



The Economic Outlook and Revenue Forecast through Fiscal Year 2024

Prepared by the Virginia Department of Taxation
for Review by the
Governor's Advisory Council on Revenue Estimates

November 23, 2020

Ralph S. Northam
Governor

Aubrey L. Layne, Jr., MBA, CPA
Secretary of Finance

Craig M. Burns
Tax Commissioner

GOVERNOR'S CONFIDENTIAL WORKING PAPERS

Table of Contents

Introduction:		ii
Section 1:	The U.S. Economy	1-1
Section 2:	The Virginia Economy	2-1
Section 3:	General Fund Revenues	3-1
Section 4:	Non-General Fund Revenues	4-1
Appendix A:	Economic Data	A-1
Appendix B:	General Fund Data	B-1
Appendix C:	Models and Methodologies	C-1

Introduction

The Joint Advisory Board of Economists (JABE) met on November 4, 2020 as part of the regular fall forecasting process to consider three economic forecasts: the IHS Markit October standard forecast, the IHS Markit October alternative pessimistic forecast, and Moody's Analytics October standard forecast. Eight members of the Board agreed that the IHS Markit October standard forecast was a reasonable outlook for Virginia. Two members thought a pessimistic plus forecast would be more prudent and two member opted for the pessimistic forecast.

The purpose of this meeting is to review the most current economic forecasts to determine the most likely path for the Virginia economy over the next biennium, and which of the resulting revenue forecasts seems appropriate. This forecast will serve as the basis for the budget to be released by the Governor in December.

Section 1 of this book contains a review of the national economic performance during fiscal year 2020. Summaries of IHS Markit October standard and alternative pessimistic national outlooks are presented.

Section 2 contains a review of Virginia's economic performance during fiscal year 2020. This is followed by a summary of the IHS Markit October standard and alternative pessimistic economic scenarios for Virginia developed by the Department of Taxation.

Section 3 contains a review of Virginia's general fund revenue collections during fiscal year 2019. This is followed by a summary of the October standard and alternative pessimistic forecasts.

Section 4 discusses nongeneral fund revenue and forecasts.

Historical and forecast economic data are contained in Appendix A. Appendix B is a history of general fund revenue collections. Appendix C contains detailed econometric output for major sources.

SECTION 1
THE U.S. ECONOMY

Section 1 The U.S. Economy

Introduction

This section examines the outlook for the national economy for fiscal years 2021 through 2024. Tables 1.1 and 2.2 compare the IHS Markit June 2020 standard forecast, on which Virginia's current interim economic and revenue forecasts are based, with three forecasts for your consideration: the IHS Markit October 2020 standard and alternative pessimistic forecasts and the Moody's Analytics October standard forecast.

At the time the interim forecast was developed, real GDP had contracted 5.0 percent in the first quarter, and IHS Markit predicted that GDP would contract 41.9 percent in the second quarter, with the trough of this recession occurring in April. IHS noted, however, that states were re-opening their economies earlier than anticipated at the time of this estimate. Although this was expected to slow curtailment of the pandemic, and thus recovery, they expected GDP to regain its previous peak in mid-2022, and they projected growth of 11.7 percent in second-half GDP.

IHS Markit considered the unanticipated 2.5 million job gain in May as encouraging, but noted some of the strength was likely due to using funds provided under the Payroll Protection program, and did not expect the economy to regain full employment until late 2023.

The IHS Markit U.S. Standard Forecast

As IHS Markit prepared the October forecast, real GDP had fallen at an annualized rate of 31.4 percent in the second quarter of 2020. The standard forecast expects the COVID-19 infection rate will likely increase this fall, causing consumers and businesses to remain cautious. It is expected that the second round of stimulus checks and emergency unemployment benefits will be disbursed in the fourth quarter. In the October standard forecast, IHS expects real GDP to decline by 1.1 percent in fiscal year 2020, compared with a 2.1 percent decline in the interim forecast. IHS assigns a probability of 50 percent to the standard scenario.

On a fiscal year basis, the October standard forecast predicts real GDP will grow 0.8 percent in fiscal year 2021, then 2.9 percent in fiscal year 2022. Following a 1.9 percent decline in employment in fiscal year 2020, payroll employment is expected to fall by 1.8 percent in fiscal year 2021, then increase 3.3 percent in fiscal year 2022. The October standard forecast expects the unemployment rate to rise to 7.3 percent in fiscal year 2021, then fall to 5.7 percent in fiscal year 2022.

Total personal income is expected to rise by 2.8 percent in fiscal year 2021, faster than the interim forecast of 0.3 percent. Income growth then slows to 0.6 percent in fiscal year 2022, well below the interim forecast of 3.8 percent. The October forecast for the largest component of personal income, wages and salaries, is also higher than the interim estimate in fiscal year 2021. IHS Markit expects wages and salaries to rise 3.0 percent in fiscal year 2021 and 5.8 percent in fiscal year 2022.

Expectations for consumer spending in the October standard forecast are more optimistic than the interim forecast for fiscal year 2021. Real consumer spending is expected to rise 0.8 percent in fiscal year 2021, compared with a 3.7 percent decline in the interim forecast. Spending is then expected to grow 3.1 percent in fiscal year 2022.

At its September meeting, the Federal Reserve left the federal funds target rate unchanged at 0.0 to 0.25 percent and signaled it will keep rates low through 2023. In the October standard forecast, IHS assumes the Fed will keep the federal funds rate at this range through late 2026.

Alternative U.S. Forecasts

IHS Markit Pessimistic Alternative Scenario

The pessimistic scenario anticipates a weaker recovery in consumer spending and a slower recovery than the standard forecast. This scenario is based on two underlying assumptions. First, the pace of opening up is slower than assumed in the standard forecast. Second, that this development results in some retrenchment in consumer spending late in the year, providing little fuel to the economic recovery. In addition, the recovery is assumed to be hampered by the failure to maintain a steady decline in new cases and deaths from COVID-19. The recovery takes significantly longer than in the baseline. The previous peak in GDP is not passed until mid-2022, almost one year later than in the baseline forecast. IHS Markit assigns a 30 percent probability to the pessimistic scenario.

In this forecast, real GDP declines by 1.5 percent in fiscal year 2021, then increases 3.0 percent in fiscal year 2022. Total personal income increases by 1.3 percent in fiscal year 2021 before declining 0.5 percent in fiscal year 2022. In fiscal year 2023, growth is expected to pick up to 3.7 percent.

This forecast expects employment to decline by 3.4 percent in fiscal year 2021, then increase 2.8 percent in 2022. Unemployment increases to 8.3 percent in fiscal year 2021, then falls to 7.2 percent in fiscal year 2022.

Wages and salaries remain below the standard forecast, growing 1.0 percent in fiscal year 2021, and 3.8 percent in fiscal year 2022.

Moody's Analytics Standard Forecast

In its October standard forecast, Moody's Analytics assumes the worst of the pandemic is over, admitting it is a tenuous assumption. In addition, it assumes that the 1.5 trillion stimulus package will not be passed until February. Real GDP and job growth come almost to a standstill in the fourth quarter but the economy avoids a double-dip recession as the fiscal support provided early next year revives it. The forecast also projects that the Federal Reserve will maintain a near-zero policy rate until mid-2023 and begin a schedule of rate hikes thereafter.

In the Moody's Analytics standard forecast, real GDP is expected to remain flat in fiscal year 2021, before growing 4.2 percent in fiscal year 2022 compared with IHS Markit's 2.9 percent estimate.

Moody's Analytics expects total personal income growth of 0.8 percent in fiscal year 2021, followed by a decline of 0.3 percent in 2022. For wages and salaries, Moody's Analytics estimates a decline of 0.4 percent in fiscal year 2021 and growth of 3.8 percent in 2022.

The Moody's Analytics forecast for employment is substantially lower than HIS Markit for the next two fiscal years with a higher unemployment rate. Moody's Analytics expects employment to fall 3.5 percent in fiscal year 2021, then increase 2.1 percent in fiscal year 2022. The unemployment rises to 8.3 in fiscal year 2021 and falls to 7.2 percent in 2022.

Table 1.1 - Fiscal Years 2019-2024 Interim, October IHS Forecasts, and October Moody's Forecast
 U.S. Economic Forecasts - Income and Other Indicators (% Change)

		<u>FY19</u>	<u>FY20</u>	<u>FY21</u>	<u>FY22</u>	<u>FY23</u>	<u>FY24</u>
<u>Output, Income, and Spending (% of Total)</u>							
Real GDP	Interim (Jun '20)	2.6	(2.1)	(4.0)	6.7	4.1	2.7
	Oct Standard	2.5	(1.1)	0.8	2.9	3.1	2.7
	Oct Pessimistic			(1.5)	3.0	3.6	3.3
	Oct Moody's			0.0	4.2	4.3	2.9
Total Personal Income	Interim (Jun '20)	5.0	3.9	0.3	3.8	4.4	3.5
	Oct Standard	4.8	5.1	2.8	0.6	4.6	4.4
	Oct Pessimistic			1.3	(0.5)	3.7	3.9
	Oct Moody's			0.8	(0.3)	5.4	5.3
Wages and Salaries (50%)	Interim (Jun '20)	4.8	0.9	0.5	7.9	4.9	3.7
	Oct Standard	4.9	1.7	3.0	5.8	5.3	4.6
	Oct Pessimistic			1.0	3.8	4.5	4.7
	Oct Moody's			(0.4)	3.8	5.2	5.6
Average Wage	Interim (Jun '20)	3.2	3.1	3.5	2.5	2.5	2.5
	Oct Standard	3.4	3.8	4.7	2.5	2.9	3.1
	Oct Pessimistic			4.4	1.0	1.0	1.2
	Oct Moody's			3.0	1.7	2.4	3.6
Real Consumer Spending	Interim (Jun '20)	2.8	(2.5)	(3.7)	5.5	3.8	3.1
	Oct Standard	2.5	(1.3)	0.8	3.1	2.8	2.6
	Oct Pessimistic			(1.5)	3.3	3.6	3.0
	Oct Moody's			1.3	3.7	4.1	3.2
<u>Interest Rates (%)</u>							
3-Month Treasury Bills	Interim (Jun '20)	2.3	1.2	0.1	0.1	0.1	0.1
	Oct Standard	2.3	1.2	0.1	0.1	0.1	0.1
	Oct Pessimistic			0.1	0.1	0.1	0.1
	Oct Moody's			0.1	0.2	0.3	0.7
30-Year Treasury Bonds	Interim (Jun '20)	3.0	2.0	1.8	1.9	2.1	2.3
	Oct Standard	3.0	1.9	1.5	1.9	2.2	2.4
	Oct Pessimistic			1.4	1.7	1.8	1.9
	Oct Moody's			1.7	2.7	3.5	4.1
<u>Prices (% of Total)</u>							
CPI	Interim (Jun '20)	2.1	1.6	0.8	2.3	1.9	1.8
	Oct Standard	2.1	1.6	1.9	2.7	2.0	1.8
	Oct Pessimistic			1.5	1.6	1.1	1.1
	Oct Moody's			1.5	2.3	2.8	2.6
GDP Deflator	Interim (Jun '20)	2.1	1.5	0.7	1.1	1.5	1.8
	Oct Standard	2.2	1.4	1.4	1.5	1.7	1.9
	Oct Pessimistic			1.2	0.5	0.7	1.1
	Oct Moody's			1.2	2.0	2.3	2.4

The Interim forecast is IHS Markit's June 2020 U.S. standard scenario.

The Oct Standard forecast is IHS Markit's Oct 2020 U.S. standard forecast.

The Oct Pessimistic forecast is IHS Markit's Oct 2020 U.S. pessimistic alternative scenario.

The Oct Moody's forecast is Moody's Analytics' October 2020 standard forecast.

Table 1. 2 - Fiscal Years 2019-2024 Interim, October IHS Forecasts, and October Moody's Forecast
 U.S. Economic Forecasts - Employment and Labor Markets (% Change)

		<u>FY19</u>	<u>FY20</u>	<u>FY21</u>	<u>FY22</u>	<u>FY23</u>	<u>FY24</u>
<u>Employment and Labor Markets (% of Total)</u>							
Total Nonagricultural Employment	Interim (Jun '20)	1.5	(2.0)	(3.0)	5.3	2.4	1.2
	Oct Standard	1.5	(1.9)	(1.8)	3.3	2.3	1.5
	Oct Pessimistic			(3.4)	2.8	3.5	3.4
	Oct Moody's			(3.5)	2.1	2.8	2.0
Construction (5%)	Interim (Jun '20)	4.1	(0.3)	(12.1)	4.7	4.6	2.6
	Oct Standard	4.1	(0.2)	(2.9)	(0.5)	1.9	1.8
	Oct Pessimistic			(3.7)	(2.8)	1.0	1.7
	Oct Moody's			(2.3)	5.1	4.9	3.0
Manufacturing (9%)	Interim (Jun '20)	1.9	(1.9)	(8.6)	2.9	2.4	1.9
	Oct Standard	1.9	(1.7)	(3.3)	1.0	1.2	0.6
	Oct Pessimistic			(2.4)	(0.6)	1.0	1.5
	Oct Moody's			(4.0)	0.0	1.2	0.1
Trade, Transportation, and Utilities (19%)	Interim (Jun '20)	0.6	(2.4)	(1.5)	6.5	(4.9)	(3.0)
	Oct Standard	0.6	(2.1)	0.3	2.1	(2.0)	(1.8)
	Oct Pessimistic			(2.0)	1.4	(0.8)	0.0
	Oct Moody's			(2.7)	1.4	2.9	2.0
Financial Activities (6%)	Interim (Jun '20)	1.9	0.8	(4.7)	2.9	4.8	(0.3)
	Oct Standard	1.9	0.9	0.7	2.3	4.4	1.2
	Oct Pessimistic			(1.3)	2.3	7.3	2.2
	Oct Moody's			(0.6)	1.9	3.2	2.3
Professional and Business Services (14%)	Interim (Jun '20)	2.0	(1.0)	(5.6)	10.7	8.9	2.3
	Oct Standard	2.0	(0.8)	(0.9)	5.2	6.7	5.0
	Oct Pessimistic			(5.9)	3.0	8.4	10.7
	Oct Moody's			(2.1)	3.2	3.3	2.4
Education and Health Services (16%)	Interim (Jun '20)	1.9	(0.2)	1.1	2.8	4.0	3.2
	Oct Standard	1.9	(0.1)	(1.2)	3.5	1.0	0.8
	Oct Pessimistic			(2.7)	3.6	3.1	2.7
	Oct Moody's			(3.3)	1.6	2.9	2.2
Leisure and Hospitality (11%)	Interim (Jun '20)	1.5	(8.8)	2.2	10.4	1.8	3.7
	Oct Standard	1.5	(8.6)	(6.4)	8.2	5.2	3.7
	Oct Pessimistic			(7.7)	9.1	5.3	4.7
	Oct Moody's			(10.3)	4.9	3.0	2.8
Government (15%)	Interim (Jun '20)	0.5	(0.6)	(1.3)	3.0	1.6	1.0
	Oct Standard	0.5	(0.6)	(1.9)	1.6	2.1	2.1
	Oct Pessimistic			(1.9)	1.6	2.1	2.1
	Oct Moody's			(3.4)	0.5	1.6	1.7
Unemployment Rate (%)	Interim (Jun '20)	3.8	6.1	9.0	5.9	4.7	4.3
	Oct Standard	3.8	6.0	7.3	5.7	4.5	4.0
	Oct Pessimistic			8.3	7.2	5.9	4.9
	Oct Moody's			8.3	7.2	5.4	4.5

The Interim forecast is IHS Markit's June 2020 U.S. standard scenario.

The Oct Standard forecast is IHS Markit's Oct 2020 U.S. standard forecast.

The Oct Pessimistic forecast is IHS Markit's Oct 2020 U.S. pessimistic alternative scenario.

The Oct Moody's forecast is Moody's Analytics' October 2020 standard forecast.

SECTION 2
THE VIRGINIA ECONOMY

Section 2 The Virginia Economy

Introduction

This section examines the outlook for the Virginia economy for fiscal years 2021 through 2024. Tables 2.1 and 2.2 compare the IHS Markit's June 2020 interim forecast, which was based on IHS Markit's June 2020 U.S. standard forecast with modifications from both the JABE and the GACRE members, with three additional forecasts: IHS Markit's October 2020 standard and alternative pessimistic forecasts and the Moody's Analytics October standard forecast. Tables 2.4 and 2.5 provide an overview of regional employment in Virginia.

At the time the interim forecast was developed, Virginia seasonally adjusted total nonfarm employment reached a trough in April 2020 – falling by 458.1 thousand or 10.7 percent from the previous peak level of 4,099.9 thousand in February 2020. As of September 2020 when some COVID-19 restrictions were eased, Virginia recovered 195,300 jobs, but still remains 5.9 percent below the peak. The sectors that experienced the most significant declines were trade, transportation, and utilities; education and health services; leisure and hospitality; other business services; and state and local government.

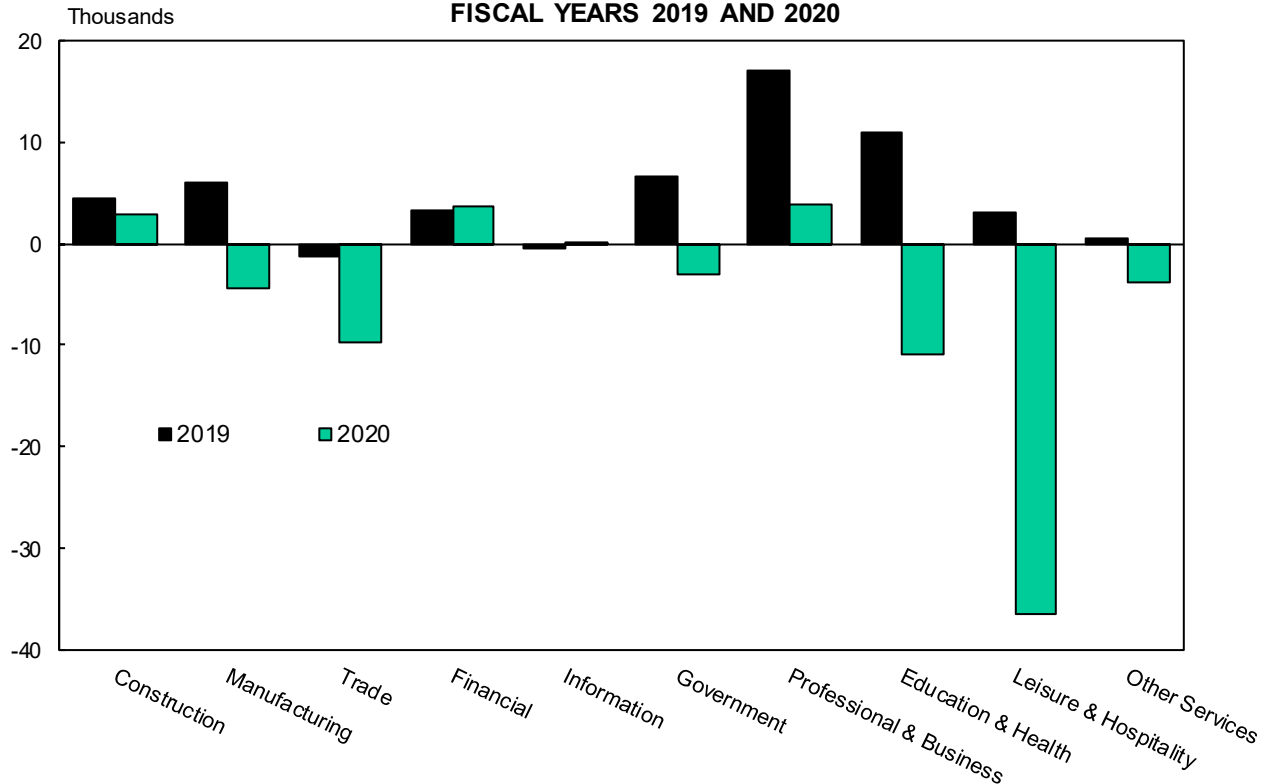
Tabular data are presented throughout this section. More detailed tabular data are presented in Appendix A. Table A.1 shows quarterly national and Virginia historical data for major forecast variables from fiscal year 2018 through fiscal year 2020. Table A.2 shows quarterly national and Virginia data for the three forecasts through fiscal year 2022. Table A.3 displays national and Virginia annual historical and forecast data from fiscal year 2002 through fiscal year 2024. Table A.4 displays annual regional historical and forecast employment data from fiscal year 2002 through fiscal year 2024.

<u>FY20</u>	<u>CES</u>	<u>ES202</u>
Q1	1.2	1.1
Q2	1.2	1.1
Q3	1.1	0.9
Q4	-8.5	-8.7
Annual	-1.2	-1.4

The state and regional employment data used in the forecast are the result of a methodology that uses unemployment insurance tax records (ES-202) data to fine tune the current employment statistics (CES) survey data. To ensure that the most current Virginia employment data are used in the forecast, ES-202 data through the fourth quarter

of calendar year 2019 have been incorporated into the CES employment data series. The revised employment series is then seasonally adjusted. This process yields a projection of the annual benchmark revisions that the Virginia Employment Commission will release early next calendar year. The table on the previous page compares the base CES employment data series with the series incorporating ES-202 data.

Figure 2.1
VIRGINIA JOB GAINS/LOSSES BY SECTOR
FISCAL YEARS 2019 AND 2020



IHS Markit Virginia Standard Forecast

This section compares IHS Markit's October 2020 forecast with the interim forecast. In the interim forecast, employment in the Commonwealth was projected to fall 2.0 percent in fiscal year 2021, then rebound at a 1.2 percent rate in fiscal year 2022. Figure 2.2 compares employment growth in Virginia with that of the nation. Under the standard forecast, employment is expected to fall 0.3 percent in fiscal year 2021, then expand 1.0 percent in fiscal year 2022.

As shown in Figure 2.4, according to the October standard forecast, total nonagricultural employment is expected to increase 1.0 percent (38,500 jobs) in fiscal year 2022, below the interim forecast of 1.2 percent growth. The professional and business services sector and the education and health services sector are expected to be the main drivers over the forecast horizon. Overall, employment is expected to increase 1.4 percent in

fiscal year 2023 and 0.9 percent in fiscal year 2024 as the national economy continues to grow.

The October standard forecast has personal income and wage and salary income growing at about a 3.3 to 3.9 percent pace over the fiscal year 2021-22 period. Figure 2.3 compares national and state personal income.

In the October standard forecast, total personal income is expected to grow close to a percentage point below the interim forecast over the forecast horizon. Growth of 3.7 percent is expected in fiscal year 2021, then growth of 3.4 in fiscal year 2022. Income from wages and salaries is expected to grow 3.3 percent in fiscal year 2021 and 3.9 percent in fiscal year 2022. Growth of dividends, interest, and rental income is expected to increase 3.1 percent in both fiscal year 2021 and fiscal year 2022.

Alternative Virginia Forecasts

IHS Markit's Pessimistic Alternative Scenario

In the Virginia pessimistic alternative forecast, economic growth significantly slows, as a broad loss in confidence and growing aversion to risk leads to a drop in a wide range of investment and consumer spending categories. Employment falls 1.8 percent in fiscal year 2021, then grows 0.4 percent in fiscal year 2022. Total personal income grows 2.1 percent in fiscal year 2021 and 2.2 percent in fiscal year 2022, compared with 2.8 percent and 2.5 percent in the October standard forecast. Wages and salaries grow 1.5 percent and 2.7 percent in fiscal years 2021-22. These growth rates are below the rates in the October standard forecast.

Moody's Analytics Standard Forecast

In the Moody's Analytics forecast, employment falls 3.5 percent in fiscal year 2021, then grows 2.0 percent in fiscal year 2022. Personal income falls 1.5 percent in fiscal year 2021, then grows 0.4 percent in fiscal year 2022. Wages and salaries fall 1.3 percent in fiscal year 2021, then grow 3.7 percent in fiscal year 2022.

Note that the Moody's state model is driven off of national expectations as compared to the Department of Taxation's regional model that forecasts the 3 largest MSA's and the balance of the state to forecast a statewide total. The differences in modeling approaches is particularly clear when analyzing the employment projections for professional and business services. In the regional model, employment in this sector in the Northern Virginia region has held up quite well due to continued employment in federal government contractors which helps to buoy statewide employment in professional and business services. As a result, Moody's forecast for wages and salaries is also significantly lower given that their estimate does not include as many workers in the higher salaried professional and business services sector.

Figure 2.2
U.S. AND VIRGINIA EMPLOYMENT GROWTH
HISTORY AND FORECAST - FISCAL YEARS 1998-2024

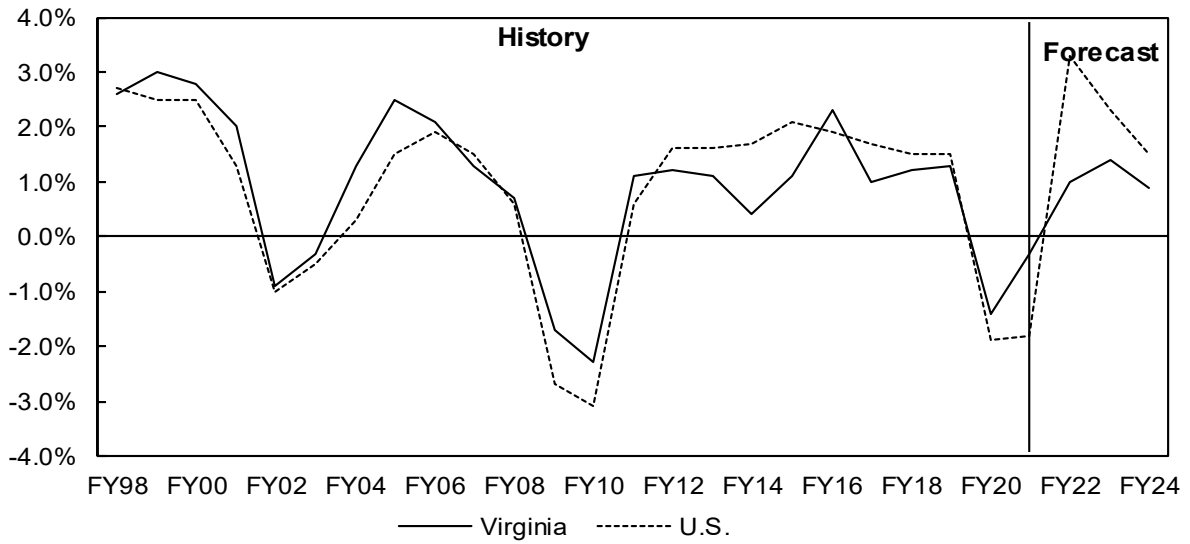


Figure 2.3
U.S. AND VIRGINIA PERSONAL INCOME GROWTH
HISTORY AND FORECAST - FISCAL YEARS 1998-2024

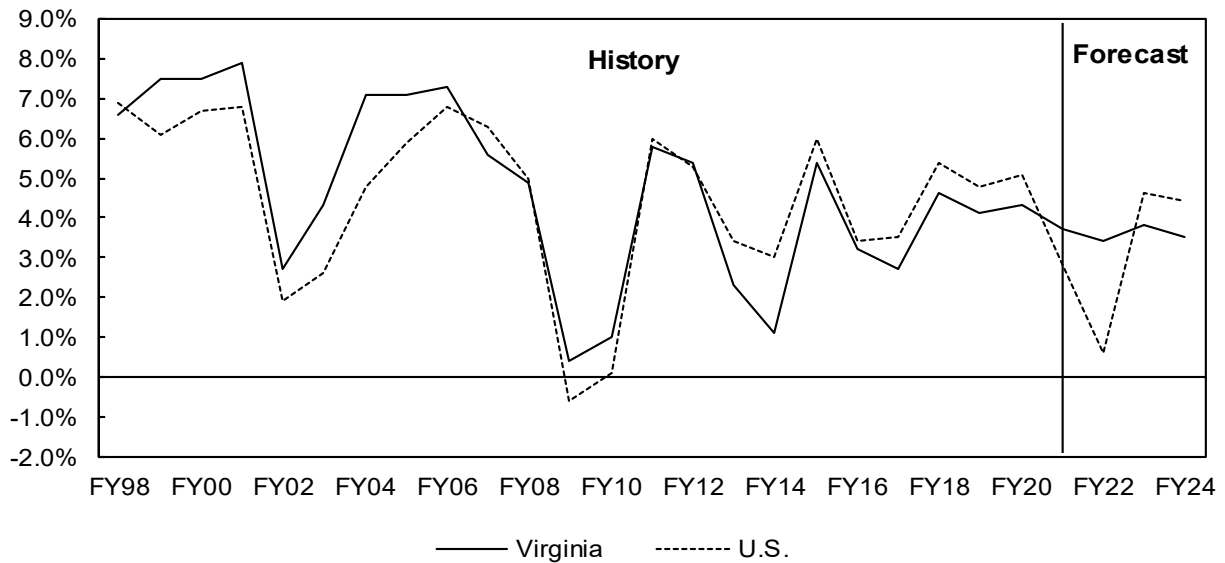


Figure 2.4
VIRGINIA EMPLOYMENT GROWTH
FY 2000-20 ACTUAL AND FY 2021-24 FORECAST

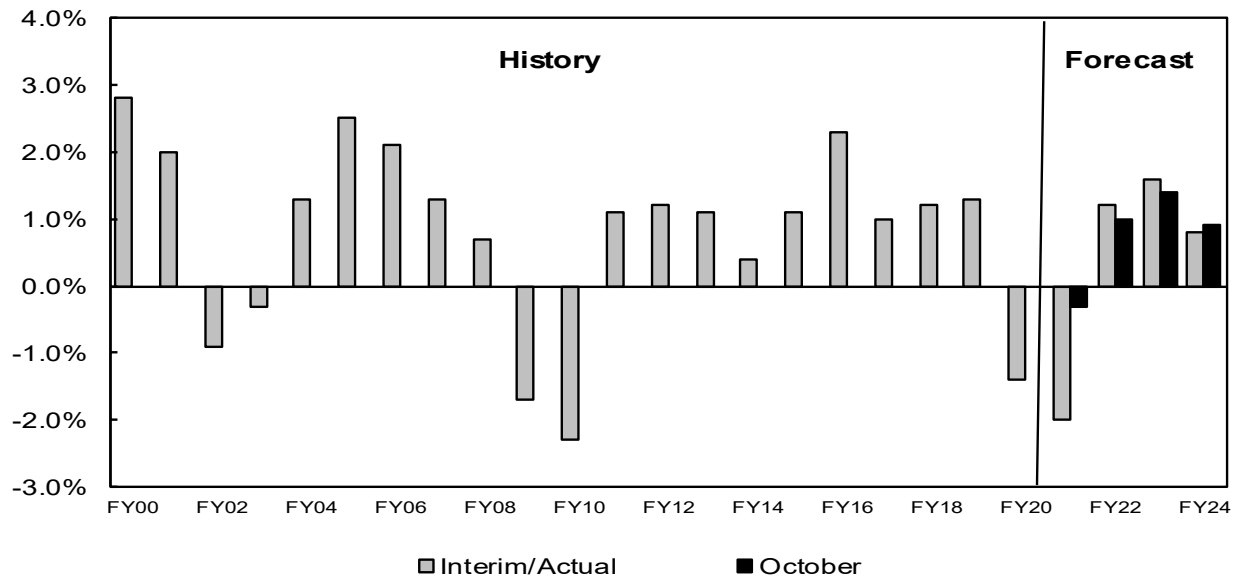
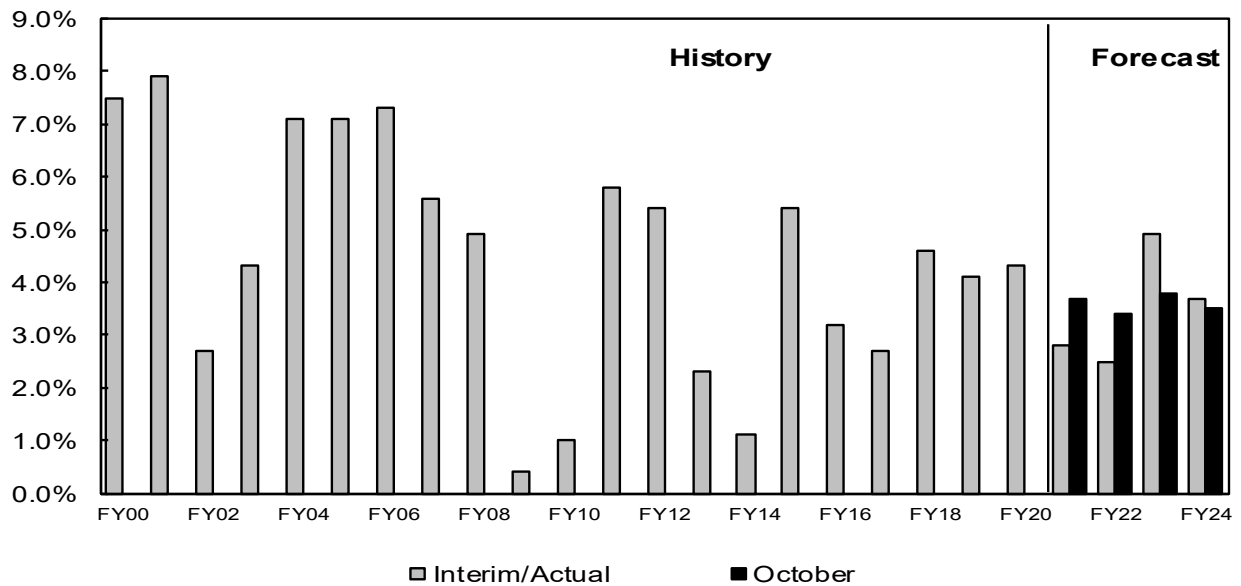


Figure 2.5
VIRGINIA PERSONAL INCOME GROWTH
FY 2000-20 ACTUAL AND FY 2021-24 FORECAST



Virginia Economy

Table 2.1 - Fiscal Years 2019-2024 Interim, October IHS Forecasts, and October Moody's
Virginia Economic Forecasts - Employment and Labor Markets (% Change)

		<u>FY19</u>	<u>FY20</u>	<u>FY21</u>	<u>FY22</u>	<u>FY23</u>	<u>FY24</u>
<u>Employment and Labor Markets (% of Total)</u>							
Total Nonagricultural Employment	Interim (Jun '20)	1.2	(1.7)	(2.0)	1.2	1.6	0.8
	Oct Standard	1.3	(1.4)	(0.3)	1.0	1.4	0.9
	Oct Pessimistic			(1.8)	0.4	2.4	2.5
	Oct Moody's			(3.5)	2.0	2.6	1.9
Construction and Mining (5%)	Interim (Jun '20)	1.9	(1.7)	(13.2)	2.8	5.0	2.7
	Oct Standard	2.2	1.4	1.9	(0.4)	1.4	1.4
	Oct Pessimistic			1.3	(2.1)	0.8	1.3
	Oct Moody's			(0.2)	4.4	4.1	2.2
Manufacturing (6%)	Interim (Jun '20)	3.1	(1.6)	(10.2)	2.8	2.9	2.3
	Oct Standard	2.6	(1.9)	(3.8)	1.1	1.4	0.6
	Oct Pessimistic			(2.8)	(0.7)	1.1	1.7
	Oct Moody's			(6.8)	(0.5)	1.0	0.1
Trade, Transportation, and Utilities (17%)	Interim (Jun '20)	(0.6)	(0.5)	(0.1)	3.8	(9.8)	(4.9)
	Oct Standard	(0.2)	(1.5)	(1.7)	1.5	(4.7)	(3.1)
	Oct Pessimistic			(4.3)	0.3	(4.0)	(1.6)
	Oct Moody's			(2.1)	1.1	2.4	1.7
Financial Activities (5%)	Interim (Jun '20)	0.1	(0.6)	(3.8)	0.8	6.5	(0.1)
	Oct Standard	1.5	1.7	1.8	2.8	5.5	1.4
	Oct Pessimistic			(0.6)	2.8	9.1	2.7
	Oct Moody's			(3.0)	1.8	3.0	2.2
Professional and Business Services (18%)	Interim (Jun '20)	1.7	(0.5)	(2.8)	3.7	7.4	1.9
	Oct Standard	2.3	0.5	2.2	3.1	4.4	3.2
	Oct Pessimistic			(0.9)	1.6	5.5	6.6
	Oct Moody's			(2.0)	2.8	3.2	2.4
Education and Health Services (13%)	Interim (Jun '20)	3.0	1.0	2.7	1.6	4.7	3.8
	Oct Standard	2.0	(2.0)	(1.8)	3.6	1.1	0.8
	Oct Pessimistic			(3.4)	3.8	3.3	2.9
	Oct Moody's			(5.0)	1.9	2.9	2.2
Leisure and Hospitality (10%)	Interim (Jun '20)	1.4	(8.5)	(6.1)	7.9	1.8	3.7
	Oct Standard	0.8	(8.9)	(12.3)	6.9	4.7	3.1
	Oct Pessimistic			(13.5)	7.7	4.8	4.1
	Oct Moody's			(9.1)	4.0	3.3	3.0
Government (19%)	Interim (Jun '20)	0.7	(0.8)	4.0	(6.0)	(0.7)	0.3
	Oct Standard	0.9	(0.3)	5.0	(8.2)	(0.6)	0.5
	Oct Pessimistic			4.9	(8.5)	(1.0)	0.2
	Oct Moody's			(4.3)	0.6	1.4	1.4
Unemployment Rate (%)	Interim (Jun '20)	2.9	6.4	6.1	4.8	4.3	4.0
	Oct Standard	2.9	4.4	6.9	5.4	4.3	3.8
	Oct Pessimistic			7.8	6.8	5.6	4.6
	Oct Moody's			6.5	5.8	4.5	3.8

The Interim forecast is based on IHS Markit's June 2020 U.S. standard forecast with recommendations by JABE and GACRE.

