COVID-19: Economic Implications and Policy Response

Scott L. Baier
Clemson University
and
National Economic Education Delegation

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What is this?

- **A natural disaster – with important twists:**
  - Global
  - Duration is unpredictable
  - Economic toll is enormous and potentially durable
- **A health crisis that spilled over onto the economy.**
  - A perfect storm of economic difficulty
    - Supply side
    - Demand side
    - Financial
  - Without a culprit

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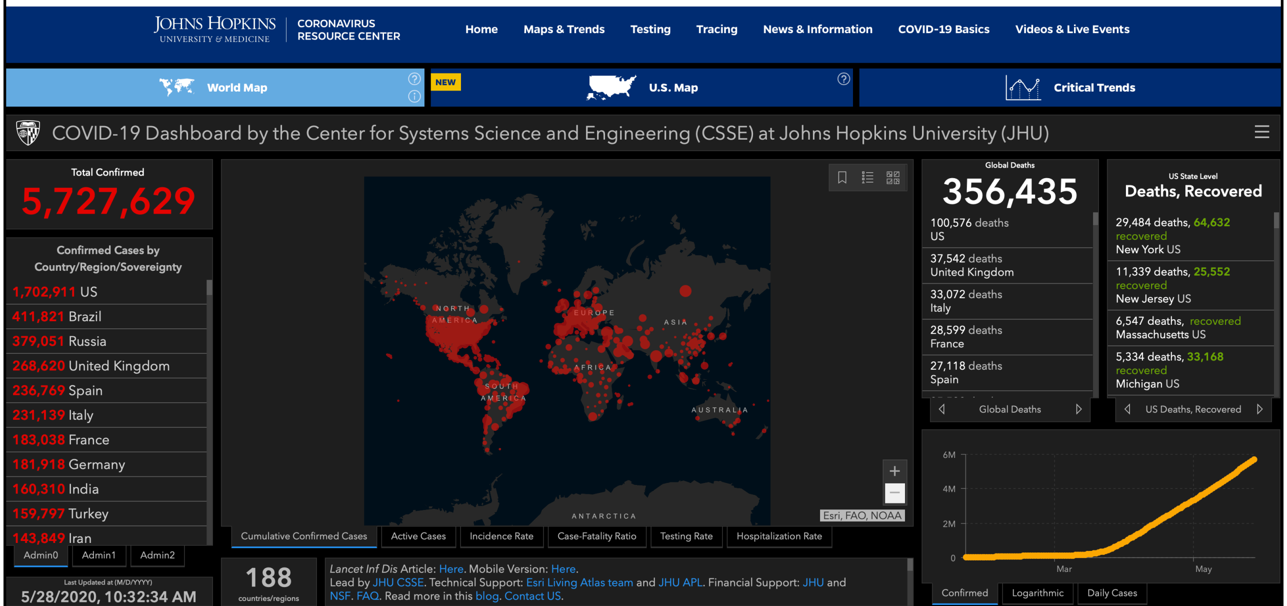

Unlike the daily updates of coronavirus, standard economic data releases do not come to us at such high frequency

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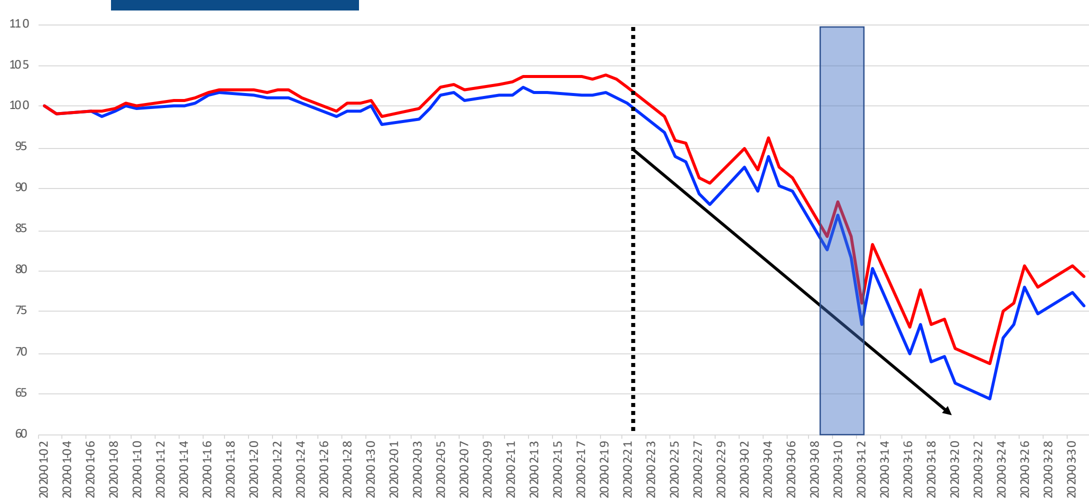
Stock Market Activity

Jan 2020 – March 2020



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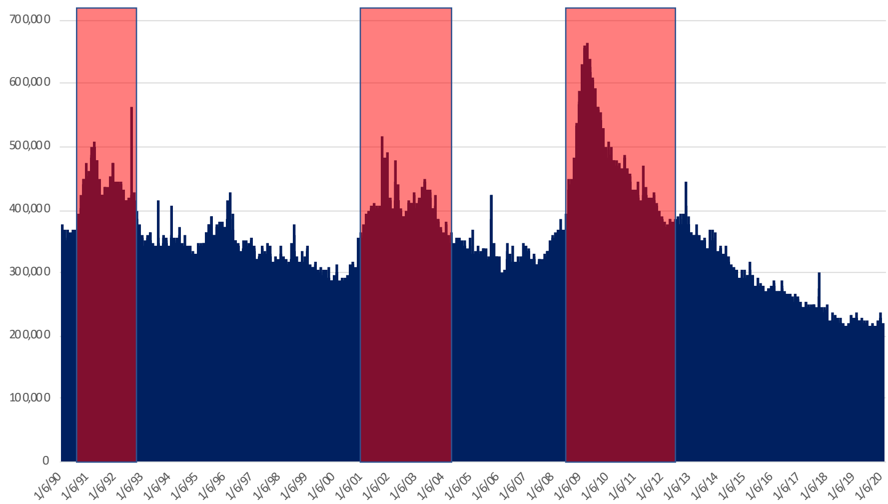
Weekly Unemployment Claims: 1/1990 – 3/2020



When the economy is doing well, initial claims for unemployment average about 280,000 to 340,000.

During recessions, initial claims typically increase to about 400,000 --the biggest increase had 665,000.

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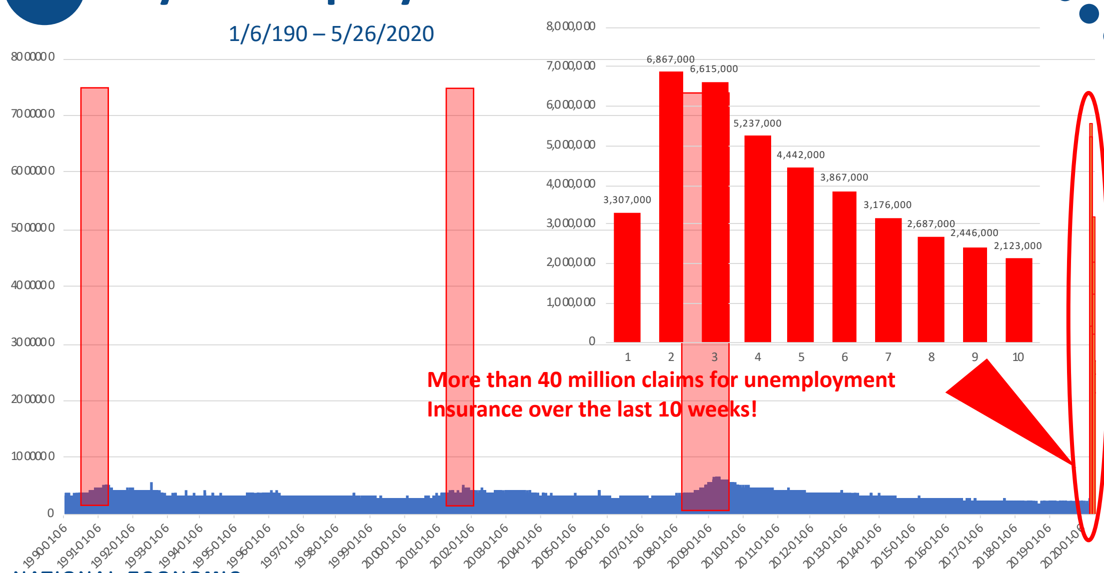
Weekly Unemployment Claims

