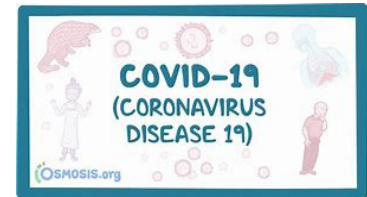




COVID-19: Economic Implications and Policy Response

The Branson School

May 18, 2020
Jon Haveman, Ph.D.
Executive Director, NEED



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National Economic Education Delegation

• Vision

- One day, the public discussion of policy issues will be grounded in an accurate perception of the underlying economic principles and data.

• Mission

- NEED unites the skills and knowledge of a vast network of professional economists to promote understanding of the economics of policy issues in the United States.

• NEED Presentations

- Are **nonpartisan** and intended to reflect the consensus of the economics profession.

2

Credits and Disclaimer

- **This slide deck was authored by:**

- Jon D. Haveman, NEED
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- Geoffrey Woglom, Amherst College (Emeritus)

- **Disclaimer**

- NEED presentations are designed to be nonpartisan.
- It is, however, inevitable that the presenter will be asked for and will provide their own views.
- Such views are those of the presenter and not necessarily those of the National Economic Education Delegation (NEED).



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Outline

- **What is this?**
- **Evidence of Impact**
- **Government Policy**
- **What to expect going forward**



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What is this?

- **A natural disaster – with important twists:**
 - Global
 - Duration is unpredictable
- **A health crisis that spilled over onto the economy.**
 - A perfect storm of economic troubles
 - o Supply side
 - o Demand side
 - o Financial

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The Health Crisis

Overview

1,516,343

Active cases	1,145,219	+9,268
Recovered cases	281,192	+6,927
Fatal cases	89,932	+434



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Early COVID-19 Timeline

Date	Event
Dec 31	First case detected in Hubei Province
Jan 20	First case outside China (Thailand, Japan, and South Korea)
Jan 31	White House limits International travel
Feb 11	WHO names new coronavirus COVID-19
Feb 24	US Stock market Volatility begins

Aircraft Components and Manufacturers:

- Wingtips: KAA (Korea)
- Fixed & Movable Leading Edge: Spirit (US)
- Wing: Mitsubishi (Japan)
- Forward Fuselage: Kawasaki (Japan)
- Center Fuselage: Alenia (Italy)
- Rear Fuselage: Boeing (US)
- Movable Trailing Edge: Hawker de Havilland (Australia)
- Fixed Trailing Edge: Kawasaki (Japan)
- Passenger Doors: Latecoere (France)
- Wing-to-Body Fairing: Boeing (US)
- Tailfin: Boeing (US)
- Tailfin Leading Edge: Shenyang Aircraft Corp. Ltd. (China)
- Rudder: Chengdu Aircraft Corp. Ltd. (China)
- Lithium-ion Batteries: GS Yuasa (Japan)
- Landing-Gear Structure: Messier-Dowty (France)
- Nacelles: Goodrich (US)
- Engines: Rolls-Royce (UK), General Electric (US)

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Events Canceled

- March 6 — SxSW canceled
- March 10 — Ivy League cancels its basketball tournament
- March 11 — March Madness will be played without fans
- March 12 — March Madness canceled
- March 13 — Masters and Boston Marathon postponed
- March 15 — CDC recommends cancellation of events involving 50+ people
- March 16 — Kentucky Derby postponed
- **March 19 — California becomes the first state to issue a stay-home and business-closing order**

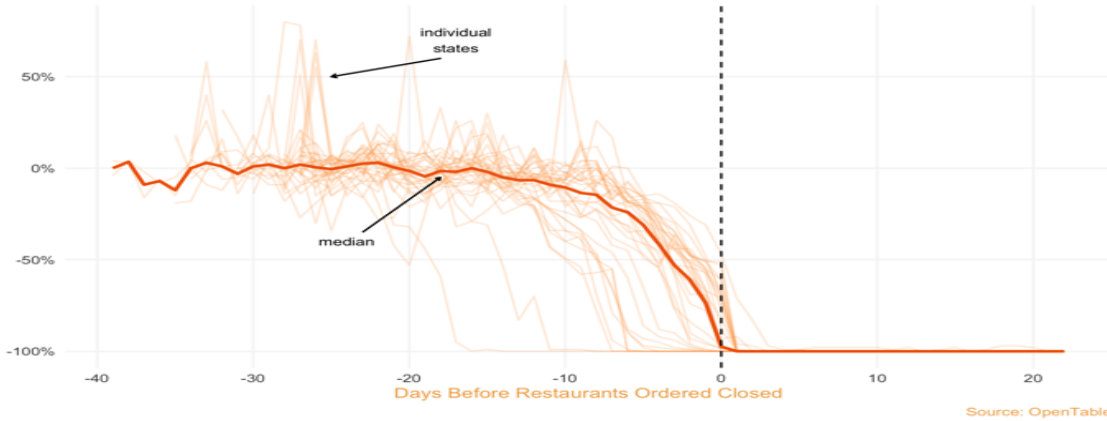
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Source: David Boaz and Author

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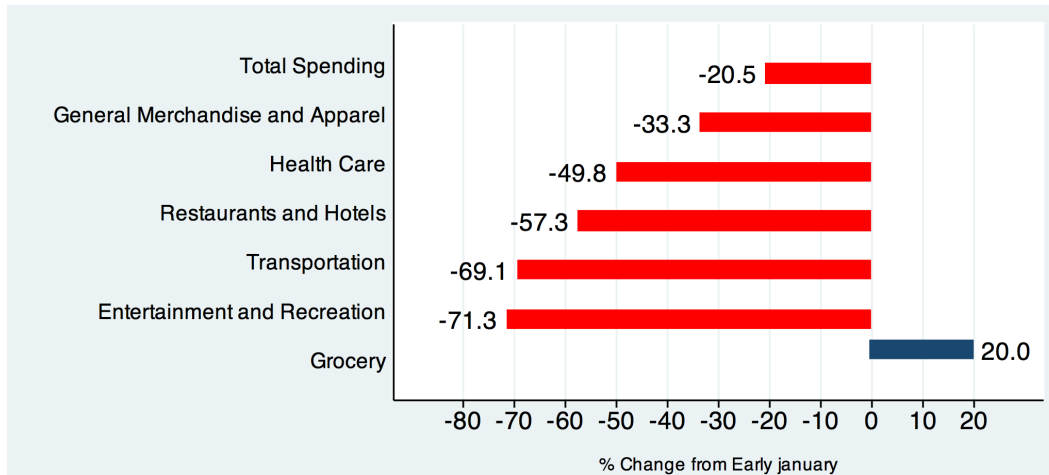
Reservations: Open Table

The Day Before Closures, Restaurant Reservations Had Fallen 73 Percent on Average
Percent change in 2020 OpenTable reservations in 37 states compared to same day 2019



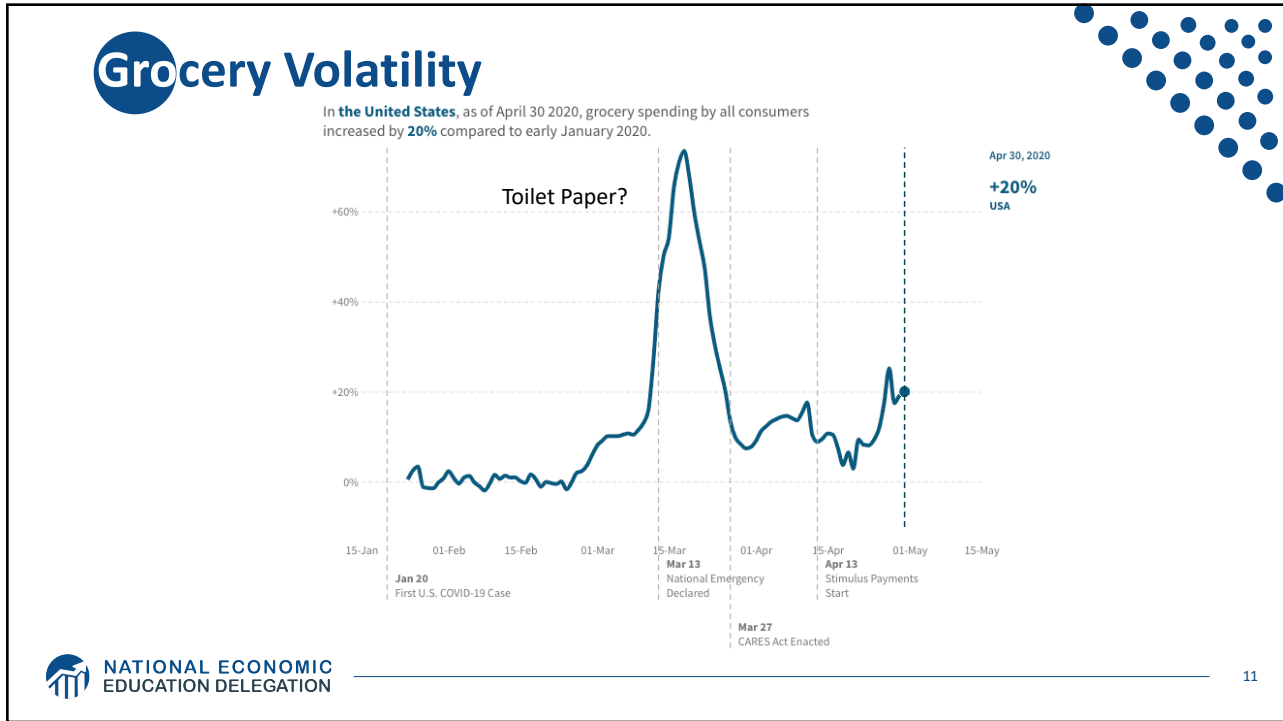
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Plunge in Consumer Spending

