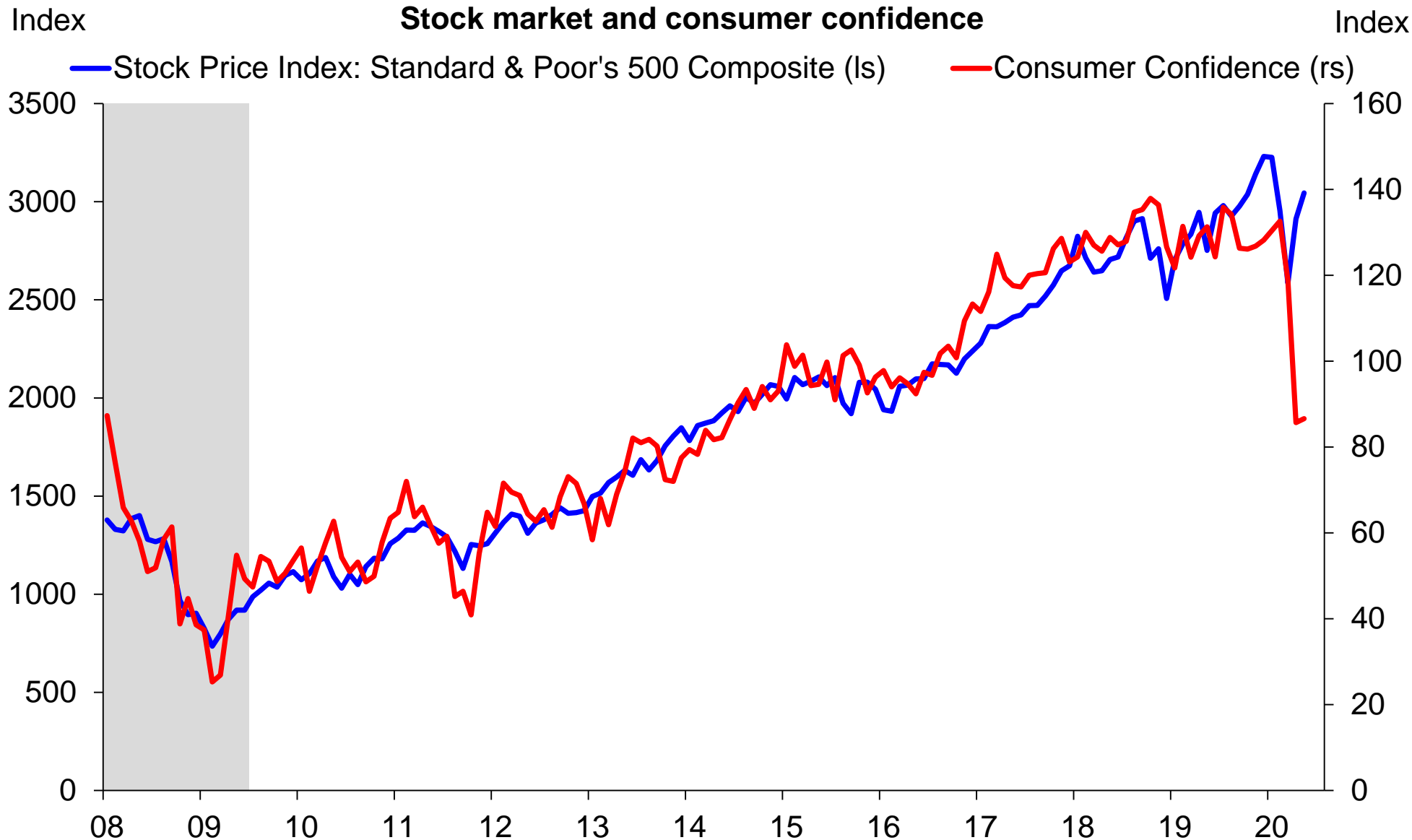
# Summer reading



- Advice and Dissent: Why America Suffers When Economics and Politics Collide, by Alan Blinder
- The Deficit Myth: Modern Monetary Theory, by Stephanie Kelton
- The Economics of Race in the United States, by Brendan O'Flaherty
- Away from Chaos: The Middle East and the Challenge to the West, by Giles Keppel
- Deaths of Despair and the Future of Capitalism, by Case and Deaton
- Competitive Advantage in Investing, by Steve Abrahams
- The Great Reversal: How America Gave Up on Free Markets, by Thomas Philippon
- The Euro and the Battle of Ideas, by Brunnermeier, James, and Landau
- Superpower Showdown, a cold war between US and China, by Davis and Wei
- What Is Populism? by Jan-Werner Muller

Source: DB Global Research

# S&P500 and consumer confidence

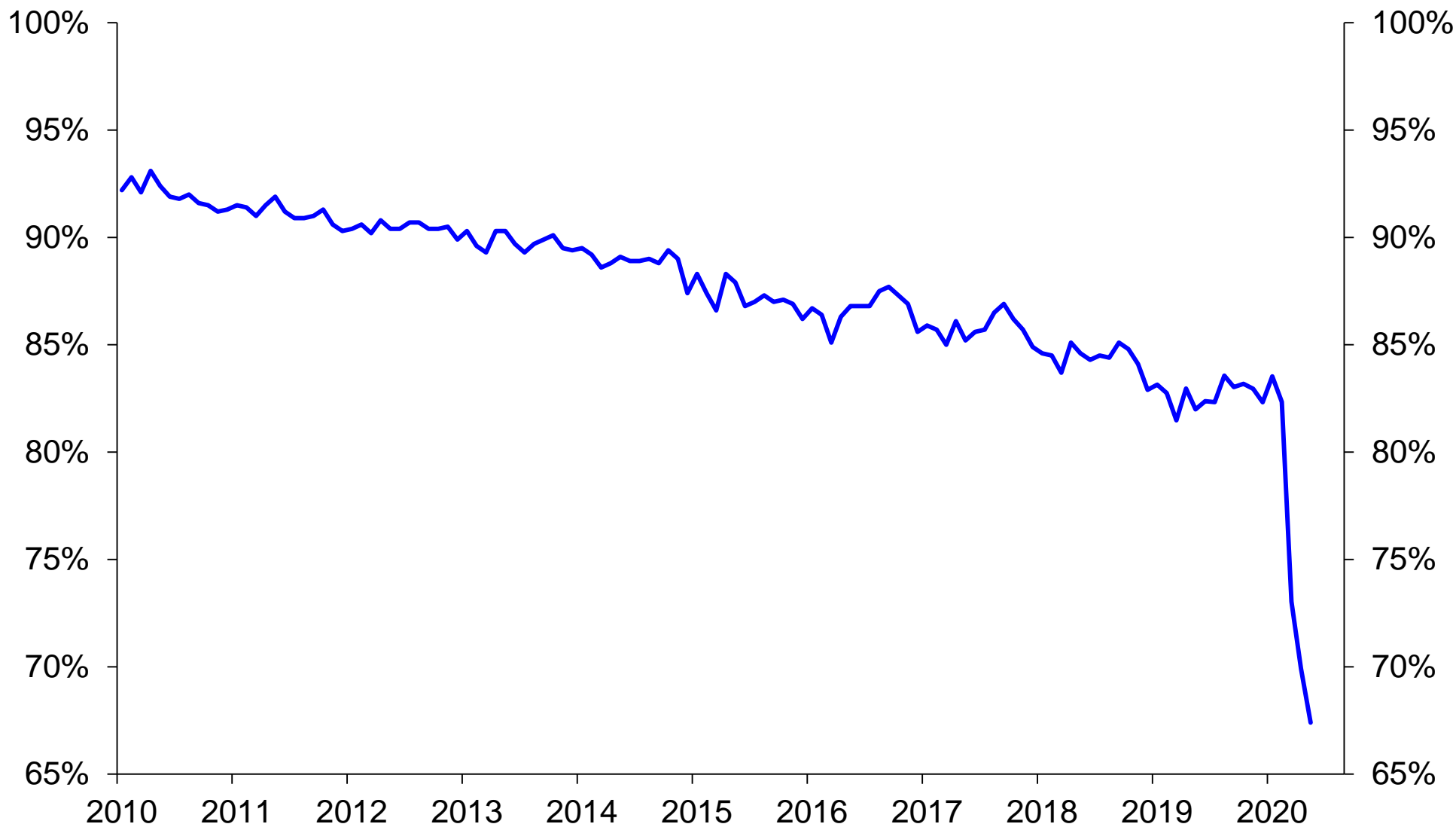


Source: S&P, The Conference Board, Haver Analytics, DB Global Research

# US employment report, response rate in household survey

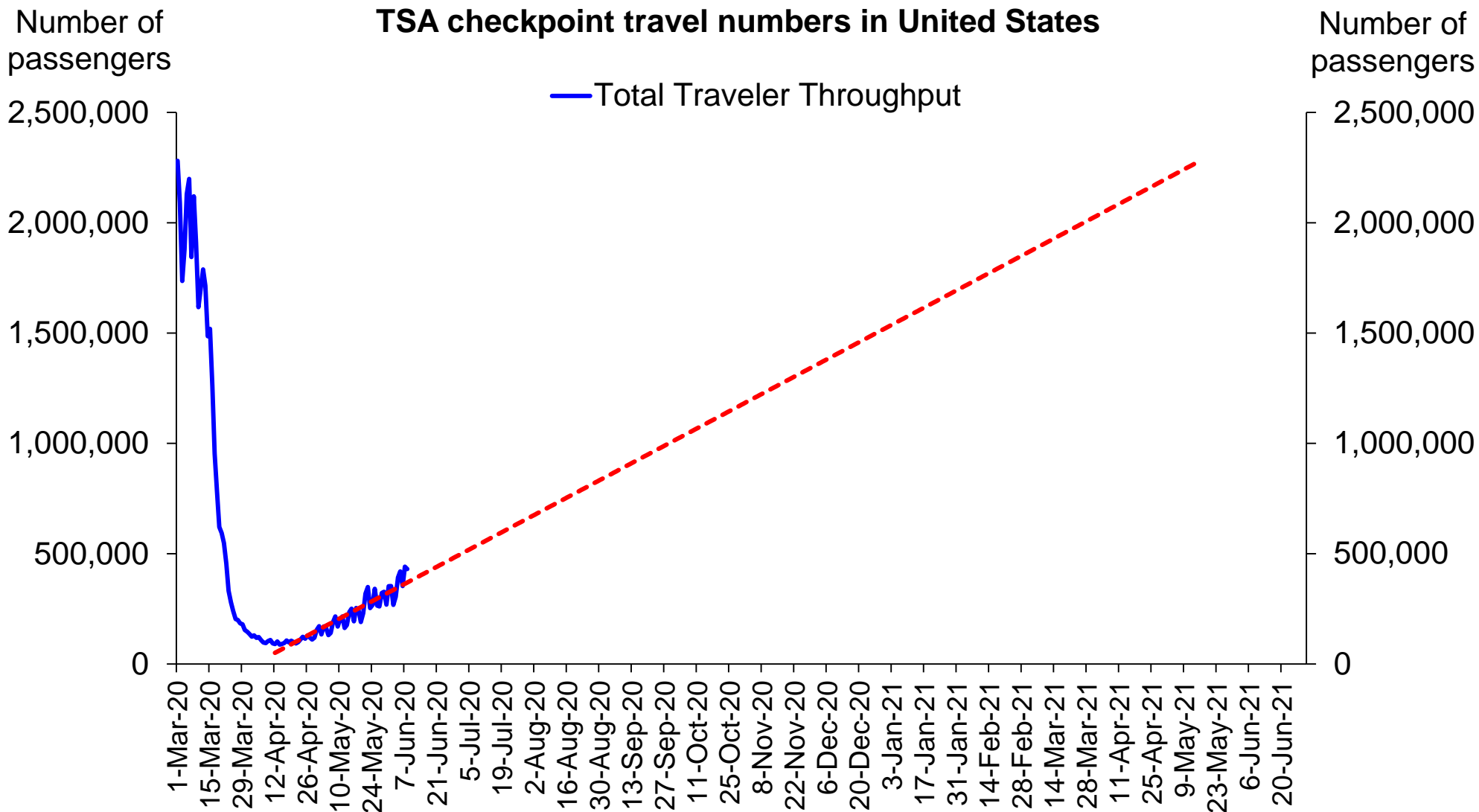


## CPS Household Survey Response Rate, 2010-2020



Source: BLS, DB Global Research

# At current speed of normalization airline traffic will be back to pre-virus levels in June 2021



Note: Dotted line is linear trend regressed on time from April 12.

