



# Economic and Revenue Forecasting in the “unprecedented, highly uncertain, and rapidly changing” COVID-19 Recession

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# Outline of Presentation

- The Pre-COVID Maine Economy
- The COVID-19 Economy March 2020 – June 2021
- Revenue Performance March 2020 – June 2021
- Short and Long Term Issues to Watch

The background is a deep blue with a complex, abstract pattern of glowing white and light blue lines and geometric shapes. These shapes include rectangles, squares, and cubes, some of which are slightly offset or layered, creating a sense of depth and movement. The overall effect is reminiscent of a digital or architectural blueprint.

# The Pre-COVID19 Maine Economy



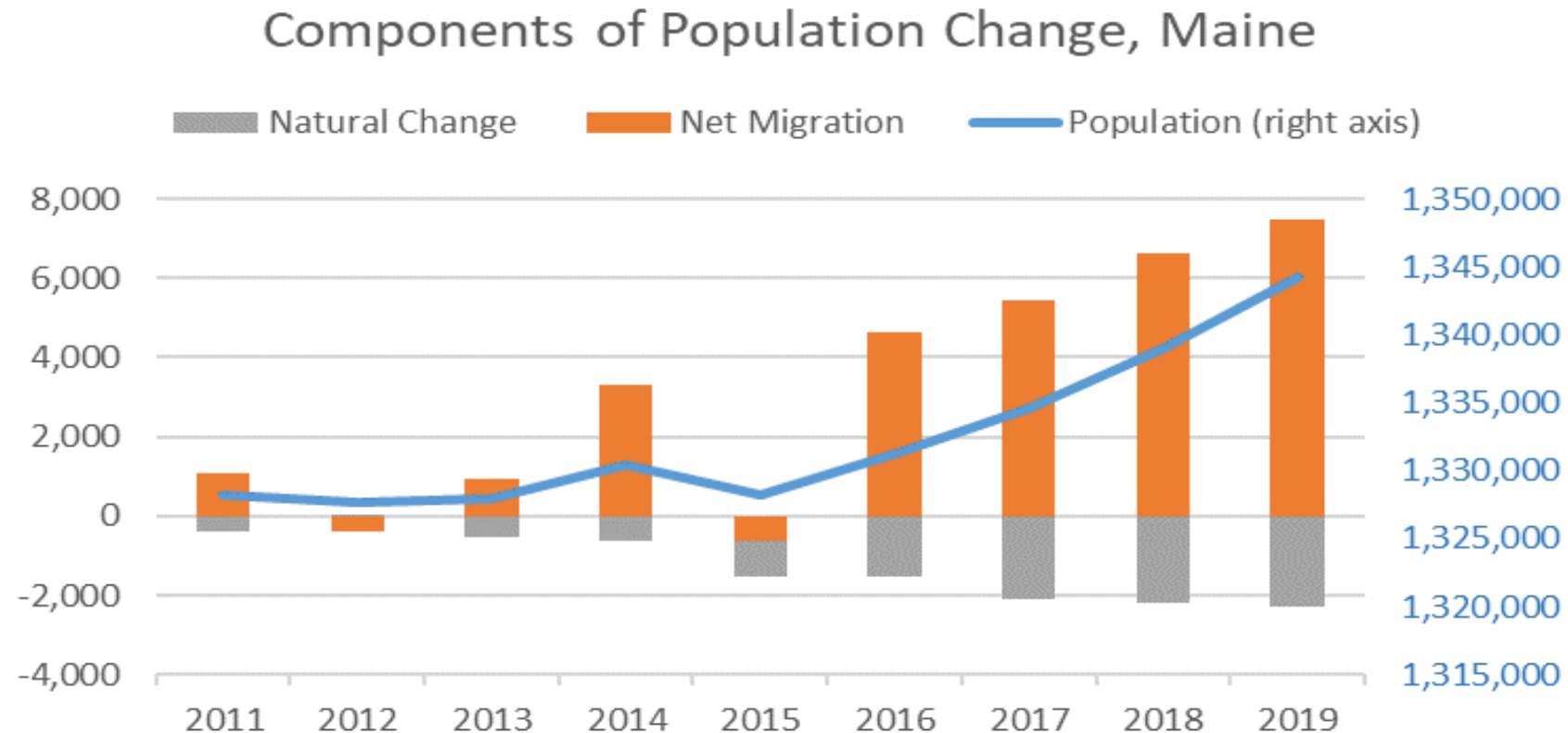


# The Maine Economy Pre-COVID19

**Population growth has increased in recent years, driven by stronger migration into the state**

**In 2019, Maine's rate of total population increase ranked 25th and the rate of total net migration ranked 16th in the U.S.**

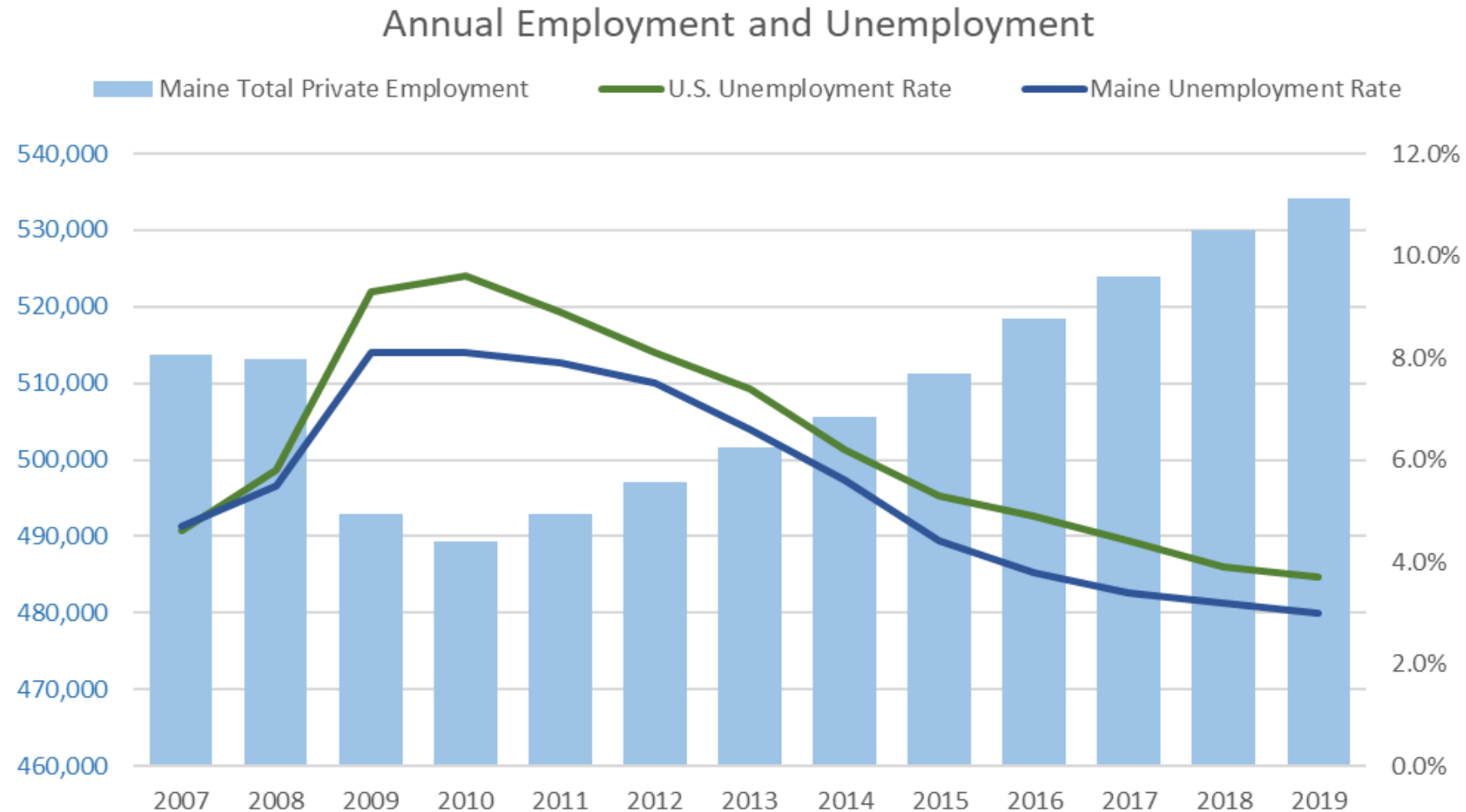
- Other parts of the U.S. are starting to face the aging population and slower population growth that Maine has years of experience with





# The Maine Economy Pre-COVID19

**Labor markets remained tight through 2019 with private businesses continuing to expand and unemployment below 4.0% for the longest stretch on record (51 consecutive months as of March 2020)**





# The Maine Economy Pre-COVID19

- Preliminary estimates for 2019 showed total personal income grew by 4.6 percent in Maine, ranking 18th in the U.S. and 1st in New England

Total Personal Income (percent change from preceding period)							
	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019
United States	1.3	5.7	4.8	2.6	4.7	5.6	4.4
Connecticut	-2.1	4.6	2.5	1.9	3.4	5.8	3.2
<b>Maine</b>	<b>-0.3</b>	<b>4.3</b>	<b>4.1</b>	<b>3</b>	<b>4.1</b>	<b>5.3</b>	<b>4.6</b>
Massachusetts	0.8	5.3	6.6	3.4	4.8	5.7	4.4
New Hampshire	-0.3	4.3	4.3	3.6	4	5.5	4.5
Rhode Island	-0.1	4.3	3.9	1.1	3.6	4.8	3.3
Vermont	1.3	3.9	3.7	2.2	2.5	4.5	4.3



# The Maine Economy Pre-COVID19 – February 1, 2020

## CEFC Economic Forecast

Calendar Years	2018	2019	2020	2021	2022	2023	2024	2025
<b>Wage &amp; Salary Employment (Annual Percentage Change)</b>								
CEFC Forecast 11/2019	0.7	0.8	0.4	0.0	0.0	0.0		
CEFC Forecast 02/2020	0.7	0.9	0.5	0.2	0.1	0.0	0.0	0.0
<b>Personal Income (Annual Percentage Change)</b>								
CEFC Forecast 11/2019	5.3	4.6	4.1	3.9	3.6	3.5		
CEFC Forecast 02/2020	5.3	4.7	4.1	4.0	3.7	3.5	3.5	3.5
<b>Wage and Salary Income (Annual Percentage Change)</b>								
CEFC Forecast 11/2019	4.4	4.5	4.1	3.7	3.4	3.2		
CEFC Forecast 02/2020	4.4	4.5	4.1	3.7	3.4	3.2	3.2	3.2
<b>CPI (Annual Percentage Change)</b>								
CEFC Forecast 11/2019	2.4	1.9	2.0	2.0	2.0	2.0		
CEFC Forecast 02/2020	2.4	1.8	1.9	2.0	2.0	2.0	2.0	2.0



# The Maine Economy Pre-COVID19 – March 1st RFC

## General Fund Summary

	<b>FY19 Actual</b>	<b>FY20</b>	<b>FY21</b>	<b>FY22</b>	<b>FY23</b>
Current Forecast	\$3,848,511,092	\$3,956,856,574	\$4,039,639,504	\$4,144,431,540	\$4,285,769,358
Annual % Growth	7.3%	2.8%	2.1%	2.6%	3.4%
Net Increase (Decrease)	\$0	\$40,034,451	\$34,080,948	\$31,605,982	\$33,344,535
Revised Forecast	\$3,848,511,092	\$3,996,891,025	\$4,073,720,452	\$4,176,037,522	\$4,319,113,893
Annual % Growth	7.3%	3.9%	1.9%	2.5%	3.4%



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# The COVID19 US & Maine Economies



# Why is the COVID19 Economy Unprecedented?

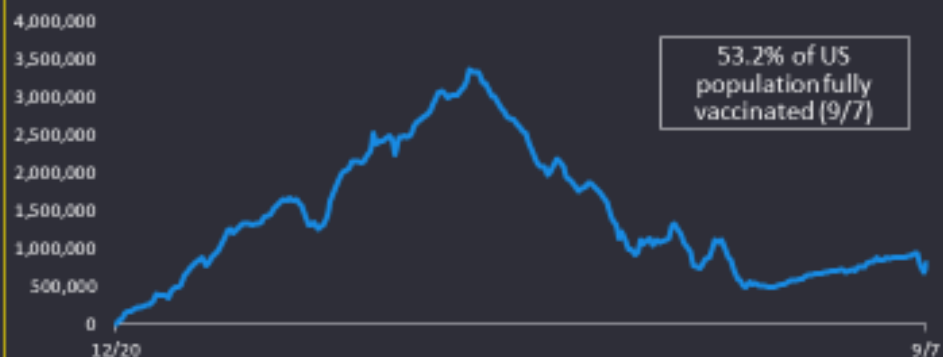
- Pandemic induced recession – no road map of what counter-cyclical policy should be
- Both a supply and demand side recession rather than just demand side
- Federal fiscal and monetary response was swift and massive
- Recession concentrated on service sector not goods sector
- Low-wage service sector jobs disproportionately affected
- Women disproportionately impacted because of jobs and childcare

