Economic Outlook: Riding the COVID-Coaster

August 19, 2020

KPMG Economics

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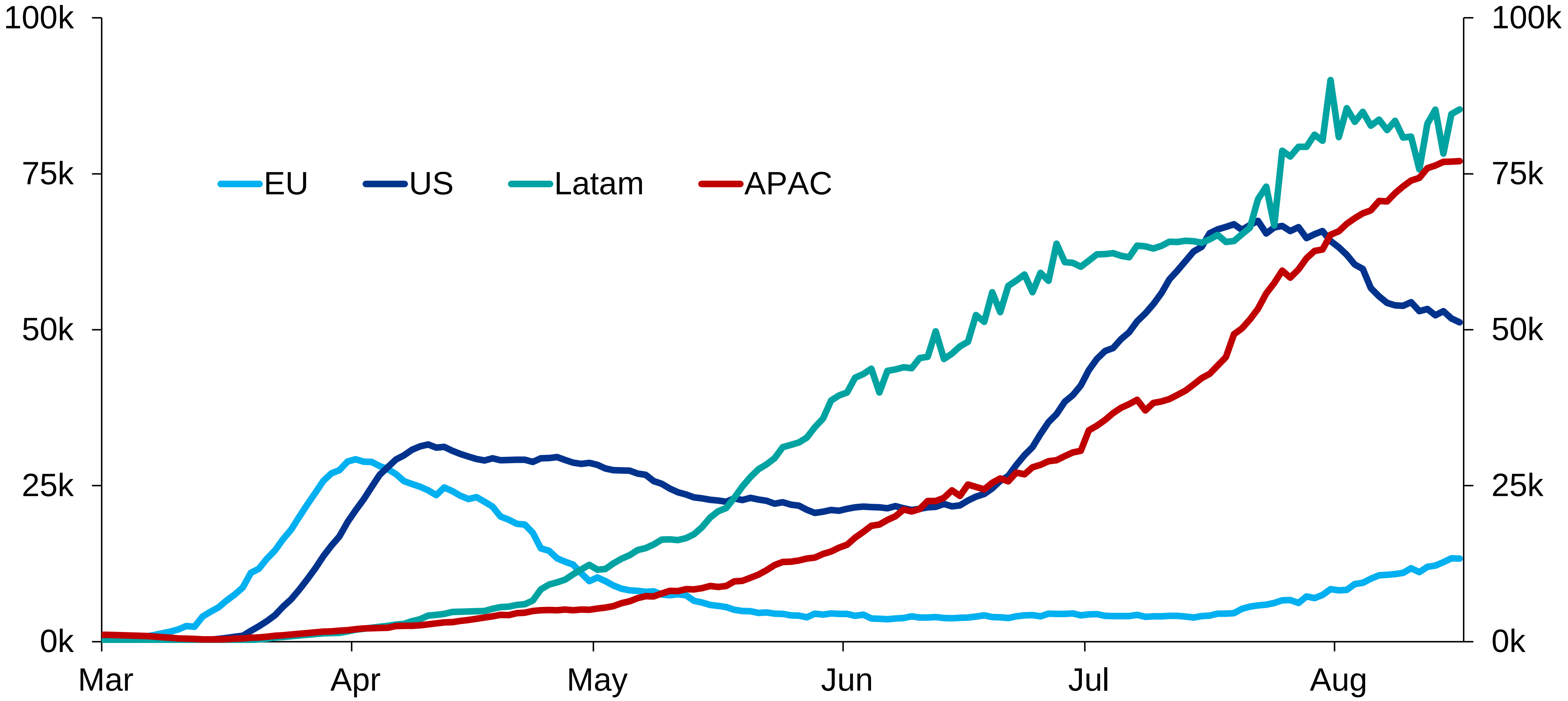
COVID-19 maintains its grip on the global economy

New COVID-19 Cases

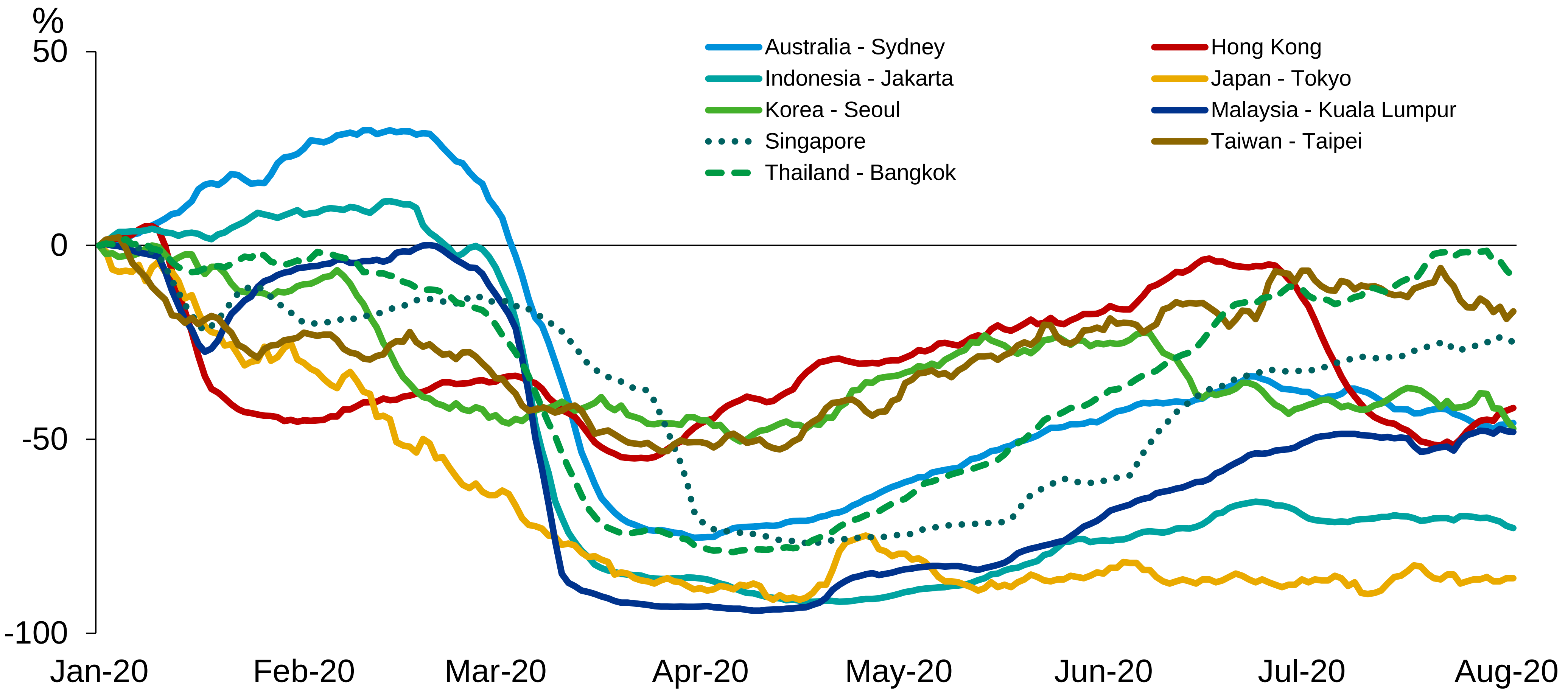
7D moving avg



Source: KPMG Economics, Johns Hopkins University (August 17, 2020), Bloomberg

Diverging paths to recovery in Asia hamper global economy

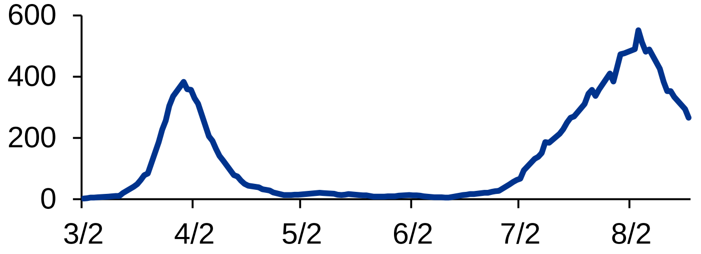
Asia & Australia Public Transit Demand



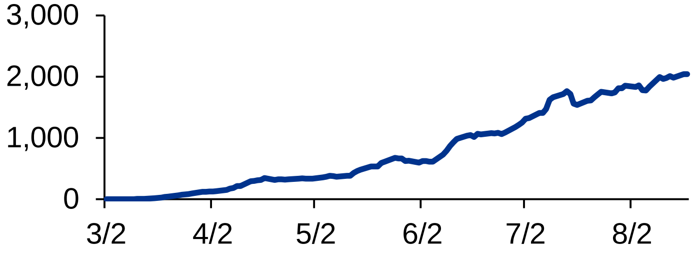
Source: KPMG Economics, Moovit, Bloomberg (August 16, 2020)
Note: baseline comparison with week of Jan 15, 2020

Asia & Australia: Daily new cases – Seven-day moving

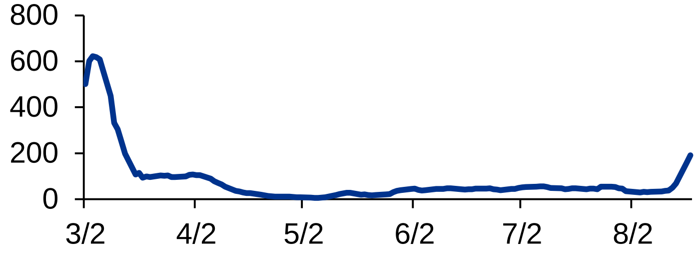
Australia (25.2m)



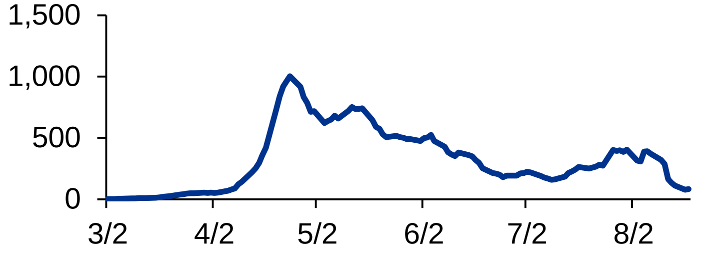
Indonesia (271m)



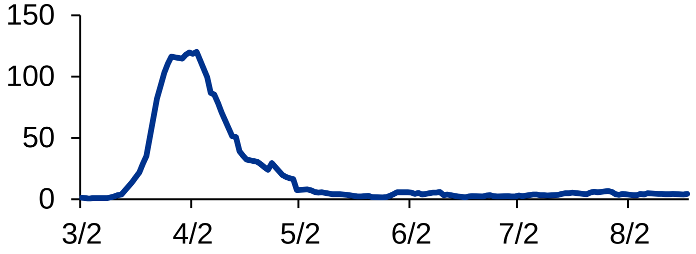
South Korea (51.2m)



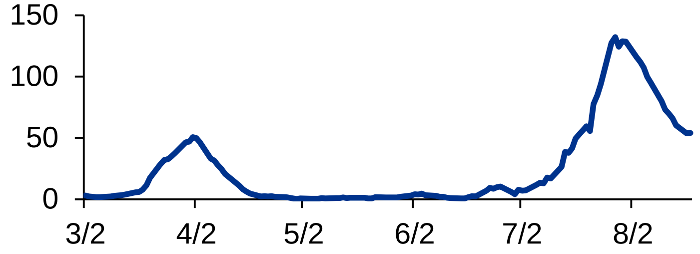
Singapore (5.8m)



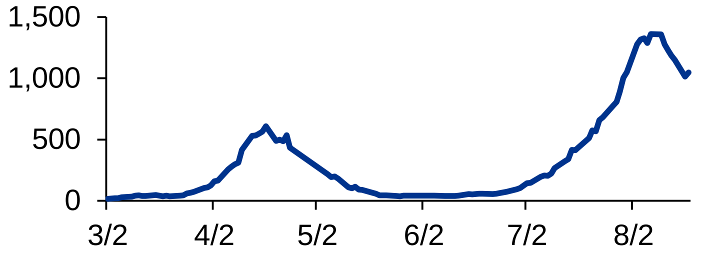
Thailand (69.6m)



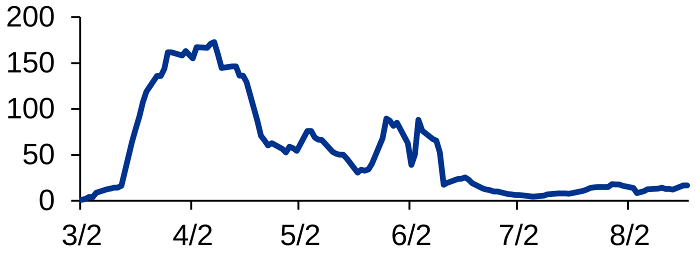
Hong Kong (7.4m)



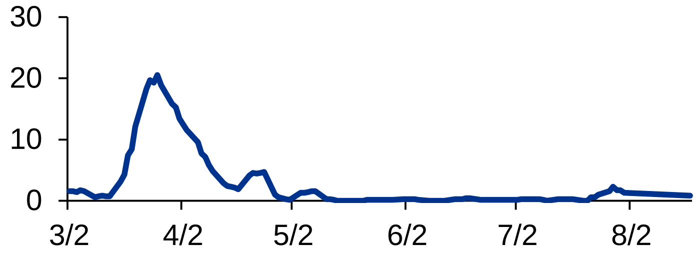
Japan (127m)



Malaysia (31.9m)



Taiwan (23.8m)

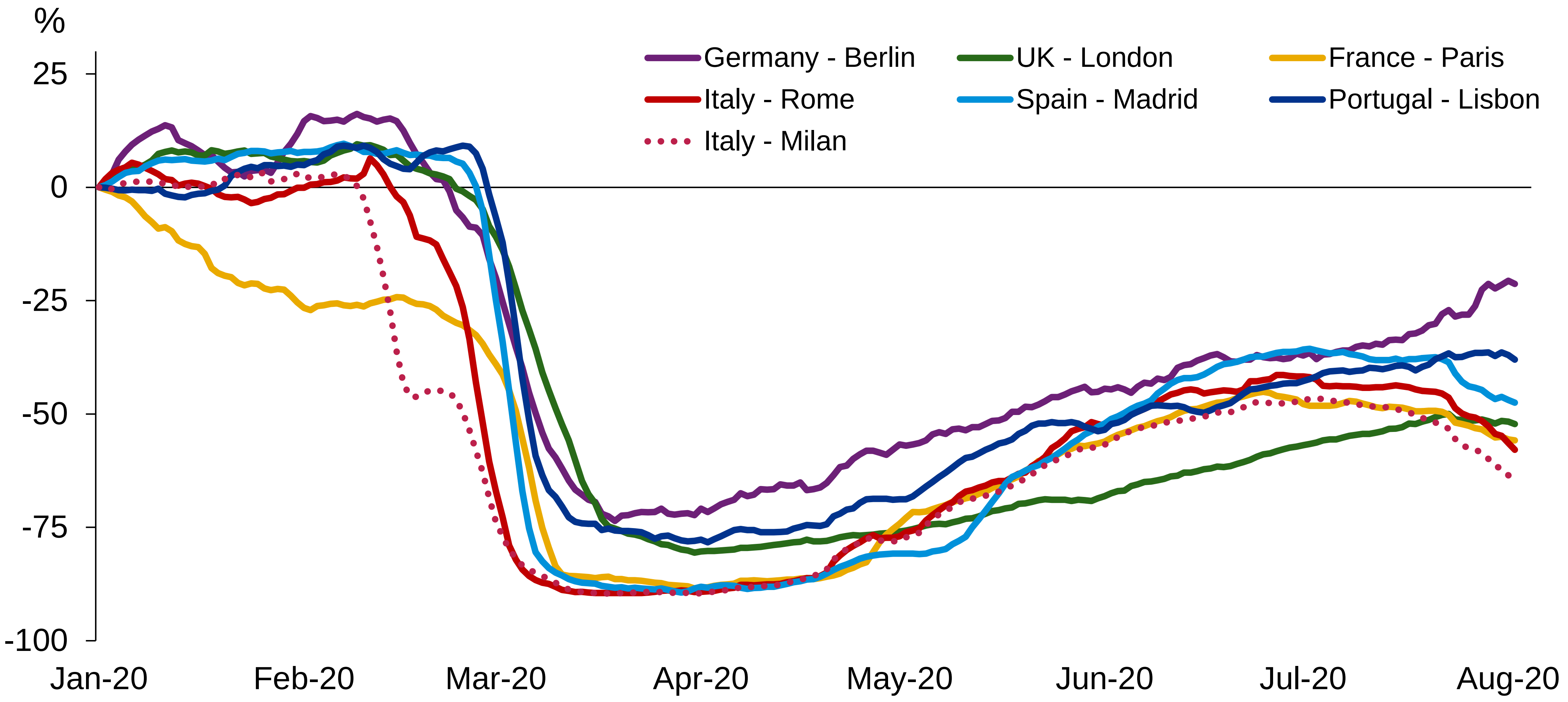


Note: Total population in parentheses

Source: KPMG Economics, Johns Hopkins University (August 18, 2020), Haver Analytics

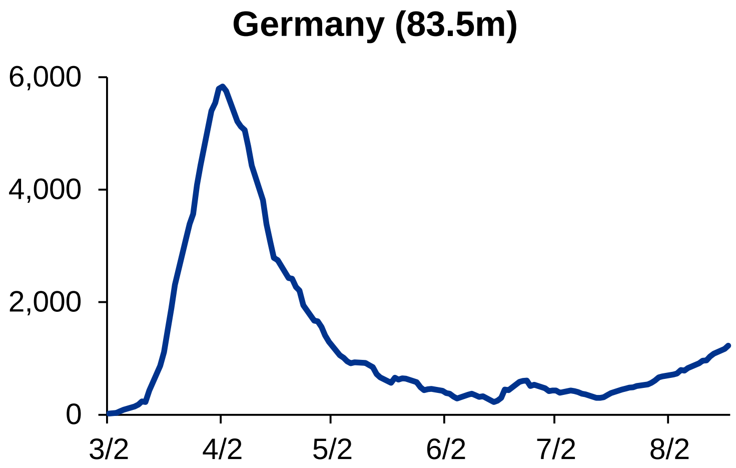
European economies see a mixed path to normalization

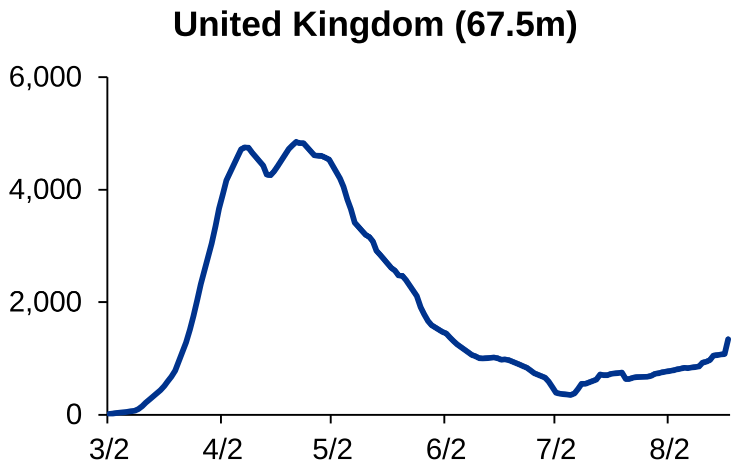
Europe Public Transit Demand

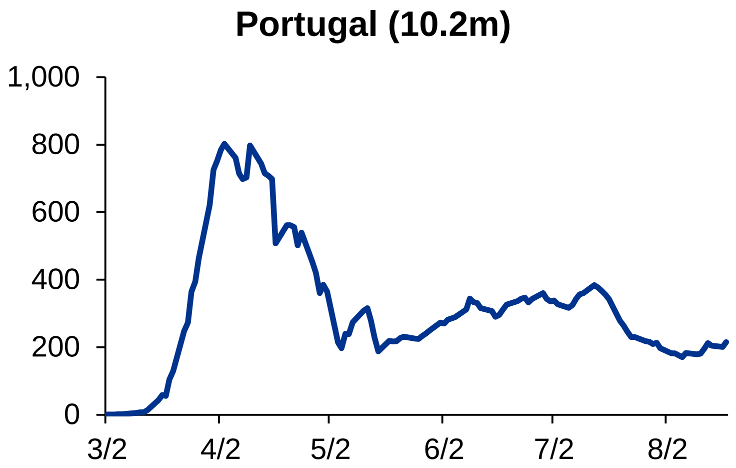


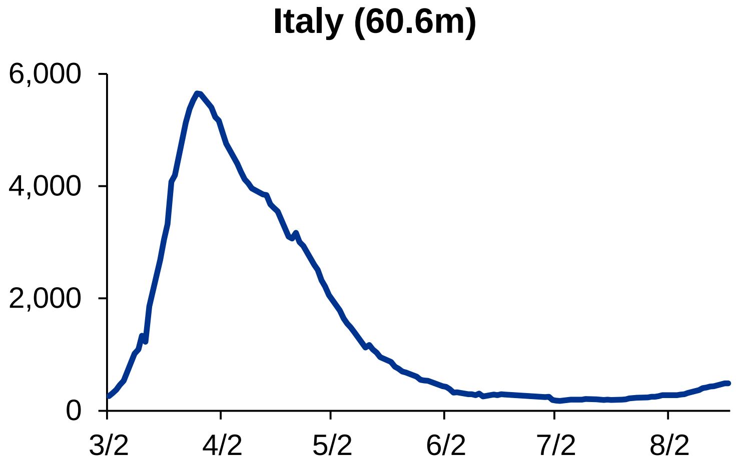
Source: KPMG Economics, Moovit, Bloomberg (August 16, 2020)
Note: baseline comparison with week of Jan 15, 2020