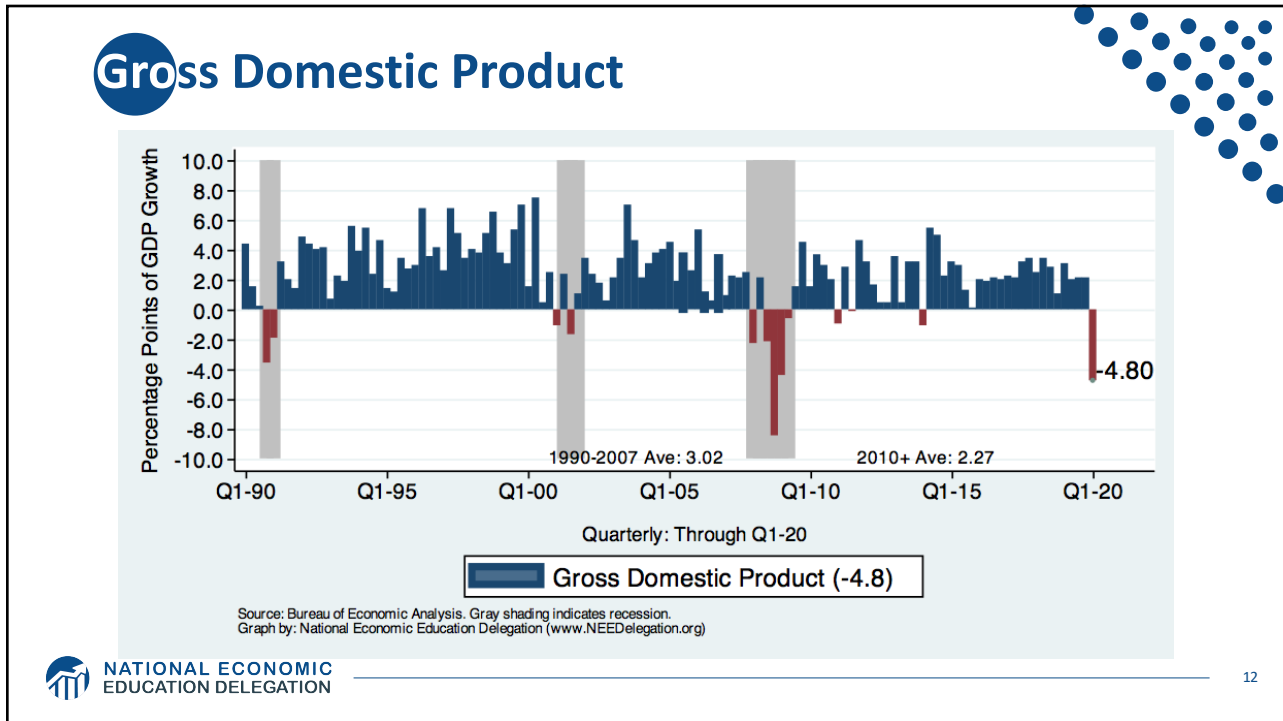


Source: <https://tracker.opportunityinsights.org/>, April 30, 2020
Graph by: National Economic Education Delegation (www.NEEDelegation.org)

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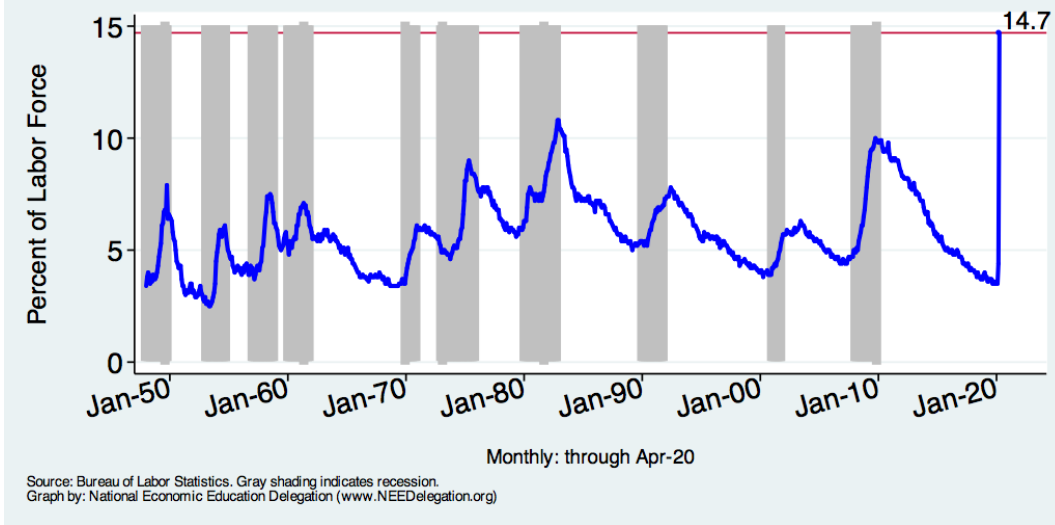


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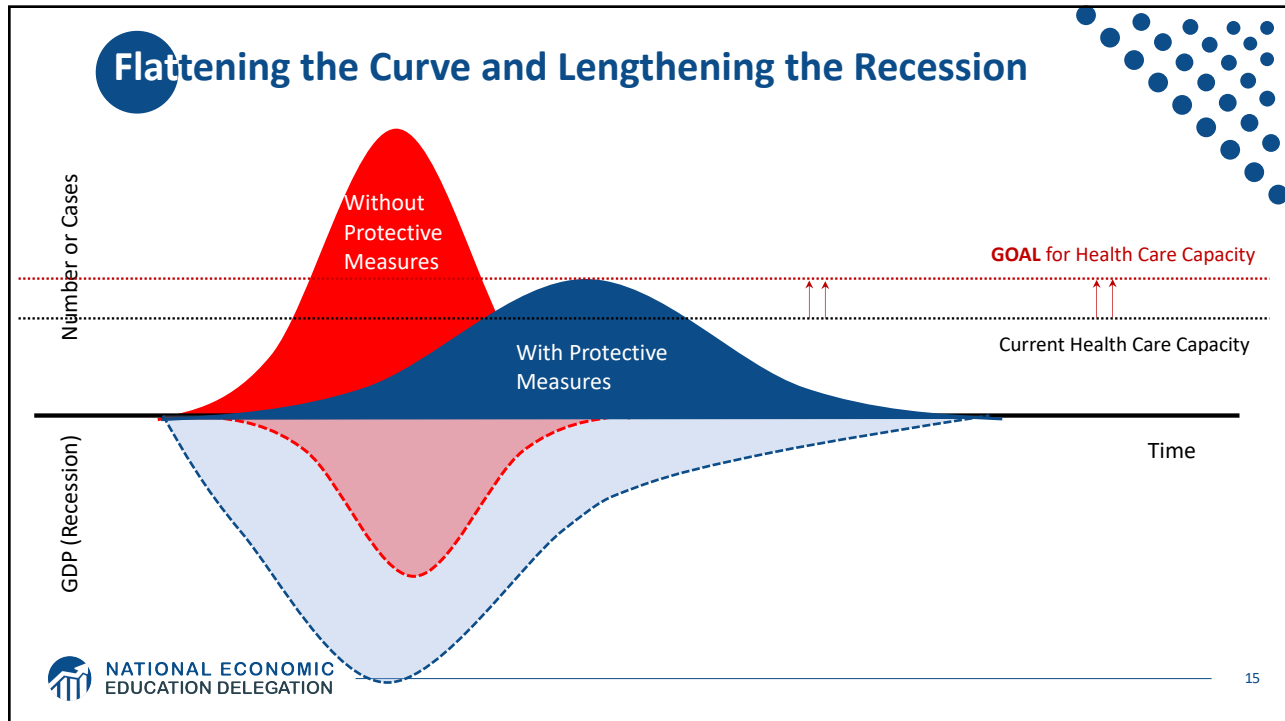
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Unemployment Rate



A Tale of Three Policies Efforts

- **Social policy** - Social Distancing, Local Governments
- **Fiscal Policy** - Congress
- **Monetary Policy** - Federal Reserve



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BOTE Cost Benefit Analysis

BOTE: Back Of The Envelope

- **BENEFITS of social distancing:**
 - \$7 million/life and 600,000 lives saved (\$4.2 trillion)
 - Long term health issues avoided: 2 million at \$500,000 (\$1 trillion)
 - **Total Benefit of Social Distancing: \$5.2 Trillion**
- **COSTS of “Shelter in Place” or “Lockdown”**
 - There are about 70+ workdays in a quarter (plus March).
 - **The cost of a “lockdown” is roughly \$1.3 Trillion**