The Oct Standard forecast is based on IHS Markit's October 2020 U.S. standard forecast.

The Oct Pessimistic forecast is based on IHS Markit's October 2020 U.S. pessimistic alternative scenario.

The Oct Moody's forecast is based on Moody's Analytics' October 2020 U.S. standard forecast.

Table 2.2 - Fiscal Years 2019-2024 Interim, October IHS Forecasts, and October Moody's
Virginia Economic Forecasts - Income (% Change)

		<u>FY19</u>	<u>FY20</u>	<u>FY21</u>	<u>FY22</u>	<u>FY23</u>	<u>FY24</u>
<u>Income (% of Total)</u>							
Total Personal Income	Interim (Jun '20)	4.8	3.7	2.8	2.5	4.9	3.7
	Oct Standard	4.1	4.3	3.7	3.4	3.8	3.5
	Oct Pessimistic			2.1	2.2	3.9	3.6
	Oct Moody's			(1.5)	0.4	5.3	5.3
Wages and Salaries (53%)	Interim (Jun '20)	4.3	0.9	1.9	4.5	6.1	4.4
	Oct Standard	4.6	2.5	3.3	3.9	4.8	3.9
	Oct Pessimistic			1.5	2.7	4.9	4.4
	Oct Moody's			(1.3)	3.7	5.1	5.6
Average Wage	Interim (Jun '20)	3.1	2.7	3.9	3.2	4.5	3.5
	Oct Standard	3.3	4.0	3.5	2.9	3.4	3.0
	Oct Pessimistic			3.2	2.3	2.4	1.9
	Oct Moody's			2.1	1.7	2.5	3.6
Dividends, Interest, and Rent (20%)	Interim (Jun '20)	5.4	5.0	3.5	(2.4)	1.9	1.6
	Oct Standard	3.7	(0.4)	3.1	3.1	1.9	3.1
	Oct Pessimistic			1.3	2.9	2.0	2.5
	Oct Moody's			(4.8)	4.3	7.1	5.6
Supplements to Wages and Salaries (12%)	Interim (Jun '20)	4.2	2.3	(0.6)	5.3	5.1	3.7
	Oct Standard	3.5	1.4	2.6	5.8	5.5	4.7
	Oct Pessimistic			0.5	3.7	4.7	4.8
	Oct Moody's			(0.5)	3.2	4.0	4.5
Proprietor's Income (7%)	Interim (Jun '20)	4.6	0.7	(20.2)	10.2	13.8	10.8
	Oct Standard	3.6	3.4	(4.6)	(0.9)	(1.3)	1.9
	Oct Pessimistic			(4.5)	(0.7)	(1.5)	1.7
	Oct Moody's			1.5	11.0	9.2	7.1
Net Transfer Payments (6%)	Interim (Jun '20)	9.8	28.4	26.9	(4.6)	(1.1)	(0.9)
	Oct Standard	6.7	46.4	8.7	(0.3)	3.1	0.8
	Oct Pessimistic			8.8	(2.6)	3.8	1.0
	Oct Moody's			2.1	(39.0)	(1.0)	(0.1)

The Interim forecast is based on IHS Markit's June 2020 U.S. standard forecast with recommendations by JABE and GACRE.

The Oct Standard forecast is based on IHS Markit's October 2020 U.S. standard forecast.

The Oct Pessimistic forecast is based on IHS Markit's October 2020 U.S. pessimistic alternative scenario.

The Oct Moody's forecast is based on Moody's Analytics' October 2020 U.S. standard forecast.

Virginia Economy

Table 2.3 - Fiscal Years 2019-2024 October Standard Forecast
Virginia Economic Forecast - Regional Employment (% Change)

		<u>FY19</u>	<u>FY20</u>	<u>FY21</u>	<u>FY22</u>	<u>FY23</u>	<u>FY24</u>
<u>Region by Sector (% of Total)</u>							
Northern Virginia (37%) *	Total Nonagricultural Employment	1.9	(0.7)	1.2	0.2	0.9	0.8
	Construction and Mining (5%) **	4.3	1.4	(1.8)	(0.5)	1.8	1.8
	Trade, Transportation, and Utilities (14%)	0.5	(1.2)	(5.5)	1.5	(7.3)	(4.6)
	Financial Activities (5%)	1.4	1.1	1.6	2.5	4.9	1.3
	Professional and Business Services (28%)	2.9	1.7	5.0	2.4	3.5	2.4
	Education and Health Services (12%)	3.0	(2.0)	(4.2)	4.9	1.4	1.1
	Leisure and Hospitality (10%)	0.7	(10.5)	(14.9)	7.9	5.4	3.6
	Government (16%)	1.5	0.9	11.4	(12.8)	(1.8)	0.1
Hampton Roads (20%)	Total Nonagricultural Employment	0.7	(1.8)	(0.6)	1.2	1.3	0.7
	Construction and Mining (5%)	2.2	(1.3)	(4.3)	(0.4)	1.4	1.4
	Trade, Transportation, and Utilities (16%)	(1.7)	(2.5)	0.8	1.3	(5.1)	(3.3)
	Financial Activities (5%)	1.0	0.6	2.8	2.5	4.6	1.2
	Professional and Business Services (15%)	1.9	(0.9)	(0.5)	4.5	5.8	4.4
	Education and Health Services (15%)	1.1	(1.0)	1.1	2.2	0.6	0.5
	Leisure and Hospitality (12%)	0.1	(6.8)	(8.0)	5.3	3.5	2.4
	Government (20%)	0.0	(0.9)	2.2	(6.3)	(0.6)	0.1
Richmond (17%)	Total Nonagricultural Employment	1.6	(1.5)	(1.9)	1.8	2.3	1.1
	Construction and Mining (6%)	3.0	(0.2)	1.4	(0.5)	1.6	1.6
	Trade, Transportation, and Utilities (18%)	0.2	(2.1)	(1.5)	3.2	(2.6)	(2.3)
	Financial Activities (8%)	3.9	4.6	1.4	2.9	5.9	1.5
	Professional and Business Services (17%)	2.1	(0.2)	(1.4)	3.9	5.4	3.8
	Education and Health Services (15%)	2.4	(1.9)	(2.4)	4.5	1.3	1.0
	Leisure and Hospitality (10%)	1.6	(7.8)	(13.7)	6.7	4.4	3.0
	Government (17%)	1.3	(0.6)	4.7	(8.9)	(0.7)	0.4
Balance (26%)	Total Nonagricultural Employment	0.6	(2.0)	(1.0)	1.5	1.5	1.0
	Construction and Mining (5%)	(1.2)	4.7	12.1	(0.3)	0.9	0.9
	Trade, Transportation, and Utilities (18%)	(0.1)	(0.8)	0.7	0.5	(3.1)	(1.9)
	Financial Activities (4%)	(0.6)	0.4	1.9	3.6	6.9	1.8
	Professional and Business Services (10%)	0.5	(1.6)	(1.9)	3.8	5.2	4.1
	Education and Health Services (16%)	1.4	(2.7)	(0.9)	2.8	0.8	0.6
	Leisure and Hospitality (10%)	0.8	(9.3)	(11.5)	7.3	5.0	3.3
	Government (20%)	0.7	(0.9)	(0.2)	(3.2)	0.7	1.3

The Oct Standard forecast from the Department of Taxation is based on IHS Markit's October 2020 U.S. standard forecast.

* Represents the percentage share of Virginia in fiscal year 2020.

** Represents the percentage share of total employment within the region in fiscal year 2020.

Table 2.4 - Fiscal Years 2019-2024 October Pessimistic Scenario
Virginia Economic Forecast - Regional Employment (% Change)

		<u>FY19</u>	<u>FY20</u>	<u>FY21</u>	<u>FY22</u>	<u>FY23</u>	<u>FY24</u>
<u>Region by Sector (% of Total)</u>							
Northern Virginia (37%) *	Total Nonagricultural Employment	1.9	(0.7)	(0.5)	(0.4)	2.1	2.5
	Construction and Mining (5%) **	4.3	1.4	(2.5)	(2.6)	1.0	1.6
	Trade, Transportation, and Utilities (14%)	0.5	(1.2)	(8.7)	(0.3)	(6.5)	(2.9)
	Financial Activities (5%)	1.4	1.1	(0.6)	2.5	8.1	2.5
	Professional and Business Services (28%)	2.9	1.7	2.6	1.2	4.5	5.0
	Education and Health Services (12%)	3.0	(2.0)	(6.3)	5.2	4.5	4.0
	Leisure and Hospitality (10%)	0.7	(10.5)	(16.3)	8.9	5.6	4.7
	Government (16%)	1.5	0.9	11.3	(13.3)	(2.4)	(0.4)
Hampton Roads (20%)	Total Nonagricultural Employment	0.7	(1.8)	(2.1)	0.7	2.3	2.3
	Construction and Mining (5%)	2.2	(1.3)	(4.9)	(2.2)	0.8	1.3
	Trade, Transportation, and Utilities (16%)	(1.7)	(2.5)	(2.0)	(0.0)	(4.4)	(1.8)
	Financial Activities (5%)	1.0	0.6	0.7	2.4	7.7	2.3
	Professional and Business Services (15%)	1.9	(0.9)	(5.1)	2.5	7.5	9.5
	Education and Health Services (15%)	1.1	(1.0)	0.1	2.3	2.0	1.8
	Leisure and Hospitality (12%)	0.1	(6.8)	(8.9)	5.8	3.5	3.1
	Government (20%)	0.0	(0.9)	2.2	(6.5)	(0.9)	(0.1)
Richmond (17%)	Total Nonagricultural Employment	1.6	(1.5)	(3.8)	1.3	3.7	2.9
	Construction and Mining (6%)	3.0	(0.2)	0.7	(2.4)	0.9	1.4
	Trade, Transportation, and Utilities (18%)	0.2	(2.1)	(4.6)	2.2	(1.1)	0.2
	Financial Activities (8%)	3.9	4.6	(1.1)	2.8	9.6	2.9
	Professional and Business Services (17%)	2.1	(0.2)	(5.0)	2.2	7.0	7.9
	Education and Health Services (15%)	2.4	(1.9)	(4.4)	4.7	4.1	3.6
	Leisure and Hospitality (10%)	1.6	(7.8)	(14.8)	7.4	4.6	3.9
	Government (17%)	1.3	(0.6)	4.6	(9.2)	(1.1)	0.0
Balance (26%)	Total Nonagricultural Employment	0.6	(2.0)	(2.0)	0.9	2.2	2.3
	Construction and Mining (5%)	(1.2)	4.7	11.7	(1.3)	0.5	0.8
	Trade, Transportation, and Utilities (18%)	(0.1)	(0.8)	(0.7)	0.0	(2.7)	(1.2)
	Financial Activities (4%)	(0.6)	0.4	(1.3)	3.6	11.5	3.5
	Professional and Business Services (10%)	0.5	(1.6)	(5.8)	2.1	6.4	8.4
	Education and Health Services (16%)	1.4	(2.7)	(2.2)	2.9	2.6	2.2
	Leisure and Hospitality (10%)	0.8	(9.3)	(12.8)	8.1	5.1	4.3
	Government (20%)	0.7	(0.9)	(0.2)	(3.4)	0.5	1.1

The Oct Pessimistic forecast from the Department of Taxation is based on IHS Markit's October 2020 U.S. pessimistic forecast.

* Represents the percentage share of Virginia in fiscal year 2020.

** Represents the percentage share of total employment within the region in fiscal year 2020.

SECTION 3
GENERAL FUND REVENUES

Section 3 General Fund Revenues

General Fund Revenues

This section reviews general fund revenue collections for fiscal year 2020, comparing actual collections with the official forecast for the year. Following this review, two general fund revenue forecasts are presented: the November standard and alternative pessimistic forecasts. The standard forecast is based on the IHS Markit October 2020 standard economic outlook. The basis for the pessimistic alternative forecast is the IHS October alternative pessimistic economic scenario. These updated forecasts are compared with the interim forecast based on the IHS June 2020 outlook and the corresponding Virginia state forecast developed by the Department of Taxation.

Fiscal Year 2020 in Review

In fiscal year 2020, total general fund revenues rose 2.0 percent, with a shortfall of \$234.2 million – a 1.1 percent variance from the forecast. Most major revenue sources finished the year below their respective forecasts with individual withholding and sales taxes largely responsible for the shortfall. Individual nonwithholding met the forecast, while individual refunds were lower than expected, offsetting some of the deficit. Collectively, the five major sources ended the year \$243.9 million short of the forecast (1.2 percent variance). Collections of miscellaneous taxes and other revenues exceeded the forecast by \$9.7 million (1.2 percent variance).

Table 3.1 on the next page compares actual revenues for fiscal year 2020 with the official forecast. The official revenue forecast was based on the October 2019 IHS Markit standard U.S. forecast, the corresponding Virginia economic forecast developed by the Department of Taxation with recommendations from GACRE, and includes actions of the 2020 General Assembly – Chapters 1283 and 1289.

Table 3.2 provides an evolutionary perspective of the fiscal year 2020 forecasts used by the Governor and General Assembly, in terms of their variance from actual collections. The variances for total revenues ranged from 4.0 percent in the December 2017 introduced forecast to (1.1) percent in the April 2020 official forecast.

General Fund Revenues

Table 3.1
Fiscal Year 2020 General Fund Collections: Actual and Official Forecast
(Dollars in Millions)

	Fiscal Year 2019		Fiscal Year 2020						
	Actual	% Growth	Official Forecast	Actual	Forecast Variance		% Growth Over FY 19		
					Dollars	Percent	Official	Actual	
MAJOR TAX SOURCES									
Corporate Income	\$ 943.4	9.5 %	\$ 1,031.5	\$ 1,011.7	\$ (19.9)	(1.9) %	9.3 %	7.2 %	
Individual Income Tax									
Gross	16,964.7	5.9	17,396.0	17,182.5	(213.5)	(1.2)	2.5	1.3	
Withholding	12,987.8	3.6	13,591.9	13,378.1	(213.8)	(1.6)	4.7	3.0	
Nonwithholding	3,976.8	14.5	3,804.1	3,804.5	0.4	0.0	(4.3)	(4.3)	
Refunds	<u>(1,738.2)</u>	<u>(8.9)</u>	<u>(1,976.6)</u>	<u>(1,830.9)</u>	<u>145.7</u>	<u>(7.4)</u>	<u>13.7</u>	<u>5.3</u>	
Net	15,226.5	7.9	15,419.4	15,351.6	(67.8)	(0.4)	1.3	0.8	
Insurance Company Premiums	382.0	13.0	394.1	360.6	(33.5)	(8.5)	3.2	(5.6)	
State Sales & Use Tax	3,580.4	3.4	3,844.5	3,706.8	(137.7)	(3.6)	7.4	3.5	
Wills, Suits, Deeds, & Contract Fees	<u>386.5</u>	<u>(2.1)</u>	<u>468.6</u>	<u>483.5</u>	<u>14.9</u>	<u>3.2</u>	<u>21.3</u>	<u>25.1</u>	
Total Major Tax Sources	\$ 20,518.7	7.1 %	\$ 21,158.1	\$ 20,914.2	\$ (243.9)	(1.2) %	3.1 %	1.9 %	
MISCELLANEOUS TAXES AND OTHER REVENUES									
Alcoholic Beverage State Tax	\$ 200.1	4.8 %	\$ 211.0	\$ 226.4	\$ 15.4	7.3 %	5.4 %	13.2 %	
Bank Franchise Tax	29.7	24.0	22.0	26.7	4.7	21.5	(25.9)	(10.0)	
Beer & Beverage Excise Tax	40.7	(0.5)	40.7	40.8	0.1	0.2	0.1	0.3	
Corporate Franchise & Charter Fees	58.2	8.6	52.3	59.2	6.9	13.1	(10.2)	1.6	
Excess & Other Fees from Officers	(6.9)	10.3	(7.5)	(8.6)	(1.1)	15.3	(9.2)	(25.9)	
Estate & Gifts	0.2	na	0.0	0.1	0.1	n/a	n/a	n/a	
Institutional Revenues	2.7	(2.3)	2.6	2.6	(0.0)	(1.1)	(3.5)	(4.6)	
Interest & Rents	87.3	41.4	129.3	110.7	(18.6)	(14.4)	48.1	26.9	
Licenses & Permits	3.9	(1.5)	4.0	3.6	(0.4)	(11.2)	1.4	(9.9)	
Miscellaneous Taxes and Penalties	245.9	7.3	236.8	230.4	(6.4)	(2.7)	(3.7)	(6.3)	
Other Miscellaneous Revenues	28.1	44.4	23.8	34.8	11.0	46.1	(15.2)	23.8	
Public Service GR / Consumption Tax	<u>98.9</u>	<u>0.2</u>	<u>98.9</u>	<u>97.0</u>	<u>(1.9)</u>	<u>(1.9)</u>	<u>0.0</u>	<u>(1.9)</u>	
Total Misc. Taxes and Other Revenues	\$ 788.8	9.8 %	\$ 813.9	\$ 823.6	\$ 9.7	1.2 %	3.2 %	4.4 %	
TOTAL GF REVENUES	\$ 21,307.5	7.2 %	\$ 21,972.0	\$ 21,737.8	\$ (234.2)	(1.1) %	3.1 %	2.0 %	
TRANSFERS									
A.B.C. Profits	\$ 130.7	19.4 %	\$ 124.8	\$ 137.5	\$ 12.7	10.2 %	(4.5) %	5.2 %	
Sales Tax (0.25%)	392.6	4.2	421.6	406.0	(15.6)	(3.7)	7.4	3.4	
Transfers Per Appropriations Act	<u>134.7</u>	<u>(5.3)</u>	<u>155.3</u>	<u>160.4</u>	<u>5.1</u>	<u>3.3</u>	<u>15.3</u>	<u>19.1</u>	
Total Transfers	\$ 658.0	4.7 %	\$ 701.7	\$ 703.9	\$ 2.2	0.3 %	6.6 %	7.0 %	
TOTAL GENERAL FUND	\$ 21,965.5	7.1 %	\$ 22,673.7	\$ 22,441.7	\$ (232.0)	(1.0) %	3.2 %	2.2 %	

The Official forecast is based on the October 2019 IHS Markit US Standard outlook and the corresponding Virginia economic outlook developed by the Department of Taxation with recommendations from GACRE. It includes actions of the 2020 General Assembly - Chapters 1283 and 1289.

Table 3.2
Fiscal Year 2020 Actual Collections Over (Under) the Forecast
Percent Variance

	April 24 2020 Official	December 17 2019 Introduced	May 3 2019 Official	December 18 2018 Introduced	April 28 2018 Official	December 18 2017 Introduced
Major Tax Sources (96%)						
Corporate Income (5%)	(1.9) %	4.9 %	(1.9) %	(3.0) %	9.2 %	9.2 %
Individual Income (71%)	(0.4)	0.4	0.6	(0.2)	3.3	3.8
Insurance Company Premiums (2%)	(8.5)	(11.9)	(12.1)	(12.1)	(9.3)	(6.2)
State Sales & Use Tax (18%)	(3.6)	(2.3)	(0.6)	(0.7)	2.3	2.3
Wills, Suits, Deeds & Contracts (2%)	3.2	10.5	31.2	31.2	18.7	18.7
Total Major Tax Sources	(1.2) %	0.1 %	0.5 %	(0.1) %	3.5 %	3.9 %
Miscellaneous Taxes & Other Revenues (4%)	1.2 %	1.2 %	9.1 %	9.1 %	7.9 %	7.9 %
Total Revenues	(1.1) %	0.2 %	0.8 %	0.2 %	3.6 %	4.0 %

Numbers in parentheses indicate collections as a percentage of total general fund revenues. These may not add to 100 percent due to rounding.

The April 24, 2020 official forecast is based on the October 2019 IHS Markit U.S. standard outlook and the corresponding Virginia economic outlook developed by the Department of Taxation with recommendations from the GACRE. It includes actions of the 2020 General Assembly - Chapters 1283 and 1289.

The December 17, 2019 forecast is based on the October 2019 IHS Markit U.S. standard outlook and the corresponding Virginia state forecast developed by the Department of Taxation with recommendations from the JABE and the GACRE.

The May 3, 2019 official forecast is based on the October 2018 IHS Markit U.S. standard outlook and the corresponding Virginia economic outlook developed by the Department of Taxation with recommendations from GACRE. It includes actions of the 2019 General Assembly - Chapter 854.

The December 18, 2018 forecast is based on the October 2018 IHS Markit U.S. standard outlook and the corresponding Virginia state forecast developed by the Department of Taxation with recommendations from JABE and GACRE and the Governor's proposed tax policies affecting revenues.

The June 7, 2018 official forecast is based on the October 2017 IHS Markit U.S. standard outlook and the corresponding Virginia economic outlook developed by the Department of Taxation with recommendations from GACRE. It includes actions of the 2018 General Assembly - Chapters 1 and 2.

The December 18, 2017 forecast is based on the October 2017 IHS Markit U.S. standard outlook and the corresponding Virginia state forecast developed by the Department of Taxation with recommendations from JABE and GACRE and contains the same policy assumptions in Chapter 836.

Individual Income Taxes

Withholding: In fiscal year 2020, withholding receipts (62 percent of total revenues) increased 3.0 percent, trailing the forecast growth rate of 4.7 percent and \$213.8 million short of the forecast.

Nonwithholding: Collections of individual nonwithholding (17 percent of total revenues) fell 4.3 percent in fiscal year 2020, matching the forecast. These payments are historically tied to non-wage income sources – mainly the financial markets -- and are extremely volatile. The annual estimate included reducing the forecasted collections by \$216.8 million for the nonwithholding collar. The nonwithholding collar is the 10-year average of nonwithholding payments as a percent of total revenues (16.5%), limited to 1 percent of general fund revenues.

Refunds: Individual income tax refunds were \$145.7 million less than expected in fiscal year 2020. The amount of refunds issued rose 5.3 percent over last year, compared with the forecast of 13.7 percent growth. During the fiscal year 2020 filing season, which began in February, the Department of Taxation issued 2.5 million refunds, about 90,000 more than last year.

General Fund Revenues

Sales Taxes

Collections of sales and use taxes (18 percent of total revenues) were \$137.7 million below the forecast. Collections rose 3.5 percent for the year, trailing the forecast of 7.4 percent growth. Retail sales collections fell 4.5 percent and use tax collections increased 32.3 percent. Ninety percent of the increase in use tax collections were from new *Wayfair* related dealers.

Corporate Income Taxes

Corporate income tax collections (5 percent of total revenues), historically the most volatile revenue source, also fell short of the forecast. Collections were \$19.9 million below expectations in fiscal year 2020. The fiscal year growth of 7.2 percent trailed the forecast of 9.3 percent.

Wills, Suits, Deeds, and Contract Fees

Wills, Suits, Deeds, and Contract Fees (2 percent of total revenues), of which the primary component is the recordation tax, exceeded the forecast in fiscal year 2020 with a surplus of \$14.9 million. Collections finished the year with growth of 25.1 percent from fiscal year 2019 compared with the official forecast of a 21.3 percent increase.

Insurance Premiums Taxes

Another major source to see a shortfall, collections of taxes on the premiums of insurance companies (2 percent of total revenues) were \$33.5 million below the annual estimate. Collections declined 5.6 percent for the year compared with the forecast of 3.2 percent growth.

The General Fund Revenue Forecasts for Fiscal Years 2021-2024

This section presents two general fund revenue forecasts. The standard forecast is based on the IHS Markit October 2020 standard economic outlook and the corresponding state forecast developed by TAX. The basis for the alternative forecast is the IHS Markit October alternative pessimistic economic scenario. These forecasts are compared with the interim forecast based on the IHS Markit June 2020 standard outlook and the corresponding Virginia state forecast developed by the Department of Taxation.

Standard General Fund Revenue Forecast

Table 3.3 at the end of this section provides a comparison of the interim revenue forecast with the November standard general fund forecast.

In the November standard forecast, total general fund revenues have been raised by \$689.7 million in fiscal year 2021. The increase from the interim forecast comes mainly from upward revisions to corporate income, nonwithholding, wills suits and deeds, and sales and

use taxes. Revenues are now expected to increase 1.4 percent in fiscal year 2021 and 3.2 percent in fiscal year 2022. Over the fiscal year 2021-2022 biennium, general fund revenues are revised upward by \$1.2 billion.

Net Individual Income Taxes

Withholding

The withholding revenue model is based on a direct relationship with wages and salaries (51 percent of total personal income) and net transfer payments (6 percent of total personal income) in Virginia. The historical data series in the withholding revenue model has been shortened to eliminate the strong growth due to high levels of defense spending prior to 2006.

Nonwithholding

The revenue model for nonwithholding considers estimated and final payments independently. Estimated payments are modeled as a function of total proprietor's income, dividends, interest, and rental income, and the S&P 500 index, while final payments are driven solely by growth in the S&P 500 index.

Refunds

The forecast methodology for individual refunds relies on the revised outlook for withholding and nonwithholding, comparing taxable year individual income tax with taxable year refunds for the first and second half of a taxable year.

Sales

The sales tax revenue model is based on a direct relationship with total personal income in Virginia.

Corporate

The corporate revenue model considers gross payments and refunds separately. Gross payments are modeled as a function of Virginia specific pre-tax corporate profits and the S&P 500 index.

Wills, Suits, Deeds, and Contracts (Recordation)

The revenue model for wills, suits, deeds and contracts is based on mortgage originations, mortgage refinancing and home prices in Virginia, along with the yield on 30-year treasury bonds. The outlook for recordation taxes drives the other components of this source.

General Fund Revenues

The Pessimistic Alternative Forecast for Fiscal Years 2021 - 2022

Table 3.4 at the end of this section compares the interim forecast and the November alternative pessimistic general fund forecast. The pessimistic forecast is very similar to the interim standard forecast.

The November alternative pessimistic forecast actually raises the total general fund revenue forecast by \$86.2 million in fiscal year 2021. For the 2020-2022 biennium, total revenues are revised down by \$383.0 million compared with a \$1.2 billion increase in the standard forecast.

Table 3.3
The Interim to November Standard General Fund Forecast for Fiscal Year 2021
(Dollars in Millions)

November 23, 2020

	Fiscal Year 2021				
	Interim	November	Change	% Growth Over FY20	
	Forecast	Forecast		Interim	November
MAJOR TAX SOURCES					
Corporate Income	\$ 1,041.7	\$ 1,212.7	\$ 171.0	3.0 %	19.9 %
Individual Income Tax:					
Gross	17,373.1	17,711.5	338.4	1.1	3.1
Withholding	13,704.2	13,739.6	35.4	2.4	2.7
Nonwithholding	3,668.9	3,971.9	303.0	(3.6)	4.4
Refunds	<u>(1,924.9)</u>	<u>(2,164.6)</u>	<u>(239.7)</u>	<u>5.1</u>	<u>18.2</u>
Net	15,448.2	15,546.9	98.7	0.6	1.3
Insurance Company Premiums	337.4	333.9	(3.5)	(6.4)	(7.4)
State Sales & Use Tax	3,346.5	3,609.4	262.9	(9.7)	(2.6)
Wills, Suits, Deeds, & Contract Fees	<u>422.4</u>	<u>549.3</u>	<u>126.9</u>	<u>(12.6)</u>	<u>13.6</u>
Total Major Tax Sources	\$ 20,596.2	\$ 21,252.2	\$ 656.0	(1.5) %	1.6 %
MISCELLANEOUS TAXES AND OTHER REVENUES					
Alcoholic Beverage State Tax	\$ 219.7	\$ 233.5	\$ 13.8	(3.0) %	3.1 %
Bank Franchise Tax	22.0	24.0	2.0	(17.7)	(10.2)
Beer & Beverage Excise Tax	40.7	40.8	0.1	(0.2)	0.1
Corporate Franchise & Charter Fees	52.3	53.9	1.6	(11.6)	(8.9)
Excess & Other Fees from Officers	(7.5)	(9.0)	(1.5)	(13.3)	4.1
Estate & Gifts	0.0	0.0	0.0	n/a	n/a
Institutional Revenues	2.6	2.1	(0.5)	1.1	(18.3)
Interest & Rents	80.3	89.0	8.7	(27.5) %	(19.6)
Licenses & Permits	4.0	3.0	(1.0)	12.6 %	(15.5)
Miscellaneous Taxes and Penalties	220.6	226.6	6.0	(4.2) %	(1.6)
Other Miscellaneous Revenues	23.3	28.1	4.8	(33.0) %	(19.2)
Public Service GR / Consumption Tax	<u>98.9</u>	<u>98.6</u>	<u>(0.3)</u>	<u>1.9 %</u>	<u>1.6</u>
Total Misc. Taxes and Other Revenues	\$ 756.9	\$ 790.6	\$ 33.7	(8.1) %	(4.0) %
TOTAL GF REVENUES	\$ 21,353.1	\$ 22,042.8	\$ 689.7	(1.8) %	1.4 %
TRANSFERS					
A.B.C. Profits	\$ 139.5	\$ 139.5	\$ 0.0	1.5 %	1.5 %
Sales Tax (0.375%)	365.7	394.4	28.7	(9.9)	(2.9)
Transfers Per Appropriations Act	<u>105.2</u>	<u>105.2</u>	<u>0.0</u>	<u>(34.4)</u>	<u>(34.4)</u>
Total Transfers	\$ 610.4	\$ 639.1	\$ 28.7	(13.3) %	(9.2) %
TOTAL GENERAL FUND	\$ 21,963.5	\$ 22,681.9	\$ 718.4	(2.1) %	1.1 %

The Interim forecast is based on the June 2020 IHS Markit Standard Outlook and the corresponding Virginia state forecast developed by the Department of Taxation with recommendations of GACRE. It includes actions of the 2020 General Assembly Special Session.

The November Standard forecast is based on the October 2020 IHS Markit Standard Outlook and the corresponding Virginia state forecast developed by the Department of Taxation.

General Fund Revenues

Table 3.3
The Interim to November Standard General Fund Forecast for Fiscal Year 2022
(Dollars in Millions)

November 23, 2020

	Fiscal Year 2022					2020-2022 Biennium		
	Interim	November	Change	% Growth Over FY21		Interim	November	Change
	Forecast	Forecast		Interim	November	Forecast	Forecast	
MAJOR TAX SOURCES								
Corporate Income	\$ 1,143.0	\$ 1,289.6	\$ 146.6	9.7 %	6.3 %	\$ 2,184.7	\$ 2,502.3	\$ 317.6
Individual Income Tax:								
Gross	18,125.9	18,231.3	105.4	4.3	2.9	35,499.0	35,942.8	443.8
Withholding	14,341.0	14,245.9	(95.1)	4.6	3.7	28,045.2	27,985.5	(59.7)
Nonwithholding	3,784.9	3,985.4	200.5	3.2	0.3	7,453.8	7,957.3	503.5
Refunds	<u>(2,062.4)</u>	<u>(2,121.2)</u>	<u>(58.8)</u>	<u>7.1</u>	<u>(2.0)</u>	<u>(3,987.3)</u>	<u>(4,285.8)</u>	<u>(298.5)</u>
Net	16,063.5	16,110.1	46.6	4.0	3.6	31,511.7	31,657.0	145.3
Insurance Company Premiums	359.5	360.8	1.3	6.6	8.1	696.9	694.7	(2.2)
State Sales & Use Tax	3,438.7	3,705.7	267.0	2.8	2.7	6,785.2	7,315.1	529.9
Wills, Suits, Deeds, & Contract Fees	<u>393.0</u>	<u>467.0</u>	<u>74.0</u>	<u>(7.0)</u>	<u>(15.0)</u>	<u>815.4</u>	<u>1,016.3</u>	<u>200.9</u>
Total Major Tax Sources	\$ 21,397.7	\$ 21,933.2	\$ 535.5	3.9 %	3.2 %	\$ 41,993.9	\$ 43,185.4	\$ 1,191.5
MISCELLANEOUS TAXES AND OTHER REVENUES								
Alcoholic Beverage State Tax	\$ 228.8	\$ 242.9	\$ 14.1	4.1 %	4.0 %	\$ 448.5	\$ 476.4	\$ 27.9
Bank Franchise Tax	22.0	24.0	2.0	0.0	0.0	44.0	48.0	4.0
Beer & Beverage Excise Tax	40.7	40.8	0.1	0.0	0.0	81.4	81.6	0.2
Corporate Franchise & Charter Fees	52.3	53.9	1.6	0.0	0.0	104.6	107.8	3.2
Excess & Other Fees from Officers	(7.5)	(8.0)	(0.5)	0.0	11.1	(15.0)	(17.0)	(2.0)
Estate & Gifts	0.0	0.0	0.0	n/a	n/a	0.0	0.0	n/a
Institutional Revenues	2.6	2.1	(0.5)	0.0	0.0	5.2	4.2	(1.0)
Interest & Rents	92.2	89.4	(2.8)	14.8	0.4	172.5	178.4	5.9
Licenses & Permits	4.0	3.6	(0.4)	0.0	20.0	8.0	6.6	(1.4)
Miscellaneous Taxes and Penalties	230.5	228.6	(1.9)	4.5	0.9	451.1	455.2	4.1
Other Miscellaneous Revenues	23.3	29.1	5.8	0.0	3.6	46.6	57.2	10.6
Public Service GR / Consumption Tax	<u>98.9</u>	<u>98.6</u>	<u>(0.3)</u>	<u>0.0</u>	<u>0.0</u>	<u>197.8</u>	<u>197.2</u>	<u>(0.6)</u>
Total Misc. Taxes and Other Revenues	\$ 787.8	\$ 805.0	\$ 17.2	4.1 %	1.8 %	\$ 1,544.7	\$ 1,595.6	\$ 50.9
TOTAL GF REVENUES	\$ 22,185.5	\$ 22,738.2	\$ 552.7	3.9 %	3.2 %	\$ 43,538.6	\$ 44,781.0	\$ 1,242.4
TRANSFERS								
A.B.C. Profits	\$ 132.7	\$ 132.7	\$ 0.0	(4.9) %	(4.9) %	\$ 272.2	\$ 272.2	\$ 0.0
Sales Tax (0.375%)	375.9	405.1	29.2	2.8	2.7	741.6	799.5	57.9
Transfers Per Appropriations Act	<u>103.8</u>	<u>103.8</u>	<u>0.0</u>	<u>(1.3)</u>	<u>(1.3)</u>	<u>209.0</u>	<u>209.0</u>	<u>0.0</u>
Total Transfers	\$ 612.4	\$ 641.6	\$ 29.2	0.3 %	0.4 %	\$ 1,222.8	\$ 1,280.7	\$ 57.9
TOTAL GENERAL FUND	\$ 22,797.9	\$ 23,379.8	\$ 581.9	3.8 %	3.1 %	\$ 44,761.4	\$ 46,061.7	\$ 1,300.3

The Interim forecast is based on the June 2020 IHS Markit Standard Outlook and the corresponding Virginia state forecast developed by the Department of Taxation with recommendations of GACRE. It includes actions of the 2020 General Assembly Special Session.