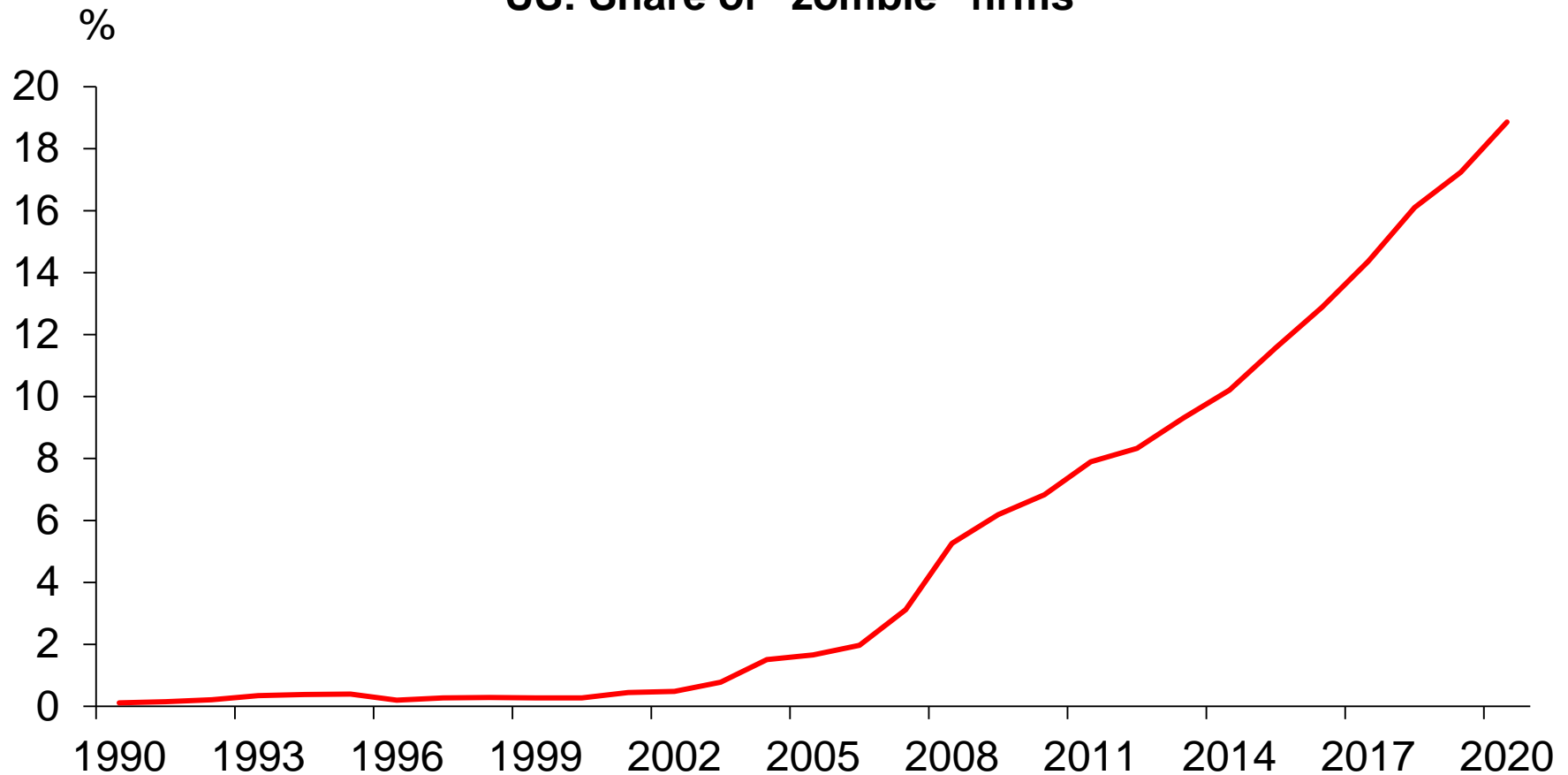
Source: Department of Homeland Security, DB Global Research



# US: Rising share of companies with debt servicing costs that are higher than profits



## US: Share of “zombie” firms



Note: Firm-level data is used to calculate the share of listed firms that are more than ten years old with an interest coverage ratio less than one for three years in a row.

Source: Datastream, Worldscope, DB Global Research

# Germany: Rising share of companies with interest payments that are higher than earnings



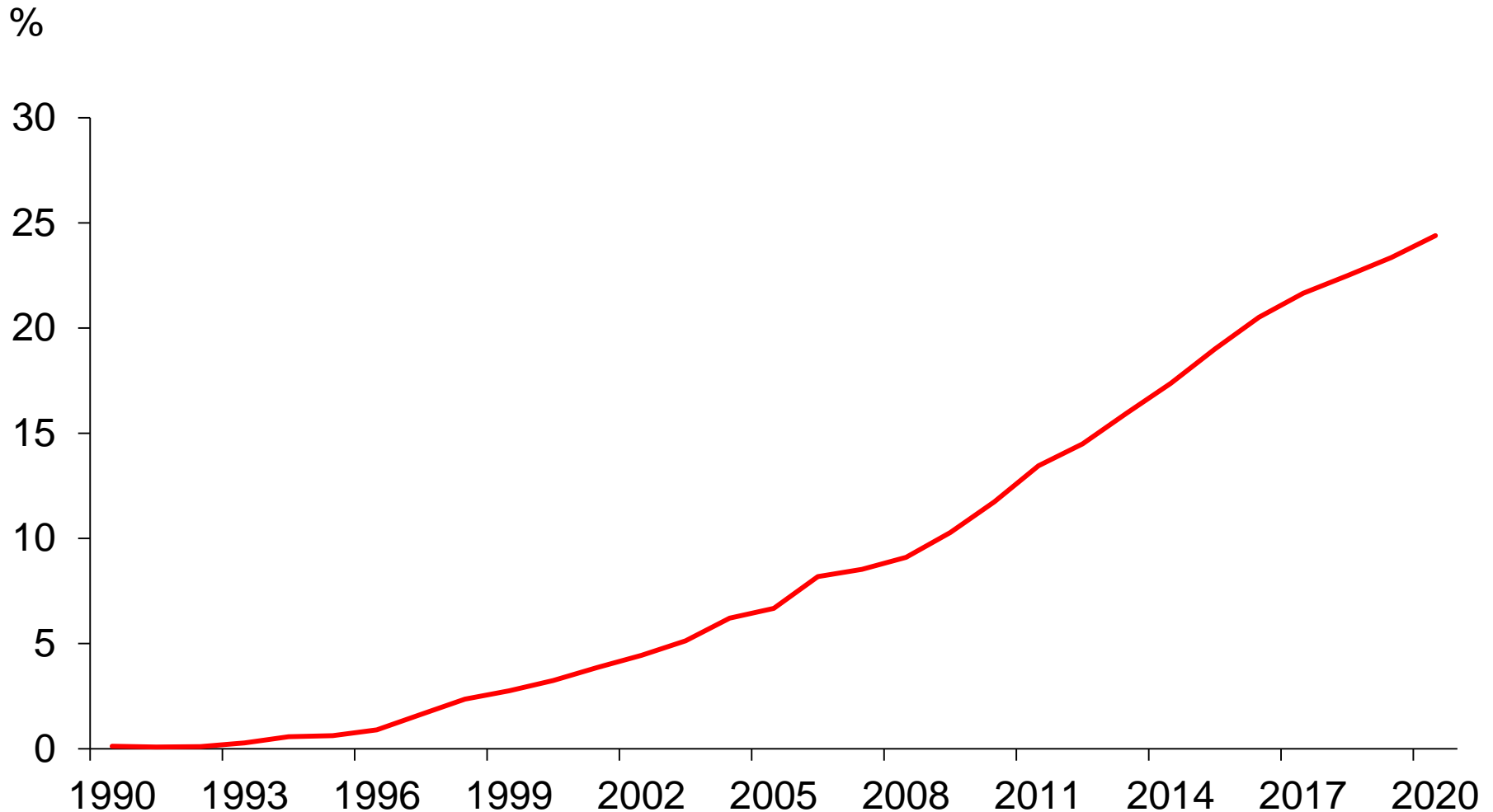
Note: Firm-level data is used to calculate the share of listed firms that are more than ten years old with an interest coverage ratio less than one for three years in a row.

Source: Datastream, Worldscope, DB Global Research

# UK: Rising share of companies with interest payments that are higher than earnings



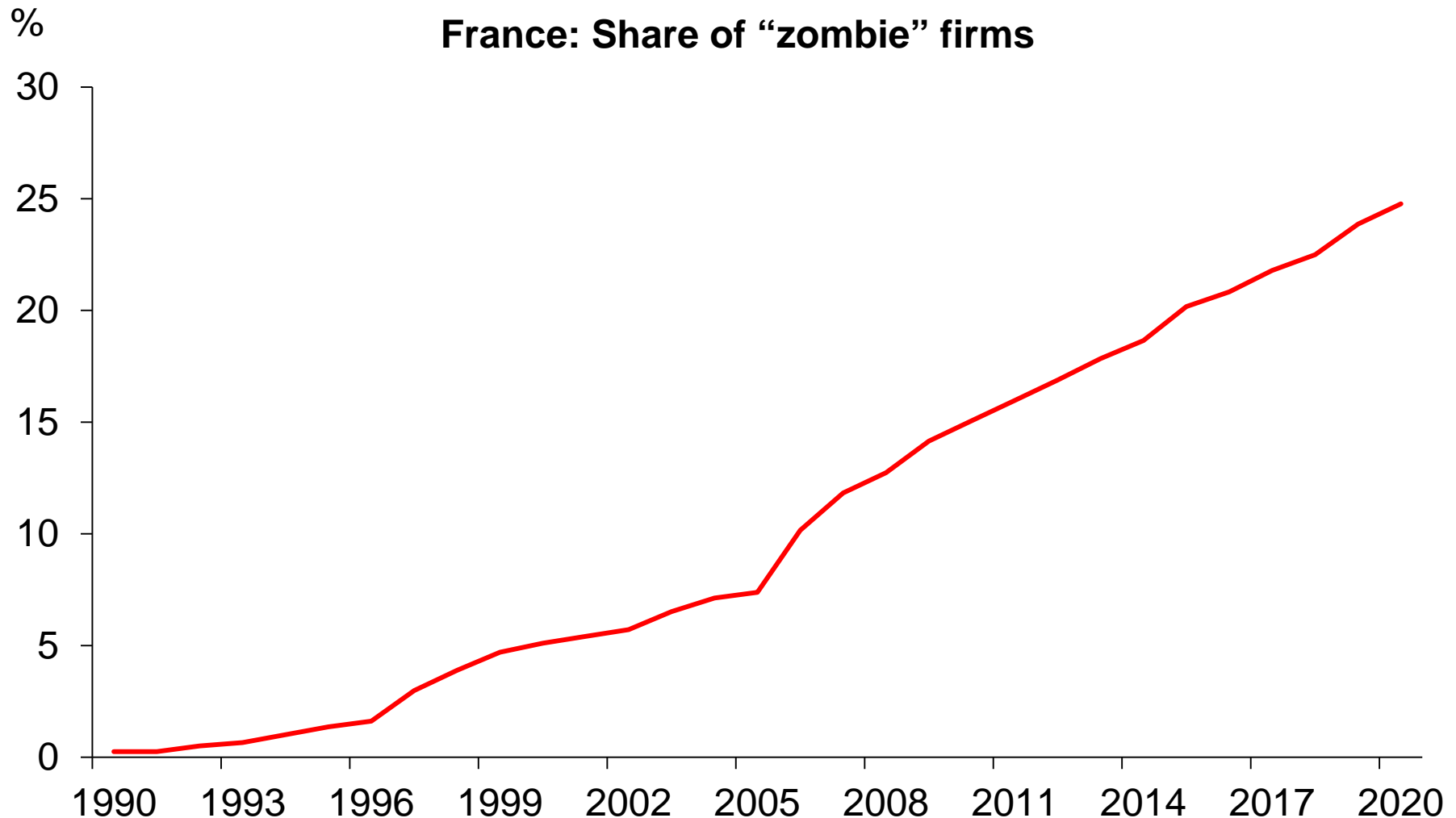
## UK: Share of “zombie” firms



Note: Firm-level data is used to calculate the share of listed firms that are more than ten years old with an interest coverage ratio less than one for three years in a row.

