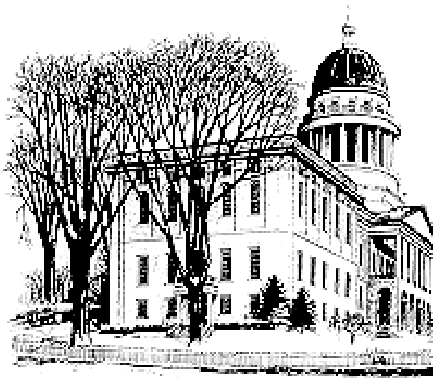
STRESS-TESTING MAINE GENERAL FUND REVENUES & RESERVES FY2021-FY2025

NOVEMBER 2, 2020

Consensus Economic Forecasting Commission
and
Revenue Forecasting Committee



STATE OF MAINE

REVENUE FORECASTING COMMITTEE

Members:
Michael J. Allen, Chair, Associate Commissioner of Tax Policy
Beth Ashcroft, State Budget Officer
James Breece, University of Maine System
Marc Cyr, Principal Analyst, Office of Fiscal and Program Review
Christopher Nolan, Director, Office of Fiscal and Program Review
Amanda Rector, State Economist

CONSENSUS ECONOMIC FORECASTING COMMISSION

Members:
Ryan Low, Chair, Vice Chancellor for Finance and Administration & Treasurer, UMS
Sarah Austin, Policy Analyst, Maine Center for Economic Policy
Dr. Sheena S. Bunnell, Professor of Business Economics, University of ME Farmington
Dr. Chuck Lawton
Dr. Julieta Yung, Assistant Professor of Economics, Bates College

November 2, 2020

TO: Governor Janet T. Mills
President of the Senate Troy D. Jackson
Speaker of the House Sara Gideon
Senator Cathy Breen, Senate Chair, Appropriations and Financial Affairs
Representative Drew Gattine, House Chair, Appropriations and Financial Affairs
Members, Joint Standing Committee on Appropriations and Financial Affairs

FROM: Ryan Low, Chair
Consensus Economic Forecasting Commission

Michael J. Allen, Chair
Revenue Forecasting Committee

In accordance with Title 5, Chapter 151-B, Section 1710-G, the Consensus Economic Forecasting Commission (CEFC) and the Revenue Forecasting Committee (RFC) are pleased to present the biennial stress-test of sales and individual income taxes based on two economic recession scenarios: one a moderate recession, the other a severe recession. Additionally, this report includes an analysis of the sufficiency of the current level of the Maine Budget Stabilization Fund (MBSF) and an estimate of the reserves in the MBSF necessary to offset the declines in General Fund revenue because of potential economic recession scenarios.

This year's report was developed during an unprecedented pandemic-induced recession. During their June off-cycle forecasting meeting the CEFC decided to replace their February 1, 2020 severe recession scenario with their new baseline forecast based on the severe COVID-19 recession that began during the first quarter of CY2020. The baseline and moderate recession scenarios continue to be from the economic and revenue forecasts released by the CEFC in February and the RFC in March, respectively.

In addition, this year's report analyzes the sufficiency of the MBSF relative to three different spending limitations in order to provide decisionmakers with useful information on the size of the MBSF necessary to maintain desired spending levels during an economic downturn. Two of the spending limitations are defined in Title 5 and are the same as our report from two years ago; the base spending limitation and the LD1 spending limitation (see Part V). The third spending limitation included in this year's report falls between the other two and is defined as the FY2021 level of appropriations ($4.152 billion) enacted earlier this calendar year increased by the same Growth Limitation Factor as the base spending limitation. For purposes of this report we call this third spending limitation the "alternative limitation".

Table 1 below provides a summary of the primary macroeconomic parameters defining the hypothetical moderate recession scenario and the commission's July forecast (severe recession scenario), relative to the equivalent assumptions in the CEFC's February 2020 baseline forecast.

Table 1

Calendar Years	2019	2020	2021	2022	2023	2024	2025
Wage & Salary Employment (in Thousands)							
CEFC Forecast 02/2020	634.4	637.5	638.8	639.4	639.4	639.4	639.4
Hypothetical Moderate Recession	634.4	631.7	622.0	624.7	634.6	643.8	644.8
CEFC Forecast 07/2020 (Severe Recession)	634.4	585.1	608.6	620.8	620.7	620.7	620.7
Personal Income ($ Millions)							
CEFC Forecast 02/2020	68,505	71,342	74,167	76,898	79,575	82,359	85,270
Hypothetical Moderate Recession	68,505	70,555	71,950	74,721	78,936	83,198	86,662
CEFC Forecast 07/2020 (Severe Recession)	68,505	71,126	70,252	72,861	75,442	78,158	80,988
Wage and Salary Income ($ Millions)							
CEFC Forecast 02/2020	31,341	32,626	33,833	34,983	36,103	37,258	38,450
Hypothetical Moderate Recession	31,341	32,006	32,461	34,115	36,413	38,654	40,091
CEFC Forecast 07/2020 (Severe Recession)	31,341	29,795	30,391	31,302	32,241	33,209	34,205
CPI (Annual Percentage Change)							
CEFC Forecast 02/2020	1.8	1.9	2.0	2.0	2.0	2.0	2.0
Hypothetical Moderate Recession	1.8	3.9	1.9	2.9	2.7	2.9	2.9
CEFC Forecast 07/2020 (Severe Recession)	1.8	0.9	1.5	1.7	2.0	2.0	2.0

The two forecasting committees estimate that a hypothetical moderate recession beginning in the first quarter of CY2020 would reduce General Fund revenues relative to the March baseline revenue forecast by 3.9 percent in FY2021 and approximately 5.0 percent in FY2022. Under the moderate recession scenario General Fund revenues would return to the same level as the baseline revenue forecast in FY2024. The current MBSF level of $258.8 million and other available resources would be enough to maintain current FY2021 appropriations of $4.152 billion and half of the difference between the alternative spending limitation in FY2022 and forecasted revenues. The current MBSF would be depleted by the start of FY2023, falling short of the FY2023 alternative spending limitation appropriations level by $235.3 million. We estimate a MBSF of 18 percent of FY2020 General Fund revenue ($715 million), the current statutory maximum, would be necessary to fully offset the revenue declines from a moderate recession to essentially maintain the alternative spending limitation level of appropriations for the FY2022-FY2025 period.

The two forecasting committees estimate that the current severe recession beginning in the first quarter of CY2020 will reduce General Fund revenues relative to the March baseline revenue forecast by 14.1 percent in FY2021, 14.7 percent in FY2022, and over 16 percent in each fiscal year between FY2023-2025. The current MBSF level of $258.8 million and other available resources would be enough to offset 60 percent of current FY2021 revenue shortfall.[1] Annual revenue shortfalls relative to the current baseline forecast would range between $435 and $500 million over the FY2022-2025 period. We estimate the MBSF would require a prohibitive level of funding to fully offset the reduction in revenue during the budget window studied. However, a MBSF equal to the current maximum of 18 percent of FY2020 General Fund revenue would be enough to fully offset the revenue shortfall in FY2021 and offset approximately two-thirds of the revenue decline in FY2022.

It has been 15 years since enactment of 5 MRSA, Chapter 142: Maine Budget Stabilization Fund. While there have been minor amendments to Chapter 142 since 2005, primarily in 2015, the method of funding and uses of the MBSF and its relationship to the General Fund Appropriation Limitation have essentially remained the same. The current economic recession may provide policymakers with the opportunity to review Chapter 142 and determine if changes are warranted as the economic recovery unfolds and we prepare for a new economic expansion.

---

[1] For purposes of this report only the MBSF and other available resources are considered to offset the estimated revenue shortfall. In September 2020 the Governor ordered curtailment of allotments to the State's General Fund by $221,775,584 to close the FY2021 budget gap. Of this amount, approximately $97 million was a replacement of State spending with one-time Federal funding from the Coronavirus Aid, Relief, and Economic Security (CARES) Act Coronavirus Relief Funds and approximately $125 million came from adopting departmental cost savings and efficiencies.

In January 2021, the Governor has indicated she will propose for Legislative approval an additional $130 million in General Fund departmental efficiencies utilizing improved FMAP and transferred unspent appropriations from the FY2020 General Fund. The Governor has also indicated she will request that $70 million in proceeds generated by the State liquor operation be moved from the Maine Municipal Bond Bank to the General Fund.

Cc: Kirsten LC Figueroa, Commissioner, Department of Administrative and Financial Services

Jeremy Kennedy, Chief of Staff, Office of the Governor

Members, Joint Standing Committee on Taxation

Julie Jones, Office of Fiscal and Program Review, Maine Legislature

Suzanne Gresser, Executive Director of the Maine Legislature

I: EXECUTIVE SUMMARY

Since the mid-1990s state revenue bases have become more elastic, magnifying revenue forecasting errors over the course of the business cycle. These forecasting errors have made it difficult for state policymakers, who are required to have balanced budgets, to determine how much incoming revenue during good economic times should be saved to offset the revenue shortfalls that will follow the inevitable onset of the next recession. Led by PEW Charitable Trusts, researchers since the end of the 2007-09 recession have been evaluating best practices that states can use to guide them in determining the method of funding and uses of "rainy day" funds that will best serve their states during a recession. One best practice is a regular "stress-test" of a state's revenue system to estimate the magnitude of revenue reductions during recessionary periods and the reserves necessary to achieve the policy goals of policymakers to offset those shortfalls.

The FY2018-2019 biennial budget included a proposal that was subsequently enacted in Public Law 2017, chapter 284, Part N requiring the CEFC and the RFC to perform a biennial stress-test of General Fund revenues assuming hypothetical moderate and severe recessions and evaluating the sufficiency of the Maine Budget Stabilization Fund (MBSF) under each economic scenario.

Under the moderate recession scenario General Fund revenues would return to the same level as the baseline revenue forecast in FY2024. The current MBSF level of $258.8 million and other available resources would be enough to maintain current FY2021 appropriations of $4.152 billion and half of the difference between the alternative spending limitation in FY2022 and forecasted revenues. The current MBSF would be depleted by the start of FY2023, falling short of the FY2023 alternative spending limitation appropriations level by $235.3 million. We estimate a MBSF of 18 percent of FY2020 General Fund revenue ($715 million), the current statutory maximum, would be necessary to fully offset the revenue declines from a moderate recession to essentially maintain the alternative spending limitation level of appropriations for the FY2022-FY2025 period.

The two forecasting committees estimate that the current severe recession beginning in the first quarter of calendar year 2020 will reduce General Fund revenues relative to the March baseline revenue forecast by 14.1 percent in FY2021, 14.7 percent in FY2022, and over 16 percent in each fiscal year between FY2023-2025. The current MBSF level of $258.8 million and other available resources would be enough to offset 60 percent of current FY2021 revenue shortfall. Annual revenue shortfalls relative to the current baseline forecast would range between $435 and $500 million over the FY2022-2025 period. We estimate the MBSF would require a prohibitive level of funding to fully offset the reduction in revenue during the budget window studied. However, a MBSF equal to the current maximum of 18 percent of FY2020 General Fund revenue would be enough to fully offset the revenue shortfall in FY2021 and offset approximately two-thirds of the revenue decline in FY2022.

