COVID-19: Economic Implications and Policy Response

Marin County Office of Education
Property Tax Forum: 2020

May 13, 2020
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Executive Director, NEED

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.
Who Are We?

• Honorary Board: 48 members
  - 2 Fed Chairs: Janet Yellen, Ben Bernanke
  - 6 Chairs Council of Economic Advisers
    o Furman (D), Rosen (R), Bernanke (R), Yellen (D), Tyson (D), Goolsbee (D)
  - 3 Nobel Prize Winners
    o Akerlof, Smith, Maskin

• Delegates: 500+ members
  - At all levels of academia and some in government service
  - All have a Ph.D. in economics
  - Crowdsource slide decks
  - Give presentations

• Global Partners: 45 Ph.D. Economists
  - Aid in slide deck development

Available NEED Topics Include:

• Coronavirus Economics
• US Economy
• Climate Change
• Economic Inequality
• Economic Mobility
• Trade and Globalization
• Trade Wars
• Immigration Economics
• Housing Policy
• Federal Budgets
• Federal Debt
• 2017 Tax Law
• Autonomous Vehicles
• US Social Policy
Credits and Disclaimer

• This slide deck was authored by:
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  - Scott Baier, Clemson University
  - 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).

Outline

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

• A natural disaster – with important twists
  - Global
  - Duration is unpredictable
  - Economic toll is enormous and potentially durable

• A health crisis with enormous economic implications.
  - A perfect storm of economic difficulty
    o Supply side
    o Demand side
    o Financial
  - Without a culprit

Process for Dealing with a Natural Disaster

• Mitigation of effects
  - Policies to protect the public health.

• Tend to the vulnerable
  - Policies to protect economically vulnerable.

• Shore up structures
  - Policies to maintain the structure of the economy.

• Rebuild
  - Economic stimulus – but not yet!

This crisis requires the same approach and sequence.
Gross Domestic Product

Percentage Points of GDP Growth

Quarterly: Through Q1-20

Gross Domestic Product (-4.8)

Source: Bureau of Economic Analysis. Gray shading indicates recession.

Graph by: National Economic Education Delegation (www.NEEDelegation.org)

DJI A and S&P 500

Down 35% in one month

Index: Jan 1, 2020 = 100

Daily, through 5/11/20

DJIA
SP500
Monthly Changes in Nonfarm Employment

Total Nonfarm Payrolls

Date, Through Apr-20

Source: Bureau of Labor Statistics
Graph by: National Economic Education Delegation (www.NEEDelegation.org)

Job Losses Appear to be Slowing

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

NATIONAL ECONOMIC EDUCATION DELEGATION
Change in Hours Worked: Small Businesses

Source: HomeBase - Values are relative to the January Daily Average
Graph by: National Economic Education Delegation (www.NEEDelgation.org)
We are rapidly approaching Great Depression territory. Since 3/21, 31 million new claims, which would increase the unemployment rate by rise significantly to 17-20%.

Source: U.S. Employment and Training Administration
Graph by: National Economic Education Delegation (www.NEDElegation.org)
A Tale of Three Policies Efforts

- **Social policy: Social Distancing**
  - Shutdowns in some industries versus others
  - Furloughs and lay-offs result
  - Vulnerable populations now more vulnerable

- **Fiscal Policy**
  - Business and taxpayer supports
  - Low-cost way to engage policy, but building danger later

- **Monetary Policy**
  - Back to Zero interest rates
  - Managing markets and inflation is out with the bath water
**Flattening the Curve and Lengthening the Recession**

- **Without Protective Measures**
- **With Protective Measures**

**GOAL for Health Care Capacity**

**Current Health Care Capacity**

**GDP (Recession)**

**Number of Cases**

**Time**

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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/124218049956666828](https://twitter.com/BetseyStevenson/status/124218049956666828)
How Do We Pay for This?

• **Good News:** Treasury Interest Rates are Near Zero
• **Bad News:** The Long-term Budget Outlook was already a Mess

Don’t worry about the drought when the house is on fire!