The November Standard forecast is based on the October 2020 IHS Markit Standard Outlook and the corresponding Virginia state forecast developed by the Department of Taxation.

General Fund Revenues

Table 3.3
The November Standard General Fund Forecast for Fiscal Years 2022-24
(Dollars in Millions)

November 23, 2020

	Fiscal Year 2023		Fiscal Year 2024		2022-2024 Biennium	
	November Forecast	% Growth Over FY 22	November Forecast	% Growth Over FY 23	November Forecast	% Growth Over 20-22
MAJOR TAX SOURCES						
Corporate Income	\$ 1,370.3	6.3 %	\$ 1,395.3	1.8 %	\$ 2,765.6	10.5 %
Individual Income Tax:						
Gross	18,858.4	3.4	19,351.8	2.6	38,210.2	6.3
Withholding	14,648.3	2.8	15,039.7	2.7	29,688.0	6.1
Nonwithholding	4,210.1	5.6	4,312.1	2.4	8,522.2	7.1
Refunds	<u>(2,184.1)</u>	3.0	<u>(2,250.7)</u>	3.0	<u>(4,434.8)</u>	3.5
Net	16,674.3	3.5	17,101.1	2.6	33,775.4	6.7
Insurance Company Premiums	375.4	4.0	388.0	3.4	763.4	9.9
State Sales & Use Tax	3,809.2	2.8	3,897.7	2.3	7,706.9	5.4
Wills, Suits, Deeds, & Contract Fees	<u>467.0</u>	0.0	<u>467.0</u>	0.0	<u>934.0</u>	(8.1)
Total Major Tax Sources	\$ 22,696.2	3.5 %	\$ 23,249.1	2.4 %	\$ 45,945.3	6.4 %
MISCELLANEOUS TAXES AND OTHER REVENUES						
Alcoholic Beverage State Tax	\$ 253.0	4.2 %	\$ 263.6	4.2 %	\$ 516.6	8.4 %
Bank Franchise Tax	24.0	0.0	24.0	0.0	48.0	0.0
Beer & Beverage Excise Tax	40.8	0.0	40.8	0.0	81.6	0.0
Corporate Franchise & Charter Fees	53.9	0.0	53.9	0.0	107.8	0.0
Excess & Other Fees from Officers	(8.0)	0.0	(8.0)	0.0	(16.0)	(5.9)
Estate & Gifts	0.0	n/a	0.0	n/a	0.0	n/a
Institutional Revenues	2.1	0.0	2.1	0.0	4.2	0.0
Interest & Rents	89.4	0.0	89.4	0.0	178.8	0.2
Licenses & Permits	3.6	0.0	3.6	0.0	7.2	9.1
Miscellaneous Taxes and Penalties	229.6	0.4	229.9	0.1	459.5	0.9
Other Miscellaneous Revenues	30.1	3.4	30.1	0.0	60.2	5.2
Public Service GR / Consumption Tax	<u>98.6</u>	0.0	<u>98.6</u>	0.0	<u>197.2</u>	0.0
Total Misc. Taxes and Other Revenues	\$ 817.1	1.5 %	\$ 828.0	1.3 %	\$ 1,645.1	3.1 %
TOTAL GF REVENUES	\$ 23,513.3	3.4 %	\$ 24,077.1	2.4 %	\$ 47,590.4	6.3 %
TRANSFERS						
A.B.C. Profits	\$ 142.5	7.4 %	\$ 150.1	5.3 %	\$ 292.6	7.5 %
Sales Tax (0.375%)	416.8	2.9	426.8	2.4	843.6	5.5
Transfers Per Appropriations Act	<u>115.0</u>	<u>10.8</u>	<u>115.0</u>	<u>0.0</u>	<u>230.0</u>	<u>10.0</u>
Total Transfers	\$ 674.3	5.1 %	\$ 691.9	2.6 %	\$ 1,366.2	6.7 %
TOTAL GENERAL FUND	\$ 24,187.6	3.5 %	\$ 24,769.0	2.4 %	\$ 48,956.6	6.3 %

The November Standard forecast is based on the October 2020 IHS Markit Standard Outlook and the corresponding Virginia state forecast developed by the Department of Taxation.

General Fund Revenues

Table 3.4
The Interim to November Pessimistic General Fund Forecast for Fiscal Year 2021
(Dollars in Millions)

November 23, 2020

	Fiscal Year 2021				
	Interim	Nov Pess	Change	% Growth Over FY20	
	Forecast	Forecast		Interim	Nov Pess
MAJOR TAX SOURCES					
Corporate Income	\$ 1,041.7	\$ 1,132.0	\$ 90.3	3.0 %	11.9 %
Individual Income Tax:					
Gross	17,373.1	17,468.5	95.4	1.1	1.7
Withholding	13,704.2	13,605.3	(98.9)	2.4	1.7
Nonwithholding	3,668.9	3,863.2	194.3	(3.6)	1.5
Refunds	<u>(1,924.9)</u>	<u>(2,264.6)</u>	<u>(339.7)</u>	<u>5.1</u>	<u>23.7</u>
Net	15,448.2	15,203.9	(244.3)	0.6	(1.0)
Insurance Company Premiums	337.4	325.2	(12.2)	(6.4)	(9.8)
State Sales & Use Tax	3,346.5	3,468.3	121.8	(9.7)	(6.4)
Wills, Suits, Deeds, & Contract Fees	<u>422.4</u>	<u>519.3</u>	<u>96.9</u>	<u>(12.6)</u>	<u>7.4</u>
Total Major Tax Sources	\$ 20,596.2	\$ 20,648.7	\$ 52.5	(1.5) %	(1.3) %
MISCELLANEOUS TAXES AND OTHER REVENUES					
Alcoholic Beverage State Tax	\$ 219.7	\$ 233.5	\$ 13.8	(3.0) %	3.1 %
Bank Franchise Tax	22.0	24.0	2.0	(17.7)	(10.2)
Beer & Beverage Excise Tax	40.7	40.8	0.1	(0.2)	0.1
Corporate Franchise & Charter Fees	52.3	53.9	1.6	(11.6)	(8.9)
Excess & Other Fees from Officers	(7.5)	(9.0)	(1.5)	(13.3)	4.1
Estate & Gifts	0.0	0.0	0.0	n/a	n/a
Institutional Revenues	2.6	2.1	(0.5)	1.1	(18.3)
Interest & Rents	80.3	89.0	8.7	(27.5) %	(19.6)
Licenses & Permits	4.0	3.0	(1.0)	12.6 %	(15.5)
Miscellaneous Taxes and Penalties	220.6	226.6	6.0	(4.2) %	(1.6)
Other Miscellaneous Revenues	23.3	28.1	4.8	(33.0) %	(19.2)
Public Service GR / Consumption Tax	<u>98.9</u>	<u>98.6</u>	<u>(0.3)</u>	<u>1.9 %</u>	<u>1.6</u>
Total Misc. Taxes and Other Revenues	\$ 756.9	\$ 790.6	\$ 33.7	(8.1) %	(4.0) %
TOTAL GF REVENUES	\$ 21,353.1	\$ 21,439.3	\$ 86.2	(1.8) %	(1.4) %
TRANSFERS					
A.B.C. Profits	\$ 139.5	\$ 139.5	\$ 0.0	1.5 %	1.5 %
Sales Tax (0.375%)	365.7	379.0	13.3	(9.9)	(6.7)
Transfers Per Appropriations Act	<u>105.2</u>	<u>105.2</u>	<u>0.0</u>	<u>(34.4)</u>	<u>(34.4)</u>
Total Transfers	\$ 610.4	\$ 623.7	\$ 13.3	(13.3) %	(11.4) %
TOTAL GENERAL FUND	\$ 21,963.5	\$ 22,063.0	\$ 99.5	(2.1) %	(1.7) %

The Interim forecast is based on the June 2020 IHS Markit Standard Outlook and the corresponding Virginia state forecast developed by the Department of Taxation with recommendations of GACRE. It includes actions of the 2020 General Assembly Special Session.

The November Pessimistic forecast is based on the October 2020 IHS Markit Pessimistic Outlook and the corresponding Virginia state forecast developed by the Department of Taxation.

General Fund Revenues

Table 3.4
The Interim to November Pessimistic General Fund Forecast for Fiscal Year 2022
(Dollars in Millions)

November 23, 2020

	Fiscal Year 2022					2020-2022 Biennium		
	Interim Forecast	Nov Pess Forecast	Change	% Growth Over FY21		Interim Forecast	Nov Pess Forecast	Change
				Interim	Nov Pess			
MAJOR TAX SOURCES								
Corporate Income	\$ 1,143.0	\$ 1,215.4	\$ 72.4	9.7 %	7.4 %	\$ 2,184.7	\$ 2,347.4	\$ 162.7
Individual Income Tax								
Gross	18,125.9	17,790.3	(335.6)	4.3	1.8	35,499.0	35,258.8	(240.2)
Withholding	14,341.0	14,094.5	(246.5)	4.6	3.6	28,045.2	27,699.8	(345.4)
Nonwithholding	3,784.9	3,695.8	(89.1)	3.2	(4.3)	7,453.8	7,559.0	105.2
Refunds	(2,062.4)	(2,281.2)	(218.8)	7.1	0.7	(3,987.3)	(4,545.8)	(558.5)
Net	16,063.5	15,509.1	(554.4)	4.0	2.0	31,511.7	30,713.0	(798.7)
Insurance Company Premiums	359.5	291.4	(68.1)	6.6	(10.4)	696.9	616.6	(80.3)
State Sales & Use Tax	3,438.7	3,513.4	74.7	2.8	1.3	6,785.2	6,981.7	196.5
Wills, Suits, Deeds, & Contract Fees	393.0	382.0	(11.0)	(7.0)	(26.4)	815.4	901.3	85.9
Total Major Tax Sources	\$ 21,397.7	\$ 20,911.3	\$ (486.4)	3.9 %	1.3 %	\$ 41,993.9	\$ 41,560.0	\$ (433.9)
MISCELLANEOUS TAXES AND OTHER REVENUES								
Alcoholic Beverage State Tax	\$ 228.8	\$ 242.9	\$ 14.1	4.1 %	4.0 %	\$ 448.5	\$ 476.4	\$ 27.9
Bank Franchise Tax	22.0	24.0	2.0	0.0	0.0	44.0	48.0	4.0
Beer & Beverage Excise Tax	40.7	40.8	0.1	0.0	0.0	81.4	81.6	0.2
Corporate Franchise & Charter Fees	52.3	53.9	1.6	0.0	0.0	104.6	107.8	3.2
Excess & Other Fees from Officers	(7.5)	(8.0)	(0.5)	0.0	11.1	(15.0)	(17.0)	(2.0)
Estate & Gifts	0.0	0.0	0.0	n/a	n/a	0.0	0.0	n/a
Institutional Revenues	2.6	2.1	(0.5)	0.0	0.0	5.2	4.2	(1.0)
Interest & Rents	92.2	89.4	(2.8)	14.8	0.4	172.5	178.4	5.9
Licenses & Permits	4.0	3.6	(0.4)	0.0	20.0	8.0	6.6	(1.4)
Miscellaneous Taxes and Penalties	230.5	228.6	(1.9)	4.5	0.9	451.1	455.2	4.1
Other Miscellaneous Revenues	23.3	29.1	5.8	0.0	3.6	46.6	57.2	10.6
Public Service GR / Consumption Tax	98.9	98.6	(0.3)	0.0	0.0	197.8	197.2	(0.6)
Total Misc. Taxes and Other Revenues	\$ 787.8	\$ 805.0	\$ 17.2	4.1 %	1.8 %	\$ 1,544.7	\$ 1,595.6	\$ 50.9
TOTAL GF REVENUES	\$ 22,185.5	\$ 21,716.3	\$ (469.2)	3.9 %	1.3 %	\$ 43,538.6	\$ 43,155.6	\$ (383.0)
TRANSFERS								
A.B.C. Profits	\$ 132.7	\$ 132.7	\$ 0.0	(4.9) %	(4.9) %	\$ 272.2	\$ 272.2	\$ 0.0
Sales Tax (0.375%)	375.9	384.0	8.1	2.8	1.3	741.6	763.0	21.4
Transfers Per Appropriations Act	103.8	103.8	0.0	(1.3)	(1.3)	209.0	209.0	0.0
Total Transfers	\$ 612.4	\$ 620.5	\$ 8.1	0.3 %	(0.5) %	\$ 1,222.8	\$ 1,244.2	\$ 21.4
TOTAL GENERAL FUND	\$ 22,797.9	\$ 22,336.8	\$ (461.1)	3.8 %	1.2 %	\$ 44,761.4	\$ 44,399.8	\$ (361.6)

The Interim forecast is based on the June 2020 IHS Markit Standard Outlook and the corresponding Virginia state forecast developed by the Department of Taxation with recommendations of GACRE. It includes actions of the 2020 General Assembly Special Session.

The November Pessimistic forecast is based on the October 2020 IHS Markit Pessimistic Outlook and the corresponding Virginia state forecast developed by the Department of Taxation.

General Fund Revenues

Table 3.4
The November Pessimistic General Fund Forecast for Fiscal Years 2022-24
(Dollars in Millions)

November 23, 2020

	Fiscal Year 2023		Fiscal Year 2024		2022-2024 Biennium	
	Nov Pess Forecast	% Growth Over FY 22	Nov Pess Forecast	% Growth Over FY 23	Nov Pess Forecast	% Growth Over 20-22
MAJOR TAX SOURCES						
Corporate Income	\$ 1,303.2	7.2 %	\$ 1,335.9	2.5 %	\$ 2,639.1	12.4 %
Individual Income Tax:						
Gross	18,390.5	3.4	18,882.2	2.7	37,272.7	5.7
Withholding	14,497.8	2.9	14,893.9	2.7	29,391.7	6.1
Nonwithholding	3,892.7	5.3	3,988.3	2.5	7,881.0	4.3
Refunds	<u>(2,184.1)</u>	<u>(4.3)</u>	<u>(2,250.7)</u>	<u>3.0</u>	<u>(4,434.8)</u>	<u>(2.4)</u>
Net	16,206.4	4.5	16,631.5	2.6	32,837.9	6.9
Insurance Company Premiums	325.0	11.5	336.2	3.5	661.2	7.2
State Sales & Use Tax	3,614.8	2.9	3,707.9	2.6	7,322.7	4.9
Wills, Suits, Deeds, & Contract Fees	<u>382.0</u>	<u>0.0</u>	<u>382.0</u>	<u>0.0</u>	<u>764.0</u>	<u>(15.2)</u>
Total Major Tax Sources	\$ 21,831.4	4.4 %	\$ 22,393.5	2.6 %	\$ 44,224.9	6.4 %
MISCELLANEOUS TAXES AND OTHER REVENUES						
Alcoholic Beverage State Tax	\$ 253.0	4.2 %	\$ 263.6	4.2 %	\$ 516.6	8.4 %
Bank Franchise Tax	24.0	0.0	24.0	0.0	48.0	0.0
Beer & Beverage Excise Tax	40.8	0.0	40.8	0.0	81.6	0.0
Corporate Franchise & Charter Fees	53.9	0.0	53.9	0.0	107.8	0.0
Excess & Other Fees from Officers	(8.0)	0.0	(8.0)	0.0	(16.0)	(5.9)
Estate & Gifts	0.0	n/a	0.0	n/a	0.0	n/a
Institutional Revenues	2.1	0.0	2.1	0.0	4.2	0.0
Interest & Rents	89.4	0.0	89.4	0.0	178.8	0.2
Licenses & Permits	3.6	0.0	3.6	0.0	7.2	9.1
Miscellaneous Taxes and Penalties	229.6	0.4	229.9	0.1	459.5	0.9
Other Miscellaneous Revenues	30.1	3.4	30.1	0.0	60.2	5.2
Public Service GR / Consumption Tax	<u>98.6</u>	<u>0.0</u>	<u>98.6</u>	<u>0.0</u>	<u>197.2</u>	<u>0.0</u>
Total Misc. Taxes and Other Revenues	\$ 817.1	1.5 %	\$ 828.0	1.3 %	\$ 1,645.1	3.1 %
TOTAL GF REVENUES	\$ 22,648.5	4.3 %	\$ 23,221.5	2.5 %	\$ 45,870.0	6.3 %
TRANSFERS						
A.B.C. Profits	\$ 142.5	7.4 %	\$ 150.1	5.3 %	\$ 292.6	7.5 %
Sales Tax (0.375%)	395.1	2.9	405.4	2.6	800.5	4.9
Transfers Per Appropriations Act	<u>115.0</u>	<u>10.8</u>	<u>115.0</u>	<u>0.0</u>	<u>230.0</u>	<u>10.0</u>
Total Transfers	\$ 652.6	5.2 %	\$ 670.5	2.7 %	\$ 1,323.1	6.3 %
TOTAL GENERAL FUND	\$ 23,301.1	4.3 %	\$ 23,892.0	2.5 %	\$ 47,193.1	6.3 %

The November Pessimistic forecast is based on the October 2020 IHS Markit Pessimistic Outlook and the corresponding Virginia state forecast developed by the Department of Taxation.

Legislative Changes Affecting the Forecast

Table 3.5 below lists the legislative and policy changes that affect the revenue forecast for fiscal years 2021-2024.

Table 3.5
Summary of Recent Legislation Affecting General Fund Revenues
(Millions of Dollars)

	FY21	FY22	FY23	FY24
CORPORATE INCOME TAX				
2018 Allow Metallurgical Coal Credits -- HB665/SB378, 2018	0.0	(6.5)	(5.8)	(5.2)
Increase Existing R&D Expenses Tax Credit Cap -- HB884/SB58, 2016	(1.0)	(1.0)	(1.0)	(1.0)
New Large R&D Tax Credit -- HB884/SB58, 2016	(20.0)	(20.0)	(20.0)	(20.0)
Increase Existing R&D Expenses Tax Credit Cap -- SB110, 2020			(4.8)	(4.8)
Sunset Telework tax credit	0.1	0.1	0.1	0.1
Conformity to TCJA -- HB2529/SB1372, 2019	187.3	262.4	329.7	318.4
INDIVIDUAL INCOME TAX				
Land Preservation Tax Credit (Total Cost)	83.7	83.7	83.7	83.7
Retain \$20,000 limit on LPTC	10.3	10.3	10.3	
Conformity to TCJA (Business Provisions in Individual) -- HB2529/SB1372, 2019	(0.3)	43.8	93.5	86.1
Conformity to TCJA Pease Limitation -- HB2529/SB1372, 2019	73.3	76.1	79.1	82.2
Conformity to TCJA (Individual Provisions) -- HB2529/SB1372, 2019	466.7	492.5	520.0	546.1
Conformity to TCJA -- HB2529/SB1372, 2019	(301.5)	(309.2)	(317.8)	(325.9)
Worker misclassification Audits -- Ch1289	1.7	2.6	2.6	2.6
1099K Threshold Change -- Ch1289	10.0	20.0	20.0	20.0
Conformity Technical -- Ch1289	(1.3)	1.5		
Conformity -- HB1413, Ch 255	(4.7)	2.4	0.9	0.3
Texas Holdem -- SB936	(0.4)	0.2	0.2	0.2
STATE SALES AND USE TAX				
ATV Sales Tax Increase -- C. 840, SB249; C. 838, HB 1441, 2018	0.2	0.2	0.2	0.2
Personal Hygiene exemption - HB2540, 2019	(3.6)	(3.7)	(3.9)	(4.0)
Tobacco Products Tax Increase -- C. 1289	0.1	0.2	0.4	0.8
INSURANCE COMPANY PREMIUMS				
Historic Rehab Tax Credit (\$5 mil) -- HB2460/SB1034, 2017 and Chapter 2, 2018	13.0	13.0	13.0	13.0
OTHER REVENUE				
Bottomlands Permits Fees (Oyster Leasing C&R Programs)	(0.4)	(0.4)	(0.4)	(0.4)

SECTION 4
NON-GENERAL FUND REVENUES

Section 4 Non-General Fund Revenues

Transportation Revenues

Chapter 1230, enacted during the 2020 session of the General Assembly, directed most transportation revenues to a new Commonwealth Transportation Fund. In addition to the financial structural changes made to the Commonwealth's transportation funding system, several changes were made to the funding mechanisms: the motor fuels tax was converted to a cents-per-gallon tax, the base registration fee was reduced, and a highway use fee for alternative fuel and fuel-efficient vehicles will be implemented in fiscal year 2021.

Revenues used for the Commonwealth's transportation program are derived from the following taxes and fees:

- Motor Fuels and Road Use Taxes,
- A 4.15 percent Vehicle Sales and Use Tax,
- Licensing fees,
- 0.60 cent State Retail Sales and Use Tax,
- 0.3 percent State Retail Sales and Use tax,
- 3.0 cents of the State Recordation Tax,
- One-third of State Insurance Premiums Tax,
- International Registration Plan Fees,
- Interest Earnings, and
- Other miscellaneous taxes and fees.

In addition, federal, local, and toll revenues are also used to finance transportation programs. These revenue sources, however, do not determine the fiscal capacity of the state's transportation program and, therefore, are not addressed here. Instead, the discussion focuses on revenues from state sources.

Fiscal Year 2020 in Review

Table 4.1 on the following page compares actual collections in fiscal year 2020 to the official forecast for the Commonwealth Transportation Fund (CTF). Total transportation revenues totaled over \$3.6 billion, an increase of \$50.2 million over last year. Revenue collections grew by 1.4 percent, lagging the official forecast of 4.8 percent growth, resulting in a forecast variance of 3.3 percent.

Due to the Covid-19 pandemic and subsequent phases of lockdowns, the CTF's major revenue sources fell short of their respective forecasts. Solid growth over the first three quarters of fiscal year 2020 offset some of the damage from the pandemic.

NON-GENERAL FUND REVENUES

Table 4.1
Actual Collections Compared to the Official Forecast for Fiscal Year 2020 (Preliminary)
(Millions of Dollars)

Revenue Sources	FY2019 Actual	FY2020 Actual	FY2020 Forecast	Percent Change 2019-2020		Forecast Variance	
				Actual	Forecast	Amount	Percent
Motor Fuels Tax	844.7	844.0	884.9	(0.1)	4.8	(40.9)	(4.6)
Road Use Tax	9.8	20.5	24.8	109.2	153.1	(4.3)	(17.3)
Vehicle Sales Tax	978.6	954.1	988.8	(2.5)	1.0	(34.7)	(3.5)
Vehicle Licenses	266.1	270.8	299.2	1.8	12.4	(28.4)	(9.5)
State Sales Tax	1,087.8	1,124.1	1,153.1	3.3	6.0	(29.0)	(2.5)
Recordation Tax	47.1	59.7	48.8	26.8	3.6	10.9	22.3
Insurance Premiums Tax	168.7	183.6	183.6	8.8	8.8	0.0	0.0
Int'l Registration Plan	72.6	70.4	70.8	(3.0)	(2.5)	(0.4)	(0.6)
Interest Earnings	16.4	19.8	9.8	20.7	(40.2)	10.0	102.0
Rental Tax	42.4	38.7	43.6	(8.7)	2.8	(4.9)	(11.2)
Aviation Fuels Tax	2.0	1.8	2.0	(10.0)	0.0	(0.2)	(10.0)
Miscellaneous	19.0	17.9	17.9	(5.8)	(5.8)	0.0	0.0
TOTAL	\$3,555.2	\$3,605.4	\$3,727.3	1.4	4.8	(121.9)	(3.3)

Outlook for Key Tax Base Variables

Motor Fuel Consumption

Table 4.2 on the next page shows that gasoline consumption fell by 7.4 percent and diesel fuel consumption declined by 10.9 percent in fiscal year 2020 as the pandemic and resultant lockdowns affected motor fuels consumption.

Travel on all roads and streets changed by -12.3 percent (-35.3 billion vehicle miles) for August 2020 as compared with August 2019. Travel for the month is estimated to be 251.3 billion vehicle miles." The 12-month moving average was down 1.1 percent month-over-month and down 8.8 percent year-over-year. If population growth is factored in, the 12-month MA of the civilian population-adjusted data (age 16-and-over) was down 1.2 percent month-over-month and down 9.9 percent year-over-year.

The Great Recession had a substantial impact on our driving habits, but habits bounced back over the next five or so years. The decline in driving was most likely related to

the cost of gasoline during that time period. The COVID-19 pandemic has had a massive impact on driving as Americans are staying home for work, meals, and entertainment.

Table 4.2
Motor Fuel Consumption, History and Forecast, Fiscal Years 2020 - 2024
(Percent Growth)

	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>
Taxable Gallons - Gasoline					
Official	(7.4)	0.5	0.3	0.3	0.1
Standard		3.1	(0.1)	0.5	0.1
Alternative		(0.2)	0.9	3.2	2.0
Taxable Gallons - Diesel					
Official	(10.9)	(0.3)	(1.0)	(1.0)	(2.8)
Standard		0.4	2.0	2.7	1.1
Alternative		(5.2)	(3.0)	7.8	6.3

Vehicle Sales

New car sales declined by 6.0 percent and used car sales fell by 10.9 percent in fiscal year 2020.

Table 4.3 shows the official and November 2020 forecasts for new and used vehicles. The discussion of the vehicle sales outlook is divided into two sections: new taxable titles and used taxable titles.

Table 4.3
Virginia Vehicle Market, History and Forecast, Fiscal Years 2020 - 2024
(Percent Growth)

	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>
New Taxable Titles					
Official	(6.0)	(1.1)	3.1	2.6	2.0
Standard		(4.8)	(5.8)	13.0	(1.4)
Alternative		(8.6)	(13.4)	19.9	3.3
Used Taxable Titles					
Official	(10.9)	(0.1)	(0.3)	0.9	(0.4)
Standard		(5.0)	(1.5)	6.2	0.1
Alternative		(6.8)	(5.7)	6.7	4.0

NON-GENERAL FUND REVENUES

New Taxable Titles: In fiscal year 2020, over 357,000 new vehicles were titled in Virginia, a decline of 22,699 units from fiscal year 2019.

The November forecast expects a slight decline from the fiscal year 2020 level as the economic slowing and pandemic negatively affect sales. The next two to three months will likely determine the course of 2021. Between now and the end of the year there will be results from vaccine trials that if positive could send consumer confidence up and buoy new-vehicle sales. On the flip side, many experts predict a second wave of infection that could slow economic activity.

The case for decreasing sales through the fourth quarter is not fully virus-dependent. The main reasons are emanating from the federal government. Congress has been unable to put together additional fiscal stimulus despite significant weakness in the labor market and major employers such as local governments, theme parks, and airlines announcing additional layoffs.

There is a risk of a contested election. A contested election followed by demonstrations and social unrest could derail some of the progress made. In this scenario significant angst and uncertainty for many consumers who are already struggling through a pandemic and recession cause purse strings to tighten. The pullback in overall demand will not leave auto sales untouched.

Used Taxable Titles: 1,049,858 used cars were sold in Virginia in fiscal year 2020, a drop of 128,300 units from fiscal year 2019. Used car sales generally follow a sales pattern similar to new car sales. As used car prices begin to moderate, sales of these vehicles should increase as lower prices relative to new cars make used vehicles more attractive to buyers.

November 2020 Standard Commonwealth Transportation Fund Forecast

Table 4.4 on the following pages presents a comparison of the November 2020 standard forecast to the August 2020 interim forecast.

The November forecast shows an increase of \$193.7 million and \$75.9 million in fiscal years 2021 and 2022, respectively.

NON-GENERAL FUND REVENUES

Table 4.4
The Interim and November Standard Commonwealth Transportation Fund Forecast for Fiscal Year 2021
(Dollars in Millions)

November 9, 2020

	Fiscal Year 2020		Fiscal Year 2021				
	Forecast	% Growth	Interim Forecast	November Forecast	Change	% Growth over FY 20 Interim November	
Commonwealth Transportation Fund							
Motor Fuels Tax	\$ 844.0	(0.1) %	\$ 963.7	\$ 1,016.4	\$ 52.7	14.2 %	20.4 %
Road Tax	20.5	109.2	27.4	25.4	(2.0)	33.7	23.9
Aviation Fuels Tax	1.8	(10.0)	2.0	2.0	0.0	11.1	11.1
Motor Vehicle Sales and Use Tax	954.1	(2.5)	886.6	942.4	55.8	(7.1)	(1.2)
Motor Vehicle Rental Tax	38.7	(8.9)	32.6	24.7	(7.9)	(15.8)	(36.2)
Motor Vehicle License Fees	270.8	1.8	206.5	209.7	3.2	(23.7)	(22.6)
Highway User Fee	0.0	n/a	38.0	38.0	0.0	n/a	n/a
International Registration Plan	70.4	(3.0)	73.7	71.0	(2.7)	4.7	0.9
Retail Sales and Use Tax	1,124.2	3.3	1,021.6	1,096.9	75.3	(9.1)	(2.4)
Recordation Tax (3 cents)	59.7	26.8	45.3	67.1	21.8	(24.1)	12.4
Insurance Premiums Tax (1/3)	183.6	8.9	181.4	181.4	0.0	(1.2)	(1.2)
Interest Earnings	19.8	20.7	12.0	10.1	(1.9)	(39.4)	(49.0)
Miscellaneous	17.9	(5.8)	17.9	17.3	(0.6)	0.0	(3.4)
Total State Taxes and Fees	\$ 3,605.5	1.4 %	\$ 3,508.7	\$ 3,702.4	\$ 193.7	(2.7) %	2.7 %

The Interim forecast is based on the June 2020 IHS Market Standard outlook and the corresponding Virginia state forecast developed by the Department of Taxation.

The November forecast is based on the October 2020 IHS Market Standard outlook and the corresponding Virginia state forecast developed by the Department of Taxation.

NON-GENERAL FUND REVENUES

Table 4.4
The Interim and November Standard Commonwealth Transportation Fund Forecast for Fiscal Year 2022
(Dollars in Millions)

November 9, 2020

	Fiscal Year 2022				% Growth over FY 21	
	Interim Forecast	November Forecast	Change	Interim	November	
Commonwealth Transportation Fund						
Motor Fuels Tax	\$ 1,204.4	\$ 1,278.8	\$ 74.4	25.0 %	25.8 %	
Road Tax	29.5	27.5	(2.0)	7.7	8.3	
Aviation Fuels Tax	2.0	2.0	0.0	0.0	0.0	
Motor Vehicle Sales and Use Tax	938.1	899.6	(38.5)	5.8	(4.5)	
Motor Vehicle Rental Tax	32.3	29.7	(2.6)	(0.9)	20.2	
Motor Vehicle License Fees	207.9	202.9	(5.0)	0.7	(3.2)	
Highway User Fee	46.6	46.6	0.0	n/a	22.6	
International Registration Plan	73.6	73.9	0.3	(0.1)	4.1	
Retail Sales and Use Tax	1,050.2	1,126.0	75.8	2.8	2.7	
Recordation Tax (3 cents)	42.2	57.0	14.8	(6.8)	(15.1)	
Insurance Premiums Tax (1/3)	205.9	171.8	(34.1)	13.5	(5.3)	
Interest Earnings	16.7	10.1	(6.6)	39.2	0.0	
Miscellaneous	17.9	17.3	(0.6)	0.0	0.0	
Total State Taxes and Fees	\$ 3,867.3	\$ 3,943.2	\$ 75.9	10.2 %	6.5 %	

The Interim forecast is based on the June 2020 IHS Market Standard outlook and the corresponding Virginia state forecast developed by the Department of Taxation.

The November forecast is based on the October 2020 IHS Market Standard outlook and the corresponding Virginia state forecast developed by the Department of Taxation.

NON-GENERAL FUND REVENUES

Table 4.4
The Interim and November Standard Commonwealth Transportation Fund Forecast for Fiscal Year 2023
(Dollars in Millions)

November 9, 2020

	Fiscal Year 2023				
	Interim Forecast	November Forecast	Change	% Growth over FY 22	
				Interim	November
Commonwealth Transportation Fund					
Motor Fuels Tax	\$ 1,362.6	\$ 1,345.4	\$ (17.2)	13.1 %	5.2 %
Road Tax	29.5	27.5	(2.0)	0.0	0.0
Aviation Fuels Tax	2.0	2.0	0.0	0.0	0.0
Motor Vehicle Sales and Use Tax	1,038.3	983.6	(54.7)	10.7	9.3
Motor Vehicle Rental Tax	33.1	31.1	(2.0)	2.5	4.7
Motor Vehicle License Fees	208.6	202.9	(5.7)	0.3	0.0
Highway User Fee	53.1	53.1	0.0	n/a	13.9
International Registration Plan	72.0	73.8	1.8	(2.2)	(0.1)
Retail Sales and Use Tax	1,223.0	1,157.5	(65.5)	16.5	2.8
Recordation Tax (3 cents)	42.2	57.0	14.8	0.0	0.0
Insurance Premiums Tax (1/3)	214.3	177.5	(36.8)	4.1	3.3
Interest Earnings	16.7	10.1	(6.6)	0.0	0.0
Miscellaneous	17.9	17.3	(0.6)	0.0	0.0
Total State Taxes and Fees	\$ 4,313.3	\$ 4,138.8	\$ (174.5)	11.5 %	5.0 %

The Interim forecast is based on the June 2020 IHS Market Standard outlook and the corresponding Virginia state forecast developed by the Department of Taxation.

The November forecast is based on the October 2020 IHS Market Standard outlook and the corresponding Virginia state forecast developed by the Department of Taxation.

