
Economic Developments and Monetary Policy Environment

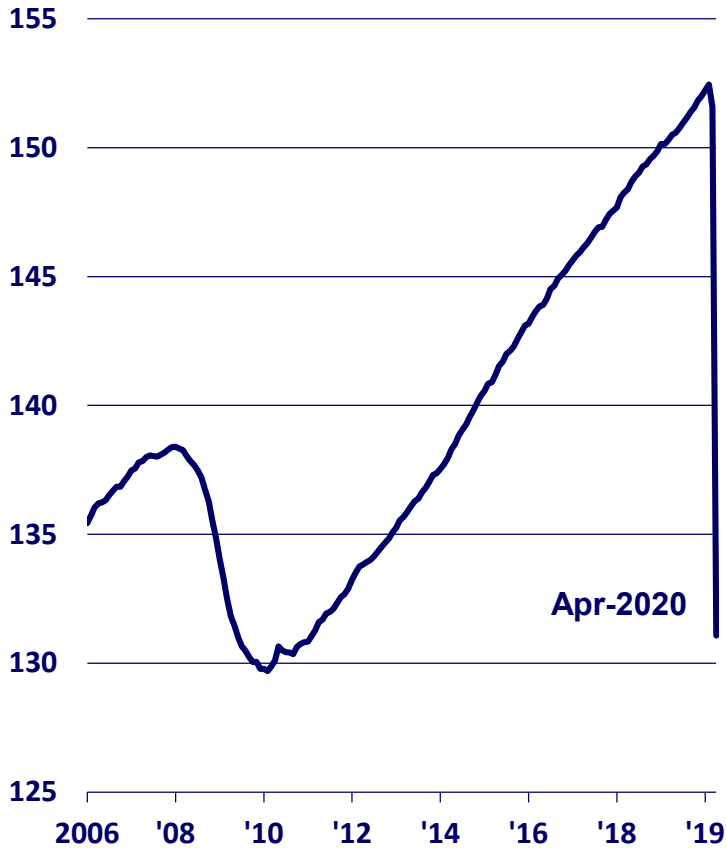
Federal Reserve Bank of Chicago
Academic Advisory Council Meeting
May 15, 2020

Spencer Krane
Senior Vice President
Federal Reserve Bank of Chicago

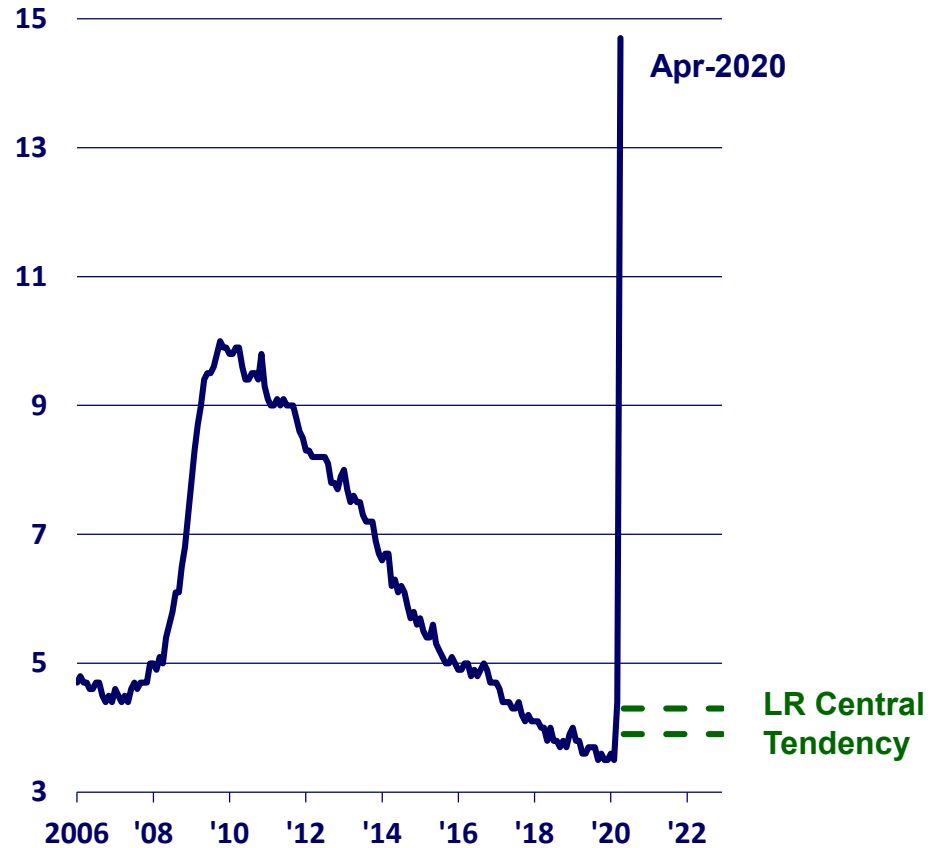
The views expressed are my own and not necessarily those of the Federal Reserve Bank of Chicago or the Federal Reserve System

Surge in Job Losses and Unemployment

Nonfarm Payroll Employment
(thousands)



Unemployment Rate
(percent)



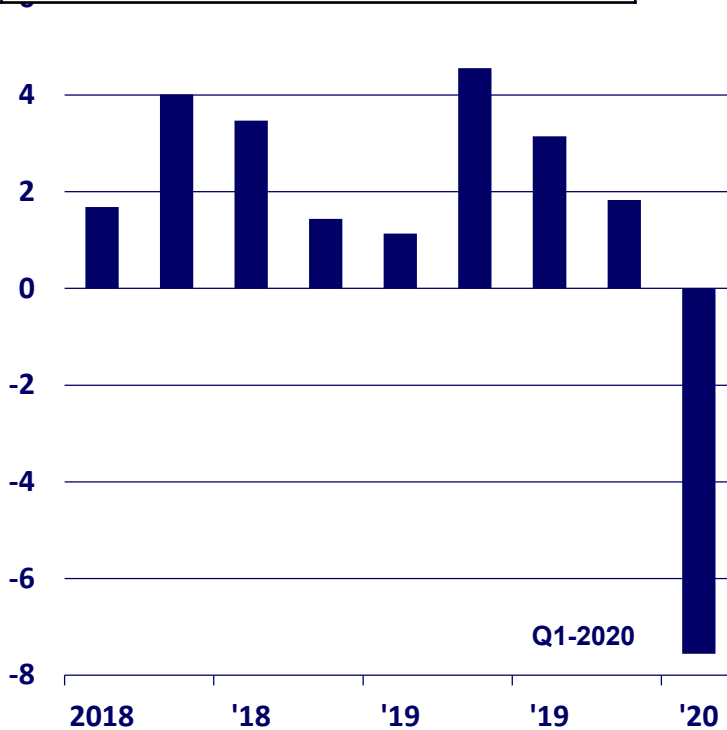
Source: Bureau of Labor Statistics from Haver Analytics and December 2019 Summary of Economic Projections

