A Recession Unlike Any Other, So Far

Tennessee Government Finance Officers Association

William F. Fox, Director

October 7, 2020
GDP Growth Plummeted in the 2\textsuperscript{nd} Quarter, Coming Back Strongly in the 3\textsuperscript{rd}
The US Employment Loss was Huge in Historical Terms

-16.0
-14.0
-12.0
-10.0
-8.0
-6.0
-4.0
-2.0
0.0
2.0

'73 '81 '90
'80 '01

'20 '07

PEAK 1 YR 2 YR 3 YR 4 YR 5 YR 6 YR 7 YR

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Employment Declined Across all States during February-August Compared to Last Year

Employment Growth (yoy)

<table>
<thead>
<tr>
<th>State</th>
<th>Employment Growth (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TX</td>
<td>-9%</td>
</tr>
<tr>
<td>MS</td>
<td>-8%</td>
</tr>
<tr>
<td>AR</td>
<td>-7%</td>
</tr>
<tr>
<td>KA</td>
<td>-6%</td>
</tr>
<tr>
<td>AL</td>
<td>-5%</td>
</tr>
<tr>
<td>GA</td>
<td>-4%</td>
</tr>
<tr>
<td>TN</td>
<td>-3%</td>
</tr>
<tr>
<td>OK</td>
<td>-2%</td>
</tr>
<tr>
<td>SC</td>
<td>-1%</td>
</tr>
<tr>
<td>DC</td>
<td>0%</td>
</tr>
<tr>
<td>FL</td>
<td>+1%</td>
</tr>
<tr>
<td>VA</td>
<td>+2%</td>
</tr>
<tr>
<td>MO</td>
<td>+3%</td>
</tr>
<tr>
<td>NC</td>
<td>+4%</td>
</tr>
<tr>
<td>MD</td>
<td>+5%</td>
</tr>
<tr>
<td>LA</td>
<td>+6%</td>
</tr>
<tr>
<td>WV</td>
<td>+7%</td>
</tr>
<tr>
<td>KY</td>
<td>+8%</td>
</tr>
</tbody>
</table>

September, 2020
The Unemployment Rate Has Fallen from its Peak but Remains Historically High

TN
August-20
8.5

U.S.
September-20
7.9
Tennessee Employment Has Fallen Across Most Categories
(Quarter Ending August, year-over-year)

- Financial Activities
- Trade, Transportation, Utilities
- Education & Health Services
- Mining, Logging, Construction
- Other Services
- Total Private
- Professional & Business Services
- Information
- U.S. Total Private
- Manufacturing
- Leisure & Hospitality

Growth Rate

Septmeber, 2020
Continued Claims Heaviest in Leisure & Hospitality, but all Industries Affected

Source: Tennessee Department of Labor and Workforce Development

September, 2020

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Employment Losses Differ Across Metro Areas
(Three Month Moving Average July, year-over-year)

-8.0% -7.0% -6.0% -5.0% -4.0% -3.0% -2.0% -1.0% 0.0%

- Chattanooga, TN-GA
- Cleveland, TN
- Knoxville, TN
- Clarksville, TN-KY
- Johnson City, TN
- Statewide
- Memphis, TN-MS-AR
- Kingsport-Bristol, TN-VA
- Jackson, TN
- Nashville-Murfreesboro-Franklin, TN

Growth Rate

September, 2020
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Job Market Effects of Covid 19

• Initial job losses came from the shutdown
• More recent losses are from lower demand – the economy has not rebounded fast enough to permit employers to maintain all workers (airlines, Disney), but are adding jobs on net
• What happens from here? Still 10,000 initial claims for unemployment benefits every week
• Most economic growth in recent years has been among firms under 20 employees, what happens if many small firms don’t recover?
Congress Enacted the CARES Act and Other Stimulus, will there be more stimulus before the election.
Federal Deficit Will Reach Extraordinary Levels, Pushing Debt to 100 Percent of GDP

Source: Congressional Budget Office and CRFB calculations.

Pre-Crisis Deficit Projections (March 2020)
Alternative Scenario
Updated Deficit Projections (June 2020)
$3.9 trillion
$3.7 trillion
$2.4 trillion
$1.7 trillion

September, 2020
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The Economy Will not Grow Faster than Demand, How will Consumers Respond?