NON-GENERAL FUND REVENUES

Table 4.4
The Interim and November Standard Commonwealth Transportation Fund Forecast for Fiscal Year 2024
in Millions)

November 9, 2020

	Fiscal Year 2024				
	Interim Forecast	November Forecast	Change	% Growth over FY 23 Interim November	
Commonwealth Transportation Fund					
Motor Fuels Tax	\$ 1,390.8	\$ 1,377.1	\$ (13.7)	2.1 %	2.4 %
Road Tax	29.5	28.3	(1.2)	0.0	2.9
Aviation Fuels Tax	2.0	2.0	0.0	0.0	0.0
Motor Vehicle Sales and Use Tax	1,052.4	982.8	(69.6)	1.4	(0.1)
Motor Vehicle Rental Tax	33.1	31.6	(1.5)	0.0	1.6
Motor Vehicle License Fees	208.6	206.0	(2.6)	0.0	1.5
Highway User Fee	53.1	53.1	0.0	n/a	0.0
International Registration Plan	68.3	72.2	3.9	(5.1)	(2.2)
Retail Sales and Use Tax	1,245.5	1,184.4	(61.1)	1.8	2.3
Recordation Tax (3 cents)	42.2	57.0	14.8	0.0	0.0
Insurance Premiums Tax (1/3)	222.9	184.3	(38.6)	4.0	3.8
Interest Earnings	16.7	10.1	(6.6)	0.0	0.0
Miscellaneous	<u>17.9</u>	<u>17.3</u>	<u>(0.6)</u>	<u>0.0</u>	<u>0.0</u>
Total State Taxes and Fees	\$ <u>4,383.0</u>	\$ <u>4,206.2</u>	\$ <u>(176.8)</u>	<u>1.6</u> %	<u>1.6</u> %

The Interim forecast is based on the June 2020 IHS Market Standard outlook and the corresponding Virginia state forecast developed by the Department of Taxation.

The November forecast is based on the October 2020 IHS Market Standard outlook and the corresponding Virginia state forecast developed by the Department of Taxation.

NON-GENERAL FUND REVENUES

Alternative Forecast

Table 4.5 on the following pages compares the August interim and November alternative Commonwealth Transportation Fund forecasts. Under the alternative forecast, total transportation fund revenues are \$86.4 million higher in fiscal year 2021 and \$109.8 million lower in fiscal year 2022.

This forecast is based on IHS Markit October 2020 alternative forecast and the corresponding Virginia state forecast.

NON-GENERAL FUND REVENUES

Table 4.5
The Interim and November Alternative Commonwealth Transportation Fund Forecast for Fiscal Year 2021
(Dollars in Millions)

November 9, 2020

	Fiscal Year 2020		Fiscal Year 2021				
	Forecast	% Growth	Interim Forecast	November Forecast	Change	% Growth over FY 20 Interim November	
Commonwealth Transportation Fund							
Motor Fuels Tax	\$ 844.0	(0.1) %	\$ 963.7	\$ 979.1	\$ 15.4	14.2 %	16.0 %
Road Tax	20.5	109.2	27.4	25.4	(2.0)	33.7	23.9
Aviation Fuels Tax	1.8	(10.0)	2.0	2.0	0.0	11.1	11.1
Motor Vehicle Sales and Use Tax	954.1	(2.5)	886.6	915.3	28.7	(7.1)	(4.1)
Motor Vehicle Rental Tax	38.7	(8.9)	32.6	24.7	(7.9)	(15.8)	(36.2)
Motor Vehicle License Fees	270.8	1.8	206.5	209.7	3.2	(23.7)	(22.6)
Highway User Fee	0.0	n/a	38.0	38.0	0.0	n/a	n/a
International Registration Plan	70.4	(3.0)	73.7	71.0	(2.7)	4.7	0.9
Retail Sales and Use Tax	1,124.2	3.3	1,021.6	1,054.0	32.4	(9.1)	(6.2)
Recordation Tax (3 cents)	59.7	26.8	45.3	67.1	21.8	(24.1)	12.4
Insurance Premiums Tax (1/3)	183.6	8.9	181.4	181.4	0.0	(1.2)	(1.2)
Interest Earnings	19.8	20.7	12.0	10.1	(1.9)	(39.4)	(49.0)
Miscellaneous	17.9	(5.8)	17.9	17.3	(0.6)	0.0	(3.4)
Total State Taxes and Fees	\$ 3,605.5	1.4 %	\$ 3,508.7	\$ 3,595.1	\$ 86.4	(2.7) %	(0.3) %

The Interim forecast is based on the June 2020 IHS Market Standard outlook and the corresponding Virginia state forecast developed by the Department of Taxation.

The November forecast is based on the October 2020 IHS Market Alternative outlook and corresponding Virginia state forecast developed by the Department of Taxation.

NON-GENERAL FUND REVENUES

Table 4.5
The Interim and November Alternative Commonwealth Transportation Fund Forecast for Fiscal Year 2022
(Dollars in Millions)

November 9, 2020

	Fiscal Year 2022				% Growth over FY 21	
	Interim Forecast	November Forecast	Change	Interim	November	
Commonwealth Transportation Fund						
Motor Fuels Tax	\$ 1,204.4	\$ 1,228.8	\$ 24.4	25.0 %	25.5 %	
Road Tax	29.5	27.5	(2.0)	7.7	8.3	
Aviation Fuels Tax	2.0	2.0	0.0	0.0	0.0	
Motor Vehicle Sales and Use Tax	938.1	822.4	(115.7)	5.8	(10.1)	
Motor Vehicle Rental Tax	32.3	29.7	(2.6)	(0.9)	20.2	
Motor Vehicle License Fees	207.9	202.9	(5.0)	0.7	(3.2)	
Highway User Fee	46.6	46.6	0.0	n/a	22.6	
International Registration Plan	73.6	73.9	0.3	(0.1)	4.1	
Retail Sales and Use Tax	1,050.2	1,067.5	17.3	2.8	1.3	
Recordation Tax (3 cents)	42.2	57.0	14.8	(6.8)	(15.1)	
Insurance Premiums Tax (1/3)	205.9	171.8	(34.1)	13.5	(5.3)	
Interest Earnings	16.7	10.1	(6.6)	39.2	0.0	
Miscellaneous	17.9	17.3	(0.6)	0.0	0.0	
Total State Taxes and Fees	\$ 3,867.3	\$ 3,757.5	\$ (109.8)	10.2 %	4.5 %	

The Interim forecast is based on the June 2020 IHS Market Standard outlook and the corresponding Virginia state forecast developed by the Department of Taxation.

The November forecast is based on the October 2020 IHS Market Alternative outlook and corresponding Virginia state forecast developed by the Department of Taxation.

NON-GENERAL FUND REVENUES

Table 4.5
The Interim and November Alternative Commonwealth Transportation Fund Forecast for Fiscal Year 2023
(Dollars in Millions)

November 9, 2020

	Fiscal Year 2023				
	Interim Forecast	November Forecast	Change	% Growth over FY 22	
	Interim	November		Interim	November
Commonwealth Transportation Fund					
Motor Fuels Tax	\$ 1,362.6	\$ 1,358.1	\$ (4.5)	13.1 %	10.5 %
Road Tax	29.5	27.5	(2.0)	0.0	0.0
Aviation Fuels Tax	2.0	2.0	0.0	0.0	0.0
Motor Vehicle Sales and Use Tax	1,038.3	926.7	(111.6)	10.7	12.7
Motor Vehicle Rental Tax	33.1	31.1	(2.0)	2.5	4.7
Motor Vehicle License Fees	208.6	202.9	(5.7)	0.3	0.0
Highway User Fee	53.1	53.1	0.0	n/a	13.9
International Registration Plan	72.0	73.8	1.8	(2.2)	(0.1)
Retail Sales and Use Tax	1,223.0	1,098.5	(124.5)	16.5	2.9
Recordation Tax (3 cents)	42.2	57.0	14.8	0.0	0.0
Insurance Premiums Tax (1/3)	214.3	177.5	(36.8)	4.1	3.3
Interest Earnings	16.7	10.1	(6.6)	0.0	0.0
Miscellaneous	<u>17.9</u>	<u>17.3</u>	<u>(0.6)</u>	<u>0.0</u>	<u>0.0</u>
Total State Taxes and Fees	\$ <u>4,313.3</u>	\$ <u>4,035.6</u>	\$ <u>(277.7)</u>	<u>11.5</u> %	<u>7.4</u> %

The Interim forecast is based on the June 2020 IHS Market Standard outlook and the corresponding Virginia state forecast developed by the Department of Taxation.

The November forecast is based on the October 2020 IHS Market Alternative outlook and corresponding Virginia state forecast developed by the Department of Taxation.

NON-GENERAL FUND REVENUES

Table 4.5
The Interim and November Alternative Commonwealth Transportation Fund Forecast for Fiscal Year 2024
(Dollars in Millions)

November 9, 2020

	Fiscal Year 2024				
	Interim Forecast	November Forecast	Change	% Growth over FY 23	
				Interim	November
Commonwealth Transportation Fund					
Motor Fuels Tax	\$ 1,390.8	\$ 1,426.3	\$ 35.5	2.1 %	5.0 %
Road Tax	29.5	28.3	(1.2)	0.0	2.9
Aviation Fuels Tax	2.0	2.0	0.0	0.0	0.0
Motor Vehicle Sales and Use Tax	1,052.4	964.8	(87.6)	1.4	4.1
Motor Vehicle Rental Tax	33.1	31.6	(1.5)	0.0	1.6
Motor Vehicle License Fees	208.6	206.0	(2.6)	0.0	1.5
Highway User Fee	53.1	53.1	0.0	n/a	0.0
International Registration Plan	68.3	72.2	3.9	(5.1)	(2.2)
Retail Sales and Use Tax	1,245.5	1,126.7	(118.8)	1.8	2.6
Recordation Tax (3 cents)	42.2	57.0	14.8	0.0	0.0
Insurance Premiums Tax (1/3)	222.9	184.3	(38.6)	4.0	3.8
Interest Earnings	16.7	10.1	(6.6)	0.0	0.0
Miscellaneous	17.9	17.3	(0.6)	0.0	0.0
Total State Taxes and Fees	\$ 4,383.0	\$ 4,179.7	\$ (203.3)	1.6 %	3.6 %

The Interim forecast is based on the June 2020 IHS Market Standard outlook and the corresponding Virginia state forecast developed by the Department of Taxation.

The November forecast is based on the October 2020 IHS Market Alternative outlook and corresponding Virginia state forecast developed by the Department of Taxation.

ABC Revenues and Profits Fiscal Year 2020

In fiscal year 2020, ABC’s total revenue, excluding state tax receipts, was \$1,001.4 million. Gross sales of alcoholic beverages in the retail stores accounted for 97.8 percent of the revenue. The remaining 2.2 percent of revenue was generated largely through the Department’s regulatory and licensing activities. Table 4.6 shows ABC’s revenues, costs, and profits for fiscal years 2017 through 2020. Along with the net ABC profits, Table 4.6 also shows transfers required by the Acts of the Assembly and net profits for distribution transferred to the General Fund.

**Table 4.6
Alcoholic Beverage Control Authority Components
of the Enterprise Fund - Revenues, Expenses, and Disbursements
Fiscal Years 2017-2020 (\$ millions)**

	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>
Total Revenue*	\$ 807.6	\$ 844.9	\$ 902.7	\$ 1,001.4
Cost of Goods & Total Operating Expenses	637.0	664.2	701.4	789.8
Net ABC Profit	172.9	181.2	202.0	212.0
Transfer to the General Fund:				
Reimbursement for Appropriations as provided by the Acts of the Assembly	69.4	69.9	69.9	69.4
Net Profits for Distribution	\$ 101.7	\$ 109.3	\$ 126.7	\$ 142.7

*These revenue figures exclude receipts collected under the state tax on alcoholic beverages and the general sales tax.

ABC Revenues and Profit Forecast for Fiscal Years 2021-2023

Comparisons of ABC’s performance in fiscal year 2019, estimated performance for fiscal year 2020, and actual performance in fiscal year 2020, are included in Table 4.7. Fiscal Year 2020 compared to 2019 shows an increase in sales, an increase in net ABC profits for distribution, and an increase in state tax revenue. Table 4.8 contains fiscal year 2020 results for store sales, profits for distribution and state tax revenues along with the 2021 through 2023 forecasts. Profit forecasts in Table 4.8 are net of any transfers mandated by the Appropriation Act.

NON-GENERAL FUND REVENUES

ABC's profit forecast is a factor of two elements: sales performance and trends in expenses. In both cases, forecasts beyond fiscal year 2021 are more prone to forecast error given the uncertainty with the economy and impacts on customer behavior and ABC's cost structure.

Table 4.7
A Comparison of Fiscal Year 2019 Results
to Fiscal Year 2020 Estimated and Actual Results
(\$ millions)

	<u>FY19 Actual</u>	<u>FY20 Estimate</u>	<u>FY20 Actual</u>	<u>Variance</u>	
				<u>Amount</u>	<u>Percent</u>
Total Store Sales*	1,054.3	1,106.8 [▲]	1,173.6	66.8	6.0
Net ABC Profit for Distribution	126.7	121.6	142.7	21.1	17.4
State Tax Revenue**	203.5	211.0	224.2	13.2	6.3

*These figures include state tax on alcoholic beverages and exclude the general sales tax collected at ABC stores

**State Tax Revenue does not include \$9.1m wine liter tax transferred to DBHDS

In fiscal year 2021, ABC expects sales to continue to grow in the retail segment. Sales in the mixed beverage licensee (restaurant) segment are lower due to the impact of COVID on the restaurant industry. Sales growth projections are lower than the previous year's growth projections due to the higher than expected growth of fiscal year 2020 including unexpected sales growth during the initial stages of the pandemic. Sales from ABC's retail outlets continue to increase year over year. Uncontrollable factors such as holiday season sales and licensee sales have the potential to significantly impact the accuracy of ABC's sales forecast. Currently, ABC is experiencing growth in retail (store and e-Commerce) sales and declines in restaurant sales. It is also important to note that as ABC moves into its new office and warehouse, that the old office and warehouse will be sold at a significant gain. The timing and amount of the gain has not been determined and therefore are not reflected in this forecast.

On the expense side, ABC is faced with mandated salary and benefit costs, energy inflation, automatic rent escalation, telecommunication and technology costs and growth in credit card discount fees that are all very difficult to influence in the short run. Based on ABC's operations in the first seven months of the COVID pandemic, expenses are also expected to be higher with regard to enhanced pay for retail and warehouse employees, personal protective equipment and heightened cleaning protocols for retail stores, the warehouse and central office. For fiscal year 2021 there are significant increases in amortization (\$1.3 million), ongoing support of new system projects principally the licensing and point-of-sale systems (\$4.6 million) and expenses on the new building project (\$1.2 million).

Personnel costs account for 57 percent of ABC non-merchandise expenditures, 15 percent are for continuous charges such as rent and utilities, 23 percent are for contractual services such as credit cards fees, shipping product to stores and telecommunications, and 5 percent are for miscellaneous expenses such as supplies and materials, equipment and depreciation. In fiscal years 2021 through 2023, increases in expenditures are exacerbated by the need to make significant ongoing infrastructure improvements in order to improve our information technology infrastructure. Currently, several of the ABC’s systems are dated and have reached their end-of-life, needing to be upgraded to maintain viability and to keep up with ABC’s growing needs. Upgrading the outdated systems also addresses an Auditor of Public Accounts audit point, ensuring that ABC complies with state and industry security standards. Relocation to a new central office building, along with relocation of the ABC’s warehouse, are also included in these ongoing infrastructure improvements. Changes in salary and benefit cost rates, as well as mandated Appropriations Act transfers, can also significantly impact the accuracy of ABC’s expense forecasts. Additionally, implementation of GASB Statement No. 87 will have an impact on profit in fiscal year 2022 and beyond.

**Table 4.8
Forecast of ABC Store Sales, ABC State Tax on Alcohol,
and Net Profits for Distribution
(\$ millions)**

	Actual	Forecast			
	2020	2021	2022	2023	2024
Total ABC Store Sales: (1)	1,173.6 [▼]	1,216.5	1,269.1	1,326.2	1,385.9
Excess FY 2020 Q4 profits (7)		11.1			
Adjusted Net Profits for Distribution: (2) (3) (5) (6)	142.7	128.4	132.7	142.5	150.1
Total Adjusted Net Profits for Distribution	142.7	139.5	132.7	142.5	150.1
ABC State Tax Revenues:(1)					
Spirits	193.8	202.5 [▼]	211.3	220.8	230.8
Wine (4)	30.4	31.0	31.6	32.2	32.8
Total Tax Revenue:	224.2	233.5	242.9	253.0	263.6

- (1) Excludes the general sales tax and lottery sales
- (2) Does not include appropriation transfers mandated by Virginia Acts of Assembly
- (3) ABC develops forecasts on an accrual basis. The transfer of profits occurs on a cash basis. Variances often occur at year end when ABC has to transfer estimated profits on June 30th.
- (4) Wine figure excludes statutory transfers
- (5) GASB Statement No. 87 will be implemented in 2021, which will impact profits for distribution
- (6) Forecasted drop in FY 2021 Adjusted Net Profit is driven by significant increases in amortization (million), ongoing support of new system projects principally the licensing and point-of-sale systems (million) and expenses on the new building project (\$1.2 million).
- (7) Reflects the accrual-based transfer of the excess FY 2020 Q4 profits deposited into the general fund in Q1 of FY 2021

NON-GENERAL FUND REVENUES

Distribution of ABC Profits and ABC State Tax Revenues

During fiscal year 2020, ABC contributed \$212.1 million (accrual basis) of net profits to the Commonwealth, and collected \$275.5 million of taxes on store sales, wine and beer and an additional \$57.7 million of general sales tax totaling \$545.3 million.

Net ABC profits are generally earmarked for deposit in the General Fund; certain appropriations have been made by the General Assembly to recover alcohol-related program costs. The transfers for these programs and others were \$69.4 million in fiscal year 2020. These appropriations are charged against net ABC profits before being transferred to the General Fund. The remaining ABC profits are transferred into the General Fund as ABC profits. ABC expects to meet transfer requirements in fiscal year 2021 given the projected increase in gross sales. However, risks include reduced purchases (economic uncertainty, weather related, or supply chain related) and unforeseen increases in expenses.

In any given time period, amounts transferred to the General Fund will not correspond to net ABC profit earned, due to a 50 day interval before the profits are transferred to the Fund.

Table 4.9
Virginia Alcoholic Beverage Control Authority Forecast (FY2021-FY2026) (1)
As of 10/16/2020
(in millions)

	Actual FY2020	Forecast FY2021	FY2022	FY2023	FY2024	FY2025	FY2026
Revenue Sources:		<i>Growth Rate</i> 3.65%	4.32%	4.50%	4.50%	4.50%	4.50%
Alcoholic Beverages (Store Sales)	1,173.6	1,216.5	1,269.1	1,326.2	1,385.9	1,448.2	1,513.4
Less: State Taxes on Spirits & Wine	193.8	202.5	211.3	220.8	230.8	241.1	252.0
Net Store Sales	979.8	1,014.0	1,057.8	1,105.4	1,155.1	1,207.1	1,261.4
Other Revenue	21.6	23.3	23.5	23.7	23.9	24.1	24.4
Total ABC Revenue	1,001.4	1,037.3	1,081.3	1,129.1	1,179.0	1,231.2	1,285.8
Cost of Goods Sold:	563.2	583.7	609.0	636.4	665.0	694.9	726.2
Operating Costs:	226.2	248.6	256.1	266.5	278.2	291.3	301.7
Infrastructure Projects (2):	-	7.2	10.6	12.5	15.4	16.0	15.2
GASB 87:	-	-	3.5	1.8	0.9	-	-
ABC Net Profit	212.0	197.8	202.1	211.9	219.5	229.0	242.7
Profit Carryover from Prior Fiscal Year		11.1	-				
ABC Profit Requirement & Mandatory Transfers (3)		208.9	202.1				
Over/(Under) Required Transfer		-	-				

Notes:

- Forecast developed on accrual basis. The profit transfer occurs on a cash basis. Variances often occur at year end when ABC has to transfer estimated profits prior to June 30th.
- Infrastructure projects are ongoing and the depreciation/amortization impact with an increased impact beginning in FY21. These projects include the new warehouse/central office, point-of-sale system and licensing system.
- Conference Report to House Bill 5005

Virginia Lottery

Each fiscal year, the Lottery makes periodic transfers of net income (revenues from sales plus other income, minus expenses) to the Lottery Proceeds Fund, in accordance with the schedule included in the Appropriations Act. Expenses are comprised of prizes to players, commissions to retailers, ticket printing and distribution, contractual fees for gaming system operations, and administrative operating costs. The primary drivers of the net income transferred are sales of lottery products and prizes paid to players.

Actual Results - Fiscal Year 2020

The Virginia Lottery transferred \$613.4 million to the Lottery Proceeds Fund during fiscal year 2020. The Lottery also transferred \$2.0 million for debt set-off to the Department of Taxation and \$14.1 million from unclaimed prizes to the Literary Fund.

Sales for fiscal year 2020 were \$2.1 billion, a decrease of \$145.0 million (-6.3 percent) from fiscal year 2019. Net income was \$595.4 million, \$54.3 million (-8.4 percent) less than fiscal year 2019, due to lower sales.

Total transfers to the Lottery Proceeds Fund during fiscal year 2020 were as follows: \$26.9 million in residual profits from fiscal year 2019, and \$586.6 million in estimated profits from fiscal year 2020. The \$8.8 million of residual fiscal year 2020 profits, transferred in August 2020 after the 2020 fiscal year results were certified by the Auditor of Public Accounts, will be included in the total fiscal year 2021 transfers.

Forecast Overview - Fiscal Years 2021 through 2022

The Virginia Lottery developed its sales and revenue forecasts based upon a variety of baseline assumptions, including:

- continued traditional lottery gaming competition from neighboring jurisdictions, as well as the competition from casino-style gaming in nearby jurisdictions including Maryland, North Carolina, West Virginia, Kentucky and Delaware;
- no legislatively-mandated change in the overall compensation rate paid to retailers offering Lottery products, or other constraints on Lottery expenses including prizes;
- no additional legislatively mandated limitation on the administrative spending for the Lottery, other than the current statutory 10 percent spending cap in place since the Lottery's inception;
- no new constraints on the Lottery's sales and marketing efforts, including the ability to advertise products, establish prizes paid to players, and offer licensed property and other lottery games of chance that appeal to consumers; and
- no change to the July 1, 2021 implementation of the legislative prohibition on 10,000 games of skill currently operating in retail establishments throughout the Commonwealth.

NON-GENERAL FUND REVENUES

For fiscal year 2021, the Lottery is projecting sales of \$2.9 billion and net income (turnover to the Lottery Proceeds Fund) of \$676.2 million. Prize expense is estimated to be \$1.953 billion, or 67.3 percent of sales; retailer compensation is forecast to be \$129.8 million, or \$9.1 million more than the previous year. This forecast takes into account current trends, the expansion of the competitive gaming environment, simulation models for jackpot progressions and sales, and statistically expected prize expense rates. The total estimated \$676.2 million net income, plus the residual \$8.8 million of fiscal year 2020 profits that has been transferred during fiscal year 2021, brings the total expected transfers to the Lottery Proceeds Fund for fiscal year 2021 to \$685.0 million. This is an increase of \$27,071,726 from the figure in Chapter 1289 for fiscal year 2021.

For fiscal year 2022, the Lottery expects that sales will grow, creating revenue for the Lottery Proceeds Fund of \$690.9 million in fiscal year 2022, an increase of \$24.8 million from the figure in Chapter 1289 for fiscal year 2022.

For the biennium, the expected transfers to the Lottery Proceeds Fund total \$1.4 billion, or \$51.9 million more than the current budget reflects.

Sales Projections for Fiscal Years 2021 through 2022

For each fiscal year forecast, the Lottery total forecast is the sum of sales forecasts developed by the Lottery for each of its products. The methodology for each estimate is dependent upon the nature of the product. The data used in our models include such factors as: experiences of other U.S. and Canadian lotteries, variability of prize percentage, economic variables such as predicted interest rates, seasonal factors, promotions, and product life cycles.

For the current forecast period, the Lottery included projections of internet sales based on the limited actual sales activity since the games became available on July 1, 2020, as well as the sales activities of other U.S. lotteries with iLottery offerings.

Traditional Games

Traditional-style lottery products include those available at approximately 5,300 retail sales partners across Virginia. These products include scratch-off tickets, draw-game tickets where players select numbers that may match future draw results for chances to win prizes, instant-win games printed at lottery terminals, and limited-offerings including raffle style games.

iLottery Products

Beginning July 1, 2020, registered adult players within the geographic boundaries of Virginia may purchase Instant games online, for chances to win prizes. In addition to the online-only category of Instant games, several other traditional-style games are also available for purchase, including single-drawings or subscriptions to games including Powerball and Mega Millions.

Net Income for Fiscal Years 2021 through 2022

The Lottery is forecasting net income of \$676.2 million for fiscal year 2021, and \$690.9 million for fiscal year 2022. The Lottery's largest expense, prizes to players, is expected to increase over this period as sales increase and players buy more products designed with a higher portion of sales returned back in the form of prizes. Retailers should continue to earn commissions and incentives equal to about 5.6 percent of retail sales. Operating expenses are projected to remain low in proportion to sales, less than 6 percent of total sales – about half of the 10 percent statutory maximum.

Table 4.10
Forecast of Lottery Sales and Transfers to the Lottery Proceeds Fund
in \$ millions

	FY2021	FY2022	FY2023	FY2024
Sales	2,903.6	3,037.7	3,113.6	3,191.5
- Prize Expense	1,953.4	2,052.6	2,114.1	2,177.6
- Retailer Compensation	129.8	138.3	142.4	146.7
- Operating Expenses	146.4	158.2	166.1	174.4
+ Other Income	2.3	2.3	2.3	2.3
Net Income	676.2	690.9	693.2	695.0
Other Transfers	8.8	-	-	-
Total Available	685.0	690.9	693.2	695.0

Ongoing Risks to the Forecast

There are a number of ongoing risks associated with the Virginia Lottery's forecast that could significantly affect the Lottery's transfer to the Lottery Proceeds Fund. The first is luck. Since the basis of many of the Lottery's products is a random drawing, in the relatively short period of one year, a wide range of outcomes can occur. If the Lottery experiences unusually high payouts in its daily games in any given year, sales may be higher than projected, but profits lower simply due to players winning more money. Luck is also a primary driver of sales for Mega Millions and Powerball. If jackpots are won with more frequency than expected, then sales will be lower than expected due to small jackpots. A long period without a jackpot win can generate much higher sales due to the growth of the jackpot; this was the case in January 2016 when the Powerball jackpot grew to a world record \$1,586 million, and again in fiscal year 2019 with Mega Millions setting a record of \$1,537 million. This type of sales activity is never anticipated as part of a forecast of expected results, and can have longer-term negative impacts on game sales.

A second risk is competition from other gaming opportunities available to consumers. Mobile sports wagering is expected to be available in Virginia in the second half of fiscal

NON-GENERAL FUND REVENUES

year 2021. Four Virginia localities held referenda in November resulting in approval for casino gaming. While the casino operations are not expected to begin during the current biennium, a significant expansion of historical horse racing activity into the Northern Virginia region is anticipated during this biennium.

Other risks include the public health emergency and the potential for retail and consumer purchase disruption, the overall economic impacts from COVID in terms of employment and disposable income, as well as potential legislative action to delay the anticipated removal of skill games effective July 1, 2021.

The current estimates of sales and profits also presume that the Lottery's appropriation authority is sufficient to support its operations for activities including investments in technology, sales equipment necessary to sustain and expand the Lottery retailer network, advertising, and contractual commitments to vendor partners that are primarily based on percentage of sales agreements. Estimates also do not anticipate any change in the distribution of lottery profits, or any change in the prize allocations or prize types available to players.

APPENDIX A ECONOMIC DATA

TABLE A.1 - QUARTERLY NATIONAL AND VIRGINIA ECONOMIC VARIABLES

	History											
	2017.3	2017.4	2018.1	2018.2	2018.3	2018.4	2019.1	2019.2	2019.3	2019.4	2020.1	2020.2
Real Gross Domestic Product, Billions \$, SAAR	18,185.6	18,359.4	18,530.5	18,654.4	18,752.4	18,813.9	18,950.3	19,020.6	19,141.7	19,254.0	19,010.8	17,302.5
Annualized % Change	2.9	3.9	3.8	2.7	2.1	1.3	2.9	1.5	2.6	2.4	(5.0)	(31.4)
% Change from Prior Year's Quarter	2.4	2.7	3.1	3.3	3.1	2.5	2.3	2.0	2.1	2.3	0.3	(9.0)
Real Consumer Spending, Billions \$, SAAR	12,604.5	12,733.7	12,798.1	12,898.1	12,983.0	13,033.4	13,093.2	13,212.8	13,301.3	13,353.7	13,118.4	11,860.3
Annualized % Change	2.3	4.2	2.0	3.2	2.7	1.6	1.8	3.7	2.7	1.6	(6.9)	(33.2)
% Change from Prior Year's Quarter	2.4	2.9	2.6	2.9	3.0	2.4	2.3	2.4	2.5	2.5	0.2	(10.2)
U.S. Personal Income, Billions \$, SAAR	17,036.6	17,295.6	17,548.6	17,750.3	17,976.5	18,132.0	18,366.7	18,480.9	18,597.6	18,760.8	18,951.0	20,396.6
Annualized % Change	5.0	6.2	6.0	4.7	5.2	3.5	5.3	2.5	2.6	3.6	4.1	34.2
% Change from Prior Year's Quarter	5.1	5.5	5.5	5.5	5.5	4.8	4.7	4.1	3.5	3.5	3.2	10.4
Virginia Personal Income, Millions \$, SAAR	472,744.8	478,883.9	485,360.3	490,143.6	495,536.9	500,016.4	504,044.3	507,151.1	510,425.2	515,184.4	521,705.6	545,452.9
Annualized % Change	4.1	5.3	5.5	4.0	4.5	3.7	3.3	2.5	2.6	3.8	5.2	19.5
% Change from Prior Year's Quarter	4.2	4.3	4.7	4.7	4.8	4.4	3.8	3.5	3.0	3.0	3.5	7.6
Virginia Wages and Salaries, Millions \$, SAAR	241,464.3	244,490.0	247,966.6	249,693.6	252,861.3	255,329.1	259,368.9	261,081.2	263,254.7	266,303.1	269,189.3	255,390.8
Annualized % Change	4.1	5.1	5.8	2.8	5.2	4.0	6.5	2.7	3.4	4.7	4.4	(19.0)
% Change from Prior Year's Quarter	4.4	4.1	4.6	4.5	4.7	4.4	4.6	4.6	4.1	4.3	3.8	(2.2)
Virginia Dividends, Interest, and Rent, Millions \$, SAAR	101,440.8	103,057.2	105,049.0	106,782.5	108,019.4	108,653.6	107,177.7	107,699.2	107,618.2	107,945.2	108,190.4	106,008.3
Annualized % Change	4.3	6.5	8.0	6.8	4.7	2.4	(5.3)	2.0	(0.3)	1.2	0.9	(7.8)
% Change from Prior Year's Quarter	6.0	6.5	6.7	6.4	6.5	5.4	2.0	0.9	(0.4)	(0.7)	0.9	(1.6)
Virginia Total Proprietor's Income, Millions \$, SAAR	26,771.3	27,164.2	26,783.6	27,018.2	27,293.8	27,663.3	28,276.9	28,413.8	29,104.2	29,604.4	30,055.6	26,627.6
Annualized % Change	(0.2)	6.0	(5.5)	3.5	4.1	5.5	9.2	1.9	10.1	7.1	6.2	(38.4)
% Change from Prior Year's Quarter	(0.1)	0.6	(0.5)	0.9	2.0	1.8	5.6	5.2	6.6	7.0	6.3	(6.3)

SAAR: Seasonally Adjusted at Annual Rates

SA: Seasonally Adjusted

TABLE A.1 - QUARTERLY NATIONAL AND VIRGINIA ECONOMIC VARIABLE:

	History											
	2017.3	2017.4	2018.1	2018.2	2018.3	2018.4	2019.1	2019.2	2019.3	2019.4	2020.1	2020.2
Total U.S. Employment, Millions, SA	146.9	147.4	148.0	148.6	149.2	149.7	150.2	150.6	151.2	151.8	151.9	133.7
Annualized % Change	1.5	1.5	1.7	1.8	1.5	1.3	1.3	1.1	1.5	1.7	0.4	(40.0)
% Change from Prior Year's Quarter	1.5	1.5	1.5	1.6	1.6	1.6	1.5	1.3	1.3	1.4	1.2	(11.2)
Virginia Total Nonag. Employment, Thousands, SA	3,962.4	3,970.0	3,993.9	4,015.5	4,014.4	4,019.2	4,041.4	4,068.9	4,058.4	4,062.5	4,078.5	3,715.6
Annualized % Change	0.4	0.8	2.4	2.2	(0.1)	0.5	2.2	2.7	(1.0)	0.4	1.6	(31.1)
% Change from Prior Year's Quarter	1.1	1.0	1.3	1.4	1.3	1.2	1.2	1.3	1.1	1.1	0.9	(8.7)
CPI, All Urban, 1982-1984=1.0, SA	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.6	2.6	2.6	2.6	2.6
Annualized % Change	2.2	3.1	3.2	2.2	2.1	1.3	0.9	3.0	1.8	2.4	1.2	(3.5)
% Change from Prior Year's Quarter	2.0	2.1	2.2	2.7	2.7	2.2	1.6	1.8	1.8	2.0	2.1	0.4
Refiner's Acquisition Cost of Oil, \$ per Barrel	48.4	56.7	61.9	67.2	69.1	59.6	57.2	63.6	58.7	58.0	47.3	26.7
Quarterly Change	0.7	8.2	5.3	5.3	1.9	(9.5)	(2.4)	6.4	(4.9)	(0.7)	(10.7)	(20.6)
Change from Prior Year's Quarter	5.5	10.1	12.0	19.5	20.7	3.0	(4.8)	(3.6)	(10.4)	(1.6)	(9.9)	(36.9)
Before-Tax Corporate Profits, Billions \$, SAAR	2,256.5	2,058.9	2,156.0	2,185.3	2,195.7	2,209.7	2,188.9	2,243.8	2,203.4	2,313.1	1,994.7	1,793.8
Annualized % Change	9.7	(30.7)	20.2	5.6	1.9	2.6	(3.7)	10.4	(7.0)	21.4	(44.7)	(34.6)
% Change from Prior Year's Quarter	5.8	(5.6)	(2.6)	(0.9)	(2.7)	7.3	1.5	2.7	0.3	4.7	(8.9)	(20.1)
S&P 500 Stock Market Index, Level	2,467.7	2,605.0	2,732.6	2,703.2	2,851.0	2,692.0	2,722.1	2,882.9	2,958.6	3,086.4	3,069.3	2,928.8
Annualized % Change	12.5	24.2	21.1	(4.2)	23.7	(20.5)	4.5	25.8	10.9	18.4	(2.2)	(17.1)
% Change from Prior Year's Quarter	14.2	19.2	17.6	12.8	15.5	3.3	(0.4)	6.6	3.8	14.7	12.8	1.6
30-Year Treasury Bonds, Level	2.8	2.8	3.0	3.1	3.1	3.3	3.0	2.8	2.3	2.3	1.9	1.4
Quarterly Change	(0.1)	(0.0)	0.2	0.1	(0.0)	0.2	(0.3)	(0.2)	(0.5)	(0.0)	(0.4)	(0.5)
Change from Prior Year's Quarter	0.5	(0.0)	(0.0)	0.2	0.2	0.4	(0.0)	(0.3)	(0.8)	(1.0)	(1.1)	(1.4)

