

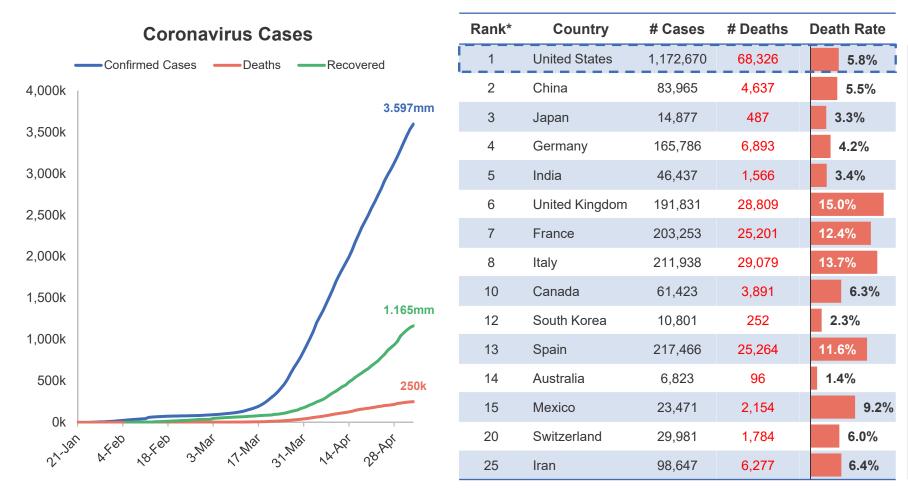
Market Update

May 4, 2020

Prepared by the Portfolio Strategies Group



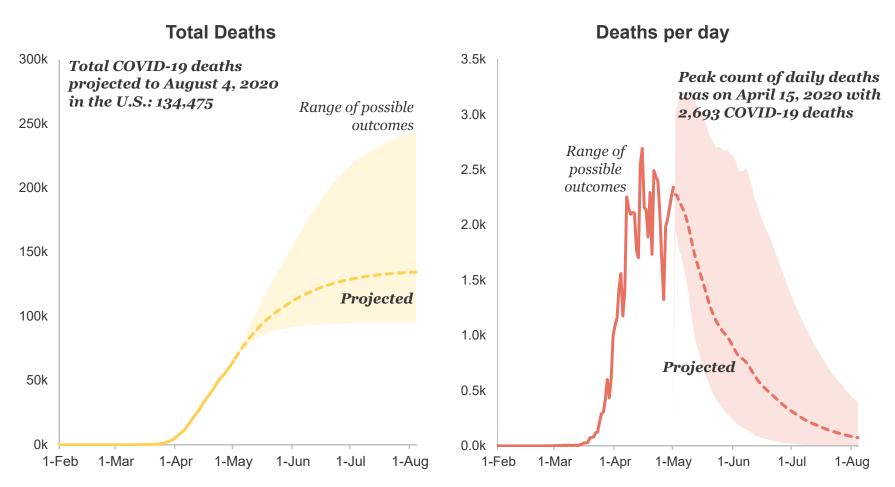
COVID-19 Pandemic Tops 3 Million Cases Worldwide



Source: Bloomberg data compiled from Johns Hopkins University, the World Health Organization, and other sources. *By size of economy, estimates by IMF for 2019. Data as of 5/04/2020.



Due to Relaxed Social Distancing, U.S. Death Projections Rise

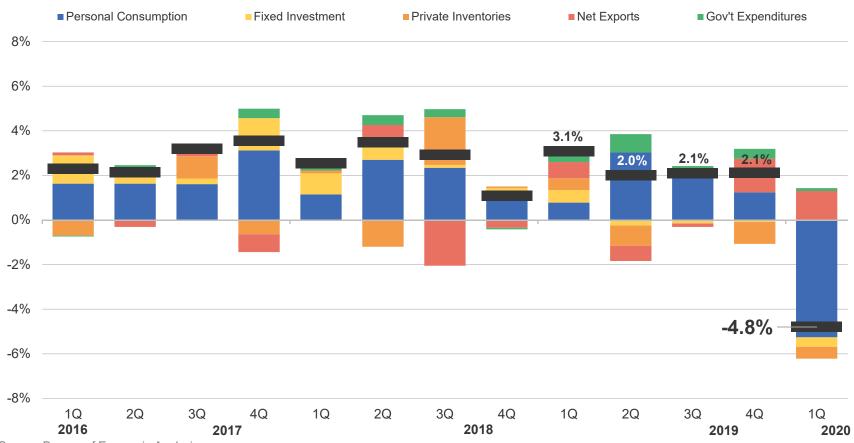


Source: Institute for Health Metrics and Evaluation, as of 5/04/2020. https://covid19.healthdata.org/projections