Percentage change (same quarter previous year)

-12.00% -10.00% -8.00% -6.00% -4.00% -2.00% 0.00% 2.00% 4.00% 6.00% 8.00%


September, 2020
Most states had reopened much of their economy in August and total retail sales were slightly up from last year (Year over Year Change)

<table>
<thead>
<tr>
<th>Category</th>
<th>Growth Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clothing and clothing access. stores</td>
<td>-20.4%</td>
</tr>
<tr>
<td>Food services and drinking places</td>
<td>-15.4%</td>
</tr>
<tr>
<td>Gasoline stations</td>
<td>-15.4%</td>
</tr>
<tr>
<td>Motor vehicle &amp; parts dealers</td>
<td>-15.4%</td>
</tr>
<tr>
<td>Health and personal care stores</td>
<td>11.1%</td>
</tr>
<tr>
<td>Food and beverage stores</td>
<td>10.0%</td>
</tr>
<tr>
<td>Electronics and appliance stores</td>
<td>5.6%</td>
</tr>
<tr>
<td>Furniture and home furnishings stores</td>
<td>3.8%</td>
</tr>
<tr>
<td>General merchandise stores</td>
<td>0.8%</td>
</tr>
<tr>
<td>Miscellaneous stores retailers</td>
<td>-0.6%</td>
</tr>
<tr>
<td>Total</td>
<td>2.6%</td>
</tr>
<tr>
<td>Nonstore retailers</td>
<td>22.4%</td>
</tr>
</tbody>
</table>

-70.0% -60.0% -50.0% -40.0% -30.0% -20.0% -10.0% 0.0% 10.0% 20.0% 30.0% Growth Rate
Financial Markets Fell but are Back to Historical Highs (S&P Index)
Oil Prices Have Recovered Some as Production Fell, but Remain Low

(WTI Spot Price in U.S. Dollars Per Barrel)
The Yield Curve is Upsloping but Rates are Historically Low Across the Spectrum

Interest Rate, in Percent

<table>
<thead>
<tr>
<th></th>
<th>3-Months</th>
<th>6-Months</th>
<th>1-Year</th>
<th>2-Years</th>
<th>5-Years</th>
<th>10-Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>October 2, 2020</td>
<td>1.79</td>
<td>1.75</td>
<td>1.67</td>
<td>1.48</td>
<td>1.43</td>
<td>1.6</td>
</tr>
<tr>
<td>October 2, 2019</td>
<td>0.09</td>
<td>0.11</td>
<td>0.13</td>
<td>0.13</td>
<td>0.28</td>
<td>0.69</td>
</tr>
</tbody>
</table>

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Light Vehicle Sales Fell Dramatically and Have Rebounded Some
Low Interest Rates have Contributed to New (and existing) Single Family Home Sales Increasing
Trends Accelerated by Covid 19

• Many retail and restaurant job losses are permanent as businesses right size themselves
# Retail Bankruptcies in 2020

<table>
<thead>
<tr>
<th>Retailer</th>
<th>Merchant Type</th>
<th>Current Rank*</th>
<th>Date of Bankruptcy</th>
<th>Additional Brands</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schurman Fine Paper Corp.</td>
<td>Consumer Brand Manufacturer</td>
<td>482</td>
<td>January 23, 2020</td>
<td>Papyrus, American Greetings, Blue Mountain, Card store, Just Wink</td>
</tr>
<tr>
<td>Pier 1 Imports</td>
<td>Retail Chain</td>
<td>99</td>
<td>February 17, 2020</td>
<td>NA</td>
</tr>
<tr>
<td>Art Van Furniture</td>
<td>Retail Chain</td>
<td>473</td>
<td>March 8, 2020</td>
<td>NA</td>
</tr>
<tr>
<td>Bluestern Brands</td>
<td>Catalog/Call center</td>
<td>57</td>
<td>March 10, 2020</td>
<td>Fingerhut, Gettington.com, Blair, Haband</td>
</tr>
<tr>
<td>Modell's Sporting Goods</td>
<td>Retail Chain</td>
<td>1312</td>
<td>March 11, 2020</td>
<td>NA</td>
</tr>
<tr>
<td>True Religion</td>
<td>Consumer Brand Manufacturer</td>
<td>898</td>
<td>April 13, 2020</td>
<td>NA</td>
</tr>
<tr>
<td>J.Crew</td>
<td>Retail Chain</td>
<td>47</td>
<td>May 4, 2020</td>
<td>J. Crew Group, J. Crew Factory, Madewell</td>
</tr>
<tr>
<td>J. Hilburn Inc.</td>
<td>Consumer Brand Manufacturer</td>
<td>316</td>
<td>May 4, 2020</td>
<td>NA</td>
</tr>
<tr>
<td>Neiman Marcus</td>
<td>Retail Chain</td>
<td>41</td>
<td>May 7, 2020</td>
<td>Bergdorf Goodman, Horchow, MyThersa.com, Neiman Marcus Last Call</td>
</tr>
<tr>
<td>Stage Stores Inc.</td>
<td>Retail Chain</td>
<td>737</td>
<td>May 10, 2020</td>
<td>Palais Royal, Bealls, Gordmans</td>
</tr>
<tr>
<td>J.C.Penney</td>
<td>Retail Chain</td>
<td>32</td>
<td>May 15, 2020</td>
<td>NA</td>
</tr>
<tr>
<td>Roots Corp.**</td>
<td>Consumer Brand Manufacturer</td>
<td>579</td>
<td>June 10, 2020</td>
<td>NA</td>
</tr>
<tr>
<td>GNC Holdings</td>
<td>Retail Chain</td>
<td>287</td>
<td>June 24, 2020</td>
<td>Lucky Vitamin, DiscountSupplements.com</td>
</tr>
<tr>
<td>Lucky Brand</td>
<td>Consumer Brand Manufacturer</td>
<td>625</td>
<td>July 3, 2020</td>
<td>NA</td>
</tr>
<tr>
<td>G-Star RAW</td>
<td>Consumer Brand Manufacturer</td>
<td>183^</td>
<td>July 3, 2020</td>
<td>NA</td>
</tr>
<tr>
<td>Brooks Brothers</td>
<td>Consumer Brand Manufacturer</td>
<td>162</td>
<td>July 8, 2020</td>
<td>NA</td>
</tr>
<tr>
<td>Sur La Table</td>
<td>Retail Chain</td>
<td>238</td>
<td>July 8, 2020</td>
<td>NA</td>
</tr>
<tr>
<td>Ascena Retail Group</td>
<td>Retail Chain</td>
<td>38</td>
<td>July 23, 2020</td>
<td>Ann Taylor, Dressbarn, Justice, Lane Bryant, Lou &amp; Grey, Catherines, Loft Outlet, Ash &amp; Erie</td>
</tr>
<tr>
<td>Tailored Brands</td>
<td>Retail Chain</td>
<td>150</td>
<td>August 2, 2020</td>
<td>The Men's Warehouse, Jos. A. Bank</td>
</tr>
<tr>
<td>Le Tote</td>
<td>Web Only^^</td>
<td>835</td>
<td>August 2, 2020</td>
<td>Lord &amp; Taylor</td>
</tr>
</tbody>
</table>
Trends Accelerated by Covid 19