# COVID19 Recession

## COVID cases, hospitalizations, and deaths rising; vaccination rate rising

- ▶ Recent rise in COVID cases creating some economic headwinds; the rise appears centered in states and population segments with lower vaccination rates
- ▶ As of 9/7, 62.5% of the US population has received at least one dose; 53.2% of the US population is fully vaccinated
- ▶ Vaccination rate rising again

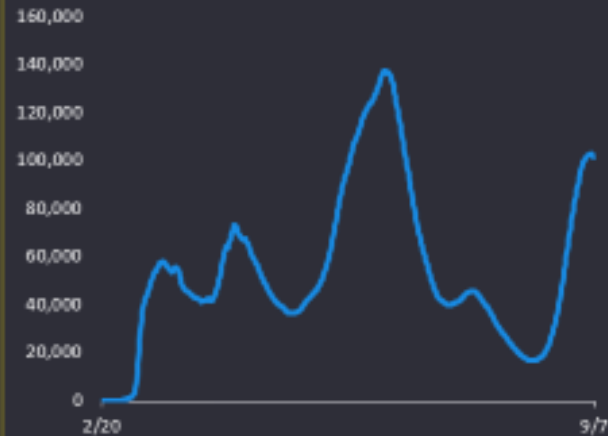
Daily COVID-19 vaccinations (7-day moving average)



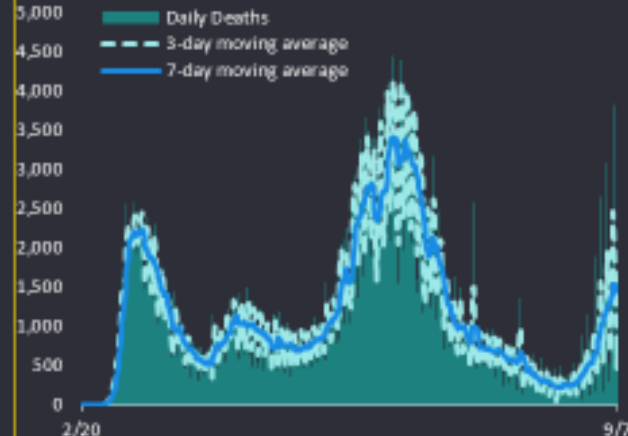
Daily new COVID-19 cases



COVID-19 hospitalizations (7-day moving average)



Daily new COVID-19 deaths



Source: John Hopkins University, Center for Systems Science and Engineering; Bloomberg COVID Vaccine Tracker; U.S. Department of Health & Human Services.  
US Economic Conditions and Outlook

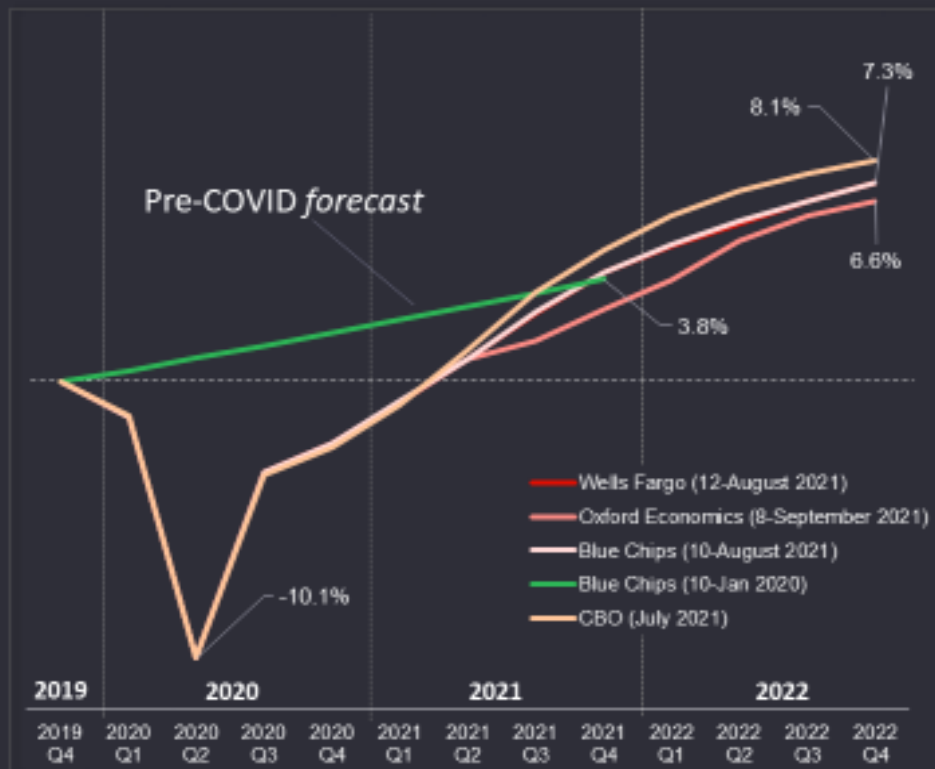
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# What Shape Recession? Alphabet Soup or Swoosh?

GDP and employment: COVID-19 impacts persist, economic recovery continues

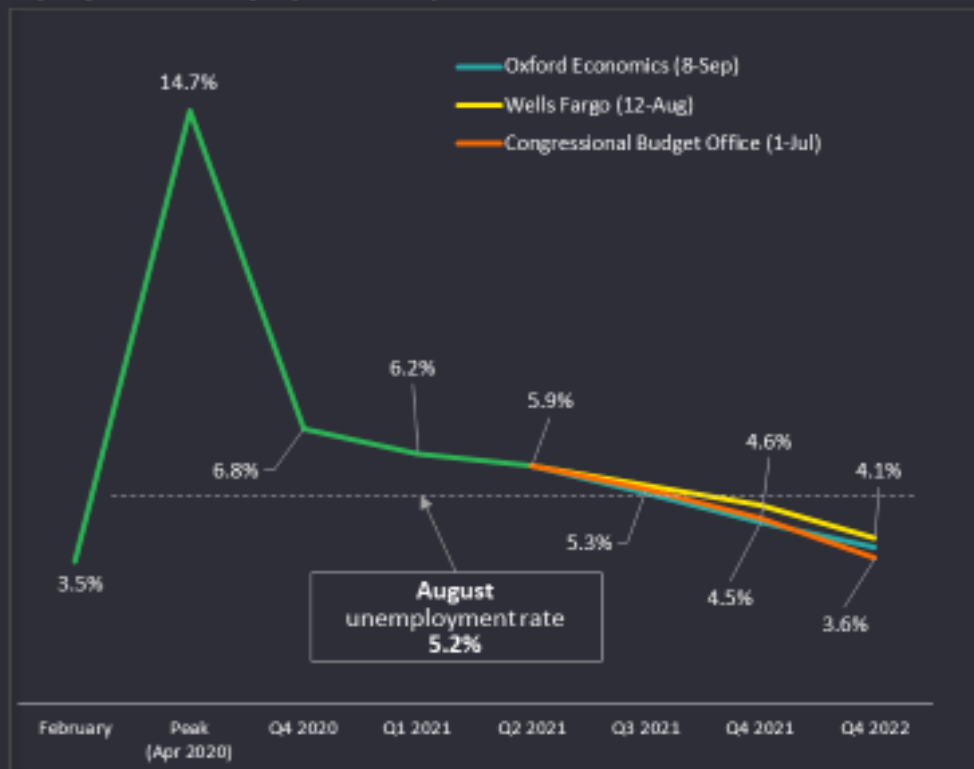
## US GDP close to exceeding pre-COVID forecast

(Change from 2019 Q4 GDP)



## US unemployment is falling, but likely elevated through 2021

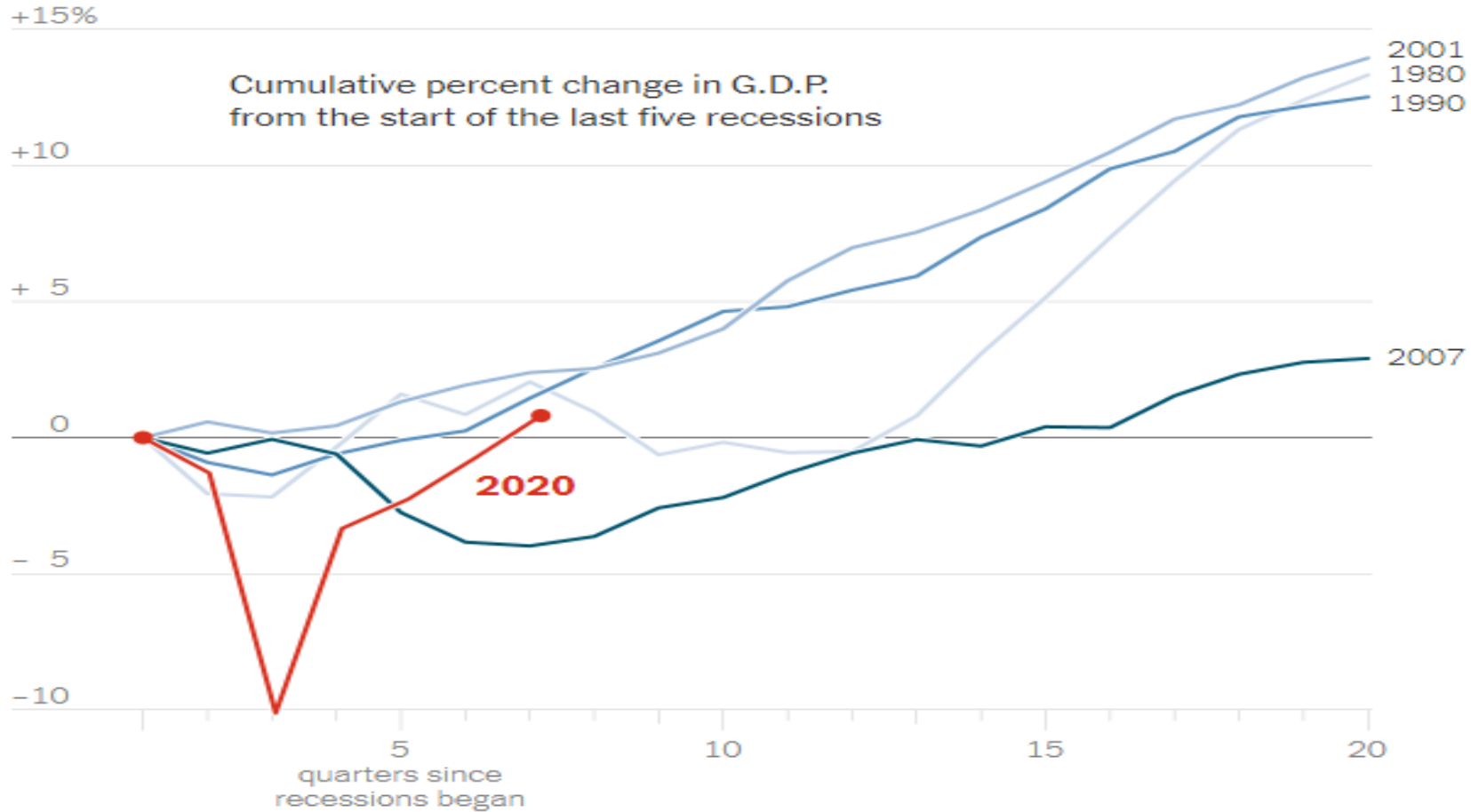
(Projected unemployment rate)





# Recovery Compared to Previous Recessions

## G.D.P. rebounded much faster than it did in the Great Recession



Note: Gross domestic product is adjusted for inflation and seasonality. Recessions are labeled by the years they started. • Source: Bureau of Economic Analysis • By Karl Russell



