OUTLOOK FOR KEY REVENUES
Palm Beach County

Fiscal Years 2019-20, 2020-21 and 2021-22

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Presented By:
Hank Fishkind, Ph.D.
Introduction

- The COVID-19 pandemic has already caused unprecedented social and economic costs.
- There is tremendous uncertainty about the trajectory of new infections, rates of mortality and morbidity, public policies, and the economic costs associated with the pandemic.
- As a result, the precise magnitude of economic costs and financial market turbulence are unknowable at this juncture.

Nevertheless: (a) governments must continue to provide public services and to protect the health, safety, and welfare of their communities and (b) businesses must plan and execute the re-opening of the economy.

- This analysis is provided to Palm Beach County for budget and policy planning.
- All data as of 6/12/2020 unless otherwise noted.
As Dr. Fauci has said, “the virus is the clock”

New cases still rising, but at a slower rate

Focus on new infection rate - < 10% key as re-openings expand

Source: [https://covidtracking.com/data/](https://covidtracking.com/data/)
COVID-19 Recession: Overview and Key Assumptions

1. Baseline

A. **Overview:** COVID-19 has triggered a severe but short global recession. In the U.S. it is the worst since the depression.

B. **Key Assumptions:** Emergency measures remain in place through May. Normal economic and social activities are delayed until mid-2021 when a vaccine is developed. In between social distancing is necessary as testing and quarantine measures ramp up depressing economic activity.

2. Pessimistic

A. **Overview:** Infections rebound in the U.S. prompting renewals of lockdown measures preventing a recovery. The result is a prolonged period of below trend economic activity.

B. **Key Assumptions:** Lockdown measures are abandoned too soon and the epidemic erupts in major cities. Extensive monetary and fiscal measures result in a quasi nationalization of major sectors of the economy. These measures fail to restore a meaningful recovery, but they do arrest the downward spiral.

Sources: Moody’s Economy.com
It is important to recognize that COVID-19 has triggered the first recession ever caused by a contraction in the services sector of the economy.

All prior recessions stemmed from the good producing sector. For example, the Great Recession beginning in 2008 was caused by an excess supply of housing stimulated by faulty financing and speculation.

Unlike a goods-based recession, a service sector recession does not generate excess inventory of goods that must be absorbed before recovery can begin.

Instead, a service-based recession causes a very sharp loss of employment and income and devastates restaurants, retail, service, entertainment, tourism and travel. Many of these businesses are relatively small and have small capital bases. Most of their workers are relatively lower paid and lack healthcare and other safety nets or much savings.
Consequences of a Services Sector Recession on the Business Cycle

- Since a services sector recession is not burdened by excess inventory, the recovery is expected to occur more quickly.

- However, in this instance with COVID-19, recovery depends upon: (a) a decline in the rate of new infections and (b) sharp increase in testing, tracing, and quarantines.

- Taiwan, Hong Kong, Singapore, and South Korea avoided massive closures of their economies with robust testing and strict quarantine of those infected. However, even in these countries disruptions occurred when infection rates spiked.

- We cannot begin to reopen our economy safely until these conditions occur, which is happening now. But, without social distancing and testing there will be a rebound in infections.

- Unprecedented monetary policies and massive fiscal stimulus including $3T including direct cash grants to families, and credit support to businesses are expected to avert another depression. But, fiscal stimulus cannot avoid a sharp recession nor a huge surge in bankruptcies and in unemployment.
Impact of COVID-19 on Real GDP

The COVID-19 recession expected to be the deepest and one of the shortest since WWII.

Sources: Moody's Economy.Com, and PFM
Comparison of COVID-19 Recession to Past Recessions

<table>
<thead>
<tr>
<th>Recession</th>
<th>Months of Duration</th>
<th>Fall in GDP</th>
<th>Peak Unemployment Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Great Depression</td>
<td>43</td>
<td>-30.0%</td>
<td>25%</td>
</tr>
<tr>
<td>2008-2009</td>
<td>18</td>
<td>-4.3%</td>
<td>13%</td>
</tr>
<tr>
<td>COVID-19</td>
<td>6</td>
<td>-10.5%</td>
<td>15%</td>
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</tbody>
</table>

- The COVID-19 recession is unique, because it is primarily a services sector recession caused by an epidemic.
- Although the COVID-19 recession is expected to be short in duration, it will likely cause a spike in the unemployment rate higher than in the Great Recession of 2008-9. Again, this is because this recession strikes at the services sector of the economy.
- Strong actions by the Federal Reserve and the $3T federal stimulus package (equal to 15% of GDP) are likely to prevent cascading sequence of business failures and layoffs from morphing into a financial crises and a depression.