1/6/190 – 5/26/2020



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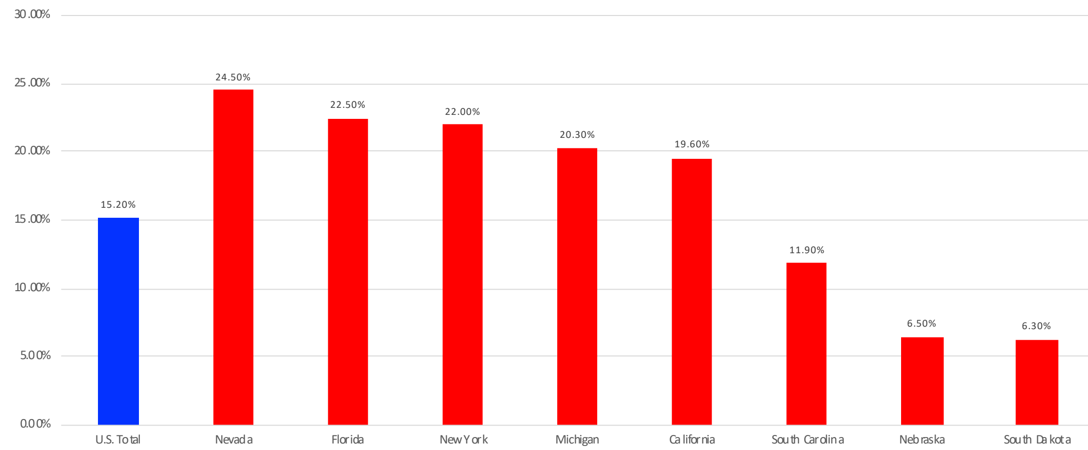
Insured Unemployment as a Share of Labor Force



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This Time is Different

- **Great Depression**
  - A Financial Crisis which and (initial) flawed policy response
  - that resulted in persistent high unemployment
- **Great Recession**
  - A Financial Crisis
- **Oil Crisis of 1975 : Supply Shock due to a sharp rise in the price of oil**
- **Prior to the pandemic none of the above:**
  - Financial markets were not in trouble.
  - Real GDP growth was strong buoyed by strong consumer spending.
  - Unemployment and inflation were both low.
  - Oil prices were falling.
- **COVID-19 – "Health Shock"**
  - Supply Shocks: Disrupted supply chains
  - Demand Shocks: Limit market transaction in order to reduce the spread
- **Spanish Flu (1918)**
  - Structure of production and consumption is notably different

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Recessions: Historical Perspective

Start Date	Recession Duration	Time to Peak Unemployment	Peak Unemployment
Nov 1948	11 mos.	12 mos.	7.9%
July 1953	10 mos.	13 mos.	6.1%
Aug 1957	8 mos.	10 mos.	7.5%
April 1960	10 mos.	11 mos.	7.5%
Dec 1969	11 mos.	12 mos.	6.1%
Nov 1973	16 mos.	17 mos.	9.0%
July 1981	16 mos.	17 mos.	10.8%
July 1990	8 mos.	11 mos.	7.8%
Mar 2001	8 mos.	26 mos.	6.2%
Dec 2007	18 mos.	27 mos.	9.9%
Mar 2020*	?????	2 mos.	14.7%

Unemployment typically peaks after the recession ends

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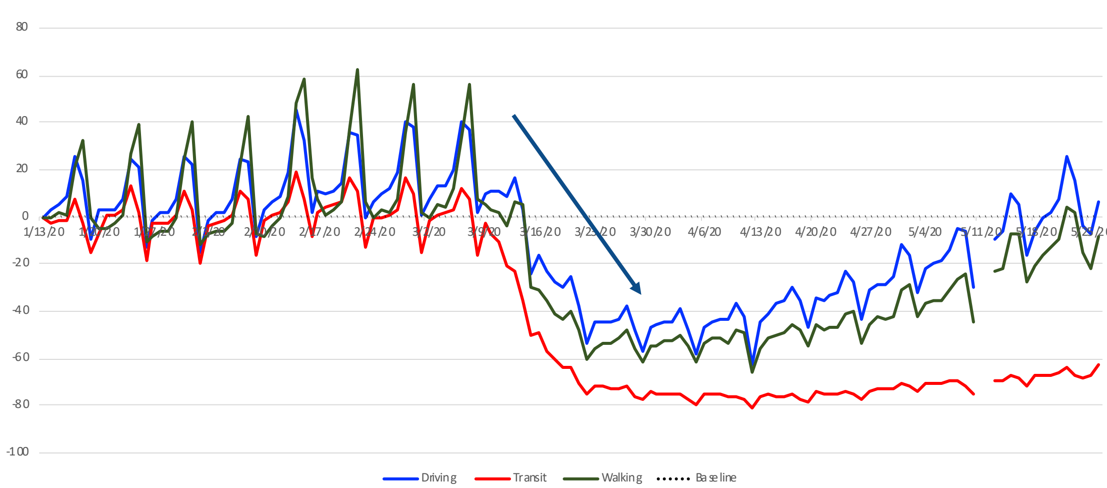
Apple Mobility Index: People Stopped Going Out



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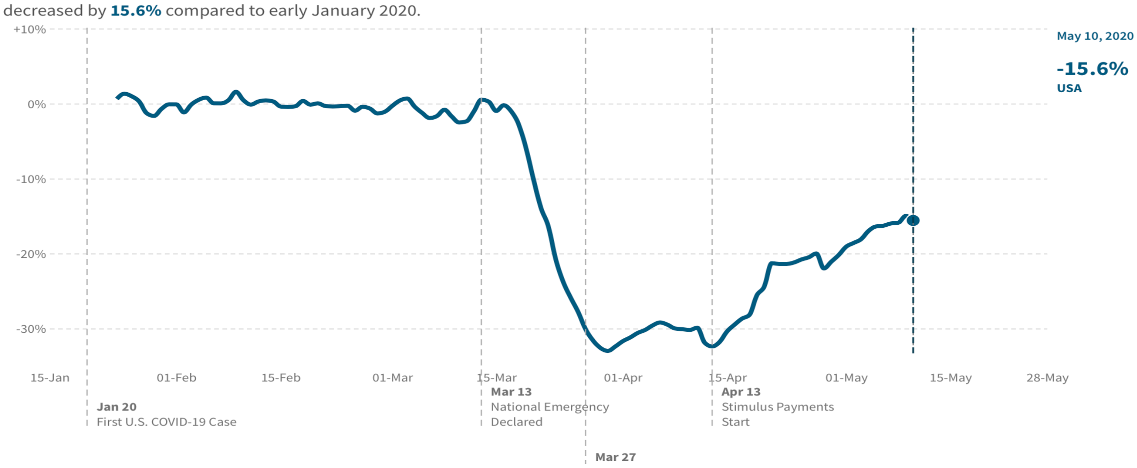
Consumer Spending Drops

In **the United States**, as of May 10 2020, total spending by all consumers decreased by **15.6%** compared to early January 2020.