II: REVENUE VOLATILITY

Following the end of the "Great Recession" (2007-09) and the relatively weak recovery, economists, state budget experts and bond rating agencies began to study to what extent state government revenue streams had become increasingly volatile, and what policies could be enacted to stabilize state budgets over the business cycle. The general conclusion of researchers is that state revenue bases have become more elastic since the mid-1990s, particularly taxable sources of the individual income tax, and that there is no reason to believe this will change in the near term.[2]

State revenues have historically increased or decreased consistent with the underlying national economy, and more specifically with changes in their respective state economies. Recent research has concluded that sometime in the late 1990s the elasticity of state tax revenues to economic conditions increased, making the management of state budgets that are required to be balanced on an annual basis more difficult. The responsiveness of individual income tax receipts has become the primary source of this increased volatility. Sales and corporate income taxes have also contributed to revenue uncertainty, but three studies cited here conclude that changes in sources of income, primarily investment income from capital gains, have made the individual income tax more difficult to forecast over the business cycle.

Mattoon and McGranahan (2012) find that the individual income tax elasticity doubled in the late 90s, and that two-thirds of the increase in cyclicality is from the income tax base, primarily from investment income. Structural changes in labor markets, especially at the high end of the income distribution, have made employee compensation more cyclical over the last 20 years as well.

Yolanda Kodrzycki (2014) of the Federal Reserve Bank of Boston focuses on the volatility of each state's revenue system. Like Mattoon and McGranahan, Kodrzycki finds that individual income taxes are the main source of the increased revenue volatility since the late 1990s, and that the concentration of capital gains and other investment income in the upper end of the income distribution has increased the elasticity of individual income tax receipts.[3]

Kodrzycki and Zhao (2015) build on prior studies by focusing on the revenue volatility of the six New England states and the size of rainy day funds needed by each state to offset the revenue shortfalls from moderate and severe recessions. The authors calculate the estimated deviation of revenues from trend for the 1988-2013 period for each state, showing that revenue volatility has increased in most of the New England states since the late 1990s, with Maine being an exception. In Maine, the volatility was slightly higher in the 2000s, but its estimated deviation from revenue trend

---

[2] Richard Mattoon and Leslie McGranahan, (2012), "Revenue Bubbles and Structural Deficits: What's a state to do?", Federal Reserve Bank of Chicago.
Yolanda K. Kodrzycki, (2014), "Smoothing State Tax Revenues over the Business Cycle: Gauging Fiscal Needs and Opportunities", Federal Reserve Bank of Boston.
Yolanda K. Kodrzycki and Bo Zhao, (2015), "Achieving Greater Fiscal Stability: Guidance for the New England States", Federal Reserve Bank of Boston.
[3] Kodrzycki's results show that Maine's individual income tax is more cyclical than the sales tax, but it is one of seven states where the elasticity decreased in the 2000-2012 period compared to the 1980-1999 period.

during economic expansions and recessions was generally consistent over the 25-year period reviewed.

The three papers explore policy options to smooth resources over the business cycle. Policy changes such as increasing (decreasing) income tax rates during recessions (expansions) could be made to offset the increasing volatility of the tax, but there are other tax policy objectives such as consistency, competitiveness, and equity to consider. Shifting to consumption taxes is another option, but most states have a narrow sales tax base that excludes many services that make up much of household spending offsetting the theoretical stability of consumption taxes. Reliance on federal assistance is one way states can limit raising taxes or cutting spending during recessionary periods, but the effectiveness of federal fiscal and monetary policy to offset state revenue shortfalls varies by state and the economic circumstances in which they are being implemented.[4] The general conclusion is that state rainy day funds (RDFs) or budget stabilization funds (BSFs) may be the best approach to smooth resources over the business cycle and act as a countercyclical policy measure. [5]

III: BUDGET STABILIZATION FUNDS

While policies to broaden state tax bases have been suggested to help reduce revenue volatility, most researchers have concluded that changes to the tax base will have a limited impact, and BSFs would be the best insurance against a recession for states, all of which must balance their budgets. This recommendation has been endorsed from groups across the ideological spectrum.[6]

The PEW Charitable Trusts (PEW) has taken the lead on the use to BSFs to address revenue volatility, publishing numerous reports on the need for state BSFs and best practices around the design of such funds so that they best serve the unique characteristics of each state's economy, revenue structure, and budget needs.[7]

RDFs traditionally have been savings accounts that had little statutory language that directed funds into and out of the fund, or purposes for its use. BSFs have a defined purpose, primarily to smooth spending over the budget cycle so that spending and taxes can remain relatively constant during recessionary purposes. Maine is a good example: it moved from a RDF that had little statutory

[4] Joe Peek, Eric Rosengren, and Geoffrey M.B. Tootell, (2018), "Some Unpleasant Stabilization Arithmetic", Federal Reserve Bank of Boston.

[5] Many people use the terms "Budget Stabilization Fund" and "Rainy Day Fund" interchangeably, but as this report will show most state budget experts believe there are important differences between the two.

[6] "Managing Uncertainty: How State Budgeting Can Smooth Revenue Volatility", (2014), The PEW Charitable Trusts.
Elizabeth McNichol, Iris Lav, and Michael Leachman, (2015), "Better State Budget Planning Can Help Build Healthier Economies", Center on Budget and Policy Priorities.
"A Primer on State Rainy Day Funds", (2015), Institute on Taxation and Economic Policy.
Joseph Henchman, (2013), "Tax Foundation and CBPP Agree: States Need Strong Rainy Day Funds", Tax Foundation.

[7] "Why States Save: Using Evidence to Inform How Large Rainy Day Funds Should Grow", (2015), The PEW Charitable Trusts.

language that set out its purpose, funding, or uses to a BSF that has clear statutory guidance on how and when it can be utilized.[8]

In PEW's "Why States Save" (2015), they recommend states consider three factors in constructing their BSFs: (1) the fund should have an explicit and narrowly defined purpose for its use, (2) states should perform a regular analysis of their revenue system to determine the degree of revenue volatility, and (3) the fund should have a target level of funding that is consistent with its stated purpose and guided by the findings of a revenue volatility study. In its December 2015 report PEW judged Maine to have an explicit and narrowly defined purpose for its BSF, but at the time of the report did not engage in a regular study of revenue volatility to estimate the reserves necessary during a recession.

IV: STRESS-TESTING STATE REVENUES AND RESERVES

Historically the general rule of thumb for RDFs and BSFs was 5 percent of general fund revenue.[9] The experience of state budgets over the last twenty years has demonstrated that for most states 5 percent of the previous year's revenues is below what is needed to adequately offset revenue shortfalls, even during a moderate recession. This is particularly true for resource-based states where commodity price fluctuations can lead to highly volatile revenue streams even during periods when the national economy is in an expansion phase. For states to estimate the level of reserves best for their budget needs, researchers have recommended a regular review of their revenue volatility over the business cycle.

Two approaches have emerged to measuring the volatility of state tax revenues, and applying those measures to provide guidance on the level of reserves that would be necessary to counter recessions of varying magnitudes.[10] These studies conclude that the MBSF would need approximately 10 percent of General Fund revenue in reserve to offset a revenue shortfall associated with a moderate recession, and approximately 15 percent during a severe recession.[11]

Kodrzycki and Zhao (2015) utilize a look-back approach to calculate the funds necessary to fully offset a revenue shortfall, which is defined as the difference between "actual revenue for the fiscal year (adjusted for policy changes) and the amount that states would have collected if revenue had been consistent with long-run trends." In this study "fully offset" means sufficient funds to get revenue resources back to the long-run revenue trend and prevent a reduction in services and/or

---

[8] See the next section for a description of Maine's Budget Stabilization Fund and how it is designed to interact with the State's appropriation limitation.

[9] National Conference of State Legislators (1983).

[10] Kodrzycki and Zhao (2015), Dan White, Bernard Yaros, and Brittany Merollo (2017), "Stress-Testing States", Moody's Analytics, Dan White, Todd Metcalfe, and Sarah Crane (2018), "Stress-Testing States 2018", Moody's Analytics, and Sarah Crane and Colin Seitz, "Stress-Testing States 2019", Moody's Analytics

[11] The Moody's Analytics' reports calculate a "combined fiscal shock" which includes not only the revenue shortfall because of the recession, but the increased spending to fully fund the state's Medicaid program.

revenue increases during the below trend period. For the 1988-2012 period the authors conclude that Maine would have needed reserves of 9.6 percent of General Fund revenue to fully offset a period of revenue shortfalls from a “Middle-Case Scenario”, and 14.9 percent for a “Worst-Case Scenario”.

The most recent Moody’s Analytics (2017, 2018, and 2019) analysis uses a forward-looking approach by “stress-testing” each state’s revenues and Medicaid expenditures during moderate and severe recession scenarios occurring in fiscal year 2021. In this study the FY2021 revenue “shortfall” is the estimated revenue during the recession scenario compared to a baseline revenue forecast for FY2021 assuming approximately 3 percent annual revenue growth from actual revenue realized in FY2019. An estimate of increased Medicaid costs during FY2021 is added to the revenue shortfall to project the combined “fiscal shock” for each state. Moody’s concludes that Maine would experience a revenue shortfall equal to 8.5 percent of FY2019 revenue if a moderate recession occurred during FY2021, and a fiscal shock equal to 10.3 percent of FY2019 revenue. For the severe recession scenario, the percentages are 12.4 percent and 14.5 percent, respectively.

Use of 2018 Stress-Test Report to Initially Forecast Impact of COVID-19

Following adjournment of the 129th Legislature in March 2020 due to the COVID-19 pandemic, the Department of Administrative and Financial Services (DAFS) utilized the 2018 report on “Stress-Testing Maine General Fund Revenues & Reserves FY2019-FY2023” to quickly inform the Governor of the expected revenue shortfall over the final quarter of FY2020 and the sufficiency of reserves to manage that shortfall.

Using the severe recession scenario from the 2018 report, DAFS estimated that the FY2020 revenue shortfall could be as much as $200 million; 5% of the approximately $4 billion revenue forecast. The supplemental budget, enacted as the Legislature adjourned, left a FY2020 balance of $193.2 million in the General Fund. Based on this initial analysis, it appeared that the State could absorb the estimated revenue shortfall without significant budget adjustments.