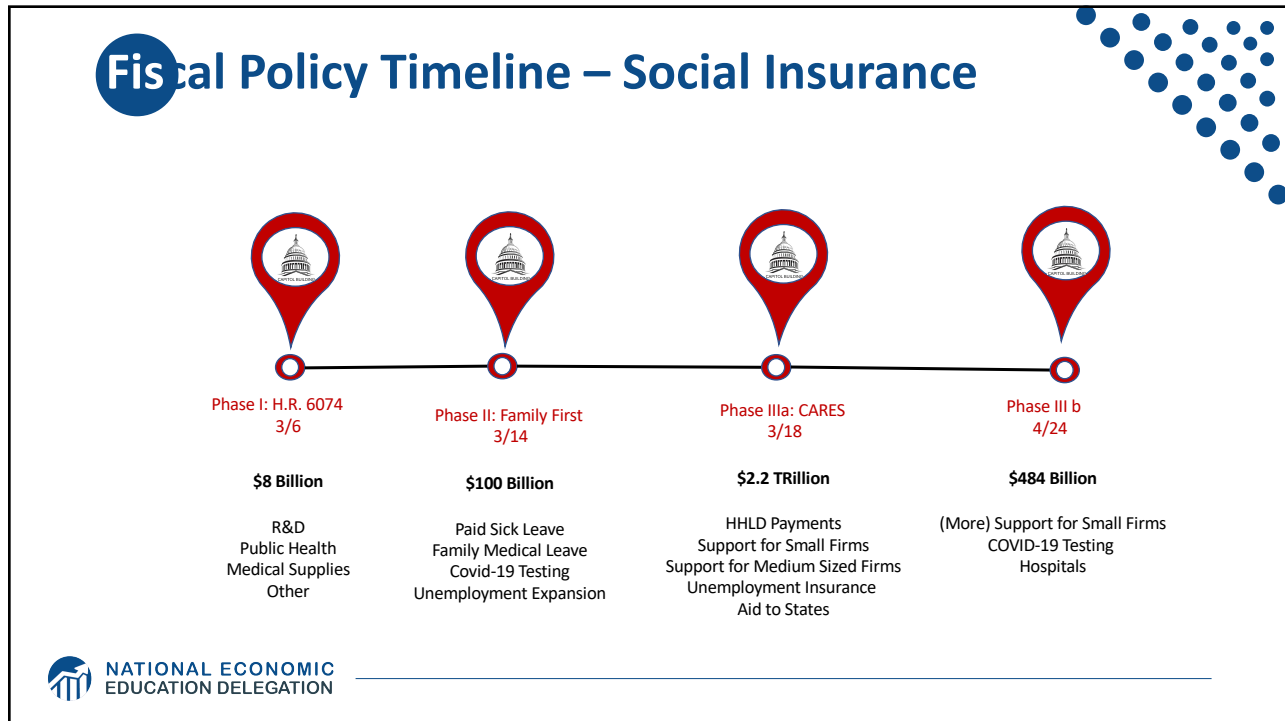
Benefit: \$5.2 trillion > Cost: \$1.3 trillion

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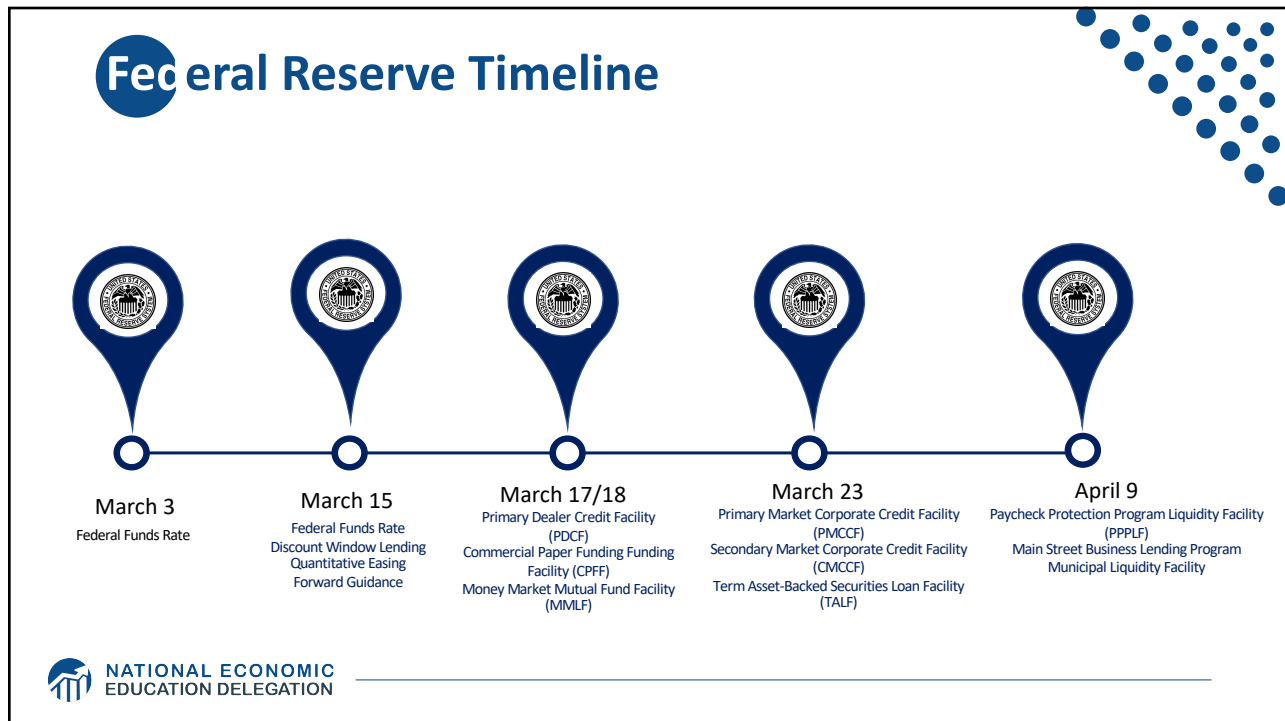
<https://twitter.com/BetseyStevenson/status/1242180499566669828>

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Thoughts on Policies to Date

- **Costs are enormous, but we are doing the right thing!**
 - And we are doing it **VERY QUICKLY!**
- **Monetary policy: Heroic! A+**
- **Fiscal policy grade: Emergency Pass**
 - Direct cash payments
 - Are they really getting into the hands of those most in need?
 - Corporate or otherwise?
 - Right strategy to maintain employee-employer ties?
 - What about states and local governments?



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Coronavirus and Inequality

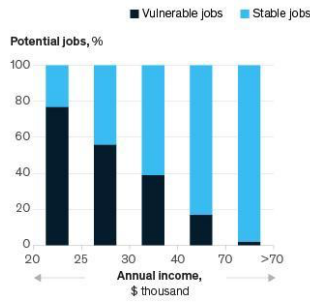
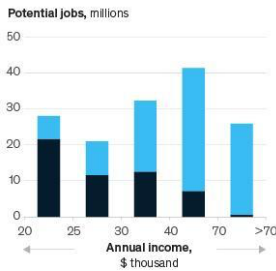
- **Racial inequities**
- **Telecommuting**
- **Primarily low wage jobs are at risk**
- **Resources to weather the storm**
- **Educational inequities**



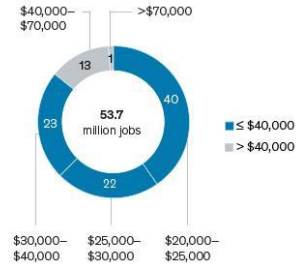
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Eighty-six percent of vulnerable jobs paid less than \$40,000 a year.

Level of job vulnerability,¹ by income band



Vulnerable jobs by annual income band¹ %



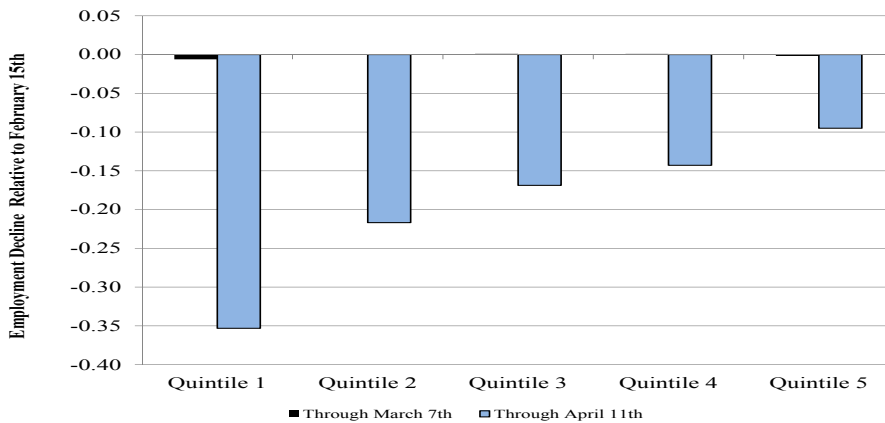
Note: Data may not sum to 100, because of rounding.
¹Vulnerable* jobs are subject to furloughs, layoffs, or being rendered unproductive (for example, workers kept on payroll but not working) during periods of high physical distancing.
 Source: LaborCube; McKinsey Global Institute analysis

McKinsey & Company

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Employment Change by Income Quintile



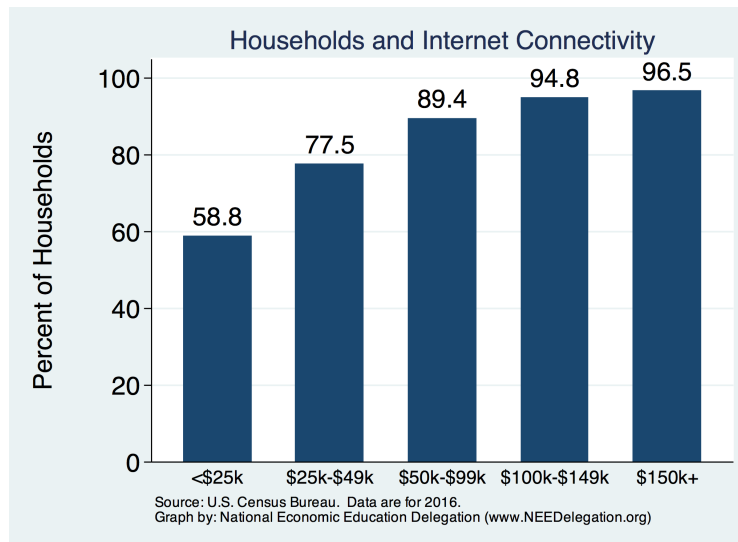
Fed Chair: 40% of workers losing their jobs earned less than \$40,000/year.