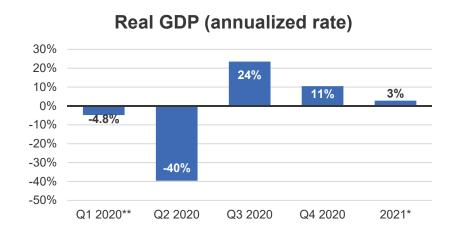
Q1 U.S. GDP Falls 4.8% as COVID-19 Lockdown Weighs on Growth

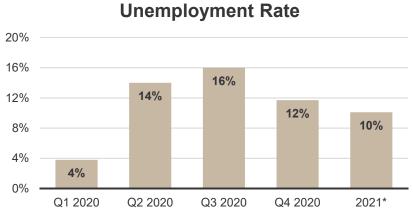
U.S. GDP Contributors and Detractors

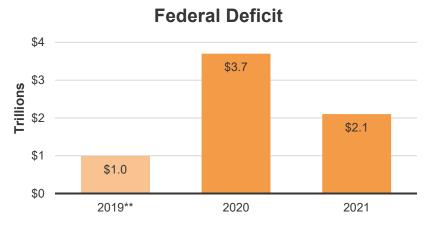


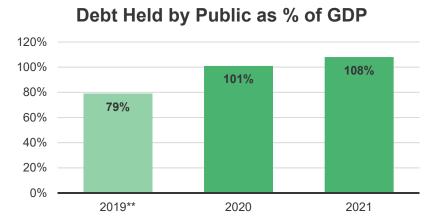


CBO Projections of Key Economic Variables





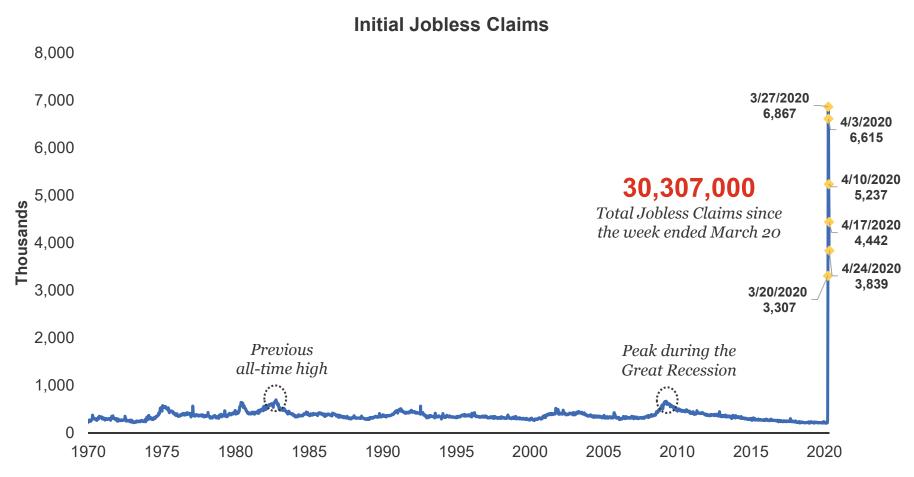




Source: Congressional Budget Office, as of 5/04/2020. *Average for year. **Actual results.



