



The Economic Outlook and Revenue Forecast through Fiscal Year 2020

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

November 20, 2017

Terence R. McAuliffe
Governor

Richard D. Brown
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 in October 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 September 2016 standard forecast. The consensus of the Board was that the IHS Markit October standard forecast was the appropriate outlook for the nation. For Virginia, the Board's consensus was that the October standard forecast was too optimistic for the Commonwealth in fiscal year 2018 and recommended some minor downward revisions to fiscal year 2018 employment and personal income. The standard forecast was accepted as the most likely economic scenario for fiscal years 2019 and 2020.

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 2017. 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 2017. 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 2017. 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 begins with a review of fiscal year 2017, comparing actual U.S. economic growth to the official forecast for the year. The official forecast for fiscal year 2017 was based on IHS Markit's October 2016 U.S. standard outlook as approved by the Joint Advisory Board of Economists (JABE) and the Governor's Advisory Council on Revenue Estimates (GACRE).

Following the review of fiscal year 2017, the IHS Markit October standard forecast is summarized. The section concludes with an overview of one additional economic outlook – IHS Markit's October 2017 pessimistic alternative scenario.

Tabular data are presented throughout this section. More detailed tabular data are presented in the appendices. Appendix A-1 shows quarterly historical data for major forecast variables from fiscal year 2015 through fiscal year 2017. Appendix A-2 shows quarterly data for the three forecasts through fiscal year 2020. Appendix A-3 displays annual historical and forecast data from fiscal year 1998 through fiscal year 2020. Appendix A-4 displays regional employment data from fiscal year 1998 through fiscal year 2020.

Review of Fiscal Year 2017

At the time of IHS Markit's October 2016 forecast, the economy continued to improve and underlying fundamentals seemed to support a continued moderate expansion. Indicators were mixed, with modest growth in real GDP and a stable labor market.

Following is a summary of key assumptions included in the October 2016 standard forecast and how those assumptions fared over the fiscal year. Table 1.1 on the next page compares the official forecast and actual results for fiscal year 2017.

- Real GDP rose 1.9 percent for the fiscal year, ahead of the forecast of 1.7 percent growth.
- Total personal income rose 2.5 percent in fiscal year 2017, lagging the forecast of 3.8 percent growth. Wages and salaries grew 2.8 percent, 1.5 percentage point below the forecast of 4.3 percent.

Table 1.1 - Fiscal Year 2017 U.S. Forecast Performance

	<u>Forecast</u>	<u>Actual</u>	<u>Actual Minus Forecast</u>
<u>Output, Income, and Spending (% Change)</u>			
Real GDP	1.7	1.9	0.2
Total Personal Income	3.8	2.5	(1.3)
Wages and Salaries (51%)	4.3	2.8	(1.5)
Average Wage	2.8	1.1	(1.7)
Real Consumer Spending	2.8	2.8	0.0
<u>Employment and Labor Markets (% Change)</u>			
Total Nonagricultural Employment	1.5	1.6	0.1
Construction (4%)	2.1	3.0	0.9
Manufacturing (9%)	(0.3)	0.1	0.4
Trade, Transportation, and Utilities (19%)	1.1	1.0	(0.1)
Information (2%)	1.0	(0.3)	(1.3)
Financial Activities (6%)	1.8	2.1	0.3
Professional and Business Services (14%)	3.0	2.9	(0.1)
Education and Health Services (15%)	2.3	2.5	0.2
Leisure and Hospitality (10%)	2.2	2.3	0.1
Other Services (4%)	0.8	1.2	0.4
Government (16%)	0.5	0.9	0.4
Unemployment Rate (%)	4.9	4.7	(0.2)
<u>Interest Rates (% Change)</u>			
3-Month Treasury Bills	0.5	0.6	0.1
30-Year Treasury Bonds	2.5	2.8	0.3
<u>Prices (% Change)</u>			
CPI	1.9	1.9	0.0
GDP Deflator	2.0	1.6	(0.4)

The Official forecast is IHS Markit October 2016 U.S. standard scenario.