Collapse in Household Spending

Real PCE Growth

(quarterly percent change, annual rate)

	Jan	Feb	Mar
Monthly percent change	0.3	0.1	-7.3



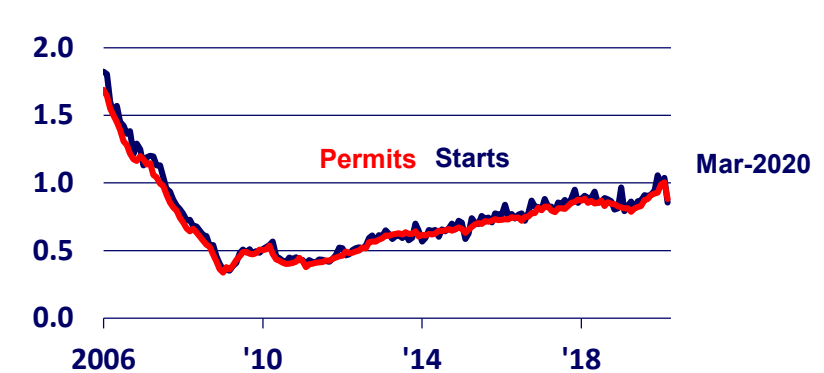
Light Vehicle Sales

(millions)



Single Family Housing Starts and Permits

(millions)

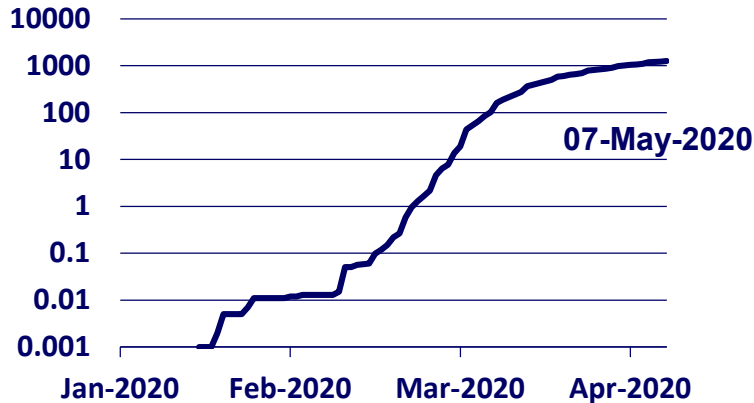


Source: Census Bureau and Bureau of Economic Analysis from Haver Analytics

High Frequency Indicators

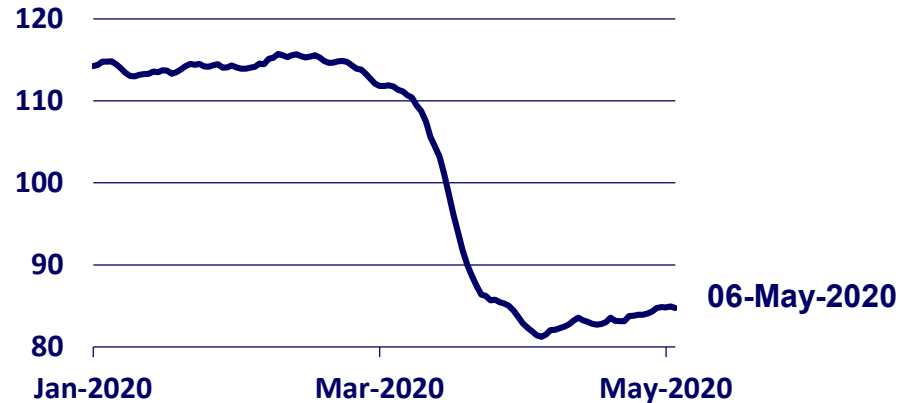
Confirmed Coronavirus Cases

(Thousands, log scale)



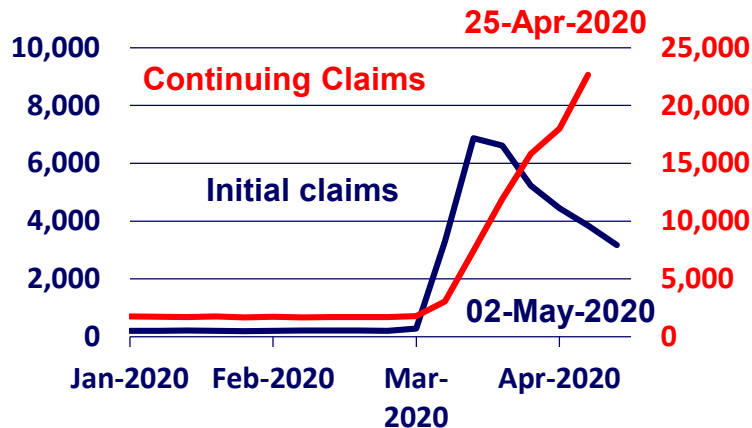
Morning Consult Consumer Confidence

(Index)



Unemployment Insurance

(Number)



Daily and weekly proprietary data on credit card, debit card, payment platform, and banking transactions generally show consumer activity bottoming out in early to mid April and flat to up a bit since.