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

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Home Schooling – The Digital Divide Issue

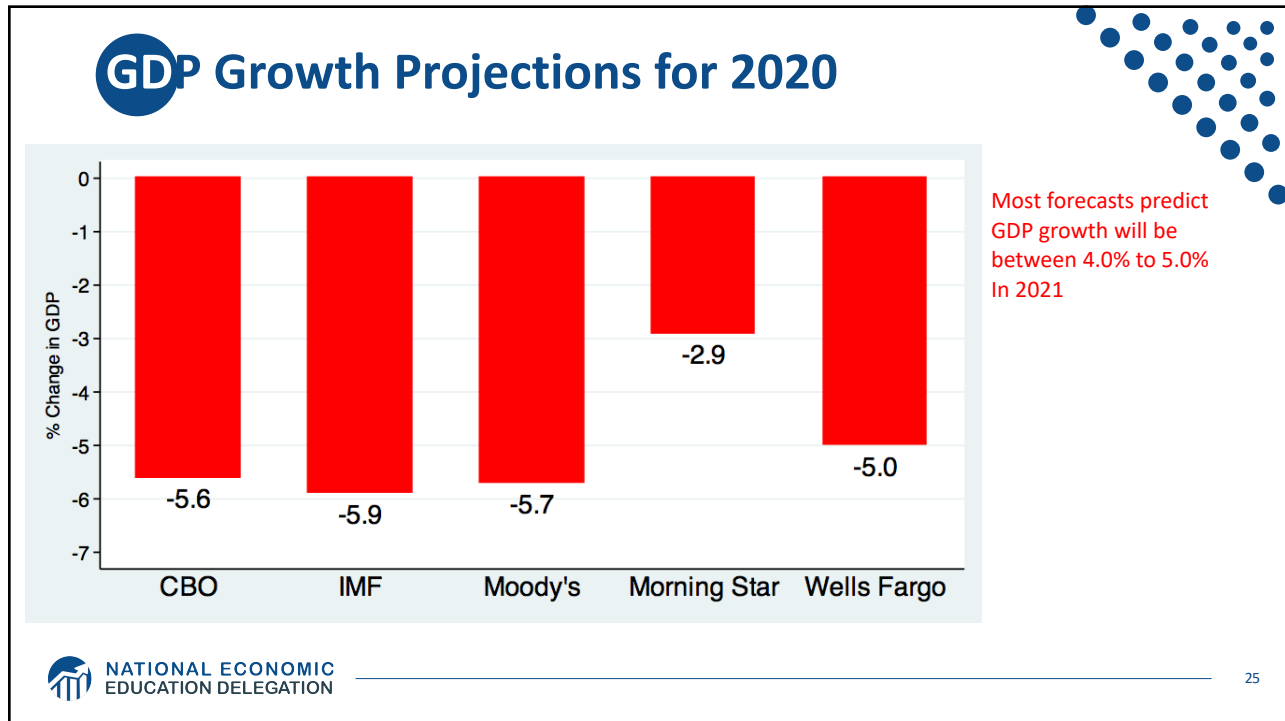


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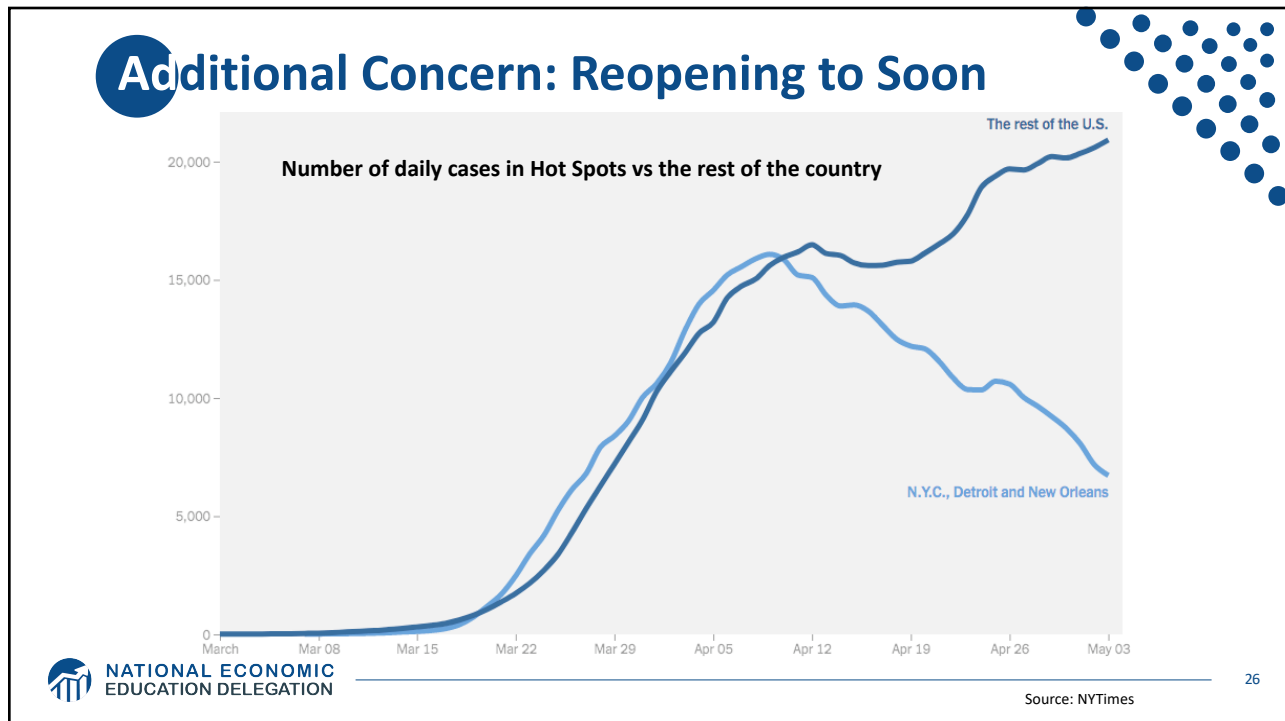
What does the future bring?

- **We won't need "shades" for quite some time.**
- **Depends on ties between employers and employees.**
- **Further government policy**
 - Aid to state and local governments.
 - More aid to the vulnerable.
 - Ultimately stimulus – but when?
- **Structural changes to the economy?**
 - More telecommuting and telehealth.
 - More rapid adoption of technology.
 - The way we buy things.

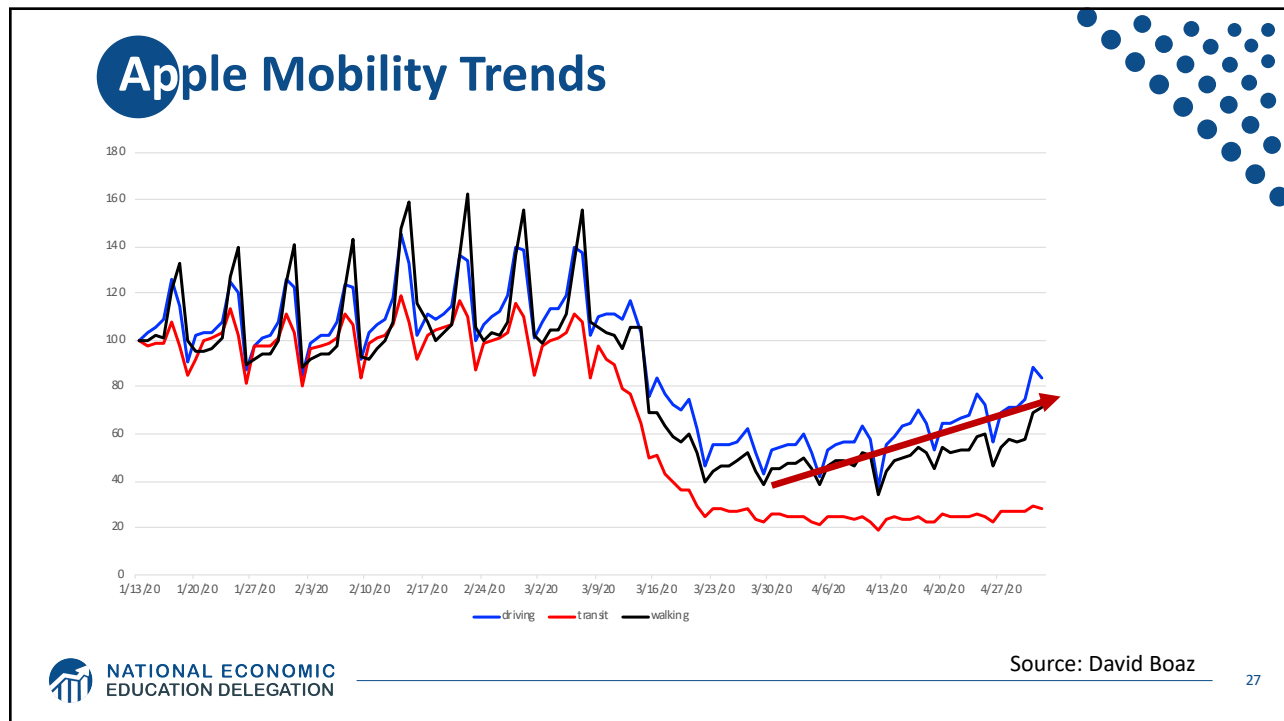
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Conclusion

- **COVID-19 is health crisis that has macroeconomic implications.**
 - With enormous built-in inequities.
- **GDP will likely contract between 5.0 and 6.0 percent this year.**
- **Positive growth will likely return in 2021**
 - If we have preventative medicines and treatments.
- **How do we plan for the next pandemic?**
 - What are the lessons for our safety net?
- **Reminder: We need to go slow.**

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Thank you!