- Real consumer spending rose 2.8 percent in fiscal year 2017, matching the forecast.
- Total nonagricultural employment grew 1.6 percent, slightly ahead of the forecast of 1.5 percent. Most sectors finished the year ahead of expectations. The construction sector grew by 3.0 percent, ahead of the forecast of 2.1 percent growth. The only sector significantly below forecast was information technology.
- The increase in the CPI of 1.9 percent also matched the forecast, while the GDP deflator increased 1.6 percent compared with the forecast of 2.0 percent.

- IHS Markit expected the Federal Reserve Bank to keep the target federal funds rate steady at 0.0 percent to 0.25 percent until December 2016, with the target rate hitting 0.5 percent by the end of calendar year 2016, reaching 1.5 percent by the end of 2017, and reaching a long-term equilibrium of 2.75 percent by the end of 2019. The target rate range is currently 1.0 to 1.25 percent.

Recent Developments in the U.S. Economy

Although the effects of hurricanes Harvey and Irma will cause significant disruptions over the coming months, recent indicators suggest that the U.S. economy remains healthy and should continue to grow modestly.

According to the initial estimate, real GDP grew at an annualized rate of 3.0 percent in the third quarter of 2017, on par with the 3.1 percent in the second quarter.

As expected, the two hurricanes distorted the employment situation in September, payroll employment declined by 33,000 jobs. Leisure/hospitality created most of the drag. Most likely a rebound will occur in payrolls in the coming months. In a separate report, the unemployment rate fell from 4.4 percent to 4.2 percent in September. Initial claims for unemployment in the week ending October 14 fell by 22,000 to 222,000. The four-week moving average dropped 9,500 to 248,250. The fact that the level of claims remained below 300,000 despite the jump from storm disruptions suggests the labor market remains healthy.

The Conference Board's index of leading indicators fell 0.2 percent in September, following a 0.4 percent increase in August. The Conference Board's index of consumer confidence declined 0.6 points to 119.8 in September. The present situation components declined – mostly due to Texas and Florida, while the expectations components increased for the month.

Conditions in the manufacturing improved in September. The Institute of Supply Management index rose from 58.8 to 60.8.

The CPI rose 0.5 percent in September following a 0.4 percent increase in August and stands 2.2 percent above September 2016. Core inflation (excluding food and energy prices) rose 0.1 percent and stands 1.7 percent above a year ago. The Federal Reserve announced at its September meeting that it will keep the federal funds rate target unchanged at 1.0 to 1.25 percent, but will begin normalizing its balance sheet in October.

The IHS Markit U.S. Standard Forecast for Fiscal Years 2018-2020

Tables 1.2 and 1.3 at the end of this section compare the official October 2016 forecast with two other forecasts: the IHS Markit October 2017 standard and pessimistic alternative forecasts.

The disruptions from hurricanes Harvey and Irma will increase the volatility of economic activity in the near term. IHS Markit estimates that the hurricanes will subtract 1.2 percentage points from the third-quarter growth and boost fourth-quarter growth by 0.9 percentage point. The October forecast also does not include federal government stimulus given the lack of progress and discord in Washington. Consumer spending will remain an engine of growth, supported by solid momentum for employment, real disposable income, and household asset values.

In the October standard forecast, growth is somewhat stronger than the official forecast. IHS Markit believes solid underlying fundamentals will allow the U.S. economy to continue its modest expansion, with real GDP growth of 2.4 percent in the third quarter of calendar year 2017 and 2.9 percent in the fourth quarter. Growth should then slow to 2.1 percent in the first half of calendar year 2018. IHS Markit assigns a 65 percent probability to the standard scenario.