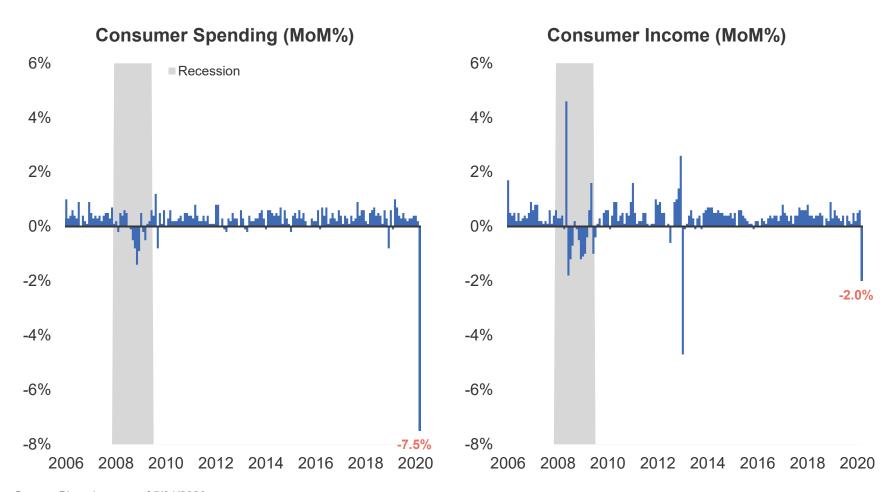
Initial Jobless Claims Exceed 30 Million



Source: Bloomberg, as of 5/04/2020. Data is seasonally adjusted.



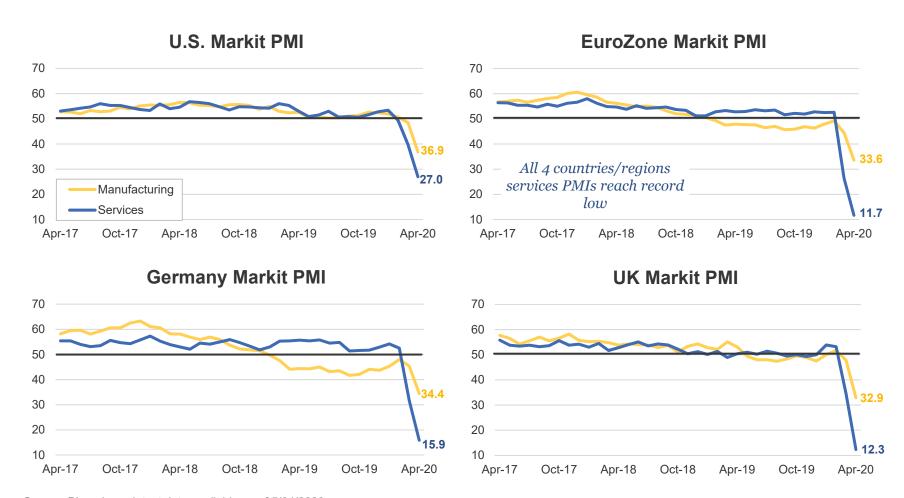
Consumer Income and Spending Fall Sharply in March



Source: Bloomberg, as of 5/04/2020.



Broad Deterioration in Services and Manufacturing PMIs

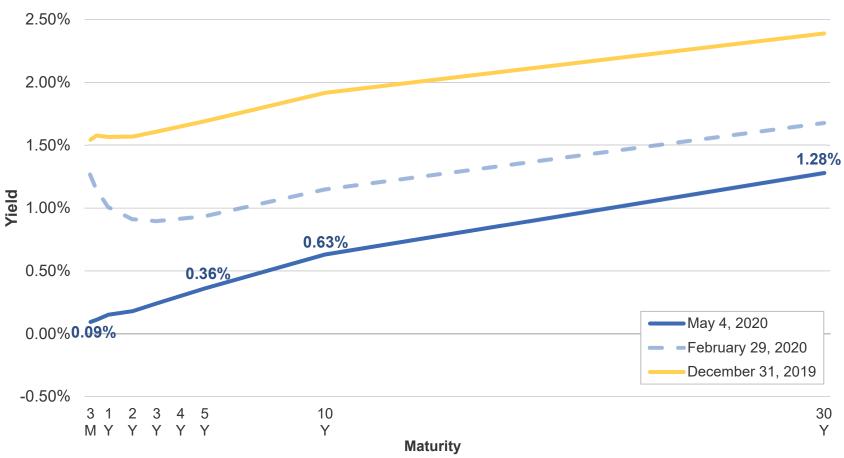


Source: Bloomberg, latest data available as of 5/04/2020.