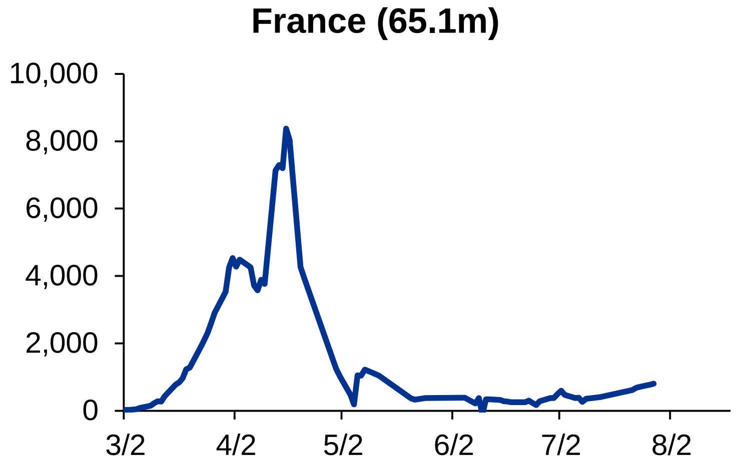
Europe: Daily new cases – Seven-day moving average

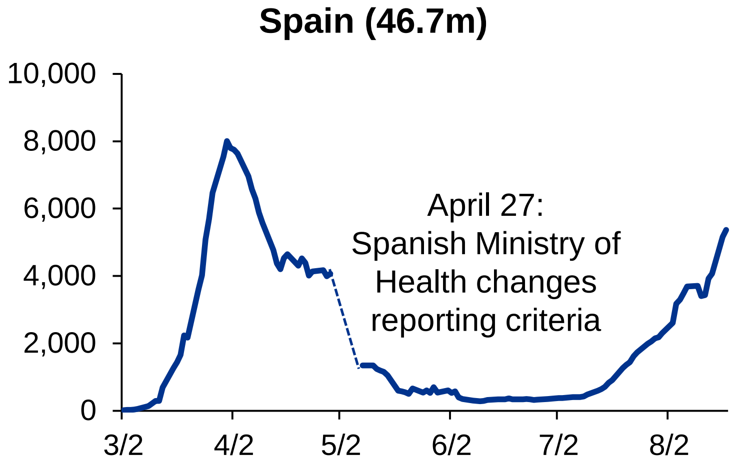










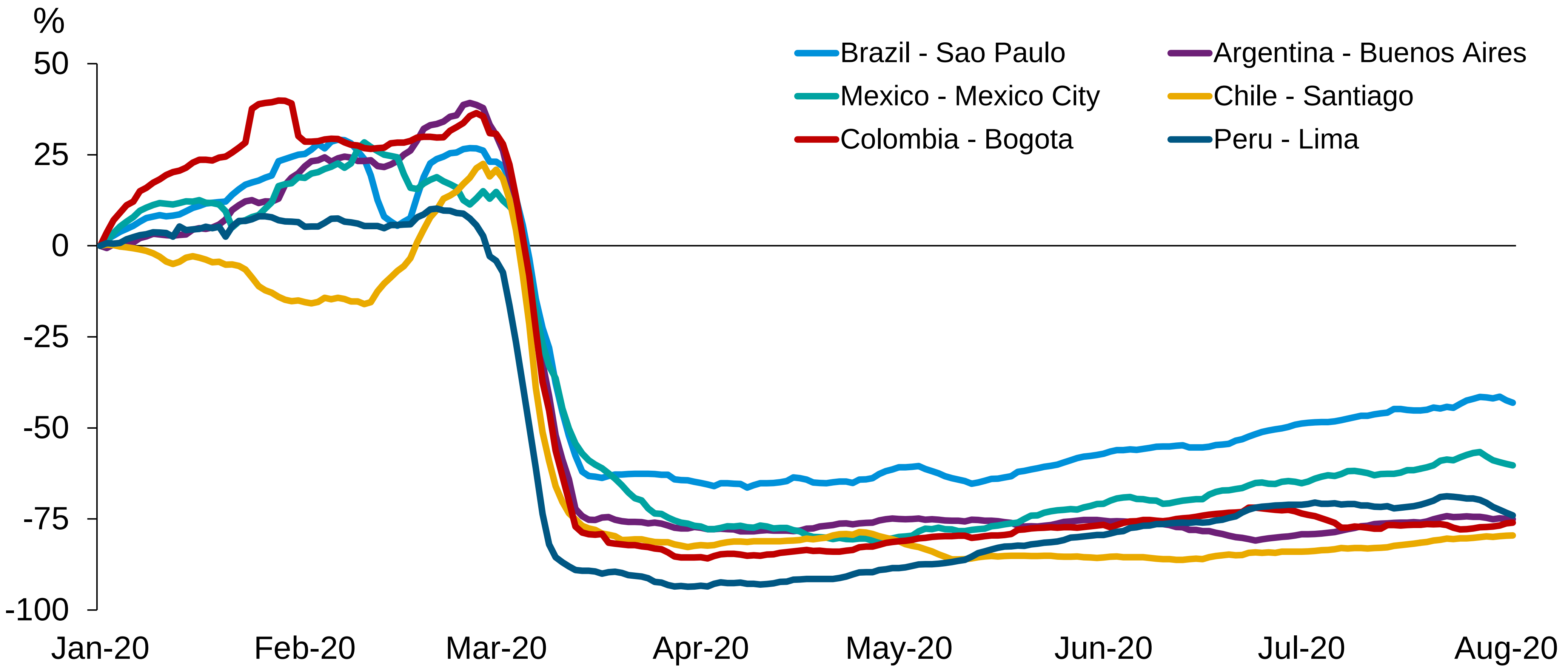


Note: Total population in parentheses

Source: KPMG Economics, Johns Hopkins University (August 18, 2020), Haver Analytics

LATAM has had limited success controlling the virus

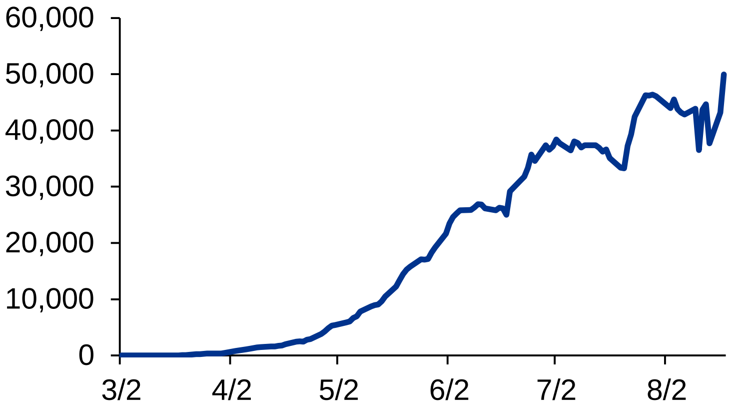
Latin America Public Transit Demand



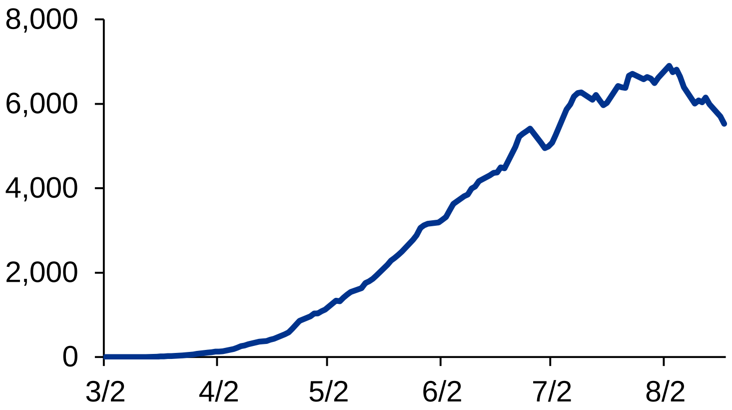
Source: KPMG Economics, Moovit, Bloomberg (August 16, 2020)
Note: baseline comparison with week of Jan 15, 2020

LATAM: Daily new cases – Seven-day moving average

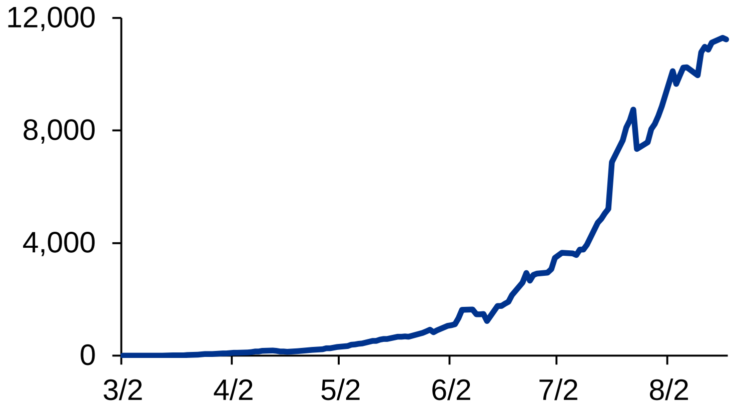
Brazil (211m)



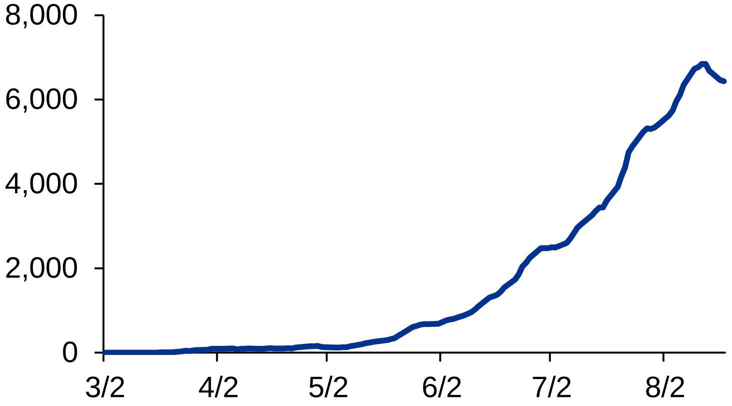
Mexico (128m)



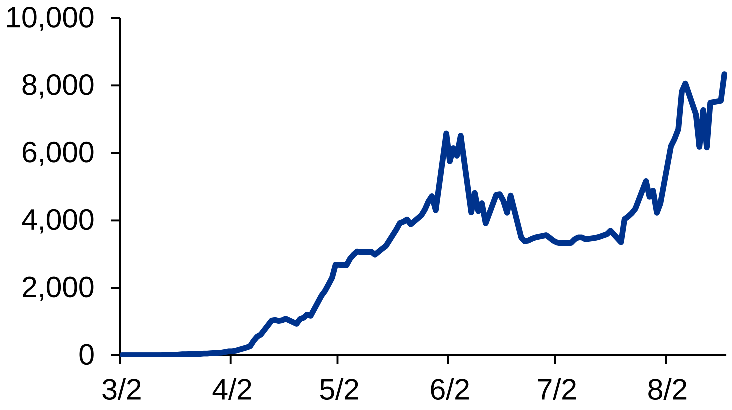
Colombia (50.3m)



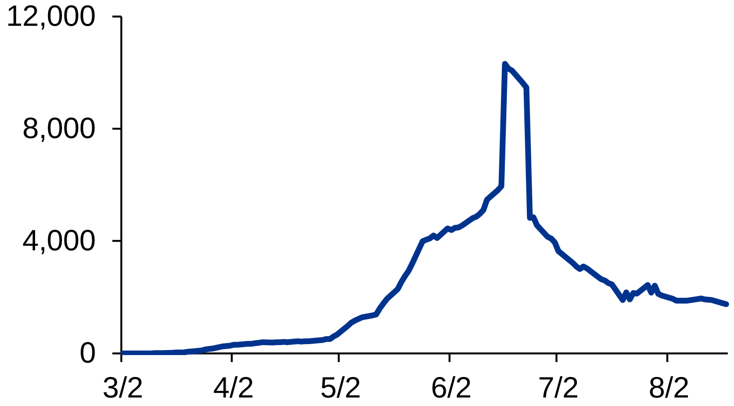
Argentina (44.8m)



Peru (32.5m)



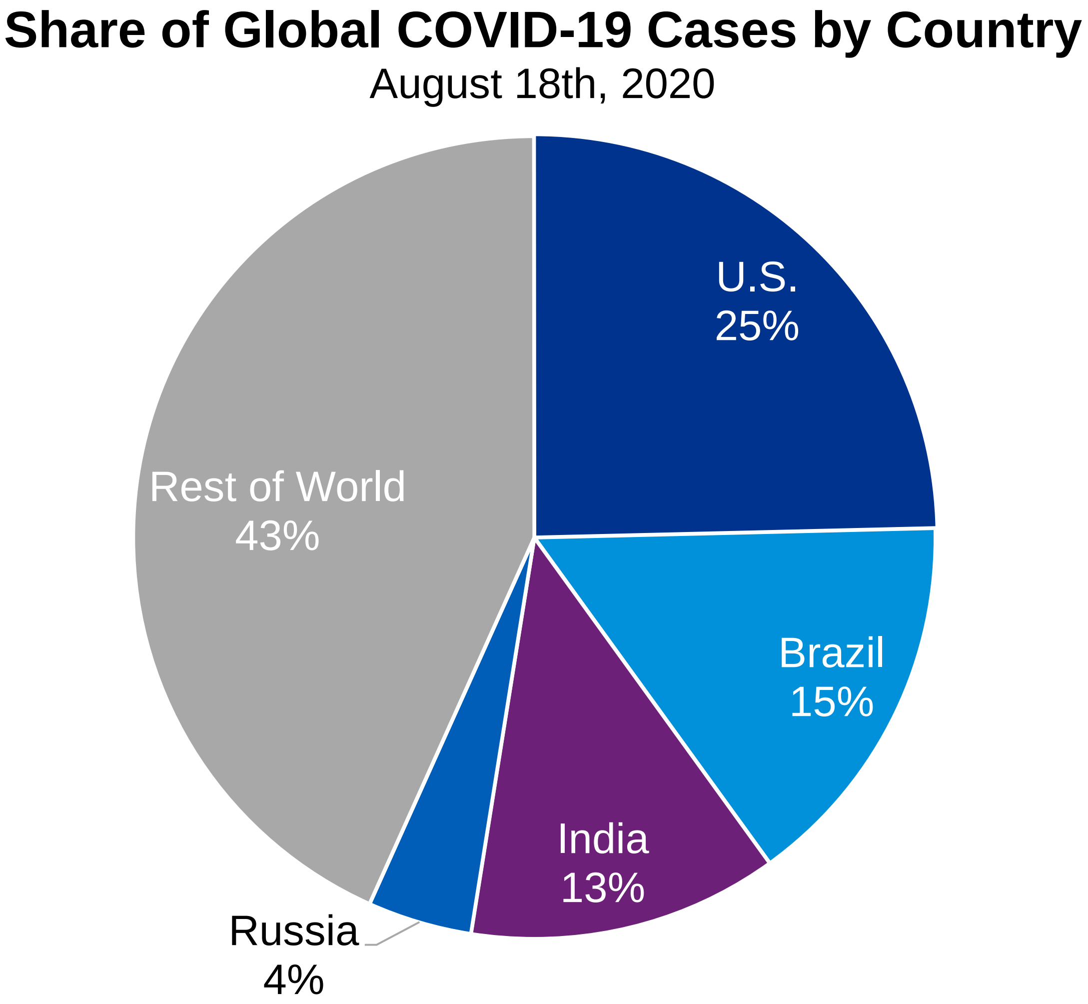
Chile (19m)

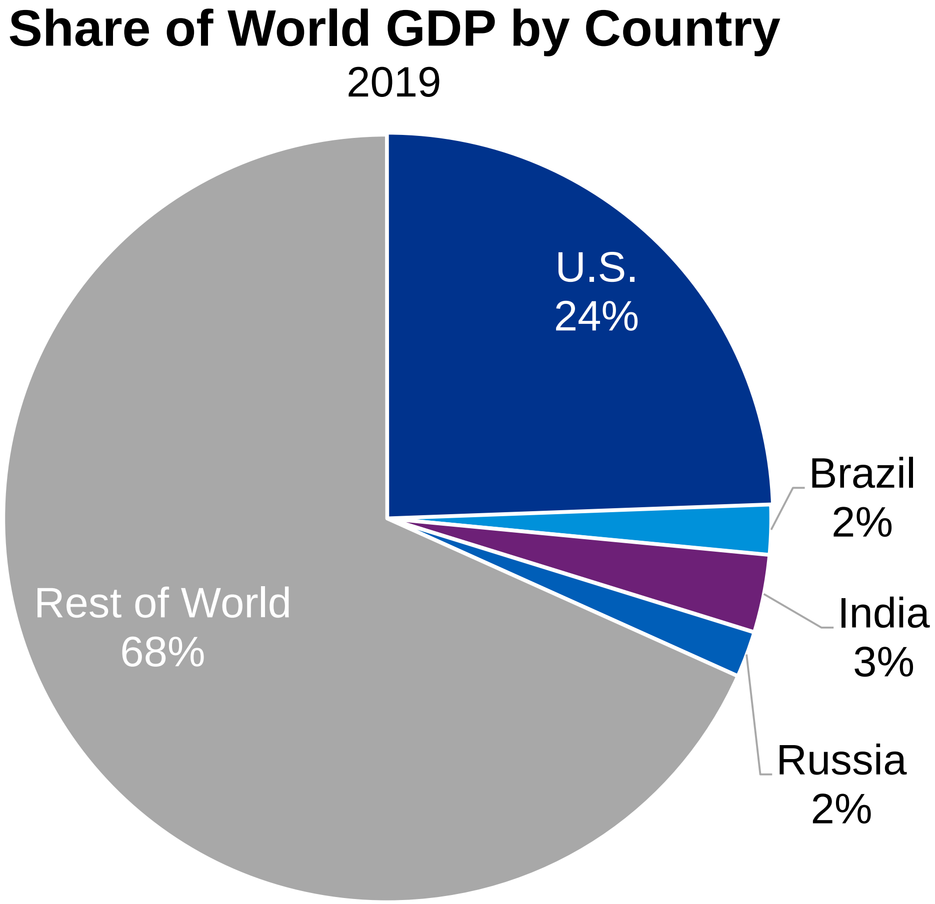


Note: Total population in parentheses

Source: KPMG Economics, Johns Hopkins University (August 18, 2020), Haver Analytics

57% of global cases are concentrated in four countries



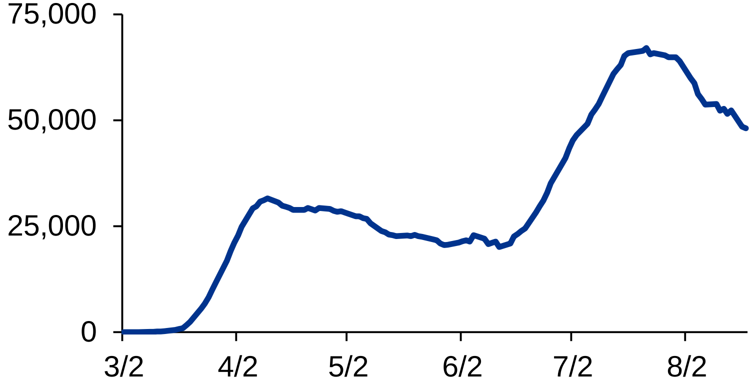


Note: Cases are cumulative total cases
Source: KPMG Economics, Johns Hopkins University (August 18, 2020), World Bank (2019), Haver Analytics