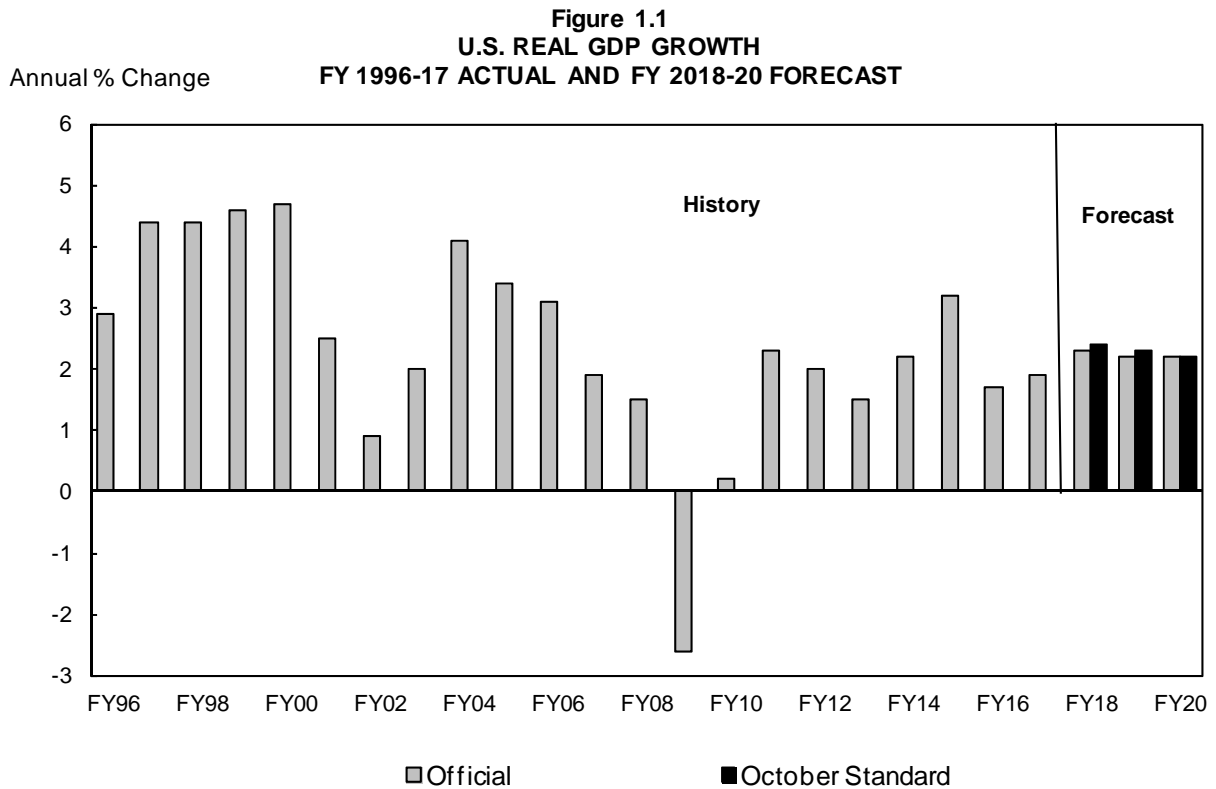
IHS expects real GDP growth of 2.4 percent in fiscal year 2018. It is then expected to grow 2.3 percent in fiscal year 2019, then drop to 2.2 percent in fiscal year 2020. Figure 1.1 on the following page depicts GDP growth.

The outlook for the job market in the October standard forecast is also stronger than the official forecast in fiscal years 2018 and 2019. Payroll employment is expected to grow 1.4 percent per in fiscal year 2018, 1.2 percent in fiscal year 2019, and 1.0 percent in fiscal year 2020. The October standard forecast expects the unemployment rate to be about 0.3 percentage point below that predicted in the official forecast over the forecast horizon, falling to 4.3 percent by 2020, compared with the official 4.6 percent.

Total personal income is expected to rise by 3.5 percent in fiscal year 2018, about a percentage point below the official forecast. Income growth then increases to 4.5 percent in fiscal year 2019 and 5.0 percent in fiscal year 2020, close to the official forecast. The October forecast for the largest component of personal income, wages and salaries, is lower than the official throughout for forecast horizon. IHS Markit expects wages and salaries to rise 4.1 percent in fiscal year 2018, and 4.9 percent in fiscal years 2019 and in 2020.

Real consumer spending is expected to grow 2.5 percent in fiscal year 2018, higher than the official forecast of 2.2 percent. Growth slightly slows to 2.4 percent in fiscal years 2019 and 2020, close to the official estimate.