Source: Datastream, Worldscope, DB Global Research

# France: Rising share of companies with interest payments that are higher than earnings



Note: Firm-level data is used to calculate the share of listed firms that are more than ten years old with an interest coverage ratio less than one for three years in a row.

Source: Datastream, Worldscope, DB Global Research

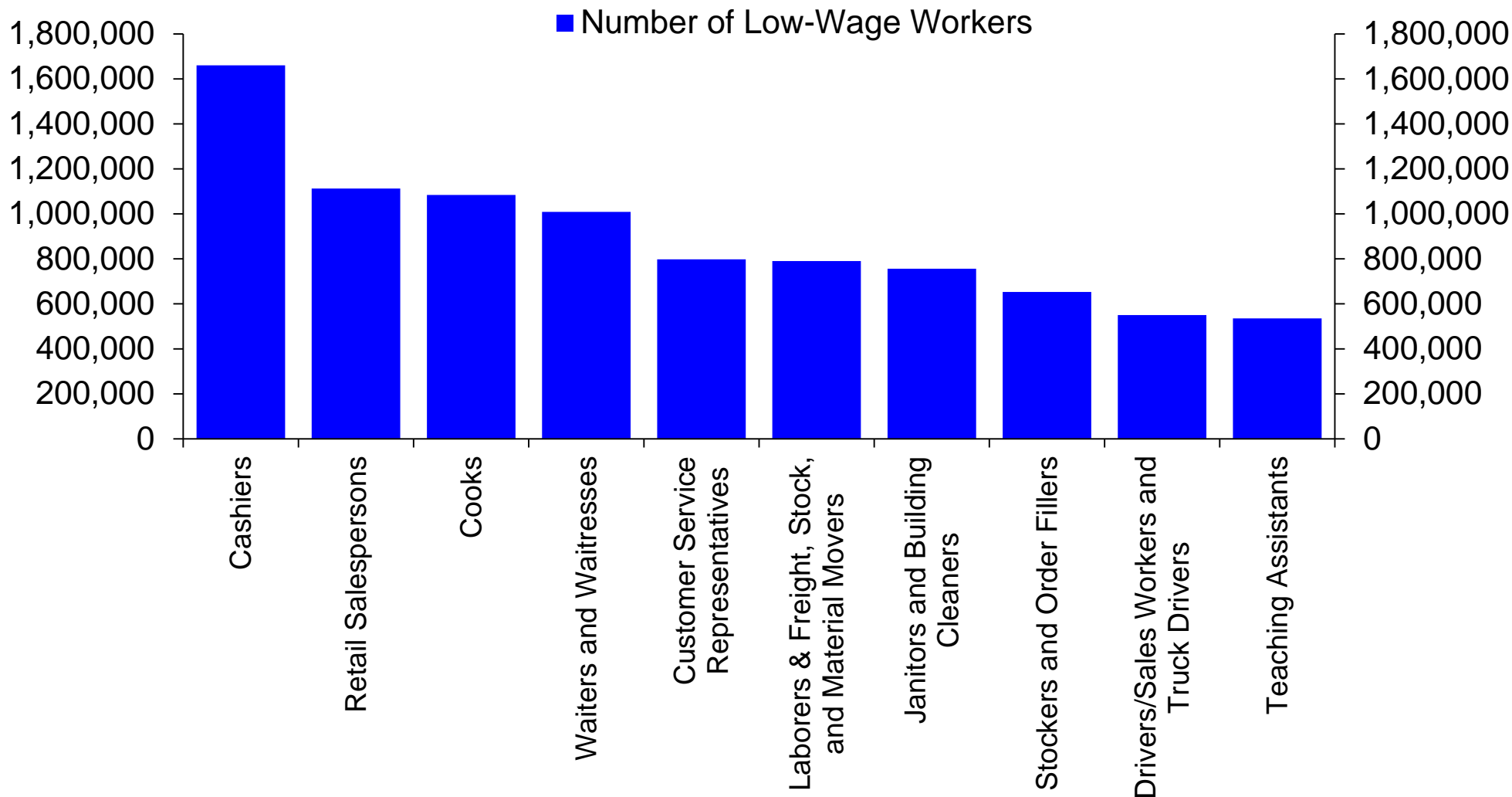
# Many low wage jobs are close physical proximity occupations



# of workers

## Top 10 Occupations Among Low-Wage Workers, 2018

# of workers



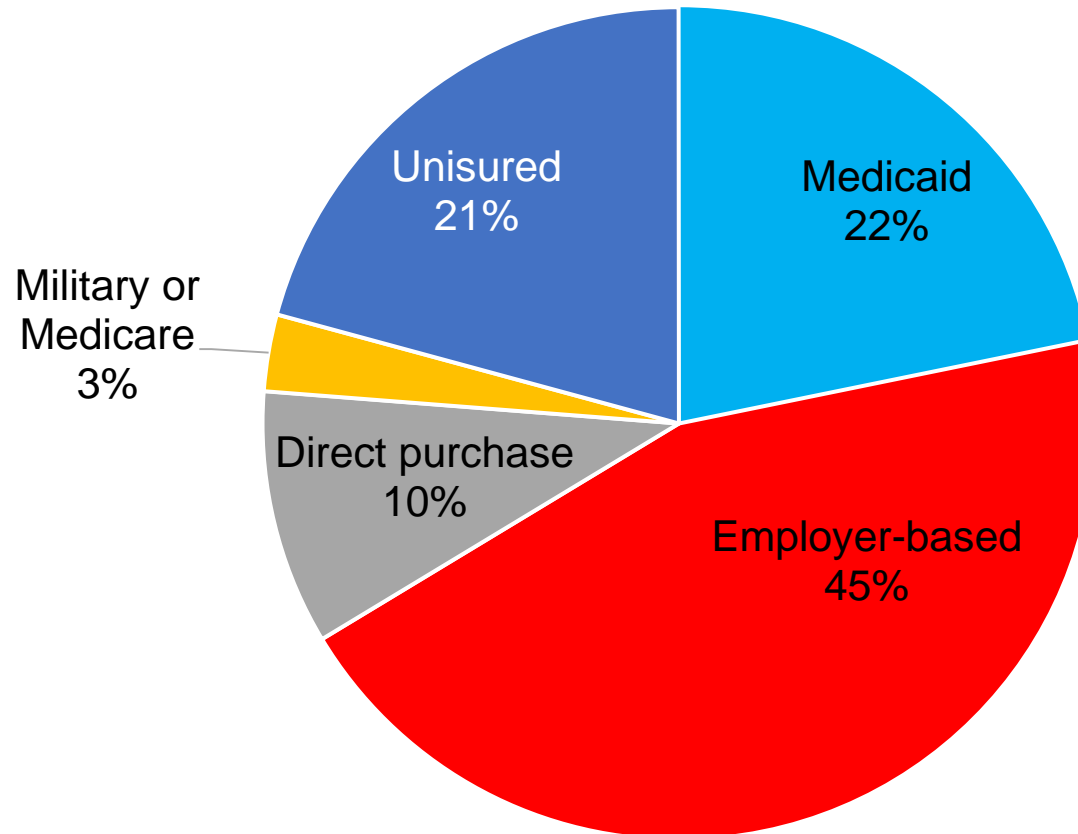
Note: Low-Wage Workers defined as those in bottom quintile of people who earned at least \$1000 in past year and worked at least 20 hours in usual week working.

Source: KFF analysis of 2018 American Community Survey, 1-Year Estimates, DB Global Research

# Health insurance coverage among low-wage workers



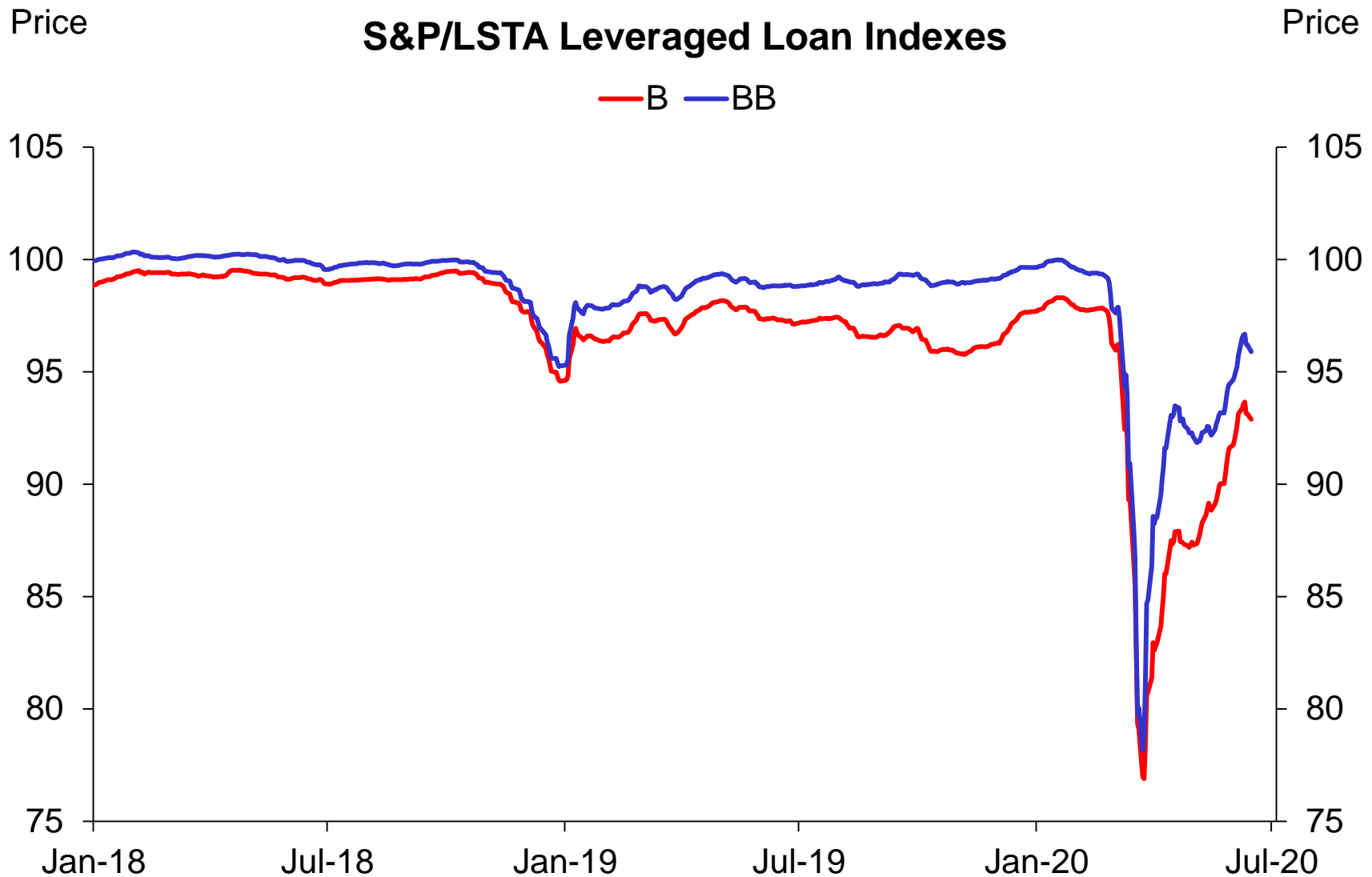
## Health insurance coverage among low-wage workers, 2018



Note: Includes low wage workers, defined as bottom quintile earners among nonelderly adults earning at least \$1000 in past year and working at least 20 hours per week in a usual week working

Source: KFF analysis of 2018 American Community Survey, 1-Year Estimates, DB Global Research