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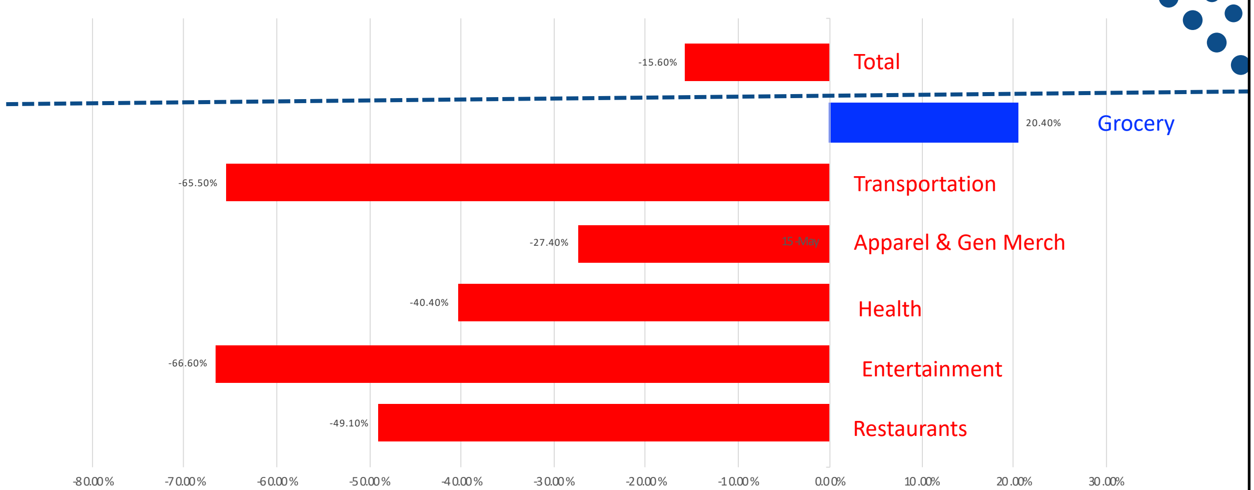
Plunge in Consumer Spending



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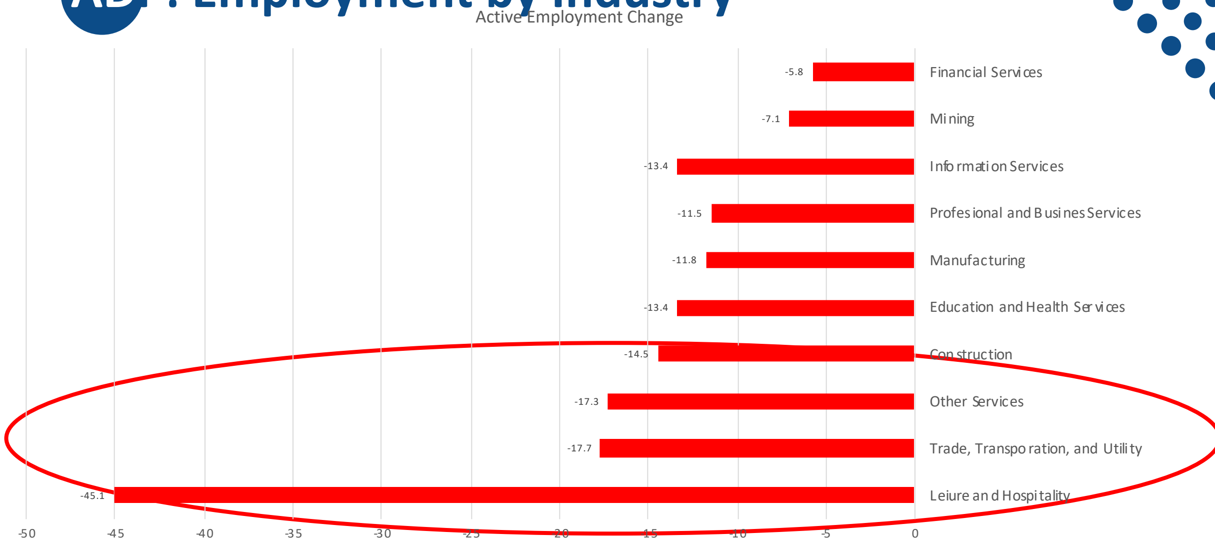
ADP: Employment by Industry



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Source: Cajner, Crain, Dexter, Grigsby, Hamins-Puertolas, Hurst, Kurtz, and Yidirmaz

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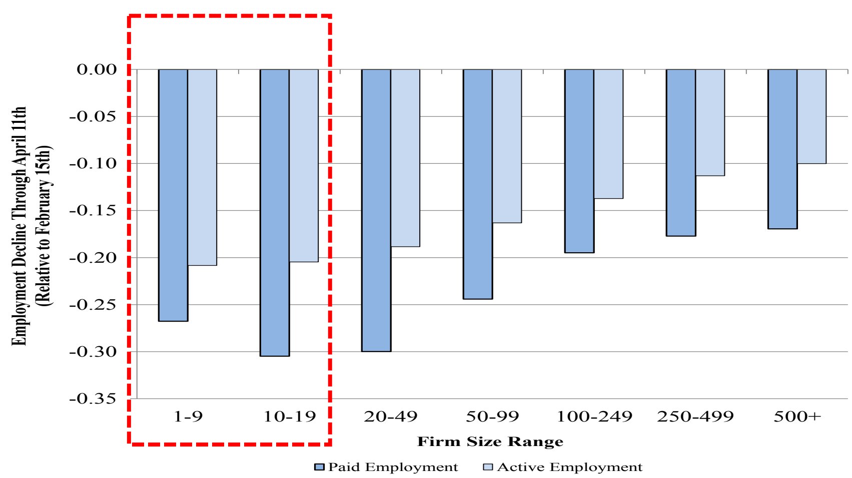
Employment Changes by Firm Size



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Source: Cajner, Crain, Dexter, Grigsby, Hamins-Puertolas, Hurst, Kurtz, and Yidirmaz

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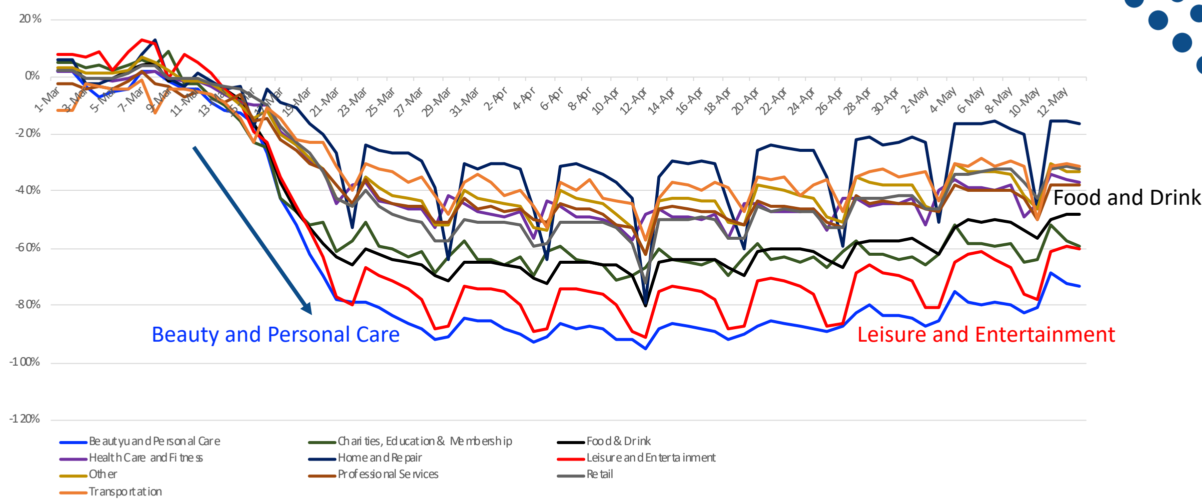
Percent Change Hours Worked



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Data Source: Homebase

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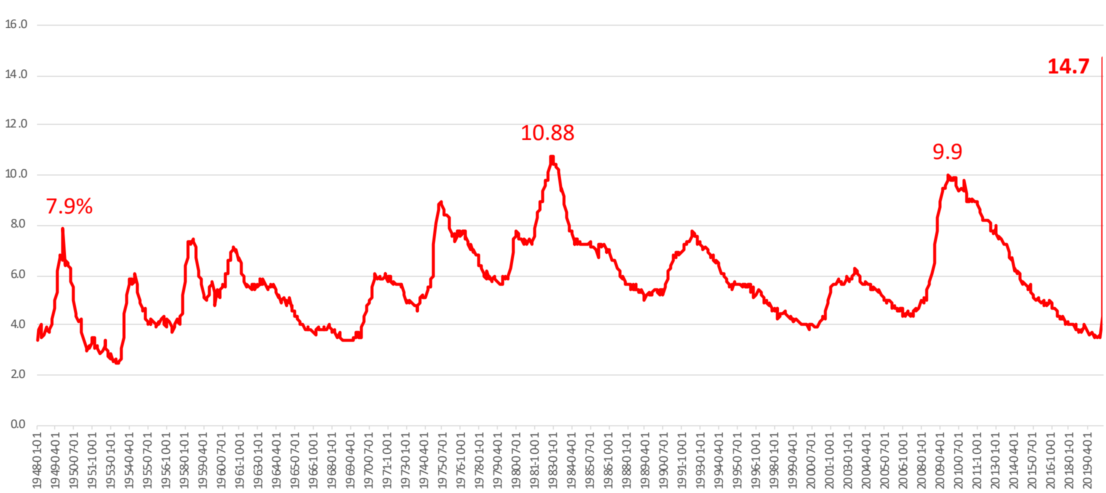
Unemployment Rate