At its September meeting, the Federal Open Market Committee statement said that the case for an increase in the federal funds rate has strengthened. It announced that it will keep the federal funds rate target unchanged at 1.0 to 1.25 percent, but will begin normalizing its balance sheet in October. In the October forecast, IHS Markit assumes the Fed will raise the federal funds rate by 25 basis points at the December meeting. They expect the upper band of the target rate will be 1.5 percent by the end of 2017, 2.25 percent by the end of 2018, and 3.0 percent by the end of 2019.



Alternative U.S. Forecast

IHS Markit Pessimistic Alternative Scenario

In the pessimistic scenario, the U.S. economy manages only very weak growth during the first two quarters of 2018 as consumers and businesses react to an uncertain fiscal and monetary policy environment. Business and consumer confidence deteriorates, impacting capital spending and hiring plans, and the stock market takes a downward turn.

In this scenario, the economy grows at annual rates of only 0.6 percent in the first quarter of 2018 and 0.4 percent in the second quarter of 2018. The unemployment rate

U.S. Economy

rises to 5.4 percent in fiscal year 2019, compared with 4.3 percent in the baseline forecast. IHS Markit assigns a 20 percent probability to the pessimistic scenario.

In the pessimistic alternative scenario, real GDP increases by 1.7 percent in fiscal year 2018 and drops to no growth in 2019, before rising 2.4 percent in fiscal year 2020. Total personal income increases by 3.2 percent in fiscal year 2018 then 2.8 and 4.3 percent in fiscal years 2019-2020.

Growth in wages and salaries is close to the October standard forecast in fiscal year 2018, but substantially below the standard in fiscal years 2019 and 2020. Wages and salaries grow by 3.7 percent in fiscal year 2018, 3.0 percent in 2019, and 4.0 in 2020.

In the pessimistic scenario, employment growth drops to 1.1 percent in fiscal year 2018 and falls 0.3 percent in fiscal year 2019, then grows by only 0.4 percent in 2020, less than half the rate of the standard forecast. The unemployment rate is well above the interim forecast over the forecast horizon, rising to 5.6 percent by fiscal year 2020.

Table 1.2 - Fiscal Years 2015-2020 Official and October Forecasts
U.S. Economic Forecasts - Income and Other Indicators

		<u>FY15</u>	<u>FY16</u>	<u>FY17</u>	<u>FY18</u>	<u>FY19</u>	<u>FY20</u>
<u>Output, Income, and Spending (% Change)</u>							
Real GDP	Official (Oct '16)	2.9	1.7	1.7	2.3	2.2	2.2
	Oct Standard	3.2	1.7	1.9	2.4	2.3	2.2
	Oct Pessimistic			1.9	1.7	0.0	2.4
Total Personal Income	Official (Oct '16)	5.3	3.7	3.8	4.7	5.0	4.9
	Oct Standard	5.8	3.6	2.5	3.5	4.5	5.0
	Oct Pessimistic			2.5	3.2	2.8	4.3
Wages and Salaries (51%)	Official (Oct '16)	5.3	4.5	4.3	5.0	5.0	4.9
	Oct Standard	5.3	4.2	2.8	4.1	4.9	4.9
	Oct Pessimistic			2.8	3.7	3.0	4.0
Average Wage	Official (Oct '16)	3.1	2.5	2.8	4.1	4.0	3.8
	Oct Standard	3.1	2.3	1.1	2.7	3.7	3.8
	Oct Pessimistic			1.1	2.6	3.2	3.5
Real Consumer Spending	Official (Oct '16)	3.4	2.7	2.8	2.2	2.5	2.4
	Oct Standard	3.7	3.0	2.8	2.5	2.4	2.4
	Oct Pessimistic			2.8	2.2	0.8	2.0
<u>Interest Rates (%)</u>							
3-Month Treasury Bills	Official (Oct '16)	0.0	0.2	0.5	1.0	1.8	2.5
	Oct Standard	0.0	0.2	0.6	1.3	2.1	2.8
	Oct Pessimistic			0.6	1.2	1.0	1.1
30-Year Treasury Bonds	Official (Oct '16)	2.9	2.8	2.5	3.0	3.5	4.0
	Oct Standard	2.9	2.8	2.8	3.3	4.0	4.6
	Oct Pessimistic			2.8	3.5	4.1	3.8
<u>Prices (% Change)</u>							
CPI	Official (Oct '16)	0.7	0.7	1.9	2.5	2.5	2.6
	Oct Standard	0.7	0.7	1.9	1.8	2.0	2.5
	Oct Pessimistic			1.9	1.8	1.9	2.3
GDP Deflator	Official (Oct '16)	1.4	1.1	2.0	2.3	2.1	2.1
	Oct Standard	1.4	1.1	1.6	1.7	2.3	2.1
	Oct Pessimistic			1.6	1.7	2.1	2.0