Sources: Moody's Economy.com and NBER
Key Interest Rates

Source: Moody's Economy.com,
IMPACT ON FLORIDA
Why Care About GDP? Where GDP Goes, so Goes Florida’s Gross State Product to a Large Extent

GDP v Florida GSP

Correlation = 0.87

Source: U.S. Bureau of Economic Analysis and PFM
COVID-19 Cases In Florida Through 6-11-20

Source: https://covidtracking.com/data/
Florida’s Population Growth Peaked in 2016 Well Before the COVID-19 Recession

- Domestic migration into Florida has slowed 38% over the last 3-years
- International migration dropped 43% since 2016

Source: U.S. Census Bureau
Florida’s Job Market in April 2020

- May will be just as bad based on new claims data for May
The COVID-19 Recession is expected to hit Florida particularly hard, because it is a services-based recession.

Florida’s economy is heavily concentrated in tourism, trade, and retirement migration — all sectors vulnerable to the COVID-19 Recession.
Implications for Palm Beach County
Palm Beach County’s Economy is also closely linked to U.S. GDP

- The correlation between the trajectories for Palm Beach’s gross regional product and GDP is 0.80. So, 80% of the variation in Palm Beach's GRP can be explained by U.S. GDP.

- Importantly, the amplitude for Palm Beach’s GRP is higher than for the U.S. during times of overall market highs and lows (e.g. Housing Bubble and Great Recession). Given the nature of the COVID-19 pandemic, it’s expected that Palm Beach’s GRP will be impacted in similar ways to the Great Recession (especially if the duration of the impacts of COVID-19 extend beyond 3 months). Palm Beach GRP appears to decline earlier than national GDP when downturns begin.

Source: U.S. Bureau of Economic Analysis
Palm Beach County Population Growth Components

- Palm Beach’s population has grown rapidly since 2011, fueled by strong inflows from northeastern states, counties elsewhere in south Florida, and increasing shares of international migration.

- Palm Beach is highly attractive to retirees. But among working families, high real estate prices accommodate only higher income households.

- Given the large tourist component of the county, high population density, and price sensitivity due to high real estate valuations, Palm Beach is subject to more pronounced impacts of the COVID-19 Recession.

Source: U.S. Census Bureau
The COVID-19 Recession is likely to have a big impact on employment given the concentration of tourist and service sector jobs in Palm Beach. Population growth will also slow consistent with the depth and duration of the recession.

Source: Moody’s Economy.com and PFM
Methodology to Forecast Key Revenues
Methodology to Forecast Key Revenues

- Palm Beach County identifies key revenues of interest
- County provides historical data to PFM
- PFM obtains data and forecasts for independent variables to used to drive forecasts for County’s key revenues
- PFM develops econometric equations to explain trajectory for key revenues as a function of logically related economic drives
- Example: growth in $\frac{1}{2}$ Sales Tax as a function of growth in retail sales and structural dummy variable

<table>
<thead>
<tr>
<th>Regression Statistics</th>
<th>Coefficients</th>
<th>Standard Error</th>
<th>t Stat</th>
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<td>Multiple R</td>
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<tr>
<td>R Square</td>
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<td>Observations</td>
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<tr>
<td>Intercept</td>
<td>0.025</td>
<td>0.003</td>
<td>(9.262)</td>
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<tr>
<td>Growth So.FL Retail Sales</td>
<td>0.975</td>
<td>0.049</td>
<td>20.014</td>
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<tr>
<td>Dummy</td>
<td>0.049</td>
<td>0.004</td>
<td>13.276</td>
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FORECASTS FOR SELECTED KEY REVENUES
Baseline Case
Base Case

County Gas Tax

- County Gas Tax
- Percent Change

© PFM
Base Case
Base Case

State Revenue Sharing

- State Revenue Sharing
- Percent Change
Base Case

Ad Valorem Property Tax

- $1,200,000,000
- $1,000,000,000
- $800,000,000
- $600,000,000
- $400,000,000
- $200,000,000
- $0

- 12%
- 10%
- 8%
- 6%
- 4%
- 2%
- 0%
- -2%
- -4%
- -6%
- -8%

Ad Valorem Property Tax vs Percent Change

© PFM
Base Case

Tourist Development Tax

- $60,000,000
- $50,000,000
- $40,000,000
- $30,000,000
- $20,000,000
- $10,000,000
- $0

- 2005-2006
- 2006-2007
- 2007-2008
- 2008-2009
- 2009-2010
- 2010-2011
- 2011-2012
- 2012-2013
- 2013-2014
- 2014-2015
- 2015-2016
- 2016-2017
- 2017-2018
- 2018-2019
- 2019-2020
- 2020-2021
- 2021-2022

- 30%
- 20%
- 10%
- 0%
- -10%
- -20%
- -30%

Tourist Development Tax
Percent Change
FORECAST FOR SELECTED KEY REVENUES – PESSIMISTIC CASE
Examples Comparing Base Case to Pessimistic Case

- Percentage Change in Florida General Funds
- Percentage Change County Gas Taxes
- Percentage Change in 1/2 Cent Sales Tax
- Percentage Change in State Revenue Sharing
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