A more detailed analysis was performed to support the $200 million estimated revenue shortfall over the remaining three months of the fiscal year. The $200 million was assumed to be split evenly between sales and use and service provider taxes (consumption taxes) and individual and corporate income taxes, which represent over 85% of the State’s General Fund revenue. Actual withholding taxes were much stronger than anticipated, primarily because of the increased taxable unemployment benefits included in the CARES Act. In total, the actual FY2020 shortfall was less than half that projected using the 2018 stress-test report. The Maine specific stress-test, however, provided a quick and reasonable assessment of the impact of an unprecedented pandemic-induced recession on state revenues, and proved to be more accurate than many other estimates provided by out-of-state non-government entities.

V: MAINE APPROPRIATION LIMITATION & BUDGET STABILIZATION FUND

General Fund Appropriation Limitation[12]

As of December 1st of each even-numbered year, a General Fund appropriation limit is established for the ensuing two fiscal years. For the first fiscal year, the General Fund appropriation limit is equal to the "biennial base year appropriation" multiplied by one plus the Growth Limitation Factor. For the second fiscal year, the General Fund appropriation limit is the General Fund appropriation limit of the first year multiplied by one plus the Growth Limitation Factor. As amended in 2015, "biennial base year appropriation" means the General Fund appropriation enacted for fiscal year 2016-17 as of December 1, 2016, and for subsequent fiscal years, the amount of the General Fund appropriation limit for the current year as of December 1, of even-numbered years. The Growth Limitation factor, as amended in 2015, means "Average personal income growth" which is defined as the average for the prior 10 calendar years, ending with the most recent calendar year for which data is available, of the percent change in personal income in this State, as estimated by the United States Department of Commerce, Bureau of Economic Analysis. The average personal income growth is determined by October 1, annually, by the State Economist. Table 2 below shows both the annual growth limitation factor and the base appropriation limitation.

The General Fund appropriation limit applies to all General Fund appropriations, except certain education costs. Section 1534 provides that the additional cost for certain essential educational programs and services ("Essential Programs and Services") for kindergarten to grade 12 education ("K-12 Education") over the FY2005 appropriation for general purpose aid for local schools is excluded from the General Fund appropriation limit until the State share of that cost reaches 55 percent of the total State and local cost (the "EPS Costs"). Current law provides that the State will pay 55 percent of the total State and local cost of K-12 Education for fiscal year 2022 and that the General Fund appropriation limit will include the State share of the cost of K-12 Education beginning with FY2022. It is common, however, for budget proposals to change this underlying statute and for the purposes of this report general purpose aid is flat funded at the approved appropriations for FY2021, which is 51.78% of the total cost for essential programs and services in FY2021. Table 2 includes the amount of additional education funding required to be added to the base spending limitation to calculate the General Fund appropriation limit, commonly referred to as the "LD1" appropriation limitation after the number assigned to the bill that proposed this calculation, at this funding level.

Table 2 includes an additional spending limitation defined as actual FY2021 appropriations increased by the annual growth limitation factor. This third spending limitation is included in this year's report to provide another spending measure that falls between the two statutorily defined spending limitations to use in determining the sufficiency of the Budget Stabilization Fund in Part

[12] 5 MRSA §1534

VIII. For purposes of this report the name given to this spending limitation is the "alternative spending limitation".

Table 2: Calculation of Base, LD1, and Alternative Spending Limitations: Fiscal Years 2018-2025

Fiscal Year	2018	2019	2020	2021	2022	2023	2024	2025
Annual Growth Limitation Factor	2.84%	2.84%	2.77%	2.77%	3.30%	3.30%	3.54%	3.54%
Total Base Appropriations	$3,469	$3,567	$3,666	$3,768	$3,892	$4,020	$4,163	$4,310
Appropriations for General Purpose Aid to Schools*	$1039	$1116	$1164	$1227	$1227	$1227	$1227	$1227
Additional Appropriations for GPA above FY2005 GPA**	$304	$381	$429	$492	$492	$492	$492	$492
LD 1 Appropriations Limit (Base plus Additional GPA)	$3,773	$3,948	$4,095	$4,260	$4,384	$4,512	$4,655	$4,802
Alternative Spending Limit (FY21 Appropriation increased by Growth Factor)				$4,152	$4,288.8	$4,430	$4,587	$4,750
* 2018 and beyond the State's Contribution include allocations for Education's share of casino revenues as amended in PL 2017, c. 284, Part C, section 1								
** The amount by which appropriations for General Purpose Aid for Local Schools exceed the appropriations for this program in FY 2005 as of December 1, 2004 are excluded from the Appropriations Limitation until the State reaches the 55% share of Essential Programs and Services funding level.								

Table 3 shows the current forecast of budgeted resources based on the March 1, 2020 revenue forecast, and how those budgeted resources compare to the LD1 spending limitation. Except for the FY2020-2021 biennium budgeted resources have consistently fallen well below the state's spending limitation. The baseline revenue forecast for the next two biennia estimates that budgeted resources will continue to be below the LD1 spending limitation, ranging from $103 to $193 million.

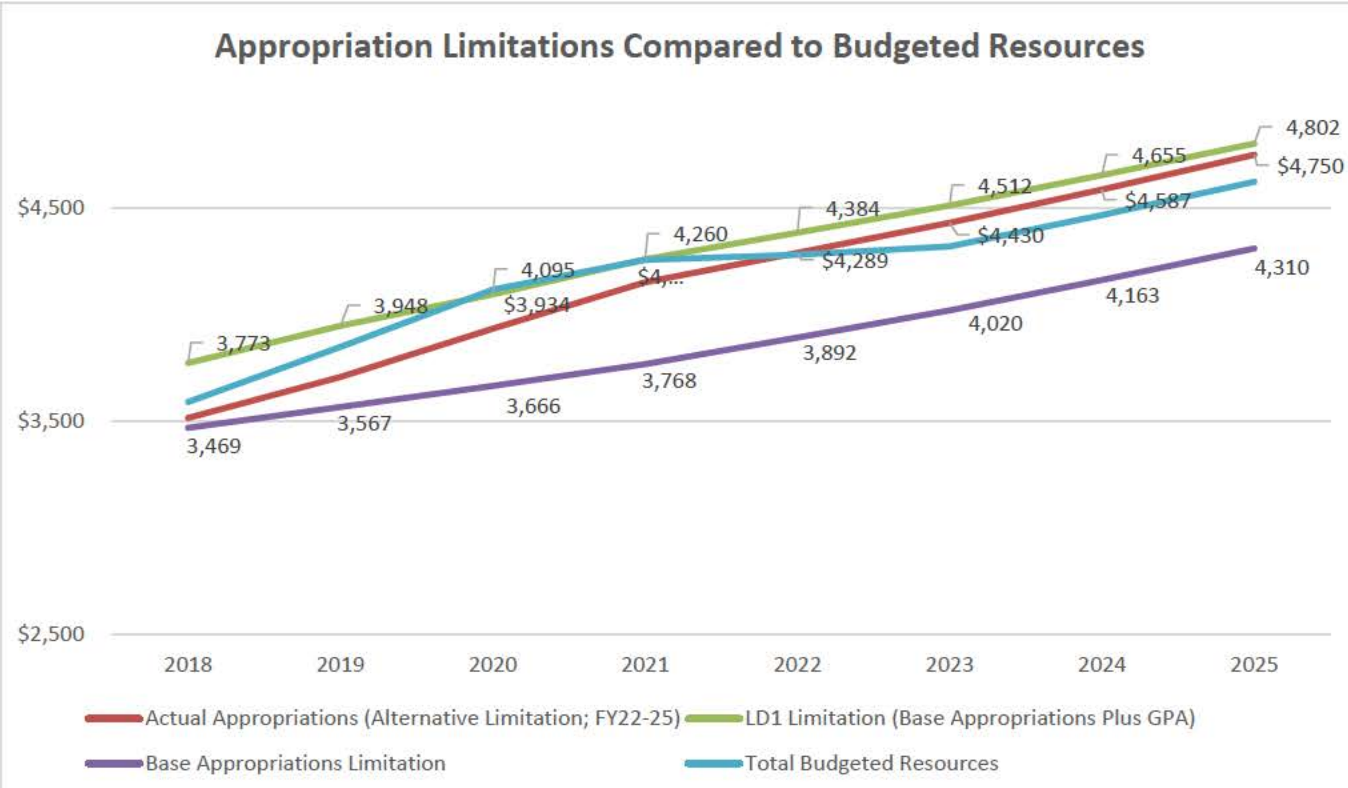
Table 3: Calculation of Budgeted Resources and LD1 Appropriations Limitation: Fiscal Years 2018-2025

Fiscal Year	2018	2019	2020	2021	2022	2023	2024	2025
Calculation Based on Current Law thru 129th 2nd Regular Session (dollars in millions)								
General Fund Budgeted Resources								
Beginning Budgeted Balance	$57	$75	$139	$184	$105	–	–	–
Net Transfers/Adjustments to Fund Balance	($55)	($61)	$9	$3	–	–	–	–
Net General Fund Revenue	$3,588	$3,834	$3,969	$4,070	$4,176	$4,319	$4,467	$4,623
Total Budgeted Resources	**$3,590**	**$3,848**	**$4,117**	**$4,257**	**$4,281**	**$4,319**	**$4,467**	**$4,623**
Amount Budgeted Resources are (below) above the LD1 Appropriations Limit	($183)	($100)	$22	($3)	($103)	($193)	($188)	($179)

The graph below compares the three General Fund appropriation limits described above to the projected level of budgeted resources using the March 1, 2020 RFC forecast.

According to 5 MRSA §1535, "Baseline General Fund revenue" and other available budgeted General Fund resources that exceed the LD1 spending limitation must be transferred to the Maine

Budget Stabilization Fund (the "Stabilization Fund").[13] In addition, pursuant to 5 MRSA §1536 80 percent of fiscal year end General Fund unappropriated surplus must be transferred to the MBSF.



The General Fund appropriation limitation may be exceeded for certain extraordinary circumstances which must be outside the control of the Legislature, including (a) catastrophic events, such as natural disaster, terrorism, fire, war and riot, (b) unfunded or underfunded State or Federal mandates, (c) citizens' initiatives or other referendum, (d) court orders or decrees or (e) loss of Federal funding. Extraordinary circumstances do not include changes in economic conditions, revenue shortfalls, increases in salaries or benefits, new programs or program expansions that go beyond existing program criteria and operation. The General Fund appropriation limit may be temporarily increased for such other purposes only by a vote of both Houses of the Legislature in a separate measure that identifies the intent of the Legislature to exceed the General Fund

---

[13] "Baseline General Fund revenue" means the recommended General Fund revenue forecast reported by the Revenue Forecasting Committee in its December 1 report in even-numbered years, increased by the estimated amount of net General Fund revenue decrease, if any, for all enacted changes affecting the state and local tax burden included in that forecast.

appropriation limit. Finally, the statutes relating to the MBSF and the appropriation limitation are subject to modification or repeal at any time by the Legislature.