Source: Johns Hopkins and Department of Labor from Haver Analytics and Morning Consult

Capital Goods and Manufacturing

Nondefense Capital Goods ex. Aircraft
(billions of \$)



Manufacturing Industrial Production
(Index, SA)



Mfg. Purchasing Managers Index
(Diffusion Index, SA)

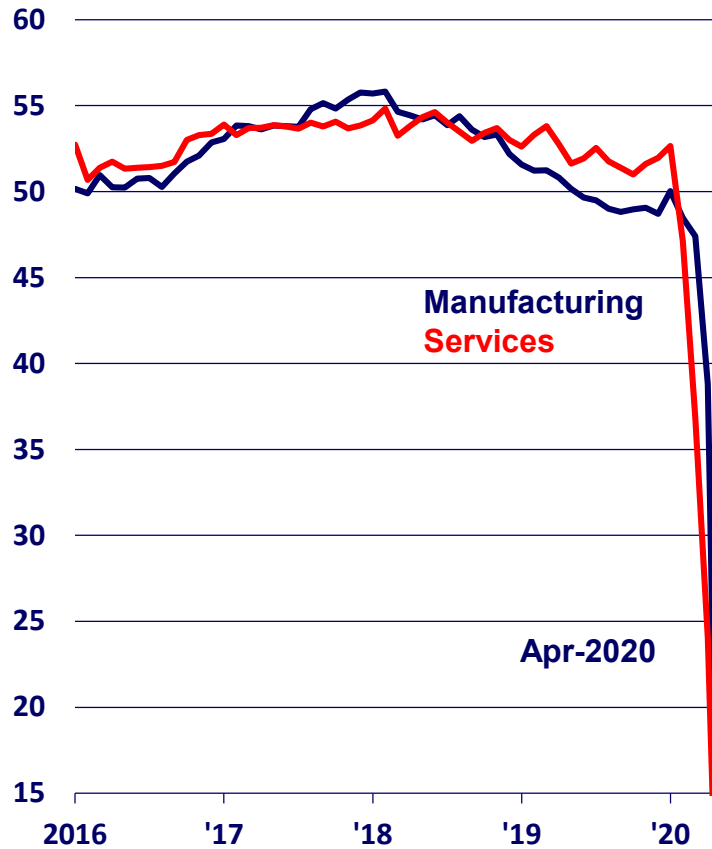


Source: Census Bureau, Federal Reserve Board, and Institute for Supply Management from Haver Analytics

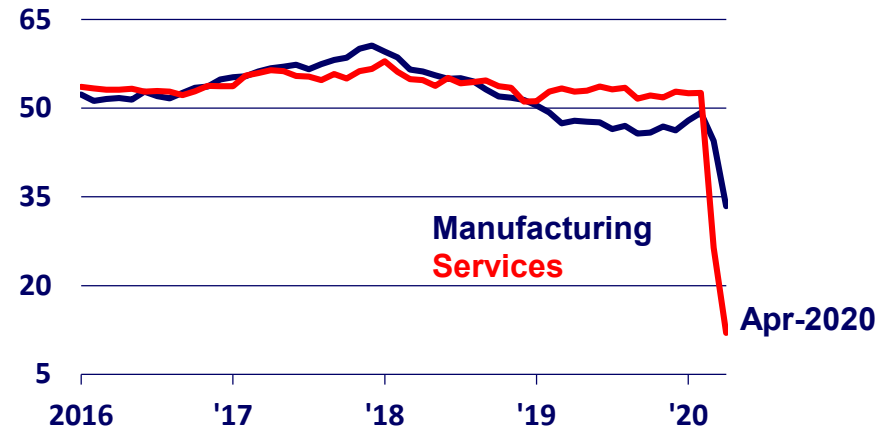
Global Collapse in Activity

JPMorgan Global PMIs

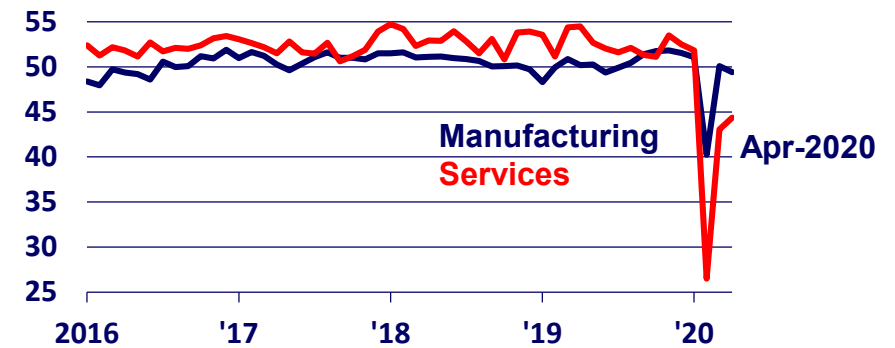
(50+ equals expansion)



Euro Area PMIs



China PMIs

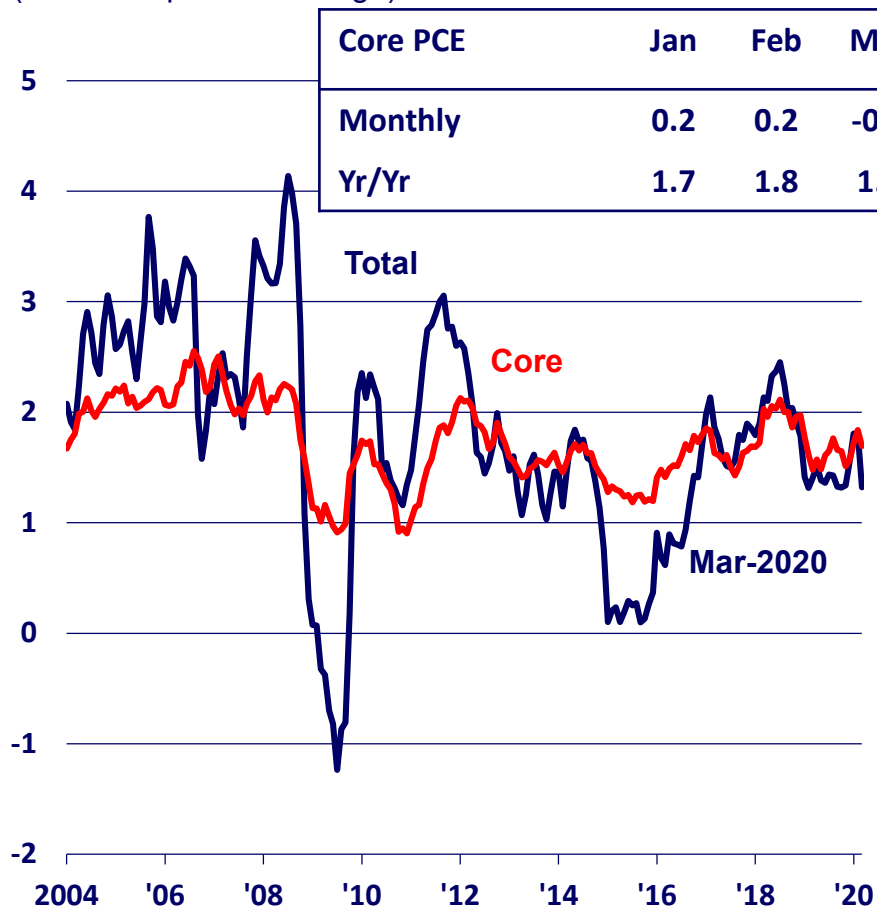


Source: JPMorgan, IHS Markit PMI from Haver Analytics

Inflation -- Supply and Demand Shocks

PCE Price Index

(12-month percent change)