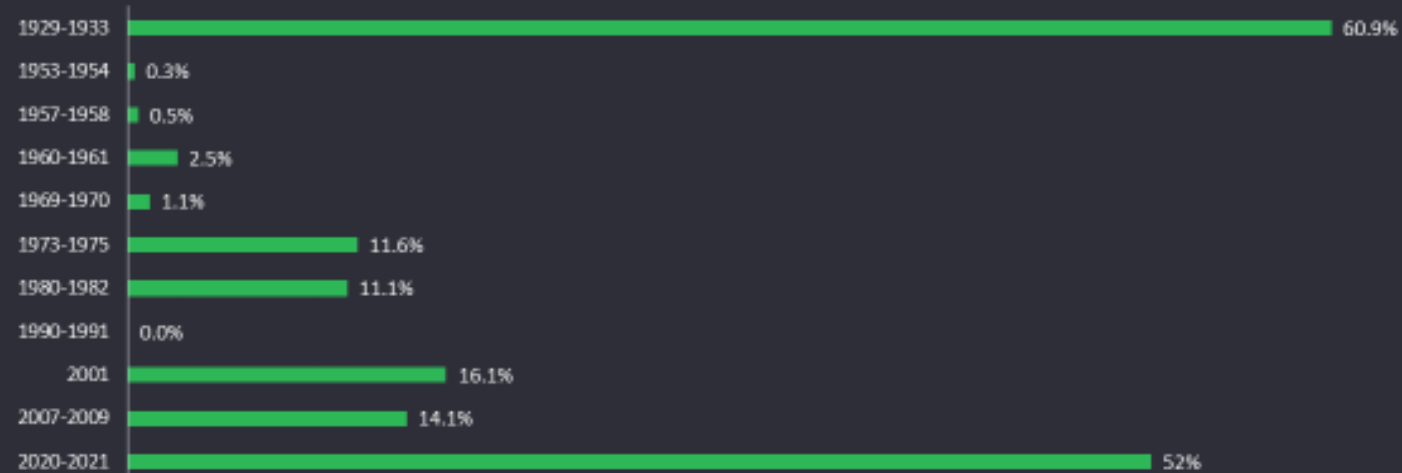


# Historic Fiscal & Monetary Policy Response

## COVID-19-related relief and stimulus

- ▶ Six Congressional packages (\$5.8t) and Federal Reserve action (\$5.6t) provided a total of \$11.4t in COVID-19-related relief and stimulus to the US economy
- ▶ Stimulus totals 52% of annual US GDP (including stimulus enacted in March 2021)

Historical US stimulus policy response (as a % of GDP) in time of crises



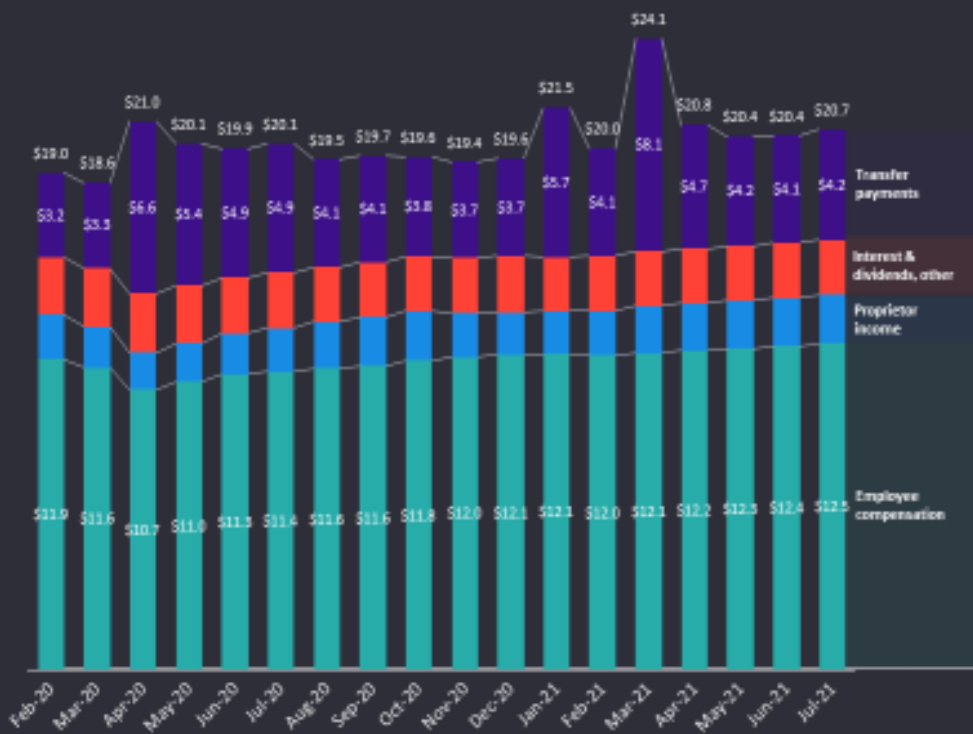
Note: Percentage for 2020-21 includes COVID stimulus enacted through March 2021. Percent of annual GDP.  
Source: Bank of America; EY Analysis.

# Personal Income and Consumption/Savings

US personal income supported by COVID relief; savings remains elevated

**Post-COVID income** supported by COVID relief;  
**employee compensation** above pre-COVID level

(Personal income by source, annualized, \$trillions)

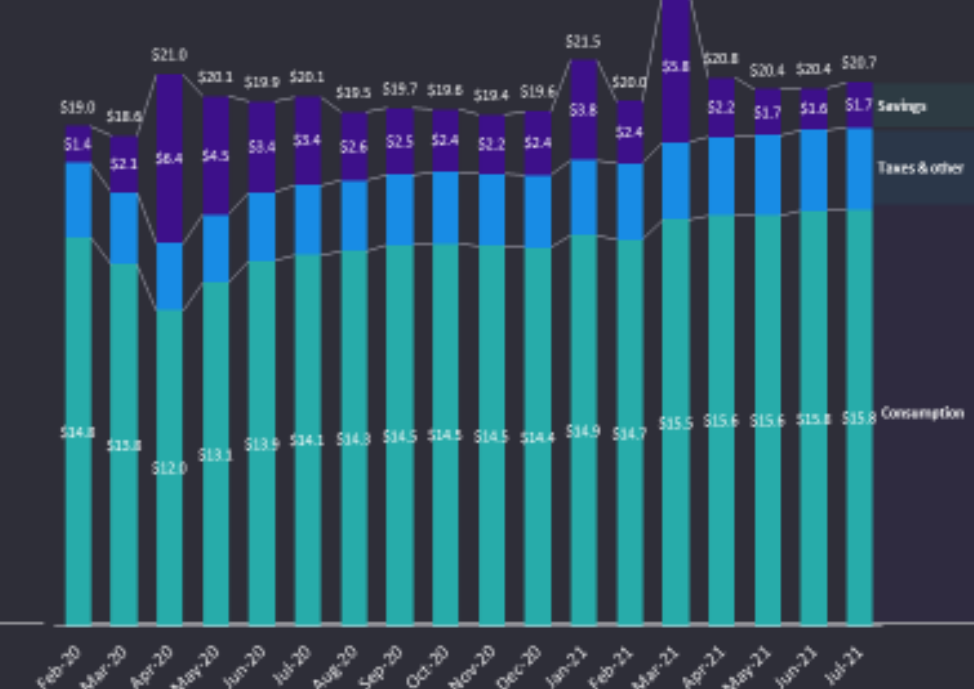


Note: Next update on October 1.  
Source: US Bureau of Economic Analysis.

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**Post-COVID consumption** above pre-COVID level;  
**roughly \$2.3 trillion in accumulated savings** since pandemic

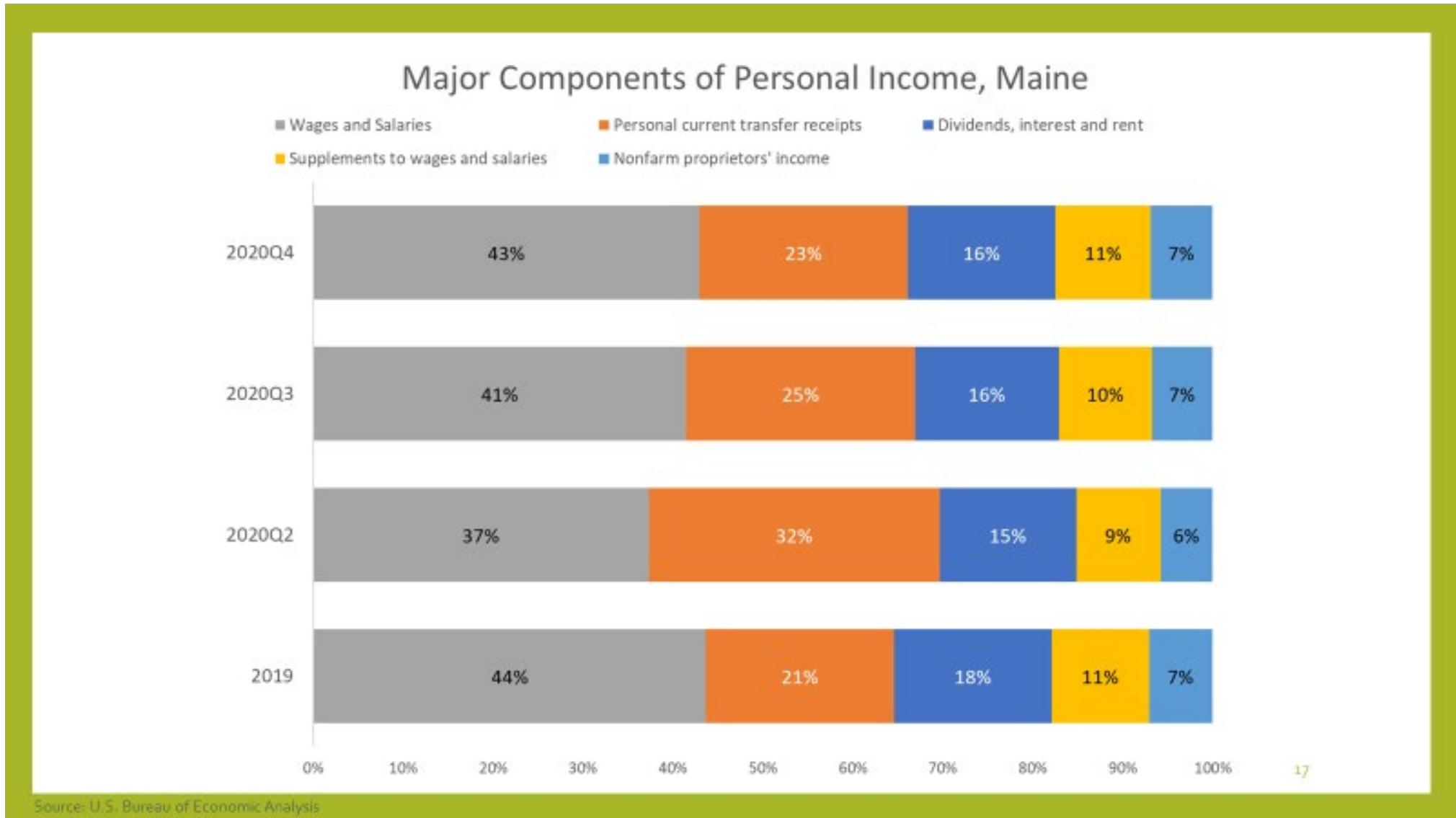
(Personal consumption, savings, and other outlays, annualized, \$trillions)