Maine Budget Stabilization Fund[14]

The Maine Budget Stabilization Fund, formerly known as the "Rainy Day Fund", was restructured in Public Law 2005, Chapter 2, to be expended primarily to offset a general fund revenue shortfall. Amounts in the stabilization fund may not exceed 18% of the total General Fund revenues in the immediately preceding state fiscal year, and except as provided by 5 MRSA §1533, may not be reduced below 1% of total General Fund revenue in the immediately preceding state fiscal year. If the stabilization fund is at its limit of 18% of General Fund revenue of the immediately preceding year, then amounts that would otherwise have been transferred to the stabilization fund must be transferred to the Property Tax Relief Fund for Maine Residents established in 5 MRSA §1518-A.

The Maine Budget Stabilization Fund, coupled with both the Reserve for General Fund Operating Capital and the temporary curtailment of allotment in 5 MRSA §1668, is an important tool in maintaining a low overall tax burden and a structurally balanced budget, indicated by both a positive budgetary balance (revenue-expenditures) and Generally Accepted Accounting Principles, net position (assets-liabilities). The fund's balance provides a smoothing mechanism and allows lawmakers to address counter-cyclical fiscal policy, such as funding for Federal Medical Assistance Percentage (FMAP) and caseload in the MaineCare program that run counter to the economic cycle, as well as maintain appropriate funding levels of the State's long-term obligations such as retirement, retiree health and debt service without raising taxes. The Maine Budget Stabilization Fund is integrated with the General Fund Appropriation limitation to provide funding consistent with the economic cycle. In addition, the fund receives deposits from the year-end General Fund unappropriated surplus. The following table displays the fund's deposit and withdrawal history since fiscal year 2005. The General Fund appropriation limitation calculation has not resulted in any deposits to the fund partly due to the allowed exclusion from the limitation of education costs associated with reaching a State share of 55% of the total cost of education.

[14] 5 MRSA §1532

Table 4: History of Maine Budget Stabilization Fund

Fiscal Year Ending June 30th	Maine Budget Stabilization Fund (Formerly Maine Rainy Day Fund)								Ending Balances as a % of General Fund Revenue	
	Beginning Balance	Deposits: GF Available Year-end, Unappropriated Surplus or "Cascade"	"Specified" Deposits: GF Unappropriated Surplus	Transfer to GF	Transfer to Programs	Interest Earned	Ending Balance	Statutory Cap	General Fund Revenue	
2005	33,158,244	13,121,679					46,279,923	279,084,505	2,790,845,053	2.5%
2006	46,279,923	30,662,369		-	-	2,960,695	79,902,987	351,819,082	2,931,825,687	4.1%
2007	79,902,987	-	29,000,000	-		6,576,879	115,479,866	362,351,447	3,019,595,389	5.2%
2008	115,479,866	-	10,000,000	-	(100,000)	3,497,143	128,877,009	370,538,280	3,087,818,992	5.5%
2009	128,877,009	-		(131,550,969)	(50,000)	2,919,303	195,343	337,364,195	2,811,368,295	0.0%
2010	195,343	19,626,525	5,597,244	-	(50,000)	15,970	25,385,082	330,681,900	2,755,682,500	1.3%
2011	25,385,082	46,080,951		-	(50,000)	50,781	71,466,814	353,394,811	2,944,956,756	3.0%
2012	71,466,814	-	4,000,000	(30,855,982)	(50,000)	247,677	44,808,509	361,864,587	3,015,538,222	2.1%
2013	44,808,509	55,065,933		(40,253,091)	(50,000)	129,123	59,700,474	371,326,061	3,094,383,842	2.0%
2014	59,700,426	8,453,337		-	(50,000)	167,728	68,271,491	373,619,632	3,113,496,933	2.4%
2015	68,271,491	23,854,159	18,803,702		(100,000)	254,141	111,083,493	599,278,778	3,329,326,547	3.3%
2016	111,083,493	707,300				561,446	112,352,239	605,914,404	3,366,191,131	3.3%
2017	112,352,239	36,837,024	46,017,246		(50,000)	1,133,541	196,290,050	621,882,695	3,454,903,862	5.7%
2018	196,290,050	76,247,087		(2,000,000)	(200,000)	2,524,023	272,861,160	645,781,652	3,587,675,847	7.6%
2019	272,861,160	18,123,960	19,800,000	(19,194,185)	(100,000)	5,718,984	297,209,920	692,731,996	3,848,511,092	7.7%
2020	297,209,920	-	17,431,338	(60,305,815)	(100,000)	4,511,388	258,746,831	714,481,866	3,969,343,702	6.5%

VI: RECESSION SCENARIOS

Statute and Background: 5 M.R.S.A. §1710-A

> **4. Alternative economic scenarios.** No later than February 1st of each even-numbered year the commission shall provide to the State Budget Officer, the State Economist and the Associate Commissioner for Tax Policy at least 2 additional economic forecasts that assume potential economic recession scenarios of varying levels of severity. These additional forecasts must include economic assumptions for the current fiscal biennium and the next 2 fiscal biennia. In each report the commission shall fully describe the methodology employed in reaching its recommendations.

The FY2018-2019 biennial budget included a provision requiring the CEFC to provide the State Economist, the State Budget Officer, and the Associate Commissioner for Tax Policy with at least two alternative economic recession scenarios of varying levels of severity. The alternative scenarios are required to be included in the CEFC's report due February 1st of each even-numbered year and must include assumptions for calendar years that encompass the current and next two biennia. It is important to note that these recession scenarios are hypothetical in nature and should not be considered a prediction by the CEFC.

Methodology

The CEFC spent time during their January 2020 meeting discussing how best to identify the alternative scenarios for use in the stress-test report described in statute. The Commissioners decided to designate two alternative scenarios provided by Moody's Analytics in January 2020 as the moderate and severe recession scenarios. While the scenarios describe a set of specific events surrounding the recessions, the CEFC does not ascribe to these specifics, instead selecting the scenarios based on the numbers and growth rates that seemed reasonable as generic "moderate" and "severe" recessions. These scenarios provided plausible economic inputs for an analysis of the General Fund revenue projections in both a moderate and severe downturn. These recession scenarios were identified explicitly for the stress-testing required by statute and are not an official economic forecast by the CEFC.

At the CEFC's off-cycle forecast meeting held in June 2020, it was decided to replace the original "severe" recession scenario with the CEFC's official July 1, 2020 forecast. Given that current conditions represented a sharp and severe recession, it made sense to use the revised off-cycle forecast in place of a hypothetical scenario. The "moderate" recession scenario was not changed from the original designation and the February 1, 2020, CEFC forecast continues to represent the baseline.

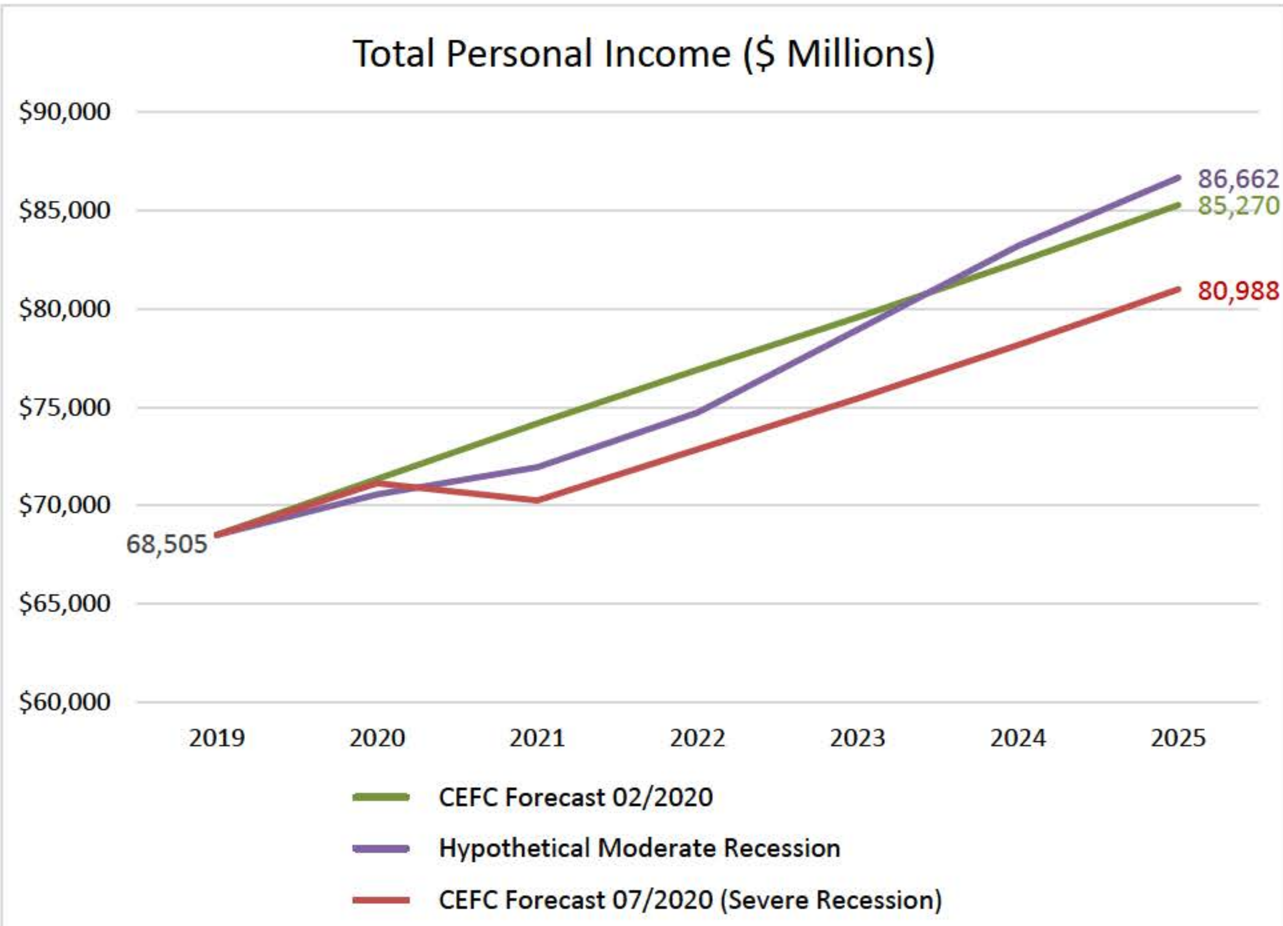
The moderate recession scenario was compared to the Moody's Analytics baseline scenario for January 2020 to create a ratio that eliminates any extra variation stemming from the differences between the Moody's baseline and the CEFC forecast. This ensures that the alternative scenario captures only the differences resulting from the economic conditions and not from a differing baseline. Additionally, the moderate recession scenario forecast was adjusted so that the recession begins in the first quarter of 2020. For 2019, the CEFC forecast was used; the alternative economic scenarios were then used to provide forecasts for CY2020-2025.

Detailed tables for the CEFC's February baseline economic forecast and the two recession scenarios are included in the Appendix to this report.