Any Questions?

www.NEEDelegation.org

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Jon@NEEDelegation.org

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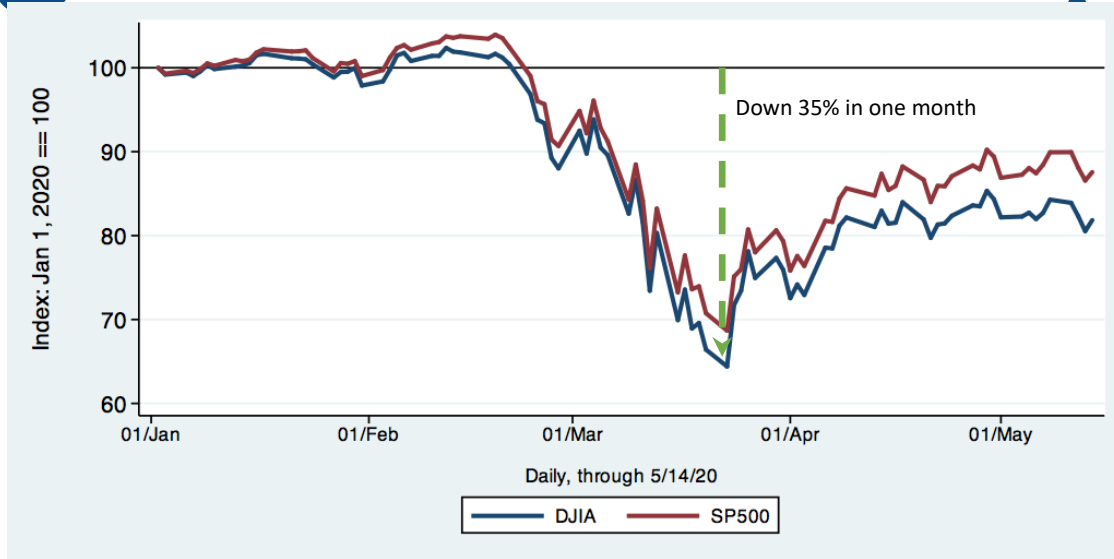
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Bonus Slides



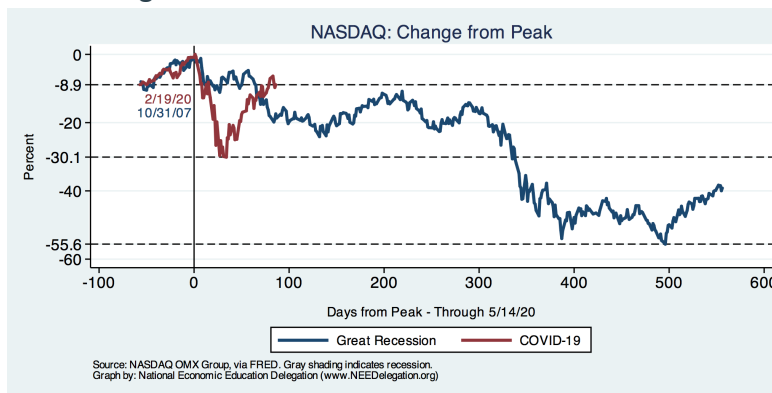
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DJIA and S&P 500

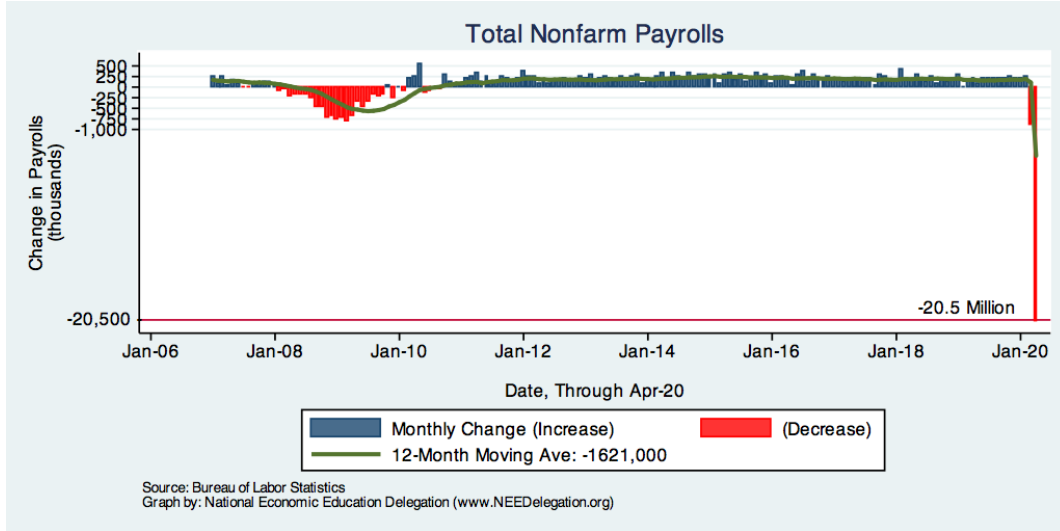


Thoughts on Policies to Date

- **Costs are enormous, but we are doing the right thing!**
 - And we are doing it **VERY QUICKLY!**

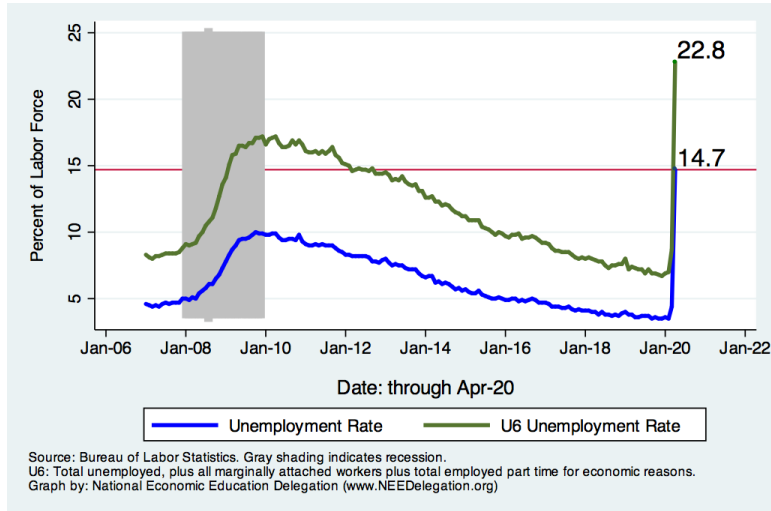


Monthly Changes in Nonfarm Employment



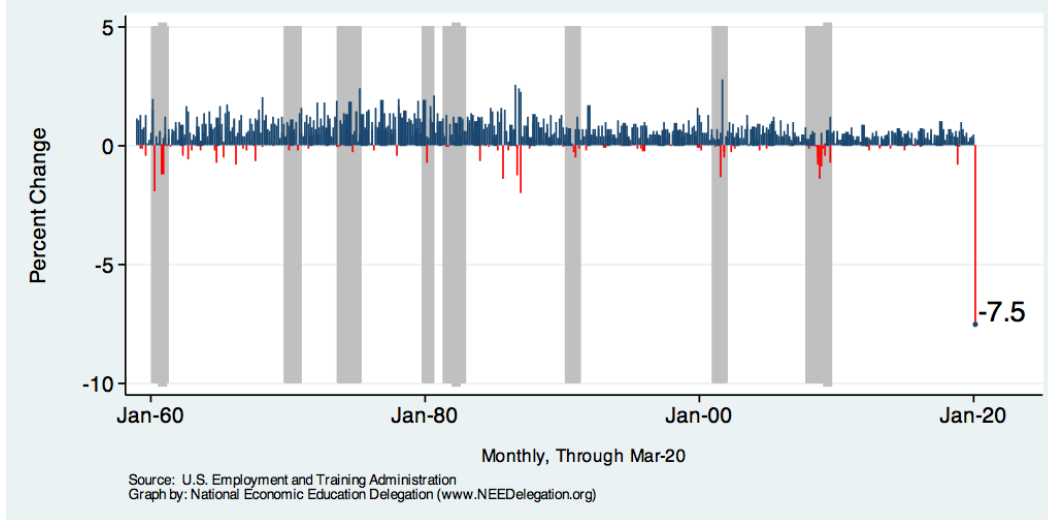
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Unemployment Rate



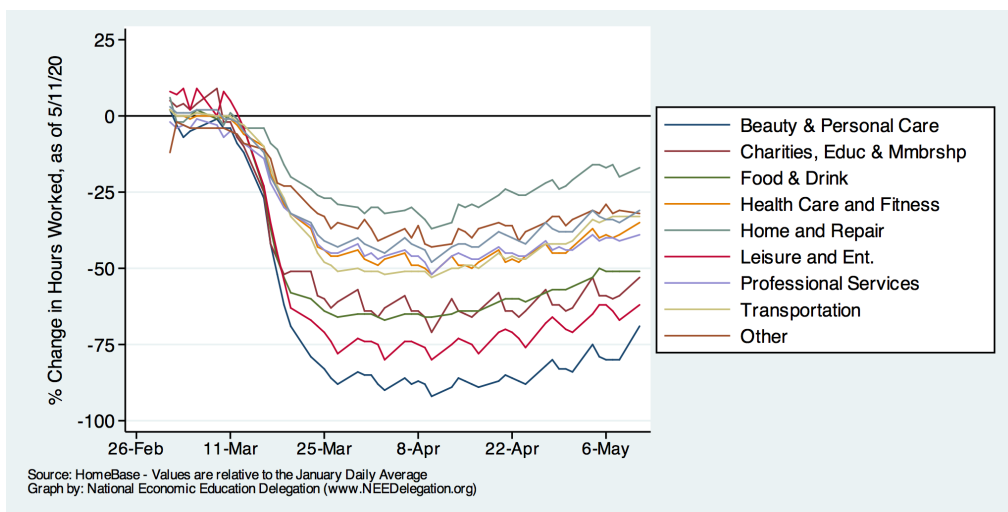
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Personal Consumption Expenditures