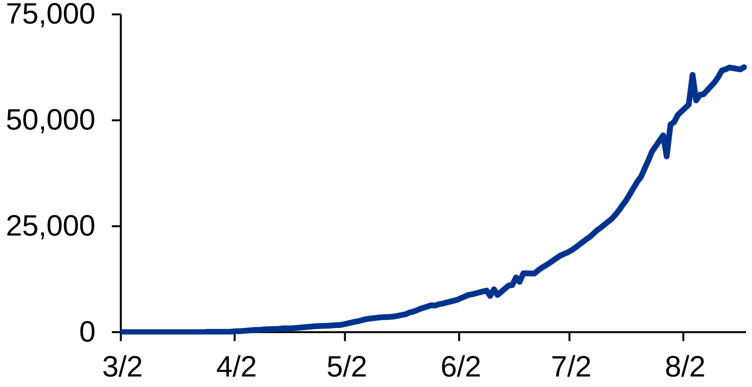
Cases slow in U.S. and Russia; India surges and Brazil sees rise

Daily New Cases – Seven-Day Moving Average

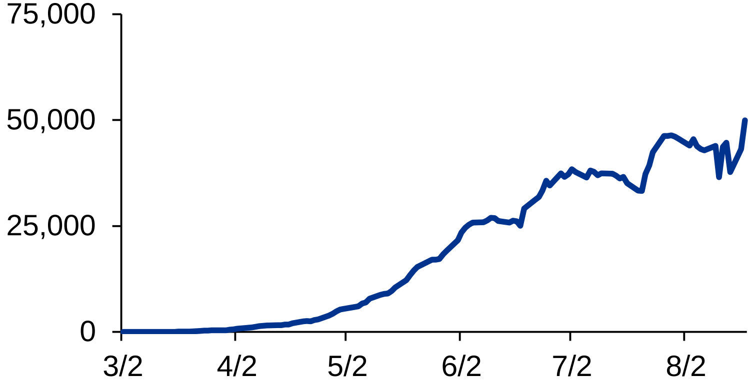
United States (329m)



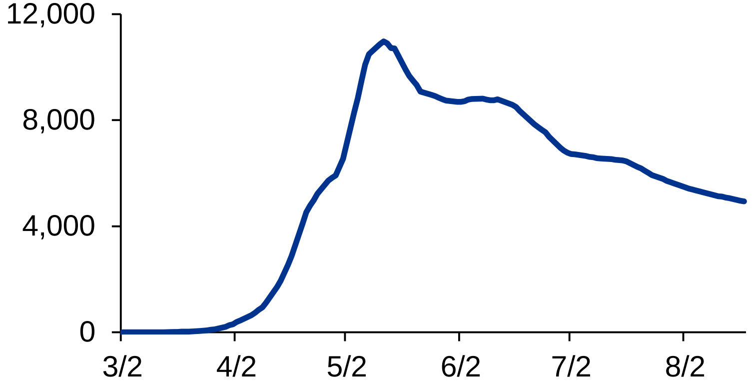
India (1,336m)



Brazil (211m)



Russia (146m)



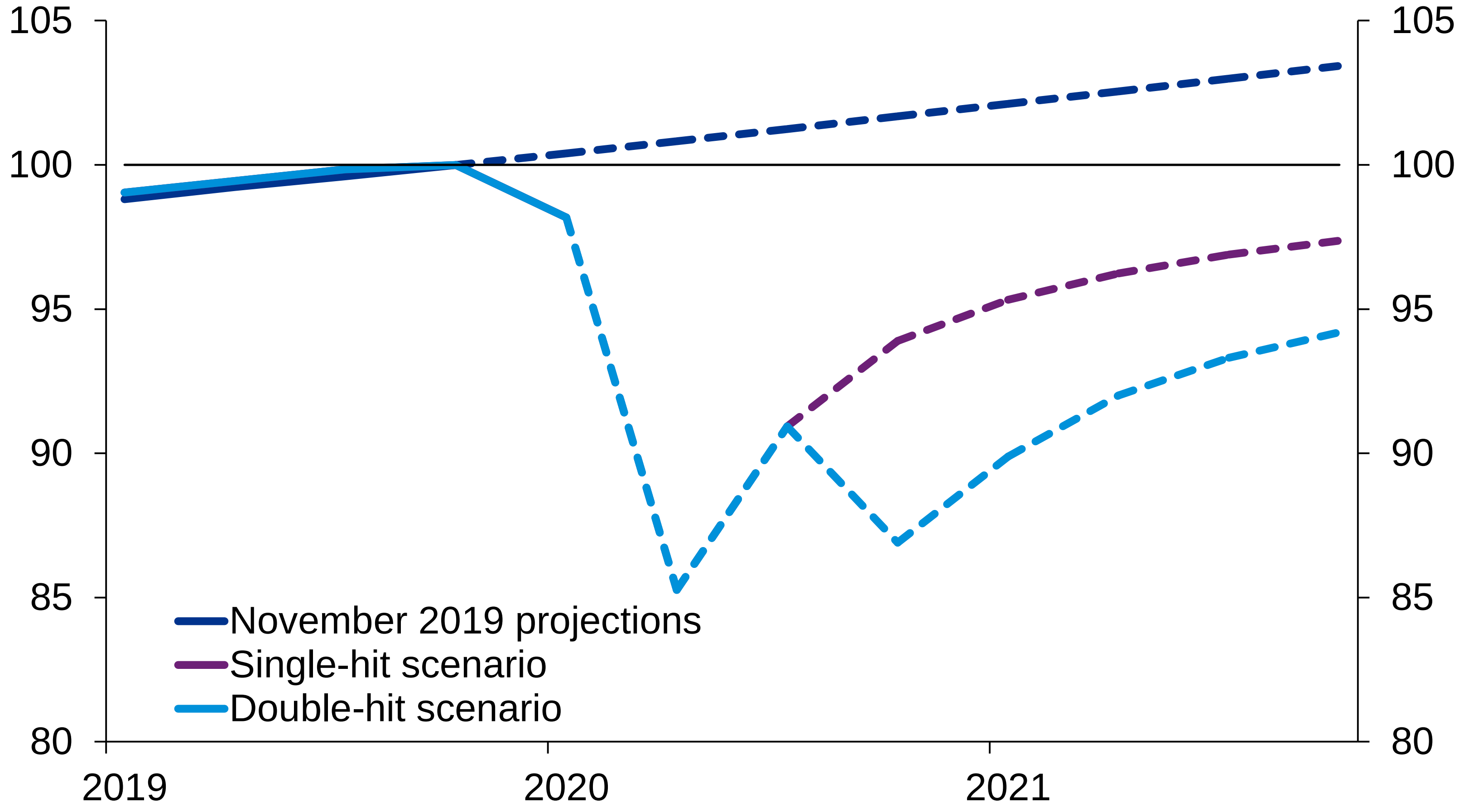
Note: Total population in parentheses

Source: KPMG Economics, Johns Hopkins University (August 18, 2020), Haver Analytics

- Official data show that confirmed cases in Russia began to slow in early May and outbreaks have not reemerged as they have in places like the United States.
- In the U.S., an individual state-by-state response has caused widely varying results on virus control.
- Brazil has seen repeated periods of resurgence as the virus proves difficult to control given the sparse medical infrastructure outside of urban areas and population density in major cities.
- India's cases continue to rise to just over 62,000/day; if current trends persist daily case growth may soon overtake the United States' peak of 66,387/day.

OECD forecasts 6% decline in global GDP due to COVID-19

OECD: Real GDP
Indexed 2019Q4 =100

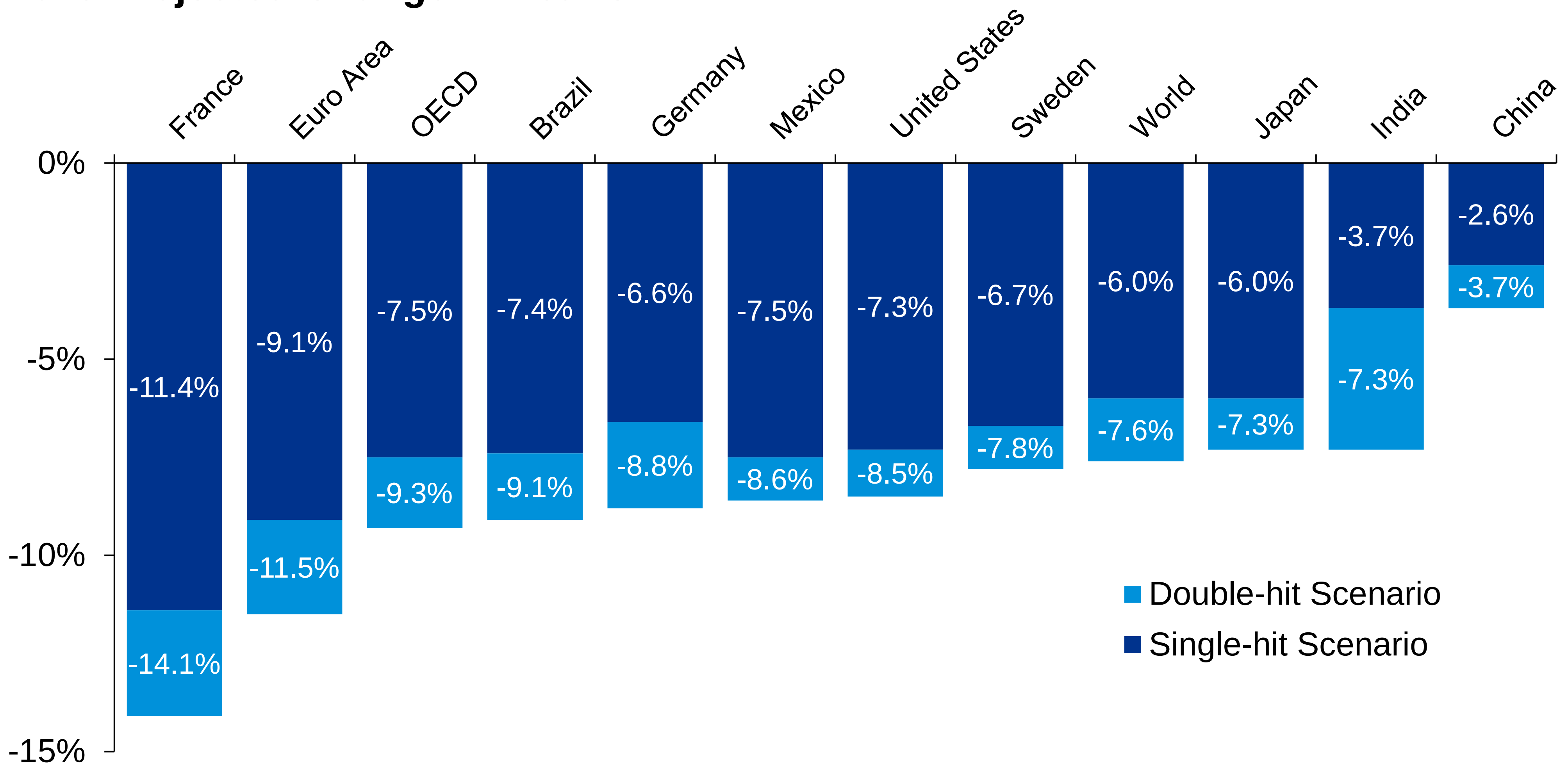


Source: KPMG Economics, OECD, Haver Analytics

- **Single-hit scenario:** Would mean global economic activity falls 6% in 2020 and OECD unemployment climbs to 9.2% from 5.4% in 2019.
- **Double-hit scenario:** A renewed outbreak of infections triggers a return to lock-downs and aversion behavior; GDP falls by 7.6% this year, before climbing back 2.8% in 2021. Output remains below 2019 levels past 2022.
- In both scenarios OECD unemployment remains high into 2022 due to the long tail of the virus and its economic impact. This in turn impacts consumption.

OECD warns of the serious risk of a second wave of cases

2020 Projected Change in Real GDP



Source: KPMG Economics, OECD, Haver Analytics

Q2 GDP likely the nadir for global growth rates

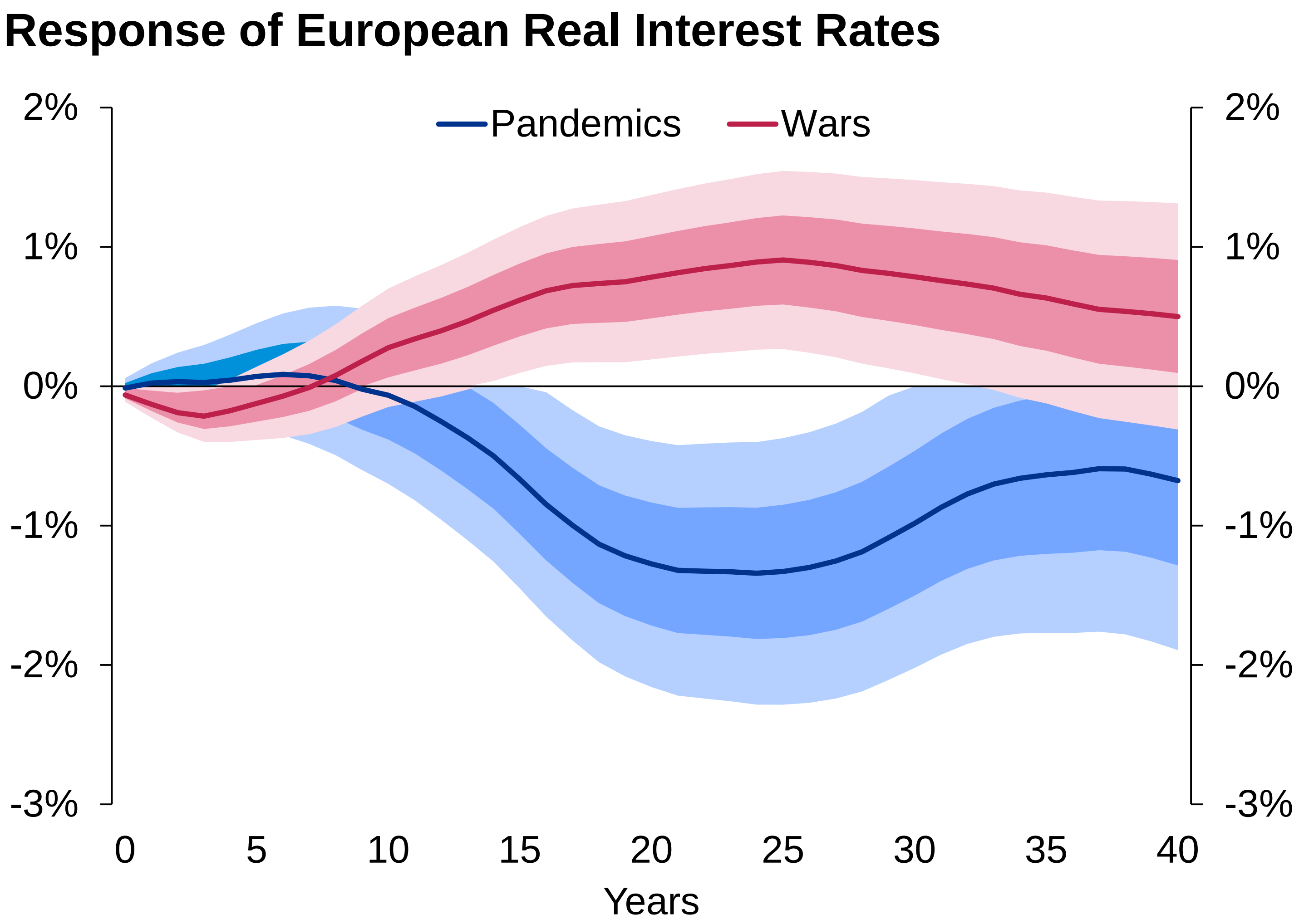
Real GDP Growth Rates %				
Top 10 Countries by GDP		2020 Q2 GDP or Forecast		
		SAAR%	Q/Q%	Y/Y%
1	U.S.	-32.9	-9.5	-9.5
2	China	54.6	11.5	3.2
3	Japan	-27.8	-7.8	-10.0
4	Germany	-34.7	-10.1	-11.6
5	U.K.	-59.8	-20.4	-21.7
6	France	-44.8	-13.8	-19.0
7	India*	-62.6	-21.8	-20.0
8	Italy	-41.0	-12.4	-17.3
9	Brazil*	-36.1	-10.6	-11.2
10	Canada*	-40.0	-12.0	-13.5
		Country reporting standard		

** Bloomberg consensus estimate for Q2 2020 real GDP. All others are actual.*

Source: KPMG Economics, Respective Countries' National Statistics Office, Bloomberg, Haver Analytics

- The U.S. reports quarterly GDP on a Seasonally Adjusted Annualized Rate (SAAR) basis in order to gauge the trend pattern in growth. This magnifies the trend and is not useful during a shock such as a pandemic. Most of Europe reports quarter-over-quarter growth. China and India report year-over-year growth.
- The graph to the left allows for comparison across methodologies.
- Regardless of the preferred metric, COVID-19 has brought the largest economic fallout in a century.
- Governments are responding with a combination of fiscal and monetary stimulus that can only serve as a bridge to the other side of the virus as demand is held back by aversion behavior.

Real interest rates depressed after previous pandemics



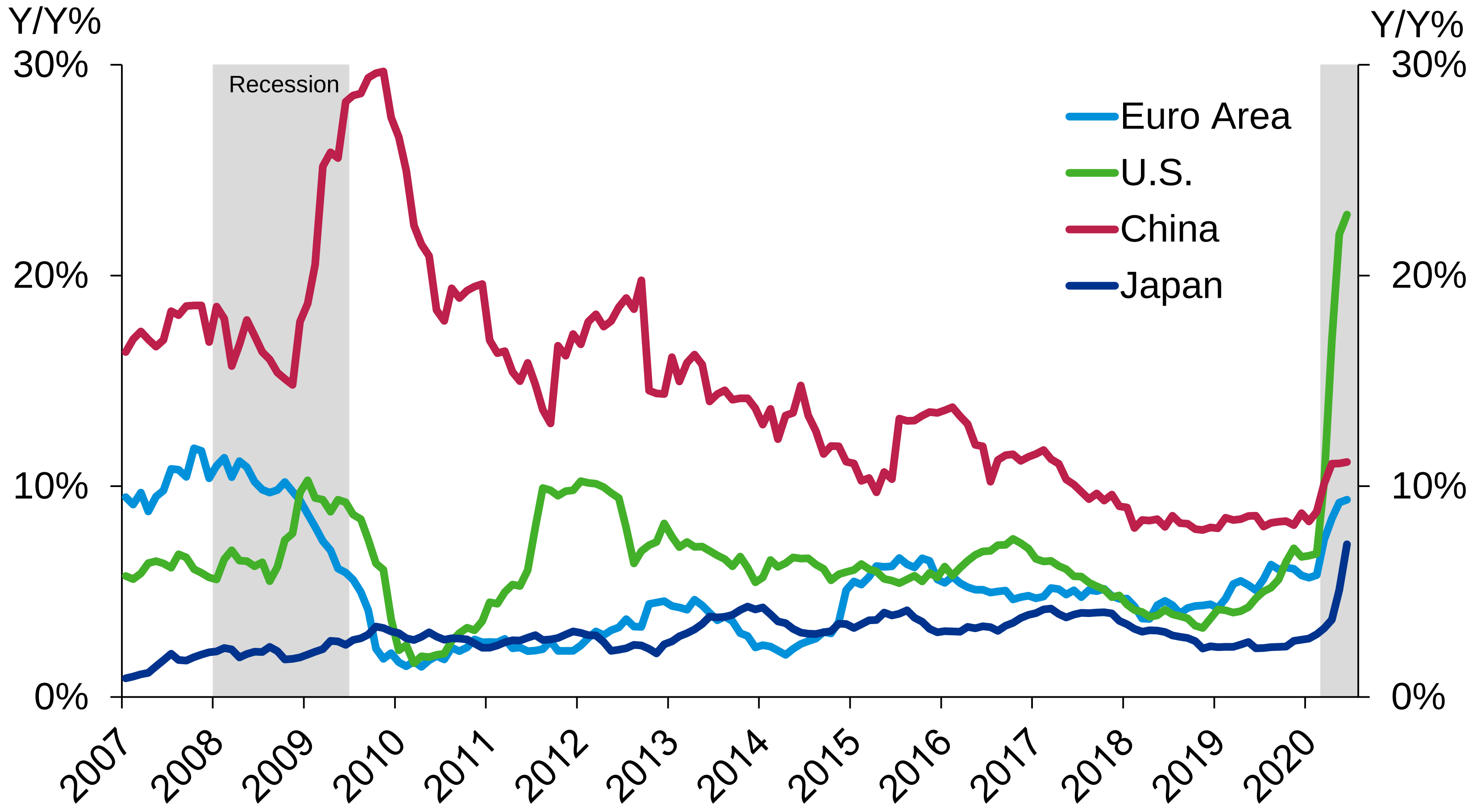
- Paper examining rates of return on assets after 12 major pandemics and military conflicts dating back to the 14th century.
- Empirical results based on Europe: France, Germany, the Netherlands, Italy, Spain, and the U.K.
- Results: Pandemics followed by multi-decade depressed returns and investment opportunities possibly due to excess capital per unit of surviving labor and/or increased precautionary saving.
- COVID-19 implications?
  - U or L shaped recovery likely
  - Low interest rates and low inflation
  - Fiscal and Monetary response > than in the past by several orders of magnitude likely to improve the outcome.