US Economic Conditions and Outlook

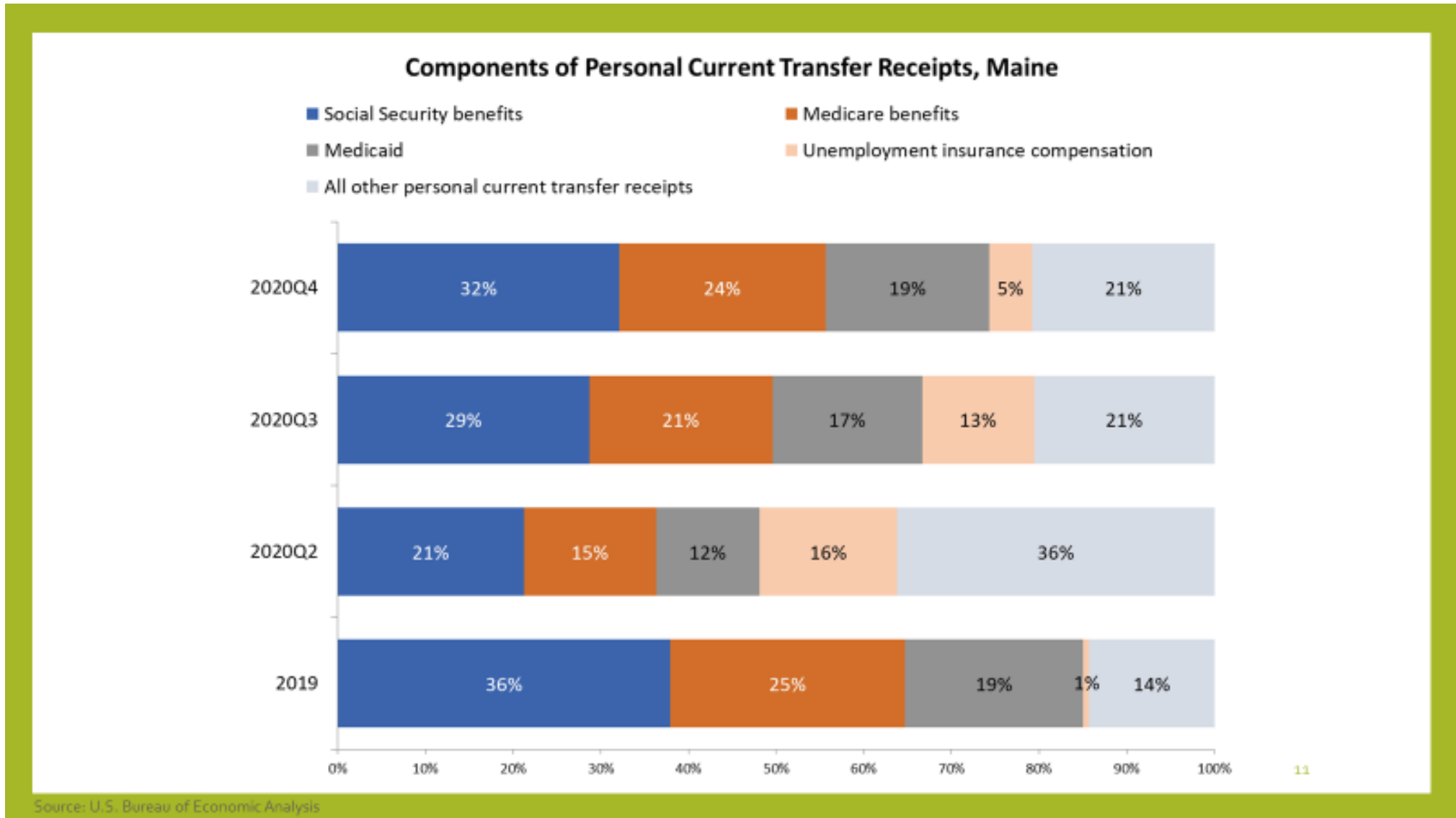


# Maine Personal Income

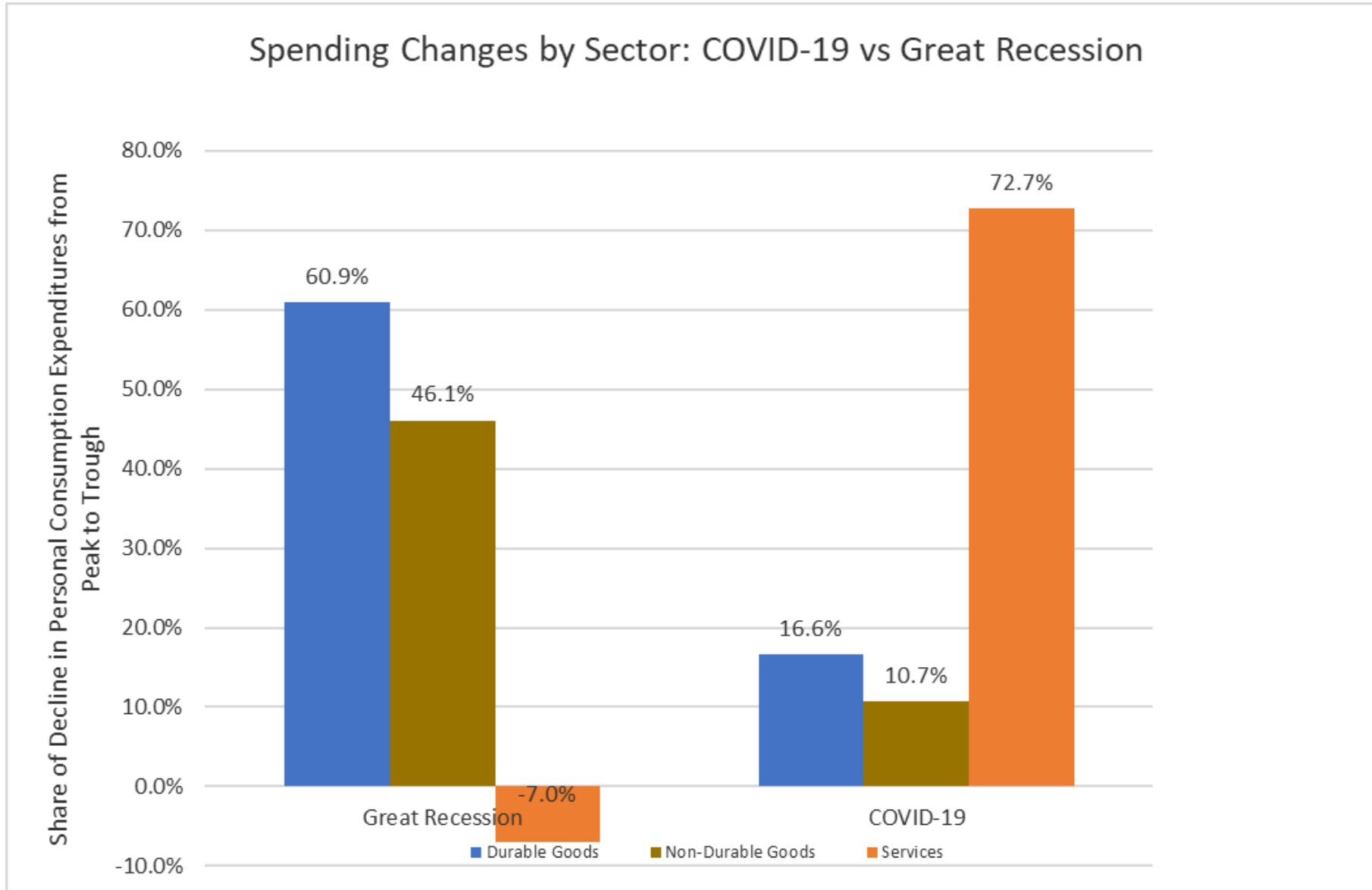




# Maine Personal Current Transfer Receipts



# Service Sector Hit the Hardest





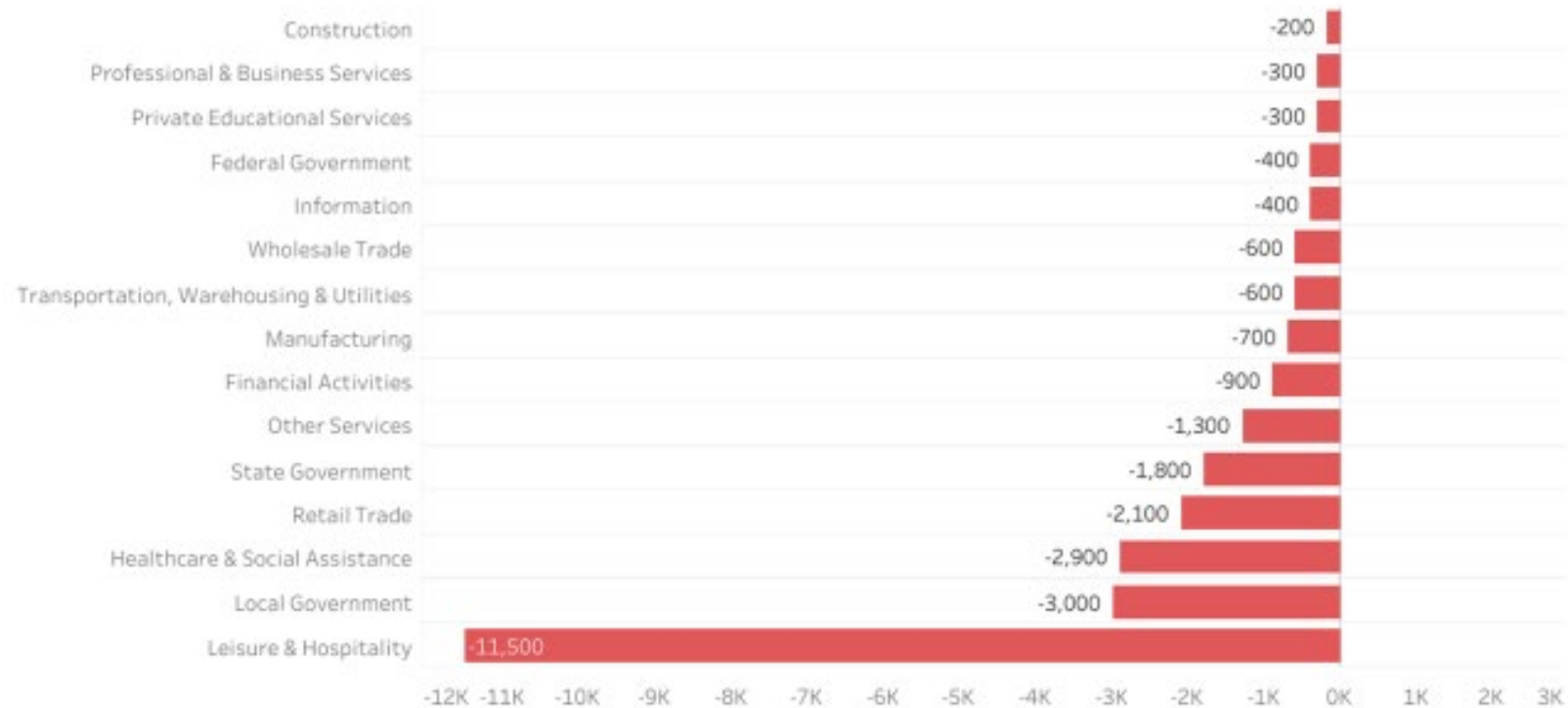


# Maine Job Losses – Low Wage Service Sector Jobs

Leisure and hospitality remains the hardest-hit sector, with 11,500 fewer jobs in March 2021 than March 2020

Over the year change

## Change in Jobs by Sector



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Source: Maine Department of Labor, Center for Workforce Research and Information

# “K-Shaped” Recovery

## Employment is following a “K-shaped” trajectory



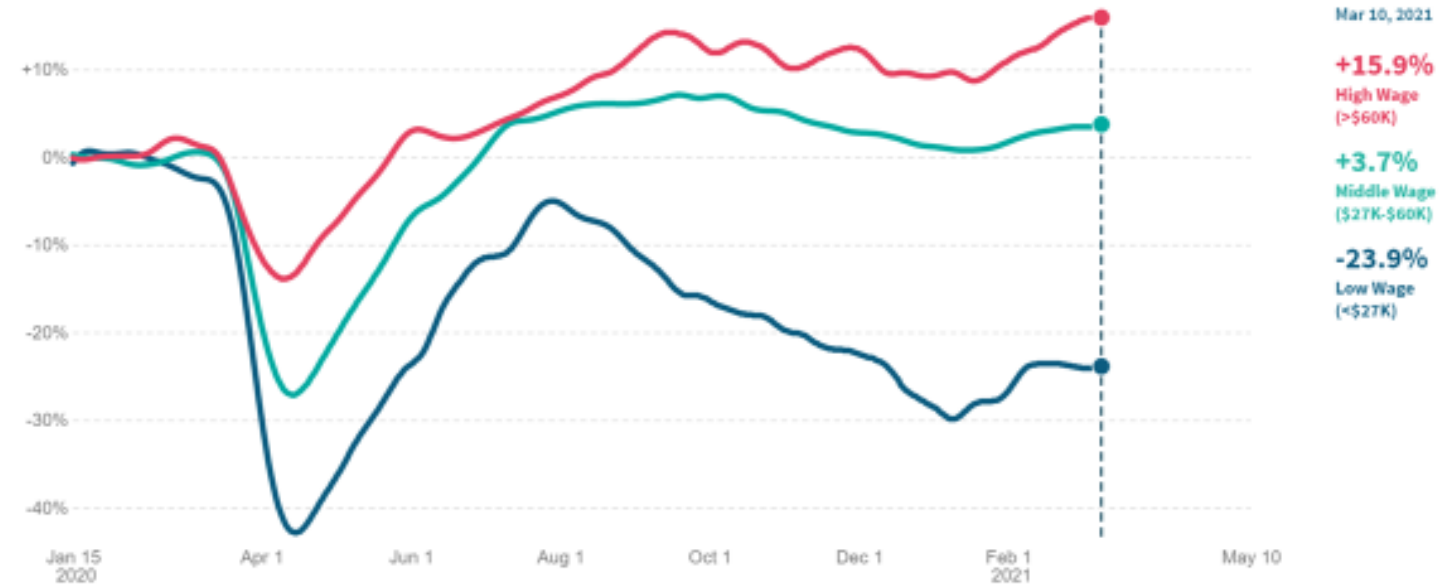
OPPORTUNITY  
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GATES Foundation