Yield Curve Remains Sharply Lower





Source: Bloomberg, as of 5/04/2020.



COVID-19 Weighs on FOMC's Economic Outlook

April

29

- The Federal Reserve is committed to using its full range of tools to support the U.S. economy in this challenging time.
- The coronavirus outbreak is causing tremendous human and economic hardship across the United States and around the world. The virus and the measures taken to protect public health are inducing sharp declines in economic activity and a surge in job losses.
- The ongoing public health crisis will weigh heavily on economic activity, employment, and inflation in the near term, and poses considerable risks to the economic outlook over the medium term.
- In light of these developments, the Committee decided to maintain the target range for the federal funds rate at 0 to 0.25%. The Committee expects to maintain this target range until it is confident that the economy has weathered recent events and is on track to achieve its maximum employment and price stability goals.
- The Committee will continue to monitor the implications of incoming information for the economic outlook, including information related to public health, as well as global developments and muted inflation pressures, and will use its tools and act as appropriate to support the economy.

Source: Federal Reserve, as of 4/29/20.



Powell Reiterates Commitment to Support Economy and Markets

"I would say we have a number of dimensions on which we can still provide support to the economy, as you know our credit policies are not subject to specific dollar limit. They can be expanded, and we can do new ones."

"Let me just say we are going to not be in any hurry to withdraw these measures or lift off. We are going to wait until we are quite confident that the economy is well on the road to recovery."

"We are going to be very patient, that means we are not going to be in any hurry to move rates up."



Message: Rates likely at zero through 2021

Source: Federal Reserve Bank, as of 4/29/20.



Federal Reserve Broadens Tool Kit to Support Markets

Zero Interest Rates

• Cut rates by 150 bps at two emergency meetings in March

Asset Purchase Programs

• Unlimited Treasury and agency MBS purchases

Repurchase Agreements

• Increased amount and term options to primary dealers

Discount Window

• Decreased rate and extended term of loans

Bank Regulatory Relief

• Lowered reserve requirement to 0; capital & liquidity flexibility

Liquidity Support

• Funding for CP, ABS, MMFs, corporate bonds and more

• U.S. Dollar Swap Lines

• Increased access to U.S. dollars to foreign central banks

Paycheck Protection Program

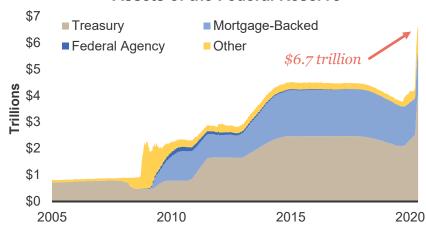
• Support for financial institutions issuing PPP loans

Main Street Lending Program

• Purchasing loans to small- and mid-size businesses

Source: Federal Reserve, as of 5/04/2020.

Assets of the Federal Reserve



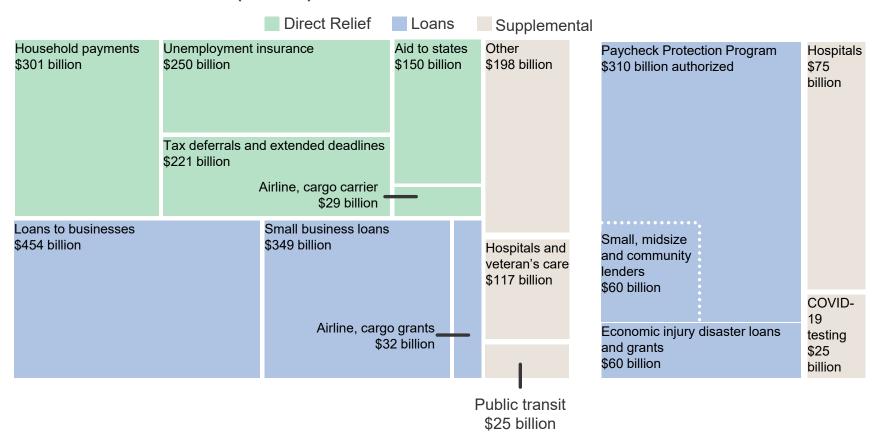
Amount Allocated to Fed's Liquidity Programs	
Facility	Holdings (billions)
Discount Window	\$31.8
PDCF	\$33.4
MMLF	\$46.3
CPFF	\$3.4
PPPLF	\$19.5
Swap Lines	\$439.0
Repurchase Agreements	\$158.2