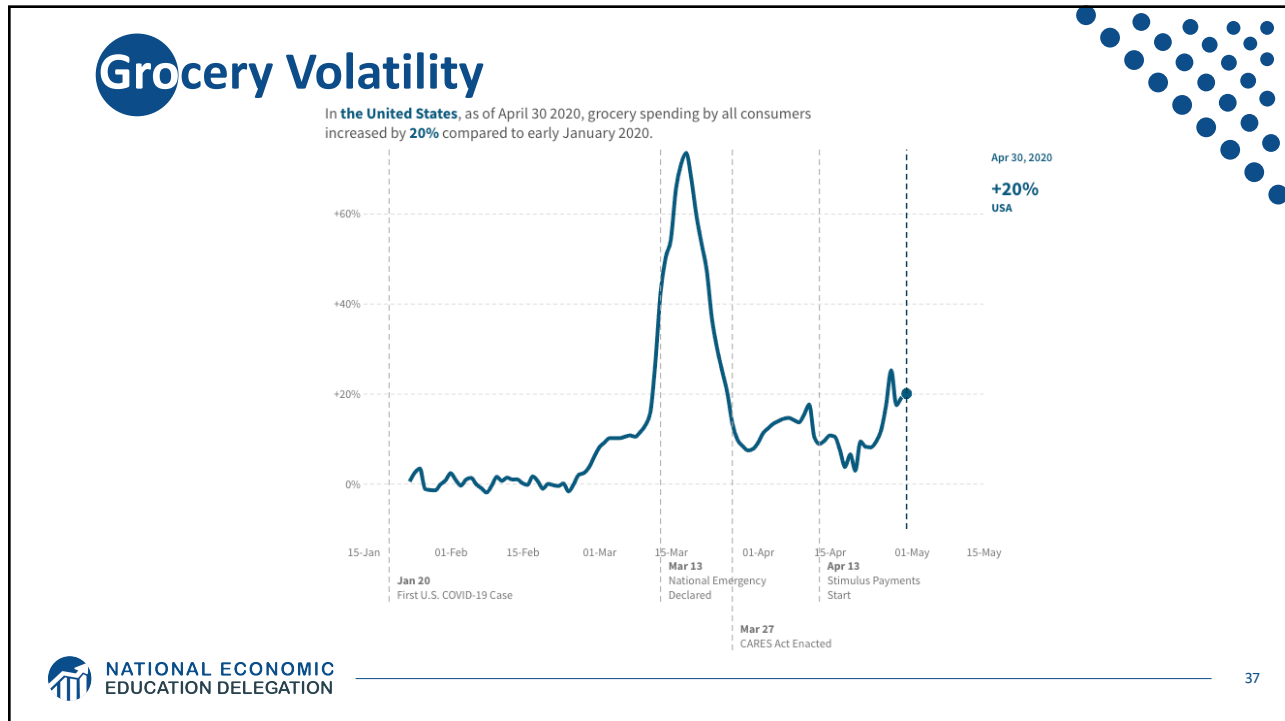


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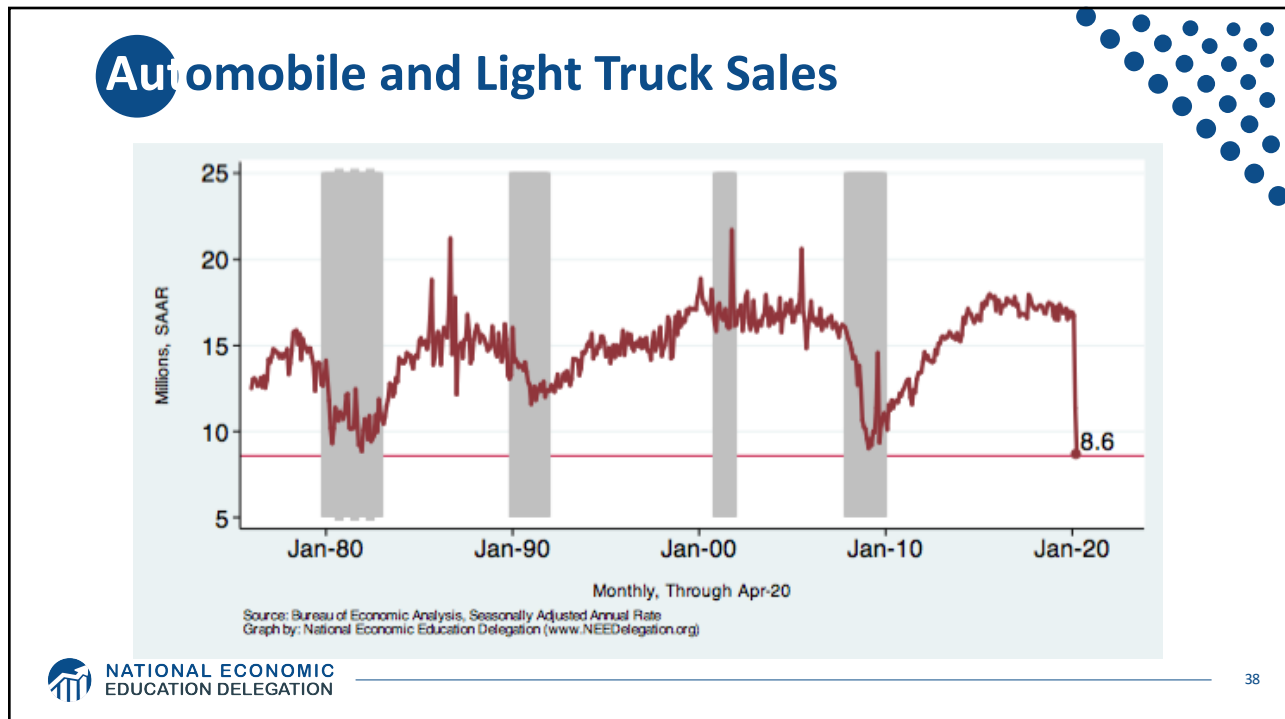
Change in Hours Worked: Small Businesses



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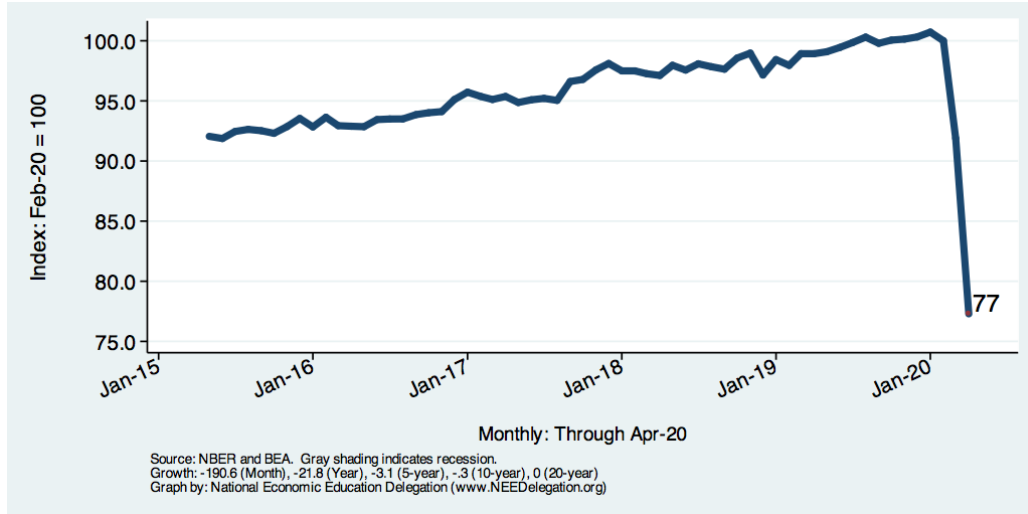


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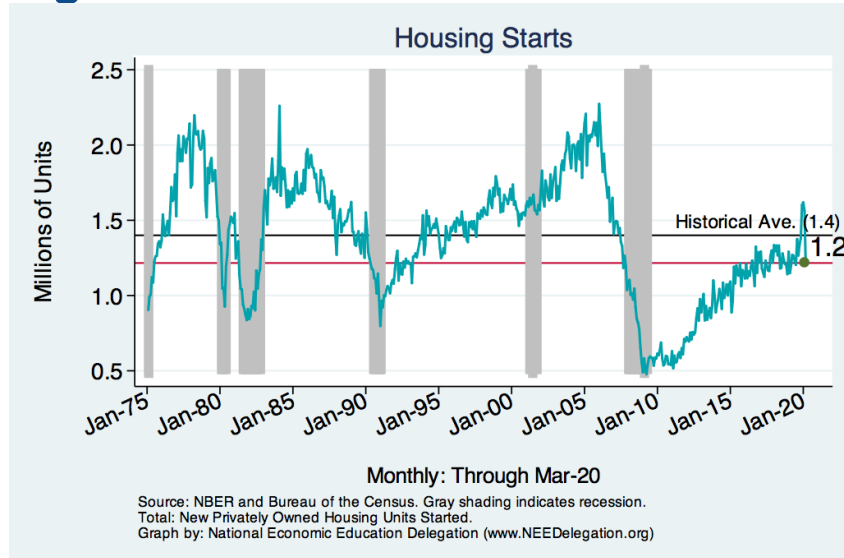