### Percent Change in Employment\*

In **Maine**, as of **March 10 2021**, employment rates among workers in the bottom wage quartile **decreased** by **23.9%** compared to January 2020 (not seasonally adjusted).



data source: Earnin, Intuit, Kronos, Paychex

\*Change in employment rates (not seasonally adjusted), indexed to January 4-31, 2020. This series is based on payroll data from Paychex and Intuit, worker-level data on employment and earnings from Earnin, and timesheet data from Kronos. The dotted line is a prediction of employment rates based on Kronos and Paychex data.

last updated: May 04, 2021 next update expected: May 14, 2021

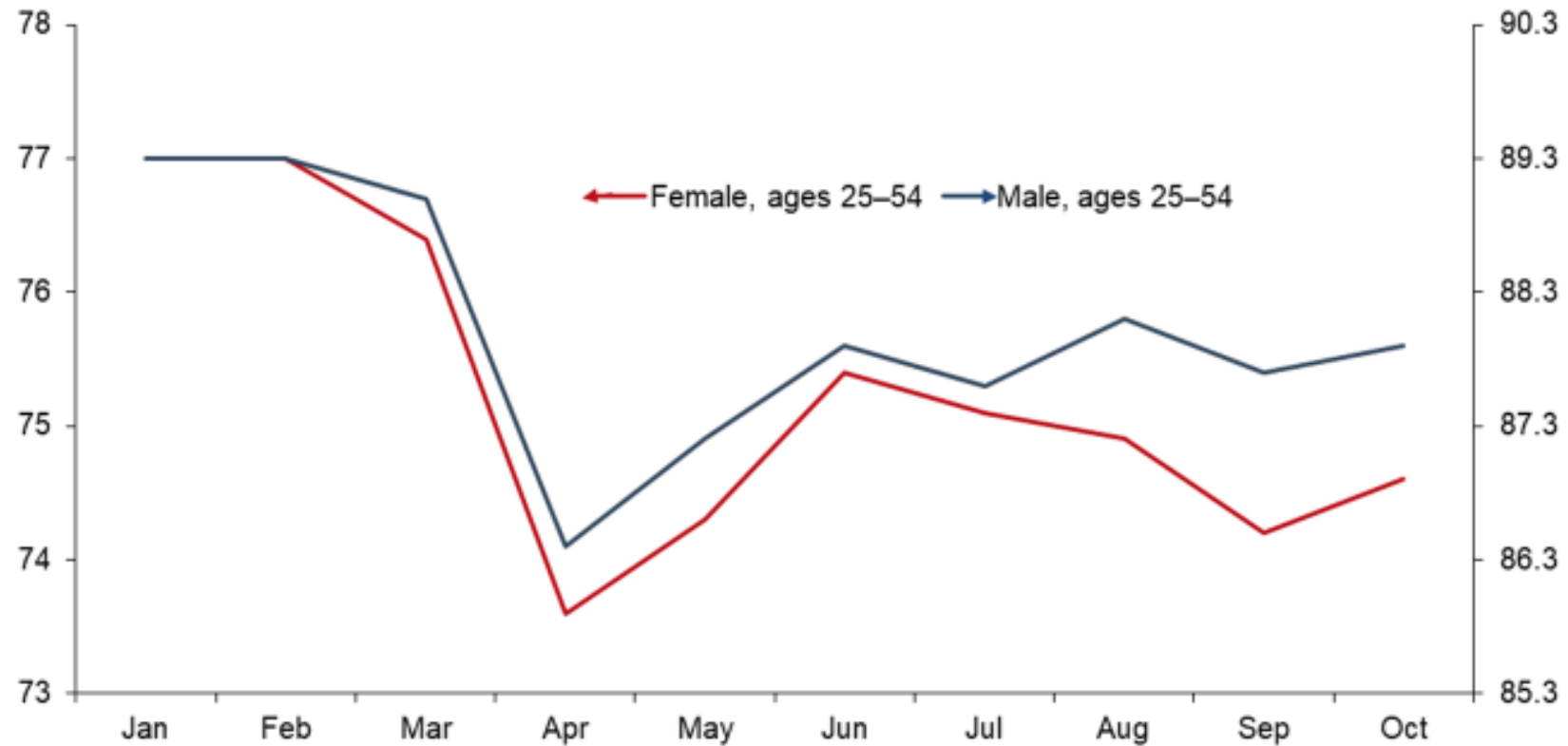
# Women with Children Leaving Labor Force

**Chart 1**

**Female Prime-Age Labor Force Participation Rates Steadily Decline Since June**

Percent, seasonally adjusted

Percent, seasonally adjusted



SOURCE: Bureau of Labor Statistics.

Federal Reserve Bank of Dallas

Source: Federal Reserve Bank of Dallas; <https://www.dallasfed.org/research/economics/2020/1110>

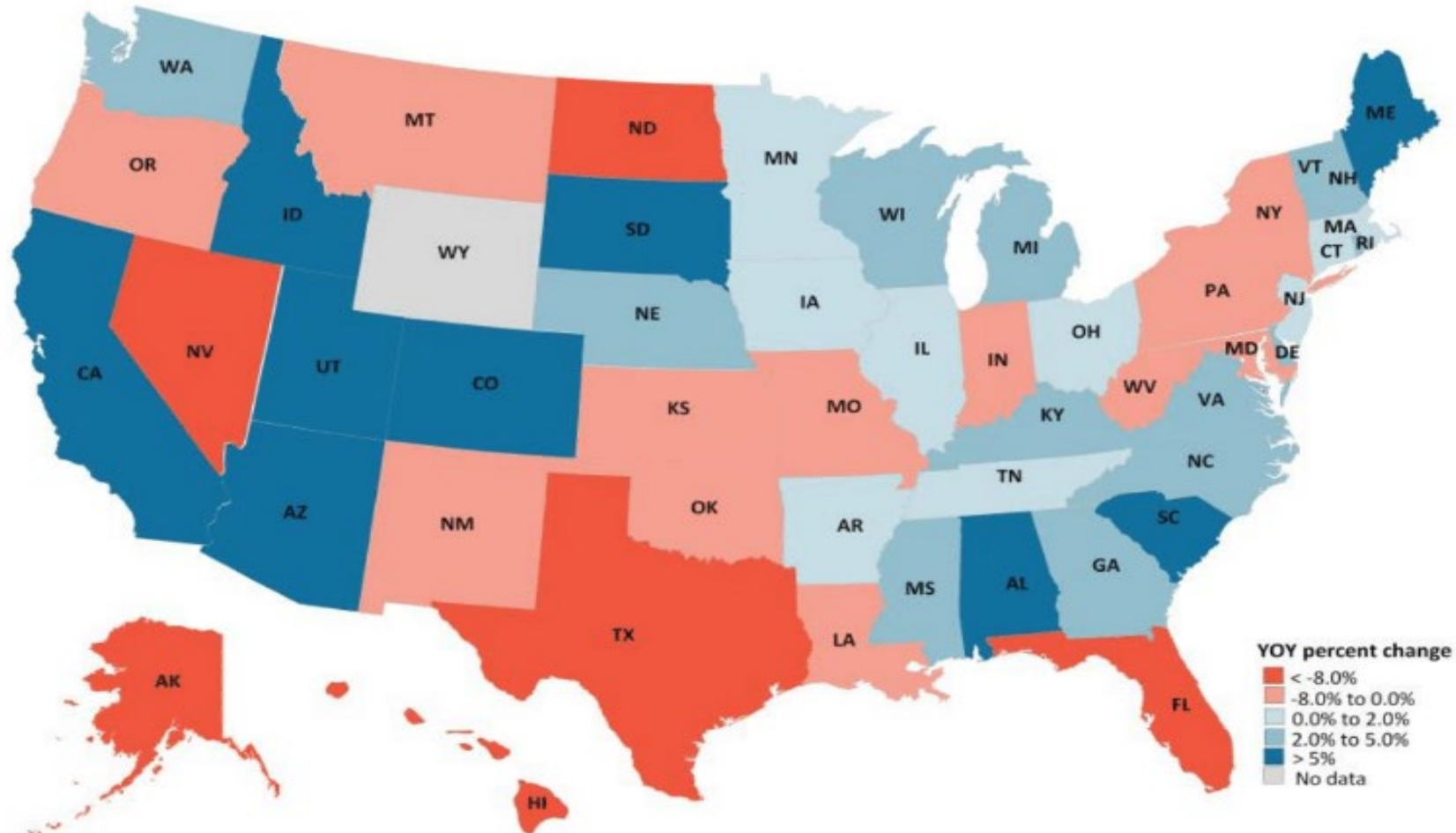
# COVID19 and State Tax Revenues



# State Revenue YOY Growth

## Percent Change in State Tax Revenues Since the Start of COVID-19

*April 2020-March 2021 vs April 2019-March 2020, percent change*



Notes: Data for Nevada and South Dakota is through February, data for New Mexico is through January, and data for Wyoming is missing.

<https://www.urban.org/policy-centers/cross-center-initiatives/state-and-local-finance-initiative/projects/state-tax-and-economic-review>





# Evolving Revenue Forecast Since Start of COVID

Applying 2018 stress-test reduction of 4% to December FY 2020 forecast

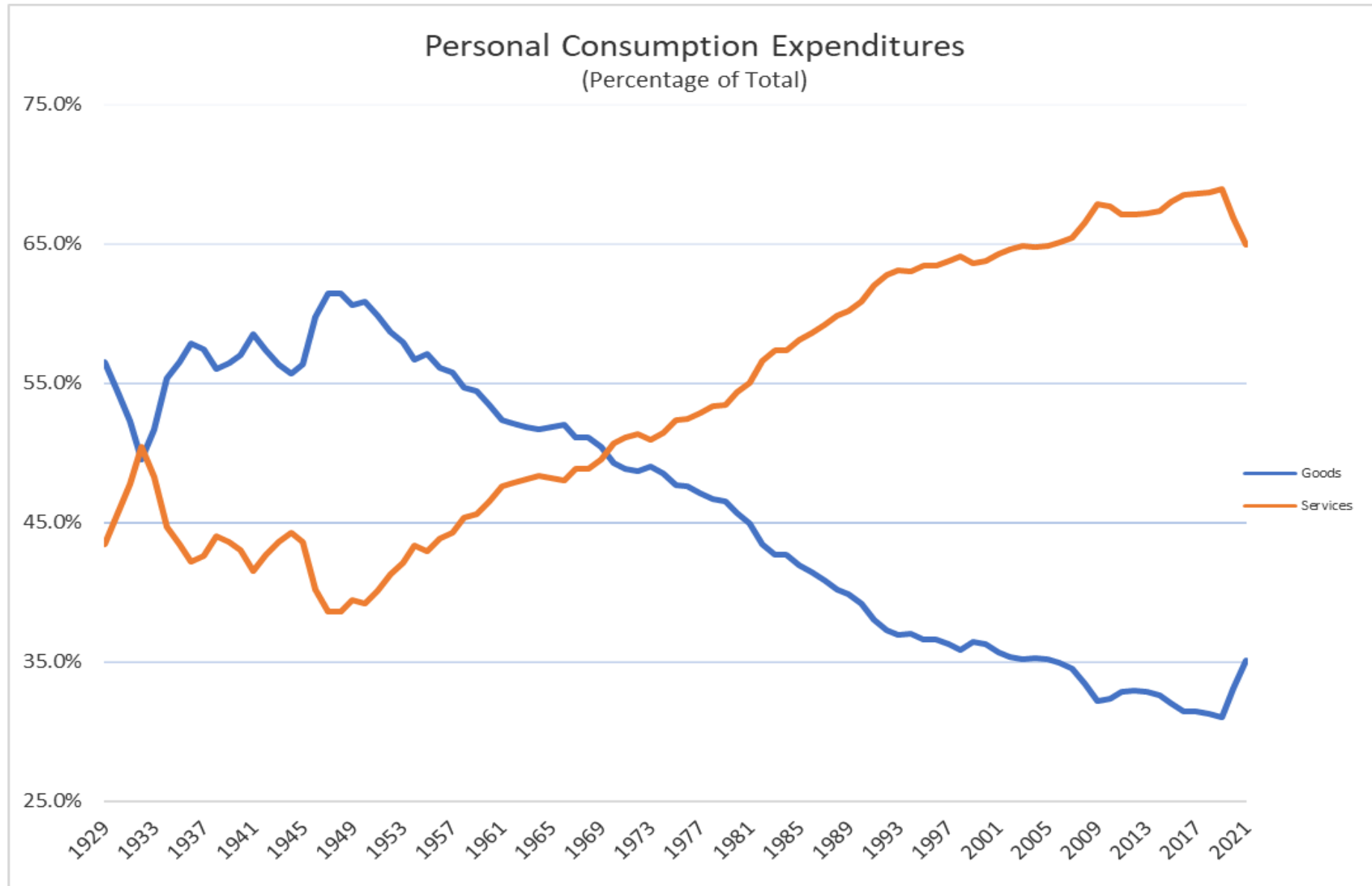
- Results in \$200 million revenue short-fall in FY 2020 or -5% from baseline forecast (Note, ignores deferral of April 15th and June 15th income tax payments to July 15th)
- Applying 11-13% decline from severe recession scenario results in a FY 2021 revenue loss of \$450 to \$525 million
- Estimate FY20 shortfall of \$80-\$90 million if income tax deferrals never happened