Source: KPMG Economics, O. Jorda, S. Singh, A. Taylor, “Longer-run economic consequences of pandemics,” March 2020

The monetary policy response is unprecedented

The Federal Reserve Leads the Way on Monetary Policy

Money Supply: M2



Source: KPMG Economics, Bank of Japan, European Central Bank, Federal Reserve Board, Haver Analytics (July 2020)

- The Federal Reserve acted swiftly to provide liquidity and increase money supply, going well beyond what was supplied during the global financial crisis.
- China was the world's monetary engine post-global financial crisis. During COVID-19, the U.S. is the world's monetary engine.
- The Federal Reserve is acting in its role as lender of last resort in two key ways: direct purchases of fixed income securities (Treasuries, Agencies MBS, Municipal Bonds, Corporate Fixed Income) and creating lending facilities for corporations.

The CARES Act including PPP rounds One and Two

CARES Relief Act	$billion
Direct Support for Hospitals/Health Care Providers	$130 bn
Direct Support for State and Local Governments	$150 bn
One-Time Payment to Individuals	$250 bn
Enhanced Unemployment Benefits (April-July)	$260 bn
Direct Lending to Distressed Industries	$75 bn
Small Business Loans & Grants (incl. PPP)	$690 bn
Other Spending: Education, Food Assistance, Tax Deferrals	$425 bn
Sub Total	**$1,980 bn**
Funding for Fed 13(3) - Leveraged 10x by the Fed	$450 bn
Grand Total	**$2,430 bn**

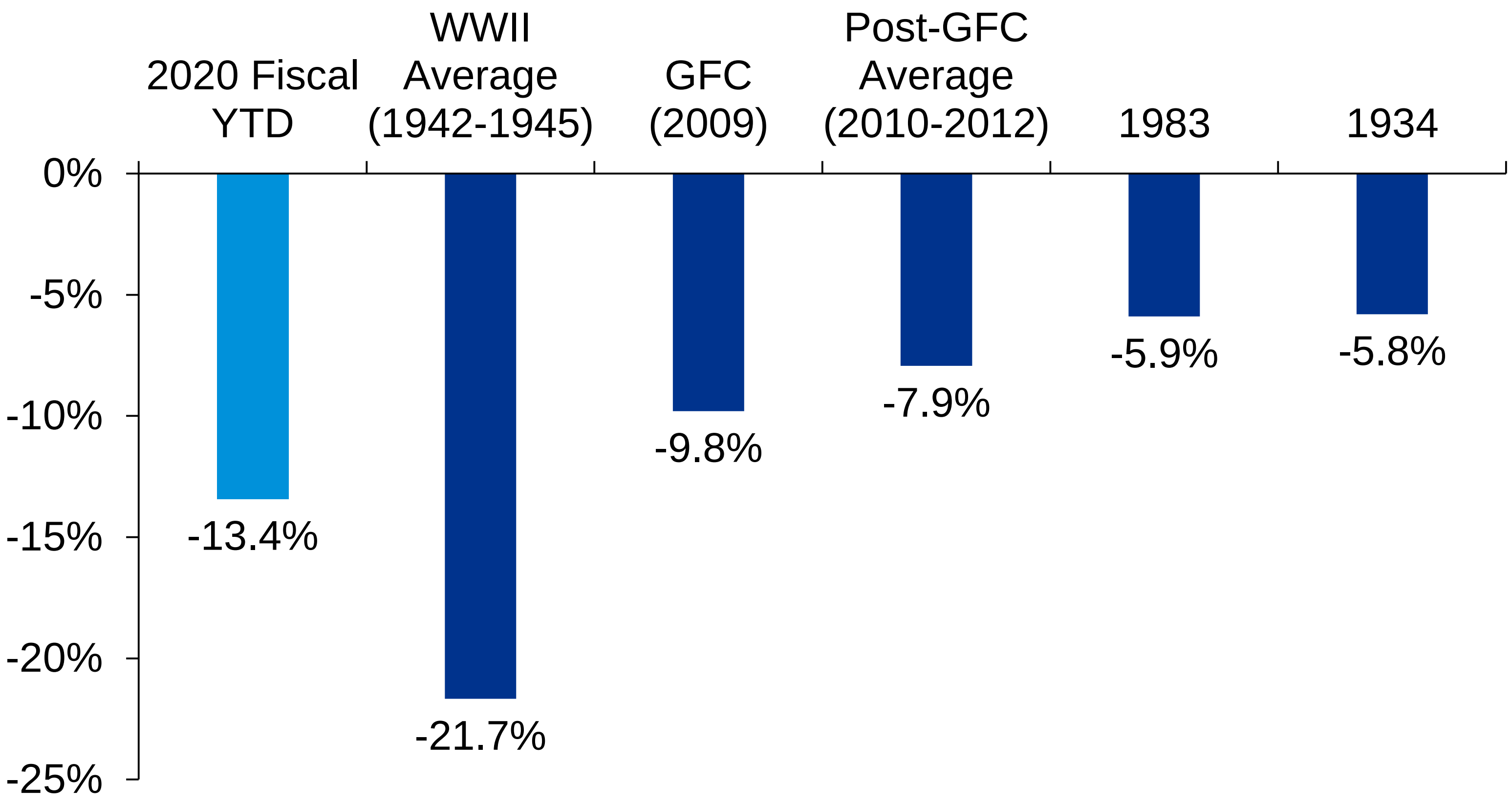
Source: KPMG Economics, MacroPolicyPerspectives, CARES Act
For research on multipliers see the following:
Leeper et al
CBO

- The CARES Act can be broken into five parts.
  - Support for healthcare and states
  - Support for households
  - Support for businesses
  - Support for markets
  - Other
- Economic multipliers for each category are impacted by the use of monetary and fiscal policy together. They can range from 0.12-3.5 depending on multiple factors including the modeling technique.
- Fiscal stimulus enacted so far totals 11.3% of GDP and further stimulus could take that number to closer to 20% of GDP.

Fiscal relief has been significant, but more may be needed

Fiscal Response Added to High Pre-Crisis Deficit Levels

Budget Balance as a % of GDP



Source: KPMG Economics, Federal Reserve Board, Haver Economics

- The U.S. entered the COVID-19 crisis with a high budget deficit (-4.6% in 2019) and high debt levels (102% of GDP).
- The considerable fiscal relief required to bridge the economy past COVID-19 and prevent a depression could well take budget deficits to WWII levels before the crisis is over.
- Similar to the WWII fiscal spending, the present situation corresponds to a sharp increase in savings and search for productivity enhancements among firms.
- It may be worthwhile to revisit some of the post-WWII policies that elevated education levels and improved infrastructure, enabling the post war productivity boom.

European relief funding breaks new ground in mutualized debt

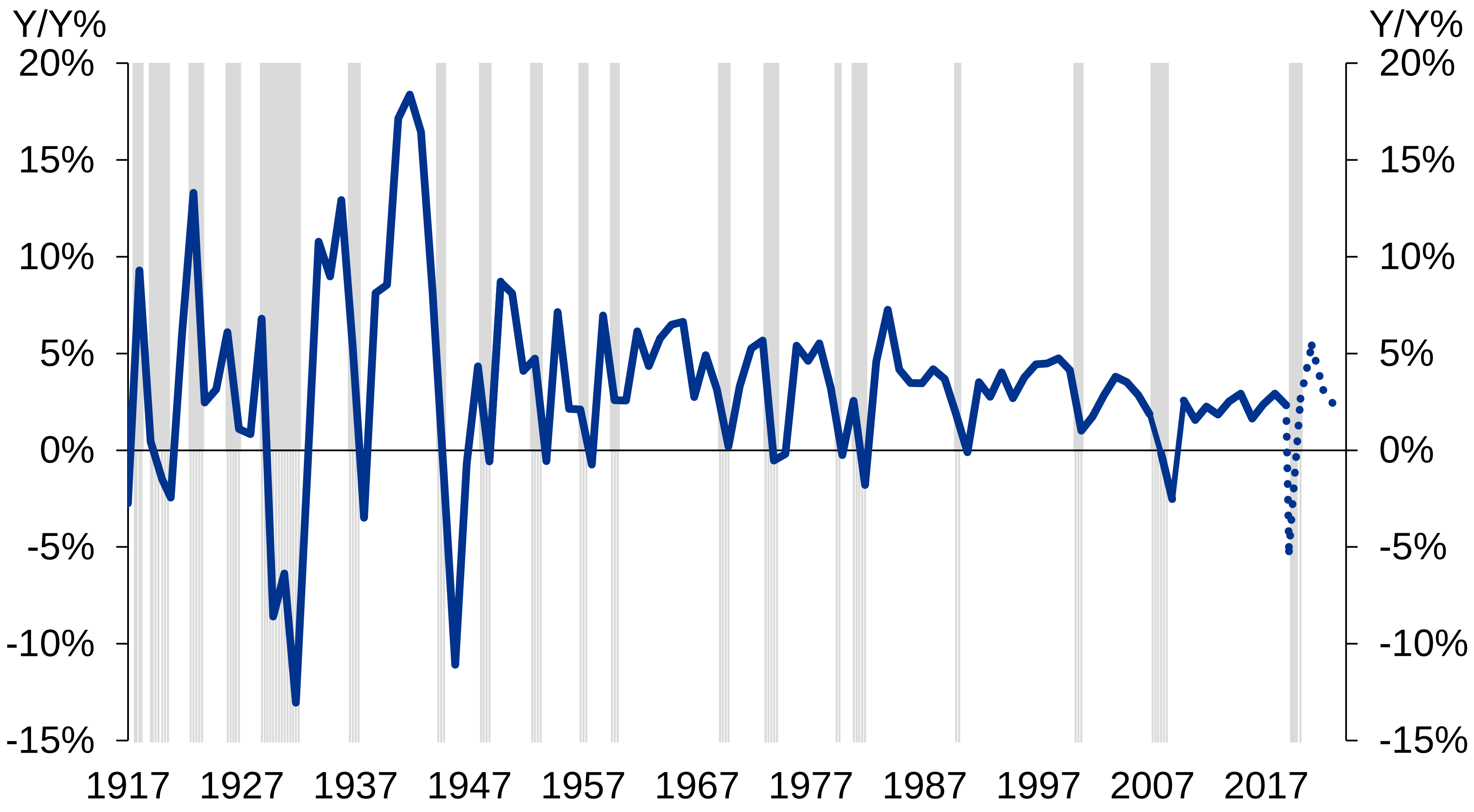
Total Amounts Under Next Generation EU Programs		
Program	Billions of Euros	Billions of Dollars
Recovery and Resilience Facility (RRF)	**€ 672.5**	**$791.4**
of which loans	*€ 360.0*	*$423.6*
of which grants	*€ 312.5*	*$367.8*
ReactEU	**€ 47.5**	**$55.9**
Horizon Europe	**€ 5.0**	**$5.9**
InvestEU	**€ 5.6**	**$6.6**
Rural Development	**€ 7.5**	**$8.8**
Just Transition Fund	**€ 10.0**	**$11.8**
RescEU	**€ 1.9**	**$2.2**
Total	**€ 750.0**	**$882.6**

Source: KPMG Economics, European Council (July 21, 2020)

- The European Parliament passed historic legislation on July 21, 2020, which includes:
  - instruments to support Member State efforts to recover, repair and emerge stronger from the crisis.
  - measures to boost private investment and support ailing companies.
  - the reinforcement of key EU programs to draw the lessons of the crisis and make the single market stronger and more resilient, and accelerate the twin green and digital transitions.
- The package will create EU bonds and comprises 5.3% of EU GDP.

Peak to trough GDP declines of historic proportions

U.S. Real GDP Growth



Note: Forecasts are inherently time sensitive and projections are dated as of August 13, 2020.

Source: KPMG Economics, BEA (Q2 2020), Haver Analytics

- From the peak in Q4 2019 to the trough, likely in Q2 2020, the U.S. economy will have contracted by 12%, significantly more than during the global financial crisis where GDP declined 3.9% peak to trough.
- This is comparable to the 1944 recession where the peak to trough decline was 12.8%, but not nearly as bad as the Great Depression which saw a 26.6% decline in GDP on a peak to trough basis.
- While this episode is expected to be severe, we anticipate GDP will be positive in 2021 on a year-over-year basis as the combination of medical advancements and behavior modification allow for more normal economic activity.

Already very different than previous recessions

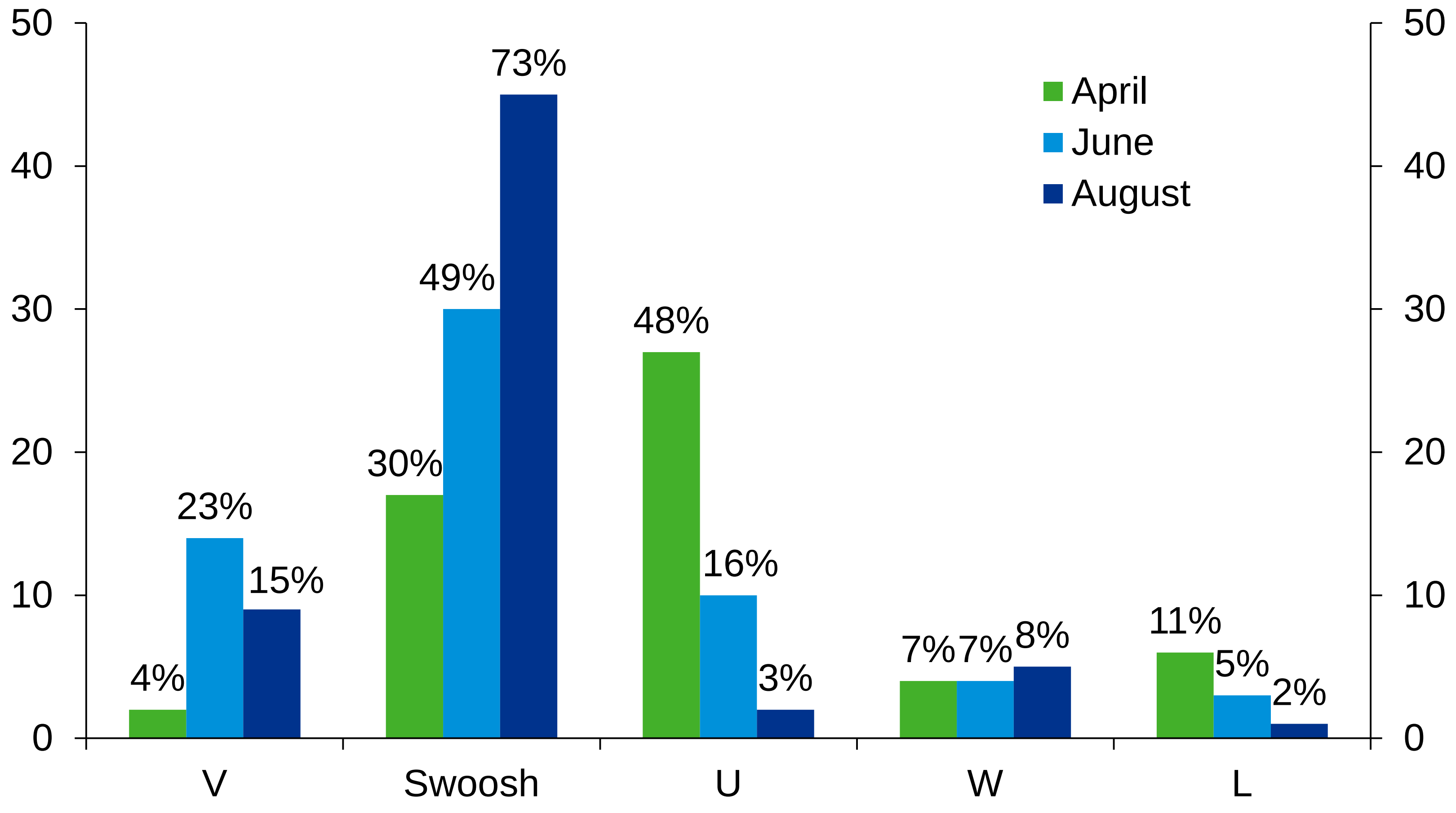
Variable	Average change in recession	Number of recessions in which variable falls	Current Recession to Date
Real GDP*	-4.2%	11/11	-10.6%
Employment*	-2.3%	11/11	-14.5%
Unemployment rate (percentage points)	+1.9	0/11	+11.2
Average weekly hours, production workers, manufacturing	-2.8%	11/11	-7.5%
Output per hour, nonfarm business*	-1.6%	10/11	+0.1%
Inflation (GDP deflator; percentage points)	-0.2	4/11	0.45
Real compensation per hour, nonfarm business*	-0.4%	7/11	-0.2%
Nominal interest rate of 3-month Treasury bills	-1.8	10/11	-1.5
Ex post real interest rate on 3-month Treasury bills	-1.5	10/11	-
Real money stock (M2/GDP deflator)**	-0.1%	3/8	18.3%

*Change in recessions is computed relative to variable average growth over the full postwar period. Q1-1947 to Q4-2016
**Available only beginning in 1959
Source: KPMG Economics, BEA, BLS, Federal Reserve Board, David Romer, Haver Analytics

U.S. Economists forecasts converge around a swoosh shape

Recovery Shape of Economist Forecasts

WSJ August Economist Survey, KPMG Shape Classification

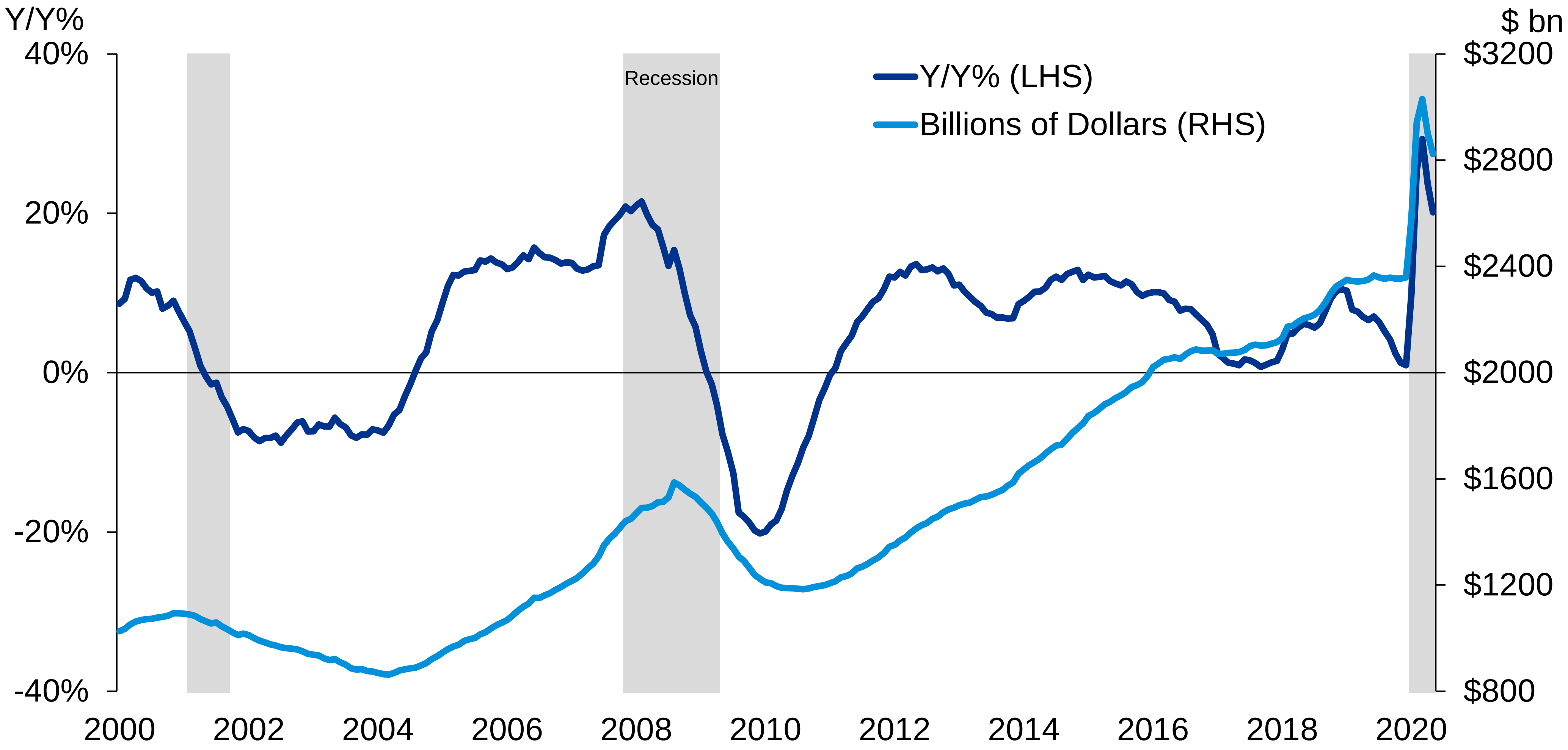


Source: KPMG Economics, WSJ August 2020 Survey 70 responses

- Early in the pandemic KPMG forecast a swoosh shape anticipating knock on effects from the pandemic.
- Given the large amount of fiscal assistance, very few economists forecast an “L” shaped recovery.
- The path of the swoosh shapes vary and many economists have downside scenarios that include a Q4 setback due to difficulty with school reopenings.