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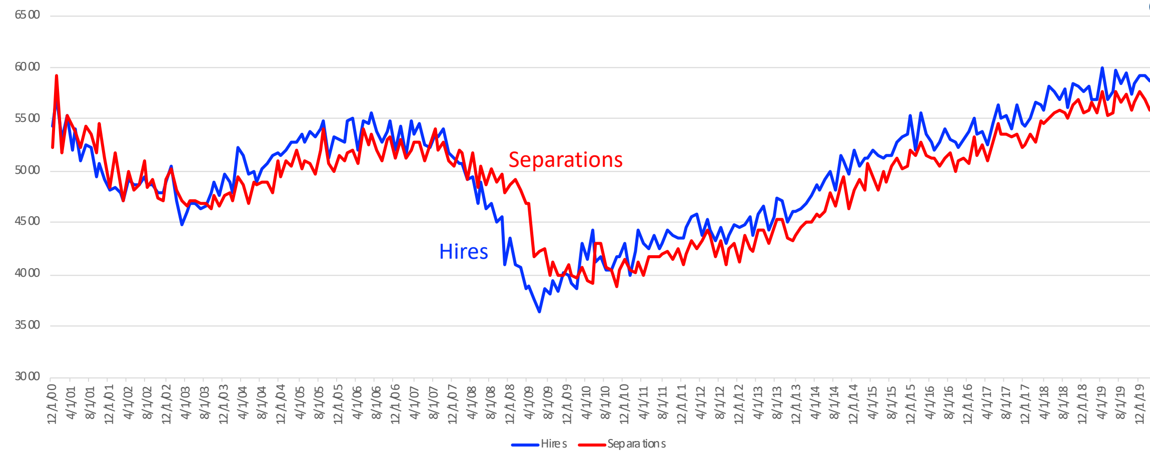
JOLTS: Hires and Separations



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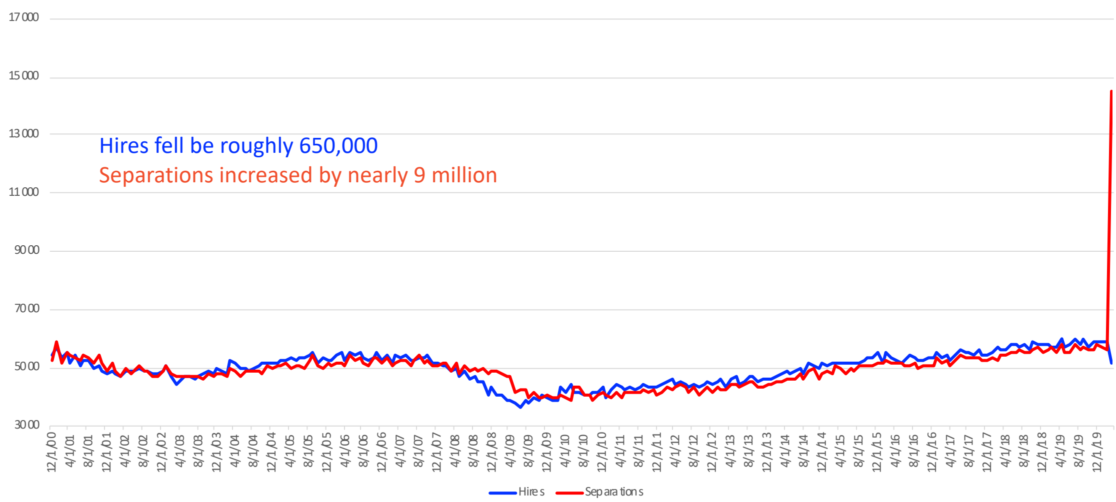

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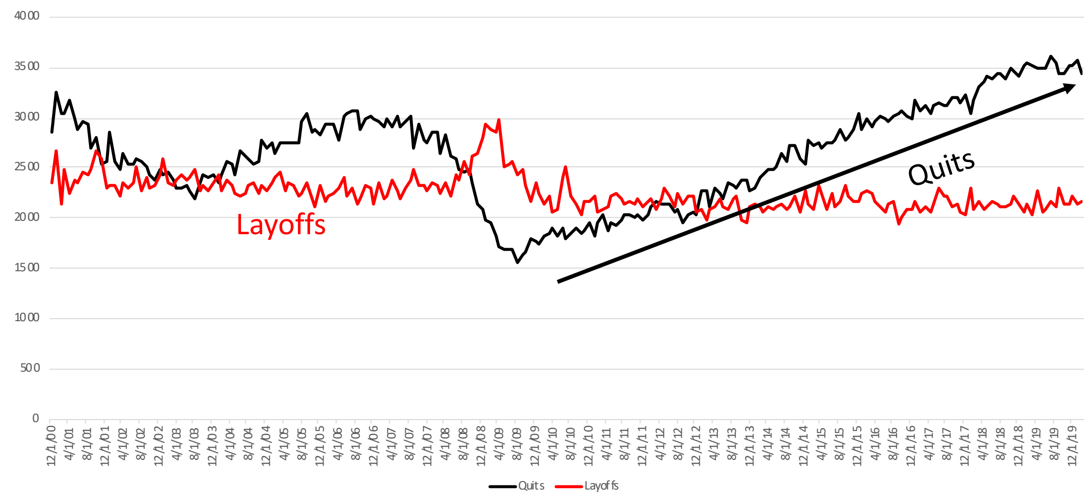
Separations: Quits and Layoffs



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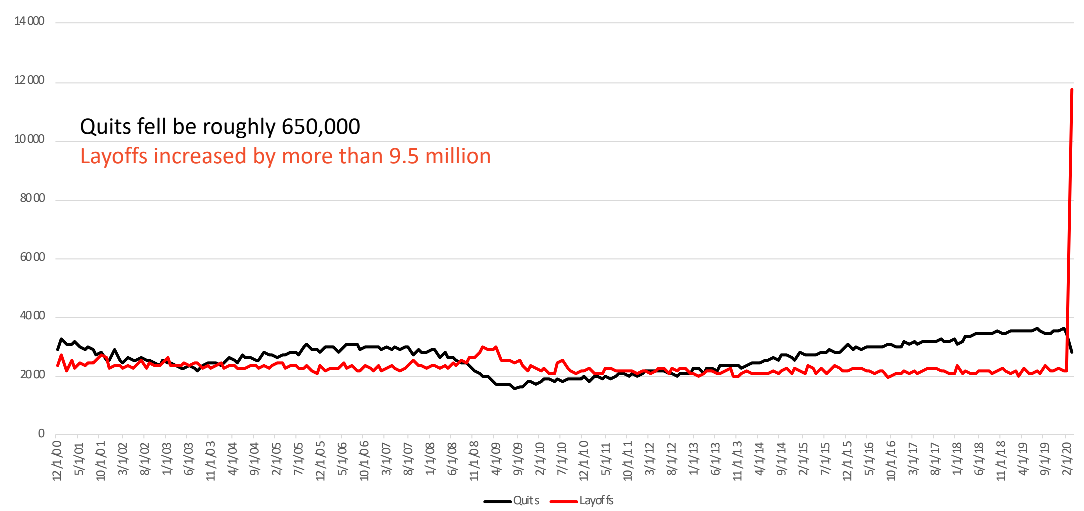

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Government Response: This Shock is Different

- **This economic shock is a "health shock" with externalities that have (large) macroeconomic consequences.**
- **The fiscal and monetary response is not one where we can or should think about Keynesian versus Classical Solutions.**
- **Response should be to target the cause of the problem and provide income support for individuals and some financial support for firms.**
  - Cause of the problem is COVID-19 and its contagion.
  - Economy appeared to be relatively structurally sound before the shock and then a sudden deterioration
  - (We hope) The economic shock is not structural and on the "other side". We hope that structurally things will be the same; therefore, we would like to preserve employment-employer matches.