The Official forecast is IHS Markit October 2016 U.S. standard scenario.

The Oct Standard forecast is IHS Markit October 2017 U.S. standard forecast.

The Oct Pessimistic forecast is IHS Markit October 2017 U.S. pessimistic alternative scenario.

U.S. Economy

Table 1.3 - Fiscal Years 2015-2020 Official October Forecasts
U.S. Economic Forecasts - Employment and Labor Markets

		<u>FY15</u>	<u>FY16</u>	<u>FY17</u>	<u>FY18</u>	<u>FY19</u>	<u>FY20</u>
<u>Employment and Labor Markets (% Change)</u>							
Total Nonagricultural Employment	Official (Oct '16)	2.1	1.9	1.5	0.9	0.9	1.0
	Oct Standard	2.1	1.9	1.6	1.4	1.2	1.0
	Oct Pessimistic			1.6	1.1	(0.3)	0.4
Construction (4%)	Official (Oct '16)	5.4	4.1	2.1	1.8	2.3	2.4
	Oct Standard	5.4	4.7	3.0	2.2	2.2	3.5
	Oct Pessimistic			3.0	1.6	(3.0)	(0.6)
Manufacturing (9%)	Official (Oct '16)	1.6	0.3	(0.3)	0.5	1.3	1.6
	Oct Standard	1.6	0.6	0.1	1.3	2.2	1.2
	Oct Pessimistic			0.1	1.1	0.8	0.3
Trade, Transportation, and Utilities (19%)	Official (Oct '16)	2.1	1.8	1.1	0.1	0.2	0.1
	Oct Standard	2.1	1.5	1.0	0.5	0.2	(0.1)
	Oct Pessimistic			1.0	0.3	(1.0)	(0.6)
Financial Activities (6%)	Official (Oct '16)	1.6	1.9	1.8	(0.3)	(0.3)	(0.4)
	Oct Standard	1.6	1.9	2.1	1.8	1.2	0.3
	Oct Pessimistic			2.1	1.2	(0.6)	0.8
Professional and Business Services (14%)	Official (Oct '16)	3.1	3.1	3.0	3.8	2.6	2.1
	Oct Standard	3.0	2.7	2.9	3.1	3.9	3.3
	Oct Pessimistic			2.9	1.5	(1.1)	5.1
Education and Health Services (15%)	Official (Oct '16)	2.3	3.1	2.3	1.3	1.0	1.1
	Oct Standard	2.3	2.8	2.5	2.0	1.1	0.8
	Oct Pessimistic			2.5	2.2	1.6	0.3
Leisure and Hospitality (10%)	Official (Oct '16)	2.9	2.9	2.2	0.9	0.7	0.8
	Oct Standard	2.9	3.4	2.3	1.5	0.2	(0.0)
	Oct Pessimistic			2.3	1.7	0.1	(1.1)
Government (16%)	Official (Oct '16)	0.5	0.5	0.5	0.1	0.6	1.2
	Oct Standard	0.5	0.8	0.9	0.2	0.4	0.8
	Oct Pessimistic			0.9	0.2	(0.2)	(0.2)
Unemployment Rate (%)	Official (Oct '16)	5.7	5.0	4.9	4.7	4.6	4.6
	Oct Standard	5.7	5.0	4.7	4.3	4.3	4.3
	Oct Pessimistic			4.7	4.5	5.4	5.6

The Official forecast is IHS Markit October 2016 U.S. standard scenario.