Significant lending boost evident as firms accessed credit lines

C&I Loans in Bank Credit: All Commercial Banks



Source: KPMG Economics, Federal Reserve Board (July 2020), Haver Analytics

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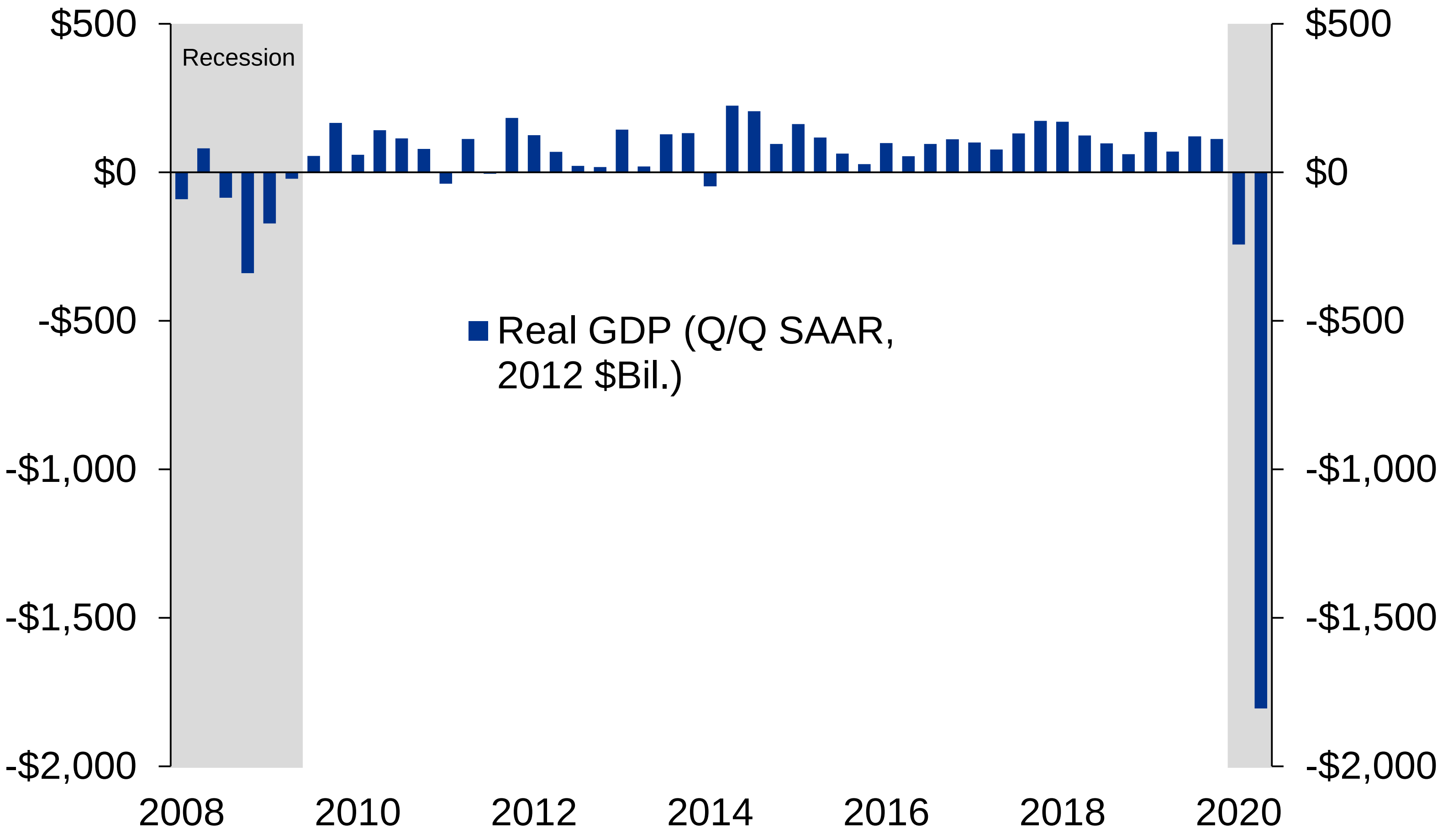
The magnitude of GDP decline dictated fiscal response

COVID-19 GDP Losses Dwarf Global Financial Crisis

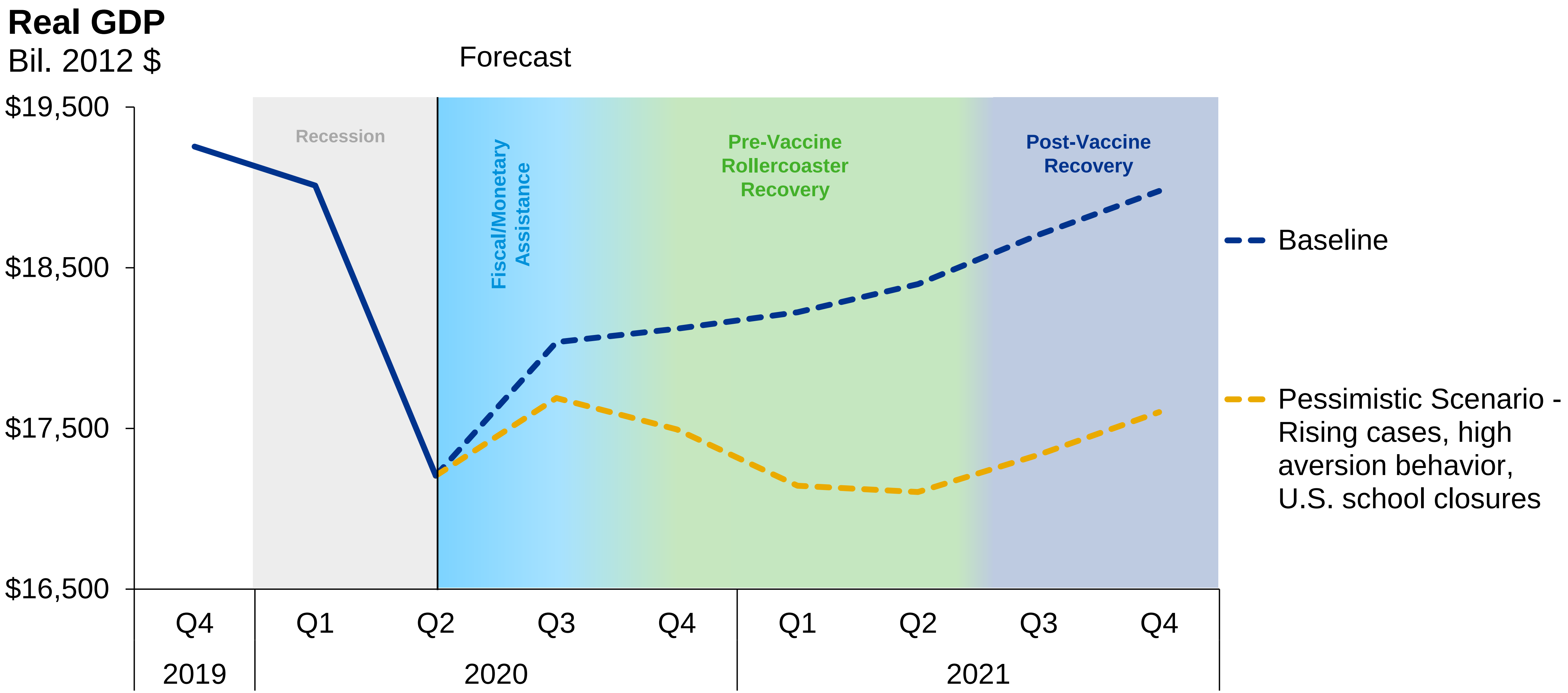
Billions of 2012 Dollars



Source: KPMG Economics, Bureau of Economic Analysis (Q2 2020), Haver Analytics

- The fall in GDP was comprehensive across all components of GDP with the exception of federal government spending.
- Consumption for services declined by 14.6% y/y and by 43.5% on an q/q seasonally adjusted annualized (SAAR) basis.
- Investment fell by 17.8% y/y and by 49% q/q SAAR.
- Since Q4 2019, the economy has lost $2 trillion dollars of GDP.

Shape of recovery depends on future fiscal relief and COVID

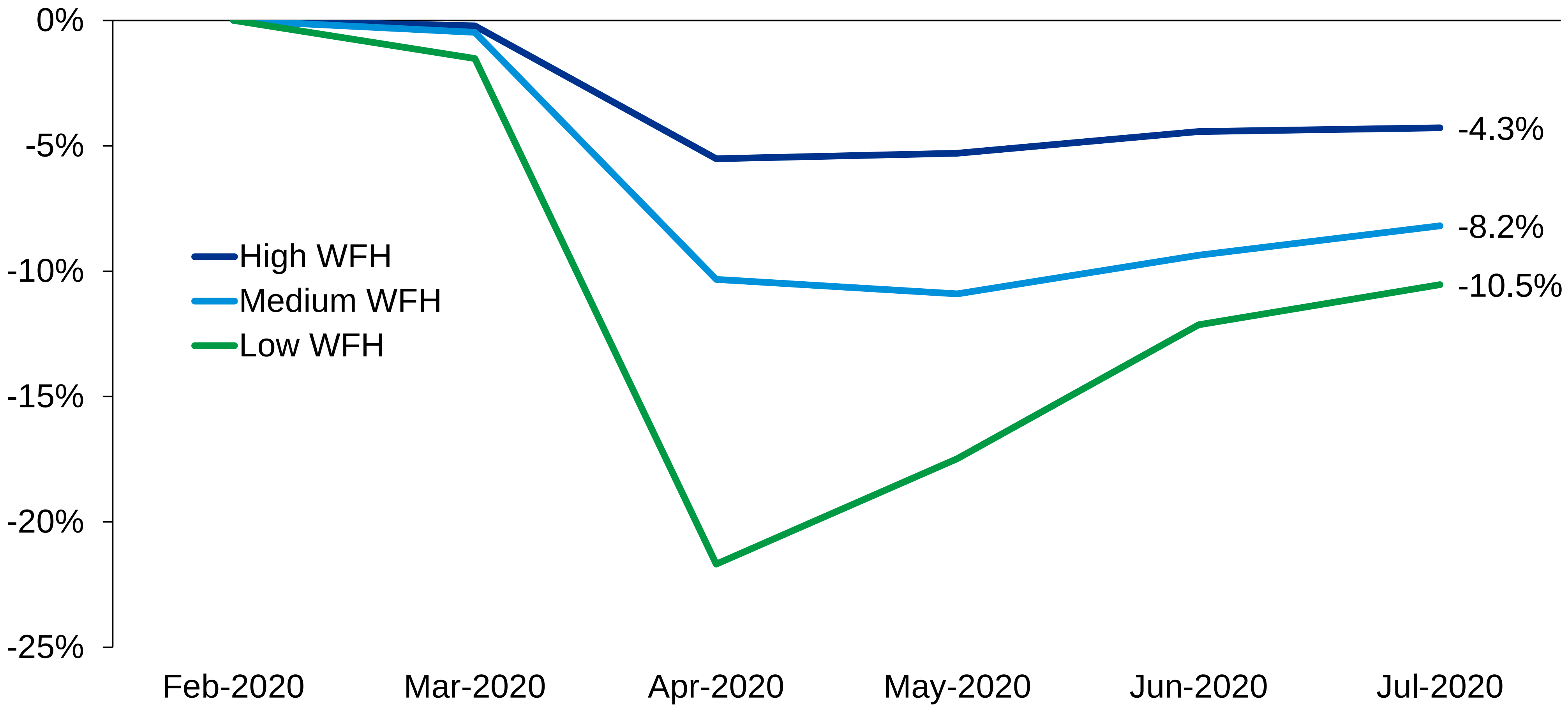


Note: Forecasts are inherently time sensitive and projections are dated as of August 13, 2020.
Source: KPMG Economics, BEA (Q2 2020), Haver Analytics

Ability to work from home a key determinant in job retention

Change in Employment by Ability to Work Remotely

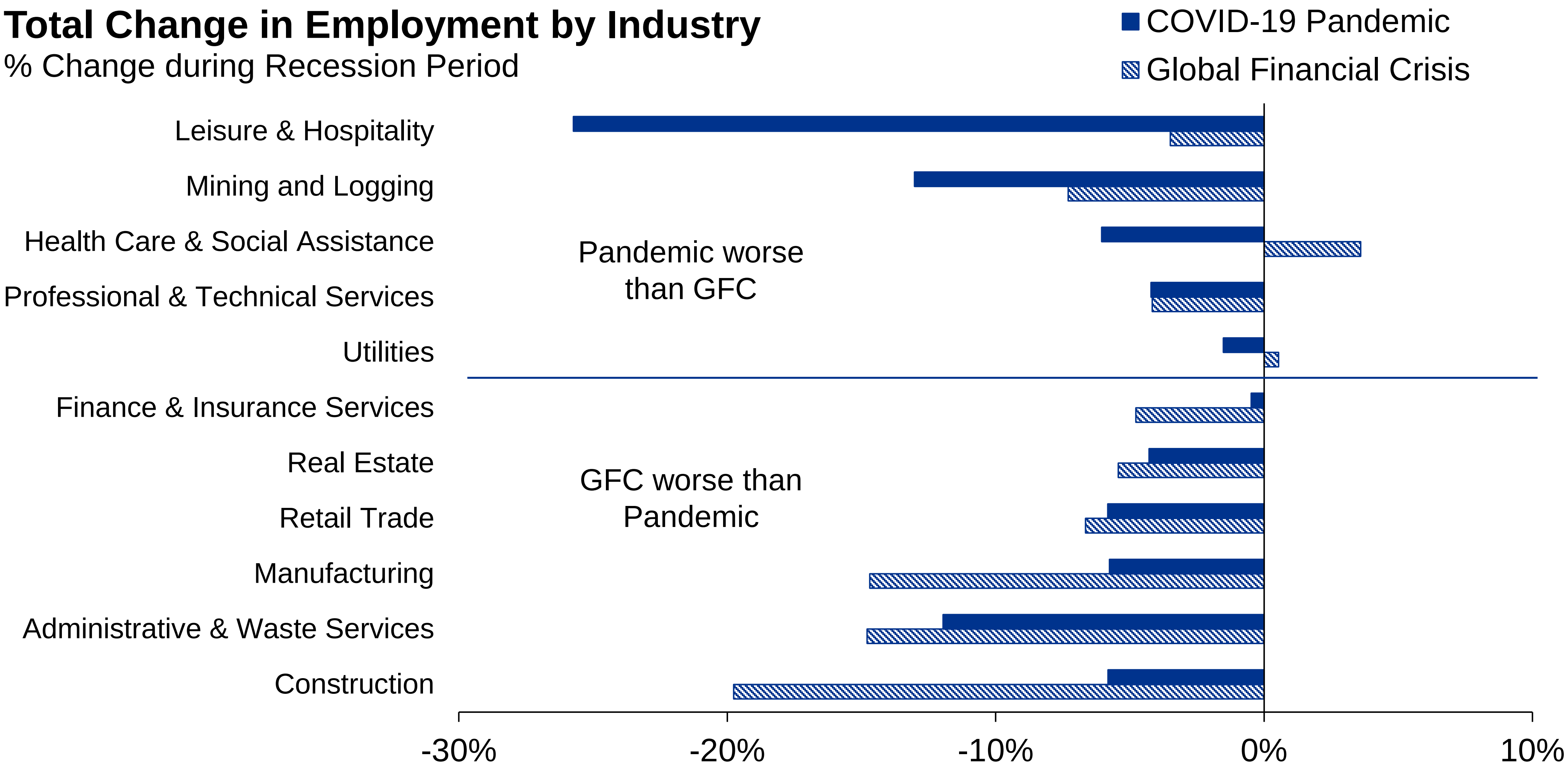
Pandemic to Date, % Change Since Feb-2020



Note: Low WFH = 0-33% of jobs remote, Medium WFH = 33%-67%; High WFH = 67-100%; Three-Digit NAICS ex. 115, 312, 316, 419, and 525 due to data constraints
Source: KPMG Economics, Dingel and Nieman (2020), BLS, Haver Analytics, based on a chart by Jed Kolko

COVID-19 impacts different sectors than the 08-09 crisis

Total Change in Employment by Industry
% Change during Recession Period

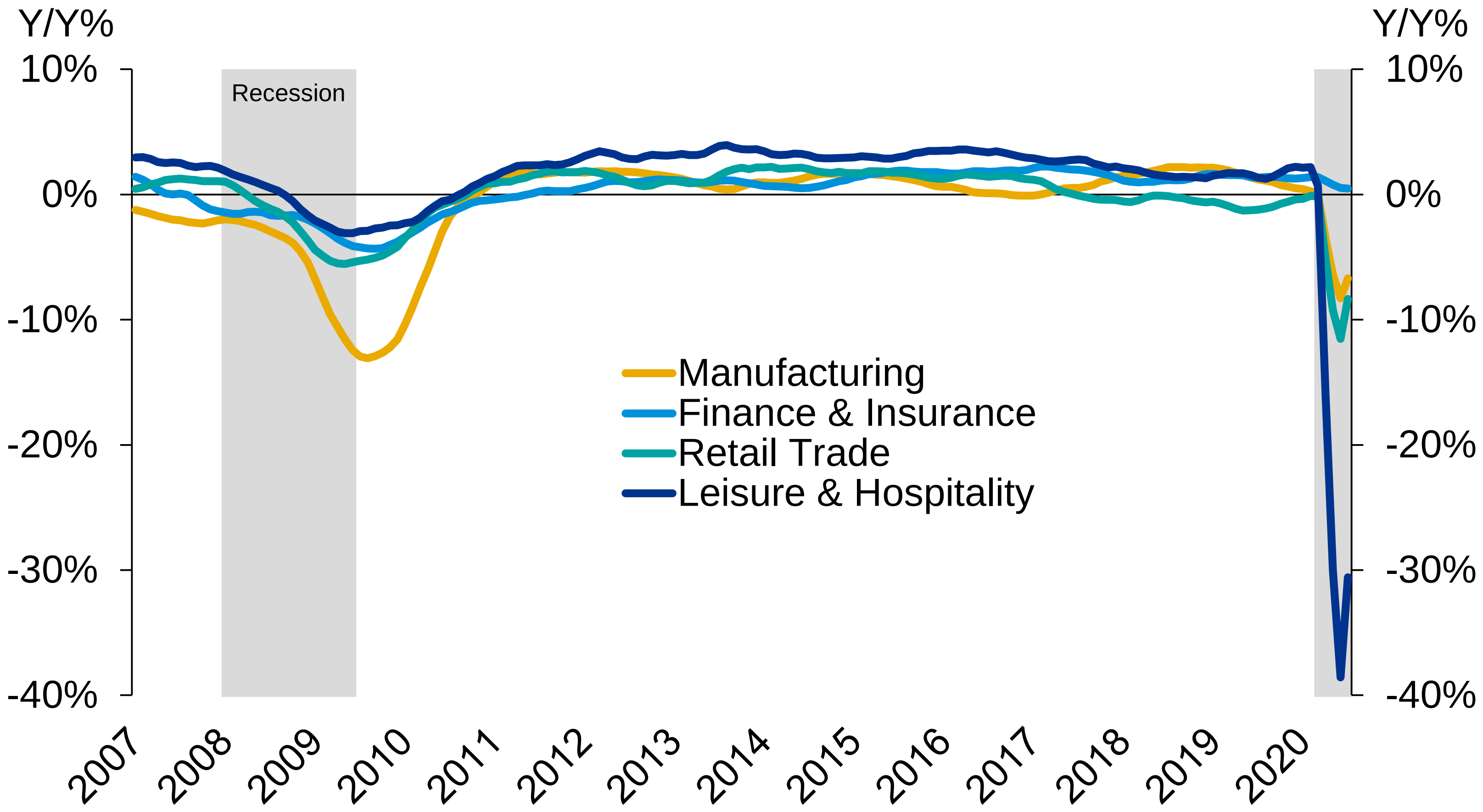


Source: KPMG Economics, Bureau of Labor Statistics (July 2020), Haver Analytics

Job losses are concentrated in sectors with high physical contact

Large Dispersion in Industry Impact

Smoothed Employment Change by Industry



Note: Three-Month Moving Average, Y/Y%

Source: KPMG Economics, Bureau of Labor Statistics (July 2020), Haver Analytics

— The COVID-19 pandemic has impacted industries differently, causing large number of job losses in the leisure and hospitality sector.