# Will underlying cash flows be consistent with a V-shaped recovery in the price of loans?



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

# MMT works until it doesn't

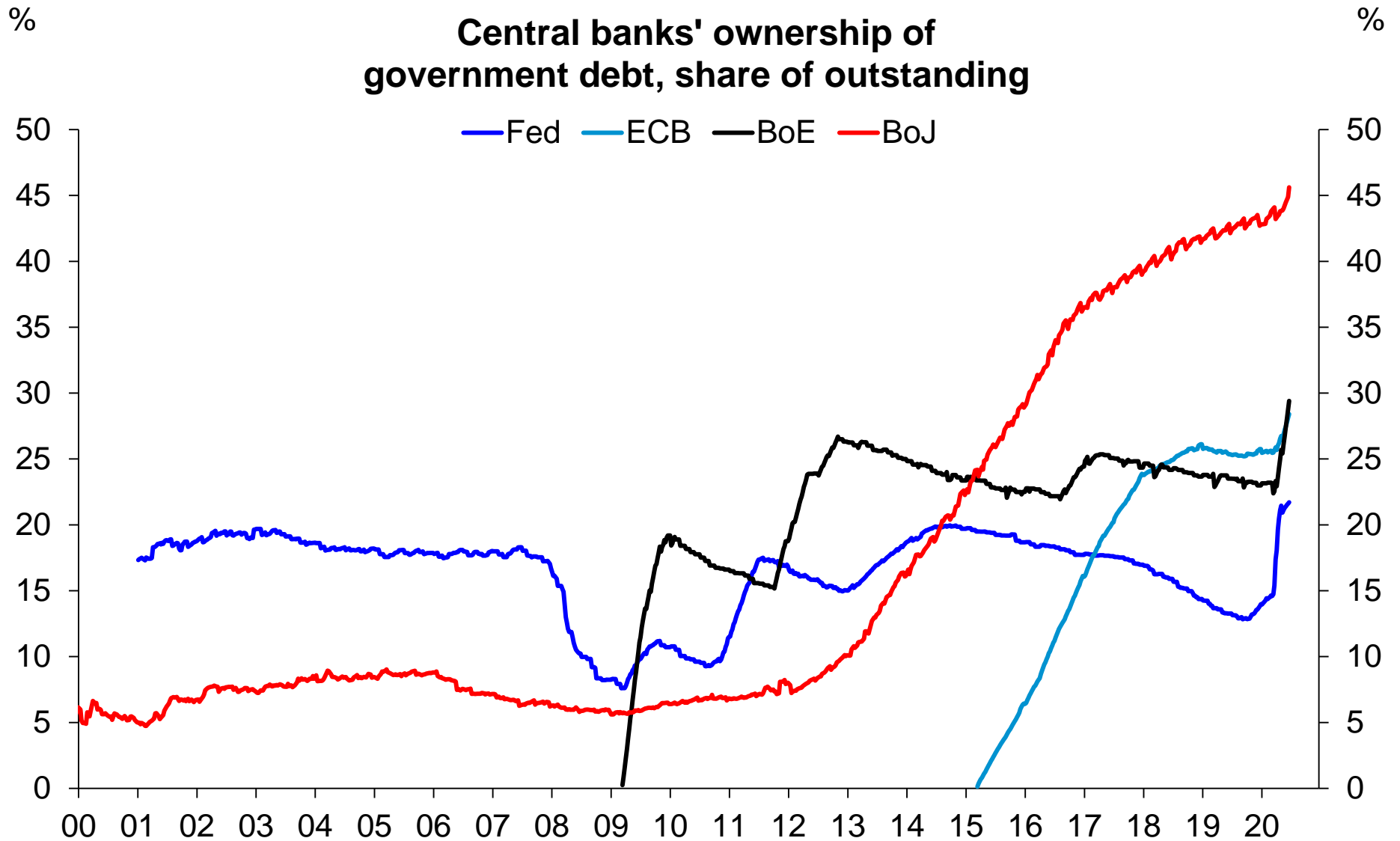


MMT assumes that the Fed can purchase all Treasuries with no consequences. But the risk-free asset is used to price all private sector assets such as the S&P500, IG, and HY credit. Put differently, **the result of the Fed buying all Treasuries – and now also IG and fallen angels – is that the Fed ends up controlling all asset prices. As a result, pricing in stock markets and bond markets no longer reflect the true default risks of individual assets.** And if prices of government bonds, credit, and equity are no longer a correct reflection of the true default risk in these asset classes, then it ultimately increases the likelihood that investors, including foreigners, no longer want to buy any public or private sector asset in the country doing MMT. **Looking at it from the finance textbook, MMT assumes that undermining the assumptions about what a risk-free asset is will have no consequences for the currency and demand for private sector assets.** As we know from history, countries that have monetized their debt have not only seen consequences for government bond interest rates but also for demand for private sector equity and credit, including from foreigners. **In short, if you assume that investors don't care about whether the price of Treasuries, credit, and S&P500 is a true reflection of the underlying default risks, then MMT works.** Or rephrasing the old IMF saying about countries growing government debt levels: MMT works until it doesn't.

Source: DB Global Research



# Central bank ownership of domestic government debt

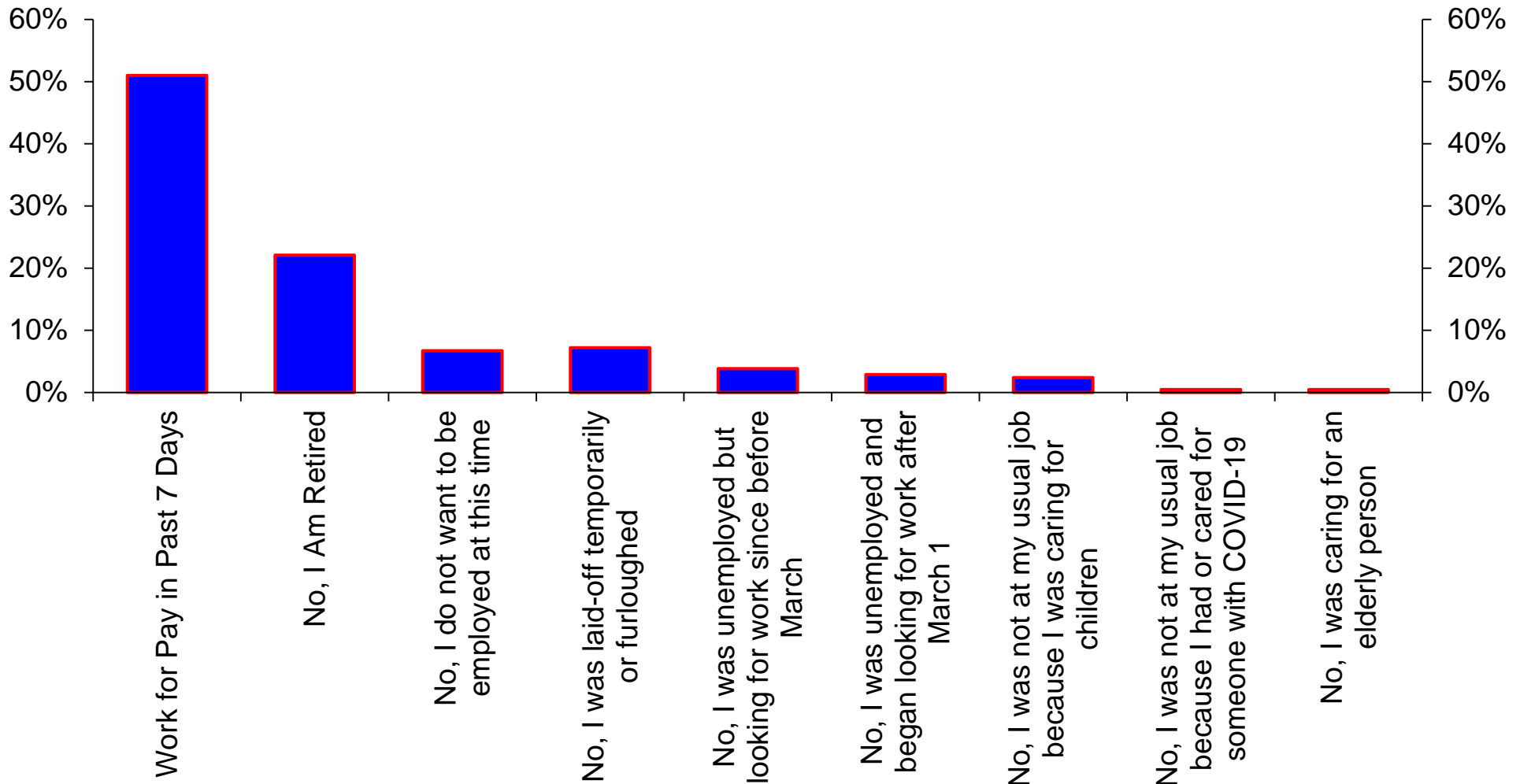


Source: DB Rates Strategy, Fed, ECB, BoE, BoJ, Treasury, ONS, Haver Analytics, DB Global Research

# Main reason for not working for pay?



**NORC COVID Impact Survey**  
**In the past 7 days, did you do any work for pay at a job or business?**  
**If not, what was your main reason for not working for pay?**



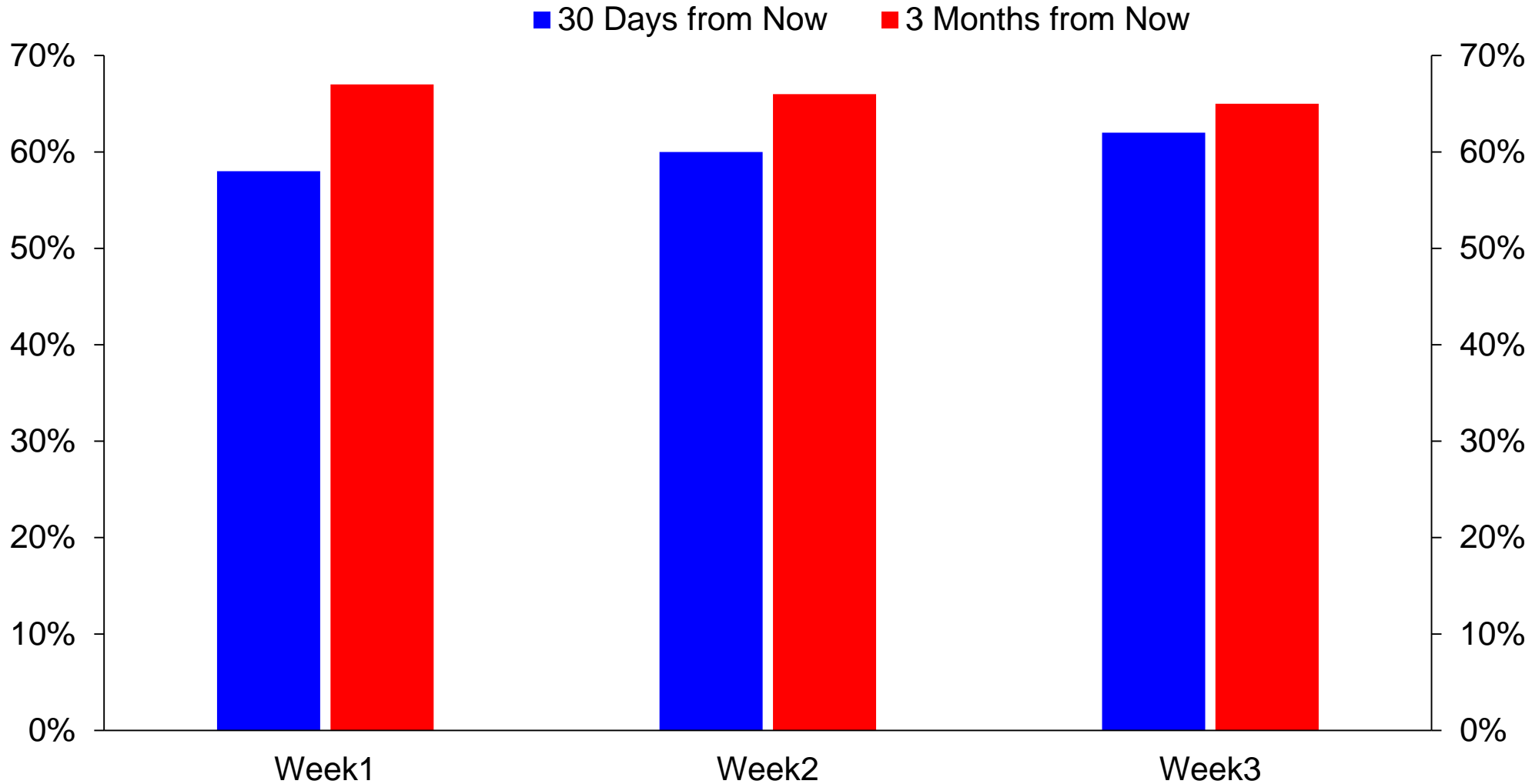
The survey of 2,047 adults was conducted May 30–June 8 using a sample drawn from NORC’s probability-based AmeriSpeak Panel, which is designed to be representative of the U.S. population.

