# High Level Comparison (Dec to Sep)

<table>
<thead>
<tr>
<th>Tax Type</th>
<th>Fiscal Year 2021</th>
<th>Fiscal Year 2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Income Tax</td>
<td>$65.7</td>
<td>$115.3</td>
</tr>
<tr>
<td>Corporate Income Tax</td>
<td>(29.7)</td>
<td>50.5</td>
</tr>
<tr>
<td>Sales Tax</td>
<td>75.7</td>
<td>(3.9)</td>
</tr>
<tr>
<td>Lottery</td>
<td>35.3</td>
<td>10.5</td>
</tr>
<tr>
<td>Other</td>
<td>(83.2)</td>
<td>38.3</td>
</tr>
<tr>
<td><strong>Subtotal: Ongoing Revenues</strong></td>
<td><strong>63.8</strong></td>
<td><strong>210.7</strong></td>
</tr>
<tr>
<td>Volatility Cap</td>
<td>0</td>
<td>(68.1)</td>
</tr>
<tr>
<td><strong>Total: Net General Fund</strong></td>
<td><strong>63.8</strong></td>
<td><strong>142.6</strong></td>
</tr>
</tbody>
</table>

Notes: Dollars in Millions
<table>
<thead>
<tr>
<th>Tax Type</th>
<th>Fiscal Year 2021</th>
<th>Fiscal Year 2022</th>
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<tbody>
<tr>
<td>Personal Income Tax</td>
<td>($186.9)</td>
<td>$(113.9)</td>
</tr>
<tr>
<td>Corporate Income Tax</td>
<td>(32.2)</td>
<td>(6.4)</td>
</tr>
<tr>
<td>Sales Tax</td>
<td>(340.5)</td>
<td>(215.8)</td>
</tr>
<tr>
<td>Lottery</td>
<td>41.9</td>
<td>16.0</td>
</tr>
<tr>
<td>Other</td>
<td>(91.2)</td>
<td>7.9</td>
</tr>
<tr>
<td><strong>Subtotal: Ongoing Revenues</strong></td>
<td><strong>(608.8)</strong></td>
<td><strong>(312.2)</strong></td>
</tr>
<tr>
<td>Volatility Cap</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total: Net General Fund</strong></td>
<td><strong>(608.8)</strong></td>
<td><strong>(312.2)</strong></td>
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Notes: Dollars in Millions
What Has Changed Since September?

• We know that the Winter COVID-19 wave is far more significant than prior waves (national and in Maryland)

• We have tremendous confidence in the efficacy of several of the vaccine candidates and a quicker roll-out expectation

• We have a better understanding of the federal stimulus; its scope, size, and how it has (and continues to) supported households and the macro economy
What Has Changed Since September?

- We have a better understanding of the consumer response to the ongoing pandemic; including times of complete restrictions as well as periods of limited restrictions

- We know that the stock market has carried positive momentum since the initial pandemic correction to record highs

- Our year-to-date revenue is performing moderately better than had been expected in September
Changes to Econ Assumptions Since September

1. Have explicitly adjusted for a difficult winter for service labor economy, particularly food services where spring and summer adaptations become less viable

2. No longer have a second stimulus in our baseline
   a. Economy has tremendous momentum and savings from the first stimulus as we head into winter
   b. We are very concerned about the unemployment insurance situation – but more of a basic humanitarian need and public policy issue than a revenue problem
   c. Should Congress pass the stimulus currently under consideration, it would largely maintain the pre-winter trajectory (likely only moderately impacting our key econ fundamentals), but might boost spending – we would address this in March

3. Increased outlook for Capital Gains Income

4. Stronger confidence in mostly “V” shaped recovery after vaccine
Forecasts of Employment (000s)

Sources: Moody's Analytics; IHS Markit; Bureau of Revenue Estimates
Disconnect between Social Impact & Revenue Impact

- Impact is largely income bi-furcated – lower income jobs bear the brunt of this recession

- And the State’s revenue structure is set to minimize the tax paid by lower income households – thereby minimizing the revenue impact from this recession

- Meanwhile, losses in business income somewhat offset by gains in capital markets

- Most jobs lost are below state average wage

- For income tax, which is 50% of revenues:
  - Taxpayers making less than $50k accounted for 43% of all taxpayers in 2019, but just 6.6% of tax

- Stimulus has sustained, and in some cases expanded, spending, so sales tax (25% of revenues) impact is mitigated
Lower Income Service Jobs Most Impacted

Number Of Private Sector Jobs (Lost) or Gained: Oct 2020 versus Feb 2020

- **Finance and insurance:** 2019Q4 Average Wage = $131,837
- **Management of companies and enterprises:** 2019Q4 Average Wage = $126,250
- **Wholesale trade:** 2019Q4 Average Wage = $85,493
- **Real estate and rental and leasing:** 2019Q4 Average Wage = $69,342
- **Information:** 2019Q4 Average Wage = $93,896
- **Other Services [except public administration]:** 2019Q4 Average Wage = $46,283
- **Natural resources; mining and construction:** 2019Q4 Average Wage = $73,294
- **Professional and technical services:** 2019Q4 Average Wage = $111,057
- **Manufacturing:** 2019Q4 Average Wage = $79,444
- **Educational services:** 2019Q4 Average Wage = $60,413
- **Retail trade:** 2019Q4 Average Wage = $34,083
- **Transportation and utilities:** 2019Q4 Average Wage = $54,792
- **Arts; entertainment; and recreation:** 2019Q4 Average Wage = $37,727
- **Administrative and waste services:** 2019Q4 Average Wage = $46,899
- **Health care and social assistance:** 2019Q4 Average Wage = $58,775
- **Accommodations and food services:** 2019Q4 Average Wage = $24,082