— Some industries, including finance and insurance, have seen little to no job losses as workers were able to smoothly transition to full time remote work.

— Many industries, such as manufacturing and retail trade, have been forced to transform legacy business practices to protect workers and customers, resulting in substantial job losses, but have been able to adapt their businesses to operate during the pandemic.

Retail sales climb to 2.7% y/y, but composition is shifting

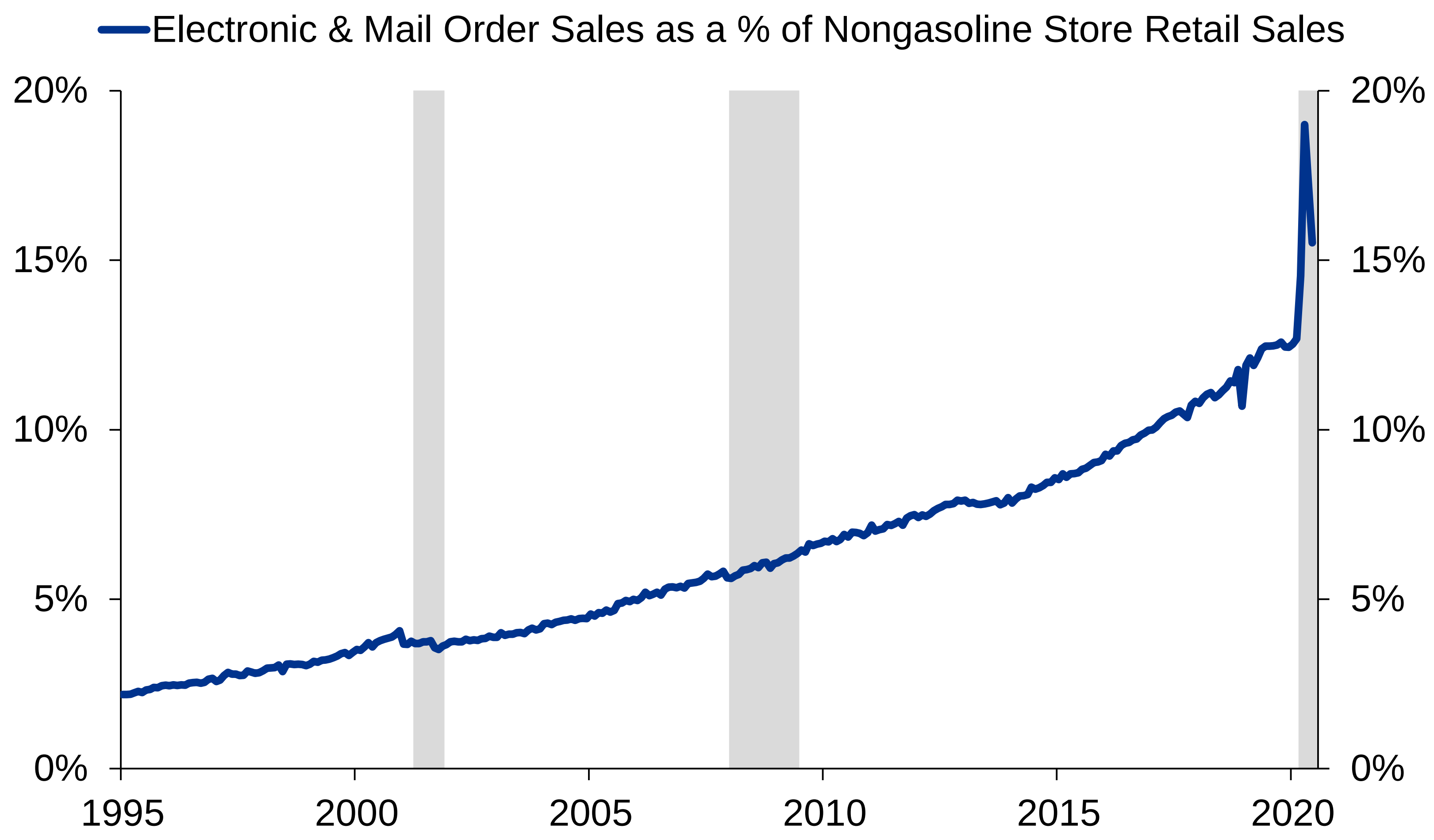
Retail Sales by Industry

Retail Industry	12-Month % Change				1-Month % Change			
	Apr	May	Jun	Jul	Apr	May	Jun	Jul
Retail and Food Services Sales	-20%	-6%	2%	3%	-15%	18%	8%	1%
Clothing & Accessory Stores	-86%	-62%	-25%	-21%	-73%	180%	99%	6%
Food Services & Drinking Places	-52%	-38%	-22%	-19%	-34%	31%	27%	5%
Gasoline Stations	-39%	-31%	-19%	-16%	-24%	12%	15%	6%
Electronics & Appliance Stores	-53%	-42%	-20%	-3%	-43%	25%	38%	23%
Miscellaneous Stores Retailers	-32%	-19%	-2%	4%	-26%	20%	22%	6%
Furniture & Home Furnishing Stores	-59%	-28%	-1%	-1%	-49%	77%	37%	0%
Health & Personal Care Stores	-10%	-8%	-1%	3%	-15%	3%	7%	4%
Motor Vehicle & Parts Dealers	-33%	-1%	8%	6%	-12%	48%	9%	-1%
General Merchandise Stores	-6%	0%	2%	1%	-14%	6%	2%	0%
Sporting Goods, Hobby, Book & Music Stores	-45%	-4%	21%	18%	-34%	78%	28%	-5%
Food & Beverage Stores	12%	15%	12%	11%	-13%	2%	-1%	0%
Building Materials, Garden Equipment & Supply Dealers	3%	19%	19%	15%	-2%	13%	1%	-3%
Nonstore Retailers (Online Sales)	23%	29%	24%	25%	9%	8%	-2%	1%

Source: KPMG Economics, Census Bureau (July 2020), Haver Analytics

COVID-19 is an accelerant to online sales

E-Commerce as a Share of Retail Sales

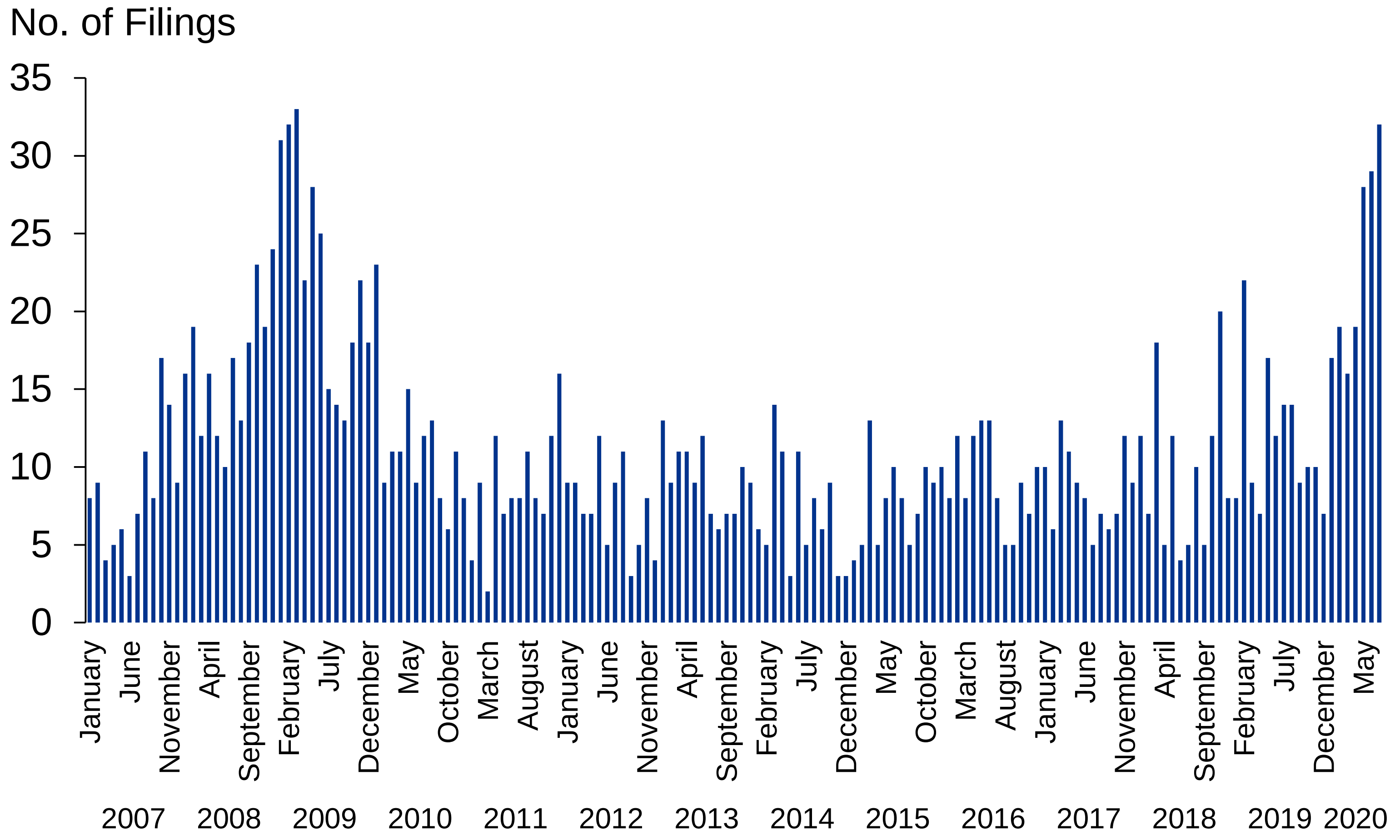


Source: KPMG Economics, Census Bureau (June 2020), Haver Analytics

- Aversion behavior and lockdown procedures forced many stores to close during the early stages of the pandemic.
- Consumers responded by cutting their spending at brick and mortar stores and significantly increasing their online purchases.
- The online share of retail sales peaked at 19% in April from 12.5% prior to the pandemic.
- Note: We exclude gasoline store sales because these sales can never move to the on-line universe.

Bankruptcies reaching 2009 levels and likely to accelerate

U.S. Corporate Bankruptcy Filings

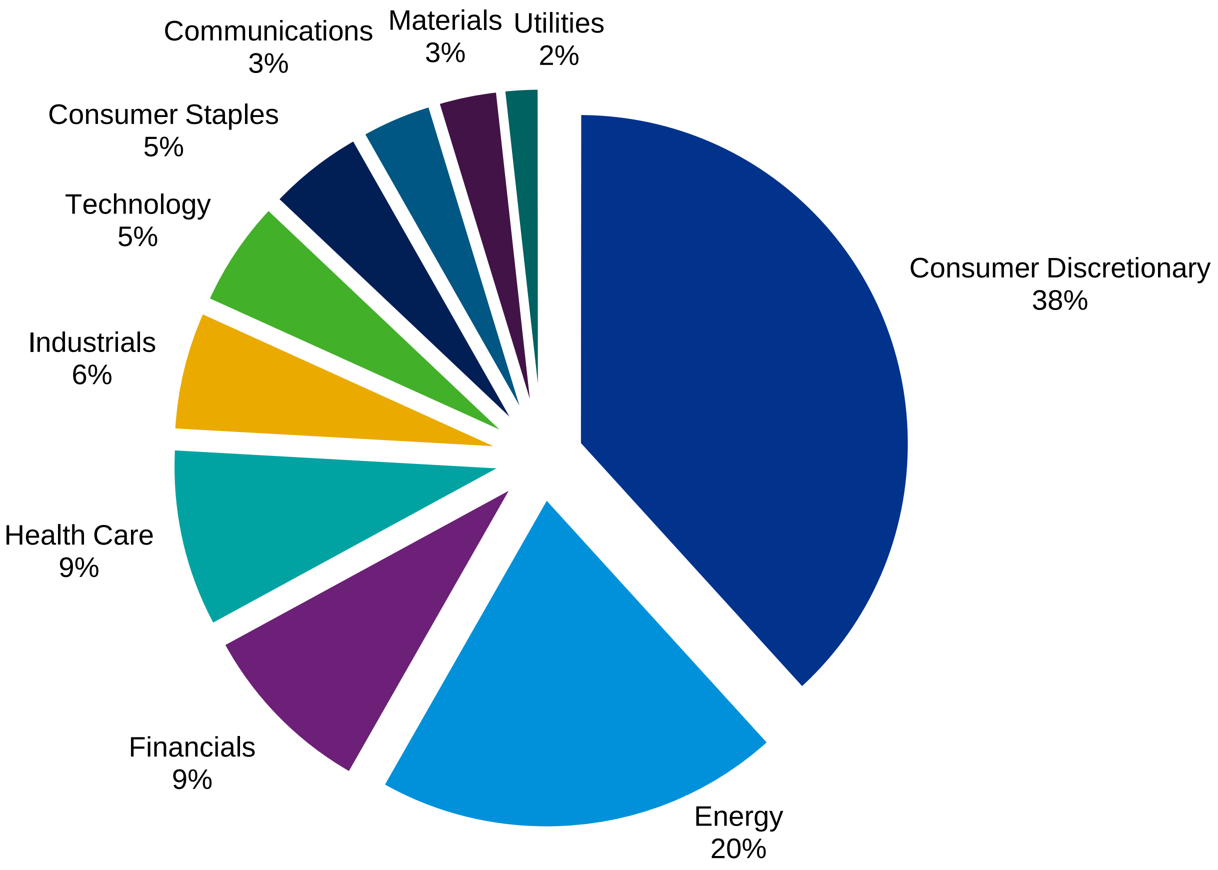


Source: KPMG Economics, Bloomberg (July 2020)

- For the week ended June 20, corporate bankruptcy filings totaled 13, the highest weekly tally since the 2009 recession.
- In July 2020, the number of filings totaled 32, nearly matching the global financial crisis high of 33 (March 2009).

Consumer discretionary and energy firms under most strain

2020 Bankruptcy Filings



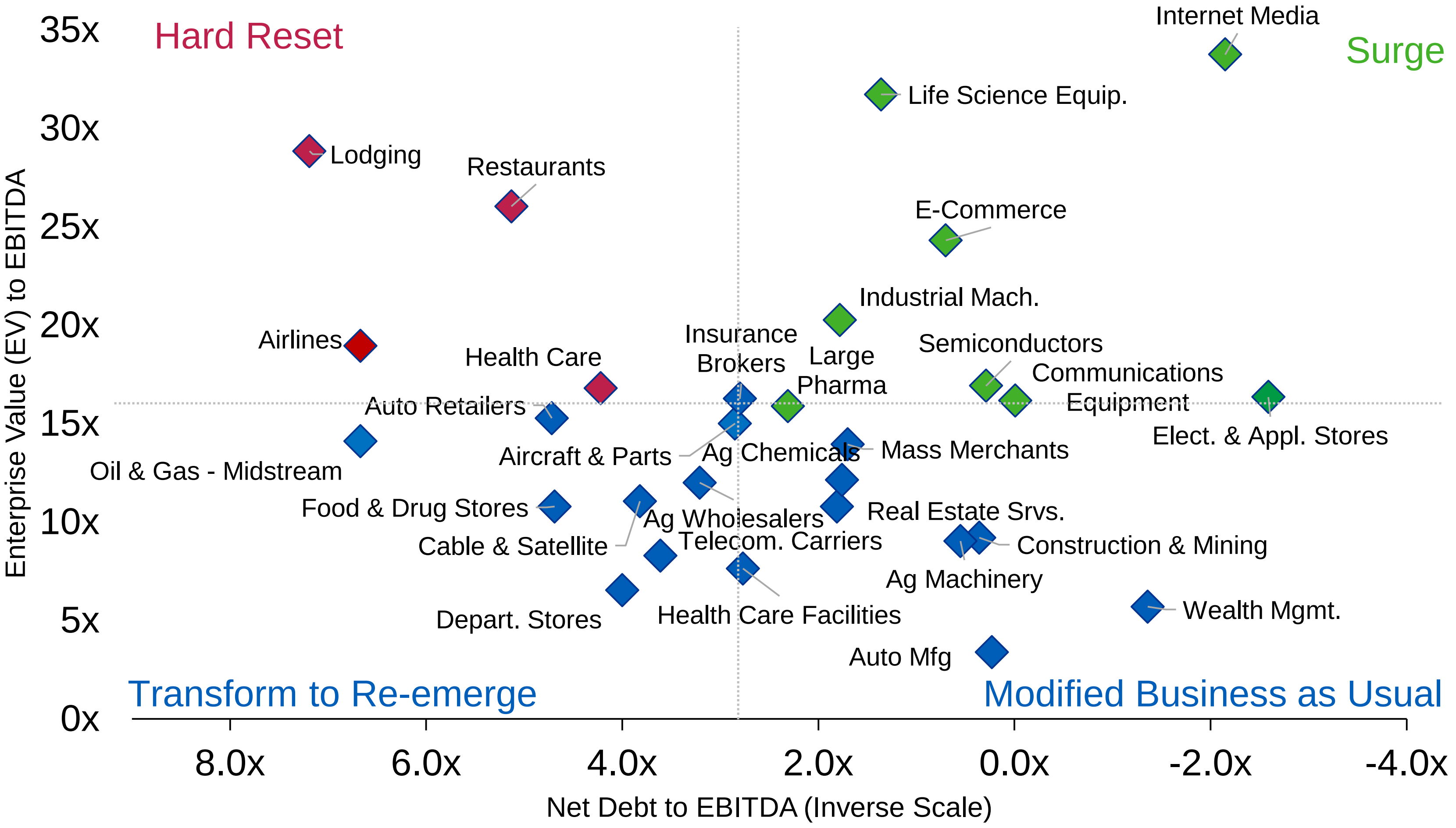
Source: KPMG Economics, Bloomberg (August 12, 2020)

— Consumer discretionary (38%) and energy firms (20%) together account for nearly 60% of the share of bankruptcy filings in 2020 year to date.

— Consumption patterns have shifted during the pandemic and will likely shift again on the other side; remaining nimble and funded is the key for survivability.