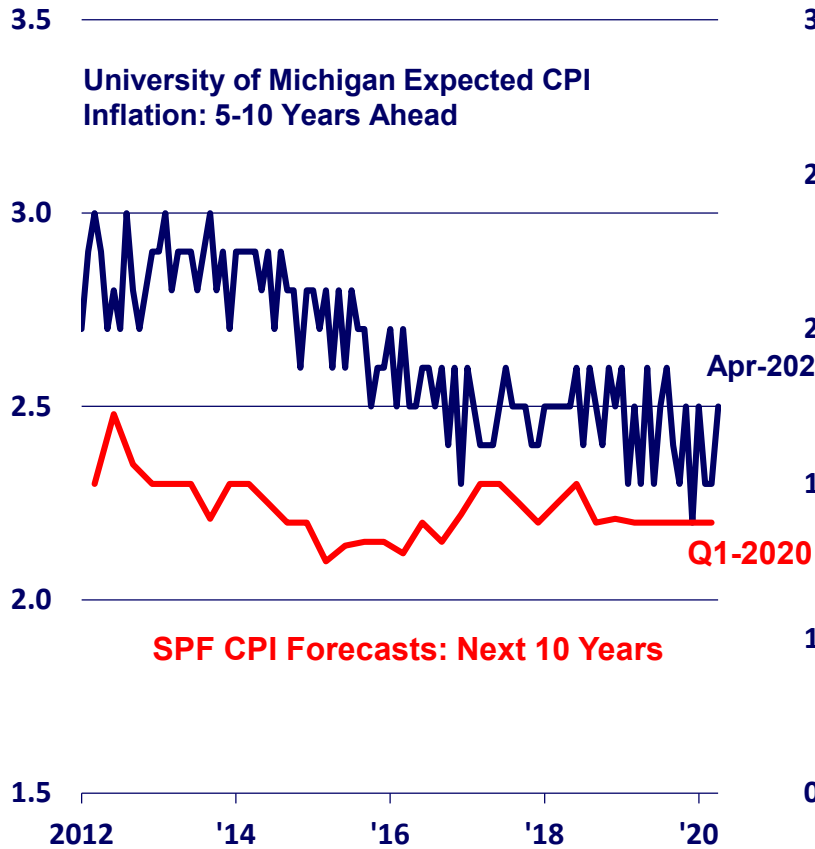


CPI monthly pct changes	Sep-Feb avg	March	April
Food at home	0.2	0.5	2.6
Gasoline	0.1	-10.5	-20.6
Core goods	-0.1	-0.3	-0.7
Core services	0.3	0.0	-0.4
Airfares	-0.1	-12.6	-15.2
Owners equiv. rent	0.3	0.3	0.2

Source: Bureau of Economic Analysis and Bureau of Labor Statistics from Haver Analytics

Inflation Expectations Indicators

Inflation Surveys (percent)



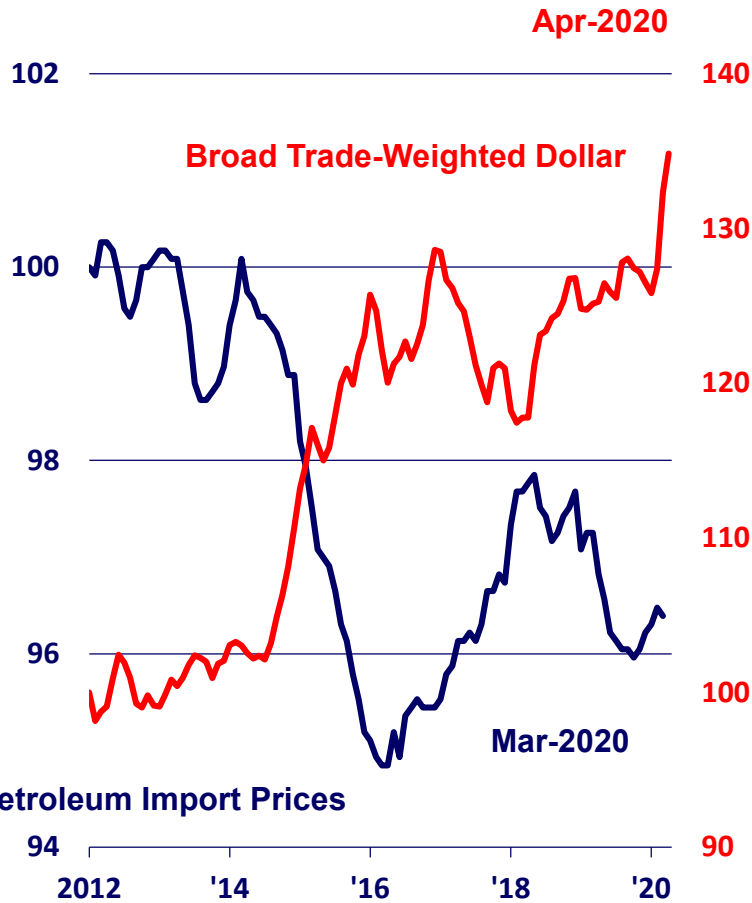
TIPS 5F/5 Inflation Compensation (percent)



Source: Federal Reserve Board, University of Michigan Survey of Consumers, and Survey of Professional Forecasters from Haver Analytics

Dollar and Oil Prices

Exchange Rate and Import Prices
(index, 2012=100)



Brent Crude Oil Prices and Futures
(dollars)



Source: Federal Reserve Board, Bureau of Labor Statistics, Energy Information Administration, and CME from Haver Analytics