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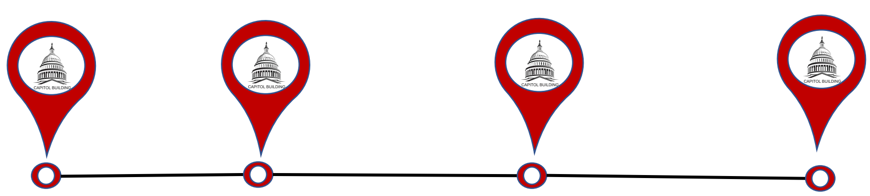
Fiscal Policy Timeline



Phase I: H.R. 6074
3/6
R&D
Public Health
Medical Supplies
Other

Phase II: Family First
3/14
Paid Sick Leave
Family Medical Leave
Covid-19 Testing
Unemployment Expansion

Phase IIIa: CARES
3/18
HHLD Payments
Support for Small Firms
Support for Medium Sized Firms
Unemployment Insurance
Aid to States

Phase III b
4/24
(More) Support for Small Firms
COVID-19 Testing
Hospitals

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Fiscal Response: CARES Act (H.R. 748)

- **Direct payment to households $1,200 for every adult and $500 for every child – similar to the 2008 rebate but purpose is different.**
- **Small business loans (Paycheck Protection Program)-- $350 billion**
  - <500 employees and designed to cover six (6) weeks of payroll.
- **Economic Stabilization Fund (Main Street Lending Program) – $500bn**
  - for medium sized firms,
  - state and local municipalities, and
  - passenger and cargo air carriers, and firms maintaining national security.
- **Expand unemployment benefits**

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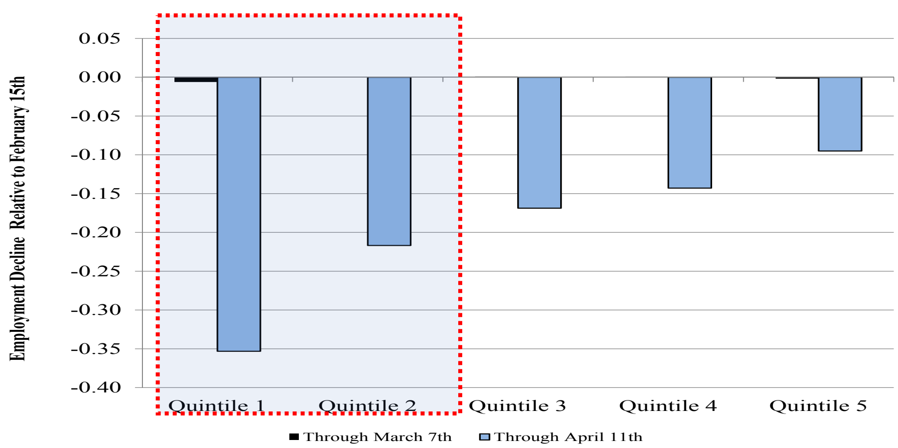
Employment Change by Income Quintile



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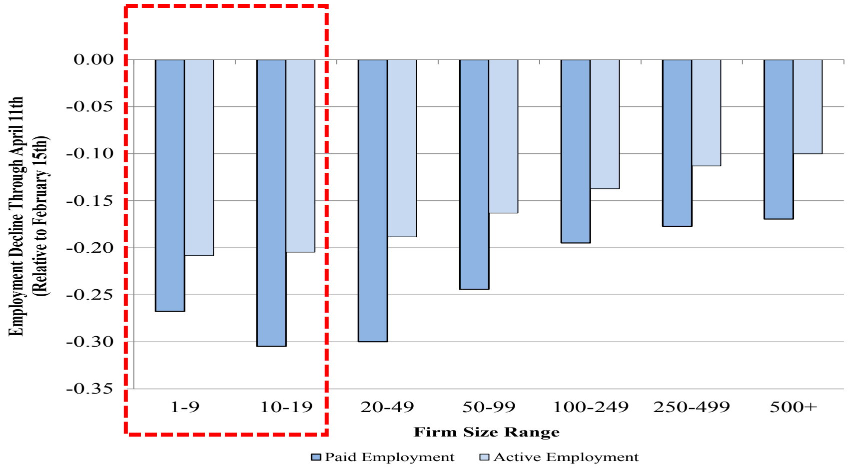

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Source: Cajner, Crain, Dexter, Grigsby, Hamins-Puertolas, Hurst, Kurtz, and Yidirmaz

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SBA Distribution

	Distribution of PPP Eligible Firms		
Firm Size	Percent of Firms	Percent of. Employment	PPP Loan Size (est)
Under 5	61.9%	9.8%	$16,985
5 to 9	16.9%	11.0%	$57,239
10 to 19	10.6%	14.0%	$121,470
20 to 99	9.1%	35.3%	$387,137
100 to 499	1.5%	29.9%	$2,248,253

But Is It Enough? Loans: are for 8 weeks

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PPP Loan Major Recipients By Industry

Industry	Amount (Billions)	Percent of Loans
Construction	$44.9	13.1
Professional, Technical and Scientific, Services	$43.3	12.7
Manufacturing	$40.9	12.0
Health Care and Social Assistance	$39.9	11.7
Accommodation and Food Service	$30.5	8.9
Retail Trade	$29.4	8.6
Wholesale Trade	$19.5	5.7

These seven (7) industries account for nearly 75% of the PPP loans

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Federal Reserve Timeline

March 3
Federal Funds Rate

March 15
Federal Funds Rate
Discount Window Lending
Quantitative Easing
Forward Guidance

March 17/18
Primary Dealer Credit Facility (PDCF)
Commercial Paper Funding Funding Facility (CPFF)
Money Market Mutual Fund Facility (MMLF)

March 23
Primary Market Corporate Credit Facility (PMCCF)
Secondary Market Corporate Credit Facility (CMCCF)
Term Asset-Backed Securities Loan Facility (TALF)

April 9
Paycheck Protection Program Liquidity Facility (PPPLF)
Main Street Business Lending Program
Municipal Liquidity Facility

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Federal Reserve: Standard Operations

- **Federal Funds Rate:** The Federal Reserve lowered the targeted Federal funds rate on March 3 and again on March 15 moving the targeted Federal Funds rate to zero.
- **Discount Window Lending:** Lowered the interest rate it charges banks to borrow from 1.75% to 0.25%.
- **Reserve Requirement:** Lowered the reserve requirement to zero.
- **Forward Guidance:** Honed during the Great Recession the Fed tries to set market expectations on the time path of interest rates over time.

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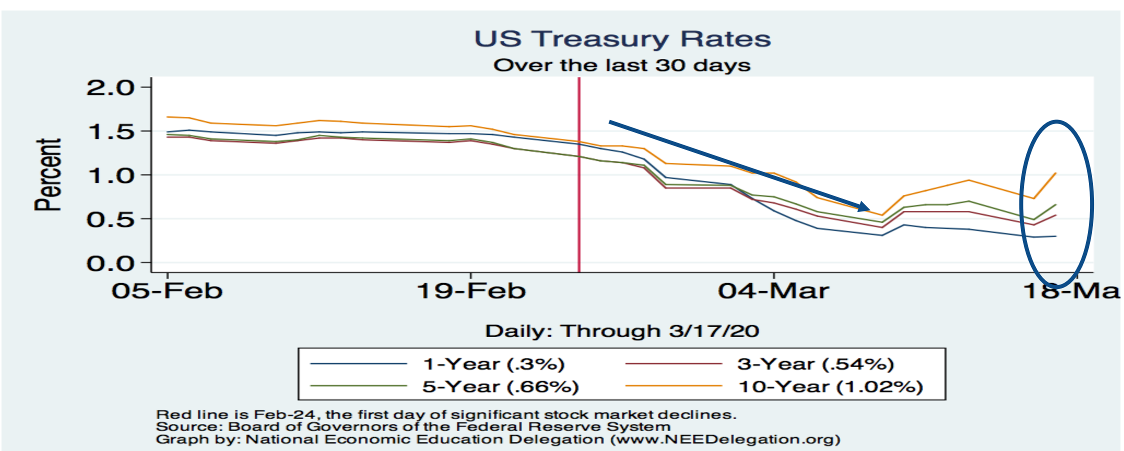
US Treasury Rates: A Safe Haven?