SAAR: Seasonally Adjusted at Annual Rates
SA: Seasonally Adjusted

TABLE A.2 - QUARTERLY NATIONAL AND VIRGINIA ECONOMIC VARIABLES

	October Standard Forecast									
	2020.3	2020.4	2021.1	2021.2	2021.3	2021.4	2022.1	2022.2		
Real Gross Domestic Product, Billions \$, SAAR	18,587.6	18,758.1	18,913.5	19,031.0	19,146.9	19,274.0	19,452.0	19,636.4		
Annualized % Change	33.2	3.7	3.4	2.5	2.5	2.7	3.7	3.8		
% Change from Prior Year's Quarter	(2.9)	(2.6)	(0.5)	10.0	3.0	2.8	2.8	3.2		
Real Consumer Spending, Billions \$, SAAR	12,865.6	12,976.4	13,045.3	13,181.5	13,268.8	13,372.0	13,472.3	13,571.9		
Annualized % Change	38.5	3.5	2.1	4.2	2.7	3.1	3.0	3.0		
% Change from Prior Year's Quarter	(3.3)	(2.8)	(0.6)	11.1	3.1	3.0	3.3	3.0		
U.S. Personal Income, Billions \$, SAAR	19,686.9	20,632.7	19,169.7	19,347.2	19,526.9	19,681.3	19,952.3	20,187.7		
Annualized % Change	(13.2)	20.6	(25.5)	3.8	3.8	3.2	5.6	4.8		
% Change from Prior Year's Quarter	5.9	10.0	1.2	(5.1)	(0.8)	(4.6)	4.1	4.3		
Virginia Personal Income, Millions \$, SAAR	543,109.0	542,885.4	545,636.7	537,562.3	551,241.2	557,583.0	564,001.1	569,564.5		
Annualized % Change	(1.7)	(0.2)	2.0	(5.8)	10.6	4.7	4.7	4.0		
% Change from Prior Year's Quarter	6.4	5.4	4.6	(1.4)	1.5	2.7	3.4	6.0		
Virginia Wages and Salaries, Millions \$, SAAR	264,430.4	271,520.1	276,164.7	276,631.1	277,778.3	280,605.8	284,348.8	288,595.2		
Annualized % Change	14.9	11.2	7.0	0.7	1.7	4.1	5.4	6.1		
% Change from Prior Year's Quarter	0.4	2.0	2.6	8.3	5.0	3.3	3.0	4.3		
Virginia Dividends, Interest, and Rent, Millions \$, SAAR	107,333.6	110,077.9	112,524.2	113,163.0	113,703.2	113,815.0	114,484.4	114,696.7		
Annualized % Change	5.1	10.6	9.2	2.3	1.9	0.4	2.4	0.7		
% Change from Prior Year's Quarter	(0.3)	2.0	4.0	6.7	5.9	3.4	1.7	1.4		
Virginia Total Proprietor's Income, Millions \$, SAAR	27,256.0	27,537.5	27,642.2	27,663.7	27,648.2	27,278.9	27,122.4	27,026.7		
Annualized % Change	9.8	4.2	1.5	0.3	(0.2)	(5.2)	(2.3)	(1.4)		
% Change from Prior Year's Quarter	(6.4)	(7.0)	(8.0)	3.9	1.4	(0.9)	(1.9)	(2.3)		

SAAR: Seasonally Adjusted at Annual Rates
SA: Seasonally Adjusted

October Standard Forecast

	2020.3	2020.4	2021.1	2021.2	2021.3	2021.4	2022.1	2022.2
Total U.S. Employment, Millions, SA	140.8	144.1	146.1	147.1	147.8	148.6	149.7	150.9
Annualized % Change	22.9	9.7	5.6	2.7	2.1	2.1	3.1	3.2
% Change from Prior Year's Quarter	(6.9)	(5.1)	(3.8)	10.0	5.0	3.1	2.5	2.6
Virginia Total Nonag. Employment, Thousands, SA	3,887.9	3,969.9	4,018.4	3,995.7	3,981.1	3,994.2	4,013.9	4,036.6
Annualized % Change	19.9	8.7	5.0	(2.2)	(1.5)	1.3	2.0	2.3
% Change from Prior Year's Quarter	(4.2)	(2.3)	(1.5)	7.5	2.4	0.6	(0.1)	1.0
CPI, All Urban, 1982-1984=1.0, SA	2.6	2.6	2.6	2.6	2.7	2.7	2.7	2.7
Annualized % Change	5.2	2.2	3.2	2.7	2.9	2.7	2.2	2.1
% Change from Prior Year's Quarter	1.3	1.2	1.7	3.3	2.7	2.8	2.6	2.5
Refiner's Acquisition Cost of Oil, \$ per Barrel	36.6	35.6	36.5	37.9	42.7	46.5	48.1	48.9
Quarterly Change	9.9	(1.0)	0.8	1.5	4.7	3.8	1.6	0.8
Change from Prior Year's Quarter	(22.1)	(22.4)	(10.8)	11.2	6.1	10.9	11.6	11.0
Before-Tax Corporate Profits, Billions \$, SAAR	3,046.0	2,171.3	2,094.7	2,109.3	2,127.6	2,106.8	2,118.2	2,134.4
Annualized % Change	731.3	(74.2)	(13.4)	2.8	3.5	(3.9)	2.2	3.1
% Change from Prior Year's Quarter	38.2	(6.1)	5.0	17.6	(30.1)	(3.0)	1.1	1.2
S&P 500 Stock Market Index, Level	3,321.6	3,437.3	3,368.5	3,341.8	3,399.3	3,468.3	3,517.0	3,539.6
Annualized % Change	65.4	14.7	(7.8)	(3.1)	7.1	8.4	5.7	2.6
% Change from Prior Year's Quarter	12.3	11.4	9.7	14.1	2.3	0.9	4.4	5.9
30-Year Treasury Bonds, Level	1.4	1.4	1.6	1.7	1.8	1.9	1.9	2.0
Quarterly Change	(0.0)	0.0	0.2	0.1	0.1	0.1	0.1	0.1
Change from Prior Year's Quarter	(0.9)	(0.9)	(0.3)	0.3	0.4	0.5	0.4	0.4

SAAR: Seasonally Adjusted at Annual Rates

SA: Seasonally Adjusted

TABLE A.2 - QUARTERLY NATIONAL AND VIRGINIA ECONOMIC VARIABLE:

	Pessimistic Alternative Scenario									
	2020.3	2020.4	2021.1	2021.2	2021.3	2021.4	2021.1	2021.2	2021.3	2021.4
Real Gross Domestic Product, Billions \$, SAAR	18,299.4	18,299.1	18,432.3	18,570.7	18,709.0	18,871.1	19,033.4	19,196.8	19,308.2	19,413.4
Annualized % Change	25.1	(0.0)	2.9	3.0	3.0	3.5	3.5	3.5	3.5	3.4
% Change from Prior Year's Quarter	(4.4)	(5.0)	(3.0)	7.3	2.2	3.1	3.3	3.4	3.3	3.3
Real Consumer Spending, Billions \$, SAAR	12,612.2	12,595.1	12,766.8	12,898.6	12,985.7	13,082.7	13,192.8	13,308.2	13,308.2	13,308.2
Annualized % Change	27.9	(0.5)	5.6	4.2	2.7	3.0	3.4	3.5	3.5	3.5
% Change from Prior Year's Quarter	(5.2)	(5.7)	(2.7)	8.8	3.0	3.9	3.3	3.2	3.3	3.2
U.S. Personal Income, Billions \$, SAAR	19,678.3	20,328.7	18,768.5	18,933.0	19,098.7	19,228.7	19,413.4	19,575.9	19,575.9	19,575.9
Annualized % Change	(13.4)	13.9	(27.3)	3.6	3.5	2.7	3.9	3.4	3.4	3.4
% Change from Prior Year's Quarter	5.8	8.4	(1.0)	(7.2)	(2.9)	(5.4)	3.4	3.4	3.4	3.4
Virginia Personal Income, Millions \$, SAAR	542,252.2	536,497.3	533,895.6	523,699.8	536,935.2	543,057.2	549,405.4	554,712.6	554,712.6	554,712.6
Annualized % Change	(2.3)	(4.2)	(1.9)	(7.4)	10.5	4.6	4.8	3.9	3.9	3.9
% Change from Prior Year's Quarter	6.2	4.1	2.3	(4.0)	(1.0)	1.2	2.9	5.9	5.9	5.9
Virginia Wages and Salaries, Millions \$, SAAR	263,849.5	267,658.6	269,835.9	268,636.2	269,487.4	272,450.1	276,552.6	280,698.9	280,698.9	280,698.9
Annualized % Change	13.9	5.9	3.3	(1.8)	1.3	4.5	6.2	6.1	6.1	6.1
% Change from Prior Year's Quarter	0.2	0.5	0.2	5.2	2.1	1.8	2.5	4.5	4.5	4.5
Virginia Dividends, Interest, and Rent, Millions \$, SAAR	107,092.3	108,077.5	109,454.8	110,576.8	111,425.3	111,579.4	112,270.7	112,515.5	112,515.5	112,515.5
Annualized % Change	4.2	3.7	5.2	4.2	3.1	0.6	2.5	0.9	0.9	0.9
% Change from Prior Year's Quarter	(0.5)	0.1	1.2	4.3	4.0	3.2	2.6	1.8	1.8	1.8
Virginia Total Proprietor's Income, Millions \$, SAAR	27,256.8	27,507.6	27,675.9	27,723.3	27,717.6	27,355.8	27,187.7	27,079.4	27,079.4	27,079.4
Annualized % Change	9.8	3.7	2.5	0.7	(0.1)	(5.1)	(2.4)	(1.6)	(1.6)	(1.6)
% Change from Prior Year's Quarter	(6.3)	(7.1)	(7.9)	4.1	1.7	(0.6)	(1.8)	(2.3)	(2.3)	(2.3)

SAAR: Seasonally Adjusted at Annual Rates

SA: Seasonally Adjusted

TABLE A.2 - QUARTERLY NATIONAL AND VIRGINIA ECONOMIC VARIABLES

	Pessimistic Alternative Scenario									
	2020.3	2020.4	2021.1	2021.2	2021.3	2021.4	2022.1	2022.2		
Total U.S. Employment, Millions, SA	140.8	142.3	142.7	142.8	143.7	145.2	147.0	148.5		
Annualized % Change	22.9	4.3	1.1	0.3	2.7	4.0	5.3	4.0		
% Change from Prior Year's Quarter	(6.9)	(6.3)	(6.1)	6.8	2.1	2.0	3.1	4.0		
Virginia Total Nonag. Employment, Thousands, SA	3,886.6	3,923.5	3,934.3	3,889.7	3,879.0	3,905.7	3,943.0	3,973.5		
Annualized % Change	19.7	3.9	1.1	(4.5)	(1.1)	2.8	3.9	3.1		
% Change from Prior Year's Quarter	(4.2)	(3.4)	(3.5)	4.7	(0.2)	(0.5)	0.2	2.2		
CPI, All Urban, 1982-1984=1.0, SA	2.6	2.6	2.6	2.6	2.6	2.7	2.7	2.7		
Annualized % Change	5.2	1.0	2.7	1.6	1.5	1.7	1.3	0.9		
% Change from Prior Year's Quarter	1.3	0.9	1.3	2.6	1.7	1.9	1.5	1.3		
Refiner's Acquisition Cost of Oil, \$ per Barrel	44.5	45.5	47.7	49.1	49.5	50.3	52.4	54.6		
Quarterly Change	17.8	1.0	2.2	1.4	0.4	0.8	2.1	2.2		
Change from Prior Year's Quarter	(14.2)	(12.5)	0.4	22.4	5.0	4.9	4.7	5.5		
Before-Tax Corporate Profits, Billions \$, SAAR	2,740.6	1,984.6	1,974.3	1,980.2	1,967.1	1,948.1	1,964.1	1,972.2		
Annualized % Change	444.8	(72.5)	(2.1)	1.2	(2.6)	(3.8)	3.3	1.6		
% Change from Prior Year's Quarter	24.4	(14.2)	(1.0)	10.4	(28.2)	(1.8)	(0.5)	(0.4)		
S&P 500 Stock Market Index, Level	3,231.6	3,295.9	3,181.4	3,124.1	3,124.7	3,161.8	3,202.3	3,228.7		
Annualized % Change	48.2	8.2	(13.2)	(7.0)	0.1	4.8	5.2	3.3		
% Change from Prior Year's Quarter	9.2	6.8	3.7	6.7	(3.3)	(4.1)	0.7	3.3		
30-Year Treasury Bonds, Level	1.4	1.3	1.4	1.5	1.6	1.7	1.7	1.7		
Quarterly Change	(0.0)	(0.0)	0.1	0.1	0.1	0.1	0.0	0.0		
Change from Prior Year's Quarter	(0.9)	(0.9)	(0.4)	0.1	0.2	0.3	0.3	0.2		

SAAR: Seasonally Adjusted at Annual Rates

SA: Seasonally Adjusted

TABLE A.2 - QUARTERLY NATIONAL AND VIRGINIA ECONOMIC VARIABLES

	Moody's Analytics October Standard Forecast									
	2020.3	2020.4	2021.1	2021.2	2021.3	2021.4	2022.1	2022.2		
Real Gross Domestic Product, Billions \$, SAAR	19,426.9	19,463.6	19,557.0	19,712.6	19,880.7	20,050.3	20,194.7	20,324.8		
Annualized % Change	0.9	0.8	1.9	3.2	3.5	3.5	2.9	2.6		
% Change from Prior Year's Quarter	1.6	1.3	1.3	1.7	2.3	3.0	3.3	3.1		
Real Consumer Spending, Billions \$, SAAR	13,531.1	13,548.1	13,579.6	13,639.3	13,718.0	13,807.0	13,898.9	13,991.6		
Annualized % Change	0.8	0.5	0.9	1.8	2.3	2.6	2.7	2.7		
% Change from Prior Year's Quarter	1.3	1.0	0.9	1.0	1.4	1.9	2.4	2.6		
U.S. Personal Income, Billions \$, SAAR	19,542.6	19,720.2	19,888.7	20,081.7	20,294.0	20,526.1	20,769.3	21,010.6		
Annualized % Change	3.8	3.7	3.5	3.9	4.3	4.7	4.8	4.7		
% Change from Prior Year's Quarter	4.1	4.0	3.8	3.7	3.8	4.1	4.4	4.6		
Virginia Personal Income, Millions \$, SAAR	521,032.5	524,150.8	527,278.0	531,879.9	537,465.5	543,624.0	550,008.2	556,513.1		
Annualized % Change	2.4	2.4	2.4	3.5	4.3	4.7	4.8	4.8		
% Change from Prior Year's Quarter	3.1	2.8	2.6	2.7	3.2	3.7	4.3	4.6		
Virginia Wages and Salaries, Millions \$, SAAR	268,661.4	269,852.8	270,656.5	272,156.9	274,163.4	276,532.4	279,189.5	282,039.3		
Annualized % Change	2.1	1.8	1.2	2.2	3.0	3.5	3.9	4.1		
% Change from Prior Year's Quarter	3.6	2.9	2.2	1.8	2.0	2.5	3.2	3.6		
Virginia Dividends, Interest, and Rent, Millions \$, SAAR	103,358.7	104,107.8	104,967.5	105,970.9	107,232.8	108,628.9	110,066.9	111,530.7		
Annualized % Change	2.7	2.9	3.3	3.9	4.8	5.3	5.4	5.4		
% Change from Prior Year's Quarter	1.7	2.2	2.8	3.2	3.7	4.3	4.9	5.2		
Virginia Total Proprietor's Income, Millions \$, SAAR	29,951.3	30,035.5	30,237.5	30,547.0	30,891.9	31,277.1	31,636.5	31,999.4		
Annualized % Change	1.3	1.1	2.7	4.2	4.6	5.1	4.7	4.7		
% Change from Prior Year's Quarter	0.4	0.7	1.4	2.3	3.1	4.1	4.6	4.8		

SAAR: Seasonally Adjusted at Annual Rates

SA: Seasonally Adjusted

TABLE A.2 - QUARTERLY NATIONAL AND VIRGINIA ECONOMIC VARIABLES

	Moody's Analytics October Standard Forecast									
	2020.3	2020.4	2021.1	2021.2	2021.3	2021.4	2022.1	2022.2		
Total U.S. Employment, Millions, SA	151.6	151.9	152.3	152.8	152.7	152.6	152.4	152.4	152.4	152.4
Annualized % Change	1.2	1.0	0.8	1.5	(0.4)	(0.1)	(0.7)	0.1	0.1	0.1
% Change from Prior Year's Quarter	1.4	1.3	1.1	1.1	0.7	0.5	0.1	(0.2)		
Virginia Total Nonag. Employment, Thousands, SA	4,038.0	4,048.9	4,057.9	4,071.6	4,069.9	4,069.3	4,063.0	4,064.9	4,063.0	4,064.9
Annualized % Change	0.6	1.1	0.9	1.4	(0.2)	(0.1)	(0.6)	0.2	(0.6)	0.2
% Change from Prior Year's Quarter	0.8	1.1	0.7	1.0	0.8	0.5	0.1	(0.2)	0.1	(0.2)
CPI, All Urban, 1982-1984=1.0, SA	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.7	2.6	2.7
Annualized % Change	2.1	1.7	1.8	1.9	2.6	2.6	2.6	2.4	2.6	2.4
% Change from Prior Year's Quarter	1.8	1.9	2.1	1.8	2.0	2.2	2.4	2.5	2.4	2.5
Refiner's Acquisition Cost of Oil, \$ per Barrel	62.0	62.0	61.9	61.5	62.3	63.0	63.6	63.7	63.6	63.7
Quarterly Change	(1.6)	(0.0)	(0.1)	(0.4)	0.8	0.7	0.6	0.1	0.6	0.1
Change from Prior Year's Quarter	(7.1)	2.4	4.9	(2.1)	0.3	1.0	1.7	2.1	1.7	2.1
Before-Tax Corporate Profits, Billions \$, SAAR	2,145.9	2,166.1	2,187.6	2,174.7	2,208.1	2,271.5	2,340.2	2,387.3	2,340.2	2,387.3
Annualized % Change	5.8	3.8	4.0	(2.3)	6.3	12.0	12.7	8.3	12.7	8.3
% Change from Prior Year's Quarter	2.8	5.8	8.5	2.8	2.9	4.9	7.0	9.8	7.0	9.8
S&P 500 Stock Market Index, Level										
Annualized % Change										
% Change from Prior Year's Quarter										
30-Year Treasury Bonds, Level	2.4	2.7	3.1	3.3	3.3	3.4	3.6	3.8	3.6	3.8
Quarterly Change	(0.4)	0.4	0.3	0.2	0.0	0.0	0.2	0.2	0.2	0.2
Change from Prior Year's Quarter	(0.7)	(0.5)	0.1	0.5	1.0	0.6	0.5	0.5	0.5	0.5

SAAR: Seasonally Adjusted at Annual Rates

SA: Seasonally Adjusted

TABLE A.3 - ANNUAL NATIONAL AND VIRGINIA ECONOMIC VARIABLES

	History											
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Real Gross Domestic Product, Billions \$, SAAR	15,604.7 (0.1)	15,208.8 (2.5)	15,598.8 2.6	15,840.7 1.6	16,197.0 2.2	16,495.4 1.8	16,912.0 2.5	17,432.2 3.1	17,730.5 1.7	18,144.1 2.3	18,687.8 3.0	19,091.7 2.2
Fiscal Year % Change	15,713.1 1.6	15,321.3 (2.5)	15,379.4 0.4	15,740.1 2.3	16,038.3 1.9	16,311.5 1.7	16,663.3 2.2	17,229.7 3.4	17,570.4 2.0	17,918.0 2.0	18,432.5 2.9	18,884.3 2.5
Real Consumer Spending, Billions \$, SAAR	10,592.8 (0.2)	10,460.0 (1.3)	10,643.0 1.7	10,843.8 1.9	11,006.8 1.5	11,166.9 1.5	11,497.4 3.0	11,934.3 3.8	12,264.6 2.8	12,587.2 2.6	12,928.1 2.7	13,240.2 2.4
Fiscal Year % Change	10,655.3 1.3	10,485.6 (1.6)	10,524.4 0.4	10,765.2 2.3	10,928.7 1.5	11,075.2 1.3	11,292.7 2.0	11,735.1 3.9	12,105.1 3.2	12,423.7 2.6	12,758.6 2.7	13,080.6 2.5
U.S. Personal Income, Billions \$, SAAR	12,442.2 3.6	12,059.1 (3.1)	12,551.6 4.1	13,326.8 6.2	14,010.1 5.1	14,181.1 1.2	14,991.7 5.7	15,724.2 4.9	16,160.7 2.8	16,948.6 4.9	17,851.8 5.3	18,551.5 3.9
Fiscal Year % Change	12,293.8 5.0	12,221.0 (0.6)	12,233.0 0.1	12,965.8 6.0	13,653.5 5.3	14,111.1 3.4	14,529.6 3.0	15,408.7 6.1	15,933.9 3.4	16,517.2 3.7	17,407.8 5.4	18,239.0 4.8
Virginia Personal Income, Millions \$, SAAR	355,931.4 3.7	349,712.1 (1.7)	365,041.4 4.4	387,003.9 6.0	405,863.9 4.9	403,198.4 (0.7)	421,873.6 4.6	441,016.7 4.5	452,400.5 2.6	470,835.7 4.1	492,764.3 4.7	509,201.3 3.3
Fiscal Year % Change	350,874.3 4.9	352,329.4 0.4	355,744.6 1.0	376,229.2 5.8	396,552.0 5.4	405,848.7 2.3	410,467.2 1.1	432,059.7 5.3	446,750.4 3.4	461,105.3 3.2	481,793.2 4.5	501,687.2 4.1
Virginia Wages and Salaries, Millions \$, SAAR	193,712.8 2.6	191,515.0 (1.1)	196,438.8 2.6	202,093.4 2.9	208,182.2 3.0	210,447.7 1.1	215,898.3 2.6	225,622.2 4.5	230,791.2 2.3	240,507.7 4.2	251,462.6 4.6	262,502.0 4.4
Fiscal Year % Change	191,305.2 4.0	192,561.0 0.7	193,289.7 0.4	199,878.5 3.4	204,801.6 2.5	210,485.7 2.8	212,041.0 0.7	220,555.6 4.0	228,162.1 3.4	235,521.0 3.2	245,903.6 4.4	257,160.1 4.6
Virginia Dividends, Interest, and Rent, Millions \$, SAAR	73,110.7 2.9	66,534.1 (9.0)	66,415.3 (0.2)	73,723.1 11.0	81,834.1 11.0	79,235.7 (3.2)	86,208.5 8.8	90,985.7 5.5	95,206.6 4.6	100,840.3 5.9	107,126.1 6.2	107,610.1 0.5
Fiscal Year % Change	72,653.1 6.5	70,493.2 (3.0)	65,256.9 (7.4)	69,766.2 6.9	78,010.8 11.8	80,724.9 3.5	82,271.1 1.9	88,911.2 8.1	93,122.0 4.7	97,832.8 5.1	104,082.4 6.4	107,887.5 3.7
Virginia Total Proprietor's Income, Millions \$, SAAR	19,905.0 (10.2)	16,828.6 (15.5)	22,314.4 32.6	24,758.2 11.0	28,688.7 15.9	26,519.8 (7.6)	27,664.4 4.3	28,050.5 1.4	26,772.8 (4.6)	26,907.8 0.5	27,189.7 1.0	28,849.8 6.1
Fiscal Year % Change	21,147.9 (9.0)	17,866.1 (15.5)	19,579.5 9.6	23,359.4 19.3	27,018.0 15.7	27,685.5 2.5	26,947.8 (2.7)	28,040.0 4.1	27,351.3 (2.5)	26,875.6 (1.7)	26,934.3 0.2	27,912.0 3.6

SAAR: Seasonally Adjusted at Annual Rates
SA: Seasonally Adjusted

TABLE A.3 - ANNUAL NATIONAL AND VIRGINIA ECONOMIC VARIABLES

	October Standard Forecast					Pessimistic Alternative Scenario				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Real Gross Domestic Product, Billions \$, SAAR	18,414.8 (3.5)	19,091.4 3.7	19,700.8 3.2	20,245.6 2.8	20,785.5 2.7	18,228.0 (4.5)	18,645.8 2.3	19,292.1 3.5	19,959.9 3.5	20,610.6 3.3
Fiscal Year % Change	18,677.3 (1.1)	18,822.6 0.8	19,377.3 2.9	19,985.2 3.1	20,514.8 2.7	18,677.3 (1.1)	18,400.4 (1.5)	18,952.6 3.0	19,633.8 3.6	20,289.8 3.3
Real Consumer Spending, Billions \$, SAAR	12,705.2 (4.0)	13,216.9 4.0	13,617.3 3.0	13,985.1 2.7	14,344.9 2.6	12,546.5 (5.2)	12,933.5 3.1	13,371.6 3.4	13,833.4 3.5	14,205.0 2.7
Fiscal Year % Change	12,908.4 (1.3)	13,017.2 0.8	13,421.3 3.1	13,803.1 2.8	14,165.2 2.6	12,908.4 (1.3)	12,718.2 (1.5)	13,142.3 3.3	13,614.2 3.6	14,023.1 3.0
U.S. Personal Income, Billions \$, SAAR	19,916.8 7.4	19,431.3 (2.4)	20,291.2 4.4	21,206.0 4.5	22,145.6 4.4	19,838.6 6.9	19,007.2 (4.2)	19,668.9 3.5	20,436.7 3.9	21,214.9 3.8
Fiscal Year % Change	19,176.5 5.1	19,709.1 2.8	19,837.0 0.6	20,747.7 4.6	21,662.6 4.4	19,176.5 5.1	19,427.1 1.3	19,329.2 (0.5)	20,043.7 3.7	20,818.7 3.9
Virginia Personal Income, Millions \$, SAAR	538,288.2 5.7	548,005.8 1.8	571,850.5 4.4	592,275.4 3.6	613,530.4 3.6	536,477.0 5.4	534,396.9 (0.4)	556,953.2 4.2	577,279.9 3.6	599,157.2 3.8
Fiscal Year % Change	523,192.0 4.3	542,298.3 3.7	560,597.5 3.4	582,172.4 3.8	602,527.5 3.5	523,192.0 4.3	534,086.2 2.1	546,027.6 2.2	567,094.1 3.9	587,780.9 3.6
Virginia Wages and Salaries, Millions \$, SAAR	265,132.6 1.0	277,795.0 4.8	290,057.6 4.4	302,156.8 4.2	314,181.1 4.0	264,022.0 0.6	270,102.4 2.3	281,992.1 4.4	294,370.4 4.4	307,379.2 4.4
Fiscal Year % Change	263,534.5 2.5	272,186.6 3.3	282,832.0 3.9	296,462.3 4.8	308,120.6 3.9	263,534.5 2.5	267,495.0 1.5	274,797.2 2.7	288,266.9 4.9	300,965.6 4.4
Virginia Dividends, Interest, and Rent, Millions \$, SAAR	107,902.5 0.3	113,301.3 5.0	115,089.1 1.6	118,188.1 2.7	121,868.4 3.1	107,342.1 (0.2)	110,759.1 3.2	112,954.1 2.0	115,662.9 2.4	118,505.6 2.5
Fiscal Year % Change	107,440.5 (0.4)	110,774.7 3.1	114,174.8 3.1	116,397.0 1.9	120,039.0 3.1	107,440.5 (0.4)	108,800.4 1.3	111,947.7 2.9	114,212.2 2.0	117,078.2 2.5
Virginia Total Proprietor's Income, Millions \$, SAAR	27,869.2 (3.4)	27,558.3 (1.1)	26,986.9 (2.1)	27,065.5 0.3	27,765.2 2.6	27,861.9 (3.4)	27,618.2 (0.9)	27,031.0 (2.1)	27,056.3 0.1	27,694.3 2.4
Fiscal Year % Change	28,848.0 3.4	27,524.9 (4.6)	27,269.0 (0.9)	26,903.3 (1.3)	27,413.5 1.9	28,848.0 3.4	27,540.9 (4.5)	27,335.1 (0.7)	26,917.3 (1.5)	27,381.4 1.7

SAAR: Seasonally Adjusted at Annual Rates
SA: Seasonally Adjusted

TABLE A.3 - ANNUAL NATIONAL AND VIRGINIA ECONOMIC VARIABLES

		Moody's Analytics October Standard Forecast				
		2020	2021	2022	2023	2024
Real Gross Domestic Product, Billions \$, SAAR	Calendar Year	18,323.5	19,055.6	19,919.0	20,623.3	21,126.0
	% Change	(4.0)	4.0	4.5	3.5	2.4
	Fiscal Year	18,677.3	18,681.1	19,474.0	20,303.1	20,890.9
	% Change	(1.1)	0.0	4.2	4.3	2.9
Real Consumer Spending, Billions \$, SAAR	Calendar Year	12,717.8	13,316.0	13,839.6	14,357.4	14,734.4
	% Change	(3.9)	4.7	3.9	3.7	2.6
	Fiscal Year	12,908.4	13,078.3	13,559.7	14,112.9	14,562.1
	% Change	(1.3)	1.3	3.7	4.1	3.2
U.S. Personal Income, Billions \$, SAAR	Calendar Year	19,309.6	19,360.2	19,765.2	20,841.6	21,901.4
	% Change	4.1	0.3	2.1	5.4	5.1
	Fiscal Year	19,176.5	19,324.3	19,257.5	20,301.9	21,380.3
	% Change	5.1	0.8	(0.3)	5.4	5.3
Virginia Personal Income, Millions \$, SAAR	Calendar Year	520,119.2	517,848.0	531,031.1	559,500.7	588,047.3
	% Change	2.1	(0.4)	2.5	5.4	5.1
	Fiscal Year	523,192.0	515,478.9	517,703.5	545,161.7	573,935.7
	% Change	4.3	(1.5)	0.4	5.3	5.3
Virginia Wages and Salaries, Millions \$, SAAR	Calendar Year	260,323.6	264,257.7	275,934.9	291,546.3	306,851.3
	% Change	(0.8)	1.5	4.4	5.7	5.2
	Fiscal Year	263,534.5	260,016.6	269,645.8	283,448.6	299,398.8
	% Change	2.5	(1.3)	3.7	5.1	5.6
Virginia Dividends, Interest, and Rent, Millions \$, SAAR	Calendar Year	104,720.4	103,488.5	110,532.7	117,448.6	123,625.2
	% Change	(2.7)	(1.2)	6.8	6.3	5.3
	Fiscal Year	107,440.5	102,262.1	106,637.3	114,242.7	120,597.7
	% Change	(0.4)	(4.8)	4.3	7.1	5.6
Virginia Total Proprietor's Income, Millions \$, SAAR	Calendar Year	28,360.2	30,905.5	34,057.5	36,754.3	39,154.4
	% Change	(1.7)	9.0	10.2	7.9	6.5
	Fiscal Year	28,848.0	29,266.8	32,485.6	35,461.9	37,979.8
	% Change	3.4	1.5	11.0	9.2	7.1

SAAR: Seasonally Adjusted at Annual Rates

SA: Seasonally Adjusted

TABLE A.3 - ANNUAL NATIONAL AND VIRGINIA ECONOMIC VARIABLES

	History											
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Total U.S. Employment, Millions, SA	137.2 (0.5)	131.3 (4.3)	130.3 (0.7)	131.9 1.2	134.2 1.7	136.4 1.6	138.9 1.9	141.8 2.1	144.3 1.8	146.6 1.6	148.9 1.6	150.9 1.4
Fiscal Year % Change	138.1 0.6	134.4 (2.7)	130.2 (3.1)	131.0 0.6	133.1 1.6	135.2 1.6	137.5 1.7	140.4 2.1	143.1 1.9	145.5 1.7	147.7 1.5	149.9 1.5
Virginia Total Nonag. Employment, Thousands, SA	3,772.2 0.0	3,651.8 (3.2)	3,646.0 (0.2)	3,692.8 1.3	3,735.8 1.2	3,762.3 0.7	3,783.3 0.6	3,858.8 2.0	3,915.3 1.5	3,958.7 1.1	4,010.7 1.3	4,057.8 1.2
Fiscal Year % Change	3,779.1 0.7	3,716.1 (1.7)	3,631.8 (2.3)	3,671.4 1.1	3,714.5 1.2	3,753.6 1.1	3,768.6 0.4	3,810.7 1.1	3,897.0 2.3	3,938.1 1.1	3,985.5 1.2	4,036.0 1.3
CPI, All Urban, 1982-1984=1.0, SA	2.2 3.8	2.1 (0.3)	2.2 1.6	2.2 3.1	2.3 2.1	2.3 1.5	2.4 1.6	2.4 0.1	2.4 1.3	2.5 2.1	2.5 2.4	2.6 1.8
Fiscal Year % Change	2.1 3.7	2.1 1.4	2.2 1.0	2.2 2.0	2.3 2.9	2.3 1.7	2.3 1.6	2.4 0.7	2.4 0.7	2.4 1.9	2.5 2.3	2.5 2.1
Refiner's Acquisition Cost of Oil, \$ per Barrel	94.3 26.3	59.2 (35.1)	76.7 17.5	101.8 25.1	101.0 (0.8)	100.5 (0.5)	92.2 (8.2)	48.4 (43.8)	40.6 (7.8)	50.7 10.1	64.5 13.8	59.4 (5.1)
Fiscal Year Change	90.9 31.8	66.5 (24.4)	72.7 6.2	89.4 16.7	103.6 14.2	98.8 (4.7)	100.0 1.2	68.9 (31.1)	40.3 (28.6)	46.8 6.5	58.6 11.8	62.4 3.8
Before-Tax Corporate Profits, Billions \$, SAAR	1,379.3 (21.3)	1,467.5 6.4	1,834.0 25.0	1,818.2 (0.9)	2,156.1 18.6	2,151.5 (0.2)	2,264.5 5.2	2,128.3 (6.0)	2,125.0 (0.2)	2,183.2 2.7	2,186.7 0.2	2,237.3 2.3
Fiscal Year % Change	1,644.6 (9.5)	1,249.9 (24.0)	1,706.1 36.5	1,833.3 7.5	2,011.3 9.7	2,132.6 6.0	2,206.6 3.5	2,247.5 1.9	2,076.6 (7.6)	2,182.4 5.1	2,164.2 (0.8)	2,209.5 2.1
S&P 500 Stock Market Index, Level	1,220.9 (17.3)	946.7 (22.5)	1,139.3 20.3	1,268.9 11.4	1,379.6 8.7	1,642.5 19.1	1,930.7 17.5	2,061.2 6.8	2,092.4 1.5	2,448.2 17.0	2,744.7 12.1	2,912.5 6.1
Fiscal Year % Change	1,426.7 1.9	965.8 (32.3)	1,085.6 12.4	1,230.5 13.4	1,287.9 4.7	1,486.2 15.4	1,795.1 20.8	2,038.4 13.6	2,025.7 (0.6)	2,266.6 11.9	2,627.1 15.9	2,787.0 6.1
30-Year Treasury Bonds, Level	4.3 (0.6)	4.1 (0.2)	4.3 0.2	3.9 (0.3)	2.9 (1.0)	3.4 0.5	3.3 (0.1)	2.8 (0.5)	2.6 (0.2)	2.9 0.3	3.1 0.2	2.6 (0.5)
Fiscal Year Change	4.6 (0.2)	3.9 (0.7)	4.4 0.5	4.2 (0.2)	3.2 (1.0)	3.0 (0.2)	3.7 0.7	2.9 (0.7)	2.8 (0.1)	2.8 (0.0)	2.9 0.2	3.0 0.1