Financial Market Developments

S&P 500 Index
(index)



10 Year Treasury
(percent)



Source: Wall Street Journal and U.S. Treasury from Haver Analytics

Financial Market Stress

Heightened Uncertainty and Risk

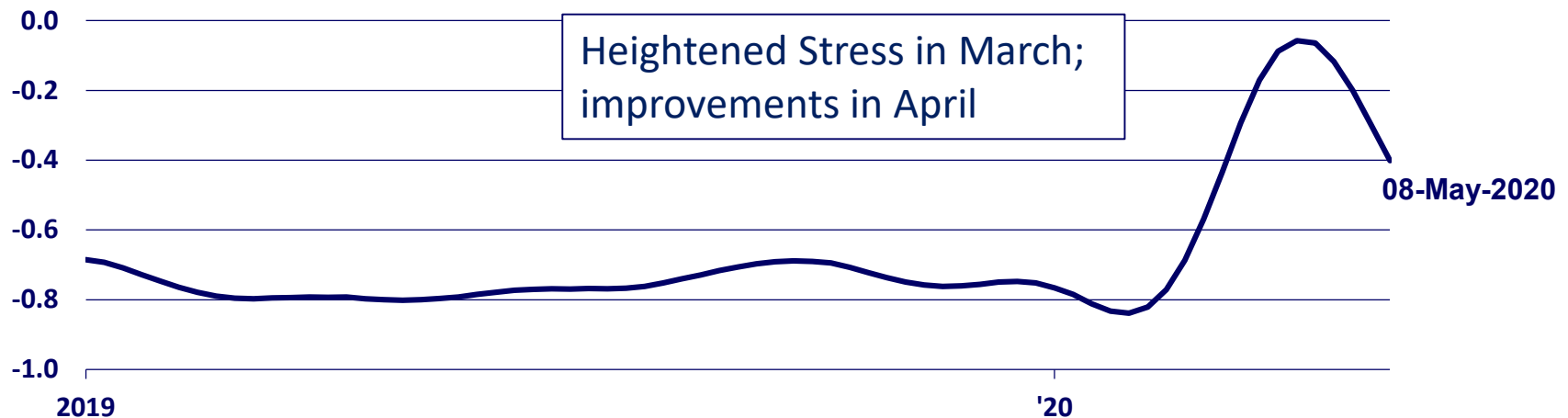
- Difficult to fund longer than overnight
- Liquidity strains in Treasury, MBS mkts
- Credit worthy firms, HH have trouble getting credit
- International flow of dollars strained

Show up in Many Market Metrics

- Mkt. volatility spikes
- Bid-asks spreads widen
- Pricing connections between similar assets/trades break down
- Risk spreads up across credit markets

Chicago Fed National Financial Conditions Index

(deviation from 1971-to-current average)



Source: Federal Reserve Bank of Chicago from Haver Analytics

Federal Reserve Actions

■ Monetary (FOMC/BoG)

- Cut funds rate to ELB, gave forward guidance
- Cut discount/ffr wedge, extend term loans
- Overnight and term repo
- Purchase treasuries, MBS, CMBS
- Eliminate reserve reqs.
- Swap lines, FIMA facility

■ Supervisory & regulatory (BoG)

- Support banks using capital and liquidity buffers to lend
- Temporary change to supplementary leverage ratio
- Other guidance (some with other regulators)

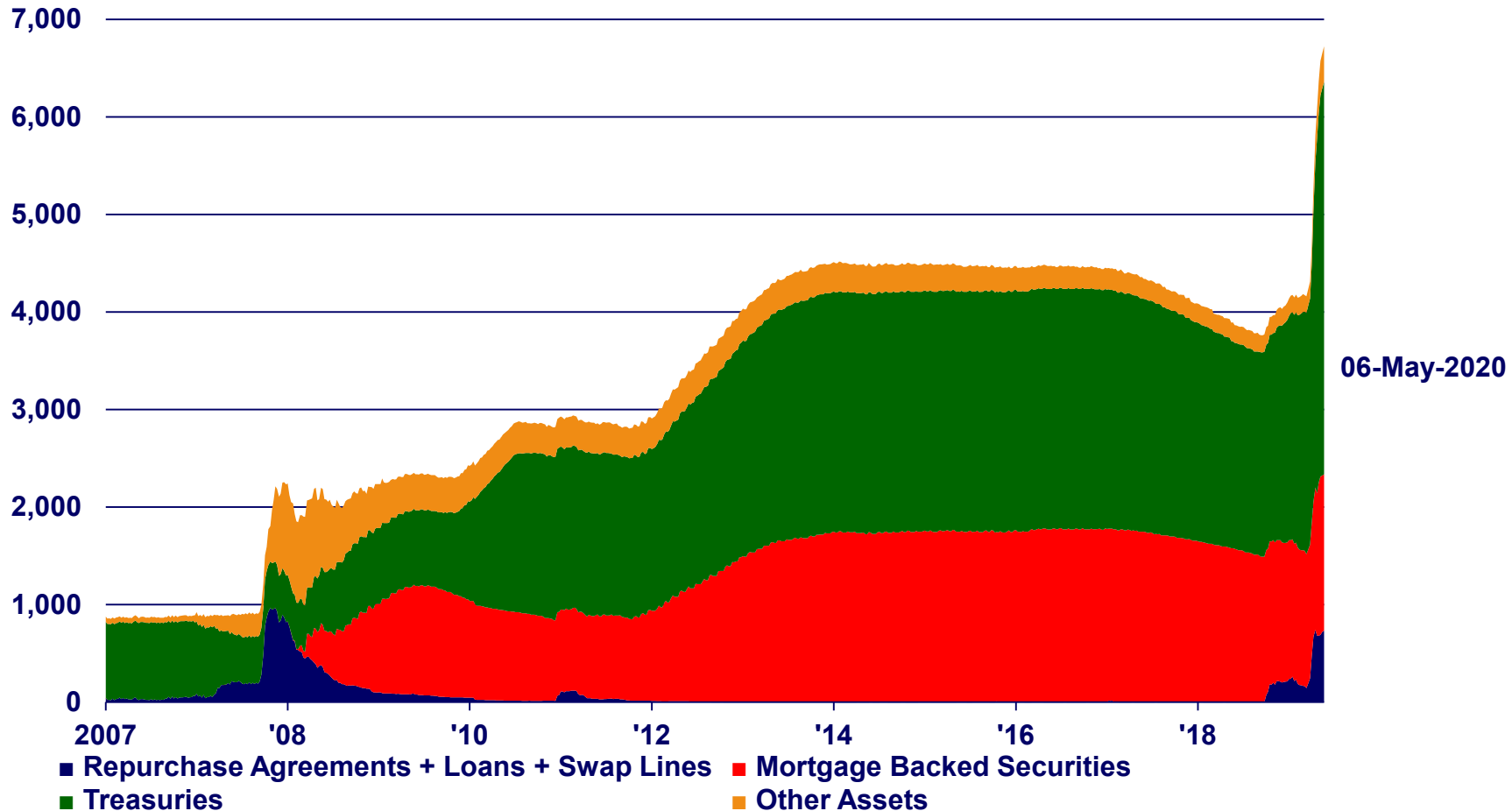
■ 13(3) Facilities (BoG)