Source: NORC COVID Impact Survey, Haver Analytics, DB Global Research

# How likely do you think it is that you will be employed?



## NORC COVID-19 Impact Survey: how likely do you think it is that you will be employed ?

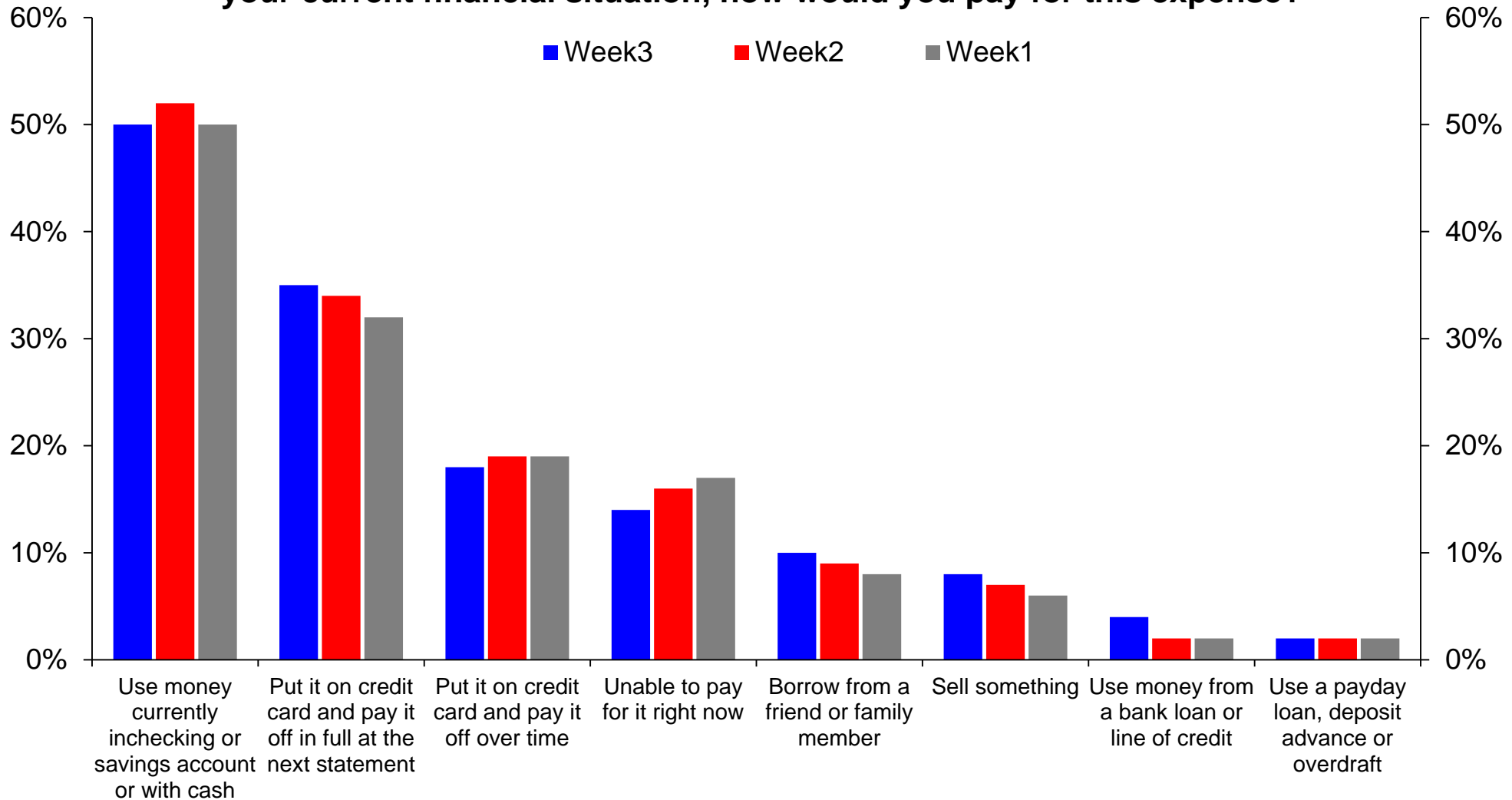


Source: NORC COVID Impact Survey, Haver Analytics, DB Global Research

# How would you pay for a \$400 unexpected expense?

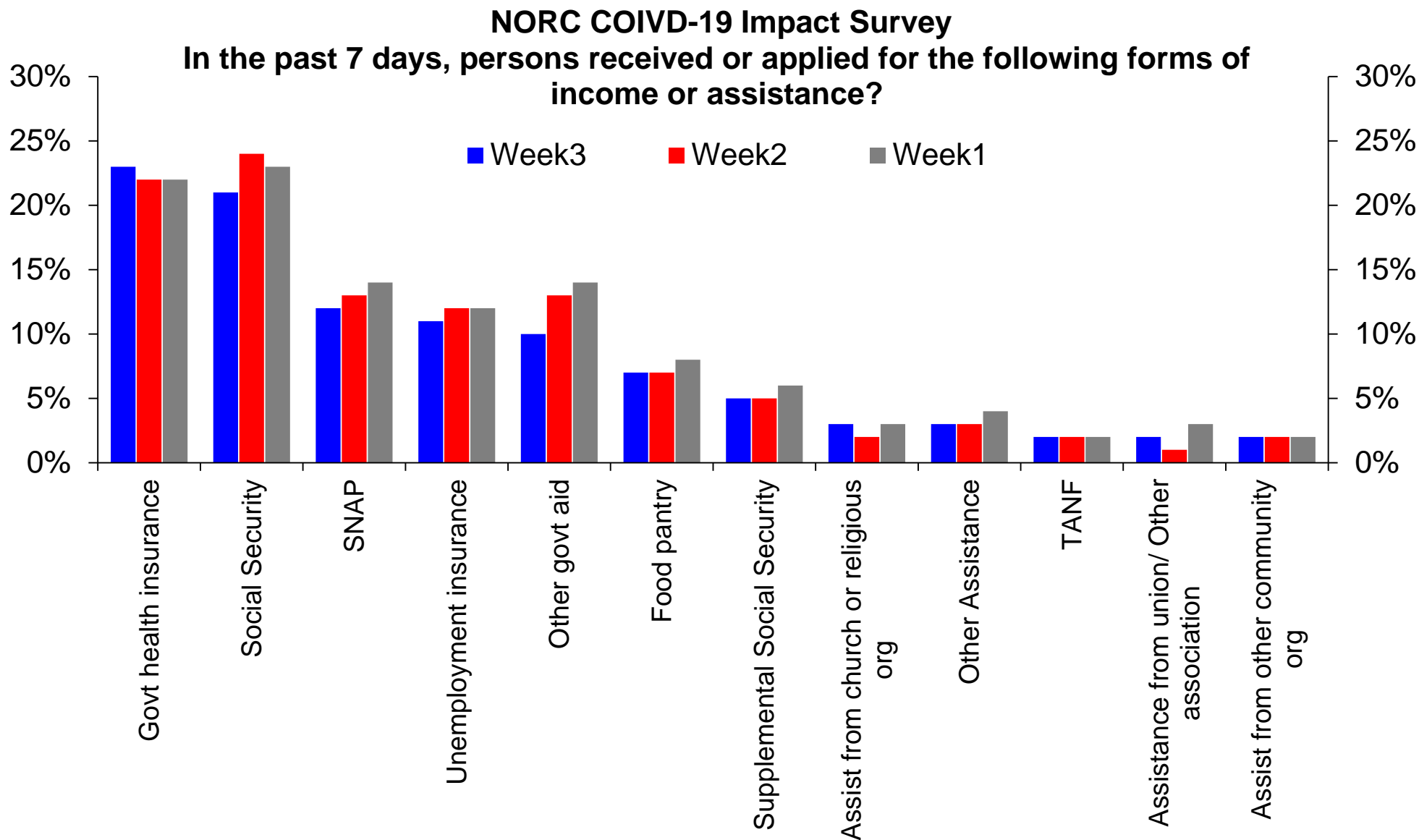


**NORC COVID Impact Survey:**  
**Suppose that you have an unexpected expense that costs \$400. Based on your current financial situation, how would you pay for this expense?**