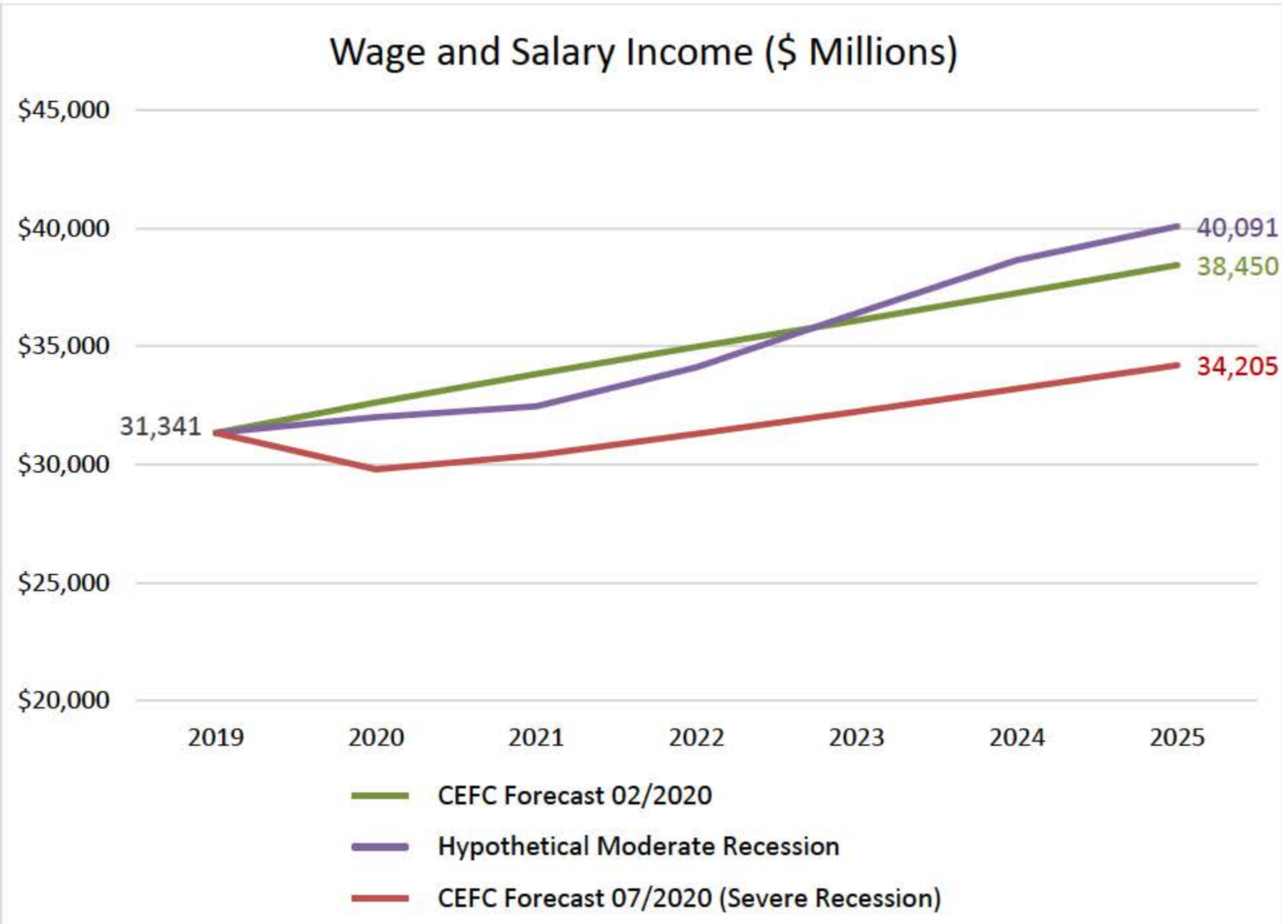
Key Economic Indicators

Total wage and salary employment in the baseline scenario from the CEFC is forecast to rise through CY2022 to 639,400 and then remain at that level through CY2025. In the hypothetical moderate recession scenario, employment declines to 622,000 before recovering to 644,800. In the CEFC's July 2020 forecast, representing the severe recession scenario, employment declines to 585,100 and only returns to 620,700 for 2022-2025.

Total personal income rises from $68.5 billion in CY2019 to $85.3 billion in CY2025 in the baseline scenario from the CEFC. The hypothetical moderate recession scenario sees total personal income rise to $86.7 billion in CY2025, but with a slower growth rate in the early years of the scenario and a faster growth rate in the later years. Total personal income in the CEFC's July 2020 forecast rises to $71.1 billion in CY2020 before falling to $70.3 billion in CY2021 and only increases to $81.0 billion in CY2025.



Wage and salary income in the baseline scenario increases from $31.3 billion in CY2019 to $38.5 billion in CY2025. In the hypothetical moderate recession scenario, wage and salary income grows at a slower pace for two years before increasing at a faster rate to $40.1 billion in CY2025. Wage and salary income declines to $29.8 billion in CY2020 in the CEFC's July 2020 forecast and only increases to $34.2 billion in CY2025.



VII: REVENUE IMPACT OF RECESSION SCENARIOS

Statute and Background: 5 M.R.S.A. §1710-G

> **Use of Revenue Forecasts.** No later than October 1st of each even-numbered year the commission and committee shall jointly issue a report to the Governor, the Legislative Council and the joint standing committee of the Legislature having jurisdiction over appropriations and financial affairs that uses the alternative economic scenarios recommended by the commission in accordance with section 1710-A, subsection 4. The report must include analyses and findings that detail the stress impact such potential economic recession scenarios would have on the current General Fund revenue projections of sales and income tax revenues. The report must include an analysis of the sufficiency of the current level of the Maine Budget Stabilization Fund and an estimate of the reserves in the Maine Budget Stabilization Fund necessary to offset the declines in revenue because of potential economic recessions of varying level of severity.

The 2018-2019 biennial budget included a provision requiring the CEFC and the RFC to perform a biennial stress-test of General Fund revenues assuming hypothetical moderate and severe recessions, and the sufficiency of the MBSF under each economic scenario. The methodology for performing the stress-test is consistent with the approach used in the two Moody's Analytics papers discussed earlier in the report.

Methodology

The moderate and severe recession revenue forecasts were performed using the same methodology as the semiannual revenue forecasting exercises. The State Economist provided the Maine Revenue Services' Office of Tax Policy (OTP) with the CEFC's economic forecasts for the two recession scenarios presented in the Appendix, and an extended baseline forecast for CY2024 and CY2025. Additionally, the State Economist provided forecasts of supplemental economic variables consistent with each recession scenario and the baseline that are typically used by OTP in developing their recommended forecasts for tax revenue lines administered by Maine Revenue Services. [15]

The March 1, 2020 baseline revenue forecast has been updated to account for all actions by the 129th Legislature through the Second Regular Session. These adjustments had little impact on sales and service provider and income taxes.

The statute only requires a stress-test of sales and use and individual income taxes.[16] While these tax lines represent over 85 percent of General Fund revenue we know that other General Fund

---

[15] The severe recession scenario used in this report is the CEFC's July 1, 2020 COVID-19 economic forecast and the revenue forecast is the RFC's August 1, 2020 forecast.

[16] We include the service provider tax in this report because the General Fund portion of the tax was originally part of the sales tax base, and the OTP models make no distinction between the two tax bases.

revenue lines such as corporate income tax, estate tax and other consumption based revenues (e.g. cigarette and tobacco taxes, real estate transfer tax, lottery revenues) will be negatively impacted in recessions as well. The revenue forecast for the moderate recession scenario does estimate changes for the corporate income tax and the estate tax and assumes the other General Fund revenue lines are unchanged. This assumption regarding the other revenue lines will slightly understate the revenue shortfall estimated in the moderate recession scenario stress-test. Since the severe recession scenario is the same as the August 1, 2020 RFC forecast, it includes changes to all General Fund revenue lines. Finally, unlike the Moody's Analytics reports the stress-test statute does not require an estimate of increased demands on Medicaid or other safety-net programs that historically rise during recessions. The omission of spending programs further understates the "fiscal shock" the budget will experience in a recession.

Moderate Recession Scenario

We estimate that a hypothetical moderate recession will reduce sales and use and service provider taxes by approximately 3.1 percent in FY2021, 3.8 percent in FY2022, 2.9 percent in FY2023 and essentially return to the baseline forecast by FY2024 (See Table 5). These percentage point reductions translate into a loss of $168.4 million in revenue over the forecast period, peaking at approximately $68 million a year in reduced revenue in FY2022. The relatively robust recovery in employment and personal income beginning in CY2023 results in the sales and use and service provider taxes essentially returning to the current baseline forecast by FY2024.

Table 5

Sales & Use and Service Provider Taxes

Fiscal Years	**2021**	**2022**	**2023**	**2024**	**2025**
March 2020 RFC Forecast	$1,695.1	$1,772.4	$1,843.2	$1,913.2	$1,984.0
Moderate Recession Forecast	$1,642.4	$1,704.7	$1,788.9	$1,898.9	$2,004.6
Variance	($52.7)	($67.7)	($54.3)	($14.3)	$20.6
Percent Change	-3.1%	-3.8%	-2.9%	-0.7%	1.0%

Individual income tax receipts have a similar pattern as sales taxes, a decline of 4.6 percent in FY2021, followed by a 5 percent decline in FY2022, a 2.2 percent decrease in FY2023, and then returning to the baseline forecast by FY2024 (See Table 6). The primary impact on individual income tax receipts is through wage and salary income, which typically represent approximately 70 percent or more of Federal Adjusted Gross Income. The significant change in wage and salary growth (+4 percent to +1.5 percent) in CY2020 because of the recession has an immediate effect on withholding receipts in FY2021. Again, the relatively quick and robust recovery starting in CY2023 results in the individual income tax forecast in the moderate recession scenario to be only $44.5 million below the current baseline forecast in FY2023 and exceeding the baseline forecast by FY2024.

Table 6

Individual Income Taxes					
Fiscal Years	**2021**	**2022**	**2023**	**2024**	**2025**
March 2020 RFC Forecast	$1,848.6	$1,926.2	$2,006.6	$2,096.7	$2,194.2
Moderate Recession Forecast	$1,763.1	$1,830.3	$1,962.1	$2,131.7	$2,276.6
Variance	($85.5)	($95.9)	($44.5)	$35.0	$82.4
Percent Change	-4.6%	-5.0%	-2.2%	1.7%	3.8%

When corporate income tax and estate tax changes are added to the sales, service provider and individual income tax moderate recession forecasts to the remaining baseline forecasts for General Fund revenues, the total estimated impact of the moderate recession on General Fund revenues is -3.9 percent in FY2021, -4.9 percent in FY2022, -2.8 percent in FY2023, and then slightly more than the baseline forecast in FY2024 (See Table 7). The shortfall in General Fund revenues is between $159 million and $203 million at the peak of the recession. Because of the forecasted length of the recession and a relatively quick recovery General Fund revenues are estimated to be equal to the baseline forecast by FY2024 and exceed the baseline forecast by $103 million in FY2025. As discussed above, this should be a best-case scenario since the revenue forecast of the moderate recession scenario doesn't account for all revenue changes during the recession or additional spending needs.