- Commercial paper funding (CPFF)
- Money mkt mutual fund liquidity (MMLF)
- Primary dealer credit (PDCF)
- Primary market corporate credit (PMCCF)
- Secondary market corporate credit (SMCCF)
- Term asset-backed securities loan (TALF)
- Paycheck protection program liquidity (PPPLF)
- Municipal liquidity (MLF)
- Main street lending program (MSNLF, MSPLF, MSELF)

Federal Reserve Assets

Balance Sheet

(Bil. of \$)



Federal Fiscal Policy Actions ~ \$2.5T

■ Households

- Direct payments (\$290B)
- Expanded unemployment insurance (\$270B)
- Emergency paid leave mandate/subsidies (\$105B)
- Other

■ Businesses

- Paycheck protection plan for small business (\$670)
- Support for targeted industries (\$25B)
- Tax cuts (\$240B)

■ Health care support \$270B)

■ State and local government (\$270B)

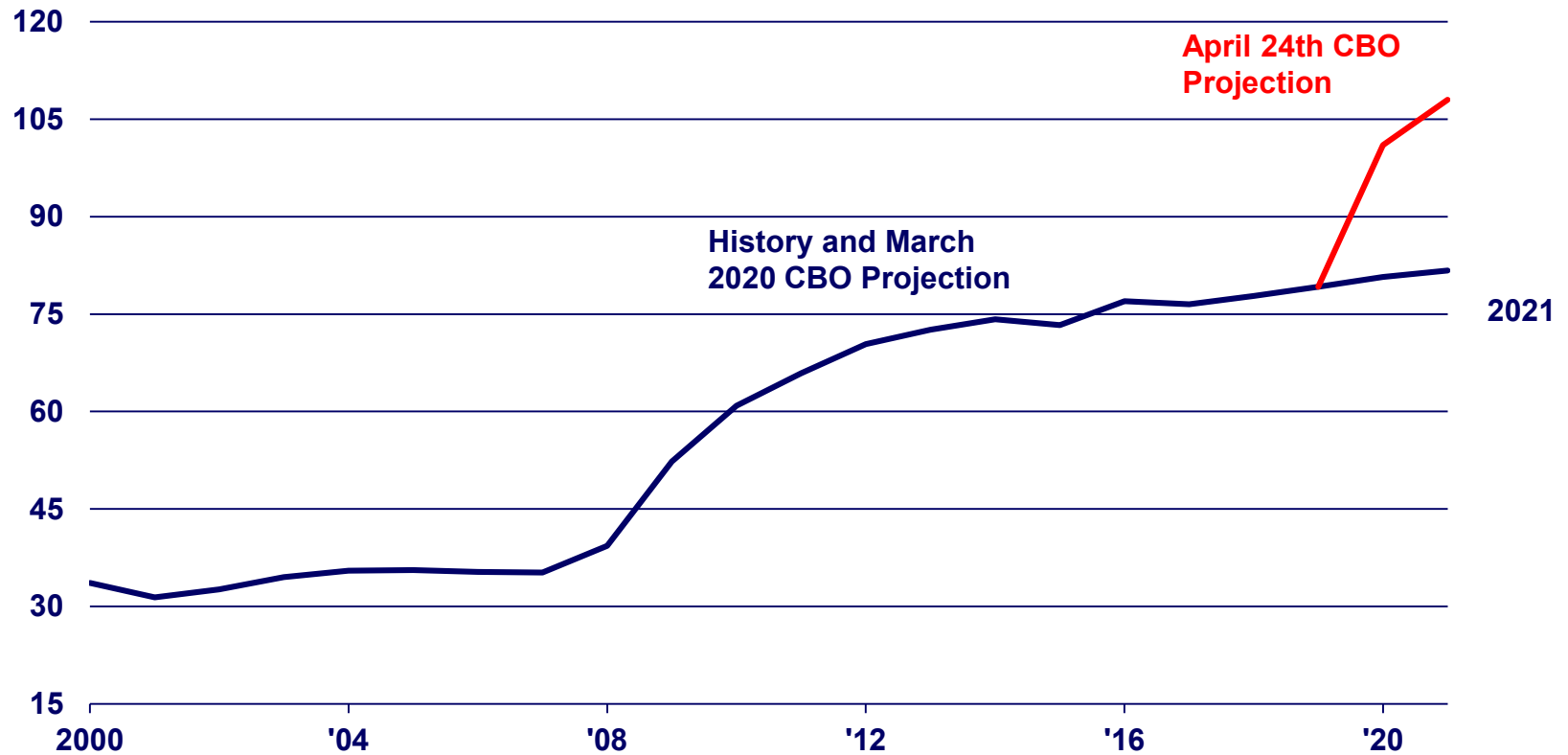
■ Loss absorption buffers for Fed facilities (\$450B)*

*Not included in the \$2.5T total

Source: Committee for a Responsible Federal Budget from Congressional Budget Office, Joint Committee on Taxation, legislative summaries, agency reports, Federal Reserve, media reports, CRFB estimates.