## General Fund Summary

	FY21	FY22	FY23	FY24	FY25
<b>March 2020 Forecast</b>	\$4,070,279,515	\$4,174,531,432	\$4,317,597,709		
Annual % Growth	2.5%	2.6%	3.4%		
Net Increase (Decrease) Forecast	(\$527,809,542)	(\$433,731,150)	(\$449,465,768)		
<b>August 2020 Forecast</b>	\$3,542,469,974	\$3,740,800,282	\$3,868,131,941		
Annual % Growth	-10.8%	5.6%	3.4%		
Net Increase (Decrease) Forecast	\$272,806,942	\$231,967,435	\$255,473,700		
<b>December 2020 Forecast</b>	\$3,815,276,916	\$3,972,767,717	\$4,123,605,641	\$4,276,170,128	\$4,431,148,462
Annual % Growth	-3.9%	4.1%	3.8%	3.7%	3.6%
Net Increase (Decrease) Enacted Leg.	(\$123,763,062)	\$34,312,346	\$54,056,820	\$5,970,750	\$6,403,000
Net Increase (Decrease) Forecast	\$479,428,979	\$241,344,813	\$219,186,512	\$223,297,647	\$213,216,979
<b>May 2021 Forecast</b>	\$4,170,942,833	\$4,248,424,876	\$4,396,848,973	\$4,505,438,525	\$4,650,768,441
Annual % Growth	5.1%	1.9%	3.5%	2.5%	3.2%
Change % from March 2020 RFC	2.5%	1.8%	1.8%	na	na



# Maine Sales Tax Goods Based



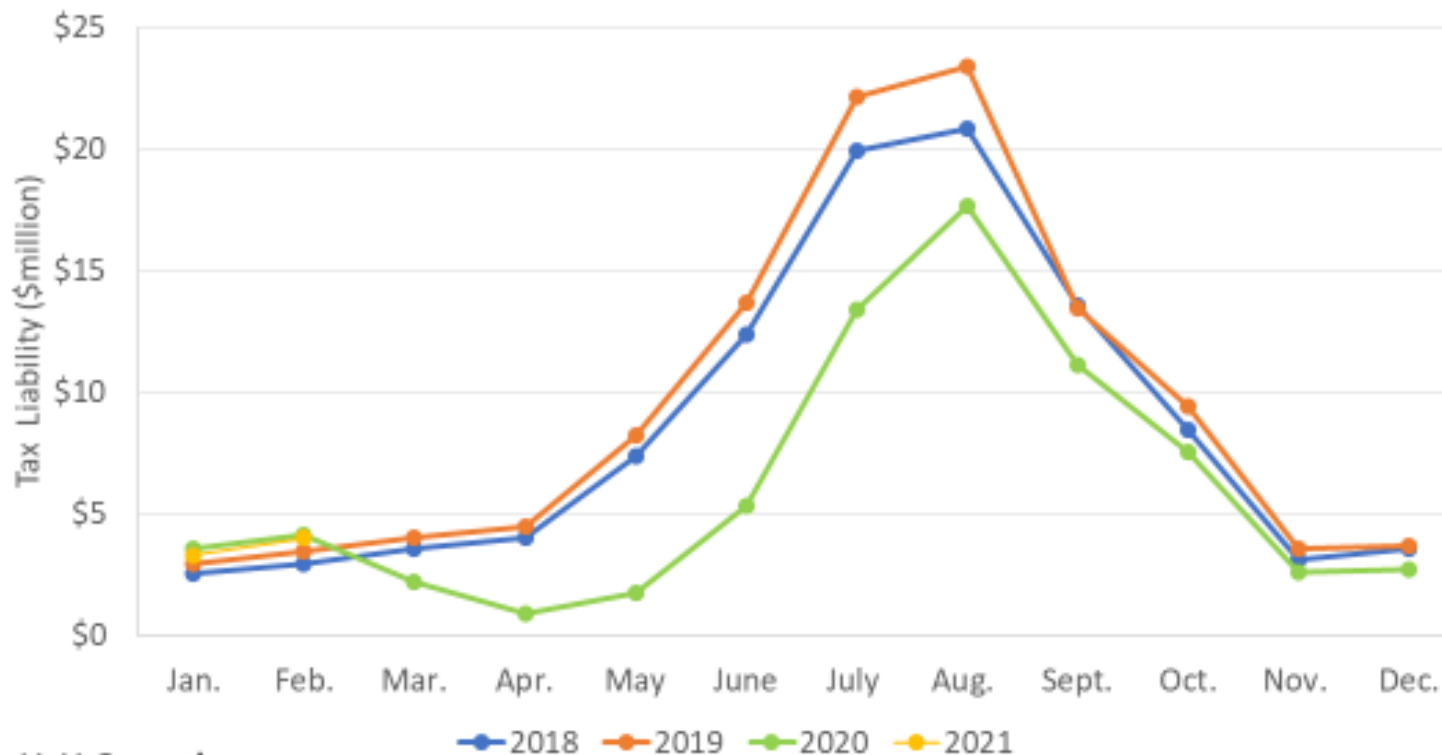
# Calendar Year Taxable Sales Summary

	Taxable Sales (\$million)				Annual Growth	
	2018	2019	2020		2019	2020
5.5% Sales	\$19,670	\$20,937	\$23,398		6.4%	11.8%
>5.5% Sales	\$4,500	\$4,754	\$3,510		5.6%	-26.2%
Total, All Sales	\$24,170	\$25,692	\$26,908		6.3%	4.7%
Estimate if 12 months of marketplace collections in 2019:						
Total, All Sales		\$26,133	\$26,908			3.0%



# Lodging Sales Rebound Over Summer

## Rental of Lodging Sales Tax



CY 2019 liability = \$112.3 million

Share of total CY 2019 sales & use tax = 7.3%

CY 2019 Share of Taxable Sales by Quarter:

1	9.3%
2	23.4%
3	52.5%
4	14.8%

### YoY Growth

July 19 – Feb.20	Mar. – May 20	June – July 20	Aug. – Sept. 20	Oct. – Nov. 20	December 20	January 21	February 21	Nov. 20 – Feb 21
9.9%	-71.0%	-47.8%	-21.9%	-21.5%	-25.6%	-7.7%	-2.8%	-15.2%



# Prepared Food Sales – Restaurant Sales

## Prepared Foods Sales Tax

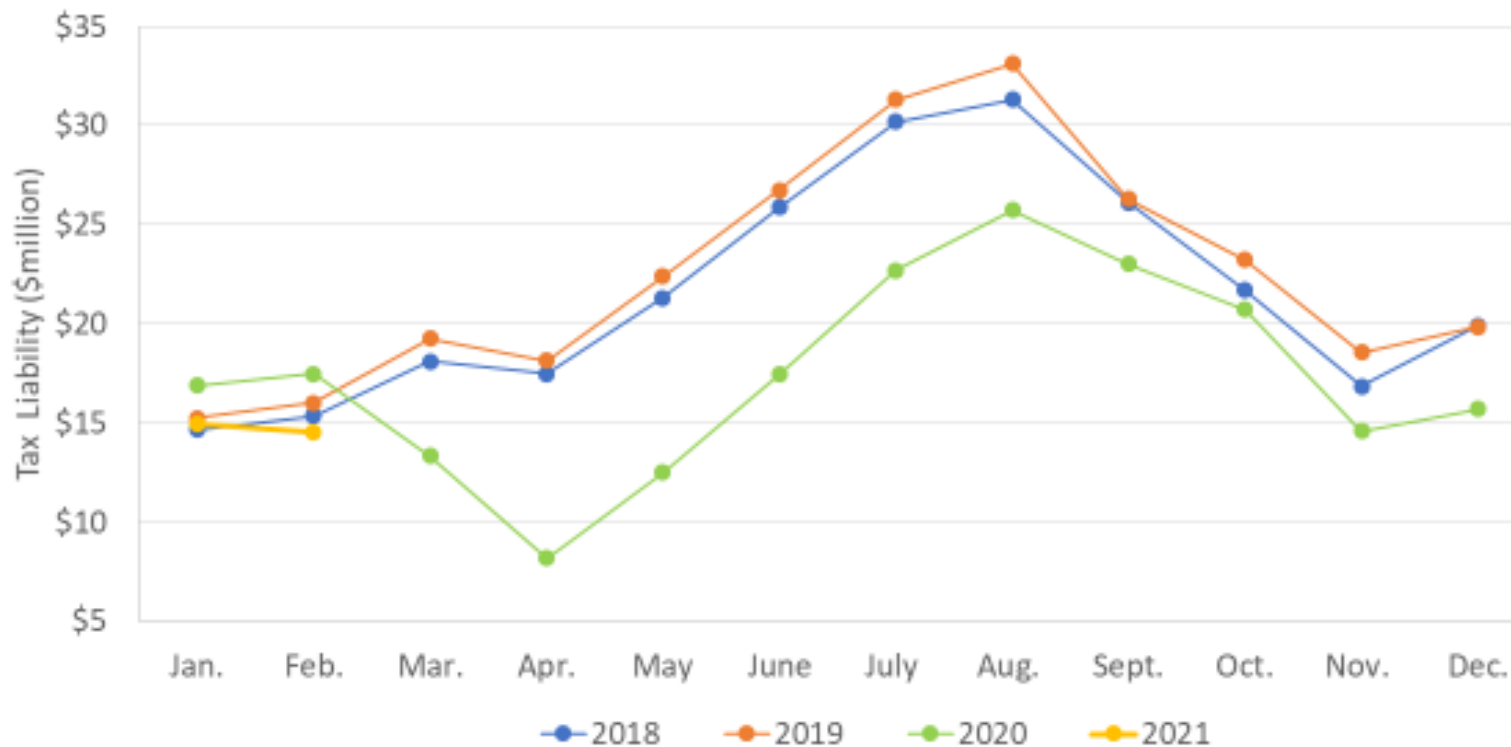
Includes sales at both restaurants and food stores

CY 2019 liability = \$269.4 million

Share of total CY 2019 sales & use tax = 17.5%

CY 2019 Share of Taxable Sales by Quarter:

1	18.7%
2	24.9%
3	33.6%
4	22.8%



### YoY Growth

July 19 – Feb.20	Mar. – May 20	June – July 20	Aug. – Sept. 20	Oct. – Nov. 20	December 20	January 21	February 21	Nov. 20 – Feb 21
5.3%	-43.1%	-30.8%	-18.0%	-15.5%	-20.8%	-11.7%	-16.8%	-17.9%