Table 7

Total General Fund					
Fiscal Years	**2021**	**2022**	**2023**	**2024**	**2025**
March 2020 RFC Forecast	$4,070.3	$4,174.5	$4,317.6	$4,467.0	$4,623.2
Moderate Recession Forecast	$3,911.6	$3,971.4	$4,195.7	$4,487.8	$4,725.8
Variance	($158.7)	($203.1)	($121.9)	$20.7	$102.6
Percent Change	-3.9%	-4.9%	-2.8%	0.5%	2.2%

Severe Recession Scenario

We estimate the COVID-19 severe recession forecasted in the June/July forecasting meetings will reduce sales and use and service provider taxes by 14.0 percent in FY2021, 8.6 percent in FY2022, and approximately 7 percent in FY2023 through FY2025 (See Table 8). These percentage point reductions translate into a loss of almost $800 million in revenue over the forecast period, peaking at approximately $250 million a year in reduced revenue in FY2021. A large percentage (60 percent) of the reduced revenue is associated with lodging and prepared food sales. Lodging sales are assumed to be down year-over-year by 50% during the third quarter of CY2020, the height of the summer tourism season. Lodging sales are assumed to improve slowly over the remainder of CY2020 and are not expected to generate the same level of tax revenue as CY2019 until CY2022. Prepared food sales, mostly restaurant sales, are projected to perform better than lodging, but are assumed to be down approximately 30% year-over-year during the third quarter of CY2020. Like lodging, prepared food sales are assumed to slowly improve and not get back to the same level of tax revenue as CY2019 until CY2022. These key assumptions by the RFC about lodging and prepared food sales are consistent with the CEFC's employment forecast for the leisure and hospitality industry. The depth of the recession, and the weak recovery keep General Fund revenues well below the current baseline forecast through the forecast period.

Table 8

Sales & Use and Service Provider Taxes					
Fiscal Years	**2021**	**2022**	**2023**	**2024**	**2025**
March 2020 RFC Forecast	$1,695.1	$1,772.4	$1,843.2	$1,913.2	$1,984.0
Severe Recession Forecast	$1,457.1	$1,620.5	$1,711.9	$1,779.8	$1,851.1
Variance	($238.0)	($151.9)	($131.3)	($133.5)	($133.0)
Percent Change	-14.0%	-8.6%	-7.1%	-7.0%	-6.7%

75% of the adjustments to individual income tax revenue is primarily the result of the CEFC's assumption of combined wage and salary and unemployment insurance (UI) benefits growth over the forecast period (See Table 9). The CEFC forecast assumes that the initial enhanced UI benefits that were part of the CARES Act, and a continuation of those benefits at some reduced level in the next federal stimulus package will almost offset the reduction in wages and salaries during CY2020. After CY2020 the CEFC assumes that UI benefits will fall back to normal levels and growth as unemployment declines, but wage and salary growth will be weaker than their previous forecast. These assumptions result in a growing gap between the February and July

CEFC forecast for the combined level of wage and salary and UI benefits, which has a significant impact on individual income tax liability. Other key factors impacting the individual income tax forecast are; (1) the reversal of the FY2020 accruals for final and estimated payments in FY2021, (2) a larger decrease in capital gains realizations than the March forecast, and (3) a reduction in IRA income in tax year 2020 due to federal tax law changes.

Table 9

Individual Income Taxes					
Fiscal Years	**2021**	**2022**	**2023**	**2024**	**2025**
March 2020 RFC Forecast	$1,848.6	$1,926.2	$2,006.6	$2,096.7	$2,194.2
Severe Recession Forecast	$1,588.3	$1,642.9	$1,689.1	$1,751.2	$1,824.8
Variance	($260.3)	($283.3)	($317.5)	($345.5)	($369.5)
Percent Change	-14.1%	-14.7%	-15.8%	-16.5%	-16.8%

When the sales, service provider, and individual income tax severe recession forecasts are added to the forecasts for the rest of General Fund revenues, the total estimated impact of the severe recession on General Fund revenues is -13.0 percent in FY2021, -10.4 percent in FY2022 and approximately -10.5 percent in each of the remaining years in the forecast window (See Table 10). The shortfall in General Fund revenue averages $465 million from FY2022 to FY2025.

Table 10

Total General Fund					
Fiscal Years	**2021**	**2022**	**2023**	**2024**	**2025**
March 2020 RFC Forecast	$4,070.3	$4,174.5	$4,317.6	$4,467.0	$4,623.2
Severe Recession Forecast	$3,542.5	$3,740.8	$3,868.1	$3,989.2	$4,124.9
Variance	($527.8)	($433.7)	($449.5)	($477.9)	($498.3)
Percent Change	-13.0%	-10.4%	-10.4%	-10.7%	-10.8%

VIII: BUDGET STABILIZATION FUND SUFFICIENCY AND NEEDS

As described in Section V, flows into and out of the MBSF are based on the difference between General Fund revenues and the General Fund Appropriation Limitation. During periods when the General Fund revenue is forecasted to exceed the spending limitation those excess revenues are to be transferred into the MBSF; surplus revenues at the end of the fiscal year are another source of funds to the MBSF. 5 MRSA §1532 provides the statutory authority to use the MBSF to offset a General Fund revenue shortfall. A revenue shortfall is defined as "the amount by which the General Fund appropriation limitation established by 5 MRSA §1534 exceeds baseline General Fund revenue and other available resources in each state fiscal year." The BSF and spending limitation are designed to work together to save during periods when revenues are above the limitation and to spend during periods of a revenue shortfall. The spending limitation is structured to be a proxy for trend revenue growth to set a spending level that is sustainable relative to the State's revenue system.

The stress-test results presented here are designed to determine if the current funding level of the MBSF is sufficient to provide resources to maintain spending at limitation levels during a period of revenue shortfall. This meets the third criteria of the PEW report that states set a BSF cap based on the unique characteristics of their revenue structure and economy.

Note, for purposes of determining the sufficiency and needs of the MBSF, we calculate the revenue shortfall as the difference between the "alternative spending limitation" and forecasted General Fund revenues. Because the General Fund appropriation limitation adds the appropriations necessary to achieve 55 percent of K-12 education to the base spending limitation, it historically has exceeded General Fund revenue, regardless of economic conditions (See Graph in Section V). By restricting the analysis to the calculation of the "alternative spending limitation" the information provided here gives policymakers an estimate of the sufficiency and needs of the MBSF to allow for growth in recent biennial budget appropriations consistent with the statutory growth factor during recessionary periods.

We estimate that a moderate recession scenario (Next Cycle Recession) will require $780 million of MBSF resources to offset a revenue shortfall over the FY2021-2025 budget period (Table 11).[17] The current MBSF level of $258.8 million is enough to cover the revenue shortfall in FY2021, and approximately two-thirds of the shortfall in FY2022. A MBSF at its maximum level of 18 percent of prior year revenues ($715 million) would fall short of providing enough resources to supplement annual revenues to maintain General Fund spending at the alternative spending limitation levels over the FY2021-2025 period by approximately $65 million. At the

[17] 5 MRSA §1532(1) is clear that the BSF may not be reduced below 1% of total General Fund revenue in the immediately preceding state fiscal year. For the purposes of that subsection, at the close of a fiscal year, "immediately preceding state fiscal year" means the fiscal year that is being closed. As a result, this analysis assumes the MBSF must have a minimum amount of approximately $45 million. An exception to the 1% minimum is if the Commissioner of DAFS declares a budget emergency (5 MRSA §1533).

end of FY2025 approximately $47 million would remain in the MBSF, the required 1 percent minimum. For the most part the 18 percent maximum is sufficient to offset the moderate recession revenue shortfall and still meet the alternative spending limitation.

Table 11

General Fund Appropriation Limitation and Sufficiency of the Maine Budget Stabilization Fund (Moderate Recession)

Fiscal Years	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**
Alternative Appropriatons Limitation as of 10/1/20		$4,152.4	$4,289.4	$4,431.0	$4,587.8	$4,750.2
Revenues/Resources Minus Appropriations Limitation		($56.7)	($318.0)	($235.3)	($100.1)	($24.4)
Budget Stabilization Fund at Fiscal Year End	$258.8	$202.1	$39.7	$42.0	$44.9	$47.3

Kodrzycki and Zhao and Moody's Analytics recommend Maine have a MBSF of 10 percent of prior year's revenue to offset a moderate recession. Based on the results of this stress-test study a MBSF of 10 percent of FY2020 revenue ($397 million) would be sufficient to cover all the revenue shortfall in FY2021 and most of the FY2022 shortfall. A MBSF of this size would provide the Governor and Legislature 18 months to institute budget savings to bring the FY2022 budget back into balance.

In the severe recession scenario (COVID-19 recession) an unreasonable level of MBSF resources would be required to fully offset a revenue shortfall over the FY2021-2025 budget period (Table 12). The current MBSF level of $258.8 million is enough to cover slightly more than half the revenue shortfall in FY2021, leaving the required 1 percent minimum of $35.4 million at the end of FY2021. A MBSF at its maximum level of 18 percent of prior year revenues ($715 million) would provide enough resources to supplement annual revenues to maintain General Fund spending at the alternative spending limitation levels in FY2021 and approximately half of the FY2022 shortfall. At the end of FY2022, $37.4 million would remain in the MBSF as required by 5 MRSA §1532(1). A MBSF at its statutory maximum entering a severe recession would provide the Governor and Legislature 18 months to institute budget savings to bring the FY2022 budget back into balance.

Table 12

General Fund Appropriation Limitation and Sufficiency of the Maine Budget Stabilization Fund (Severe Recession)						
Fiscal Years	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**
Alternative Appropriatons Limitation as of 10/1/20		$4,152.4	$4,289.4	$4,431.0	$4,587.8	$4,750.2
Revenues/Resources Minus Appropriations Limitation		($425.8)	($548.6)	($562.9)	($598.7)	($625.3)
Budget Stabilization Fund at Fiscal Year End	$258.8	$35.4	$37.4	$38.7	$39.9	$41.2

Kodrzycki and Zhao and Moody's Analytics recommend Maine have a MBSF of 15 percent of prior year's revenue to offset a severe recession. Based on the results of this stress-test study a MBSF of 15 percent of FY2020 revenue would be sufficient to cover all the revenue shortfall in FY2021 but leave the BSF with approximately 25 percent of the estimated shortfall in FY2022. A MBSF of this size would provide the Governor and Legislature 15 months to institute budget savings to bring the FY2022 budget back into balance.