Congress Providing Fiscal Stimulus to the Economy

Coronavirus Aid, Relief, and Economic Security (CARES) Act

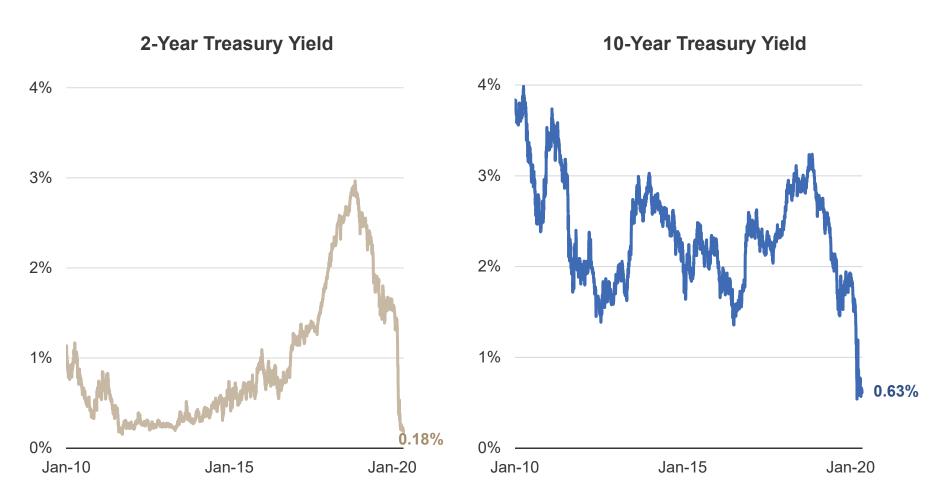
Pending Stimulus Plan*



Source: Wall Street Journal, as of April 23, 2020. *Passed by the Senate.



Treasury Yields Fall to New Lows



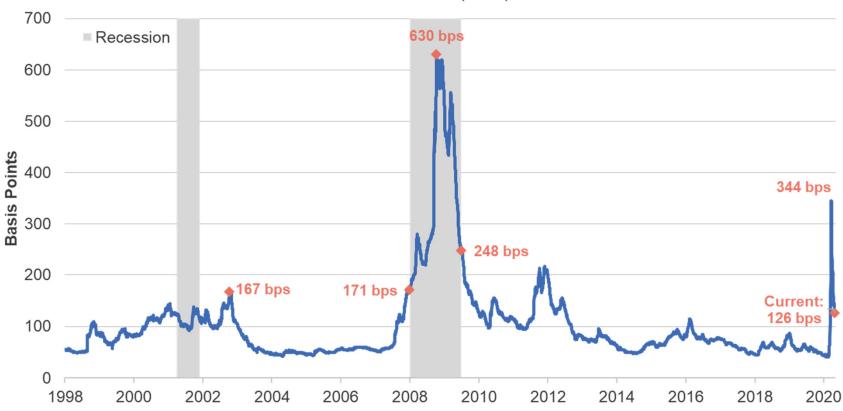
Source: Bloomberg, as of 5/04/2020.