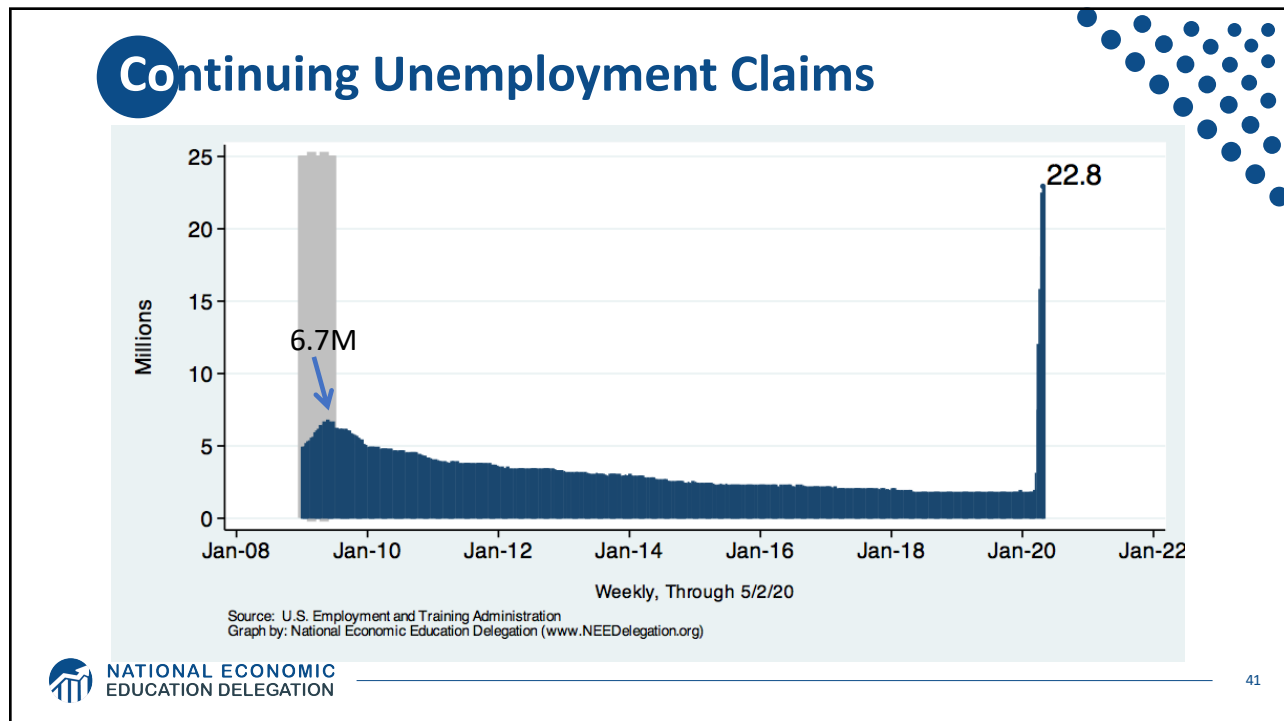
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Retail Sales

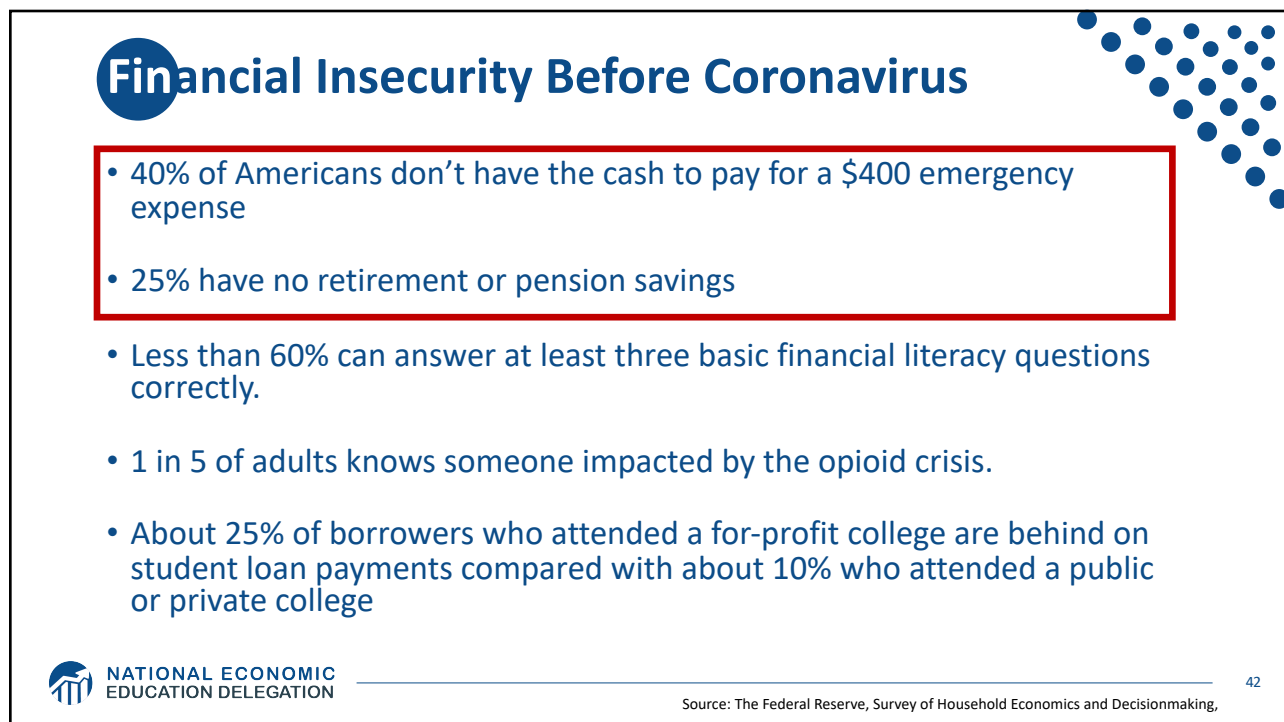


Housing Starts Plummet: Down 25% in March





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Cost Benefit Analysis: Tradeoffs

- **No containment policies**
 - Reduced economic activity
 - **More** coronavirus deaths
 - **Non-coronavirus deaths**
- **Stringent containment policies**
 - **Dramatically** reduced economic activity
 - **Fewer** coronavirus deaths
 - **Non-coronavirus deaths(?)**

↑ _____ ↑
???

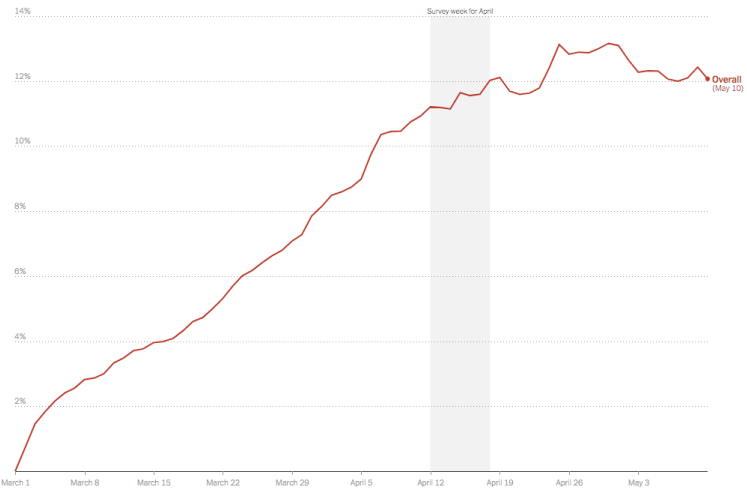
Analysis of Containment Policies
Reduced economic activity < value of additional deaths
Complicated equation – both numerically and philosophically

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Job Losses Appear to be Slowing

March and April were devastating, but May seems to be flattening
Percent of workers newly nonemployed since March 1, 14-day rolling average



Date	Percent of workers newly nonemployed (14-day rolling average)
March 1	0%
March 8	3%
March 15	4%
March 22	6%
March 29	8%
April 5	10%
April 12 (Survey week for April)	11%
April 19	12%
April 26	13%
May 3	12%
May 10 (Overall)	12%

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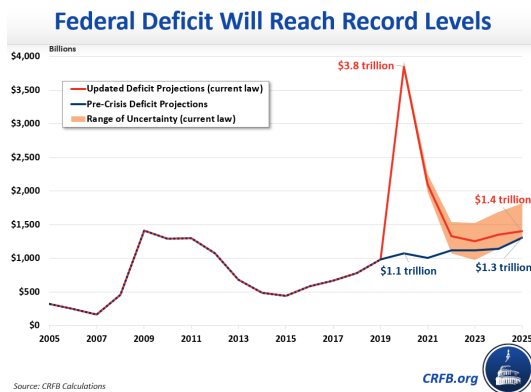
Employment: The Word of the Month



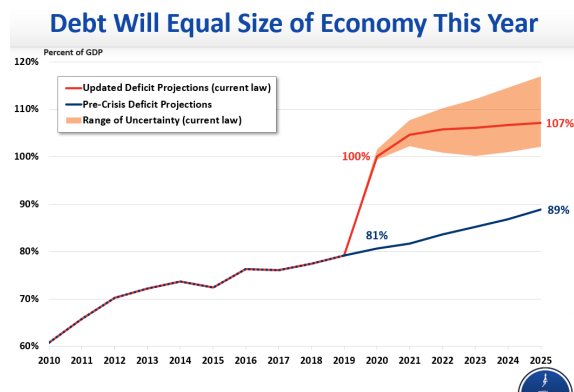
“Job losses of this scale are **unprecedented**. The total number of job losses for the month of April alone was more than double the total jobs lost during the Great Recession,” said Ahu Yildirmaz, co-head of the ADP Research Institute.