IX: CONCLUSIONS

As the national and state economies struggle to respond to the COVID-19 recession, the stress-test report required by 5 MRSA §1710-G has proven to be an important tool in responding to the unique circumstances of the last seven months. The purpose of this year's report is to inform policymakers on the estimated impact of a moderate and severe recession on sales and individual income tax revenues, and the sufficiency and needs of the Maine Budget Stabilization Fund in each of the recession scenarios. This joint biennial report by the Consensus Economic Forecasting Commission and the Revenue Forecasting Committee fulfills that statutory charge.

The two forecasting groups conclude that the current MBSF of $258.8 million is not sufficient to fully offset the revenue shortfalls estimated as the result of a moderate and severe recession. However, the MBSF is at a level that will provide the Governor and Legislature time during the early stages of a moderate or severe recession to make the changes necessary to bring the budget back into balance.

The statutory maximum for the MBSF of 18 percent of prior year General Fund revenues (currently $715 million) would be sufficient to offset a moderate recession modeled in this report. This means that estimated revenues during a moderate recession combined with drawdowns of the MBSF would allow a level of spending equal to the alternative appropriation limitation for the duration of a revenue shortfall. While a BSF at its statutory cap would not be sufficient to fully offset a revenue shortfall because of a severe recession, it would provide enough resource to maintain spending at the base appropriations limitation for approximately 18 months.

It has been 15 years since enactment of 5 MRSA, Chapter 142: Maine Budget Stabilization Fund. While there have been minor amendments to Chapter 142 since 2005, primarily in 2015, the method of funding and uses of the BSF and its relationship to the General Fund Appropriation Limitation have essentially remained the same. The current economic recession may provide policymakers with the opportunity to review Chapter 142 and determine if changes are warranted as the economic recovery unfolds and we prepare for a new economic expansion.

APPENDIX

Baseline Scenario

The baseline economic scenario is the CEFC forecast from February 1, 2020. This scenario does not forecast a recession. Employment in Maine increases through 2022. Wage and salary income rises each year along with total personal income, with the strongest growth in the near term of the forecast.

Maine Consensus Economic Forecasting Commission							
February 2020 Forecast	Forecast - Calendar Years						
	2019	2020	2021	2022	2023	2024	2025
CPI-U* (Annual Change)	1.8%	1.9%	2.0%	2.0%	2.0%	2.0%	2.0%
CPI for Energy Prices** (Annual Change)	-2.2%	4.5%	2.8%	2.5%	2.4%	2.8%	2.8%
CPI for New Vehicles** (Annual Change)	0.4%	-0.2%	-0.1%	0.0%	0.0%	0.0%	0.1%
New Vehicle Registrations** (Annual Change)	-2.5%	-2.6%	-2.9%	-2.4%	-2.0%	-1.5%	-1.2%
Personal Savings Rate**	7.9%	7.5%	7.8%	7.9%	7.6%	7.2%	7.0%
Maine Unemployment Rate**	3.1%	2.8%	2.9%	3.1%	3.5%	3.7%	3.8%
3-Month Treasury Bill Rate**	2.06%	1.54%	1.69%	2.31%	2.75%	2.80%	2.83%
10-Year Treasury Note Rate**	2.15%	2.17%	2.72%	3.56%	3.92%	4.08%	4.24%
Before-Tax Corporate Profits* (Annual Change)	4.0%	3.2%	3.5%	3.7%	2.7%	2.7%	2.7%
Maine Wage & Salary Employment* (thousands)	634.4	637.5	638.8	639.4	639.4	639.4	639.4
Natural Resources	2.2	2.2	2.2	2.2	2.1	2.1	2.1
Construction	29.1	30.3	30.3	30.3	30.3	30.3	30.2
Manufacturing	53.2	53.2	53.0	52.8	52.0	51.3	50.6
Trade/Trans./Public Utils.	120.5	120.6	120.9	121.0	121.1	121.3	121.5
Information	7.2	7.7	7.7	7.7	7.7	7.7	7.6
Financial Activities	32.4	32.3	32.3	32.4	32.4	32.4	32.4
Prof. & Business Services	69.7	69.7	70.0	70.0	70.0	70.0	70.0
Education & Health Services	127.3	127.3	127.8	127.8	127.8	127.8	127.8
Leisure & Hospitality Services	69.8	70.7	71.1	71.4	71.5	71.5	71.5
Other Services	22.5	22.7	22.7	22.7	22.7	22.7	22.7
Government	100.5	101.0	100.8	101.3	101.8	102.3	102.9
Maine Wage & Salary Employment* (Annual Change)	0.9%	0.5%	0.2%	0.1%	0.0%	0.0%	0.0%
Natural Resources	-0.5%	-2.3%	0.2%	-0.2%	-0.2%	-0.2%	-0.2%
Construction	0.7%	4.1%	0.0%	0.0%	0.0%	0.0%	-0.2%
Manufacturing	2.4%	-0.1%	-0.2%	-0.5%	-1.5%	-1.4%	-1.2%
Trade/Trans./Public Utils.	1.1%	0.1%	0.2%	0.1%	0.1%	0.1%	0.2%
Information	-1.5%	6.8%	0.1%	0.0%	-0.1%	-0.2%	-0.2%
Financial Activities	1.4%	-0.3%	0.1%	0.1%	0.1%	0.0%	0.0%
Prof. & Business Services	0.6%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%
Education & Health Services	0.1%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%
Leisure & Hospitality Services	2.1%	1.3%	0.5%	0.5%	0.2%	0.0%	0.0%
Other Services	1.6%	0.7%	0.1%	0.0%	0.0%	-0.1%	-0.2%
Government	0.3%	0.5%	-0.1%	0.5%	0.5%	0.6%	0.5%
	2019	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**
Personal Income* ($ million)	68,505	71,342	74,167	76,898	79,575	82,359	85,270
Wages & Salaries*	31,341	32,626	33,833	34,983	36,103	37,258	38,450
Supplements to Wages & Salaries*	7,957	8,275	8,573	8,864	9,166	9,477	9,799
Nonfarm Proprietors' Income*	5,166	5,321	5,491	5,673	5,814	5,960	6,109
Farm Proprietors' Income**	51	18	34	68	62	49	50
Dividends, Interest, & Rent*	13,136	13,557	13,963	14,284	14,599	14,920	15,248
Dividends	4,007	4,103	4,252	4,346	4,412	4,507	4,617
Interest	6,234	6,381	6,473	6,642	6,877	7,115	7,337
Rent	2,899	3,071	3,234	3,293	3,309	3,295	3,287
Personal Current Transfer Receipts*	15,050	15,878	16,751	17,672	18,644	19,688	20,810
Less: Contributions for Social Ins.**	5,297	5,473	5,666	5,884	6,098	6,327	6,587
Adjustment for Residence**	1,102	1,141	1,189	1,238	1,285	1,334	1,390
Personal Income* (Annual Change)	4.7%	4.1%	4.0%	3.7%	3.5%	3.5%	3.5%
Wages & Salaries*	4.5%	4.1%	3.7%	3.4%	3.2%	3.2%	3.2%
Supplements to Wages & Salaries*	4.0%	4.0%	3.6%	3.4%	3.4%	3.4%	3.4%
Nonfarm Proprietors' Income*	4.4%	3.0%	3.2%	3.3%	2.5%	2.5%	2.5%
Farm Proprietors' Income**	19.5%	-65.4%	91.1%	103.6%	-8.6%	-20.8%	1.7%
Dividends, Interest, & Rent*	4.5%	3.2%	3.0%	2.3%	2.2%	2.2%	2.2%
Dividends	6.1%	2.4%	3.6%	2.2%	1.5%	2.1%	2.4%
Interest	3.3%	2.4%	1.4%	2.6%	3.5%	3.5%	3.1%
Rent	5.0%	5.9%	5.3%	1.8%	0.5%	-0.4%	-0.2%
Personal Current Transfer Receipts*	5.5%	5.5%	5.5%	5.5%	5.5%	5.6%	5.7%
Less: Contributions for Social Ins.**	4.8%	3.3%	3.5%	3.8%	3.6%	3.8%	4.1%
Adjustment for Residence**	5.7%	3.6%	4.1%	4.1%	3.8%	3.8%	4.2%

*CEFC Forecast

**From IHS Markit and Moody's Analytics baselines (Jan. 2020)

Remaining lines derived from CEFC forecast by CEFC staff and reviewed by CEFC

Moderate Recession Scenario

The moderate recession scenario selected by the Commission is the "S7" Next-Cycle Recession scenario. On a macroeconomic level, this recession lasts a full year, which is comparable to the postwar average of recessions. The national unemployment rate peaks at 7.3 percent and real gross domestic product declines around 0.9 percent. Employment in Maine declines around 2.2 percent over the course of the recession. Wage and salary income and total personal income in Maine continue to grow but at a slower pace.