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Federal Reserve: Ensure Financial Market Stability

- **Securities Purchases (Quantitative Easing):** Fed Response: purchase treasuries and mortgage backed securities (3/15).
- Re-launched the **Primary Dealer Credit Facility (PDCF)** in order "smooth market functioning and facilitate the availability of credit to businesses and households (3/17).
- Re-instituted the **Money Market Mutual Fund Liquidity Facility (MMLF)** to "assist money market mutual funds in meeting demands for redemptions by households and investors enhancing overall market function and credit provision to the *broader economy*."
- Increased liquidity in the **repo market.** The repo market is where firms borrow and lend cash and short-term securities. The Fed was offering $100 billion in overnight loans and $20 billion in two-week loans.
  - The Fed increased the offerings to $1 trillion (from $100 bn) in overnight repos, and
  - $500 billion in one month **and** three-month repos (from $20bn 2/wks).

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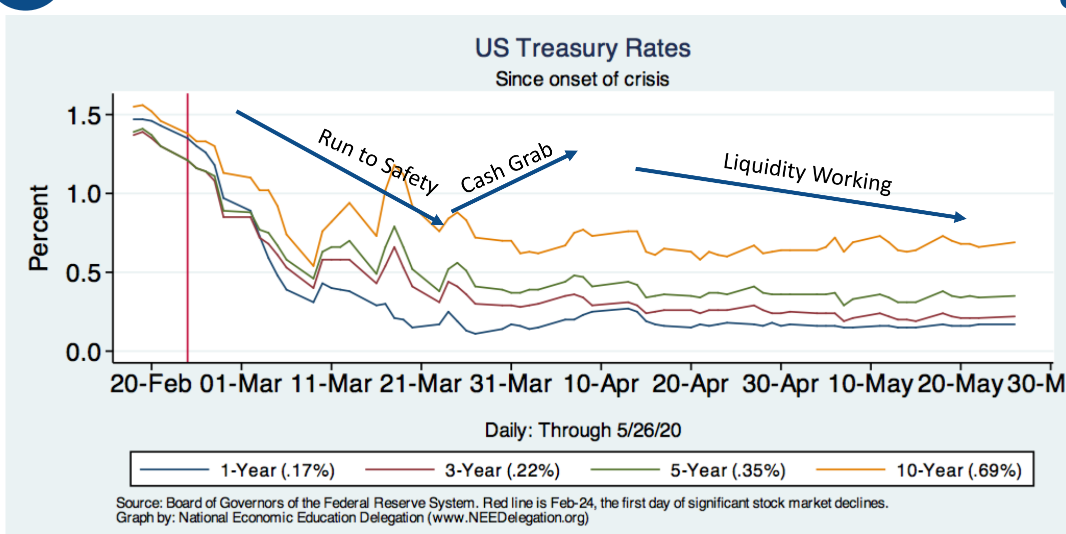
US Treasury Rates: A Safe Haven?



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Federal Reserve: Support Corporations and Business

- Created the **Primary Market Corporate Credit Facility (PMCF)** allows the Fed to lend directly to corporations by buying new bond issuances and providing loans (3/17).
- Instituted the **Commercial Paper Funding Facility (CPFF)** the Fed can purchase commercial paper from firms at a given interest rate – effectively, the Fed is lending directly to firms. (3/17)
- **Main Street (Expanded) Loan Facility:** Through the CARES Act these two programs offer four-year loans to US businesses with up to 10,000 employees or revenues less than $2.5 billion. (4/9)
- **Paycheck Protection Program Facility:** Facilitates loans under the Small Business Administration Paycheck Protection Program

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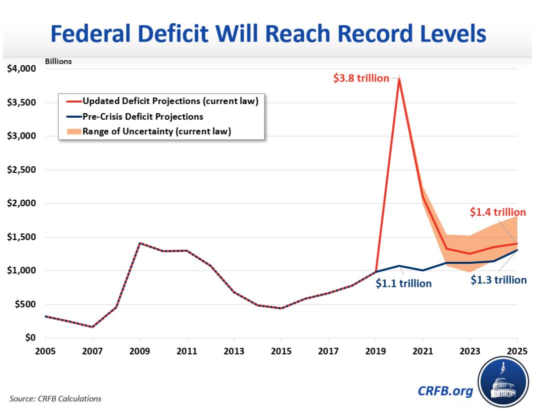
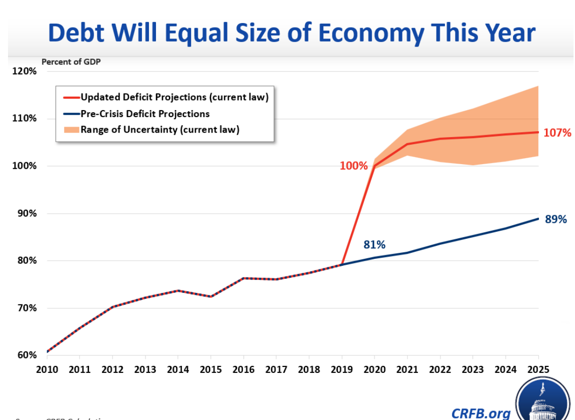
Federal Budget Implications



Deficit may be nearly 20% of GDP



Debt will likely equal GDP this year

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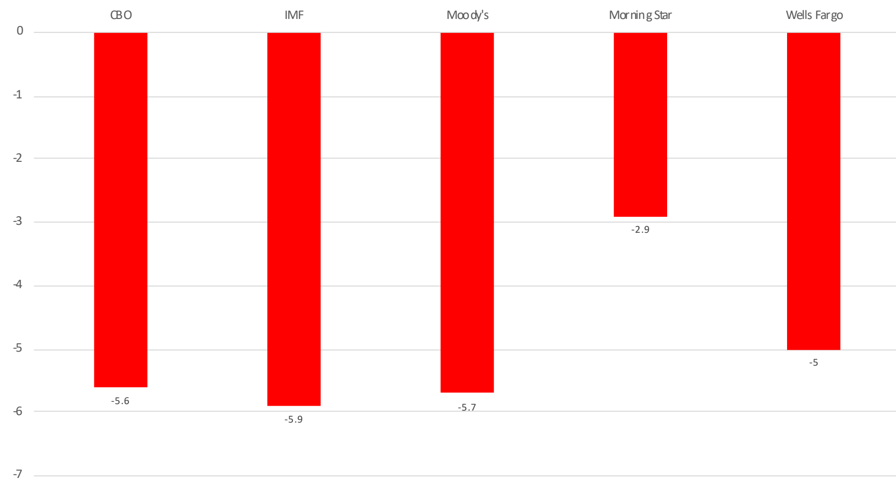
GDP Growth Projections for 2020



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What Is Next?

- **Real GDP growth in the second quarter could be -50%!**
  - What does this growth rate mean?
  - Remember the quarterly growth rate is annualized.
  - So that if Q1 real GDP was \$4.8 trillion and Q2's real GDP fell to \$4.0 trillion, the annualized growth would be $\left[\left(\frac{4.0}{4.8}\right)^4 - 1\right] * 100 \approx -50\%$
- **What about unemployment?**
  - Next Friday will be the next measure of unemployment.
  - In the second half of the year, we might see employment begin to pick up and the unemployment rate fall.
  - We might be close to 10 percent by the end of the year.
  - Even without setbacks on the health side it may take some time for the unemployment rate to get back to 5%

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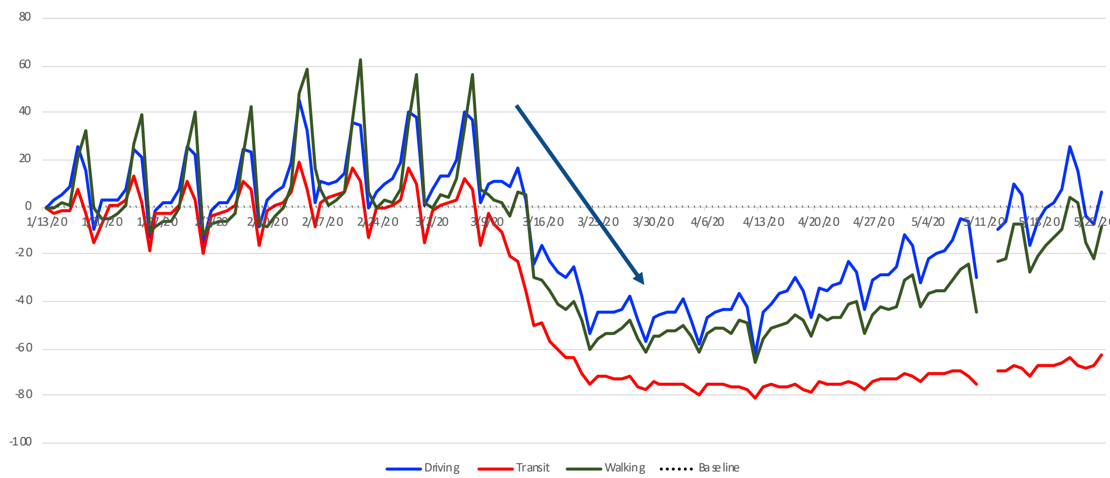
Apple Mobility Index: People Stopped Going Out