Financial factors impacting industry vulnerability

S&P 500 Industry Valuations vs. Leverage



Note: EBITDA and Net Debt (most recent quarterly filing), EV (August 11, 2020), dotted lines = median values

Source: KPMG Economics, Bloomberg LLP

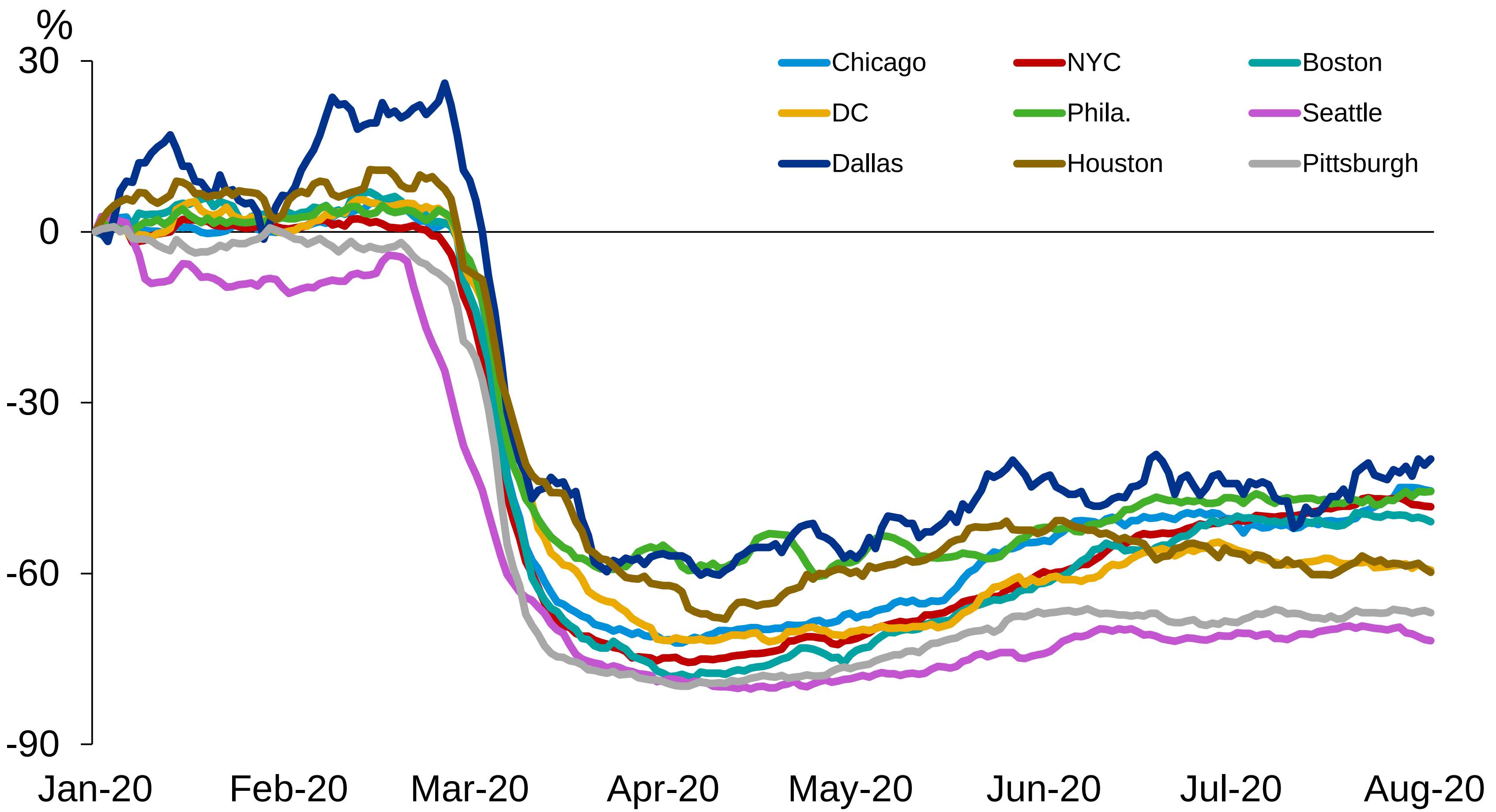
— Industries that struggle to recover from COVID-19 due to a combination of lower demand offerings, insufficient capital, and high debt will likely experience a hard reset to their businesses.

— Some firms are poised to surge despite the overall adverse operating conditions. These firms have strong balance sheets and can capitalize on consumer behavior that has been altered during the crisis.

— Most firms need to transform in order to emerge from the Great Lockdown in a position that allows them to thrive and operate effectively in what is likely to be an altered landscape.

FOMO versus FOGO will determine how much is different

U.S. Public Transit Demand



Source: KPMG Economics, Moovit, Bloomberg (August 16, 2020)
Note: baseline comparison with week of Jan 15, 2020

- Balance between fear of missing out (FOMO) and fear of going out (FOGO) dictates aversion behavior.
- Public transit usage remains down sharply across all U.S. cities from the start of the year.
- The ability to work remotely, aversion behavior and the high level of unemployment are among the primary reasons for underutilized public transport.

FOGO and restricted capacity hamper restaurant recovery

OpenTable Seated Diners – % Change from Last Year

State	City	6/29 to 7/5	7/6 to 7/12	7/13 to 7/19	7/20 to 7/26	7/27 to 8/2	8/3 to 8/9	8/10 to 8/15	Cases/ 1M
Arizona	Phoenix	-73%	-73%	-74%	-71%	-67%	-67%	-63%	26,589
Arizona	Scottsdale	-55%	-61%	-61%	-57%	-50%	-49%	-44%	
	Las Vegas	-54%	-51%	-53%	-53%	-50%	-48%	-49%	19,903
Florida	Fort Lauderdale	-51%	-51%	-50%	-57%	-57%	-51%	-45%	26,698
Florida	Naples	-37%	-31%	-37%	-48%	-44%	-33%	-28%	
Florida	Tampa	-48%	-49%	-46%	-48%	-44%	-38%	-31%	
Florida	Miami	-68%	-76%	-79%	-78%	-78%	-73%	-71%	
	Atlanta	-62%	-70%	-66%	-65%	-60%	-59%	-55%	22,325
Texas	Austin	-64%	-69%	-68%	-65%	-57%	-55%	-57%	19,297
Texas	Dallas	-70%	-72%	-68%	-67%	-61%	-59%	-55%	
Texas	Houston	-70%	-69%	-67%	-67%	-59%	-56%	-53%	
	Nashville	-67%	-71%	-74%	-72%	-69%	-65%	-65%	19,579
	New Orleans	-68%	-8%	-70%	-71%	-68%	-61%	-51%	29,667
North Carolina	Charlotte	-41%	-60%	-62%	-62%	-47%	-46%	-47%	13,879
North Carolina	Raleigh	-72%	-74%	-74%	-71%	-67%	-66%	-69%	
	Baltimore	-72%	-70%	-66%	-71%	-73%	-77%	-70%	16,576
	New York	-80%	-81%	-76%	-77%	-75%	-74%	-70%	23,420
Ohio	Cincinnati	-52%	-55%	-57%	-52%	-46%	-47%	-43%	9,267
Ohio	Columbus	-52%	-58%	-62%	-54%	-52%	-48%	-49%	
	Boston	-72%	-70%	-69%	-70%	-66%	-66%	-64%	17,932
	Seattle	-88%	-89%	-87%	-87%	-86%	-85%	-85%	9,012
	Portland	-80%	-80%	-79%	-80%	-77%	-73%	-69%	
	Denver	-54%	-56%	-54%	-54%	-51%	-50%	-51%	9,234
	Louisville	-61%	-64%	-60%	-64%	-61%	-54%	-48%	8,800

Source: OpenTable, Worldometers (August 15, 2020)

— OpenTable's statistics on seated diners at restaurants provide a valuable barometer of people's willingness to engage in activities in close proximity to others.

— On April 27th, the first U.S. cities began allowing some restaurants to reopen, although under strict controls that limit capacity.

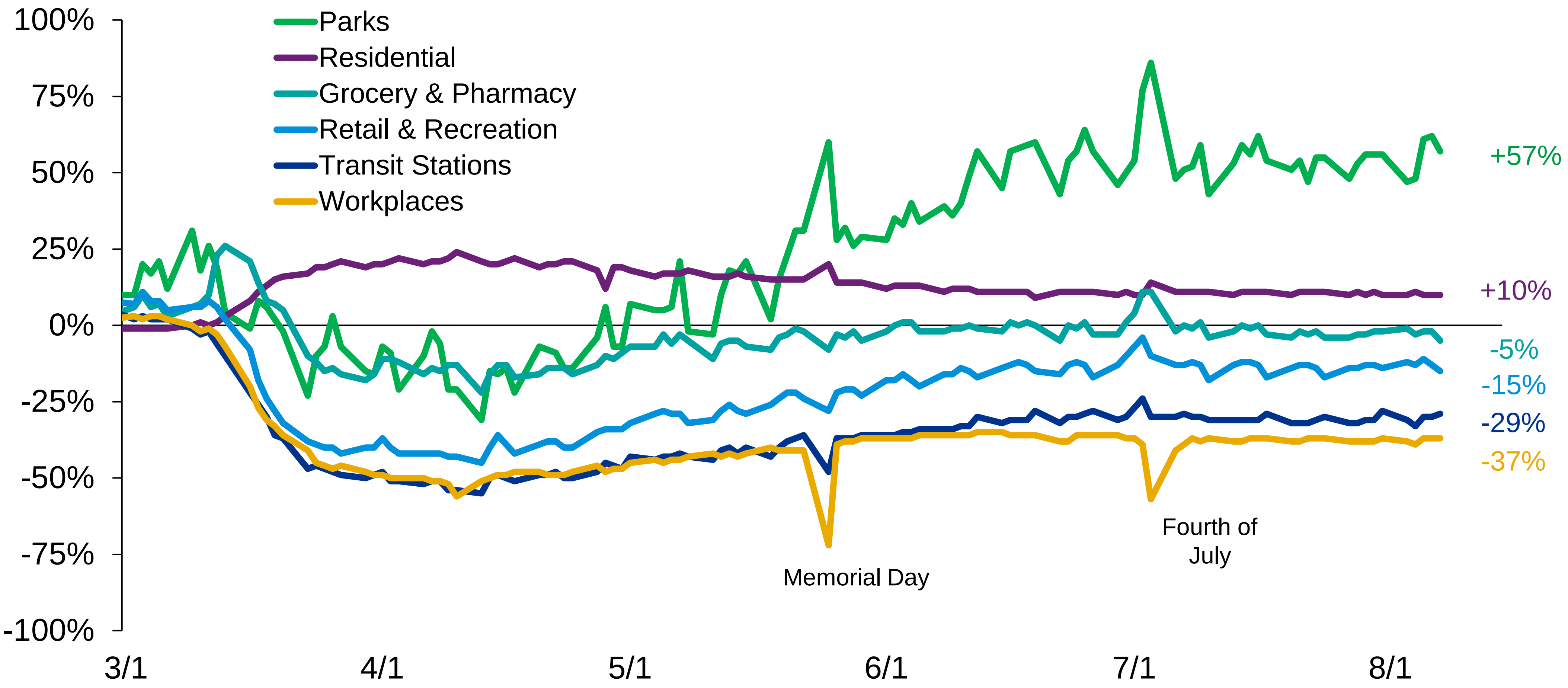
— Many restaurants may struggle to remain going concerns without continued government assistance.

— Note: New Orleans was hit by Hurricane Barry during the week of July 11, 2019, creating a base effect that reduced the year-over-year decline in 2020.

Pandemic has shifted where people spend their time

United States: Change in Visits to Community Areas

Change Relative to Jan 5 - Feb 6 Baseline

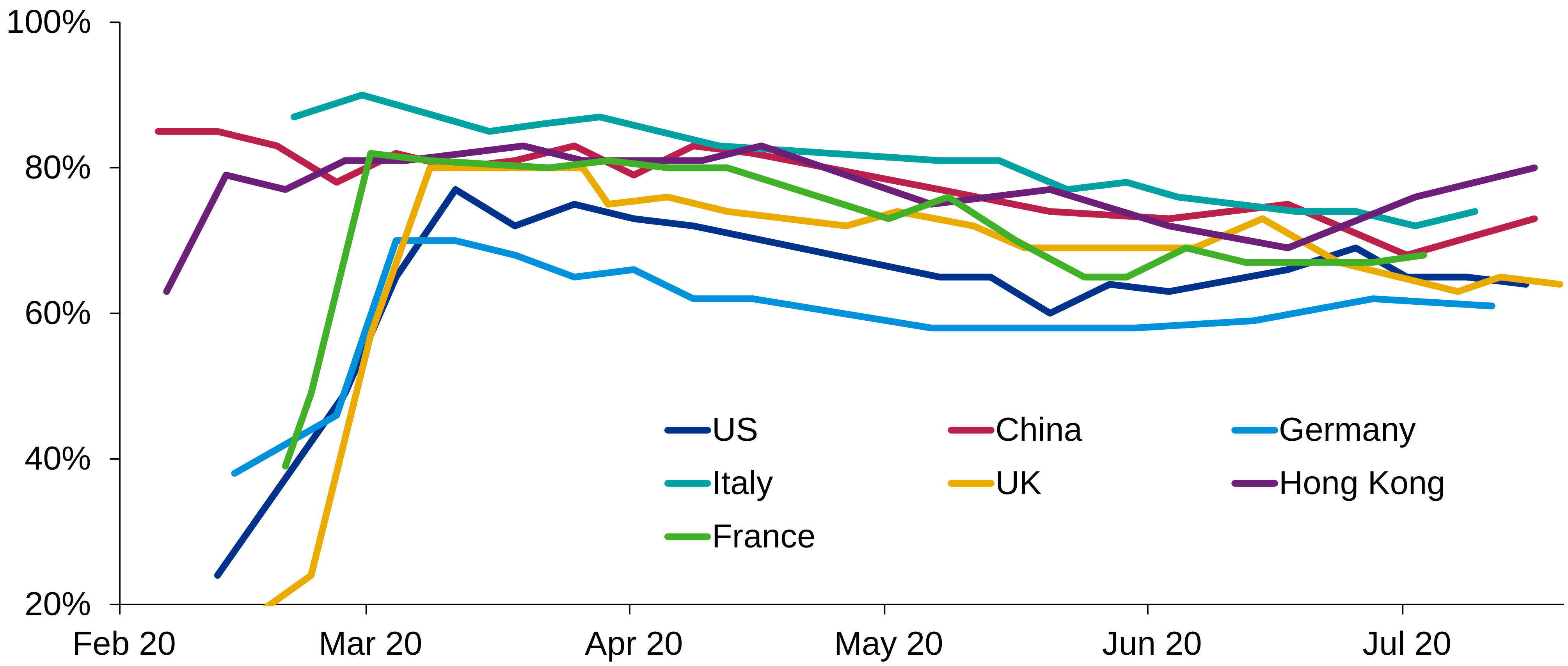


Source: KPMG Economics, Google Community Mobility Trends (August 7, 2020), Haver Analytics

Path of the virus dictates the level of aversion behavior (FOGO)

People Still Wary of Crowded Public Places

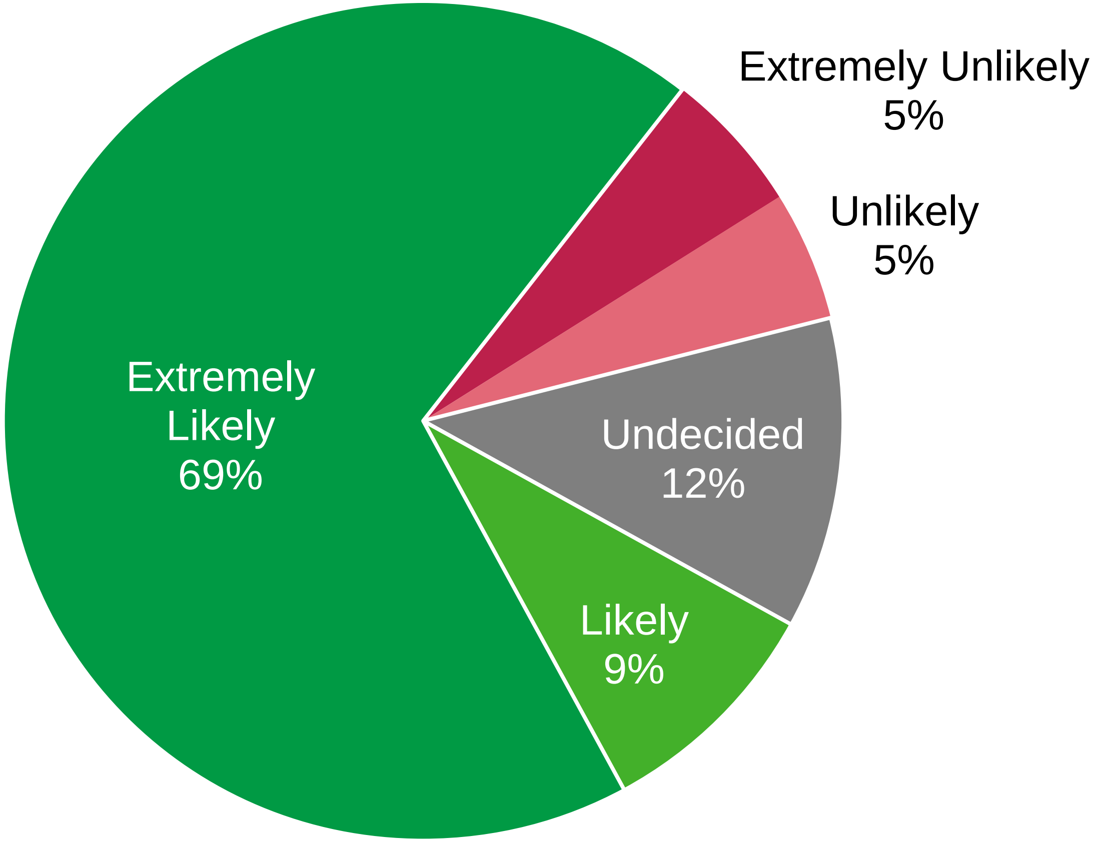
YouGov Survey - Avoid Crowded Public Places? Percent answering yes.



Source: KPMG Economics, YouGov, Bloomberg (August 7, 2020)

78% of the U.S. public likely to follow mask guidelines

Likelihood of Wearing a Mask if Required by Local Authorities
Percent of Respondents

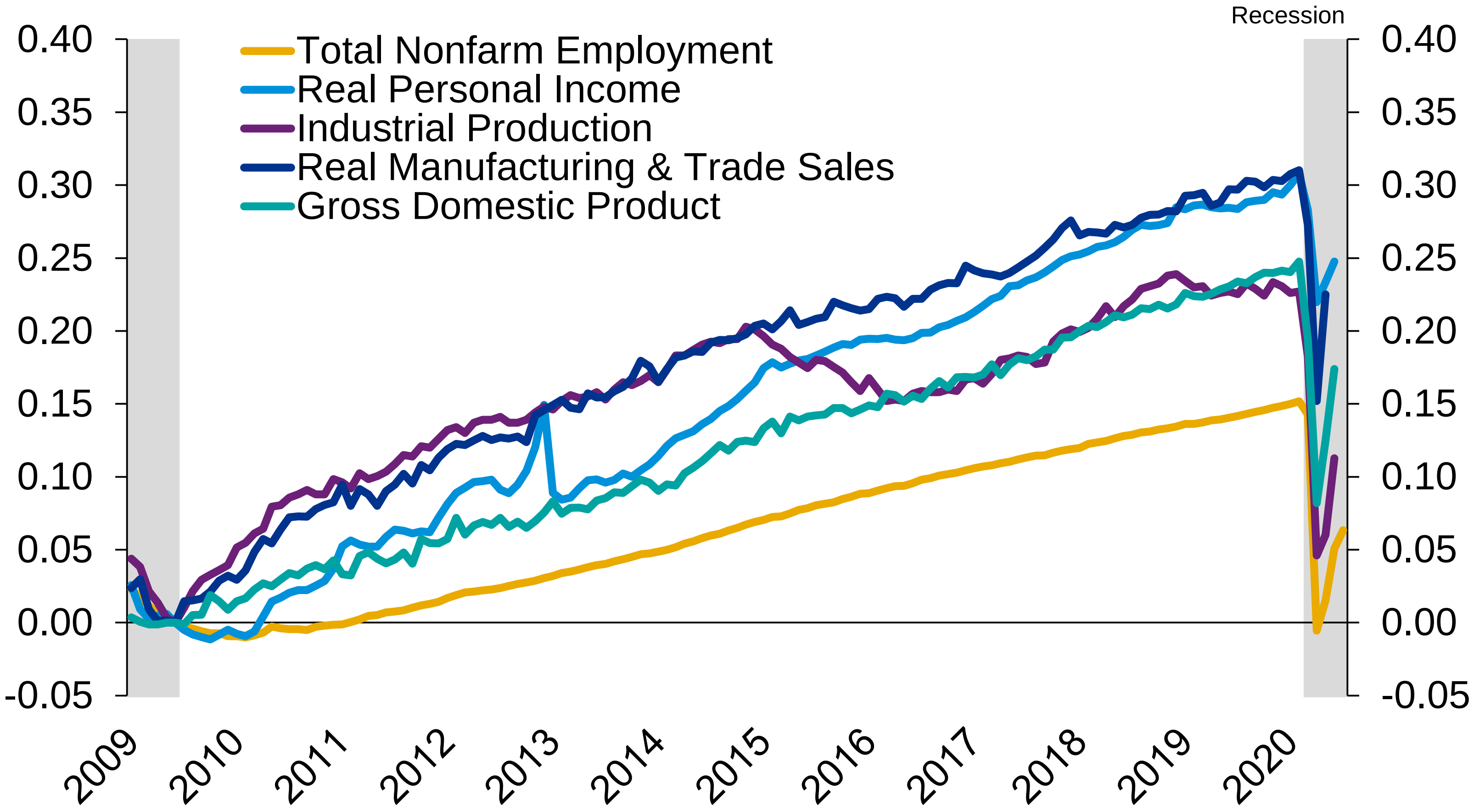


- More than three-quarters of the public say they are likely to follow mask guidelines if required by local authorities.
- One in ten people are likely to flout guidelines even if required.