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**Fiscal Policy Timeline – Social Insurance**

- **Phase I:** H.R. 6074
  - 3/6
  - $8 Billion
  - R&D
  - Public Health
  - Medical Supplies
  - Other

- **Phase II:** Family First
  - 3/14
  - $100 Billion
  - Paid Sick Leave
  - Family Medical Leave
  - Covid-19 Testing
  - Unemployment Expansion

- **Phase III:** CARES
  - 3/18
  - $2.2 Trillion
  - HHLD Payments
  - Support for Small Firms
  - Support for Medium Sized Firms
  - Unemployment Insurance
  - Aid to States

- **Phase III b**
  - 4/24
  - $484 Billion
  - (More) Support for Small Firms
  - COVID-19 Testing
  - Hospitals

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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
US Treasury Rates: A Safe Haven?

Run to Safety
Cash Grab
Liquidity Working

Inflation – Deflation is More Likely

If it shows up:
It’s not one of our top 2 problems.
1) Illness/Deaths
2) Employment
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!
- Fiscal policy grade: Emergency Pass
  - Direct cash payments
    - Are they really getting into the hands of those most in need?
  - Right strategy to maintain employee-employer ties?
  - Enough for medical care?
    - The amount spent fighting the virus is relatively small.
  - What about states and local governments?

Projected State Budget Shortfall Unprecedented

FIGURE 1

<table>
<thead>
<tr>
<th>COVID-19 State Budget Shortfalls Could Be Largest on Record</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total state budget shortfall in each fiscal year, in billions of 2020 dollars</td>
</tr>
</tbody>
</table>

- 2001 Recession: $60, $-105, $110, $-60
- Great Recession: $-120, $-230, $150, $120, $-60
- COVID-19*: $-105, $-105, $-290

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

CA: $54B Budget Shortfall
Coronavirus and Inequality

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

Home Schooling - Access to the Internet

<table>
<thead>
<tr>
<th>Income Range</th>
<th>Percent of Households</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;$25k</td>
<td>58.8</td>
</tr>
<tr>
<td>$25k-$49k</td>
<td>77.5</td>
</tr>
<tr>
<td>$50k-$99k</td>
<td>89.4</td>
</tr>
<tr>
<td>$100k-$149k</td>
<td>94.8</td>
</tr>
<tr>
<td>$150k+</td>
<td>96.5</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau. Data are for 2016.
Graph by: National Economic Education Delegation (www.NEDElegation.org)
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.
  - Ultimately stimulus – but not soon.
• Structural changes to the economy?
  - More telecommuting.
  - More rapid adoption of technology.
  - The way we buy things.

GDP Growth Projections for 2020

Most forecasts predict GDP growth will be between 4.0% to 5.0% in 2021.
Conclusion

• COVID-19 is a health crisis that has macroeconomic implications.
• The macroeconomic effects have impacted both supply and demand.
• GDP will likely contract between 5.0 and 6.0 percent this year.
• Positive growth will likely 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.
Thank you!

Any Questions?

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Contact NEED: info@NEEDelegation.org

Submit a testimonial: www.NEEDelegation.org/testimonials.php

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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 and business bankruptcies?
  - What is the future of companies that bring many people together?
    o Cruise Lines.
    o Theaters.
    o Sports.
    o Malls.
  - Looming State and Local Fiscal Crisis
  - Small business bankruptcy
**NASDAQ: Then (Great Recession) and Now**

- **NASDAQ: Change from Peak**
  - Days from Peak - Through 5/12/20
  - Source: NASDAQ OMX Group, via FRED. Gray shading indicates recession.
  - Graph by: National Economic Education Delegation (www.NEEDelegation.org)

**Contributions from different expenditure components:**

- **Consumption:** -5.26
- **Investment:** -0.96
- **Government:** 0.13
- **Net Exports:** 1.30

Note: The economic impact of COVID-19 likely only had an impact the last two to three weeks of 2020:Q1 GDP.
Retail Sales

Source: NBER and BEA. Grey shading indicates recession.
Growth: -102.3 (Month), -7.5 (Year), 0.1 (3-year), 1.4 (10-year), 8.0 (20-year).
Graph by: National Economic Education Delegation (www.NEDelegation.org)