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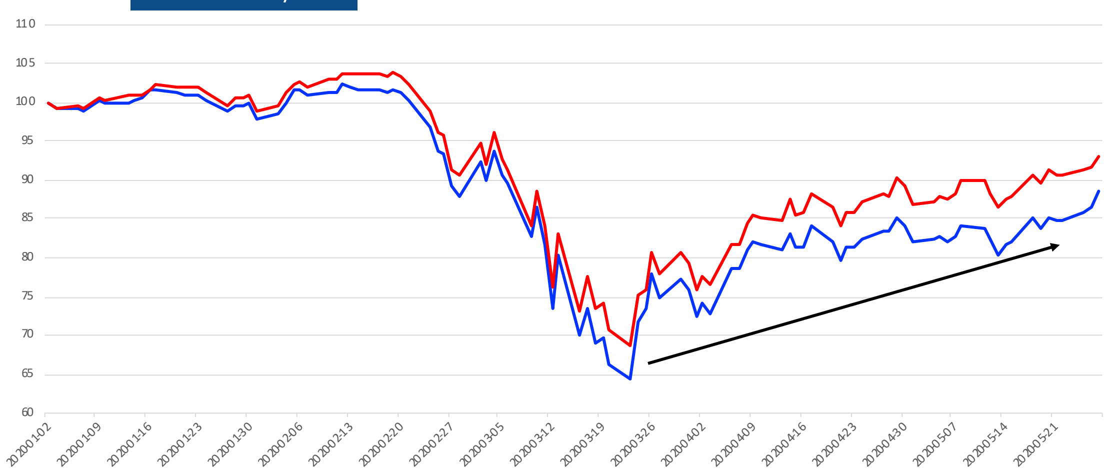
Stock Market Activity

Jan 2020 – May 2020



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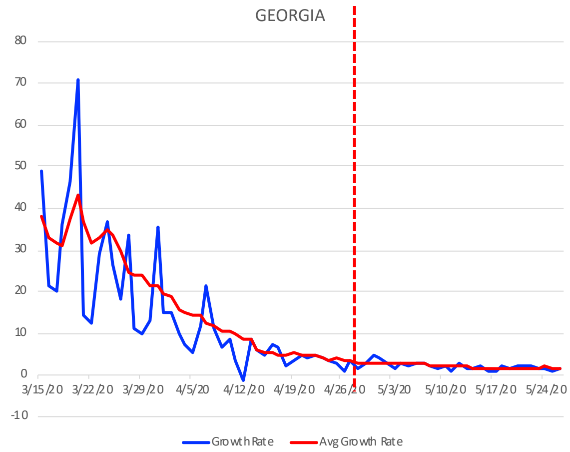
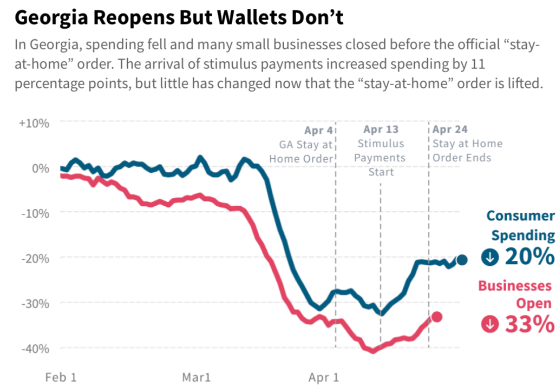
Opening Back Up





Some Big Concerns

- **P. Krugman, "Right now the economy is in the equivalent of a medically induced coma…" (*NYTimes,* 4/16).**
- **We are trying to keep the patient alive, but damage is being done;**
  - How many personal bankruptcies?
  - What is the future of companies that bring many people together?
    - Cruise Lines.
    - Theaters.
    - Concerts
    - Air Travel
    - Sports.
    - Malls.
  - Looming State and Local Fiscal Crisis
  - Bankruptcies of Small Firms

Conclusion

- COVID-19 is health crisis that has macroeconomic implications.
- The macroeconomic effects that have impacted both the supply and demand.
- GDP will likely contract between 5.0 and 6.0 percent this year.
- Positive growth may return in 2021 as long as there are preventative medicines and treatments.
- No easy answers – trade-offs are between bad outcomes.
- How do we plan for the next pandemic?
- Find the silver lining.

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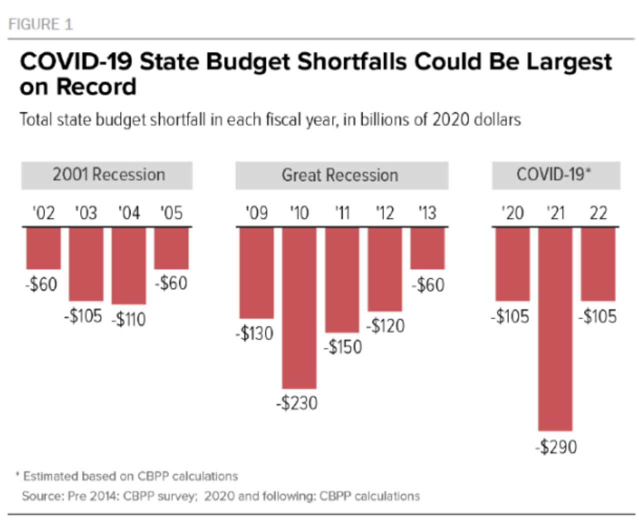
Projected State Budget Shortfall Unprecedented



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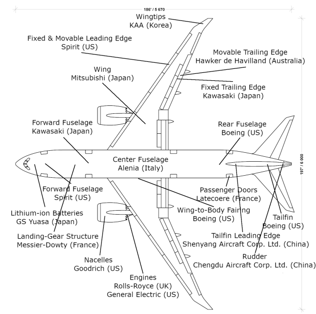
Early COVID-19 Timeline



Countries	Share of World GDP	Manufacturing as a Share of GDP
United States	24%	11%
Canada	2%	10%
UK	3%	9%
Germany	5%	20%
France	3%	10%
Italy	2%	15%
Spain	2%	11%
Japan	6%	21%
China	16%	29%

Dec 31
First case detected
In Hubei Province

Jan 20
First case outside
China (Thailand,
Japan, and South Korea)

Jan 31
White Hous
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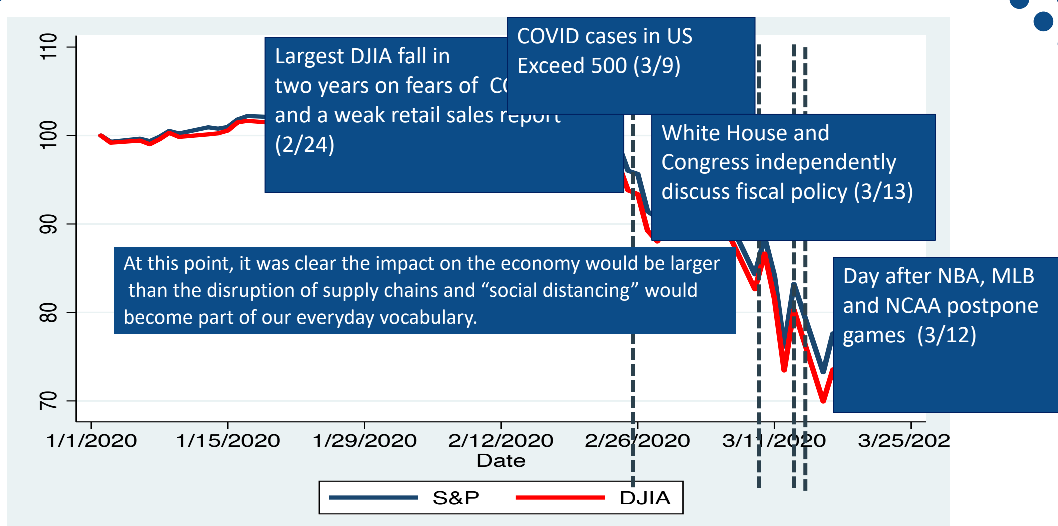
Dow Jones and S&P 500