The Oct Standard forecast is IHS Markit October 2017 U.S. standard forecast.

The Oct Pessimistic forecast is IHS Markit October 2017 U.S. pessimistic alternative scenario.

SECTION 2
THE VIRGINIA ECONOMY

Section 2 The Virginia Economy

Introduction

This section begins with a review of fiscal year 2017, comparing actual economic growth in Virginia to the official forecast for the year. The official forecast for Virginia was based on the IHS Markit October 2016 U.S. standard forecast with modifications from both the JABE and the GACRE at their fall meetings, which resulted in a standard forecast. Following the review of fiscal year 2017, the October standard and pessimistic forecasts are summarized.

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 2015 through fiscal year 2017. Table A.2 shows quarterly national and Virginia data for the three forecasts through fiscal year 2020. Table A.3 displays national and Virginia annual historical and forecast data from fiscal year 1998 through fiscal year 2020. Table A.4 displays annual regional historical and forecast employment data from fiscal year 1998 through fiscal year 2020.

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 2016 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 below compares the base CES employment data series with the series incorporating ES-202 data.

<u>FY17</u>	<u>CES</u>	<u>ES202</u>
Q1	1.2	1.1
Q2	0.8	0.7
Q3	1.3	1.5
Q4	1.2	1.3
Annual	1.1	1.2

Review of Fiscal Year 2017

Overview

In the official forecast for fiscal year 2017, employment and personal income in Virginia were expected to grow at a slower pace than in fiscal year 2016. Table 2.1 compares the official forecast and actual results for fiscal year 2017.

Table 2.1 - Fiscal Year 2017 Virginia Forecast Performance

	<u>Forecast</u>	<u>Actual</u>	<u>Actual Minus Forecast</u>
<u>Income (% Change)*</u>			
Total Personal Income	3.9	2.4	(1.5)
Wages and Salaries (52%)	4.4	2.7	(1.7)
Average Wage	2.8	1.5	(1.3)
Dividends, Interest, and Rent (20%)	3.7	2.2	(1.5)
Supplements to Wages and Salaries (12%)	3.5	(0.1)	(3.6)
Proprietor's Income (6%)	1.3	2.6	1.3
Net Transfer Payments (5%)	4.4	3.8	(0.6)
<u>Employment and Labor Markets (% Change)</u>			
Total Nonagricultural Employment	1.5	1.2	(0.3)
Construction and Mining (5%)	4.6	1.5	(3.1)
Manufacturing (6%)	1.2	(0.5)	(1.7)
Trade, Transportation, and Utilities (17%)	1.3	0.2	(1.1)
Information (2%)	0.5	(1.2)	(1.7)
Financial Activities (5%)	(0.4)	2.1	2.5
Professional and Business Services (19%)	3.5	2.6	(0.9)
Education and Health Services (14%)	2.0	1.4	(0.6)
Leisure and Hospitality (10%)	1.0	2.1	1.1
Other Services (5%)	(1.6)	1.4	3.0
Government (18%)	0.5	0.3	(0.2)
Unemployment Rate (%)	4.3	4.0	(0.3)

The forecast data are based on the October 2016 IHS Markit U.S. standard forecast and the corresponding Virginia state forecast developed as recommended by JABE and GACRE members.

Following is a review of key assumptions included in the October 2016 official forecast compared with the actual outcome for the year.

Income

Total personal income increased 2.4 percent, which was 1.5 percentage points below the official forecast. Wages and salaries, which accounted for 52 percent of total personal income in fiscal year 2017, grew 2.7 percent or 1.7 percentage points below the forecast. Dividends, interest, and rental income, which made up 20 percent of total personal income in fiscal year 2017, grew 2.2 percent, which was 1.5 percentage points behind the forecast. Proprietor's income grew 2.6 percent in fiscal year 2017, which was 1.3 percent above the forecast. Net transfer payments, which increased by 3.8 percent, were 0.6 percentage points behind the forecast; and supplements to wages and salaries finished 3.6 percentage points behind the forecast.