Housing Starts Plummet: Down 25% in March

Source: NBER and Bureau of the Census. Grey shading indicates recession.
Total: New Privately Owned Housing Units Started.
Graph by: National Economic Education Delegation (www.NEDelegation.org)
Weekly New Unemployment Claims

Continuing Unemployment Claims

Source: U.S. Employment and Training Administration
Graph by: National Economic Education Delegation (www.NEDElegation.org)
“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%
Bay Area Grew Well to 2018: GSP – Over 5 Years

Marin Home Prices

Source: Marin Economic Consulting

Source: Zillow Housing Data, https://www.zillow.com/research/data/
Produced by: National Economic Education Delegation (www.NEEDelegation.org)
Marin’s Home Price Position

<table>
<thead>
<tr>
<th>Region</th>
<th>Median Home Values - Mar-20</th>
</tr>
</thead>
<tbody>
<tr>
<td>San Francisco</td>
<td>1,447,195</td>
</tr>
<tr>
<td>San Mateo</td>
<td>1,417,958</td>
</tr>
<tr>
<td>Santa Clara</td>
<td>1,255,847</td>
</tr>
<tr>
<td>*** Marin ***</td>
<td>1,192,188</td>
</tr>
<tr>
<td>Alameda</td>
<td>896,219</td>
</tr>
<tr>
<td>Contra Costa</td>
<td>714,524</td>
</tr>
<tr>
<td>Napa</td>
<td>700,489</td>
</tr>
<tr>
<td>Sonoma</td>
<td>657,244</td>
</tr>
<tr>
<td>Solano</td>
<td>459,751</td>
</tr>
</tbody>
</table>

Home Price Appreciation w/in Marin

- Bolinas: 311.0%
- San Rafael: 201.7%
- Larkspur: 143.1%
- *** MARIN COUNTY ***: 100.0%
- Mill Valley: 135.9%
- Novato: 85.5%

Marin Average Home Value in 3/2020: $1,192,188
Marin Average Annual Growth: 4%
Indexed by Marin = 100
For More Graphs on Marin’s Economy

• https://needelegation.org/LocalGraphs/

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

Note: Data may not sum to 100, because of rounding.

*Vulnerable* jobs are subject to furloughs, layoffs, or being rendered inproductive (for example, workers kept on payroll but not working) during periods of high physical distancing.

Source: LaborHub McKinsey Global Institute analysis

McKinsey & Company
Financial Insecurity Before Coronavirus

- 40% of Americans don’t have the cash to pay for a $400 emergency expense
- 25% have no retirement or pension savings
- Less than 60% can answer at least three basic financial literacy questions correctly.
- 1 in 5 of adults knows someone impacted by the opioid crisis.
- About 25% of borrowers who attended a for-profit college are behind on student loan payments compared with about 10% who attended a public or private college.


Federal Budget Implications

Federal Deficit Will Reach Record Levels

Deficit may be nearly 20% of GDP

Debt Will Equal Size of Economy This Year

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

Overview of the Coronavirus Aid, Relief, and Economic Security Act (CARES) Act

- **Expand & Extend Unemployment Benefits** $200
- **Issue One-Time Checks** $200
- **Provide Small Business Loans & Grants** $377
- **Support Loans & Loan Guarantees for Large Businesses & State and Local Governments** $510
- **Provide Aid to States** $150
- **Increase Health-Related Spending** $180
- **Support the Safety Net** $42
- **Increase Disaster Assistance** $45
- **Increase Education Spending** $32
- **Support Transportation Providers & Industries** $72
- **Reduce Individual Taxes** -$20
- **Cut Business Taxes** -$280
- **Other spending** -$25

Source: Investment Strategy Group, Committee for a Responsible Federal Budget, Bill Text.
**Aid to Households**

**Payments to individuals**

<table>
<thead>
<tr>
<th>Eligibility</th>
<th>Program</th>
<th>Terms &amp; Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Taxpayers with incomes up to $99,000 (or $198,000 joint) based on 2019 tax return (2018 if not available)</td>
<td>- Rebate phases out gradually for incomes greater than $75,000 ($150,000 joint)</td>
<td></td>
</tr>
<tr>
<td>- Additional $500 rebate per child</td>
<td>- Rebates sent “as rapidly as possible” targeted for early April</td>
<td></td>
</tr>
</tbody>
</table>