Moody's Analytics January 2020 S7 - Next Cycle Recession							
HYPOTHETICAL MODERATE RECESSION	Forecast - Calendar Years						
	2019	2020	2021	2022	2023	2024	2025
CPI-U* (Annual Change)	1.8%	3.9%	1.9%	2.9%	2.7%	2.9%	2.9%
CPI for Energy Prices** (Annual Change)	-2.1%	-7.8%	-9.3%	5.1%	3.1%	0.7%	-0.1%
CPI for New Vehicles** (Annual Change)	0.4%	-2.9%	-3.2%	-2.3%	-1.6%	-1.2%	-1.1%
New Vehicle Registrations** (Annual Change)	-3.8%	9.4%	2.9%	5.6%	16.6%	10.0%	6.5%
Personal Savings Rate**	7.9%	8.3%	7.0%	6.2%	6.8%	7.8%	8.1%
Maine Unemployment Rate**	3.0%	3.6%	3.2%	2.7%	2.7%	2.6%	2.6%
3-Month Treasury Bill Rate**	2.06%	1.46%	0.67%	1.00%	1.42%	1.58%	1.58%
10-Year Treasury Note Rate**	2.14%	1.64%	1.30%	1.64%	1.83%	1.89%	1.88%
Before-Tax Corporate Profits* (Annual Change)	0.2%	-11.4%	-17.3%	5.3%	10.5%	9.7%	5.4%
Maine Wage & Salary Employment* (thousands)	636.0	631.7	622.0	624.7	634.6	643.8	644.8
Natural Resources	2.2	2.1	2.1	2.1	2.1	2.1	2.1
Construction	29.8	28.5	26.5	26.3	27.6	28.5	28.6
Manufacturing	53.3	52.3	51.0	51.2	51.6	51.9	51.4
Trade/Trans./Public Utils.	118.7	116.4	114.8	115.4	117.5	119.6	119.9
Information	7.2	7.2	7.1	7.1	7.2	7.3	7.3
Financial Activities	33.0	33.1	32.9	33.0	33.3	33.6	33.6
Prof. & Business Services	69.4	67.3	65.1	65.4	67.4	69.1	69.2
Education & Health Services	129.3	129.3	128.4	128.7	130.2	131.7	131.6
Leisure & Hospitality Services	69.5	69.7	68.9	69.6	70.8	71.7	71.7
Other Services	22.4	22.5	22.1	22.2	22.5	22.9	22.9
Government	101.3	101.8	101.8	102.3	102.8	103.7	104.6
Maine Wage & Salary Employment* (Annual Change)	0.9%	-1.2%	-1.5%	0.4%	1.6%	1.5%	0.2%
Natural Resources	-1.5%	-1.8%	-2.2%	-0.2%	1.1%	1.0%	-0.6%
Construction	1.5%	-7.0%	-6.9%	-0.7%	4.7%	3.2%	0.5%
Manufacturing	2.3%	-2.2%	-2.3%	0.3%	0.8%	0.5%	-0.9%
Trade/Trans./Public Utils.	-0.4%	-0.6%	-1.4%	0.5%	1.9%	1.7%	0.3%
Information	-3.1%	-1.7%	-1.7%	0.4%	1.5%	1.4%	-0.1%
Financial Activities	2.7%	-1.6%	-0.6%	0.3%	0.9%	0.8%	0.1%
Prof. & Business Services	0.0%	-2.7%	-3.3%	0.6%	2.9%	2.5%	0.2%
Education & Health Services	1.8%	-1.7%	-0.7%	0.3%	1.1%	1.1%	0.0%
Leisure & Hospitality Services	0.7%	0.3%	-1.1%	0.9%	1.7%	1.3%	0.0%
Other Services	0.6%	0.7%	-1.7%	0.5%	1.6%	1.6%	0.1%
Government	1.0%	-0.5%	0.0%	0.5%	0.5%	0.9%	0.8%
	2019	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**
Personal Income* ($ million)	68,487	70,555	71,950	74,721	78,936	83,198	86,662
Wages & Salaries*	31,363	32,006	32,461	34,115	36,413	38,654	40,091
Supplements to Wages & Salaries*	7,984	8,206	8,346	8,724	9,232	9,730	10,092
Nonfarm Proprietors' Income*	5,140	5,293	5,395	5,560	5,750	5,905	6,046
Farm Proprietors' Income**	66	54	167	308	272	219	225
Dividends, Interest, & Rent*	12,866	13,232	12,731	12,811	13,469	14,255	14,943
Dividends	3,937	4,003	3,876	3,896	4,068	4,304	4,522
Interest	6,100	6,226	5,900	5,955	6,342	6,795	7,187
Rent	2,841	2,996	2,947	2,953	3,051	3,146	3,220
Personal Current Transfer Receipts*	15,281	18,406	19,666	20,448	21,517	22,624	23,854
Less: Contributions for Social Ins.**	5,304	5,718	5,759	6,066	6,492	6,923	7,243
Adjustment for Residence**	1,092	1,217	1,236	1,305	1,398	1,490	1,559
Personal Income* (Annual Change)	4.6%	2.7%	2.0%	3.9%	5.6%	5.4%	4.2%
Wages & Salaries*	4.6%	1.5%	1.4%	5.1%	6.7%	6.2%	3.7%
Supplements to Wages & Salaries*	4.4%	2.3%	1.7%	4.5%	5.8%	5.4%	3.7%
Nonfarm Proprietors' Income*	3.9%	2.5%	1.9%	3.1%	3.4%	2.7%	2.4%
Farm Proprietors' Income**	55.3%	-27.0%	207.8%	85.0%	-11.9%	-19.3%	2.8%
Dividends, Interest, & Rent*	2.4%	2.8%	-3.8%	0.6%	5.1%	5.8%	4.8%
Dividends	4.2%	2.2%	-3.2%	0.5%	4.4%	5.8%	5.1%
Interest	1.1%	2.0%	-5.2%	0.9%	6.5%	7.1%	5.8%
Rent	2.9%	5.4%	-1.6%	0.2%	3.3%	3.1%	2.3%
Personal Current Transfer Receipts*	7.1%	20.6%	6.8%	4.0%	5.2%	5.1%	5.4%
Less: Contributions for Social Ins.**	4.9%	7.4%	0.7%	5.3%	7.0%	6.6%	4.6%
Adjustment for Residence**	4.8%	13.1%	1.6%	5.6%	7.1%	6.6%	4.6%

Severe Recession Scenario

The severe recession scenario is the July 1, 2020, off-cycle CEFC forecast. Employment in Maine declines around 8.0 percent over the course of the recession. Wage and salary income in Maine declines around 5.0 percent and total personal income declines around 1.2 percent. Employment, wage and salary income, and total personal income all fail to regain pre-recession peaks within the span of the forecast period.

Maine Consensus Economic Forecasting Commission							
July 2020 Forecast - Severe Recession	Forecast - Calendar Years						
	2019	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**
CPI-U* (Annual Change)	1.8%	0.9%	1.5%	1.7%	2.0%	2.0%	2.0%
CPI for Energy Prices** (Annual Change)	-2.1%	-10.1%	8.8%	6.5%	1.3%	2.1%	2.9%
CPI for New Vehicles** (Annual Change)	0.4%	-1.3%	0.3%	0.1%	0.3%	0.2%	0.1%
New Vehicle Registrations** (Annual Change)	-3.8%	-27.9%	13.1%	3.5%	0.5%	-0.9%	0.7%
Personal Savings Rate**	7.9%	15.4%	8.7%	7.3%	7.1%	6.8%	6.5%
Maine Unemployment Rate**	3.0%	8.0%	5.7%	4.3%	3.7%	3.5%	3.4%
3-Month Treasury Bill Rate**	2.06%	0.37%	0.10%	0.09%	0.10%	0.11%	0.11%
10-Year Treasury Note Rate**	2.14%	0.98%	0.89%	1.03%	1.26%	1.49%	1.78%
Before-Tax Corporate Profits* (Annual Change)	0.2%	-30.0%	10.0%	3.7%	2.7%	2.7%	2.7%
Maine Wage & Salary Employment* (thousands)	636.0	585.1	608.6	620.8	620.7	620.7	620.7
Natural Resources	2.2	2.0	2.1	2.2	2.2	2.2	2.2
Construction	29.8	29.0	27.4	27.5	27.1	27.1	27.4
Manufacturing	53.3	49.9	48.8	50.2	50.3	50.4	50.5
Trade/Trans./Public Utils.	118.7	110.7	117.0	115.7	106.4	106.1	106.1
Information	7.2	6.4	6.5	6.8	6.8	6.8	6.7
Financial Activities	33.0	32.3	31.2	32.1	32.0	31.9	31.8
Prof. & Business Services	69.4	64.0	66.1	71.0	73.0	73.1	73.7
Education & Health Services	129.3	121.6	127.9	129.5	134.2	135.4	135.8
Leisure & Hospitality Services	69.5	50.1	63.1	64.9	67.9	67.2	66.2
Other Services	22.4	21.4	20.3	20.7	20.5	20.2	20.0
Government	101.3	97.8	98.2	100.2	100.4	100.3	100.3
Maine Wage & Salary Employment* (Annual Change)	0.9%	-8.0%	4.0%	2.0%	0.0%	0.0%	0.0%
Natural Resources	-1.5%	-9.4%	5.0%	5.5%	0.0%	-0.1%	-0.7%
Construction	1.5%	-2.8%	-5.3%	0.2%	-1.5%	0.2%	1.0%
Manufacturing	2.3%	-6.3%	-2.4%	3.0%	0.1%	0.2%	0.2%
Trade/Trans./Public Utils.	-0.4%	-6.7%	5.7%	-1.1%	-8.0%	-0.3%	0.0%
Information	-3.1%	-11.9%	3.0%	3.4%	-0.2%	0.3%	-0.8%
Financial Activities	2.7%	-2.0%	-3.5%	2.9%	-0.2%	-0.4%	-0.3%
Prof. & Business Services	0.0%	-7.9%	3.3%	7.4%	2.8%	0.2%	0.9%
Education & Health Services	1.8%	-5.9%	5.1%	1.3%	3.6%	0.9%	0.3%
Leisure & Hospitality Services	0.7%	-27.8%	25.9%	2.9%	4.6%	-1.0%	-1.6%
Other Services	0.6%	-4.4%	-5.0%	1.8%	-1.0%	-1.5%	-1.1%
Government	1.0%	-3.5%	0.5%	2.0%	0.2%	-0.1%	0.0%
	2019	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**
Personal Income* ($ million)	68,487	71,126	70,252	72,861	75,442	78,158	80,988
Wages & Salaries*	31,363	29,795	30,391	31,302	32,241	33,209	34,205
Supplements to Wages & Salaries*	7,984	7,864	8,147	8,424	8,710	9,007	9,313
Nonfarm Proprietors' Income*	5,140	4,986	5,145	5,315	5,448	5,584	5,724
Farm Proprietors' Income**	66	26	57	88	73	58	57
Dividends, Interest, & Rent*	12,866	12,879	12,750	13,043	13,330	13,624	13,923
Dividends	3,937	4,070	4,029	4,009	4,060	4,114	4,313
Interest	6,100	5,860	5,598	5,667	5,665	5,701	5,653
Rent	2,841	2,957	3,124	3,369	3,599	3,801	3,946
Personal Current Transfer Receipts*	15,281	19,866	18,277	19,282	20,342	21,481	22,706
Less: Contributions for Social Ins.**	5,304	5,291	5,597	5,746	5,901	6,047	6,231
Adjustment for Residence**	1,092	1,002	1,083	1,152	1,198	1,243	1,291
Personal Income* (Annual Change)	4.6%	3.9%	-1.2%	3.7%	3.5%	3.6%	3.6%
Wages & Salaries*	4.6%	-5.0%	2.0%	3.0%	3.0%	3.0%	3.0%
Supplements to Wages & Salaries*	4.4%	-1.5%	3.6%	3.4%	3.4%	3.4%	3.4%
Nonfarm Proprietors' Income*	3.9%	-3.0%	3.2%	3.3%	2.5%	2.5%	2.5%
Farm Proprietors' Income**	55.3%	-60.2%	116.1%	55.0%	-17.5%	-20.1%	-1.8%
Dividends, Interest, & Rent*	2.4%	0.1%	-1.0%	2.3%	2.2%	2.2%	2.2%
Dividends	4.2%	3.4%	-1.0%	-0.5%	1.3%	1.3%	4.8%
Interest	1.1%	-3.9%	-4.5%	1.2%	0.0%	0.6%	-0.8%
Rent	2.9%	4.1%	5.6%	7.8%	6.8%	5.6%	3.8%
Personal Current Transfer Receipts*	7.1%	30.0%	-8.0%	5.5%	5.5%	5.6%	5.7%
Less: Contributions for Social Ins.**	4.9%	-0.2%	5.8%	2.7%	2.7%	2.5%	3.0%
Adjustment for Residence**	4.8%	-8.2%	8.1%	6.4%	4.0%	3.8%	3.9%

*CEFC Forecast

**From IHS Markit and Moody's Analytics baselines (Jun. 2020)

Remaining lines derived from CEFC forecast by CEFC staff and reviewed by CEFC