• Many retail and restaurant job losses are permanent as businesses right size themselves
• Retail space falls and fulfillment space grows as online purchasing doesn’t retreat
  • Use of AI in groceries continues to rise
  • Buy online pick up curbside
E-Commerce Sales are Growing Very Rapidly
Trends Accelerated by Covid 19

• Firms are learning new ways to use technology
  • Teleoffice and telemedicine role – use of office space falls because of Zoom but rises due to social distance
  • Smaller metro areas are beneficiaries
  • Replacing workers with technology – remote cleaning and disinfecting, drones,
• Fewer low skill jobs left in the economy after the pandemic, exacerbating the labor market problems
A College Education Offers Protection Against Unemployment, though All Groups have been Affected

September, 2020
Continued Importance of Education is Apparent in Unemployment Rates and Earnings

### Unemployment Rate (%)

- Less than a high school diploma: 5.6
- High school diploma: 4.1
- Some college, no degree: 3.7
- Associate's degree: 2.8
- Bachelor's degree: 2.2
- Master's degree: 2.1
- Doctoral degree: 1.6
- Professional degree: 1.5

### Median Weekly Earnings ($)

- Less than a high school diploma: $553
- High school diploma: $730
- Some college, no degree: $802
- Associate's degree: $862
- Bachelor's degree: $1,198
- Master's degree: $1,434
- Doctoral degree: $1,825
- Professional degree: $1,884
Investment Has Plummeted During the Pandemic, and will Rebound Slowly – Reduces long term US Growth
Real Net Exports as a Share of Real GDP

- April 1992 to April 2020

- The graph shows a trend over time, with fluctuations in the share of real net exports as a percentage of real GDP.

- The data is presented by William F. Fox and is available at [http://cber.haslam.utk.edu](http://cber.haslam.utk.edu).

- September, 2020
Tennessee Tax Revenues have Swung more Widely than the Economy during Past Recessions but Not this One – So Far

September, 2020

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Tennessee Tax Revenue Growth, August 2020

- Mixed Drink: -50.0%
- Gasoline: -10.0%
- Franchise & Excise: -20.0%
- Privilege: -10.0%
- Total: 0.0%
- Sales: 10.0%
- Motor Vehicle Fuel: 10.0%
- Alcoholic Beverage: 15.0%

October, 2020
William F. Fox • http://cber.haslam.utk.edu
Local Sales Tax Revenues Growing Fast in Almost Every County, August 2020

The image shows a map of Tennessee with counties color-coded to indicate the percentage change in local sales tax revenues compared to the previous year. The legend indicates the following categories:

- 0% or Less Decrease (2)
- >0% to <15% (13)
- 15% to <30% (56)
- 30% or More Increase (24)