SAAR: Seasonally Adjusted at Annual Rates
SA: Seasonally Adjusted

TABLE A.3 - ANNUAL NATIONAL AND VIRGINIA ECONOMIC VARIABLES

	October Standard Forecast					Pessimistic Alternative Scenario				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Total U.S. Employment, Millions, SA	142.6 (5.5)	147.4 3.3	151.2 2.6	153.9 1.8	156.0 1.4	142.2 (5.8)	143.6 1.0	148.9 3.7	153.8 3.2	158.7 3.2
Fiscal Year % Change	147.1 (1.9)	144.5 (1.8)	149.3 3.3	152.7 2.3	155.0 1.5	147.1 (1.9)	142.1 (3.4)	146.1 2.8	151.3 3.5	156.4 3.4
Virginia Total Nonag. Employment, Thousands, SA	3,913.0 (3.6)	3,997.3 2.2	4,039.2 1.0	4,077.9 1.0	4,111.9 0.8	3,901.1 (3.9)	3,902.2 0.0	3,979.6 2.0	4,068.4 2.2	4,167.1 2.4
Fiscal Year % Change	3,978.8 (1.4)	3,968.0 (0.3)	4,006.4 1.0	4,060.8 1.4	4,095.6 0.9	3,978.8 (1.4)	3,908.5 (1.8)	3,925.3 0.4	4,021.2 2.4	4,120.4 2.5
CPI, All Urban, 1982-1984=1.0, SA	2.6	2.7	2.7	2.8	2.8	2.6	2.6	2.7	2.7	2.7
Calendar Year % Change	1.3	2.6	2.3	1.8	1.9	1.2	1.9	1.3	1.0	1.2
Fiscal Year % Change	2.6	2.6	2.7	2.7	2.8	2.6	2.6	2.7	2.7	2.7
% Change	1.6	1.9	2.7	2.0	1.8	1.6	1.5	1.6	1.1	1.1
Refiner's Acquisition Cost of Oil, \$ per Barrel	36.5 (22.8)	40.9 4.3	50.9 10.0	55.8 4.9	56.9 1.1	41.0 (18.4)	49.1 8.2	53.2 4.1	50.6 (2.6)	51.7 1.1
Fiscal Year Change	47.7 (14.7)	36.6 (11.0)	46.5 9.9	54.3 7.8	56.4 2.1	47.7 (14.7)	46.7 (1.0)	51.7 5.0	51.9 0.2	50.9 (1.0)
Before-Tax Corporate Profits, Billions \$, SAAR	2,251.4	2,109.6	2,143.6	2,278.9	2,451.8	2,128.4	1,967.4	2,000.1	2,192.4	2,454.0
Calendar Year % Change	0.6 (6.3)	(6.3)	1.6	6.3	7.6	(4.9)	(7.6)	1.7	9.6	11.9
Fiscal Year % Change	2,076.2 (6.0)	2,355.3 13.4	2,121.8 (9.9)	2,207.9 4.1	2,363.3 7.0	2,076.2 (6.0)	2,169.9 4.5	1,962.9 (9.5)	2,095.6 6.8	2,312.9 10.4
S&P 500 Stock Market Index, Level	3,189.2	3,394.5	3,547.0	3,649.5	3,809.0	3,131.4	3,148.0	3,241.3	3,350.0	3,481.3
Calendar Year % Change	9.5	6.4	4.5	2.9	4.4	7.5	0.5	3.0	3.4	3.9
Fiscal Year % Change	3,010.8	3,367.3	3,481.1	3,589.4	3,726.2	3,010.8	3,208.3	3,179.4	3,294.1	3,411.3
Calendar Year % Change	8.0	11.8	3.4	3.1	3.8	8.0	6.6	(0.9)	3.6	3.6
30-Year Treasury Bonds, Level	1.5	1.7	2.1	2.3	2.4	1.5	1.6	1.8	1.9	1.9
Calendar Year Change	(1.1)	0.2	0.4	0.2	0.1	(1.1)	0.1	0.2	0.1	0.1
Fiscal Year Change	1.9	1.5	1.9	2.2	2.4	1.9	1.4	1.7	1.8	1.9
Calendar Year Change	(1.1)	(0.5)	0.4	0.3	0.1	(1.1)	(0.5)	0.3	0.1	0.1

SAAR: Seasonally Adjusted at Annual Rates
SA: Seasonally Adjusted

TABLE A.3 - ANNUAL NATIONAL AND VIRGINIA ECONOMIC VARIABLES

		Moody's Analytics October Standard Forecast				
		2020	2021	2022	2023	2024
Total U.S. Employment, Millions, SA	Calendar Year	142.1	143.4	146.9	150.8	152.7
	% Change	(5.9)	0.9	2.5	2.6	1.2
	Fiscal Year	147.1	142.0	145.0	149.0	152.0
	% Change	(1.9)	(3.5)	2.1	2.8	2.0
Virginia Total Nonag. Employment, Thousands, SA	Calendar Year	3,863.3	3,879.8	3,970.5	4,069.6	4,119.9
	% Change	(4.8)	0.4	2.3	2.5	1.2
	Fiscal Year	3,983.6	3,846.0	3,921.1	4,023.1	4,100.9
	% Change	(1.3)	(3.5)	2.0	2.6	1.9
CPI, All Urban, 1982-1984=1.0, SA	Calendar Year	2.6	2.6	2.7	2.8	2.9
	% Change	1.3	1.9	2.8	2.7	2.6
	Fiscal Year	2.6	2.6	2.7	2.7	2.8
	% Change	1.6	1.5	2.3	2.8	2.6
Refiner's Acquisition Cost of Oil, \$ per Barrel	Calendar Year	38.9	42.5	52.0	56.2	57.6
	% Change	(20.5)	3.7	9.5	4.3	1.4
	Fiscal Year	47.7	40.1	47.8	54.9	57.0
	% Change	(14.7)	(7.5)	7.6	7.1	2.1
Before-Tax Corporate Profits, Billions \$, SAAR	Calendar Year	1,929.2	2,259.2	2,445.9	2,523.0	2,628.4
	% Change	(13.8)	17.1	8.3	3.2	4.2
	Fiscal Year	2,076.2	2,063.1	2,391.5	2,483.8	2,571.1
	% Change	(6.0)	(0.6)	15.9	3.9	3.5
S&P 500 Stock Market Index, Level	Calendar Year					
	% Change					
	Fiscal Year					
	% Change					
30-Year Treasury Bonds, Level	Calendar Year	1.5	2.2	3.1	3.8	4.3
	% Change	(1.0)	0.6	0.9	0.7	0.5
	Fiscal Year	1.9	1.7	2.7	3.5	4.1
	% Change	(1.1)	(0.3)	1.0	0.8	0.6

SAAR: Seasonally Adjusted at Annual Rates

SA: Seasonally Adjusted

TABLE A.3 - ANNUAL NATIONAL AND VIRGINIA ECONOMIC VARIABLES

Virginia		History											
		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Construction and Mining Thousands, SA	Calendar Year	234.1	200.6	193.4	189.5	187.5	186.9	187.9	193.8	196.1	201.5	206.3	209.5
	% Change	(6.6)	(14.3)	(3.6)	(2.0)	(1.0)	(0.3)	0.5	3.1	1.2	2.7	2.4	1.5
	Fiscal Year	243.6	216.9	194.2	192.1	188.4	187.2	186.8	190.2	195.4	198.8	203.9	208.5
	% Change	(4.8)	(10.9)	(10.5)	(1.1)	(2.0)	(0.6)	(0.2)	1.8	2.7	1.7	2.6	2.2
Manufacturing Thousands, SA	Calendar Year	265.0	239.5	230.6	231.1	231.7	231.2	232.3	234.1	233.2	234.9	240.5	243.2
	% Change	(4.7)	(9.6)	(3.7)	0.2	0.2	(0.2)	0.5	0.8	(0.4)	0.8	2.4	1.1
	Fiscal Year	271.8	252.7	233.3	230.1	231.6	231.5	231.6	232.9	234.0	233.8	237.1	243.1
	% Change	(4.0)	(7.0)	(7.7)	(1.3)	0.7	(0.1)	0.0	0.6	0.5	(0.1)	1.4	2.6
Trade, Transportation, and Utilities Thousands, SA	Calendar Year	658.7	623.9	620.7	628.2	633.0	634.6	640.9	652.8	660.7	661.5	661.1	659.8
	% Change	(1.3)	(5.3)	(0.5)	1.2	0.8	0.3	1.0	1.9	1.2	0.1	(0.1)	(0.2)
	Fiscal Year	665.8	641.5	618.5	625.0	630.9	633.2	637.8	644.9	659.4	661.3	661.4	660.2
	% Change	0.1	(3.7)	(3.6)	1.1	0.9	0.4	0.7	1.1	2.3	0.3	0.0	(0.2)
Financial Activities Thousands, SA	Calendar Year	188.6	179.9	179.1	182.5	188.3	192.5	194.0	197.7	201.0	205.1	208.3	212.2
	% Change	(2.6)	(4.6)	(0.5)	2.0	3.1	2.2	0.8	1.9	1.7	2.0	1.6	1.9
	Fiscal Year	191.1	184.5	178.1	180.6	185.3	190.9	193.2	195.7	199.3	203.0	206.9	210.1
	% Change	(2.1)	(3.4)	(3.5)	1.4	2.6	3.0	1.2	1.3	1.9	1.8	1.9	1.5
Professional and Business Services Thousands, SA	Calendar Year	657.3	640.3	650.5	667.7	678.6	681.4	682.2	702.4	715.4	730.1	749.3	766.7
	% Change	1.7	(2.6)	1.6	2.6	1.6	0.4	0.1	3.0	1.9	2.1	2.6	2.3
	Fiscal Year	653.5	650.0	641.5	660.2	673.5	682.5	679.6	689.5	711.0	722.3	740.6	757.6
	% Change	2.5	(0.5)	(1.3)	2.9	2.0	1.3	(0.4)	1.5	3.1	1.6	2.5	2.3
Education and Health Services Thousands, SA	Calendar Year	447.8	455.9	463.1	469.7	480.4	491.5	497.8	513.9	526.5	535.6	546.2	555.1
	% Change	4.6	1.8	1.6	1.4	2.3	2.3	1.3	3.2	2.5	1.7	2.0	1.6
	Fiscal Year	439.6	452.6	458.0	467.7	473.6	487.3	494.3	503.7	522.6	530.8	540.9	551.9
	% Change	5.0	3.0	1.2	2.1	1.3	2.9	1.4	1.9	1.6	1.9	2.0	2.0
Leisure and Hospitality Thousands, SA	Calendar Year	349.3	341.6	341.3	349.2	358.9	366.1	371.3	386.0	399.1	404.4	408.4	410.1
	% Change	1.2	(2.2)	(0.1)	2.3	2.8	2.0	1.4	4.0	3.4	1.3	1.0	0.4
	Fiscal Year	348.6	345.0	339.5	345.5	354.2	362.8	368.7	376.4	394.9	402.7	406.8	409.9
	% Change	1.8	(1.0)	(1.6)	1.8	2.5	2.4	1.6	2.1	4.9	2.0	1.0	0.8
Government Thousands, SA	Calendar Year	695.1	703.0	706.6	713.2	713.4	712.4	710.5	711.3	714.4	716.6	722.7	730.9
	% Change	1.5	1.1	0.5	0.9	0.0	(0.1)	(0.3)	0.1	0.4	0.3	0.8	1.1
	Fiscal Year	688.7	700.3	705.9	709.2	714.4	713.4	710.2	711.1	712.6	715.8	719.3	726.0
	% Change	1.3	1.7	0.8	0.5	0.7	(0.1)	(0.5)	0.1	0.2	0.4	0.5	0.9

SAAR: Seasonally Adjusted at Annual Rates

SA: Seasonally Adjusted

TABLE A.3 - ANNUAL NATIONAL AND VIRGINIA ECONOMIC VARIABLES

Virginia		October Standard Forecast					Pessimistic Alternative Scenario				
		2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Construction and Mining Thousands, SA	Calendar Year	214.9	214.5	216.0	219.2	222.4	214.7	211.3	210.1	212.6	215.4
	% Change	2.6	(0.2)	0.7	1.5	1.4	2.5	(1.6)	(0.6)	1.2	1.3
	Fiscal Year	211.4	215.5	214.6	217.7	220.8	211.4	214.2	209.7	211.3	214.0
	% Change	1.4	1.9	(0.4)	1.4	1.4	1.4	1.3	(2.1)	0.8	1.3
Manufacturing Thousands, SA	Calendar Year	232.2	230.3	233.9	236.4	236.7	234.4	229.7	231.6	235.2	238.3
	% Change	(4.5)	(0.8)	1.6	1.0	0.1	(3.6)	(2.0)	0.8	1.6	1.3
	Fiscal Year	238.6	229.6	232.1	235.3	236.8	238.6	232.0	230.4	232.9	236.9
	% Change	(1.9)	(3.8)	1.1	1.4	0.6	(1.9)	(2.8)	(0.7)	1.1	1.7
Trade, Transportation, and Utilities Thousands, SA	Calendar Year	635.2	649.6	636.5	607.8	589.3	630.7	624.7	614.1	594.1	585.3
	% Change	(3.7)	2.3	(2.0)	(4.5)	(3.0)	(4.4)	(1.0)	(1.7)	(3.3)	(1.5)
	Fiscal Year	650.4	639.1	648.6	617.9	598.8	650.4	622.2	624.1	599.4	589.9
	% Change	(1.5)	(1.7)	1.5	(4.7)	(3.1)	(1.5)	(4.3)	0.3	(4.0)	(1.6)
Financial Activities Thousands, SA	Calendar Year	214.9	219.2	231.9	237.2	241.4	213.7	211.1	231.1	240.8	248.2
	% Change	1.3	2.0	5.8	2.3	1.8	0.7	(1.2)	9.5	4.2	3.1
	Fiscal Year	213.7	217.6	223.7	235.9	239.3	213.7	212.3	218.3	238.0	244.5
	% Change	1.7	1.8	2.8	5.5	1.4	1.7	(0.6)	2.8	9.1	2.7
Professional and Business Services Thousands, SA	Calendar Year	761.7	787.3	825.2	848.7	881.5	757.5	749.1	792.1	833.6	893.3
	% Change	(0.7)	3.4	4.8	2.9	3.9	(1.2)	(1.1)	5.7	5.2	7.2
	Fiscal Year	761.6	778.6	802.7	837.7	864.1	761.6	755.0	767.4	810.0	863.3
	% Change	0.5	2.2	3.1	4.4	3.2	0.5	(0.9)	1.6	5.5	6.6
Education and Health Services Thousands, SA	Calendar Year	526.3	544.7	552.4	558.0	563.9	523.6	532.5	551.5	567.7	584.6
	% Change	(5.2)	3.5	1.4	1.0	1.1	(5.7)	1.7	3.6	2.9	3.0
	Fiscal Year	540.9	531.2	550.6	556.4	561.0	540.9	522.5	542.5	560.5	576.9
	% Change	(2.0)	(1.8)	3.6	1.1	0.8	(2.0)	(3.4)	3.8	3.3	2.9
Leisure and Hospitality Thousands, SA	Calendar Year	325.0	348.6	353.3	376.5	376.3	325.0	342.1	352.2	376.0	378.9
	% Change	(20.7)	7.2	1.4	6.6	(0.0)	(20.8)	5.3	2.9	6.8	0.8
	Fiscal Year	373.4	327.5	350.2	366.7	378.2	373.4	323.1	348.0	364.7	379.7
	% Change	(8.9)	(12.3)	6.9	4.7	3.1	(8.9)	(13.5)	7.7	4.8	4.1
Government Thousands, SA	Calendar Year	741.3	726.1	693.6	694.3	698.7	741.3	725.1	689.9	688.3	690.9
	% Change	1.4	(2.0)	(4.5)	0.1	0.6	1.4	(2.2)	(4.9)	(0.2)	0.4
	Fiscal Year	723.9	759.9	697.6	693.1	696.3	723.9	759.7	695.3	688.2	689.4
	% Change	(0.3)	5.0	(8.2)	(0.6)	0.5	(0.3)	4.9	(8.5)	(1.0)	0.2

SAAR: Seasonally Adjusted at Annual Rates

SA: Seasonally Adjusted

TABLE A.3 - ANNUAL NATIONAL AND VIRGINIA ECONOMIC VARIABLES

Moody's Analytics September Standard Forecast

Virginia	2020	2021	2022	2023	2024	
Construction and Mining Thousands, SA	Calendar Year	210.4	213.8	225.0	231.6	235.3
	% Change	(0.4)	1.6	5.2	3.0	1.6
	Fiscal Year	210.9	210.5	219.8	228.7	233.8
	% Change	0.9	(0.2)	4.4	4.1	2.2
Manufacturing Thousands, SA	Calendar Year	230.1	221.6	223.1	224.7	223.2
	% Change	(5.5)	(3.7)	0.6	0.7	(0.7)
	Fiscal Year	239.3	223.0	221.9	224.1	224.3
	% Change	(1.6)	(6.8)	(0.5)	1.0	0.1
Trade, Transportation, and Utilities Thousands, SA	Calendar Year	635.9	636.5	649.3	664.1	670.6
	% Change	(3.5)	0.1	2.0	2.3	1.0
	Fiscal Year	647.9	634.4	641.7	657.3	668.3
	% Change	(1.9)	(2.1)	1.1	2.4	1.7
Financial Activities Thousands, SA	Calendar Year	210.6	208.7	214.0	220.3	223.4
	% Change	(0.7)	(0.9)	2.5	2.9	1.4
	Fiscal Year	213.7	207.3	211.0	217.4	222.2
	% Change	1.7	(3.0)	1.8	3.0	2.2
Professional and Business Services Thousands, SA	Calendar Year	748.3	758.4	779.8	803.4	817.0
	% Change	(2.4)	1.3	2.8	3.0	1.7
	Fiscal Year	762.9	747.5	768.3	792.5	811.2
	% Change	0.7	(2.0)	2.8	3.2	2.4
Education and Health Services Thousands, SA	Calendar Year	523.4	521.1	534.3	549.4	556.9
	% Change	(5.7)	(0.4)	2.5	2.8	1.4
	Fiscal Year	544.6	517.2	526.9	542.3	554.1
	% Change	(1.0)	(5.0)	1.9	2.9	2.2
Leisure and Hospitality Thousands, SA	Calendar Year	338.5	349.6	361.0	373.7	380.9
	% Change	(17.6)	3.3	3.3	3.5	1.9
	Fiscal Year	375.8	341.8	355.5	367.2	378.1
	% Change	(8.3)	(9.1)	4.0	3.3	3.0
Government Thousands, SA	Calendar Year	702.4	692.7	700.4	711.1	718.7
	% Change	(3.9)	(1.4)	1.1	1.5	1.1
	Fiscal Year	723.2	691.8	696.1	705.7	715.6
	% Change	(0.4)	(4.3)	0.6	1.4	1.4

SAAR: Seasonally Adjusted at Annual Rates

SA: Seasonally Adjusted

TABLE A.4 - ANNUAL VIRGINIA REGIONAL EMPLOYMENT

Northern Virginia	History												
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Total Nonagricultural Employment Thousands, SA	Calendar Year	1,328.8	1,305.8	1,317.5	1,344.7	1,369.7	1,379.1	1,380.0	1,409.2	1,438.0	1,459.9	1,488.0	1,516.0
	% Change	0.2	(1.7)	0.9	2.1	1.9	0.7	0.1	2.1	2.0	1.5	1.9	1.9
	Fiscal Year	1,329.2	1,316.6	1,307.0	1,332.1	1,357.3	1,378.3	1,377.2	1,389.6	1,427.0	1,450.1	1,473.5	1,501.7
	% Change	0.8	(0.9)	(0.7)	1.9	1.9	1.5	(0.1)	0.9	2.7	1.6	1.6	1.9
Construction and Mining Thousands, SA	Calendar Year	80.7	70.1	68.2	67.8	68.2	68.9	68.8	69.5	71.7	73.7	76.4	79.2
	% Change	(9.3)	(13.2)	(2.6)	(0.6)	0.6	0.9	(0.1)	0.9	3.2	2.7	3.7	3.7
	Fiscal Year	84.9	74.9	68.2	68.2	68.2	68.5	69.0	68.6	70.9	72.6	74.9	78.1
	% Change	(8.8)	(11.8)	(9.0)	(0.0)	0.0	0.4	0.8	(0.6)	3.4	2.4	3.1	4.3
Trade, Transportation, and Utilities Thousands, SA	Calendar Year	210.7	200.6	200.4	204.4	206.4	207.5	208.9	212.3	214.4	216.2	217.4	218.7
	% Change	(0.9)	(4.8)	(0.1)	2.0	1.0	0.5	0.7	1.7	1.0	0.8	0.6	0.6
	Fiscal Year	212.6	205.4	199.2	202.8	205.4	207.0	208.0	210.0	214.2	215.4	216.8	217.9
	% Change	0.2	(3.4)	(3.0)	1.8	1.3	0.8	0.5	1.0	2.0	0.6	0.6	0.5
Financial Activities Thousands, SA	Calendar Year	66.9	64.5	64.8	65.5	66.9	68.6	68.6	70.3	73.4	76.4	78.1	79.2
	% Change	(3.6)	(3.6)	0.5	1.1	2.2	2.5	0.0	2.5	4.3	4.1	2.2	1.4
	Fiscal Year	68.0	65.5	64.4	65.3	66.0	68.0	68.6	69.2	71.9	75.0	77.5	78.5
	% Change	(3.2)	(3.7)	(1.7)	1.4	1.1	3.0	0.9	0.9	3.8	4.4	3.3	1.4
Professional and Business Services Thousands, SA	Calendar Year	356.5	356.5	364.9	375.3	383.6	381.2	376.3	384.9	393.4	400.4	413.1	425.2
	% Change	2.2	0.0	2.4	2.8	2.2	(0.6)	(1.3)	2.3	2.2	1.8	3.2	2.9
	Fiscal Year	353.1	356.7	359.2	370.6	380.3	384.3	377.2	379.3	389.6	396.8	406.8	418.7
	% Change	2.7	1.0	0.7	3.2	2.6	1.1	(1.8)	0.6	2.7	1.9	2.5	2.9
Education and Health Services Thousands, SA	Calendar Year	127.3	131.7	135.8	141.4	145.5	147.9	149.9	155.6	161.2	165.6	170.2	175.3
	% Change	3.5	3.5	3.1	4.1	2.9	1.7	1.3	3.8	3.6	2.7	2.8	3.0
	Fiscal Year	125.0	129.3	134.0	138.5	143.2	147.4	148.6	152.0	159.0	163.5	167.9	173.0
	% Change	3.2	3.4	3.6	3.4	3.3	3.0	0.8	4.6	2.8	2.7	3.0	3.0
Leisure and Hospitality Thousands, SA	Calendar Year	118.7	116.0	116.8	121.3	126.2	130.1	132.7	139.5	145.1	146.8	148.2	148.9
	% Change	2.4	(2.3)	0.7	3.8	4.1	3.1	2.0	5.2	4.0	1.2	0.9	0.5
	Fiscal Year	117.9	117.3	115.6	119.3	123.7	128.2	131.4	135.1	143.4	146.3	147.7	148.8
	% Change	3.0	(0.4)	(1.4)	3.2	3.6	3.7	2.5	6.1	2.1	1.0	0.7	0.7
Government Thousands, SA	Calendar Year	218.9	224.1	228.9	231.1	233.6	234.6	233.2	234.5	235.3	237.1	240.5	243.7
	% Change	1.8	2.4	2.1	0.9	1.1	0.4	(0.6)	0.5	0.4	0.7	1.4	1.4
	Fiscal Year	216.8	221.6	227.0	229.6	232.2	235.1	233.3	233.8	234.9	236.5	238.2	241.8
	% Change	2.0	2.2	2.4	1.1	1.2	1.2	0.2	0.5	0.7	0.7	0.7	1.5

SAAR: Seasonally Adjusted at Annual Rates

SA: Seasonally Adjusted

TABLE A.4 - ANNUAL VIRGINIA REGIONAL EMPLOYMENT

Northern Virginia	October Standard Forecast					Pessimistic Alternative Scenario					
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	
Total Nonagricultural Employment Thousands, SA	Calendar Year	1,476.8	1,514.5	1,519.4	1,530.5	1,542.7	1,471.2	1,475.6	1,494.0	1,525.3	1,564.0
	% Change	(2.6)	2.6	0.3	0.7	0.8	(3.0)	0.3	1.2	2.1	2.5
	Fiscal Year	1,490.6	1,508.2	1,510.8	1,525.1	1,536.6	1,490.6	1,483.4	1,476.8	1,508.0	1,545.4
	% Change	(0.7)	1.2	0.2	0.9	0.8	(0.7)	(0.5)	(0.4)	2.1	2.5
Construction and Mining Thousands, SA	Calendar Year	78.4	77.3	78.0	79.4	80.8	78.3	75.9	75.3	76.5	77.7
	% Change	(1.0)	(1.4)	0.8	1.9	1.8	(1.1)	(3.1)	(0.7)	1.5	1.6
	Fiscal Year	79.1	77.3	77.3	78.7	80.1	79.1	77.2	75.1	75.9	77.1
	% Change	1.4	(1.8)	(0.5)	1.8	1.8	1.4	(2.5)	(2.6)	1.0	1.6
Trade, Transportation, and Utilities Thousands, SA	Calendar Year	205.5	207.6	200.3	187.0	178.3	203.7	197.1	190.4	180.3	175.3
	% Change	(6.1)	1.0	(3.5)	(6.7)	(4.6)	(6.9)	(3.2)	(3.4)	(5.3)	(2.8)
	Fiscal Year	215.3	203.6	206.5	191.5	182.7	215.3	196.6	195.9	183.1	177.8
	% Change	(1.2)	(5.5)	1.5	(7.3)	(4.6)	(1.2)	(8.7)	(0.3)	(6.5)	(2.9)
Financial Activities Thousands, SA	Calendar Year	79.6	81.2	85.4	87.2	88.5	79.2	78.5	85.1	88.4	90.8
	% Change	0.6	2.0	5.2	2.1	1.6	0.0	(0.9)	8.5	3.8	2.7
	Fiscal Year	79.4	80.6	82.7	86.7	87.8	79.4	78.9	80.9	87.4	89.6
	% Change	1.1	1.6	2.5	4.9	1.3	1.1	(0.6)	2.5	8.1	2.5
Professional and Business Services Thousands, SA	Calendar Year	433.3	450.6	467.7	478.5	492.8	431.6	434.2	453.7	472.5	499.0
	% Change	1.9	4.0	3.8	2.3	3.0	1.5	0.6	4.5	4.2	5.6
	Fiscal Year	425.7	447.0	457.5	473.6	485.2	425.7	437.0	442.2	462.2	485.5
	% Change	1.7	5.0	2.4	3.5	2.4	1.7	2.6	1.2	4.5	5.0
Education and Health Services Thousands, SA	Calendar Year	161.8	168.1	171.3	173.6	176.1	160.6	163.0	170.9	177.7	184.8
	% Change	(7.7)	3.9	1.9	1.3	1.4	(8.4)	1.5	4.9	4.0	4.0
	Fiscal Year	169.6	162.5	170.5	172.9	174.9	169.6	158.9	167.1	174.7	181.6
	% Change	(2.0)	(4.2)	4.9	1.4	1.1	(2.0)	(6.3)	5.2	4.5	4.0
Leisure and Hospitality Thousands, SA	Calendar Year	112.8	121.7	123.6	133.0	132.9	112.8	119.1	123.2	132.8	133.9
	% Change	(24.3)	7.9	1.6	7.6	(0.1)	(24.3)	5.6	3.4	7.8	0.9
	Fiscal Year	133.2	113.4	122.4	129.0	133.6	133.2	111.6	121.5	128.2	134.3
	% Change	(10.5)	(14.9)	7.9	5.4	3.6	(10.5)	(16.3)	8.9	5.6	4.7
Government Thousands, SA	Calendar Year	259.3	253.3	233.7	232.5	233.2	259.3	252.7	231.6	229.1	228.9
	% Change	6.4	(2.3)	(7.7)	(0.5)	0.3	6.4	(2.5)	(8.3)	(1.1)	(0.1)
	Fiscal Year	243.9	271.7	236.8	232.6	232.8	243.9	271.6	235.5	229.9	228.9
	% Change	0.9	11.4	(12.8)	(1.8)	0.1	0.9	11.3	(13.3)	(2.4)	(0.4)

SAAR: Seasonally Adjusted at Annual Rates

SA: Seasonally Adjusted

TABLE A.4 - ANNUAL VIRGINIA REGIONAL EMPLOYMENT

Hampton Roads		History											
		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Total Nonagricultural Employment Thousands, SA	Calendar Year	767.2	742.2	737.1	740.1	746.8	756.4	758.2	766.7	772.4	782.6	792.1	796.1
	% Change	(1.1)	(3.3)	(0.7)	0.4	0.9	1.3	0.2	1.1	0.7	1.3	1.2	0.5
	Fiscal Year	773.4	755.2	737.3	737.9	743.2	752.3	757.4	760.7	770.7	777.5	788.4	794.2
	% Change	0.2	(2.4)	(2.4)	0.1	0.7	1.2	0.7	0.4	0.9	1.4	0.7	
Construction and Mining Thousands, SA	Calendar Year	45.2	38.4	36.9	35.1	34.5	34.7	34.5	36.0	36.3	37.5	38.3	38.7
	% Change	(6.5)	(15.2)	(3.9)	(4.7)	(1.6)	0.5	(0.7)	4.4	0.9	3.4	2.1	1.1
	Fiscal Year	47.1	41.8	37.2	36.2	34.5	34.7	34.5	35.0	36.3	37.0	37.8	38.6
	% Change	(4.1)	(11.2)	(11.1)	(2.6)	(4.5)	0.4	(0.6)	1.6	2.0	2.2	2.2	
Trade, Transportation, and Utilities Thousands, SA	Calendar Year	137.8	128.6	127.9	127.6	127.1	127.8	128.8	130.9	133.1	133.4	131.0	130.1
	% Change	(3.3)	(6.6)	(0.6)	(0.2)	(0.3)	0.5	0.8	1.6	1.7	0.3	(1.9)	(0.7)
	Fiscal Year	140.9	132.8	127.7	128.0	127.3	127.1	128.3	129.9	132.0	133.5	132.5	130.3
	% Change	(0.6)	(5.7)	(3.9)	0.2	(0.6)	(0.1)	0.9	1.3	1.1	(0.8)	(1.7)	
Financial Activities Thousands, SA	Calendar Year	40.2	37.5	36.4	36.8	37.4	37.8	37.8	38.0	37.8	38.0	39.0	39.2
	% Change	(3.3)	(6.7)	(2.8)	1.1	1.7	1.0	(0.2)	0.5	(0.6)	0.5	2.8	0.3
	Fiscal Year	41.0	39.0	36.6	36.6	37.1	37.8	37.8	38.0	37.8	37.8	38.6	39.0
	% Change	(0.9)	(5.0)	(6.2)	0.2	1.1	1.9	0.0	0.5	0.0	2.3	1.0	
Professional and Business Services Thousands, SA	Calendar Year	104.7	99.5	97.9	98.6	99.7	102.5	104.4	105.0	104.4	109.0	113.5	114.6
	% Change	2.0	(5.0)	(1.6)	0.7	1.2	2.8	1.8	0.6	(0.6)	4.4	4.1	1.0
	Fiscal Year	104.0	102.6	98.0	98.1	99.2	101.5	103.2	104.6	104.6	106.6	111.7	113.8
	% Change	2.0	(1.3)	(4.5)	0.1	1.1	2.3	1.7	1.3	1.9	4.8	1.9	
Education and Health Services Thousands, SA	Calendar Year	91.7	93.7	94.7	98.0	100.4	104.2	105.3	108.6	110.8	112.0	113.7	114.7
	% Change	1.2	2.2	1.1	3.4	2.5	3.8	1.1	3.2	2.0	1.1	1.5	0.9
	Fiscal Year	91.2	92.8	94.1	96.4	99.0	102.4	105.0	106.4	110.3	111.3	112.9	114.2
	% Change	2.2	1.7	1.4	2.4	2.8	3.4	2.5	1.3	0.9	1.5	1.1	
Leisure and Hospitality Thousands, SA	Calendar Year	85.9	83.3	83.4	83.3	84.0	85.3	85.6	87.8	91.0	92.3	93.1	92.5
	% Change	(0.1)	(3.0)	0.1	(0.0)	0.8	1.6	0.3	2.6	3.6	1.5	0.8	(0.6)
	Fiscal Year	86.5	84.2	83.0	83.5	83.6	84.6	85.6	85.9	90.1	91.6	92.9	93.0
	% Change	1.5	(2.8)	(1.3)	0.5	0.2	1.1	1.3	0.3	4.8	1.7	1.3	0.1
Government Thousands, SA	Calendar Year	158.1	159.9	161.6	162.5	162.8	161.7	159.9	159.7	160.0	160.1	160.2	160.8
	% Change	1.6	1.1	1.1	0.6	0.1	(0.7)	(1.1)	(0.1)	0.2	0.1	0.0	0.4
	Fiscal Year	156.8	159.4	161.0	161.4	163.2	162.2	160.8	159.7	159.8	160.1	160.3	160.4
	% Change	1.6	1.7	1.0	0.3	1.1	(0.6)	(0.9)	0.1	0.2	0.2	0.2	0.0

SAAR: Seasonally Adjusted at Annual Rates

SA: Seasonally Adjusted

TABLE A.4 - ANNUAL VIRGINIA REGIONAL EMPLOYMENT

	October Standard Forecast					Pessimistic Alternative Scenario				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Hampton Roads										
Total Nonagricultural Employment Thousands, SA	766.1 (3.8)	781.0 1.9	790.9 1.3	796.8 0.7	802.3 0.7	763.5 (4.1)	762.4 (0.2)	779.4 2.2	795.2 2.0	813.5 2.3
Fiscal Year % Change	779.8 (1.8)	775.1 (0.6)	784.4 1.2	794.2 1.3	799.6 0.7	779.8 (1.8)	763.1 (2.1)	768.7 0.7	786.6 2.3	804.9 2.3
Construction and Mining Thousands, SA	37.2 (4.0)	36.3 (2.2)	36.6 0.7	37.1 1.5	37.7 1.5	37.1 (4.1)	35.8 (3.6)	35.6 (0.6)	36.0 1.2	36.5 1.3
Fiscal Year % Change	38.2 (1.3)	36.5 (4.3)	36.3 (0.4)	36.9 1.4	37.4 1.4	38.2 (1.3)	36.3 (4.9)	35.5 (2.2)	35.8 0.8	36.2 1.3
Trade, Transportation, and Utilities Thousands, SA	125.2 (3.8)	130.1 3.9	127.1 (2.3)	121.0 (4.8)	117.0 (3.3)	124.2 (4.5)	124.8 0.4	122.2 (2.1)	117.8 (3.6)	115.8 (1.7)
Fiscal Year % Change	127.0 (2.5)	128.1 0.8	129.8 1.3	123.1 (5.1)	119.0 (3.3)	127.0 (2.5)	124.5 (2.0)	124.5 (0.0)	119.0 (4.4)	116.8 (1.8)
Financial Activities Thousands, SA	39.6 1.1	40.6 2.6	42.6 4.9	43.4 2.0	44.1 1.5	39.4 0.6	39.3 (0.2)	42.5 8.1	44.0 3.6	45.2 2.6
Fiscal Year % Change	39.2 0.6	40.3 2.8	41.3 2.5	43.2 4.6	43.8 1.2	39.2 0.6	39.5 0.7	40.4 2.4	43.6 7.7	44.6 2.3
Professional and Business Services Thousands, SA	110.3 (3.8)	114.0 3.4	121.6 6.7	126.2 3.7	133.0 5.4	109.4 (4.5)	105.7 (3.4)	114.4 8.3	122.7 7.3	135.1 10.1
Fiscal Year % Change	112.7 (0.9)	112.1 (0.5)	117.2 4.5	124.0 5.8	129.4 4.4	112.7 (0.9)	106.9 (5.1)	109.6 2.5	117.8 7.5	129.0 9.5
Education and Health Services Thousands, SA	112.5 (1.9)	116.1 3.2	117.1 0.9	117.8 0.6	118.6 0.6	112.1 (2.3)	114.5 2.1	117.0 2.2	119.1 1.8	121.2 1.8
Fiscal Year % Change	113.0 (1.0)	114.3 1.1	116.9 2.2	117.6 0.6	118.2 0.5	113.0 (1.0)	113.2 0.1	115.8 2.3	118.1 2.0	120.2 1.8
Leisure and Hospitality Thousands, SA	79.0 (14.6)	83.7 5.9	84.5 1.0	88.7 4.9	88.7 (0.0)	79.0 (14.6)	82.6 4.5	84.3 2.1	88.6 5.0	89.1 0.6
Fiscal Year % Change	86.7 (6.8)	79.8 (8.0)	84.0 5.3	86.9 3.5	89.0 2.4	86.7 (6.8)	79.0 (8.9)	83.6 5.8	86.6 3.5	89.2 3.1
Government Thousands, SA	161.0 0.1	156.4 (2.9)	151.5 (3.1)	151.2 (0.2)	151.5 0.2	161.0 0.1	156.2 (3.0)	151.0 (3.4)	150.4 (0.4)	150.4 (0.0)
Fiscal Year % Change	158.9 (0.9)	162.4 2.2	152.2 (6.3)	151.2 (0.6)	151.3 0.1	158.9 (0.9)	162.4 2.2	151.9 (6.5)	150.6 (0.9)	150.3 (0.1)