**Increased Unemployment Insurance**

<table>
<thead>
<tr>
<th>Eligibility</th>
<th>Program</th>
<th>Terms &amp; Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Individuals qualifying for standard unemployment compensation</td>
<td>- Pay is immediate, vs. standard one-week waiting period</td>
<td></td>
</tr>
<tr>
<td>- Individuals not previously qualifying for unemployment compensation, such as contractors and the self-employed</td>
<td>- Provides standard unemployment compensation (roughly 50%) for 39 weeks, vs. standard 26 weeks</td>
<td></td>
</tr>
<tr>
<td>- Additional $600 pay per week through July 31 (4 months), even if unemployment compensation exceeds previous wage level</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Aid to Small Businesses**

**Small Business Loans & Payroll Subsidies**

<table>
<thead>
<tr>
<th>Eligibility</th>
<th>Program</th>
<th>Terms &amp; Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Small businesses &lt; 500 employees (&lt; 500 per physical location for accommodations and food services sector)</td>
<td>- Small business obtains loan for 2.5x monthly payroll, up to $10 million</td>
<td></td>
</tr>
<tr>
<td>- Sole proprietors, contractors, self-employed individuals</td>
<td>- Loan forgiven when used for employee pay, rent or mortgage interest, and utility payments</td>
<td></td>
</tr>
<tr>
<td>- Businesses operational, with employees on payroll, on Feb. 15</td>
<td>- Business eligible if operational and having employees on Feb 15 (repayment ability not considered)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Amount forgiven prorated to account for layoffs and pay decreases</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Government guarantee at 100% rate (vs. 75% for traditional SBA loans)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Banks earn fee up to 5% for originating loan</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Payments deferred up to 1 year</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Banks hold loans on balance sheet with zero risk rating</td>
<td></td>
</tr>
</tbody>
</table>
**Aid to Airlines**

**Relief for Specific Distressed Sectors**

- **Eligibility**
  - Airlines, air cargo, and national security/aerospace sectors

- **Program**
  - 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 ($30bn)

- **Terms & Process**
  - 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**

- **Policy**
  - NOL carryback
  - Modify pass-through loss limitation
  - 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.
  - Payroll tax delay
  - Interest deductibility

- **Amount**
  - $80bn (0.4% of GDP)
  - $140bn (0.7% of GDP)
  - $55bn (0.3% of GDP)
  - $350bn (1.7% of GDP)
  - $13bn (0.06% of GDP)
  - $4.2trn (12.2% of GDP)

**ESF & Federal Reserve Corporate and Municipal Credit Facility**

- **Eligibility**
  - Corporate sector
  - State / municipal sector

- **Program**
  - Lease, lend directly or purchase credit from issuers
  - Purchase debt in the secondary market
  - Treasury lends to implement 13(3) facility targeted at nonprofits and businesses between 500-10k employees

- **Terms & Process**
  - Requires loan collateralization, taxpayer protection, borrower solvency
  - Buys, dividends, executive compensation restricted for the life of the loan and one year following.
  - Treasury may waive these requirements if necessary
  - Congressional oversight
Aid to States

Federal Spending & Aid to States
$490bn (2.3% of GDP)

<table>
<thead>
<tr>
<th>Expenditure</th>
<th>Description</th>
<th>Amount ($bn)</th>
<th>% of GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aid to States</td>
<td>To offset declining revenues; Allocated by population with minimum $1.25bn</td>
<td>$150bn</td>
<td>0.7</td>
</tr>
<tr>
<td>Hospitals &amp; medical</td>
<td>Reimbursement to providers and other health expenses</td>
<td>$130bn</td>
<td>0.6</td>
</tr>
<tr>
<td>FEMA</td>
<td>For disaster relief fund to aid states and localities and other operations</td>
<td>$45bn</td>
<td>0.2</td>
</tr>
<tr>
<td>Transportation</td>
<td>Grants to transportation systems and airports</td>
<td>$35bn</td>
<td>0.2</td>
</tr>
</tbody>
</table>

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.
  - 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).

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
Apple Mobility Trends

Source: David Boaz