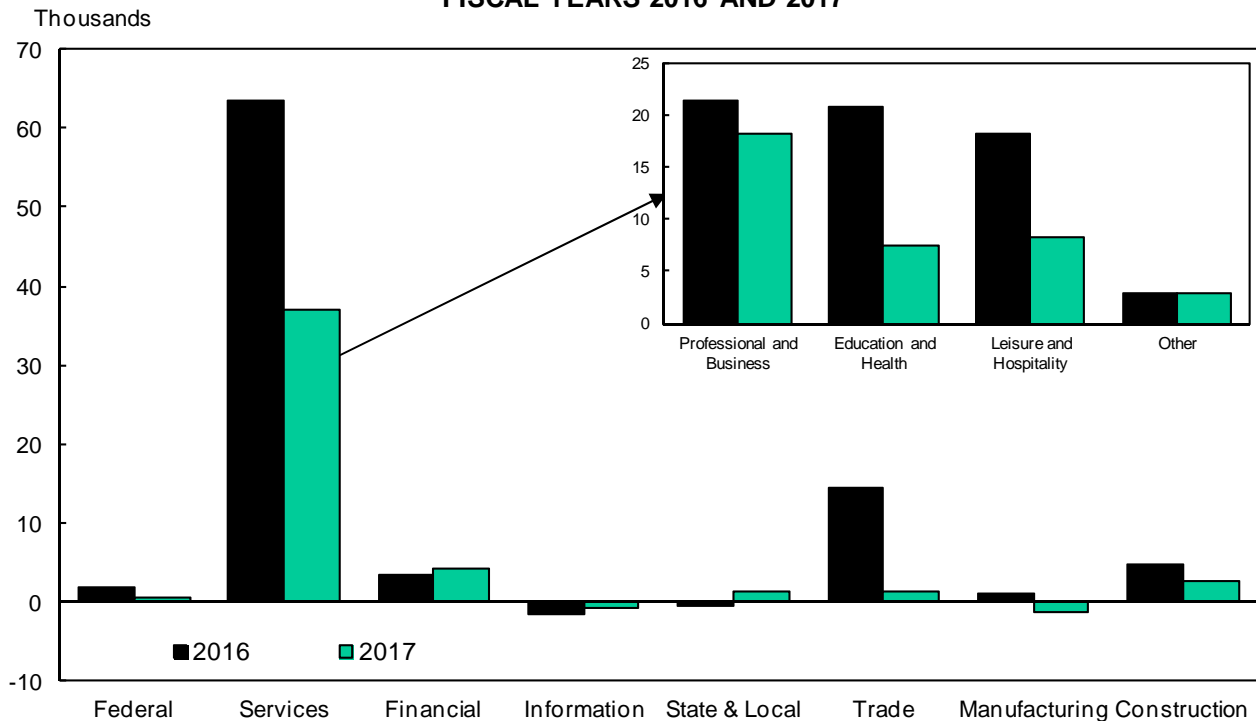
Employment

Payroll employment growth underperformed expectations in fiscal year 2017. In the official forecast, total nonagricultural employment was projected to increase 1.5 percent, with the average annual employment level rising by 59,600 jobs. Actual job gains were 45,500, an increase of 1.2 percent. Lower-than-expected gains for the construction, trade, transportation, and utilities and information sectors were offset by higher-than-expected gains in the leisure and hospitality sector, financial activities, and other services. Overall, seven out of ten major employment sectors failed to attain the official forecast in fiscal year 2017.

In terms of the number of jobs, the largest variance was concentrated in the professional and business services sector and the trade, transportation and utilities sector – both of which underperformed the forecast by about 7,000 jobs. Leisure and hospitality gained 8,300 jobs; this sector outperformed the forecasted gain of 4,000 jobs. Education and health services gained 7,500 jobs, below the forecasted gain of 10,300 jobs. Government added 2,100 jobs, instead of gaining the predicted 3,800 jobs. Figure 2.1 on the following page displays fiscal year 2017 job gains and losses by sector compared with fiscal year 2016.