Source: NORC COVID Impact Survey, Haver Analytics, DB Global Research

# Share getting this type of assistance in the past week

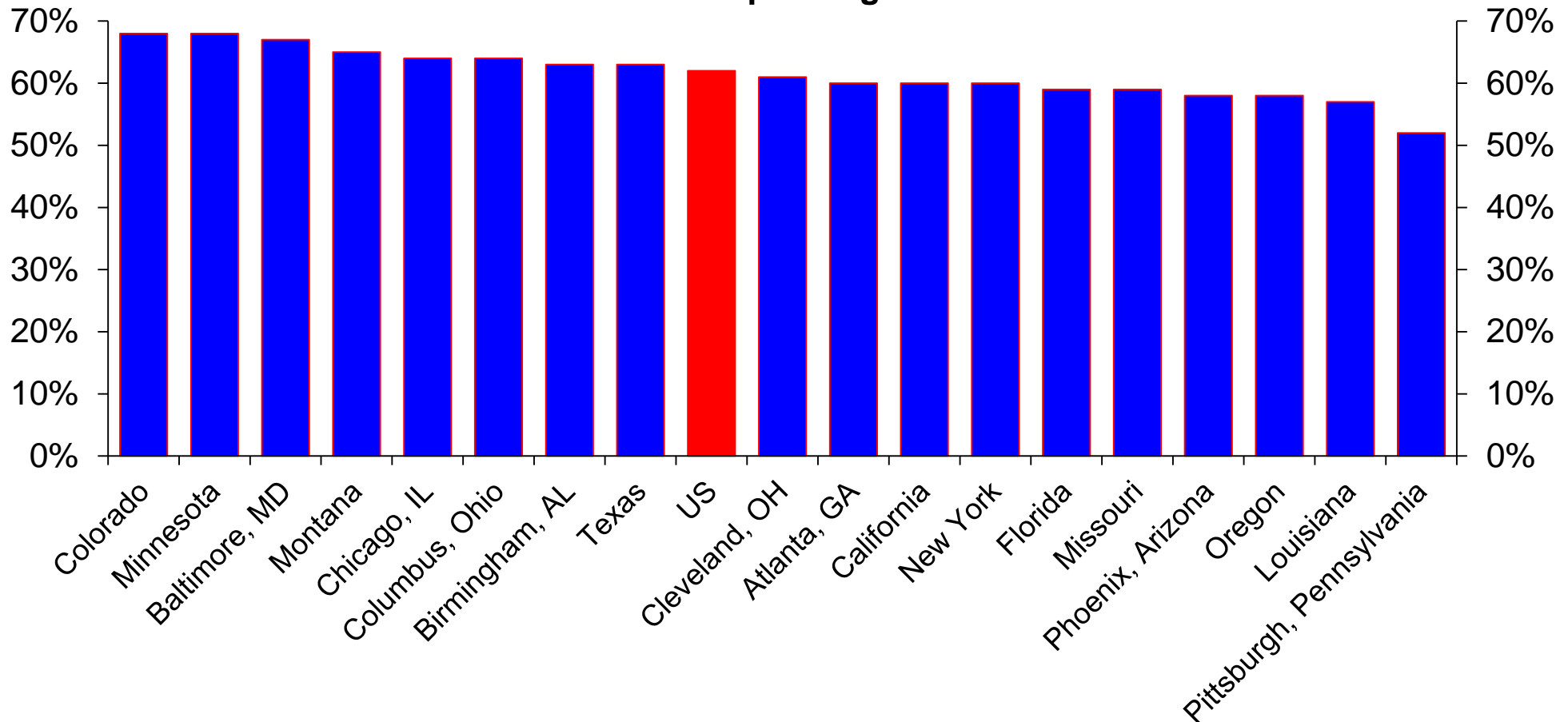


Source: NORC COVID Impact Survey, Haver Analytics, DB Global Research

# Share of people believing they will be employed within 30 days



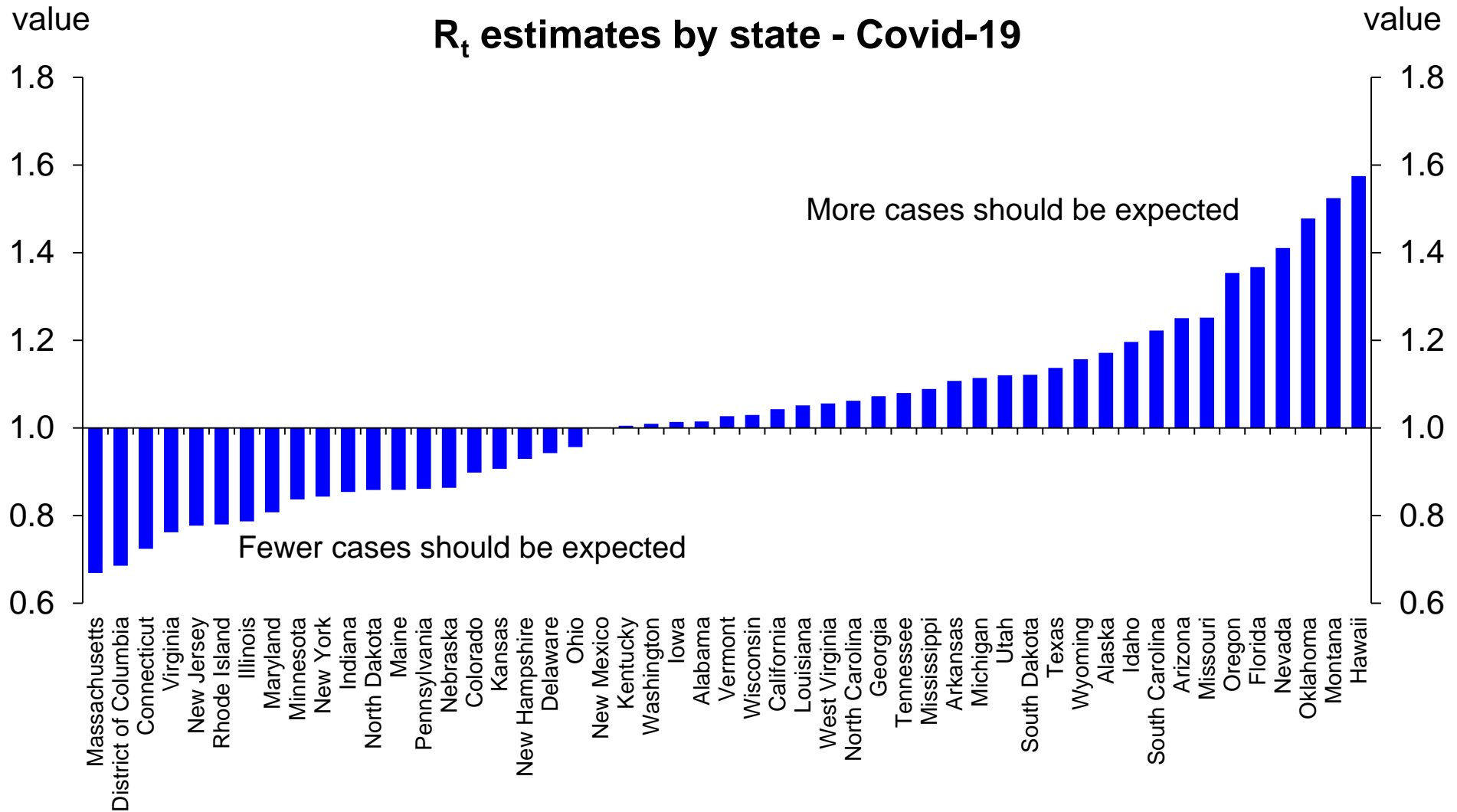
**NORC COVID Impact Survey**  
**Percent of individuals believe they will be employed in 30 days, by sampled region**



The survey was conducted May 30–June 8 using a sample drawn from NORC’s probability-based AmeriSpeak Panel, which is designed to be representative of the U.S. population.

Source: NORC COVID Impact Survey, Haver Analytics, DB Global Research

# US: Coronavirus reproduction rate, by state



Note: R<sub>t</sub> represents the effective reproduction rate of the virus; it is the average number of people who become infected by an infectious person; values over 1 indicate we should expect more cases in that area and less than 1 indicate we should expect fewer; data as of 23 June 2020