**Total Private Sector**
- Trough Jobs Lost: (378,600)
- Jobs Still Lost: (152,700)
- Emp Level (Oct to Feb): -6.7%

**Average Wage 2019Q4**: $63,838

Sources: U.S. Bureau of Labor Statistics, Maryland Department of Labor, Comptroller of Maryland, Bureau of Revenue Estimates
Reflected in our Withholding Data

Contribution to Year-Over-Year Growth of Total Withholding (Jan to Oct)

- Accommodation & Food Services
- Management of Companies & Enterprises
- Other Services (except Public Admin)
- Arts Entertainment & Recreation
- Wholesale Trade
- Real Estate & Rental & Leasing
- Utilities
- Educational Services Excl. Local
- Mining Quarrying & Oil & Gas Extraction
- Other
- Agriculture Forestry Fishing & Hunting
- Construction
- Information
- Other State & Local Governments
- State Government
- Admin & Support & Waste Mgmt & Remediation Services
- Transportation & Warehousing
- Manufacturing
- Health Care & Social Assistance
- Retail Trade
- Local Governments
- Federal Government
- Professional Scientific & Technical Services
- Finance & Insurance
- Unemployment Insurance

Source: Bureau of Revenue Estimates

Y-O-Y Growth:
- Total Withholding: 3.4%
- Total Withholding - Excl UI: 1.5%
2020Q2 Stimulus Was Incredibly Successful

Estimated Stimulus Amounts by Key Programs in 2020Q2 ($ in billions)

Perspective: The total $20.3 billion shown here is equal to 4.8% of all Maryland economic output in 2019

Note: This does not include all stimulus efforts (including much of the stimulus sent directly to governments), this represents the largest dollar categories for which we could find publicly available data

Sources: U.S. Bureau of Economic Analysis; U.S. Small Business Association; Comptroller of Maryland, Bureau of Revenue Estimates
Early Stimulus Research

Direct Payments

- Congressional Budget Office estimates that 5 of every 6 recipients of the extra $600 received benefits that exceeded their work earnings

Unemployment Insurance

- Research from University of Chicago finds that typically consumption declines by 7% on UI, but instead actually increased with the extra $600


Sources: CBO; and University of Chicago
Unemployment Insurance Direct Revenue Impact – Income Tax

- UI is taxable
- Bolstering withholding collections
- We estimate $269M for tax year 2020
- However, our research and simulations show that 70% will be refunded at filing time
Income Tax Estimate By Tax Year (excl rate and law changes)

Estimate of Taxable Income - Baseline - Dec 2020

- Recession
- History
- Dec 20
- Sep 20
Sales Tax: Volatile & Shifting

- Large downturns in the Spring with shutdown
- Stimulus very supportive
- Shift to durable goods in support of COVID replacement activities:
  - Home renovations; recreational items (canoes, kayaks, etc…)
- Shift to goods purchases in replacement of services
- Shift to online purchasing

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Mar 2020</th>
<th>Sep 2020</th>
<th>Dec 2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>$260</td>
<td>$331</td>
<td>$331</td>
</tr>
<tr>
<td>2021</td>
<td>324</td>
<td>465</td>
<td>547</td>
</tr>
<tr>
<td>2022</td>
<td>350</td>
<td>500</td>
<td>547</td>
</tr>
<tr>
<td>2023</td>
<td>374</td>
<td>550</td>
<td>563</td>
</tr>
</tbody>
</table>

Notes: (1) Dollars in Millions; (2) First $100M to GF, rest to Blueprint; (3) Does not include online retailers with nexus
Sales Tax: Temporary Shift From Services

National Personal Consumption Expenditures: Year-Over-Year Growth

Share of Goods & Services - US

<table>
<thead>
<tr>
<th>May 2019 to Oct 2019</th>
<th>Goods</th>
<th>Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>31%</td>
<td>69%</td>
<td></td>
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<table>
<thead>
<tr>
<th>May 2020 to Oct 2020</th>
<th>Goods</th>
<th>Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>34%</td>
<td>66%</td>
<td></td>
</tr>
</tbody>
</table>

Note: Big deal on $14.6 Trillion in Total Spending

Sources: U.S. Bureau of Economic Analysis; Comptroller of Maryland; Bureau of Revenue Estimates
Disparate Impact Applies To Businesses Also

- In 2020Q2:
  - The top 0.1% of sales tax accounts (61 businesses) were up 32%
  - The remainder were down 22%
  - Also 11k fewer accounts (one account can be many locations)

- In 2020Q3:
  - The top 0.1% of sales tax accounts (55 businesses) were up 37%
  - The remainder were down 4%
  - Also 7.7k fewer accounts (one account can be many locations)
Top 100 Retailers are 1% of total, but 50% of Retail Withholding – up 16%

The remaining ~ 10,000 retailers are down 4%
Final Revenue & Econ Thoughts

• Greater risk on the non-wage side, businesses making payroll, but are they profitable??
• FREE LUNCH
  • What is the cost for our stimulus??
  • Can we print our way out of this?
  • Is inflation on the horizon – slower econ growth? Currently under debate in economic circles
• What happens to the broader financial economy with delayed and perhaps delinquent mortgage and rent payments?
• Local budgets to be more impacted due to heavier reliance on property tax? (Commercial property to undergo valuation correction)
• Accelerated shifts to AI and robotics?
Thank You

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