SAAR: Seasonally Adjusted at Annual Rates

SA: Seasonally Adjusted

TABLE A.4 - ANNUAL VIRGINIA REGIONAL EMPLOYMENT

Richmond		History											
		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Total Nonagricultural Employment Thousands, SA	Calendar Year	619.9	595.2	591.6	600.1	612.1	621.7	632.2	650.0	662.3	669.8	679.8	686.9
	% Change	(0.4)	(4.0)	(0.6)	1.4	2.0	1.6	1.7	2.8	1.9	1.1	1.5	1.1
	Fiscal Year	622.3	609.5	590.1	594.6	606.0	617.2	627.0	639.1	658.8	666.2	674.0	684.6
	% Change	0.3	(2.1)	(3.2)	0.8	1.9	1.8	1.6	1.9	1.1	1.2	1.6	
Construction and Mining Thousands, SA	Calendar Year	41.4	34.6	32.4	31.8	32.6	33.2	33.9	36.2	36.9	38.0	39.7	39.8
	% Change	(8.0)	(16.3)	(6.3)	(2.0)	2.4	1.9	2.0	6.9	2.0	2.9	4.4	0.4
	Fiscal Year	43.9	37.9	32.9	32.2	32.1	33.0	33.2	35.0	36.7	37.4	38.8	40.0
	% Change	(1.5)	(13.5)	(13.3)	(2.3)	(0.3)	3.1	0.6	5.4	4.7	1.9	3.9	3.0
Trade, Transportation, and Utilities Thousands, SA	Calendar Year	114.0	108.1	107.3	109.3	111.9	114.3	117.4	119.7	121.7	121.9	123.9	122.2
	% Change	(0.9)	(5.1)	(0.8)	1.8	2.4	2.2	2.7	2.0	1.7	0.2	1.6	(1.3)
	Fiscal Year	114.9	111.6	107.0	108.1	110.3	113.3	116.2	117.9	121.7	121.3	123.0	123.3
	% Change	1.0	(2.9)	(4.2)	1.1	2.1	2.7	2.6	1.5	3.2	(0.3)	1.4	0.2
Financial Activities Thousands, SA	Calendar Year	43.9	42.6	42.2	43.6	45.7	46.9	47.7	49.1	48.7	49.4	51.0	52.9
	% Change	(3.6)	(2.9)	(1.1)	3.3	5.0	2.6	1.6	2.9	(0.7)	1.5	3.1	3.9
	Fiscal Year	44.7	43.4	42.2	42.5	44.8	46.4	47.4	48.4	48.8	49.1	50.0	52.0
	% Change	(2.7)	(3.0)	(2.8)	0.8	5.3	3.6	2.1	2.2	0.8	0.7	1.8	3.9
Professional and Business Services Thousands, SA	Calendar Year	98.9	92.2	92.5	96.3	98.8	100.3	102.5	109.4	112.8	114.7	116.9	118.8
	% Change	0.5	(6.7)	0.3	4.0	2.6	1.6	2.2	6.7	3.2	1.6	1.9	1.6
	Fiscal Year	99.3	95.7	91.2	94.8	97.3	99.6	101.4	105.1	112.1	114.0	115.5	117.9
	% Change	2.2	(3.7)	(4.7)	4.0	2.6	2.3	1.8	3.7	6.7	1.6	1.4	2.1
Education and Health Services Thousands, SA	Calendar Year	80.4	82.9	84.5	86.1	88.7	91.0	93.3	95.6	97.1	98.5	99.6	102.2
	% Change	8.8	3.1	1.9	1.8	3.1	2.6	2.5	2.6	1.6	1.4	1.1	2.6
	Fiscal Year	77.5	81.9	84.1	84.7	87.4	90.0	92.3	94.2	96.7	97.9	98.8	101.2
	% Change	7.1	5.7	2.7	0.8	3.2	2.9	2.6	2.1	2.6	1.3	1.0	2.4
Leisure and Hospitality Thousands, SA	Calendar Year	52.3	51.4	51.0	53.0	55.5	57.1	58.0	60.9	63.4	64.9	66.0	66.9
	% Change	0.8	(1.8)	(0.8)	4.0	4.6	2.9	1.6	5.0	4.1	2.4	1.6	1.4
	Fiscal Year	52.3	51.9	50.8	51.7	54.6	56.3	57.6	59.1	62.5	64.3	65.4	66.5
	% Change	1.1	(0.8)	(2.1)	1.7	5.5	3.2	2.3	2.5	5.9	2.8	1.7	1.6
Government Thousands, SA	Calendar Year	109.0	110.3	111.1	110.7	110.2	109.4	109.8	109.5	110.6	110.6	111.4	112.8
	% Change	(1.2)	1.2	0.7	(0.3)	(0.5)	(0.7)	0.3	(0.3)	1.0	0.0	0.7	1.2
	Fiscal Year	108.6	110.1	110.8	110.6	110.8	109.7	109.3	109.8	110.1	110.7	110.7	112.2
	% Change	(2.9)	1.4	0.6	(0.1)	0.1	(1.0)	(0.3)	0.4	0.3	0.5	0.0	1.3

SAAR: Seasonally Adjusted at Annual Rates

SA: Seasonally Adjusted

TABLE A.4 - ANNUAL VIRGINIA REGIONAL EMPLOYMENT

Richmond		October Standard Forecast					Pessimistic Alternative Scenario				
		2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Total Nonagricultural Employment Thousands, SA	Calendar Year	657.6	668.6	682.6	691.8	699.5	654.7	649.1	671.3	690.7	710.7
	% Change	(4.3)	1.7	2.1	1.4	1.1	(4.7)	(0.9)	3.4	2.9	2.9
	Fiscal Year	674.4	661.5	673.1	688.3	695.8	674.4	648.8	657.0	681.3	701.2
	% Change	(1.5)	(1.9)	1.8	2.3	1.1	(1.5)	(3.8)	1.3	3.7	2.9
Construction and Mining Thousands, SA	Calendar Year	40.4	40.3	40.6	41.3	41.9	40.4	39.6	39.3	39.9	40.5
	% Change	1.6	(0.3)	0.8	1.7	1.6	1.4	(1.9)	(0.7)	1.4	1.5
	Fiscal Year	39.9	40.5	40.3	40.9	41.6	39.9	40.2	39.3	39.6	40.2
	% Change	(0.2)	1.4	(0.5)	1.6	1.6	(0.2)	0.7	(2.4)	0.9	1.4
Trade, Transportation, and Utilities Thousands, SA	Calendar Year	118.0	121.6	121.9	117.9	115.4	116.9	116.3	117.8	116.4	116.7
	% Change	(3.5)	3.1	0.3	(3.3)	(2.1)	(4.3)	(0.5)	1.2	(1.2)	0.3
	Fiscal Year	120.7	118.9	122.6	119.4	116.7	120.7	115.1	117.7	116.5	116.6
	% Change	(2.1)	(1.5)	3.2	(2.6)	(2.3)	(2.1)	(4.6)	2.2	(1.1)	0.2
Financial Activities Thousands, SA	Calendar Year	55.1	55.5	59.0	60.5	61.6	54.8	53.4	58.8	61.4	63.3
	% Change	4.0	0.8	6.2	2.5	1.9	3.4	(2.4)	10.0	4.4	3.2
	Fiscal Year	54.4	55.2	56.7	60.1	61.0	54.4	53.8	55.3	60.6	62.4
	% Change	4.6	1.4	2.9	5.9	1.5	4.6	(1.1)	2.8	9.6	2.9
Professional and Business Services Thousands, SA	Calendar Year	115.3	117.7	124.8	129.1	135.1	114.6	110.8	118.9	126.5	137.4
	% Change	(2.9)	2.0	6.0	3.5	4.6	(3.5)	(3.4)	7.3	6.4	8.6
	Fiscal Year	117.7	116.0	120.6	127.1	131.9	117.7	111.8	114.3	122.2	131.9
	% Change	(0.2)	(1.4)	3.9	5.4	3.8	(0.2)	(5.0)	2.2	7.0	7.9
Education and Health Services Thousands, SA	Calendar Year	96.1	99.9	101.6	102.9	104.2	95.4	97.2	101.4	105.1	108.9
	% Change	(6.0)	4.0	1.7	1.2	1.3	(6.6)	1.8	4.4	3.6	3.6
	Fiscal Year	99.3	96.9	101.2	102.5	103.6	99.3	94.9	99.4	103.5	107.2
	% Change	(1.9)	(2.4)	4.5	1.3	1.0	(1.9)	(4.4)	4.7	4.1	3.6
Leisure and Hospitality Thousands, SA	Calendar Year	53.0	56.1	56.8	60.4	60.4	53.0	55.1	56.7	60.3	60.8
	% Change	(20.7)	5.9	1.3	6.2	(0.0)	(20.7)	4.0	2.8	6.4	0.7
	Fiscal Year	61.3	52.8	56.4	58.9	60.7	61.3	52.2	56.0	58.6	60.9
	% Change	(7.8)	(13.7)	6.7	4.4	3.0	(7.8)	(14.8)	7.4	4.6	3.9
Government Thousands, SA	Calendar Year	113.7	111.2	105.6	105.6	106.2	113.7	111.1	105.0	104.6	104.8
	% Change	0.8	(2.2)	(5.1)	0.0	0.5	0.8	(2.3)	(5.5)	(0.4)	0.2
	Fiscal Year	111.5	116.7	106.3	105.5	105.9	111.5	116.6	105.9	104.7	104.7
	% Change	(0.6)	4.7	(8.9)	(0.7)	0.4	(0.6)	4.6	(9.2)	(1.1)	0.0

SAAR: Seasonally Adjusted at Annual Rates

SA: Seasonally Adjusted

**APPENDIX B
GENERAL FUND DATA**

TABLE B.1 - QUARTERLY GENERAL FUND REVENUES
(Millions of Dollars)

	2017.3	2017.4	2018.1	2018.2	2018.3	2018.4	2019.1	2019.2	2019.3	2019.4	2020.1	2020.2	2020.3
Withholding	2,888.1	3,026.9	3,441.1	3,184.5	2,920.9	3,259.3	3,481.2	3,326.4	3,091.4	3,449.9	3,580.9	3,255.9	3,164.2
Annual % Change	4.0	2.0	6.5	9.0	1.1	7.7	1.2	4.5	5.8	5.8	2.9	(2.1)	2.4
Nonwithholding	463.8	581.7	688.5	1,738.9	530.3	297.9	727.0	2,421.6	617.6	359.0	801.7	2,026.2	982.4
Annual % Change	(1.5)	76.6	0.8	13.3	14.4	(48.8)	5.6	39.3	16.5	20.5	10.3	(16.3)	59.1
Gross Individual Income Tax	3,351.8	3,608.6	4,129.5	4,923.4	3,451.2	3,557.2	4,208.2	5,748.0	3,709.0	3,808.8	4,382.5	5,282.1	4,146.6
Annual % Change	3.2	9.5	5.5	10.5	3.0	(1.4)	1.9	16.7	7.5	7.1	4.1	(8.1)	11.8
Individual Refunds	126.7	162.3	876.1	742.5	137.9	167.3	739.2	693.7	158.5	191.9	838.8	641.0	280.7
Annual % Change	10.3	13.5	0.5	1.5	8.8	3.1	(15.6)	(6.6)	15.0	14.7	13.5	(7.6)	77.1
Net Individual Income Tax	3,225.1	3,446.3	3,253.5	4,180.9	3,313.3	3,389.9	3,469.0	5,054.2	3,550.5	3,616.9	3,543.7	4,641.1	3,865.9
Annual % Change	2.9	9.3	6.9	12.3	2.7	(1.6)	6.6	20.9	7.2	6.7	2.2	(8.2)	8.9
Sales and Use Tax	667.2	865.2	832.2	1,097.2	717.2	888.1	842.4	1,132.7	773.0	962.7	918.4	1,052.7	830.8
Annual % Change	2.7	4.6	1.5	3.5	7.5	2.6	1.2	3.2	7.8	8.4	9.0	(7.1)	7.5
Corporate Income Tax	252.7	134.9	104.5	369.9	227.4	164.7	101.4	449.8	246.8	220.7	116.3	427.9	335.8
Annual % Change	27.9	12.6	(29.3)	2.2	(10.0)	22.1	(2.9)	21.6	8.5	34.0	14.6	(4.9)	36.1
Wills, Suits, Deeds, Contracts	107.1	94.2	83.1	110.5	97.4	93.5	80.6	115.0	122.1	124.2	107.7	129.6	165.8
Annual % Change	(2.3)	(4.4)	3.4	4.3	(9.1)	(0.8)	(3.0)	4.1	25.4	32.9	33.6	12.7	35.9
Insurance Premiums	0.0	94.7	(11.0)	254.3	0.0	93.2	18.1	270.7	0.0	94.0	(12.0)	278.5	0.0
Annual % Change	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Interest Income	28.2	21.6	10.7	1.0	42.6	20.5	33.6	(9.7)	73.1	27.5	19.0	(9.6)	50.0
Annual % Change	12.8	100.1	(43.6)	2.2	51.2	(5.5)	214.9	(1,106.0)	71.7	34.5	(43.5)	(1.0)	(31.5)
Alcoholic Beverage Sales	15.3	55.4	61.9	99.3	14.0	57.5	64.8	104.5	17.4	61.1	71.1	117.6	15.8
Annual % Change	7.9	3.1	2.1	5.8	(8.0)	3.8	4.7	5.2	24.1	6.2	9.8	12.6	(9.6)
All Other Revenues	86.8	70.7	105.4	162.3	90.8	88.6	106.9	174.8	87.2	96.0	102.6	157.6	88.2
Annual % Change	5.6	(18.8)	(0.4)	(4.4)	4.6	25.3	1.5	7.7	(3.9)	8.4	(4.0)	(9.9)	1.1
Total General Fund Revenues	4,382.3	4,782.9	4,440.2	6,275.4	4,502.7	4,796.0	4,716.8	7,292.0	4,870.1	5,203.1	4,866.8	6,795.5	5,352.4
Annual % Change	4.1	7.7	3.7	8.9	2.7	0.3	6.2	16.2	8.2	8.5	3.2	(6.8)	9.9

TABLE B.2 - ANNUAL GENERAL FUND REVENUES
(Millions of Dollars)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Withholding												
Calendar Year	9,031.7	9,401.4	9,775.0	10,119.1	10,415.9	10,795.6	11,165.7	11,554.0	12,066.9	12,805.8	13,348.9	
% Change	(1.7)	4.1	4.0	3.5	2.9	3.6	3.4	3.5	4.4	6.1	4.2	
Fiscal Year	9,138.1	9,176.2	9,635.1	10,039.7	10,251.3	10,484.2	11,044.3	11,306.3	11,895.4	12,540.5	12,987.8	13,378.1
% Change	2.3	0.4	5.0	4.2	2.1	2.3	5.3	2.4	5.2	5.4	3.6	3.0
Nonwithholding												
Calendar Year	2,189.8	1,875.2	2,251.8	2,350.9	2,877.3	2,646.9	3,075.1	3,081.5	3,263.7	3,255.6	4,125.2	
% Change	(23.3)	(14.4)	20.1	4.4	22.4	(8.0)	16.2	0.2	5.9	(0.2)	26.7	
Fiscal Year	2,310.4	1,906.8	2,178.6	2,357.9	2,807.7	2,524.9	3,041.6	3,070.1	3,018.5	3,472.9	3,976.8	3,804.5
% Change	(19.2)	(17.5)	14.3	8.2	19.1	(10.1)	20.5	0.9	(1.7)	15.1	14.5	(4.3)
Gross Individual Income Tax												
Calendar Year	11,221.4	11,276.6	12,026.8	12,470.0	13,293.3	13,442.5	14,240.8	14,635.5	15,330.6	16,061.4	17,474.1	
% Change	(6.8)	0.5	6.7	3.7	6.6	1.1	5.9	2.8	4.7	4.8	8.8	
Fiscal Year	11,448.5	11,082.9	11,813.7	12,397.6	13,059.0	13,009.2	14,086.0	14,376.4	14,913.9	16,013.4	16,964.7	17,182.5
% Change	(2.9)	(3.2)	6.6	4.9	5.3	(0.4)	8.3	2.1	3.7	7.4	5.9	1.3
Individual Refunds												
Calendar Year	2,032.1	1,945.5	1,823.1	1,754.0	1,787.6	1,760.5	1,765.7	1,790.0	1,892.1	1,923.8	1,783.4	
% Change	18.1	(4.3)	(6.3)	(3.8)	1.9	(1.5)	0.3	1.4	5.7	1.7	(7.3)	
Fiscal Year	1,967.4	1,994.7	1,869.3	1,784.7	1,719.1	1,755.8	1,757.3	1,820.7	1,861.0	1,907.6	1,738.2	1,830.9
% Change	17.1	1.4	(6.3)	(4.5)	(3.7)	2.1	0.1	3.6	2.2	2.5	(8.9)	5.3
Net Individual Income Tax												
Calendar Year	9,189.3	9,331.1	10,203.8	10,716.0	11,505.7	11,682.0	12,475.1	12,845.5	13,438.5	14,137.7	15,690.6	
% Change	(11.0)	1.5	9.4	5.0	7.4	1.5	6.8	3.0	4.6	5.2	11.0	
Fiscal Year	9,481.1	9,088.3	9,944.4	10,612.8	11,340.0	11,253.3	12,328.7	12,555.6	13,052.9	14,105.8	15,226.5	15,351.6
% Change	(6.3)	(4.1)	9.4	6.7	6.9	(0.8)	9.6	1.8	4.0	8.1	7.9	0.8
Sales and Use Tax												
Calendar Year	2,853.0	2,958.0	3,080.6	3,190.9	3,178.0	3,108.9	3,253.5	3,292.3	3,412.5	3,534.7	3,710.8	
% Change	(4.6)	3.7	4.1	3.6	(0.4)	(2.2)	4.7	1.2	3.6	3.6	5.0	
Fiscal Year	2,903.4	3,082.5	3,012.4	3,121.5	3,219.8	3,066.5	3,235.4	3,295.9	3,357.1	3,461.8	3,580.4	3,706.8
% Change	(5.6)	6.2	(2.3)	3.6	3.1	(4.8)	5.5	1.9	1.9	3.1	3.4	3.5
Corporate Income Tax												
Calendar Year	736.7	792.7	809.9	900.9	733.7	820.6	754.8	792.6	897.2	866.5	1,018.7	
% Change	(0.2)	7.6	2.2	11.2	(18.6)	11.8	(8.0)	5.0	13.2	(3.4)	17.6	
Fiscal Year	648.0	806.5	822.3	859.9	796.7	757.5	831.9	764.9	827.0	861.9	943.4	1,011.7
% Change	(19.8)	24.4	2.0	4.6	(7.3)	(4.9)	9.8	(8.0)	8.1	4.2	9.5	7.2
Wills, Suits, Deeds, Contracts												
Calendar Year	312.8	288.5	296.8	346.2	364.0	309.7	364.4	390.8	387.6	384.4	441.9	
% Change	(15.3)	(7.8)	2.9	16.6	5.1	(14.9)	17.7	7.2	(0.8)	(0.8)	14.9	
Fiscal Year	314.3	290.2	291.5	322.1	377.5	310.8	346.3	369.1	394.4	394.9	386.5	483.5
% Change	(31.1)	(7.7)	0.4	10.5	17.2	(17.7)	11.4	6.6	6.9	0.1	(2.1)	25.1

TABLE B.2 - ANNUAL GENERAL FUND REVENUES
(Millions of Dollars)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Insurance Premiums												
Calendar Year	254.5	267.3	257.4	276.4	272.6	305.6	312.6	341.9	345.4	336.5	382.8	
% Change	(17.7)	5.0	(3.7)	7.4	(1.4)	12.1	2.3	9.4	1.0	(2.6)	13.8	
Fiscal Year	255.0	261.9	281.6	252.9	262.2	320.4	300.6	339.1	340.9	337.9	382.0	360.6
% Change	(35.7)	2.7	7.5	(10.2)	3.7	22.2	(6.2)	12.8	0.5	(0.9)	13.0	(5.6)
Interest Income												
Calendar Year	71.0	75.0	80.2	72.7	66.6	65.4	49.2	55.0	69.6	74.7	124.5	
% Change	(39.6)	5.5	7.0	(9.4)	(8.3)	(1.8)	(24.8)	11.9	26.6	7.2	66.8	
Fiscal Year	104.2	94.3	81.1	77.2	67.5	74.1	48.7	52.2	55.6	61.4	87.0	110.4
% Change	(44.9)	(9.5)	(14.0)	(4.9)	(12.5)	9.8	(34.3)	7.1	6.7	10.4	41.6	26.9
Alcoholic Beverage Sales												
Calendar Year	173.4	176.5	181.8	189.4	195.9	200.9	210.5	218.6	225.1	232.7	247.7	
% Change	2.2	1.8	3.0	4.2	3.4	2.6	4.8	3.8	3.0	3.4	6.5	
Fiscal Year	173.2	175.1	178.9	186.4	195.2	199.2	207.8	217.6	222.4	231.8	240.8	267.2
% Change	2.6	1.1	2.2	4.2	4.7	2.1	4.3	4.7	2.2	4.3	3.9	11.0
All Other Revenues												
Calendar Year	406.3	432.1	423.9	412.4	423.7	437.7	443.8	436.6	433.2	447.1	465.0	
% Change	(16.8)	6.4	(1.9)	(2.7)	2.7	3.3	1.4	(1.6)	(0.8)	3.2	4.0	
Fiscal Year	435.7	420.7	428.1	413.9	425.7	429.6	436.2	445.8	444.9	425.2	461.1	446.0
% Change	(21.8)	(3.4)	1.8	(3.3)	2.9	0.9	1.5	2.2	(0.2)	(4.4)	8.4	(3.3)
Total General Fund Revenues												
Calendar Year	13,997.0	14,321.2	15,334.3	16,105.0	16,740.2	16,930.7	17,863.9	18,373.3	19,209.0	20,014.2	22,082.0	
% Change	(9.7)	2.3	7.1	5.0	3.9	1.1	5.5	2.9	4.5	4.2	10.3	
Fiscal Year	14,315.1	14,219.5	15,040.2	15,846.7	16,684.6	16,411.4	17,735.6	18,040.1	18,695.1	19,880.8	21,307.5	21,737.8
% Change	(9.2)	(0.7)	5.8	5.4	5.3	(1.6)	8.1	1.7	3.6	6.3	7.2	2.0

APPENDIX C
MODELS AND METHODOLOGIES

Corporate Income Tax

diffya(corp)

$$= 1.31905 * \text{diffya}(\text{zbva}) - 0.15217 * \text{diffya}(\text{sp500va})$$

(2.15477) (0.19341)

$$+5.08875$$

(1.06056)

Sum Sq	56265.8	Std Err	31.6977	LHS Mean	6.9180
R Sq	0.1034	R Bar Sq	0.0713	F 2, 56	3.2276
D.W.(1)	2.1491	D.W.(4)	1.9155		

Quarterly data for 59 periods from 2006Q1 to 2020Q3

diffya	Year-over-year difference function
corp	Gross corporate income tax receipts
zbva	Virginia portion of national pre-tax profits
sp500va	Virginia specific Standard and Poor's 500 stock index

GENERAL FUND METHODOLOGY

Corporate Income Tax, Gross Receipts

	<u>Fiscal Year</u>	<u>Actual</u>	<u>Fitted</u>	<u>Residual</u>	<u>% Residual</u>
2011	10Q3	227.0	221.8	5.2	2.3%
	10Q4	238.3	262.5	(24.2)	-10.2%
	11Q1	161.8	133.1	28.7	17.7%
	11Q2	390.4	386.3	4.1	1.1%
	Total	1,017.5	1,003.7	13.8	1.4%
2012	11Q3	241.8	229.4	12.3	5.1%
	11Q4	224.1	244.6	(20.5)	-9.1%
	12Q1	184.9	184.5	0.4	0.2%
	12Q2	397.9	407.8	(9.9)	-2.5%
	Total	1,048.8	1,066.4	(17.6)	-1.7%
2013	12Q3	224.8	261.4	(36.6)	-16.3%
	12Q4	273.1	237.6	35.4	13.0%
	13Q1	134.1	186.8	(52.7)	-39.3%
	13Q2	375.1	401.9	(26.8)	-7.2%
	Total	1,007.1	1,087.8	(80.7)	-8.0%
2014	13Q3	242.2	228.8	13.4	5.5%
	13Q4	225.4	280.8	(55.3)	-24.5%
	14Q1	141.3	141.0	0.3	0.2%
	14Q2	356.1	387.1	(31.0)	-8.7%
	Total	965.0	1,037.6	(72.6)	-7.5%
2015	14Q3	256.6	253.7	2.9	1.1%
	14Q4	242.0	233.6	8.4	3.5%
	15Q1	159.4	146.9	12.5	7.8%
	15Q2	350.5	358.7	(8.2)	-2.3%
	Total	1,008.5	992.9	15.6	1.6%
2016	15Q3	233.5	254.8	(21.2)	-9.1%
	15Q4	219.5	236.8	(17.3)	-7.9%
	16Q1	186.3	159.5	26.8	14.4%
	16Q2	334.5	352.3	(17.8)	-5.3%
	Total	973.8	1,003.4	(29.5)	-3.0%
2017	16Q3	242.4	239.2	3.3	1.3%
	16Q4	232.2	231.8	0.4	0.2%
	17Q1	165.1	198.3	(33.2)	-20.1%
	17Q2	391.3	343.1	48.2	12.3%
	Total	1,031.1	1,012.4	18.7	1.8%
2018	17Q3	272.8	252.7	20.2	7.4%
	17Q4	235.2	233.6	1.5	0.7%
	18Q1	138.1	169.1	(31.0)	-22.5%
	18Q2	404.8	396.4	8.4	2.1%
	Total	1,050.9	1,051.7	(0.9)	-0.1%
2019	18Q3	254.0	276.7	(22.7)	-8.9%
	18Q4	269.4	245.7	23.7	8.8%
	19Q1	135.0	143.6	(8.6)	-6.4%
	19Q2	416.3	412.2	4.1	1.0%
	Total	1,074.7	1,078.3	(3.5)	-0.3%
2020	19Q3	292.5	259.4	33.1	11.3%
	19Q4	311.9	279.5	32.4	10.4%
	20Q1	153.5	134.8	18.8	12.2%
	20Q2	478.3	403.3	75.0	15.7%
	Total	1,236.3	1,077.0	159.2	12.9%

Individual Income Tax - Withholding

diffya(with)

$$= 0.00095 * \text{diffya}(\text{ywstran}) + 86.3603$$

(0.67520) (5.59246)

Sum Sq	264520	Std Err	71.3227	LHS Mean	94.7285
R Sq	0.0150	R Bar Sq	-0.0229	F 2, 52	0.3968
D.W.(1)	1.8456	D.W.(4)	1.8848		

Quarterly data for 55 periods from 2007Q1 to 2020Q3

diffya	Year-over-year difference function
with	Withholding tax receipts
ywstran	Virginia income from wages and salaries and transfer payments

GENERAL FUND METHODOLOGY

Individual Income Tax - Withholding

	<u>Fiscal Year</u>	<u>Actual</u>	<u>Fitted</u>	<u>Residual</u>	<u>% Residual</u>
2011	10Q3	2,219.1	2,237.9	(18.9)	-0.8%
	10Q4	2,459.9	2,432.1	27.8	1.1%
	11Q1	2,538.5	2,523.0	15.5	0.6%
	11Q2	2,417.6	2,409.2	8.4	0.3%
	Total	9,635.1	9,602.2	32.9	0.3%
2012	11Q3	2,308.0	2,314.7	(6.7)	-0.3%
	11Q4	2,510.9	2,548.4	(37.5)	-1.5%
	12Q1	2,640.7	2,627.4	13.4	0.5%
	12Q2	2,580.0	2,506.6	73.5	2.8%
	Total	10,039.7	9,997.1	42.6	0.4%
2013	12Q3	2,292.0	2,398.4	(106.4)	-4.6%
	12Q4	2,606.4	2,611.1	(4.7)	-0.2%
	13Q1	2,761.1	2,727.7	33.4	1.2%
	13Q2	2,591.9	2,658.8	(67.0)	-2.6%
	Total	10,251.3	10,395.9	(144.6)	-1.4%
2014	13Q3	2,403.1	2,391.1	12.0	0.5%
	13Q4	2,659.9	2,689.2	(29.3)	-1.1%
	14Q1	2,803.7	2,846.9	(43.2)	-1.5%
	14Q2	2,617.5	2,693.5	(76.0)	-2.9%
	Total	10,484.2	10,620.8	(136.6)	-1.3%
2015	14Q3	2,554.4	2,494.9	59.5	2.3%
	14Q4	2,820.0	2,760.2	59.8	2.1%
	15Q1	2,875.3	2,905.7	(30.4)	-1.1%
	15Q2	2,794.7	2,723.6	71.1	2.5%
	Total	11,044.3	10,884.3	160.0	1.4%
2016	15Q3	2,666.5	2,645.3	21.2	0.8%
	15Q4	2,829.2	2,908.0	(78.8)	-2.8%
	16Q1	3,029.1	2,972.4	56.7	1.9%
	16Q2	2,781.4	2,876.4	(95.0)	-3.4%
	Total	11,306.3	11,402.1	(95.9)	-0.8%
2017	16Q3	2,777.0	2,756.3	20.8	0.7%
	16Q4	2,966.4	2,934.0	32.4	1.1%
	17Q1	3,231.3	3,117.3	114.0	3.5%
	17Q2	2,920.7	2,890.8	29.9	1.0%
	Total	11,895.4	11,698.2	197.1	1.7%
2018	17Q3	2,888.1	2,871.5	16.6	0.6%
	17Q4	3,026.9	3,057.9	(31.1)	-1.0%
	18Q1	3,441.1	3,316.6	124.4	3.6%
	18Q2	3,064.5	3,013.9	50.6	1.7%
	Total	12,420.5	12,259.9	160.6	1.3%
2019	18Q3	3,040.9	2,984.9	56.0	1.8%
	18Q4	3,259.3	3,129.7	129.6	4.0%
	19Q1	3,481.2	3,526.3	(45.1)	-1.3%
	19Q2	3,326.4	3,158.2	168.1	5.1%
	Total	13,107.8	12,799.2	308.7	2.4%
2020	19Q3	3,091.4	3,132.8	(41.4)	-1.3%
	19Q4	3,449.9	3,341.4	108.4	3.1%
	20Q1	3,580.9	3,587.3	(6.4)	-0.2%
	20Q2	3,255.9	3,432.8	(176.9)	-5.4%
	Total	13,378.1	13,494.3	(116.3)	-0.9%

GENERAL FUND METHODOLOGY

Individual Income Tax - Estimated Payments

	<u>Fiscal Year</u>	<u>Actual</u>	<u>Fitted</u>	<u>Residual</u>	<u>% Residual</u>
2011	10Q3	254.8	302.5	(47.7)	-18.7%
	10Q4	204.8	223.3	(18.5)	-9.0%
	11Q1	351.3	416.2	(65.0)	-18.5%
	11Q2	490.4	478.6	11.8	2.4%
	Total	1,301.3	1,420.6	(119.4)	-9.2%
2012	11Q3	315.5	309.6	5.9	1.9%
	11Q4	226.7	223.3	3.4	1.5%
	12Q1	370.3	405.6	(35.3)	-9.5%
	12Q2	522.6	483.4	39.3	7.5%
	Total	1,435.1	1,421.8	13.3	0.9%
2013	12Q3	299.0	329.9	(30.9)	-10.3%
	12Q4	178.2	248.9	(70.7)	-39.7%
	13Q1	492.6	419.7	72.9	14.8%
	13Q2	593.0	522.7	70.3	11.9%
	Total	1,562.8	1,521.2	41.6	2.7%
2014	13Q3	328.3	359.1	(30.7)	-9.4%
	13Q4	223.2	274.9	(51.7)	-23.1%
	14Q1	453.2	476.2	(23.0)	-5.1%
	14Q2	567.7	577.7	(9.9)	-1.8%
	Total	1,572.5	1,687.9	(115.3)	-7.3%
2015	14Q3	372.7	393.4	(20.7)	-5.5%
	14Q4	317.8	297.8	20.0	6.3%
	15Q1	516.7	502.1	14.6	2.8%
	15Q2	642.8	603.2	39.6	6.2%
	Total	1,850.0	1,796.5	53.5	2.9%
2016	15Q3	398.1	398.0	0.1	0.0%
	15Q4	383.8	310.5	73.3	19.1%
	16Q1	493.9	498.0	(4.1)	-0.8%
	16Q2	646.6	614.5	32.0	5.0%
	Total	1,922.3	1,821.0	101.3	5.3%
2017	16Q3	410.6	420.9	(10.3)	-2.5%
	16Q4	335.7	347.3	(11.6)	-3.4%
	17Q1	581.4	546.3	35.1	6.0%
	17Q2	621.0	665.0	(44.0)	-7.1%
	Total	1,948.7	1,979.5	(30.8)	-1.6%
2018	17Q3	415.5	461.2	(45.7)	-11.0%
	17Q4	643.1	401.4	241.7	37.6%
	18Q1	474.9	609.8	(134.8)	-28.4%
	18Q2	705.9	698.4	7.5	1.1%
	Total	2,239.5	2,170.7	68.8	3.1%
2019	18Q3	444.8	503.1	(58.3)	-13.1%
	18Q4	285.5	466.6	(181.1)	-63.4%
	19Q1	548.8	577.5	(28.7)	-5.2%
	19Q2	838.4	718.1	120.3	14.3%
	Total	2,117.4	2,265.3	(147.9)	-7.0%
2020	19Q3	579.2	497.6	81.6	14.1%
	19Q4	354.5	469.6	(115.1)	-32.5%
	20Q1	650.8	609.2	41.6	6.4%
	20Q2	772.4	749.5	22.9	3.0%
	Total	2,356.8	2,325.9	30.9	1.3%