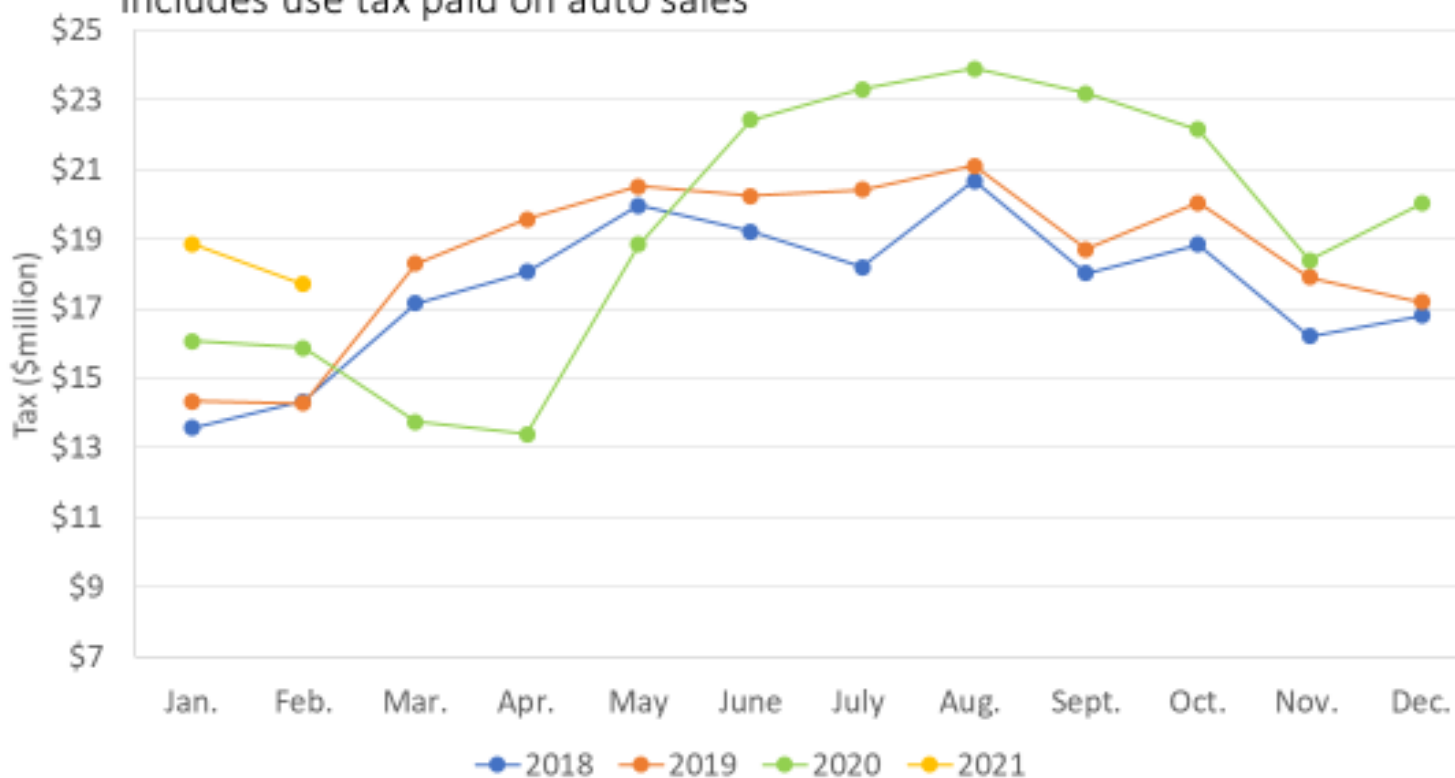




# Automobile Sales Rebound

## Auto Dealer & Lease Sales Tax

Includes use tax paid on auto sales



CY 2019 liability = \$222.5 million

Share of total CY 2019 sales & use tax = 14.5%

CY 2019 Share of Taxable Sales by Quarter:

1	21.1%
2	27.1%
3	27.0%
4	24.8%

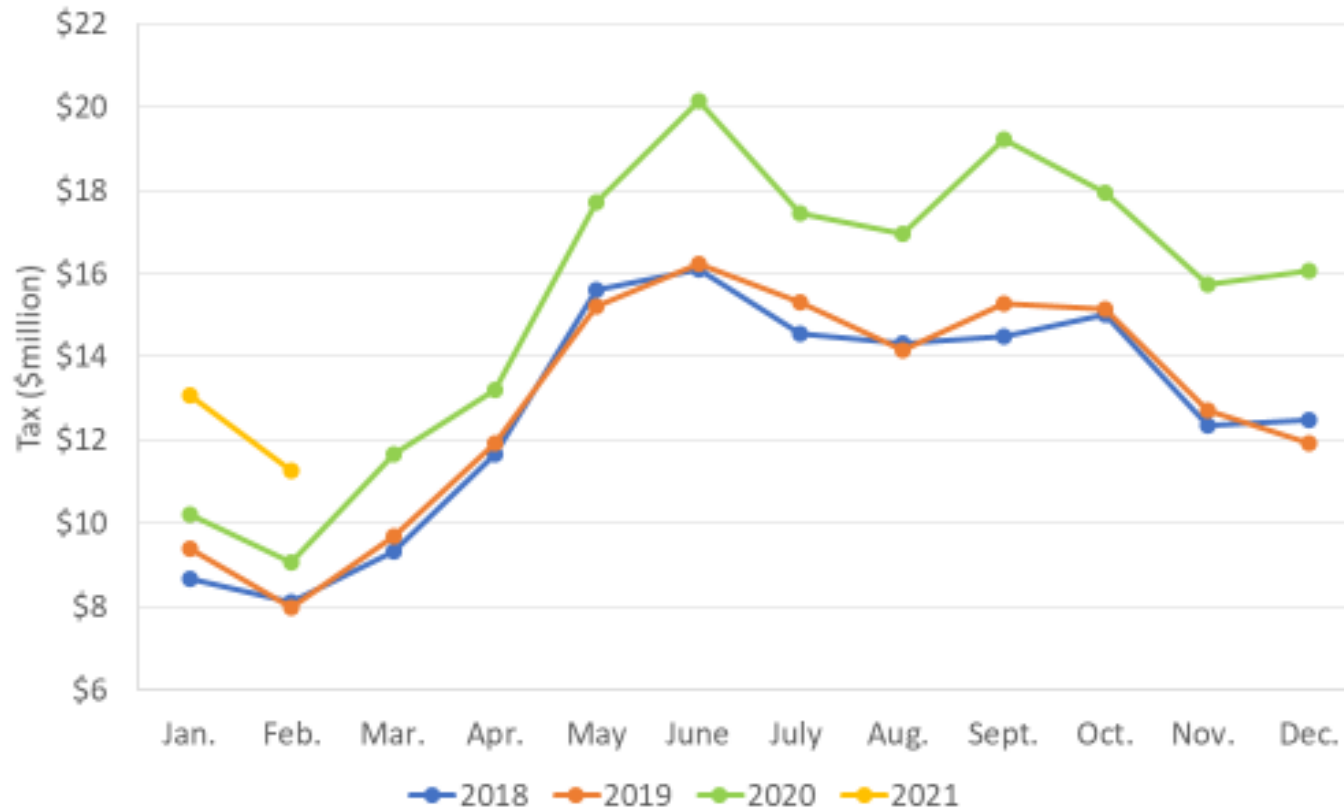
### YoY Growth

July 19 – Feb.20	Mar. – May 20	June – July 20	Aug. – Sept. 20	Oct. – Nov. 20	December 20	January 21	February 21	Nov. 20 – Feb 21
7.3%	-21.2%	12.5%	18.3%	6.8%	16.5%	17.4%	11.5%	11.9%



# Building Supply Store Sales Surge During COVID

## Building Supply Stores Sales Tax



CY 2019 liability = \$154.7 million

Share of total CY 2019 sales & use tax = 10.1%

CY 2019 Share of Taxable Sales by Quarter:

1	17.5%
2	28.0%
3	28.9%
4	25.7%

### YoY Growth

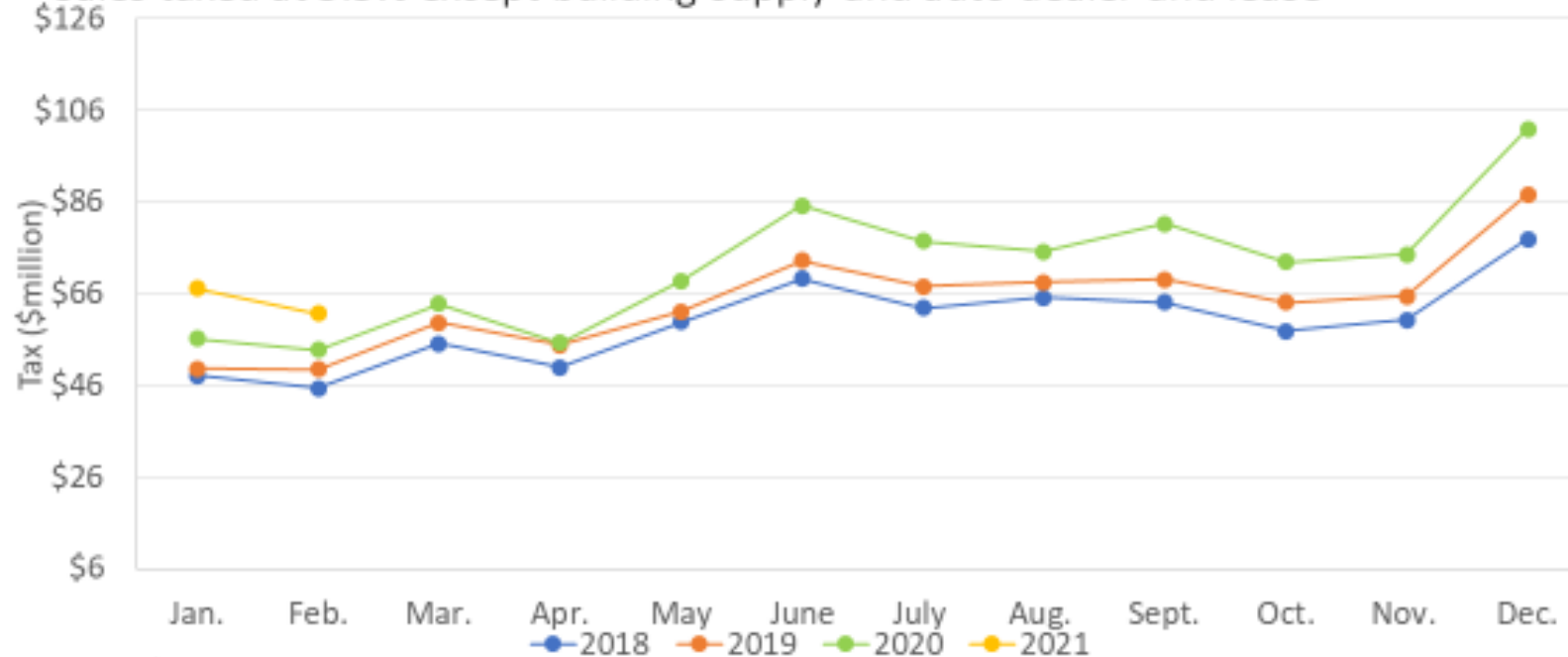
July 19 – Feb.20	Mar. – May 20	June – July 20	Aug. – Sept. 20	Oct. – Nov. 20	December 20	January 21	February 21	Nov. 20 – Feb 21
3.2%	15.7%	19.2%	22.8%	20.8%	34.8%	28.0%	24.1%	27.8%