Corporate Spreads Normalize Amid Fed Stimulus

Corporate Yield Spreads

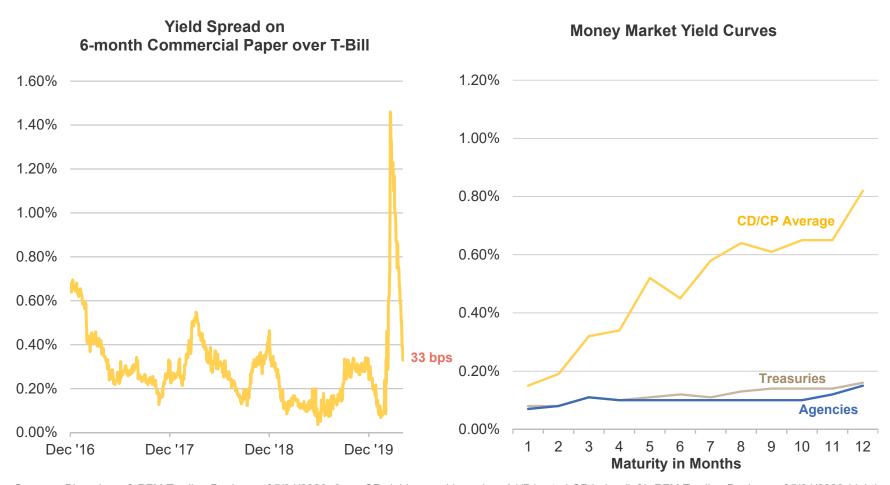




Source: Bloomberg, as of 5/04/20. Recession period derive from the National Bureau of Economic Research (NBER) based recession indicators.



Short-Term Credit Spreads Elevated and Volatile

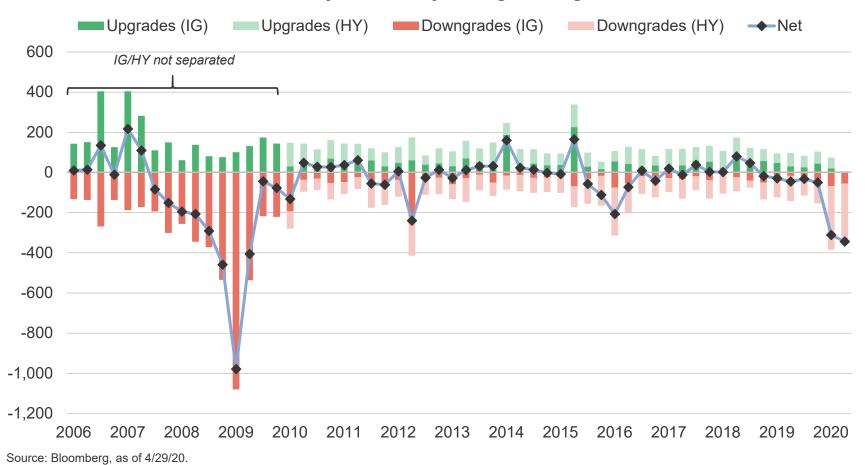


Sources: Bloomberg & PFM Trading Desk, as of 5/04/2020. 6-mo CP yield spread based on A1/P1 rated CP index (left). PFM Trading Desk, as of 5/04/2020 (right).



Rating Downgrades Likely to Accelerate, Focused in High Yield

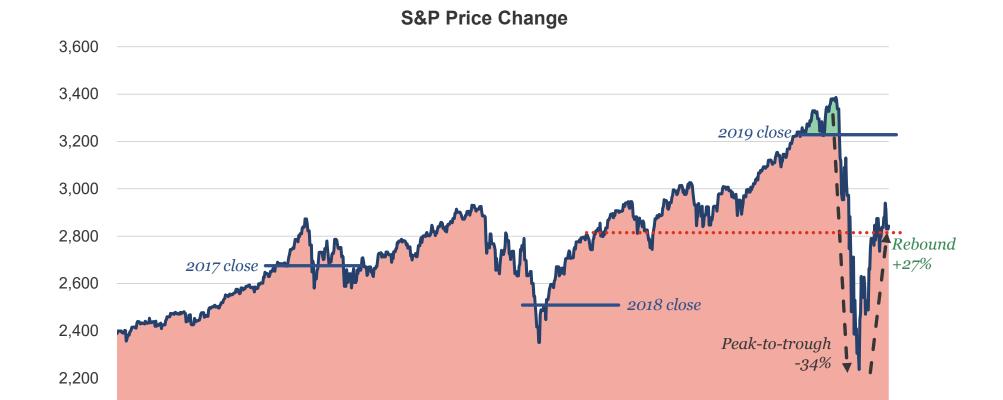
Moody's Quarterly Ratings Changes





Stocks Rally But Remain Down From February Highs

May '18



Nov '18

May '19

Nov '19

Source: Bloomberg, as of 5/04/2020.

Nov '17

May '17

2,000

May '20



Disclosures

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