Biggest % Losses at Smallest Firms:
SM: 21.5%; MID: 17.4%; LG: 13.4%

Federal Budget Implications



Deficit may be nearly 20% of GDP



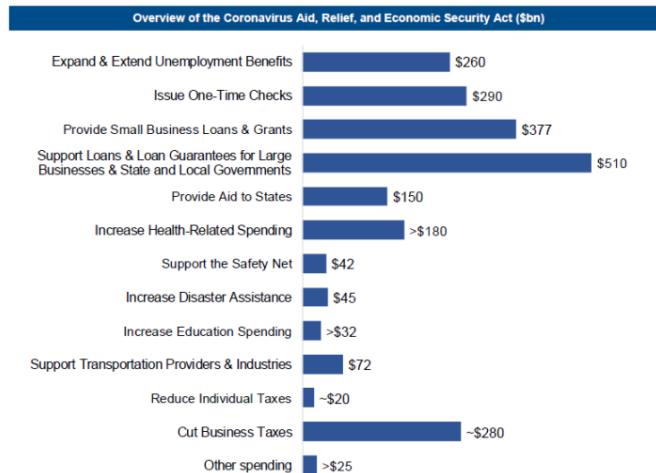
Debt will likely equal GDP this year

Many Policy Alternatives

- **Denmark: Pay (discounted) salaries**
 - Keeps employees “on the job”.
- **Temporary UBI**
 - \$2k/adult for 6 months - \$3.6T
 - Grant if can prove need, otherwise a loan. Grants = \$240B
- **Payroll Tax Cut**
 - No. Designed to get people back to work. Not yet.
- **Excess revenue tax**
 - 10% or more above normal, taxed at high rate. (Amazon, Zoom)
- **Many others...**



The Cares ACT



Aid to Households

Payments to Individuals		
\$269bn (1.3% of GDP)		
Eligibility	Program	Terms & Process
<ul style="list-style-type: none"> - Taxpayers with incomes up to \$99,000 (or \$198,000 joint) based on 2019 tax return (2018 if not available) 	<ul style="list-style-type: none"> - Tax rebate of \$1,200 (or \$2,400 for a joint tax return) - Additional \$500 rebate per child 	<ul style="list-style-type: none"> - Rebate phases out gradually for incomes greater than \$75,000 (\$150,000 joint) - Rebates sent "as rapidly as possible" targeted for early April

Increased Unemployment Insurance		
\$250bn (1.2% of GDP)		
Eligibility	Program	Terms & Process
<ul style="list-style-type: none"> - Individuals qualifying for standard unemployment compensation - Individuals not previously qualifying for unemployment compensation, such as contractors and the self-employed 	<ul style="list-style-type: none"> - Provides standard unemployment compensation (roughly 50%) for 39 weeks, vs standard 26 weeks - Additional \$600 pay per week through July 31 (4 months), even if unemployment compensation exceeds previous wage level 	<ul style="list-style-type: none"> - Pay is immediate, vs. standard one-week waiting period



Aid to Small Businesses

Small Business Loans & Payroll Subsidies		
\$377bn (1.8% of GDP)		
Eligibility	Program	Terms & Process
<ul style="list-style-type: none"> - Small businesses < 500 employees (< 500 per physical location for accomm. and food services sector) - Sole proprietors, contractors, self-employed individuals - Businesses operational, with employees on payroll, on Feb. 15 	<ul style="list-style-type: none"> - Small business obtains loan for 2.5x monthly payroll, up to \$10 million - Loan forgiven when used for employee pay, rent or mortgage interest, and utility payments 	<ul style="list-style-type: none"> - Business eligible if operational and having employees on Feb 15 (repayment ability not considered) - Amount forgiven prorated to account for layoffs and pay decreases - Government guarantee at 100% rate (vs. 75% for traditional SBA loans) - Banks earn fee up to 5% for originating loan - Payments deferred up to 1 year - Banks hold loans on balance sheet with zero risk rating



Aid to Airlines

Relief for Specific Distressed Sectors		
\$46bn (0.2% of GDP)		
Eligibility	Program	Terms & Process
- Airlines, air cargo, and national security/aerospace sectors	<ul style="list-style-type: none"> - Direct lending: airlines (\$25bn), air cargo (\$4bn), and national security/aerospace (\$17bn) - Grants to pay wages, salaries and benefits: airlines (\$25bn), air cargo (\$4bn), airline contractors (\$3bn) 	<ul style="list-style-type: none"> - Alternative financing not available - Short loan duration, < 5 years - Stock buybacks and dividend payments prohibited until 1 year after date of loan repayment - Exec comp restrictions - Must retain 90% of employment level as of March 24 - Majority of employees must be based in US

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Aid to Business

Tax Deferral and Tax Cuts		
\$668bn (3.2% of GDP) in 2020; \$286bn (1.4% of GDP) over 10 yrs		
Policy	Description	Amount
NOL carryback	Carry back losses 5 years to offset profits from prior years	\$89bn (0.4% of GDP)
Modify pass-through loss limitation	Eases the limitation on pass-through loss, so they can use excess losses to generate refunds	\$140bn (0.7% of GDP)
Employee retention credit	Payroll tax credit equal to 50% of wages paid by employers through Dec. 31, 2020, whose businesses were shut down or revenues declined by 50% vs. the same quarter the prior year.	\$55bn (0.3% of GDP)
Payroll tax delay	Delays payment of 2020 payroll taxes, with half due by 12/31/2021 and half due 12/31/2022	\$350bn (1.7% of GDP) benefit in 2020, repaid in 2021/2022
Interest deductibility	Increase deductibility of interest from 30% to 50% of EBITDA for 2020	\$13bn (0.06% of GDP)

ESF & Federal Reserve Corporate and Municipal Credit Facility		
\$454bn (2.2% of GDP)		
Eligibility	Program	Terms & Process
<ul style="list-style-type: none"> - Corporate sector - State / municipal sector 	<ul style="list-style-type: none"> - Lend directly or purchase debt from issuer - Purchase debt in the secondary market - Treasury endeavors to implement 13(3) facility targeted at nonprofits and businesses between 500-10k employees. 	<ul style="list-style-type: none"> - Requires loan collateralization, taxpayer protection, borrower solvency - Buybacks, dividends, executive compensation restricted for the life of the loan and one year following; - Treasury may waive these requirements if necessary - Congressional oversight

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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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SBLA Distribution

Firm Size	Distribution of PPP Eligible Firms		PPP Loan Size (est)
	Percent of Firms	Percent of Employment	
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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Aid to States

Federal Spending & Aid to States			
\$490bn (2.3% of GDP)			
Expenditure	Description	Amount (\$bn)	% of GDP
Aid to States	To offset declining revenues; Allocated by population with minimum \$1.25bn	\$150bn	0.7
Hospitals & medical	Reimbursement to providers and other health expenses	\$130bn	0.6
FEMA	For disaster relief fund to aid states and localities and other operations	\$45bn	0.2
Transportation	Grants to transportation systems and airports	\$35bn	0.2



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Monetary Policy – Federal Reserve

- **Two primary objectives**
 - Stabilize the economy
 - Maintain liquidity of the system
- **Actions in three forms:**
 - Traditional interest rate stimulus
 - Inject cash into the system
 - Shore up existing debt and structures



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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.

Federal Reserve: Ensure Financial Market Stability

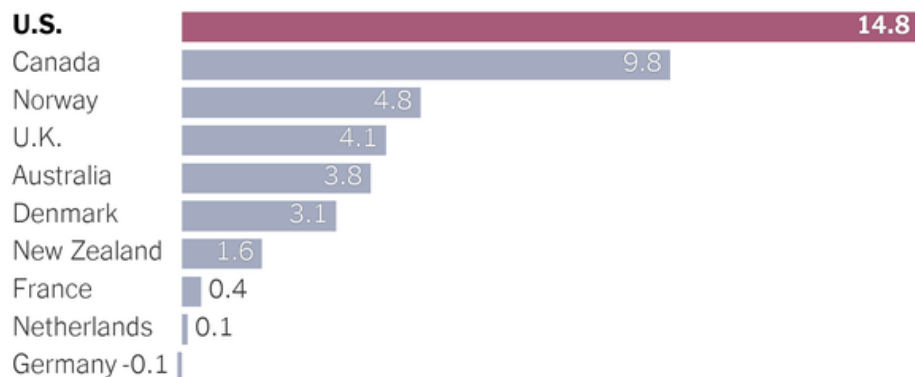
- **In mid-March, Treasury and Mortgage Backed Securities markets began behaving irregularly as the demand for liquidity increased.**
 - **Securities Purchases (Quantitative Easing):** Fed Response: purchase treasuries and mortgage backed securities (3/15).
 - Re-launched the **Primary Dealer Credit 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.
 - o The Fed increased the offerings to \$1 trillion (from \$100 bn) in overnight repos, and
 - o \$500 billion in one month **and** three-month repos (from \$20bn 2/wks).

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

Other Countries Are Doing it Better

Unemployment claims as share of the labor force



By The New York Times | Source: Brookings

Projected State Budget Shortfall Unprecedented

FIGURE 1

COVID-19 State Budget Shortfalls Could Be Largest on Record

Total state budget shortfall in each fiscal year, in billions of 2020 dollars



CA: \$54B Budget Shortfall?

* Estimated based on CBPP calculations
Source: Pre 2014: CBPP survey; 2020 and following: CBPP calculations

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