Individual Income Tax – Final Payments

pch(fp)

$$= 1.10678 * \underset{(2.96601)}{\text{pch(cysp500)}} - \underset{(0.32803)}{1.74643}$$

Sum Sq	3519.69	Std Err	17.1262	LHS Mean	6.3185
R Sq	0.4230	R Bar Sq	0.3749	F 1, 12	8.7972
D.W.(1)	2.8571	D.W.(2)	1.4018		

Annual data for 14 periods from 2006 to 2019

pch	Percent change function
fp	Final payments
cysp500	Standard and Poor's 500 stock index, calendar year

Individual Income Tax - Final Payments Percent Growth

<u>Fiscal Year</u>	<u>Actual</u>	<u>Fitted</u>	<u>Residual</u>
2007	18.6		
2008	4.5	(35.0)	39.5
2009	(30.0)	(224.3)	194.3
2010	(25.1)	(266.0)	240.8
2011	34.0	(27.6)	61.6
2012	5.2	(45.7)	50.9
2013	34.9	88.2	(53.3)
2014	(23.5)	56.6	(80.1)
2015	25.1	(40.6)	65.8
2016	(3.7)	(45.6)	41.9
2017	(6.8)	70.9	(77.7)
2018	15.3	40.0	(24.7)
2019	26.4	(74.1)	100.5
2020	13.7	391.8	(378.2)

State Sales Tax

diff(sales)

$$= 0.00104 * \text{diff}(\text{yrpicva}) + 8.00595$$

(0.96076) (1.29443)

Sum Sq	76192.4	Std Err	39.0365	LHS Mean	4.3917
R Sq	0.0540	R Bar Sq	0.0161	F 2, 50	1.4262
D.W.(1)	2.1861	D.W.(4)	0.6165		

Quarterly data for 53 periods from 2007Q3 to 2020Q3

diff	Quarter-over-quarter difference function
sales	Sales tax receipts
yrpicva	Virginia personal income

GENERAL FUND METHODOLOGY

State Sales Tax

Fiscal Year		Actual	Fitted	Residual	% Residual
2011	10Q3	577.9	758.7	(180.7)	-31.3%
	10Q4	746.3	863.0	(116.7)	-15.6%
	11Q1	719.7	639.7	80.0	11.1%
	11Q2	968.5	752.4	216.1	22.3%
	Total	3,012.4	3,013.7	(1.4)	0.0%
2012	11Q3	620.4	792.7	(172.3)	-27.8%
	11Q4	772.0	880.1	(108.0)	-14.0%
	12Q1	768.1	672.4	95.6	12.5%
	12Q2	961.0	781.3	179.7	18.7%
	Total	3,121.5	3,126.6	(5.1)	-0.2%
2013	12Q3	684.7	816.3	(131.6)	-19.2%
	12Q4	777.1	902.5	(125.4)	-16.1%
	13Q1	787.0	690.5	96.4	12.3%
	13Q2	971.0	753.7	217.3	22.4%
	Total	3,219.8	3,163.0	56.7	1.8%
2014	13Q3	653.9	830.0	(176.1)	-26.9%
	13Q4	766.1	884.7	(118.6)	-15.5%
	14Q1	721.1	695.3	25.8	3.6%
	14Q2	925.3	769.3	156.0	16.9%
	Total	3,066.5	3,179.3	(112.9)	-3.7%
2015	14Q3	684.0	785.9	(102.0)	-14.9%
	14Q4	778.5	870.3	(91.8)	-11.8%
	15Q1	764.3	716.9	47.4	6.2%
	15Q2	1,008.7	784.7	224.0	22.2%
	Total	3,235.4	3,157.9	77.6	2.4%
2016	15Q3	648.9	838.0	(189.1)	-29.1%
	15Q4	831.6	914.9	(83.2)	-10.0%
	16Q1	781.5	694.1	87.4	11.2%
	16Q2	1,033.9	817.4	216.4	20.9%
	Total	3,295.9	3,264.4	31.5	1.0%
2017	16Q3	649.9	852.1	(202.2)	-31.1%
	16Q4	827.1	939.9	(112.8)	-13.6%
	17Q1	820.0	706.0	114.0	13.9%
	17Q2	1,060.1	832.3	227.8	21.5%
	Total	3,357.1	3,330.3	26.8	0.8%
2018	17Q3	667.2	891.4	(224.2)	-33.6%
	17Q4	865.2	966.6	(101.4)	-11.7%
	18Q1	832.2	733.5	98.8	11.9%
	18Q2	1,097.2	867.2	230.0	21.0%
	Total	3,461.8	3,458.6	3.2	0.1%
2019	18Q3	717.2	912.2	(194.9)	-27.2%
	18Q4	888.1	1,004.8	(116.7)	-13.1%
	19Q1	842.4	769.1	73.3	8.7%
	19Q2	1,132.7	879.8	252.8	22.3%
	Total	3,580.4	3,565.9	14.5	0.4%
2020	19Q3	773.0	922.5	(149.4)	-19.3%
	19Q4	962.7	1,043.1	(80.4)	-8.4%
	20Q1	918.4	835.2	83.2	9.1%
	20Q2	1,052.7	999.2	53.5	5.1%
	Total	3,706.8	3,800.0	(93.2)	-2.5%

Recordation Taxes

diff(rec)

$$= - 0.37207 * \text{diff}(\text{mortorigin}) - 0.19691 * \text{diff}(\text{mortrefi}) +$$

(1.29335) (1.39970)

$$0.60386 * \text{diff}(\text{homepriceind}) - 18.6536 * \text{diff}(\text{rtbond30y.1}) -$$

(2.18881) (4.07573)

$$6.97857 * \text{qd1} + 26.7271 * \text{qd2} - 5.36233$$

(2.44114) (9.39227) (3.20681)

Sum Sq	2618.43	Std Err	7.8958	LHS Mean	1.0486
R Sq	0.7705	R Bar Sq	0.7377	F 6, 42	23.5045
D.W.(1)	1.9534	D.W.(4)	1.2698		

Quarterly data for 49 periods from 2008Q3 to 2020Q3

diff	Quarter-over-quarter difference function
rec	Recordation tax receipts
mortorigin	Total mortgage originations
mortrefi	Total mortgage refinancing
homepriceind	Home price index
rtbond30y.1	Yield on 30-year treasury bond, lagged one quarter
qd1, qd2	Quarterly dummy variables for quarters 1 and 2

GENERAL FUND METHODOLOGY

Recordation Taxes

Fiscal Year		Actual	Fitted	Residual	% Residual
2012	11Q3	78.9	70.9	8.0	10.1%
	11Q4	79.8	83.7	(3.9)	-4.8%
	12Q1	73.5	77.1	(3.6)	-4.8%
	12Q2	89.8	92.5	(2.7)	-3.0%
	Total	322.1	324.2	(2.1)	-0.7%
2013	12Q3	90.7	90.2	0.5	0.6%
	12Q4	92.2	86.6	5.7	6.1%
	13Q1	91.3	80.6	10.7	11.7%
	13Q2	103.3	109.0	(5.7)	-5.5%
	Total	377.5	366.2	11.2	3.0%
2014	13Q3	93.2	100.9	(7.7)	-8.3%
	13Q4	76.2	80.5	(4.2)	-5.5%
	14Q1	60.6	65.9	(5.4)	-8.9%
	14Q2	80.8	88.1	(7.3)	-9.0%
	Total	310.8	335.4	(24.6)	-7.9%
2015	14Q3	87.5	82.0	5.5	6.3%
	14Q4	80.9	85.9	(5.1)	-6.3%
	15Q1	76.1	73.4	2.7	3.5%
	15Q2	101.8	104.5	(2.7)	-2.6%
	Total	346.3	345.8	0.5	0.1%
2016	15Q3	96.0	93.4	2.6	2.7%
	15Q4	90.4	91.2	(0.8)	-0.8%
	16Q1	78.7	78.5	0.2	0.2%
	16Q2	104.0	104.4	(0.5)	-0.4%
	Total	369.1	367.5	1.5	0.4%
2017	16Q3	109.6	102.1	7.5	6.8%
	16Q4	98.5	112.9	(14.4)	-14.6%
	17Q1	80.4	78.8	1.5	1.9%
	17Q2	105.9	102.4	3.5	3.3%
	Total	394.4	396.2	(1.8)	-0.5%
2018	17Q3	107.1	105.1	2.0	1.9%
	17Q4	94.2	103.8	(9.6)	-10.2%
	18Q1	83.1	87.6	(4.5)	-5.4%
	18Q2	110.5	103.0	7.5	6.8%
	Total	394.9	399.6	(4.6)	-1.2%
2019	18Q3	97.4	106.6	(9.3)	-9.5%
	18Q4	93.5	95.4	(2.0)	-2.1%
	19Q1	80.6	77.7	2.9	3.6%
	19Q2	115.0	109.5	5.5	4.8%
	Total	386.5	389.3	(2.8)	-0.7%
2020	19Q3	122.1	114.4	7.7	6.3%
	19Q4	124.2	127.3	(3.1)	-2.5%
	20Q1	107.7	114.9	(7.2)	-6.7%
	20Q2	129.6	134.2	(4.5)	-3.5%
	Total	483.5	490.8	(7.3)	-1.5%

Motor Fuels Tax

gas

$$\begin{aligned}
 = & -0.00035 * \text{cyrpicva} + 0.31269 * \text{xtnemva} + 11.3241 * \text{jpc} \\
 & \quad (0.31563) \quad (3.53575) \quad (0.74414) \\
 & - 8.99245 * \text{jpgdp} - 1.98521 * \text{jpcsvtspub} + 126.732 * \text{season}_2 \\
 & \quad (0.61848) \quad (0.90849) \quad (6.10460) \\
 & + 12.4062 * \text{season}_3 + 55.6176 * \text{season}_4 - 143.546 \\
 & \quad (0.60326) \quad (2.68374) \quad (0.52407)
 \end{aligned}$$

Sum Sq	719924	Std Err	80.1742	LHS Mean	923.834
R Sq	0.6326	R Bar Sq	0.6063	F 8,112	24.1013
D.W.(1)	2.8740	D.W.(4)	000.4723		

diesel

$$\begin{aligned}
 = & 0.25628 * \text{xtnemva} - 0.00062 * \text{cyrpicva} + 34.7416 * \text{season}_2 \\
 & \quad (9.9724) \quad (5.63709) \quad (5.00200) \\
 & - 0.15656 * \text{season}_3 + 8.29525 * \text{season}_4 - 466.274 \\
 & \quad (0.02275) \quad (1.19577) \quad (8.30884)
 \end{aligned}$$

Sum Sq	82995.8	Std Err	26.8645	LHS Mean	239.427
R Sq	0.7526	R Bar Sq	0.7418	F 5,115	69.9670
D.W.(1)	1.5549	D.W.(4)	0.6166		

GAS	Taxable gallons of gasoline
PDCCENGAS	Gasoline and oil implicit price deflator
PDCCE	Consumer expenditures implicit price deflator
CYRPICVA	Virginia real personal income
SEASON_2	Dummy variable second quarter
SEASON_3	Dummy variable third quarter
SEASON_4	Dummy variable fourth quarter
DIESEL	Taxable gallons of diesel
GDP96	Real gross domestic product
PPIRPP	PPI, refined petroleum products

NON-GENERAL FUND METHODOLOGY

Gasoline Consumption

	<u>Fiscal Year</u>	<u>Actual</u>	<u>Fitted</u>	<u>Residual</u>	<u>% Residual</u>
2011	10Q3	841.3	917.0	(75.7)	-9.0%
	10Q4	1,021.0	962.7	58.4	5.7%
	11Q1	927.3	906.0	21.3	2.3%
	11Q2	1,144.6	1,037.6	107.1	9.4%
	Total	3,934.3	3,823.3	111.0	2.8%
2012	11Q3	802.7	925.4	(122.7)	-15.3%
	11Q4	944.3	971.3	(27.0)	-2.9%
	12Q1	901.8	918.3	(16.4)	-1.8%
	12Q2	1,246.4	1,041.3	205.1	16.5%
	Total	3,895.3	3,856.4	38.9	1.0%
2013	12Q3	706.8	929.3	(222.4)	-31.5%
	12Q4	1,022.5	978.7	43.8	4.3%
	13Q1	904.7	930.6	(25.9)	-2.9%
	13Q2	1,153.5	1,054.0	99.4	8.6%
	Total	3,787.5	3,892.6	(105.1)	-2.8%
2014	13Q3	737.9	937.4	(199.5)	-27.0%
	13Q4	1,023.3	978.4	44.9	4.4%
	14Q1	977.4	925.0	52.3	5.4%
	14Q2	1,129.4	1,053.3	76.1	6.7%
	Total	3,868.0	3,894.2	(26.2)	-0.7%
2015	14Q3	856.3	936.7	(80.4)	-9.4%
	14Q4	989.3	979.0	10.2	1.0%
	15Q1	914.5	924.4	(9.9)	-1.1%
	15Q2	1,241.9	1,060.2	181.7	14.6%
	Total	4,002.0	3,900.4	101.7	2.5%
2016	15Q3	796.4	955.3	(158.8)	-19.9%
	15Q4	1,038.5	1,006.6	31.9	3.1%
	16Q1	959.3	950.6	8.6	0.9%
	16Q2	1,205.6	1,082.9	122.7	10.2%
	Total	3,999.8	3,995.3	4.5	0.1%
2017	16Q3	824.9	970.9	(146.0)	-17.7%
	16Q4	1,056.9	1,017.6	39.3	3.7%
	17Q1	947.0	965.5	(18.4)	-1.9%
	17Q2	1,292.9	1,094.1	198.8	15.4%
	Total	4,121.7	4,048.0	73.7	1.8%
2018	17Q3	827.5	981.9	(154.3)	-18.6%
	17Q4	1,057.0	1,025.6	31.4	3.0%
	18Q1	963.3	980.8	(17.5)	-1.8%
	18Q2	1,263.8	1,108.9	154.9	12.3%
	Total	4,111.7	4,097.2	14.5	0.4%
2019	18Q3	822.9	992.0	(169.1)	-20.6%
	18Q4	983.3	1,032.2	(48.9)	-5.0%
	19Q1	1,095.8	983.5	112.2	10.2%
	19Q2	1,216.8	1,116.9	99.9	8.2%
	Total	4,118.7	4,124.6	(5.9)	-0.1%
2020	19Q3	869.6	999.8	(130.2)	-15.0%
	19Q4	1,032.1	1,043.2	(11.1)	-1.1%
	20Q1	961.1	997.7	(36.5)	-3.8%
	20Q2	950.7	1,014.7	(63.9)	-6.7%
	Total	3,813.6	4,055.3	(241.8)	-6.3%

NON-GENERAL FUND METHODOLOGY

Diesel Fuel Consumption

	<u>Fiscal Year</u>	<u>Actual</u>	<u>Fitted</u>	<u>Residual</u>	<u>% Residual</u>
2011	10Q3	217.2	232.4	(15.2)	-7.0%
	10Q4	259.2	241.9	17.3	6.7%
	11Q1	237.6	233.1	4.4	1.9%
	11Q2	299.8	269.9	29.9	10.0%
	Total	1,013.8	977.3	36.5	3.6%
2012	11Q3	184.8	235.6	(50.8)	-27.5%
	11Q4	257.0	246.8	10.2	4.0%
	12Q1	235.3	239.2	(3.9)	-1.7%
	12Q2	321.3	272.5	48.8	15.2%
	Total	998.3	994.0	4.3	0.4%
2013	12Q3	191.6	239.7	(48.1)	-25.1%
	12Q4	261.7	249.6	12.1	4.6%
	13Q1	240.4	252.4	(12.0)	-5.0%
	13Q2	323.7	284.4	39.4	12.2%
	Total	1,017.5	1,026.1	(8.6)	-0.8%
2014	13Q3	204.7	251.4	(46.7)	-22.8%
	13Q4	260.1	259.9	0.2	0.1%
	14Q1	257.0	247.9	9.1	3.6%
	14Q2	307.9	285.4	22.5	7.3%
	Total	1,029.7	1,044.5	(14.8)	-1.4%
2015	14Q3	202.4	249.3	(46.9)	-23.2%
	14Q4	266.5	256.2	10.4	3.9%
	15Q1	243.3	248.7	(5.4)	-2.2%
	15Q2	319.4	289.1	30.3	9.5%
	Total	1,031.7	1,043.3	(11.6)	-1.1%
2016	15Q3	210.4	260.7	(50.3)	-23.9%
	15Q4	257.7	273.7	(16.0)	-6.2%
	16Q1	238.9	265.0	(26.1)	-10.9%
	16Q2	291.1	302.5	(11.4)	-3.9%
	Total	998.1	1,101.9	(103.8)	-10.4%
2017	16Q3	229.6	268.7	(39.2)	-17.1%
	16Q4	263.7	277.8	(14.1)	-5.3%
	17Q1	254.0	271.8	(17.8)	-7.0%
	17Q2	328.1	308.3	19.8	6.0%
	Total	1,075.4	1,126.6	(51.2)	-4.8%
2018	17Q3	200.4	272.8	(72.4)	-36.1%
	17Q4	270.8	281.4	(10.6)	-3.9%
	18Q1	258.8	277.3	(18.6)	-7.2%
	18Q2	330.4	316.4	14.0	4.2%
	Total	1,060.4	1,147.9	(87.5)	-8.3%
2019	18Q3	241.9	279.2	(37.3)	-15.4%
	18Q4	249.3	287.4	(38.1)	-15.3%
	19Q1	289.0	282.9	6.1	2.1%
	19Q2	323.0	324.7	(1.7)	-0.5%
	Total	1,103.2	1,174.2	(71.0)	-6.4%
2020	19Q3	241.9	286.3	(44.4)	-18.3%
	19Q4	236.6	294.2	(57.6)	-24.3%
	20Q1	252.0	287.3	(35.3)	-14.0%
	20Q2	252.0	214.5	37.5	14.9%
	Total	982.5	1,082.2	(99.8)	-10.2%

NON-GENERAL FUND METHODOLOGY

Motor Vehicle Sales and Use Tax

log(ttcarsq)

$$\begin{aligned} = & 4.34961 * \text{dlogya}(\text{pdcgdp}) \\ & \quad (3.19223) \\ & + 1.30740 * \text{movavg}(2, \text{dlogya}(\text{xtnemva}.4)) \\ & \quad (2.49246) \\ & + 0.00000 * \text{diffya}(\text{yrpicva}) + 0.08351 * \text{season}_2 \\ & \quad (2.42509) \quad (3.74600) \\ & + 0.08728 * \text{season}_3 - 0.09352 * \text{season}_4 + 5.76529 \\ & \quad (3.91611) \quad (4.16116) \quad (190.126) \end{aligned}$$

Sum Sq	0.7566	Std Err	0.0841	LHS Mean	5.9192
R Sq	0.5269	R Bar Sq	0.5004	F 6,107	19.8640
D.W.(1)	0.6858	D.W.(4)	0.8742		

newcar

$$\begin{aligned} = & 0.00595 * \text{suvlv} + 0.01647 * \text{season}_2 + 0.01915 * \text{season}_3 \\ & \quad (17.7862) \quad (9.9154) \quad (11.6577) \\ & - 0.00945 \\ & \quad (1.81333) \end{aligned}$$

Sum Sq	0.0065	Std Err	0.0074	LHS Mean	0.0906
R Sq	0.8082	R Bar Sq	0.8033	F 3,117	164.342
D.W.(1)	0.4488	D.W.(4)	0.4581		

TTCARSQ	Total taxable titles
PDIGDP	GDP price deflator
XTNEMVA	Virginia non-agricultural employment
YRPICVA	Virginia real personal income
SEASON_2	Dummy variable second quarter
SEASON_3	Dummy variable third quarter
SEASON_4	Dummy variable fourth quarter
NEWCAR	New taxable titles
SUVLV	U.S. new light vehicle sales
RMCLV	Rate on commercial bank loans for new vehicles

NON-GENERAL FUND METHODOLOGY

New Taxable Titles (in thousands)

	<u>Fiscal Year</u>	<u>Actual</u>	<u>Fitted</u>	<u>Residual</u>	<u>% Residual</u>
2011	10Q3	79.9	79.5	0.4	0.5%
	10Q4	67.2	63.2	4.0	6.0%
	11Q1	76.0	66.6	9.4	12.4%
	11Q2	85.8	79.6	6.3	7.3%
	Total	308.9	288.8	20.1	6.5%
2012	11Q3	83.2	84.5	(1.3)	-1.6%
	11Q4	74.8	70.3	4.4	5.9%
	12Q1	81.6	75.6	6.0	7.4%
	12Q2	95.4	91.6	3.8	4.0%
	Total	335.0	322.0	13.0	3.9%
2013	12Q3	94.1	94.7	(0.6)	-0.6%
	12Q4	81.6	79.3	2.3	2.8%
	13Q1	86.8	82.5	4.2	4.9%
	13Q2	99.1	99.7	(0.6)	-0.6%
	Total	361.6	356.2	5.3	1.5%
2014	13Q3	99.5	102.2	(2.7)	-2.8%
	13Q4	81.1	82.8	(1.7)	-2.1%
	14Q1	81.4	84.6	(3.3)	-4.0%
	14Q2	90.5	106.4	(15.9)	-17.5%
	Total	352.5	376.0	(23.6)	-6.7%
2015	14Q3	102.3	109.2	(6.9)	-6.7%
	14Q4	84.6	88.9	(4.3)	-5.1%
	15Q1	83.9	90.4	(6.5)	-7.7%
	15Q2	103.8	110.3	(6.5)	-6.3%
	Total	374.6	398.8	(24.2)	-6.5%
2016	15Q3	109.5	115.9	(6.4)	-5.9%
	15Q4	91.6	95.1	(3.4)	-3.7%
	16Q1	88.6	93.9	(5.3)	-6.0%
	16Q2	101.4	109.9	(8.5)	-8.4%
	Total	391.0	414.7	(23.7)	-6.1%
2017	16Q3	108.2	114.3	(6.1)	-5.6%
	16Q4	92.3	95.2	(2.9)	-3.1%
	17Q1	92.0	92.4	(0.4)	-0.5%
	17Q2	98.4	107.0	(8.6)	-8.7%
	Total	390.9	408.9	(18.0)	-4.6%
2018	17Q3	103.5	111.3	(7.8)	-7.5%
	17Q4	88.7	94.8	(6.1)	-6.9%
	18Q1	87.7	92.5	(4.8)	-5.4%
	18Q2	97.8	109.6	(11.8)	-12.0%
	Total	377.7	408.1	(30.4)	-8.0%
2019	18Q3	102.4	110.8	(8.5)	-8.3%
	18Q4	90.5	94.4	(3.9)	-4.3%
	19Q1	87.7	91.0	(3.3)	-3.8%
	19Q2	99.4	108.3	(8.9)	-9.0%
	Total	379.9	404.5	(24.6)	-6.5%
2020	19Q3	104.4	111.0	(6.7)	-6.4%
	19Q4	91.1	90.7	0.4	0.5%
	20Q1	87.9	79.7	8.1	9.3%
	20Q2	73.8	74.1	(0.2)	-0.3%
	Total	357.2	355.5	1.7	0.5%

NON-GENERAL FUND METHODOLOGY

Used Taxable Titles (in thousands)

	<u>Fiscal Year</u>	<u>Actual</u>	<u>Fitted</u>	<u>Residual</u>	<u>% Residual</u>
2011	10Q3	289.2	289.9	(0.7)	-0.2%
	10Q4	237.9	249.8	(11.9)	-5.0%
	11Q1	289.1	288.6	0.4	0.1%
	11Q2	289.8	316.5	(26.7)	-9.2%
	Total	1,106.0	1,144.9	(38.8)	-3.5%
2012	11Q3	276.8	325.2	(48.5)	-17.5%
	11Q4	237.4	266.9	(29.5)	-12.4%
	12Q1	296.0	297.9	(1.8)	-0.6%
	12Q2	285.8	308.6	(22.7)	-8.0%
	Total	1,096.0	1,198.5	(102.5)	-9.4%
2013	12Q3	282.8	300.8	(18.0)	-6.4%
	12Q4	237.1	263.4	(26.3)	-11.1%
	13Q1	280.8	269.7	11.1	3.9%
	13Q2	305.5	278.9	26.6	8.7%
	Total	1,106.1	1,112.8	(6.7)	-0.6%
2014	13Q3	290.0	276.2	13.9	4.8%
	13Q4	241.6	228.1	13.5	5.6%
	14Q1	271.0	277.1	(6.0)	-2.2%
	14Q2	307.7	295.0	12.7	4.1%
	Total	1,110.3	1,076.4	33.9	3.1%
2015	14Q3	289.1	296.4	(7.3)	-2.5%
	14Q4	250.1	242.8	7.2	2.9%
	15Q1	271.6	262.1	9.5	3.5%
	15Q2	306.8	274.4	32.4	10.6%
	Total	1,117.6	1,075.7	41.9	3.8%
2016	15Q3	297.5	268.1	29.3	9.9%
	15Q4	257.4	222.4	35.1	13.6%
	16Q1	291.0	252.8	38.2	13.1%
	16Q2	309.5	267.3	42.2	13.6%
	Total	1,155.4	1,010.6	144.8	12.5%
2017	16Q3	304.0	267.5	36.5	12.0%
	16Q4	266.9	236.1	30.8	11.5%
	17Q1	305.4	283.2	22.1	7.2%
	17Q2	317.8	294.1	23.7	7.5%
	Total	1,194.1	1,081.0	113.1	9.5%
2018	17Q3	304.6	293.5	11.2	3.7%
	17Q4	261.4	242.8	18.6	7.1%
	18Q1	290.8	281.8	9.0	3.1%
	18Q2	317.2	307.6	9.5	3.0%
	Total	1,173.9	1,125.7	48.3	4.1%
2019	18Q3	301.0	306.7	(5.7)	-1.9%
	18Q4	258.2	249.4	8.7	3.4%
	19Q1	296.1	279.8	16.3	5.5%
	19Q2	322.8	290.9	31.9	9.9%
	Total	1,178.2	1,126.9	51.3	4.4%
2020	19Q3	312.3	286.2	26.1	8.4%
	19Q4	271.1	239.2	31.9	11.8%
	20Q1	273.3	285.3	(12.0)	-4.4%
	20Q2	193.1	325.8	(132.7)	-68.7%
	Total	1,049.9	1,136.5	(86.6)	-8.2%

Motor Vehicle License Revenues

vehreg1

$$= 0.92841 * \text{vehreg1}[-4] - 0.11114 * \text{vehreg2}[-8]$$

(19.3191) (1.08661)

$$+ 47680.4 * \text{origvtff} + 110478$$

(1.49540) (2.18840)

Sum Sq	4E+11	Std Err	61900.9	LHS Mean	1203235
R Sq	0.8054	R Bar Sq	0.8004	F 3,115	158.697
D.W.(1)	1.7329	D.W.(4)	2.2272		

vehreg2

$$= 1.10453 * (\text{vehreg2.8} * \text{renew}) + 932.200 * \text{qd2} + 31282.0$$

(24.3745) (0.16108) (3.36317)

Sum Sq	8E+10	Std Err	26996.1	LHS Mean	253416
R Sq	0.8411	R Bar Sq	0.8384	F 2,116	307.023
D.W.(1)	0.6726	D.W.(4)	1.4630		

VEHREG1	One year registrations
VEHREG2	Two year registrations
RENEW2	Percent of two year renewals who maintain the two year interval
QD2	Dummy variable second quarter

NON-GENERAL FUND METHODOLOGY

One Year Registrations

	<u>Fiscal Year</u>	<u>Actual</u>	<u>Fitted</u>	<u>Residual</u>	<u>% Residual</u>
2011	10Q3	1,339,471	1,262,307	77,164	5.8%
	10Q4	1,072,468	1,056,575	15,893	1.5%
	11Q1	1,241,276	1,208,072	33,204	2.7%
	11Q2	1,287,951	1,301,093	(13,142)	-1.0%
	Total	4,941,166	4,828,047	113,119	2.3%
2012	11Q3	1,320,807	1,323,109	(2,302)	-0.2%
	11Q4	1,054,684	1,081,249	(26,565)	-2.5%
	12Q1	1,235,555	1,234,182	1,373	0.1%
	12Q2	1,251,833	1,273,218	(21,385)	-1.7%
	Total	4,862,879	4,911,759	(48,880)	-1.0%
2013	12Q3	1,330,752	1,302,756	27,996	2.1%
	12Q4	1,059,221	1,062,976	(3,755)	-0.4%
	13Q1	1,207,727	1,227,048	(19,321)	-1.6%
	13Q2	1,370,117	1,240,630	129,487	9.5%
	Total	4,967,817	4,833,409	134,408	2.7%
2014	13Q3	1,286,444	1,312,805	(26,361)	-2.0%
	13Q4	1,070,701	1,067,846	2,855	0.3%
	14Q1	1,177,663	1,199,924	(22,261)	-1.9%
	14Q2	1,324,308	1,349,562	(25,254)	-1.9%
	Total	4,859,116	4,930,137	(71,021)	-1.5%
2015	14Q3	1,303,376	1,268,152	35,224	2.7%
	14Q4	1,043,487	1,076,473	(32,986)	-3.2%
	15Q1	1,125,800	1,172,057	(46,257)	-4.1%
	15Q2	1,353,553	1,303,512	50,041	3.7%
	Total	4,826,216	4,820,194	6,022	0.1%
2016	15Q3	1,310,587	1,286,296	24,291	1.9%
	15Q4	1,091,163	1,050,911	40,252	3.7%
	16Q1	1,203,707	1,124,477	79,230	6.6%
	16Q2	1,305,838	1,330,836	(24,998)	-1.9%
	Total	4,911,295	4,792,520	118,775	2.4%
2017	16Q3	1,284,089	1,290,519	(6,430)	-0.5%
	16Q4	1,065,690	1,095,011	(29,321)	-2.8%
	17Q1	1,194,429	1,197,891	(3,462)	-0.3%
	17Q2	1,302,104	1,285,127	16,977	1.3%
	Total	4,846,312	4,868,549	(22,237)	-0.5%
2018	17Q3	1,242,320	1,266,297	(23,977)	-1.9%
	17Q4	1,041,436	1,070,035	(28,599)	-2.7%
	18Q1	1,199,940	1,185,631	14,309	1.2%
	18Q2	1,266,694	1,282,338	(15,644)	-1.2%
	Total	4,750,390	4,804,301	(53,911)	-1.1%
2019	18Q3	1,234,621	1,225,565	9,056	0.7%
	18Q4	1,067,739	1,045,761	21,978	2.1%
	19Q1	1,182,279	1,189,515	(7,236)	-0.6%
	19Q2	1,263,417	1,248,029	15,388	1.2%
	Total	4,748,056	4,708,870	39,186	0.8%
2020	19Q3	1,263,017	1,220,246	42,771	3.4%
	19Q4	1,057,058	1,067,242	(10,184)	-1.0%
	20Q1	1,086,420	1,166,736	(80,316)	-7.4%
	20Q2	965,886	1,238,663	(272,777)	-28.2%
	Total	4,372,381	4,692,886	(320,505)	-7.3%

NON-GENERAL FUND METHODOLOGY

Two Year Registrations

	<u>Fiscal Year</u>	<u>Actual</u>	<u>Fitted</u>	<u>Residual</u>	<u>% Residual</u>
2011	10Q3	305,619	327,947	(22,328)	-7.3%
	10Q4	240,029	254,924	(14,895)	-6.2%
	11Q1	274,668	291,061	(16,393)	-6.0%
	11Q2	288,437	315,764	(27,327)	-9.5%
	Total	1,108,753	1,189,696	(80,943)	-7.3%
2012	11Q3	298,282	292,656	5,626	1.9%
	11Q4	234,104	241,743	(7,639)	-3.3%
	12Q1	286,257	273,752	12,505	4.4%
	12Q2	296,383	310,986	(14,603)	-4.9%
	Total	1,115,026	1,119,137	(4,111)	-0.4%
2013	12Q3	329,923	318,212	11,711	3.5%
	12Q4	252,382	256,633	(4,251)	-1.7%
	13Q1	285,852	289,154	(3,302)	-1.2%
	13Q2	328,063	303,013	25,050	7.6%
	Total	1,196,220	1,167,012	29,208	2.4%
2014	13Q3	308,108	311,324	(3,216)	-1.0%
	13Q4	255,044	251,070	3,974	1.6%
	14Q1	280,728	300,034	(19,306)	-6.9%
	14Q2	326,511	310,473	16,038	4.9%
	Total	1,170,391	1,172,902	(2,511)	-0.2%
2015	14Q3	330,347	341,030	(10,683)	-3.2%
	14Q4	256,512	268,231	(11,719)	-4.6%
	15Q1	270,965	299,654	(28,689)	-10.6%
	15Q2	339,195	340,216	(1,021)	-0.3%
	Total	1,197,019	1,249,131	(52,112)	-4.4%
2016	15Q3	326,940	320,549	6,391	2.0%
	15Q4	268,453	270,730	(2,277)	-0.8%
	16Q1	303,775	294,843	8,932	2.9%
	16Q2	333,097	338,759	(5,662)	-1.7%
	Total	1,232,265	1,224,881	7,384	0.6%
2017	16Q3	344,522	341,428	3,094	0.9%
	16Q4	284,256	272,108	12,148	4.3%
	17Q1	314,861	285,677	29,184	9.3%
	17Q2	345,999	350,667	(4,668)	-1.3%
	Total	1,289,638	1,249,881	39,757	3.1%
2018	17Q3	328,067	338,229	(10,162)	-3.1%
	17Q4	310,698	283,319	27,379	8.8%
	18Q1	372,289	316,481	55,808	15.0%
	18Q2	402,900	344,942	57,958	14.4%
	Total	1,413,954	1,282,972	130,982	9.3%
2019	18Q3	405,809	354,736	51,073	12.6%
	18Q4	350,744	298,156	52,588	15.0%
	19Q1	385,882	326,889	58,993	15.3%
	19Q2	417,039	357,055	59,984	14.4%
	Total	1,559,474	1,336,836	222,638	14.3%
2020	19Q3	418,853	339,288	79,565	19.0%
	19Q4	350,465	322,981	27,484	7.8%
	20Q1	373,041	380,805	(7,764)	-2.1%
	20Q2	361,360	410,477	(49,117)	-13.6%
	Total	1,503,719	1,453,550	50,169	3.3%

NON-GENERAL FUND METHODOLOGY

ABC Revenue Estimating Methodology

Distilled spirit sales revenues are a function of the price of product and quantity sold. Both are forecasted using separate models with quarterly data from 1981 through the present. The price of distilled spirits is a function of the cost of product and the appropriate state and federal taxes and mark-ups. Sales estimates serve as the basis for the development of pro forma profit and loss statements. Sales performance can be significantly influenced by changes in consumer behavior (primarily during the holiday period) and severe weather that are both impossible to accurately forecast. Expenses are estimated based on anticipated budget requirements during the forecasting period. Variations in anticipated expenses are often the source of forecasting error, particularly in the later years of the forecast.

Average Price of Distilled Spirits

The average sales price per gallon of distilled spirits sold was calculated for each quarter. This was adjusted to account for changes in mark-up, state taxes, and the Federal Excise Tax on distilled spirits. The resulting base price was forecasted using an ARIMA model that was found to fit the data better than previous regression-based forecasting methods.

Statistical Results:

Mean Squared Error = .04

$R^2 = 98.1\%$

Quantity of Liquor Demanded

Again, a variety of modeling techniques and data were evaluated to forecast the demand for distilled spirits. The Winter's Multiplicative exponential smoothing method provided the best fit for the data.

Statistical Results:

Mean Squared Error = .001

$R^2 = 98.7\%$