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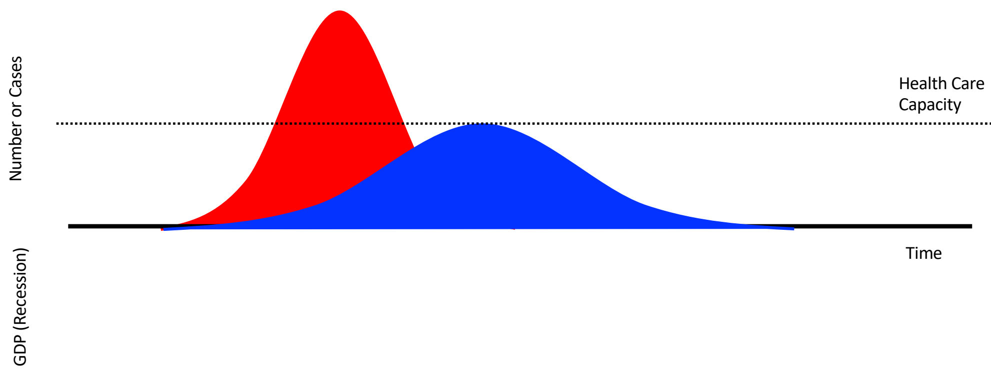
Flattening the Curve May Deepen and Lengthen the Recession



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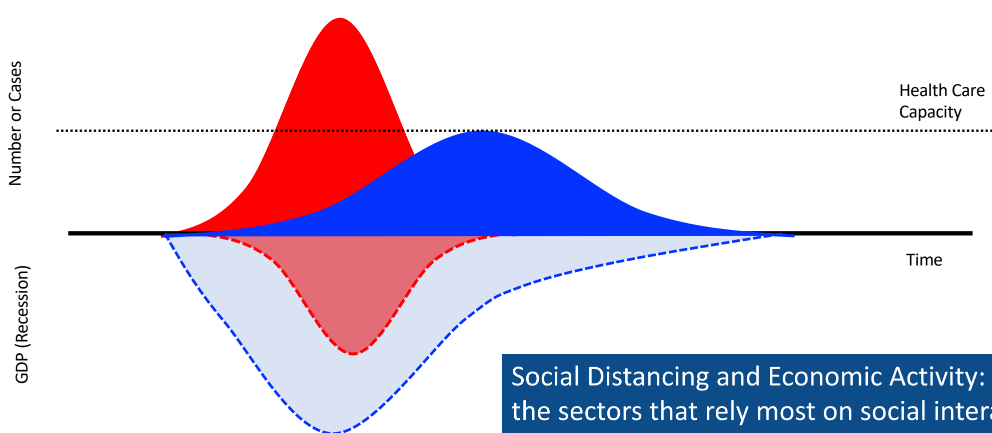

Social Distancing and Economic Activity:
the sectors that rely most on social interaction
will the hardest hit – service Sector

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From Supply Chains to a Sudden Drop in Demand

Countries	Share of World GDP	Manufacturing as a Share of GDP	Services as a Share of GDP
United States	24%	11%	77.4%
Canada	2%	10%	66.7%
UK	3%	9%	71.0%
Germany	5%	20%	61.8%
France	3%	10%	70.3%
Italy	2%	15%	66.3%
Spain	2%	11%	67.7%
Japan	6%	21%	69.1%
China	16%	29%	52.2%

Supply Chain Effect

Sudden Demand Drop

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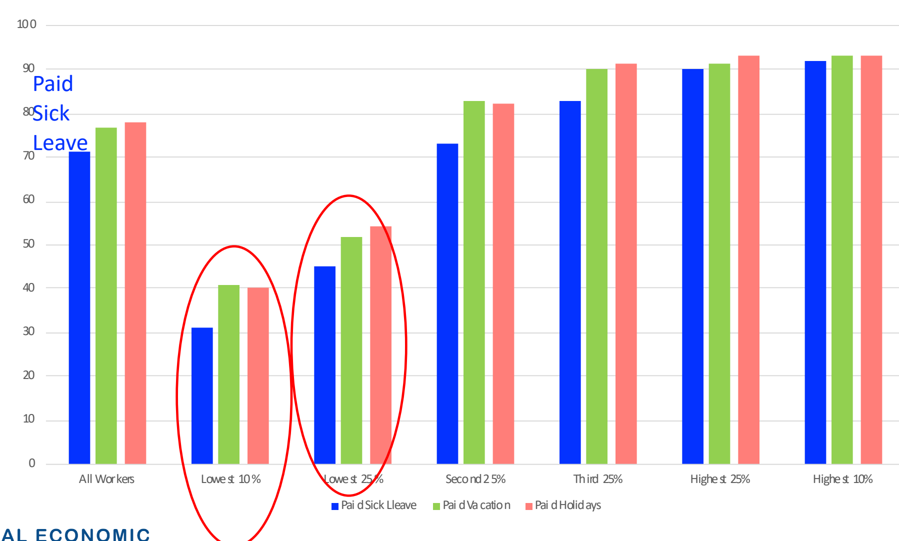
Paid Leave by Income Category



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Government Response (Phase 2): Family First (H.R. 6201)

- Free testing for anyone whose doctor recommends testing.
- Expand family and medical leave
- Paid emergency sick leave
- Additional unemployment benefits
- Food assistance: Supplemental Nutrition Assistance Program (SNAP) and Home-Delivered Nutritional Services

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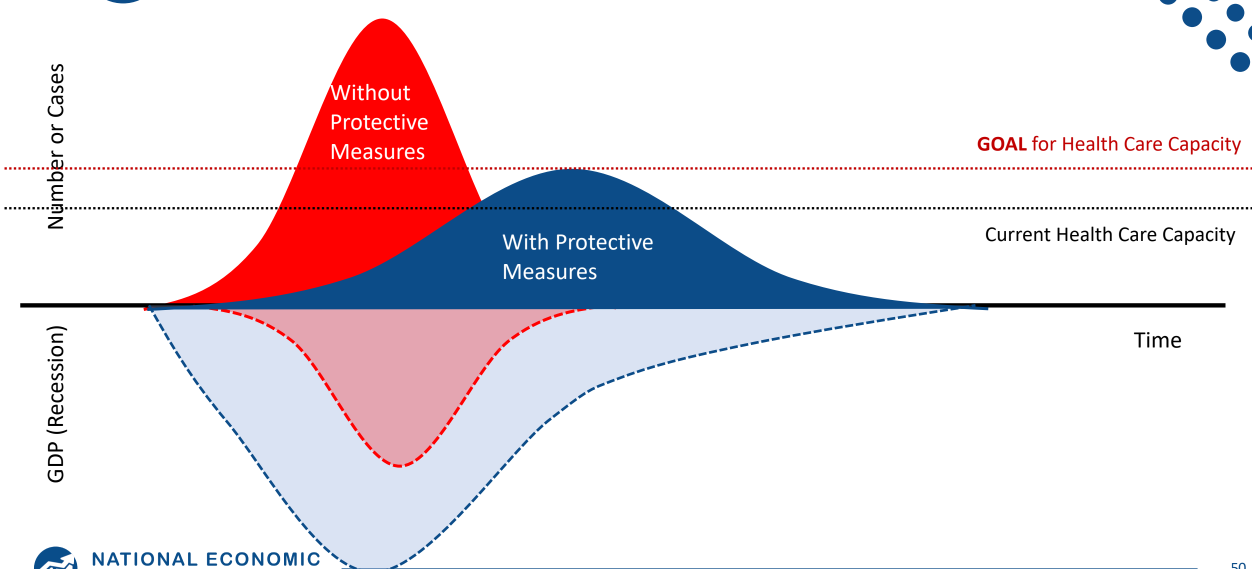
Flattening the Curve and Lengthening the Recession



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