# Taxation of Remote and Marketplace Sales Were Key

## 5.5% Sales, All Other

Sales taxed at 5.5% except building supply and auto dealer and lease



### YoY Growth

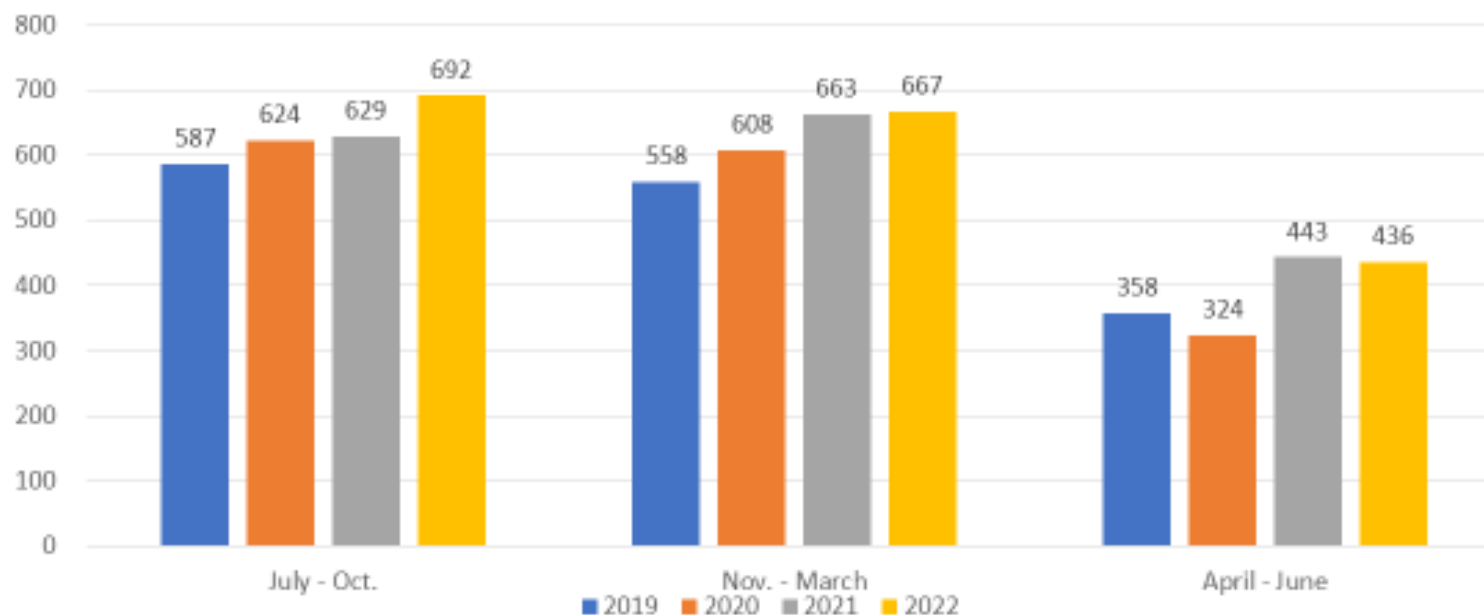
	July 19 – Feb.20	Mar. – May 20	June – July 20	Aug. – Sept. 20	Oct. – Nov. 20	Dec. 20	January 21	February 21	Nov. 20 – Feb 21
Excluding auto & building supply	9.2%	6.3%	15.5%	13.8%	13.9%	16.3%	19.6%	14.9%	16.1%
All 5.5% sales	8.0%	1.7%	15.5%	15.9%	13.5%	18.2%	20.2%	15.3%	16.7%



# Sales and Use Tax Forecast

## Fiscal Year 2019 – 22 Sales & Use Tax Revenue

Fiscal Year revenue, \$ million, excluding net accruals in FY 21 and FY 22



### FY 2022 Revenue Minus FY 2021 Revenue, Excluding Net Accruals (\$mil)

	July-Oct	Nov-Mar	April - June
Total change in revenue	\$62.5	\$4.1	-\$7.5
Prepared food, Lodging, and Adult Use MJ	\$58.0	\$24.0	\$11.9
Everything Else	\$4.5	-\$19.9	-\$19.5



# Individual Income Tax Forecast Improves

## Individual Income Tax: Annual Growth and Forecast Revision

(\$million)

Fiscal Year	Actual and Forecast	Recommended Change
2017-18	6.5%	
2018-19	5.6%	
2019-20*	7.9%	
2020-21	-1.6%	\$224
2021-22	4.5%	\$150
2022-23	4.3%	\$140
2023-24	4.3%	\$130
2024-25	4.6%	\$122

Dollar values in millions. \*Without 1040 estimated and final payment accruals FY 20 growth would have been -14.1%.



# Enhanced UI Benefits – \$55.5M State Withholding in CY21

## Individual Income Tax: Withholding

(\$million)

	2019	2020	2021		2020	2021
Calendar Year	\$1,464.7	\$1,588.8			8.5%	
Jan. – Mar.	\$375.7	\$408.0	\$447.5		8.6%	9.7%

### Growth Rates After Adjustments

	2020	2021
Remove unemployment insurance withholding:		
Calendar Year	4.8%	
Jan. – Mar.	8.6%	7.3%
Remove UI withholding and adjust for number of Thursdays		
Calendar Year	3.7%	
Jan. – Mar.	8.6%	10.8%

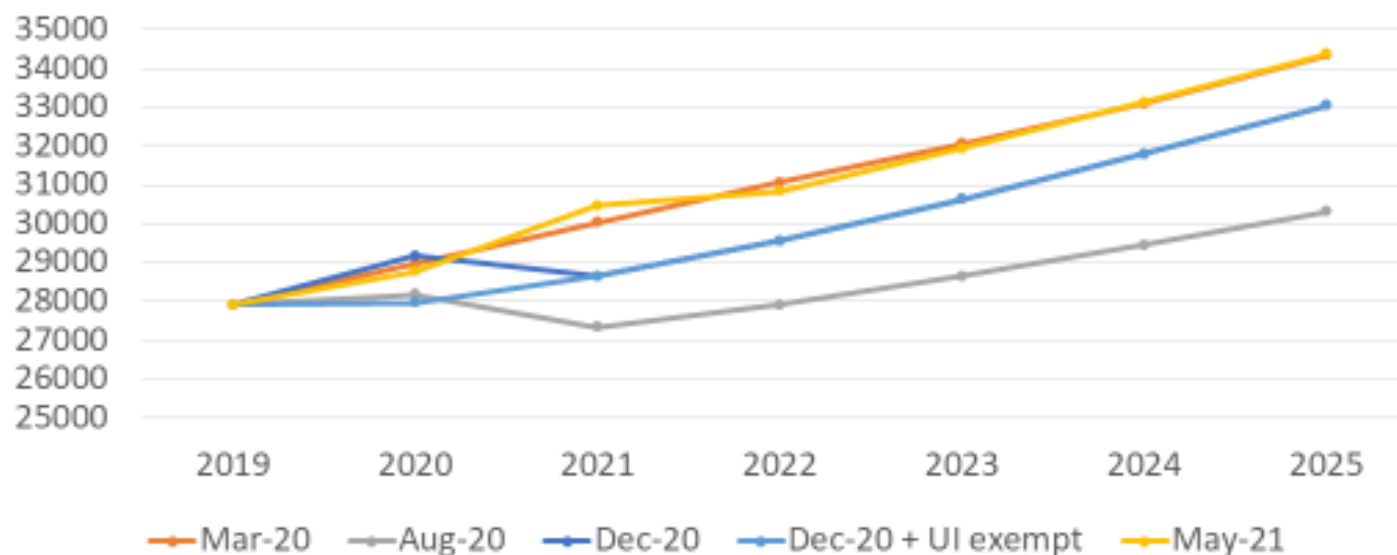
Withholding variance:  
\$64.3 million over budget through March



# W&S Forecast and UI Benefits Help Forecast

## Individual Income Tax: Resident 1040 Wages + Taxable Unemployment Insurance Income

(\$million)



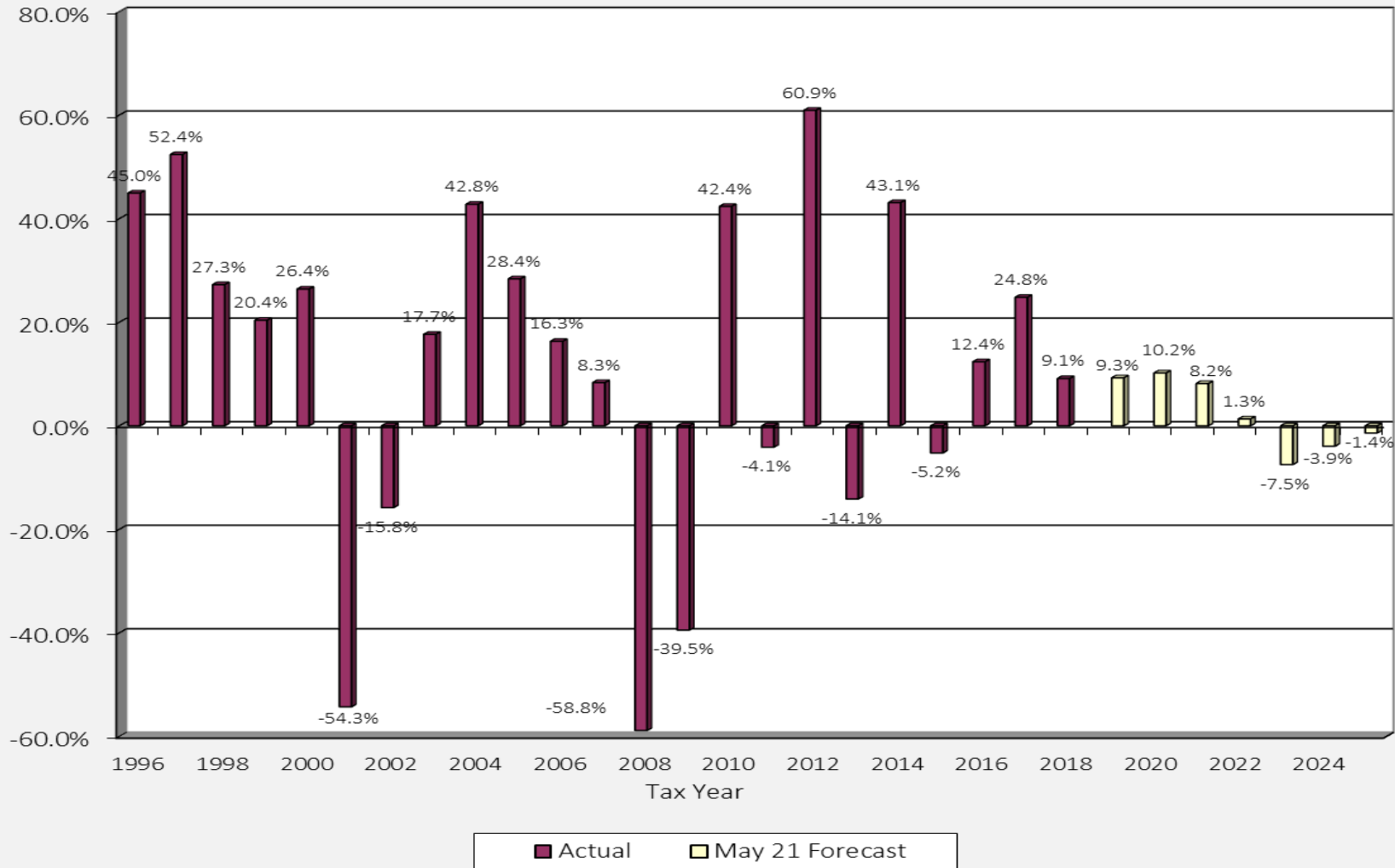
	2020	2021	2022	2023	2024	2025
Annual Growth, December 2020	4.5%	-1.8%	3.2%	3.6%	3.8%	3.9%
Annual Growth, December 2020 + UI exemption	0.2%	2.4%	3.2%	3.6%	3.8%	3.9%
Annual Growth, May 2021	3.1%	5.9%	1.2%	3.5%	3.8%	3.7%
May 21 recommendation relative to Dec 20 forecast + UI exemption	2.9%	6.3%	4.3%	4.2%	4.2%	4.0%





# Preliminary TY20 Returns Point to Significant Capital Gains

Percentage Change in Capital Gains Realizations by Maine Residents





# Additional TY20 Capital Gains Liability of \$100M+

## Individual income tax: Capital Gains

Tax Year	2019	2020	2021	2022	2023	2024	2025
Annual growth:							
December RFC	3.2%	-5.1%	-3.2%	3.9%	3.9%	4.0%	4.0%
May RFC	9.3%	10.2%	8.2%	1.3%	-7.5%	-3.9%	-1.4%
CBO Forecast (Sept 2020)	8.3%	-20.5%	0.5%	4.5%	1.1%	2.3%	3.1%
CBO Forecast (Jan 2021)	10.6%	-7.7%	23.8%	1.3%	-7.5%	-3.9%	-1.4%
May 21 resident capital gains liability:							
Relative to March 20 RFC	-\$5.4	\$15.9	\$44.4	\$53.0	\$37.9		
Relative to Dec 20 RFC	\$10.1	\$38.0	\$59.7	\$56.2	\$32.3	\$16.9	\$6.8



# What We're Watching for Fall Forecasts

- Additional Federal Fiscal Stimulus
- Inflation and Fed Monetary Policy
- Recent Surge in COVID19
- Vaccine Effectiveness; Booster?
- Remote Work and Migration to ME
- Does Goods Sector Remain Strong?

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