Source: Rt.live, DB Global Research

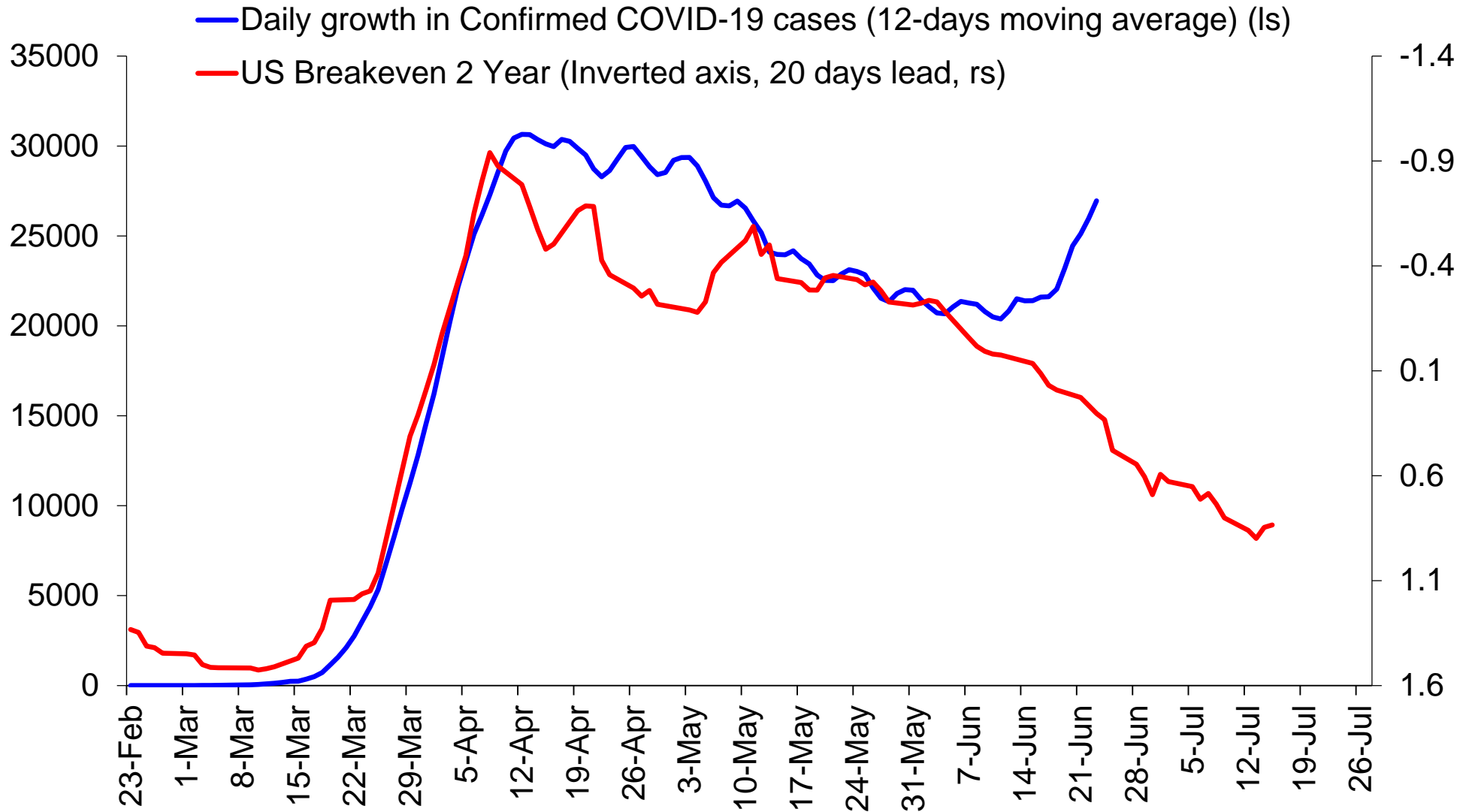
# COVID-19 and inflation expectations



# of cases

## United States: COVID-19 and inflation expectations

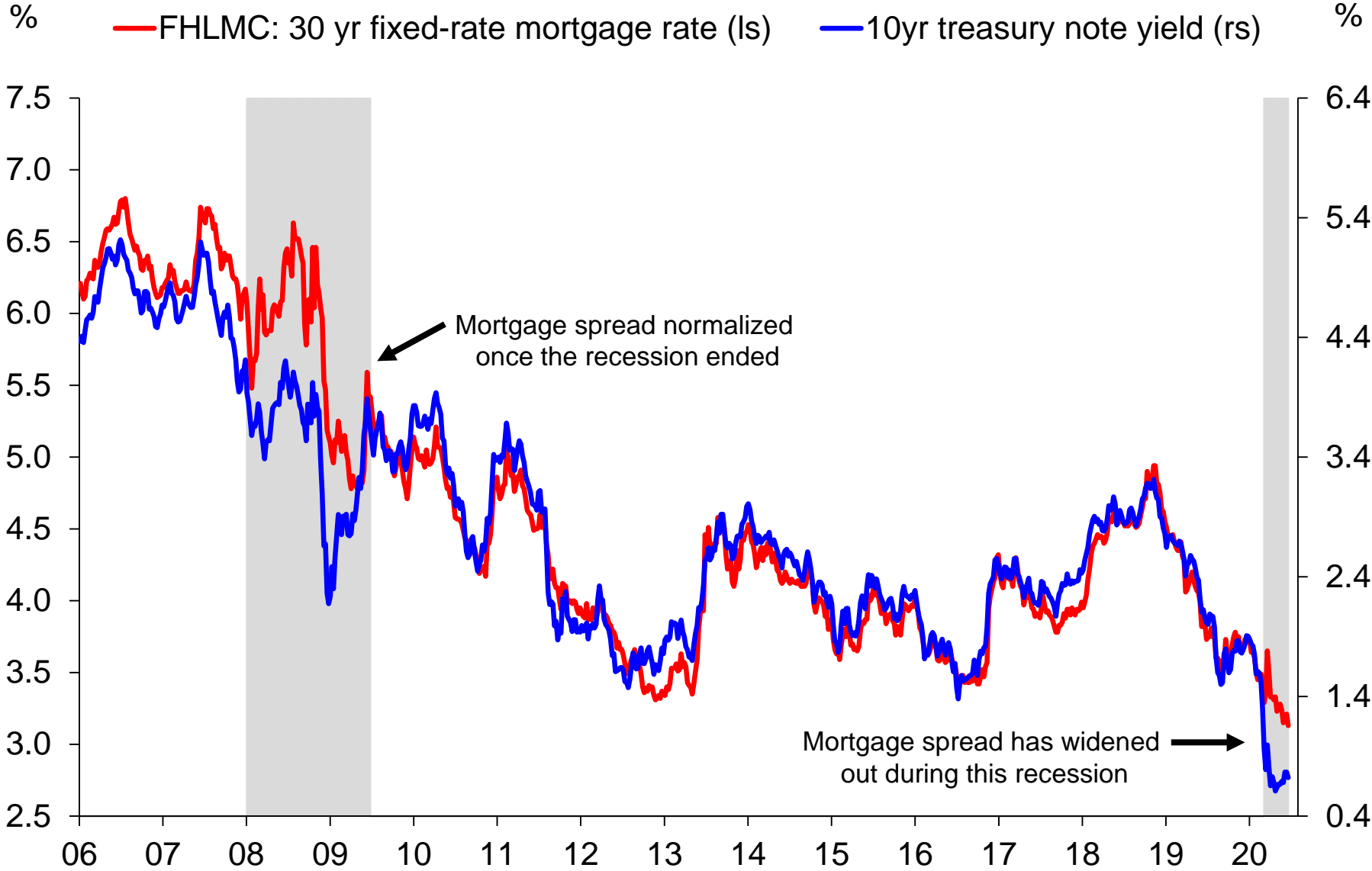
%



Source: JHU, Bloomberg Finance LP, DB Global Research

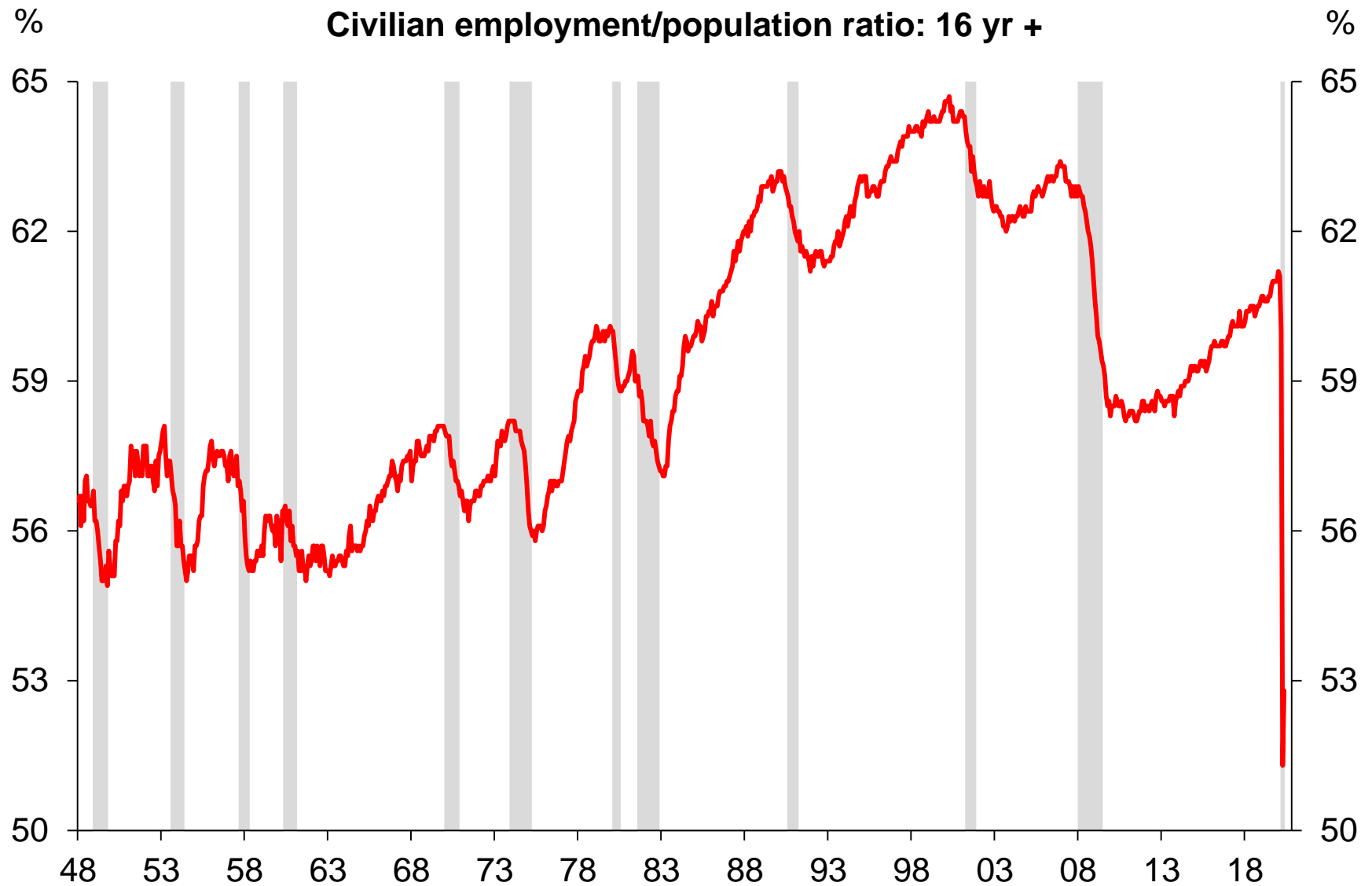


# Mortgage rates have fallen less than Treasury rates



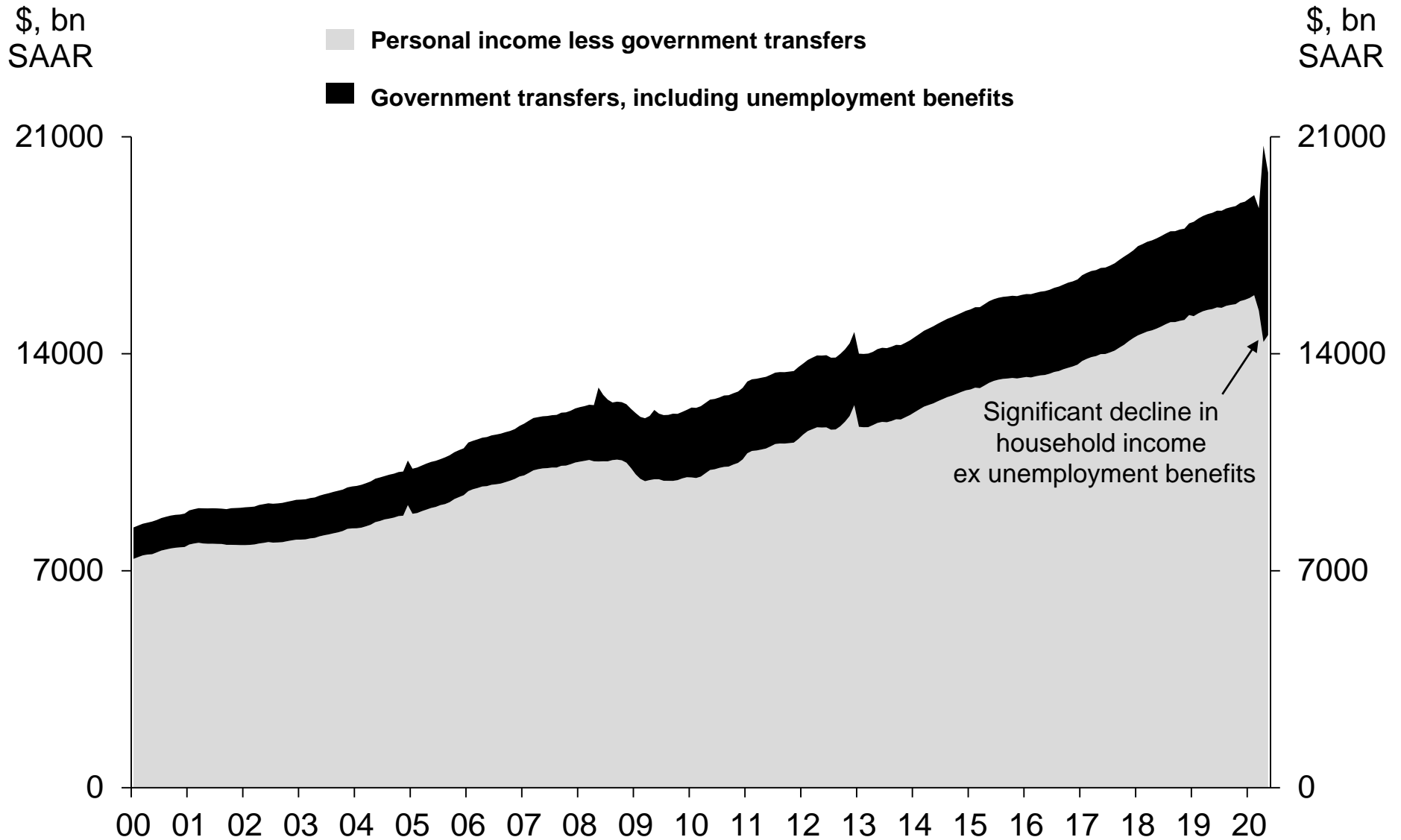
Source: FHLMC, FRB, Haver Analytics, DB Global Research

# Only half of the US population has a job



Source: BLS, Haver Analytics, DB Global Research

# If it hadn't been for the aggressive US fiscal response the US recession would have been much deeper



Source: BEA, 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.

*Rajsekhar Bhattacharyya and Krishna Bhimavarapu are employees of Acuity Knowledge Partners, a third-party research service provider to Deutsche Bank*



# Appendix 1

## Important Disclosures

### \*Other Information Available upon Request

Prices are current as of the end of the previous trading session unless otherwise indicated and are sourced from local exchanges via Reuters, Bloomberg and other vendors . Other information is sourced from Deutsche Bank, subject companies, and other sources. For disclosures pertaining to recommendations or estimates made on securities other than the primary subject of this research, please see the most recently published company report or visit our global disclosure look-up page on our website at <https://research.db.com/Research/Disclosures/CompanySearch>. Aside from within this report, important conflict disclosures can also be found at <https://research.db.com/Research/Topics/Equities?topicId=RB0002> under the “Disclosures Lookup” and “Legal” tabs. Investors are strongly encouraged to review this information before investing.

#### Analyst Certification

The views expressed in this report accurately reflect the personal views of the undersigned lead analyst about the subject issuers and the securities of those issuers. In addition, the undersigned lead analyst has not and will not receive any compensation for providing a specific recommendation or view in this report. Torsten Slok



## Additional Information

The information and opinions in this report were prepared by Deutsche Bank AG or one of its affiliates (collectively "Deutsche Bank"). Though the information herein is believed to be reliable and has been obtained from public sources believed to be reliable, Deutsche Bank makes no representation as to its accuracy or completeness. Hyperlinks to third-party websites in this report are provided for reader convenience only. Deutsche Bank neither endorses the content nor is responsible for the accuracy or security controls of those websites.

If you use the services of Deutsche Bank in connection with a purchase or sale of a security that is discussed in this report, or is included or discussed in another communication (oral or written) from a Deutsche Bank analyst, Deutsche Bank may act as principal for its own account or as agent for another person.

Deutsche Bank may consider this report in deciding to trade as principal. It may also engage in transactions, for its own account or with customers, in a manner inconsistent with the views taken in this research report. Others within Deutsche Bank, including strategists, sales staff and other analysts, may take views that are inconsistent with those taken in this research report. Deutsche Bank issues a variety of research products, including fundamental analysis, equity-linked analysis, quantitative analysis and trade ideas. Recommendations contained in one type of communication may differ from recommendations contained in others, whether as a result of differing time horizons, methodologies, perspectives or otherwise. Deutsche Bank and/or its affiliates may also be holding debt or equity securities of the issuers it writes on. Analysts are paid in part based on the profitability of Deutsche Bank AG and its affiliates, which includes investment banking, trading and principal trading revenues.

Opinions, estimates and projections constitute the current judgment of the author as of the date of this report. They do not necessarily reflect the opinions of Deutsche Bank and are subject to change without notice. Deutsche Bank provides liquidity for buyers and sellers of securities issued by the companies it covers. Deutsche Bank research analysts sometimes have shorter-term trade ideas that may be inconsistent with Deutsche Bank's existing longer-term ratings. Some trade ideas for equities are listed as Catalyst Calls ideas on the Research Website (<https://research.db.com/Research/>), and can be found on the general coverage list and also on the covered company's page. A Catalyst Call idea represents a high-conviction belief by an analyst that a stock will outperform or underperform the market and/or a specified sector over a time frame of no less than two weeks and no more than three months. In addition to Catalyst Calls ideas, analysts may occasionally discuss with our clients, and with Deutsche Bank salespersons and traders, trading strategies or ideas that reference catalysts or events that may have a near-term or medium-term impact on the market price of the securities discussed in this report, which impact may be directionally counter to the analysts' current 12-month view of total return or investment return as described herein. Deutsche Bank has no obligation to update, modify or amend this report or to otherwise notify a recipient thereof if an opinion, forecast or estimate changes or becomes inaccurate. Coverage and the frequency of changes in market conditions and in both general and company-specific economic prospects make it difficult to update research at defined intervals. Updates are at the sole discretion of the coverage analyst or of the Research Department Management, and the majority of reports are published at irregular intervals. This report is provided for informational purposes only and does not take into account the particular investment objectives, financial situations, or needs of individual clients. It is not an offer or a solicitation of an offer to buy or sell any financial instruments or to participate in any particular trading strategy. Target prices are inherently imprecise and a product of the analyst's judgment. The financial instruments discussed in this report may not be suitable for all investors, and investors must make their own informed investment decisions. Prices and availability of financial instruments are subject to change without notice, and investment transactions can lead to losses as a result of price fluctuations and other factors. If a financial instrument is denominated in a currency other than an investor's currency, a change in exchange rates may adversely affect the investment. Past performance is not necessarily indicative of future results. Performance calculations exclude transaction costs, unless otherwise indicated. Unless otherwise indicated, prices are current as of the end of the previous trading session and are sourced from local exchanges via Reuters, Bloomberg and other vendors. Data is also sourced from Deutsche Bank, subject companies, and other parties.