Federal Debt Rising

End of fiscal year debt held by the public, including Federal Reserve
(Percent of GDP)

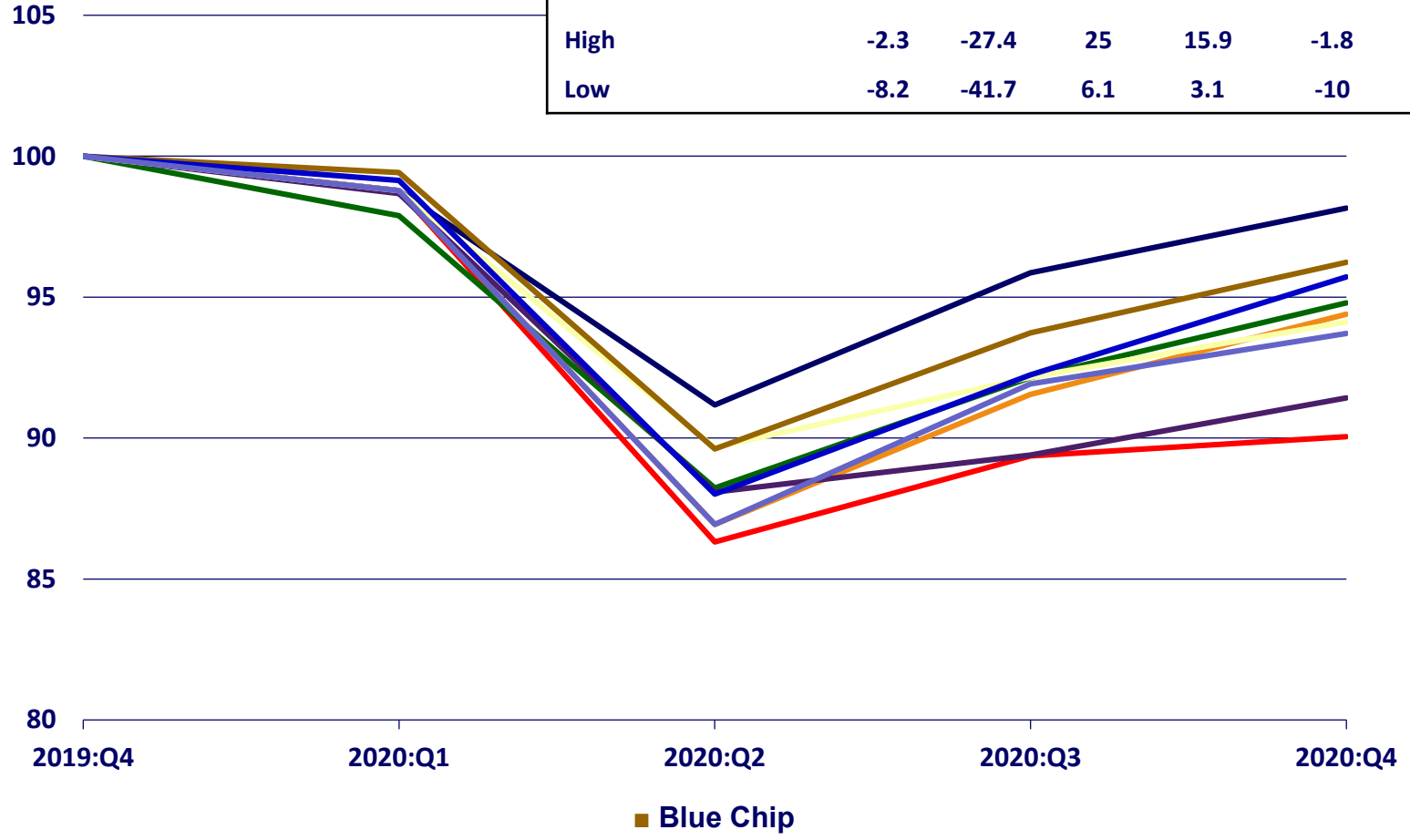


OMB and CBO from Haver Analytics

Forecasters see steep drop in GDP

GDP Level
(Index, 2019:Q4=100)

GDP (percent change, annual rate)	Q1	Q2	Q3	Q4	2020 Q4-to-Q4	2021 Q4-to-Q4
Median	-4.8	-36.5	19.7	9.9	-5.6	5.2
High	-2.3	-27.4	25	15.9	-1.8	7.8
Low	-8.2	-41.7	6.1	3.1	-10	3.1