Source: KPMG Economics, Consumers and COVID-19 Survey, Federal Reserve Bank of Cleveland (July 2020)

Monthly data suggest a rebound but not to previous levels

NBER Dating Committee Recession Indicators
Logged and Indexed, June-2009=0



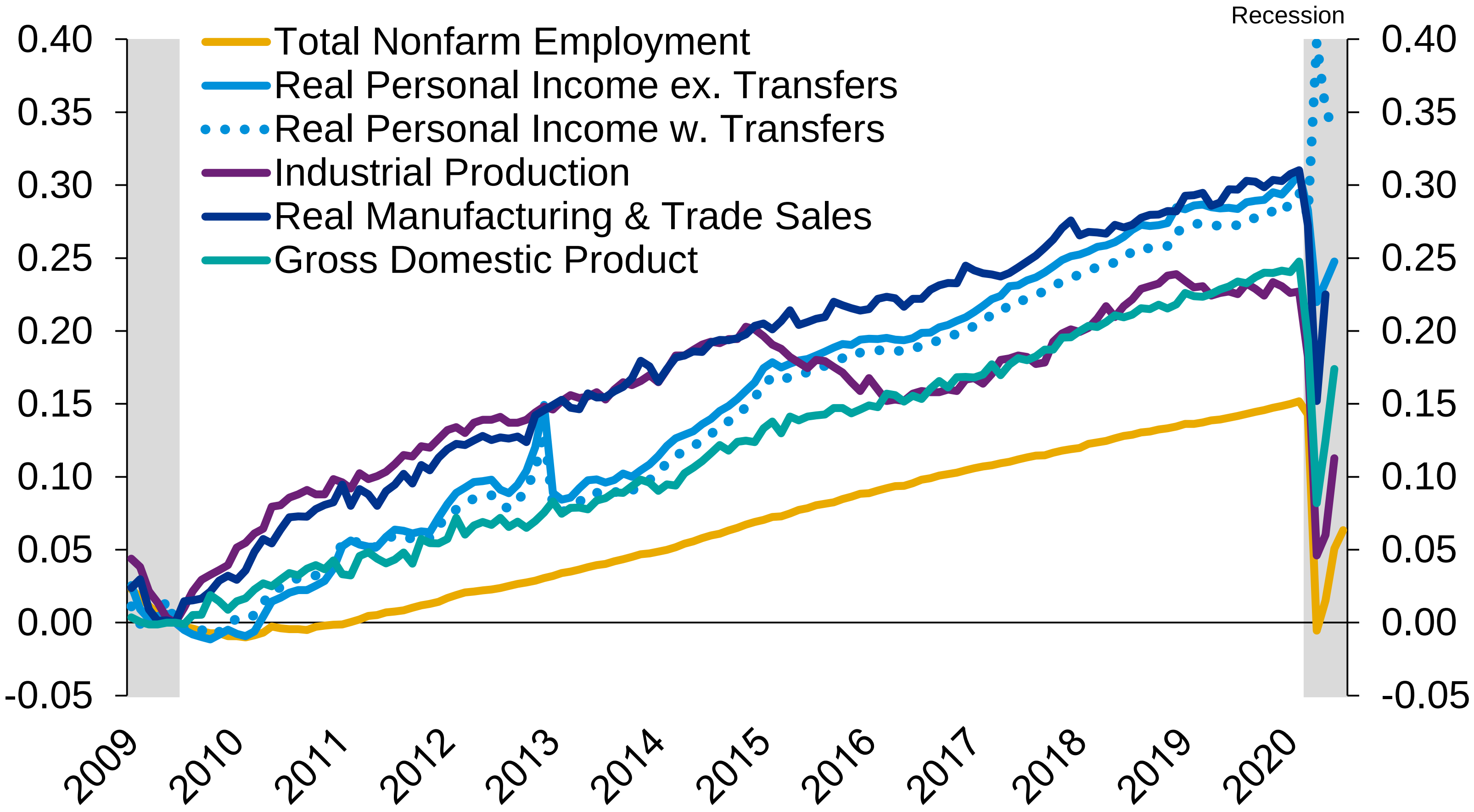
Source: KPMG Economics, Macroeconomic Advisors by IHS Markit, BEA, BLS, Haver
Note: Data are logged and indexed. Data are seasonally adjusted. Total sales is Real Manufacturing & Trade Sales for All Industries

- Key economic indicators followed by the National Bureau of Economic Research (NBER) to conduct business cycle dating reveal the sharp drop in economic activity due to the shock of the pandemic.
- The NBER Business Cycle Dating Committee declared that the current recession began in February 2020.
- Note job losses from the pandemic erased all of the gains from the prior expansion at the nadir.

Is this time different?

NBER Dating Committee Recession Indicators

Logged and Indexed, June-2009=0



Source: KPMG Economics, Macroeconomic Advisors by IHS Markit, BEA, BLS, Haver

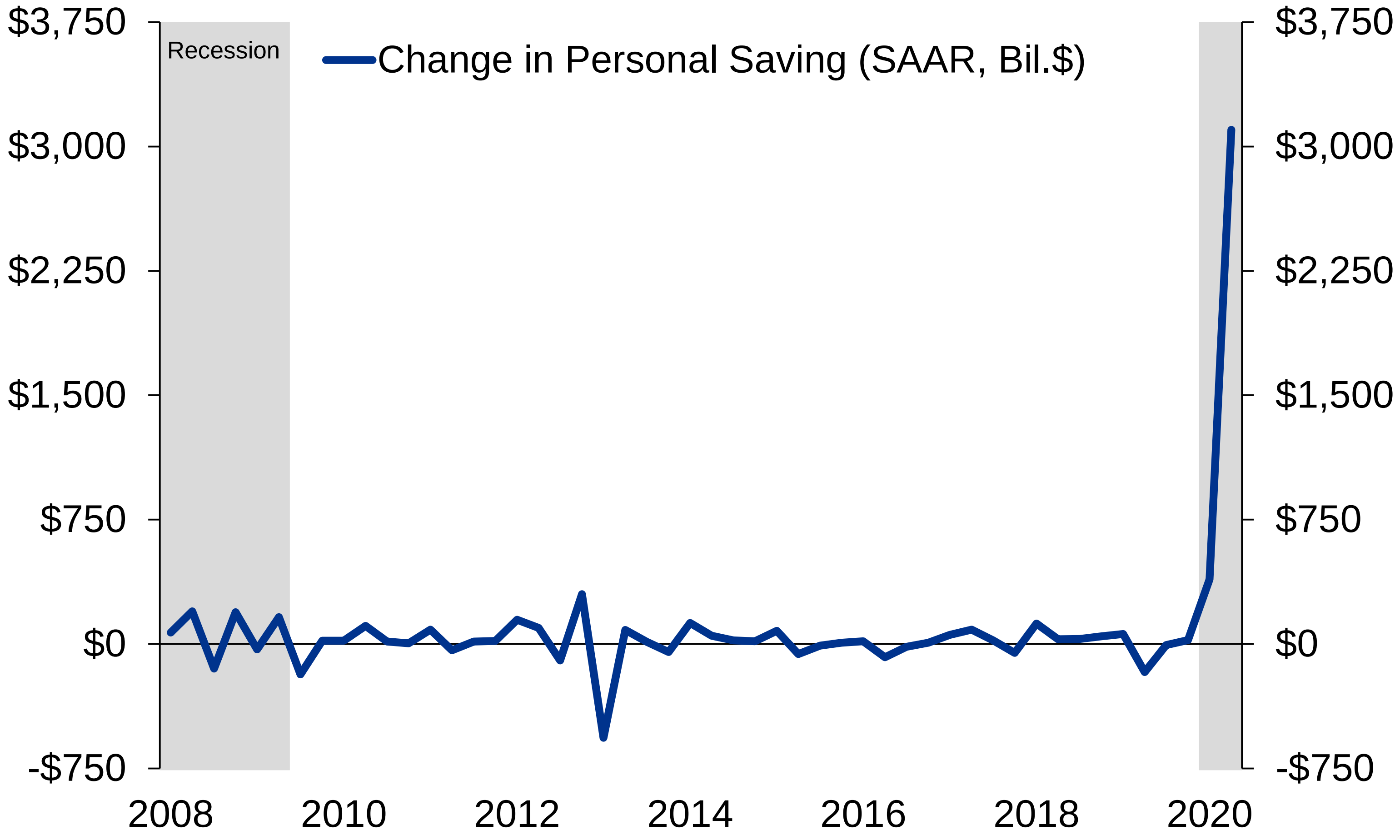
Note: Data are logged and indexed. Data are seasonally adjusted. Total sales is Real Manufacturing & Trade Sales for All Industries

- One of the indicators used by the dating committee is real personal income excluding transfers, this excludes federal and state unemployment benefits, and any other benefits to households such social security or disability payments.
- Normally unemployment benefits boost income slightly at the outset of a recession and then fall during a recovery.
- The extraordinary increase in benefits during COVID-19 boosted household incomes more than normal (dotted blue line.) This could provide significant support to consumer spending if a vaccine is discovered in the near future.

Firepower to spend could be a growth catalyst post vaccine

Record Savings Level

Billions of Dollars



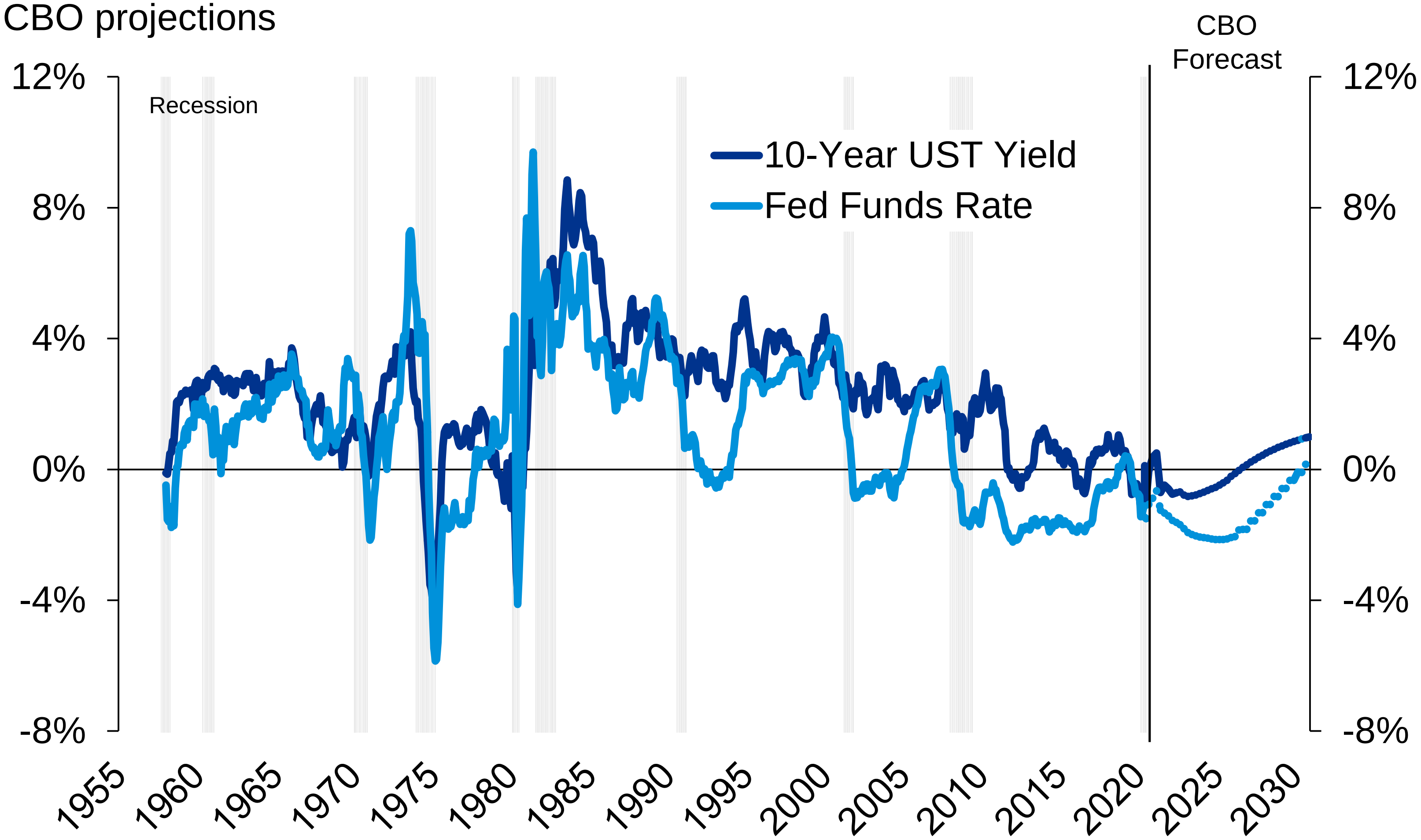
Source: KPMG Economics, Bureau of Economic Analysis (Q2 2020), Haver Analytics

- Savings have risen for several reasons:
  - consumers are not consuming high contact services such as recreation, dining out, and health care.
  - consumers are engaging in precautionary savings as future visibility on the economy is limited.
- The fall in health care consumption subtracted nearly 10 percentage points from GDP, a record decline. We anticipate a gradual return of health care services consumption to positively contribute to Q3 GDP.
- Once the virus is tamed, savings will be a catalyst for renewed economic activity provided economic deterioration can be forestalled until then.

Real interest rates forecast to be negative for many years

Federal Funds Rate Adjusted for Core Inflation

CBO projections



Source: KPMG Economics, Federal Reserve Board, Bureau of Labor Statistics, Haver Analytics (July 2020)

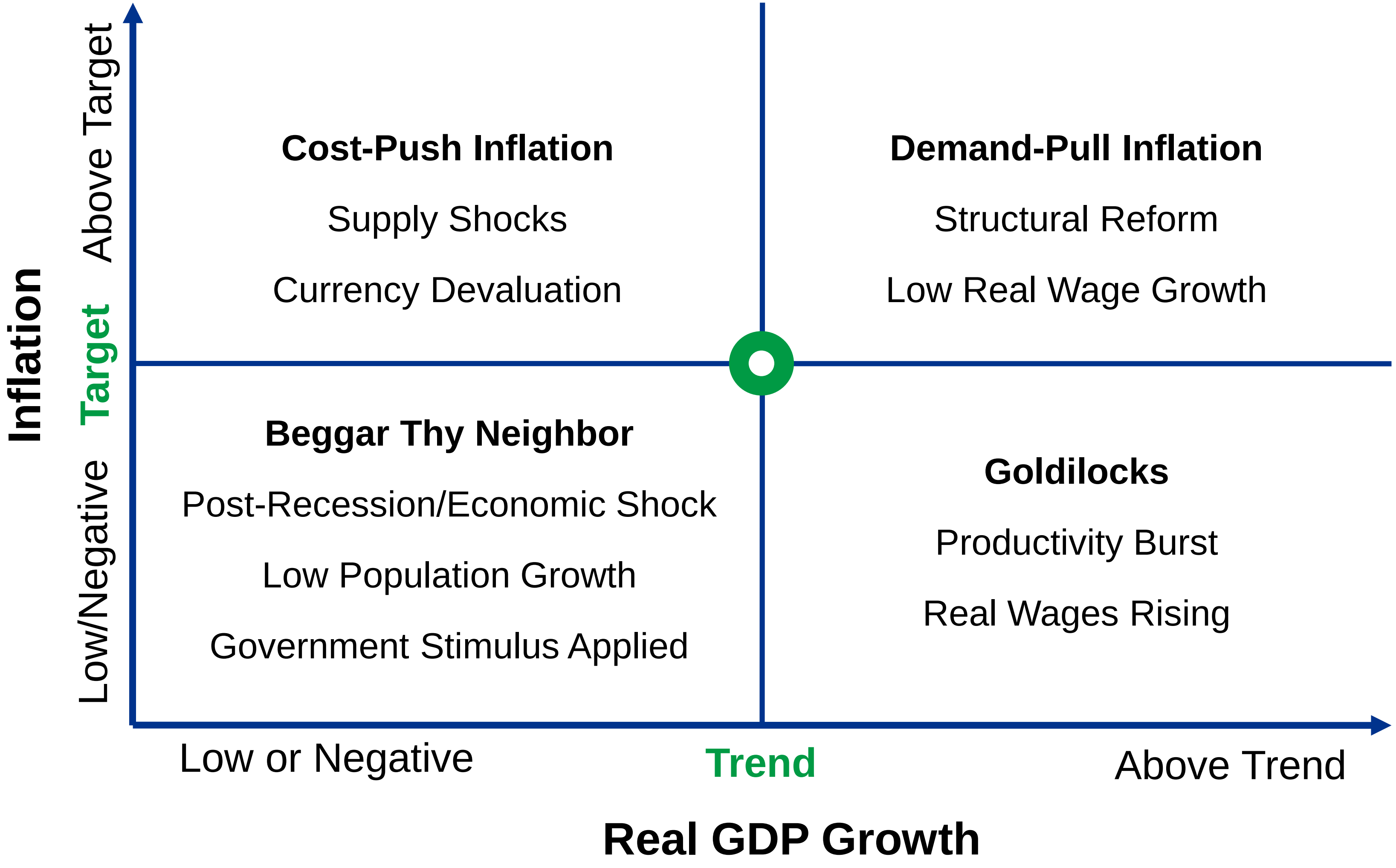
— Short-term real interest rates are expected to remain in negative territory for an extended period.

— The Federal Reserve will do all it can to promote economic growth in order to return the economy to full employment.

— The anticipated prolonged duration of the economic recovery and the lack of meaningful inflation means the yield curve is likely to remain flat.

— On a real basis, longer-term interest rates will also join their shorter-term counterparts in negative territory in the years immediately ahead.

Inflation not a concern due to significant demand shock



Source: KPMG Economics

- The significant drop in output is more of a cause for worry about deflation than inflation, despite record levels of monetary and fiscal stimulus.
- Low inflation environments can reduce demand as low inflation expectations can lead to delayed consumption, low interest rates and increased savings rates.
- Stimulating demand in the face of a pandemic, which lowers both demand and income levels, is challenging. Full demand will return when medical solutions are in place.
- Often countries will engage in a "beggar thy neighbor" stimulus that weakens their currency to stimulate growth and inflation.

Rethinking the global economy after the Great Lockdown:

Financial Markets

1. #Rateslowforlongtime – Real rates vs. nominal rates and why it matters.
2. The rise of Zombie Firms? To what extent is this a risk and what could it do to the economy?
3. Flation and Funding – How a period of sustained low inflation/deflation interacts with market interest rates and the incentive to invest.
4. Geopolitical Reordering – Sino-US relations, Sino-Russian relations, Sino-Iran relations, Sino-NK relations, Sino-Europe relations, US-Europe, US- ASEAN.
5. Will the U.S. lose its reserve currency status? Why does this matter and what factors could influence the outcome?

Real Economy

1. Digitization – In terms of adoption of digital modalities, COVID has been a huge catalyst.

2. Global Supply Chain Reorganization

3. Economic Divisions - the education vs. low education, routine vs. non-routine job, low wage vs high wage divides that have been growing over the past three decades have been accelerated during COVID. This has structural implications for the economy going forward.

4. Human Capital Implications – a subset of economic divisions, the lack of in-person teaching, networking and working in firms, is likely to hinder many types of human capital development.

Thank you

For more information, please see KPMG’s Covid-19 resource page:
https://www.kpmg.us/insights/2020/covid-19-resilience-readiness.html

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