The Deutsche Bank Research Department is independent of other business divisions of the Bank. Details regarding our organizational arrangements and information barriers we have to prevent and avoid conflicts of interest with respect to our research are available on our website (<https://research.db.com/Research/>) under Disclaimer.

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.

Derivative transactions involve numerous risks including market, counterparty default and illiquidity risk. The appropriateness of these products for use by investors depends on the investors' own circumstances, including their tax position, their regulatory environment and the nature of their other assets and liabilities; as such, investors should take expert legal and financial advice before entering into any transaction similar to or inspired by the contents of this publication. The risk of loss in futures trading and options, foreign or domestic, can be substantial. As a result of the high degree of leverage obtainable in futures and options trading, losses may be incurred that are greater than the amount of funds initially deposited – up to theoretically unlimited losses. Trading in options involves risk and is not suitable for all investors. Prior to buying or selling an option, investors must review the "Characteristics and Risks of Standardized Options", at <http://www.optionsclearing.com/about/publications/character-risks.jsp>. If you are unable to access the website, please contact your Deutsche Bank representative for a copy of this important document.



Participants in foreign exchange transactions may incur risks arising from several factors, including the following: (i) exchange rates can be volatile and are subject to large fluctuations; (ii) the value of currencies may be affected by numerous market factors, including world and national economic, political and regulatory events, events in equity and debt markets and changes in interest rates; and (iii) currencies may be subject to devaluation or government-imposed exchange controls, which could affect the value of the currency. Investors in securities such as ADRs, whose values are affected by the currency of an underlying security, effectively assume currency risk.

Unless governing law provides otherwise, all transactions should be executed through the Deutsche Bank entity in the investor's home jurisdiction. Aside from within this report, important conflict disclosures can also be found at <https://research.db.com/Research/> on each company's research page. Investors are strongly encouraged to review this information before investing.

Deutsche Bank (which includes Deutsche Bank AG, its branches and affiliated companies) is not acting as a financial adviser, consultant or fiduciary to you or any of your agents (collectively, "You" or "Your") with respect to any information provided in this report. Deutsche Bank does not provide investment, legal, tax or accounting advice, Deutsche Bank is not acting as your impartial adviser, and does not express any opinion or recommendation whatsoever as to any strategies, products or any other information presented in the materials. Information contained herein is being provided solely on the basis that the recipient will make an independent assessment of the merits of any investment decision, and it does not constitute a recommendation of, or express an opinion on, any product or service or any trading strategy.

The information presented is general in nature and is not directed to retirement accounts or any specific person or account type, and is therefore provided to You on the express basis that it is not advice, and You may not rely upon it in making Your decision. The information we provide is being directed only to persons we believe to be financially sophisticated, who are capable of evaluating investment risks independently, both in general and with regard to particular transactions and investment strategies, and who understand that Deutsche Bank has financial interests in the offering of its products and services. If this is not the case, or if You are an IRA or other retail investor receiving this directly from us, we ask that you inform us immediately.

In July 2018, Deutsche Bank revised its rating system for short term ideas whereby the branding has been changed to Catalyst Calls ("CC") from SOLAR ideas; the rating categories for Catalyst Calls originated in the Americas region have been made consistent with the categories used by Analysts globally; and the effective time period for CCs has been reduced from a maximum of 180 days to 90 days.

During the period November 2018 to March 2020 Deutsche Bank may have been showing incomplete information regarding Disclosure 1 in some parts of the equity research and debt research coverage. If you require any further information please contact [DVS.Support@db.com](mailto:DVS.Support@db.com).

United States: Approved and/or distributed by Deutsche Bank Securities Incorporated, a member of FINRA, NFA and SIPC. Analysts located outside of the United States are employed by non-US affiliates that are not subject to FINRA regulations.

Germany: Approved and/or distributed by Deutsche Bank AG, a joint stock corporation with limited liability incorporated in the Federal Republic of Germany with its principal office in Frankfurt am Main. Deutsche Bank AG is authorized under German Banking Law and is subject to supervision by the European Central Bank and by BaFin, Germany's Federal Financial Supervisory Authority.

United Kingdom: Approved and/or distributed by Deutsche Bank AG acting through its London Branch at Winchester House, 1 Great Winchester Street, London EC2N 2DB. Deutsche Bank AG in the United Kingdom is authorised by the Prudential Regulation Authority and is subject to limited regulation by the Prudential Regulation Authority and Financial Conduct Authority. Details about the extent of our authorisation and regulation are available on request.

Hong Kong SAR: Distributed by Deutsche Bank AG, Hong Kong Branch except for any research content relating to futures contracts within the meaning of the Hong Kong Securities and Futures Ordinance Cap. 571. Research reports on such futures contracts are not intended for access by persons who are located, incorporated, constituted or resident in Hong Kong. The author(s) of a research report may not be licensed to carry on regulated activities in Hong Kong and, if not licensed, do not hold themselves out as being able to do so. The provisions set out above in the 'Additional Information' section shall apply to the fullest extent permissible by local laws and regulations, including without limitation the Code of Conduct for Persons Licensed or Registered with the Securities and Futures Commission. This report is intended for distribution only to 'professional investors' as defined in Part 1 of Schedule of the SFO. This document must not be acted or relied on by persons who are not professional investors. Any investment or investment activity to which this document relates is only available to professional investors and will be engaged only with professional investors.

India: Prepared by Deutsche Equities India Private Limited (DEIPL) having CIN: U65990MH2002PTC137431 and registered office at 14th Floor, The Capital, C-70, G Block, Bandra Kurla Complex Mumbai (India) 400051. Tel: +91 22 7180 4444. It is registered by the Securities and Exchange Board of India (SEBI) as a Stock broker bearing registration no.: INZ000252437; Merchant Banker bearing SEBI Registration no.: INM000010833 and Research Analyst bearing SEBI Registration no.: INH000001741. DEIPL may have received administrative warnings from the SEBI for breaches of Indian regulations. Deutsche Bank and/or its affiliate(s) may have debt holdings or positions in the subject company. With regard to information on associates, please refer to the "Shareholdings" section in the Annual Report at: <https://www.db.com/ir/en/annual-reports.htm>.

Japan: Approved and/or distributed by Deutsche Securities Inc.(DSI). Registration number - Registered as a financial instruments dealer by the Head of the Kanto Local Finance Bureau (Kinsho) No. 117. Member of associations: JSDA, Type II Financial Instruments Firms Association and The Financial Futures Association of Japan. Commissions and risks involved in stock transactions - for stock transactions, we charge stock commissions and consumption tax by multiplying the transaction amount by the commission rate agreed with each customer. Stock transactions can lead to losses as a result of share price fluctuations and other factors. Transactions in foreign stocks can lead to additional losses stemming from foreign exchange fluctuations. We may also charge commissions and fees for certain categories of investment advice, products and services. Recommended investment strategies, products and services carry the risk of losses to principal and other losses as a result of changes in market and/or economic trends, and/or fluctuations in market value. Before deciding on the purchase of financial products and/or services, customers should carefully read the relevant disclosures, prospectuses and other documentation. 'Moody's', 'Standard Poor's', and 'Fitch' mentioned in this report are not registered credit rating agencies in Japan unless Japan or 'Nippon' is specifically designated in the name of the entity. Reports on Japanese listed companies not written by analysts of DSI are written by Deutsche Bank Group's analysts with the coverage companies specified by DSI. Some of the foreign securities stated on this report are not disclosed according to the Financial Instruments and Exchange Law of Japan. Target prices set by Deutsche Bank's equity analysts are based on a 12-month forecast period.

Korea: Distributed by Deutsche Securities Korea Co.



South Africa: Deutsche Bank AG Johannesburg is incorporated in the Federal Republic of Germany (Branch Register Number in South Africa: 1998/003298/10).

Singapore: This report is issued by Deutsche Bank AG, Singapore Branch (One Raffles Quay #18-00 South Tower Singapore 048583, 65 6423 8001), which may be contacted in respect of any matters arising from, or in connection with, this report. Where this report is issued or promulgated by Deutsche Bank in Singapore to a person who is not an accredited investor, expert investor or institutional investor (as defined in the applicable Singapore laws and regulations), they accept legal responsibility to such person for its contents.

Taiwan: Information on securities/investments that trade in Taiwan is for your reference only. Readers should independently evaluate investment risks and are solely responsible for their investment decisions. Deutsche Bank research may not be distributed to the Taiwan public media or quoted or used by the Taiwan public media without written consent. Information on securities/instruments that do not trade in Taiwan is for informational purposes only and is not to be construed as a recommendation to trade in such securities/instruments. Deutsche Securities Asia Limited, Taipei Branch may not execute transactions for clients in these securities/instruments.

Qatar: Deutsche Bank AG in the Qatar Financial Centre (registered no. 00032) is regulated by the Qatar Financial Centre Regulatory Authority. Deutsche Bank AG - QFC Branch may undertake only the financial services activities that fall within the scope of its existing QFCRA license. Its principal place of business in the QFC: Qatar Financial Centre, Tower, West Bay, Level 5, PO Box 14928, Doha, Qatar. This information has been distributed by Deutsche Bank AG. Related financial products or services are only available only to Business Customers, as defined by the Qatar Financial Centre Regulatory Authority.

Russia: The information, interpretation and opinions submitted herein are not in the context of, and do not constitute, any appraisal or evaluation activity requiring a license in the Russian Federation.

Kingdom of Saudi Arabia: Deutsche Securities Saudi Arabia LLC Company (registered no. 07073-37) is regulated by the Capital Market Authority. Deutsche Securities Saudi Arabia may undertake only the financial services activities that fall within the scope of its existing CMA license. Its principal place of business in Saudi Arabia: King Fahad Road, Al Olaya District, P.O. Box 301809, Faisaliah Tower - 17th Floor, 11372 Riyadh, Saudi Arabia.

United Arab Emirates: Deutsche Bank AG in the Dubai International Financial Centre (registered no. 00045) is regulated by the Dubai Financial Services Authority. Deutsche Bank AG - DIFC Branch may only undertake the financial services activities that fall within the scope of its existing DFSA license. Principal place of business in the DIFC: Dubai International Financial Centre, The Gate Village, Building 5, PO Box 504902, Dubai, U.A.E. This information has been distributed by Deutsche Bank AG. Related financial products or services are available only to Professional Clients, as defined by the Dubai Financial Services Authority.

Australia and New Zealand: This research is intended only for "wholesale clients" within the meaning of the Australian Corporations Act and New Zealand Financial Advisors Act, respectively. Please refer to Australian specific research disclosures and related information at <https://australia.db.com/australia/content/research-information.html>. Where research refers to any particular financial product recipients of the research should consider any product disclosure statement, prospectus or other applicable disclosure document before making any decision about whether to acquire the product. In preparing this report, the primary analyst or an individual who assisted in the preparation of this report has likely been in contact with the company that is the subject of this research for confirmation/clarification of data, facts, statements, permission to use company-sourced material in the report, and/or site-visit attendance. Without prior approval from Research Management, analysts may not accept from current or potential Banking clients the costs of travel, accommodations, or other expenses incurred by analysts attending site visits, conferences, social events, and the like. Similarly, without prior approval from Research Management and Anti-Bribery and Corruption ("ABC") team, analysts may not accept perks or other items of value for their personal use from issuers they cover.

Additional information relative to securities, other financial products or issuers discussed in this report is available upon request. This report may not be reproduced, distributed or published without Deutsche Bank's prior written consent.

Backtested, hypothetical or simulated performance results have inherent limitations. Unlike an actual performance record based on trading actual client portfolios, simulated results are achieved by means of the retroactive application of a backtested model itself designed with the benefit of hindsight. Taking into account historical events the backtesting of performance also differs from actual account performance because an actual investment strategy may be adjusted any time, for any reason, including a response to material, economic or market factors. The backtested performance includes hypothetical results that do not reflect the reinvestment of dividends and other earnings or the deduction of advisory fees, brokerage or other commissions, and any other expenses that a client would have paid or actually paid. No representation is made that any trading strategy or account will or is likely to achieve profits or losses similar to those shown. Alternative modeling techniques or assumptions might produce significantly different results and prove to be more appropriate. Past hypothetical backtest results are neither an indicator nor guarantee of future returns. Actual results will vary, perhaps materially, from the analysis.

Copyright © 2020 Deutsche Bank AG