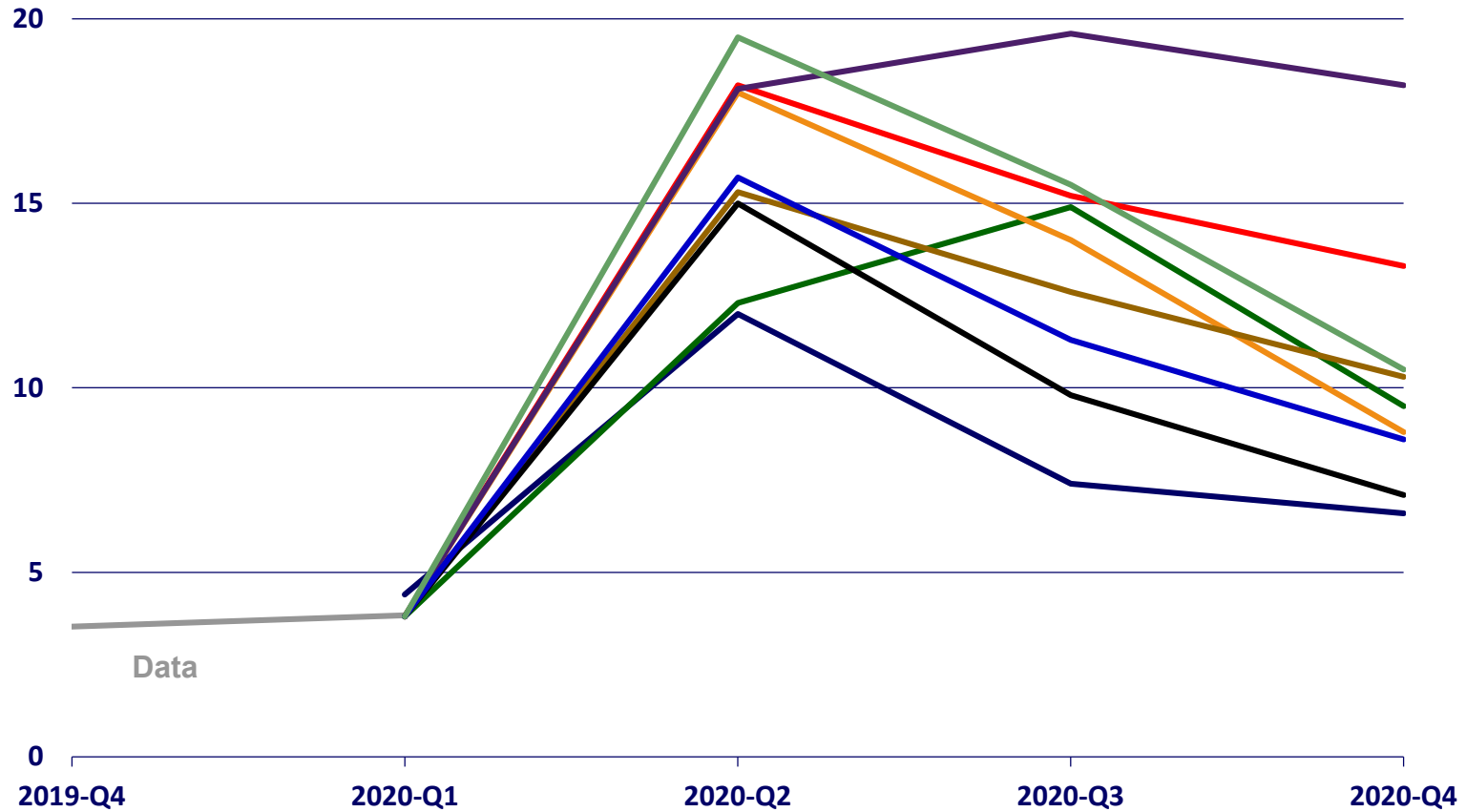


Source: Blue Chip from Haver Analytics and other internal sources

And Large Increase in Unemployment

Unemployment Rate
(percent)

Unemployment rate (percent)	Q1	Q2	Q3	Q4	2021 Q4
Median	3.8	15.7	14.0	9.5	6.5
High	4.4	19.5	19.6	18.2	11.7
Low	3.8	12	7.4	6.6	4.4



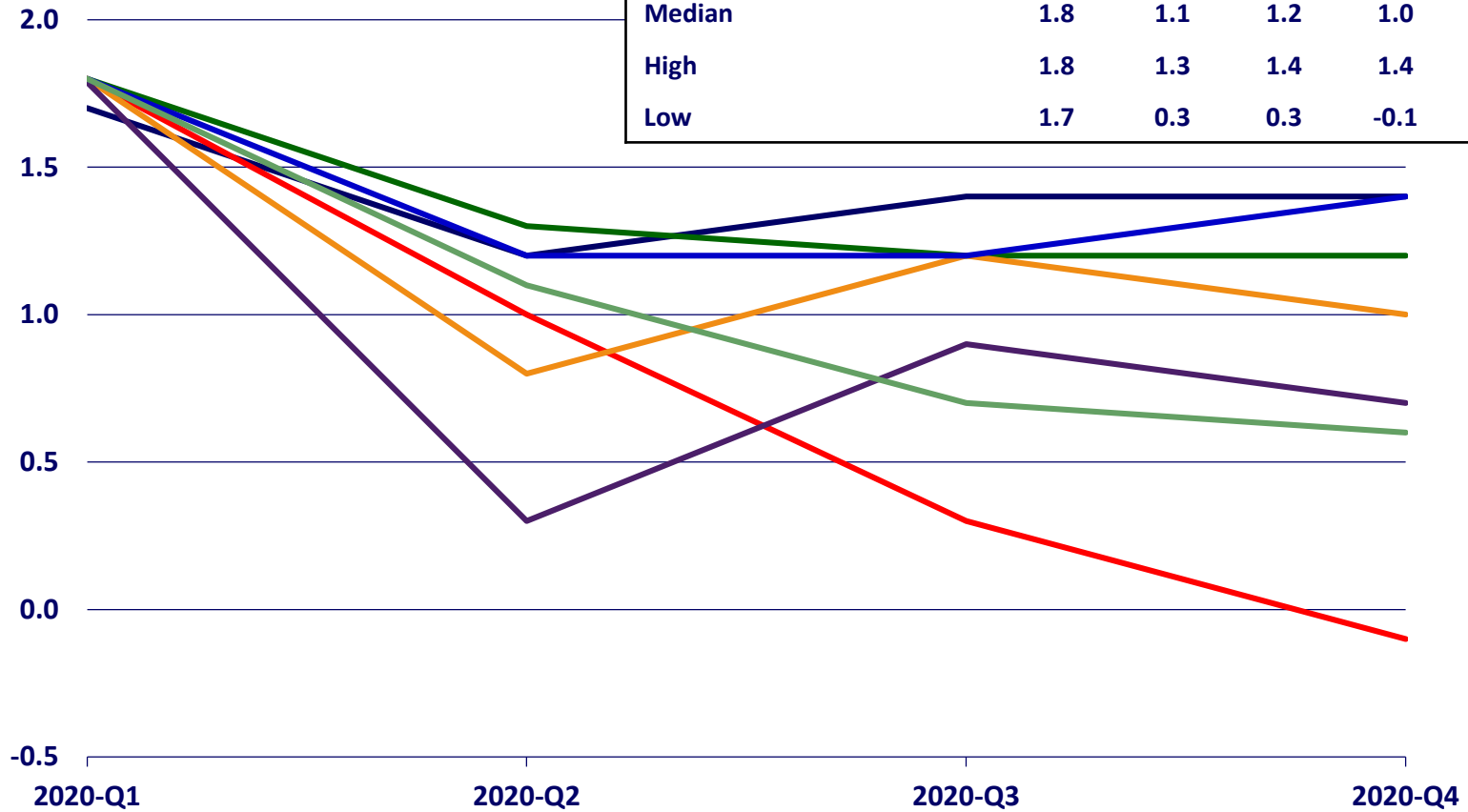
■ Blue Chip

Source: Blue Chip from Haver Analytics and other internal sources

Inflation

Core PCE Inflation
(Percent change, year-over-year)

Core PCE Inflation (percent change, year-over-year)	Q1	Q2	Q3	Q4	2021 Q4
Median	1.8	1.1	1.2	1.0	1.3
High	1.8	1.3	1.4	1.4	1.7
Low	1.7	0.3	0.3	-0.1	-0.4



Source: Various internal sources