Tables 2.4 and 2.5 provide an overview of regional employment in Virginia. In Northern Virginia, which represents 37 percent of all jobs in the state, total employment rose by 24,400 jobs, below the predicted amount of 24,700. The professional and business services sector added 9,400 new jobs in fiscal year 2017, down from the 10,500 gain in fiscal year 2016. Education and health services added 5,300 jobs, down from 7,600 in fiscal year 2016. State and local government added 1,700 jobs, while the federal government lost 600 jobs.

Figure 2.1
VIRGINIA JOB GAINS/LOSSES BY SECTOR
FISCAL YEARS 2016 AND 2017



Employment in the Norfolk-Virginia Beach-Newport News MSA (20 percent of state employment) was below expectations in fiscal year 2017, rising by 0.5 percent compared with the forecast of 0.9 percent growth. The region gained 4,000 jobs in fiscal year 2017, compared with 9,800 in 2016. Most sectors were just shy of the forecast. Employment in the tourism industry and government, long staples of the area economy, both had minimal gains.

Employment in the Richmond-Petersburg MSA (17 percent of state employment) was below expectations by growing 1.6 percent in fiscal year 2017, behind the forecast of 2.1 percent. The region gained 10,700 jobs in fiscal year 2017, compared with 20,200 in 2016. Professional and business services accounted for almost 40 percent of the employment gains, while all other sectors had minimal gains.

Outside of the three major metro areas, the remainder of the state (26 percent of state employment) increased 6,500 jobs in fiscal year 2017, following a gain of 19,000 in fiscal year 2016. Leisure and hospitality and other services were the strongest performers, while state and local government, manufacturing, construction, and trade, transportation and utilities lost jobs.

Recent Developments in the Virginia Economy

In Virginia, payroll employment rose 0.9 percent in September from September of last year. Northern Virginia posted growth of 0.7 percent and Richmond-Petersburg rose 1.6 percent, while Hampton Roads fell 1.2 percent. The seasonally adjusted unemployment rate dipped to 3.7 percent in September and stands 0.4 percent below September 2016.

The Virginia Leading Index rose 0.7 percent in August after remaining unchanged in July. All four components -- the U.S. leading index, auto registrations, future employment, and initial claims improved in August. The indexes for Richmond, Northern Virginia, Bristol, Hampton Roads, Roanoke, Charlottesville, Blacksburg, Harrisonburg, Winchester, and Staunton rose in August while the index for Lynchburg declined.

The October Standard Forecast for Fiscal Years 2018 through 2020

This section compares the official forecast, the IHS Markit October 2016 forecast with two other forecasts currently under consideration. Tables 2.2 and 2.3 compare the official forecast with IHS Markit October 2017 standard and the pessimistic alternative scenario. Tables 2.4 and 2.5 show the October 2017 standard forecast and the pessimistic alternative scenario for regional employment. All four tables appear at the end of the section.

In the official forecast, economic growth in the Commonwealth was projected to moderately slow in fiscal year 2018 relative to fiscal year 2017. The October standard forecast has personal income and wage and salary income growing in the 3 ½ percent range in fiscal year 2018, faster than the respectively revised 2.4 percent and 2.7 percent rates in fiscal year 2017. While employment is forecast to increase 1.3 percent in fiscal year 2018 – faster than the 1.2 percent increase in fiscal year 2017. Federal government spending declined 0.2 percent in calendar year 2017 and is forecast to decline 1.5 percent in calendar year 2018, after which it is expected to be in neutral position throughout the forecast horizon. Figure 2.2 on the next page compares employment growth in Virginia with that of the nation, while Figure 2.3 provides the same comparison for personal income.

As shown in Figure 2.4, according to the October standard forecast, total nonagricultural employment is expected to increase 1.3 percent (53,000 jobs) in fiscal year 2018, above the official forecast of 1.0 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 1.0 percent in fiscal year 2019 and 0.8 percent in fiscal year 2020, in line with the official forecast.

Figure 2.2
U.S. AND VIRGINIA EMPLOYMENT GROWTH
HISTORY AND FORECAST - FISCAL YEARS 1992-2020

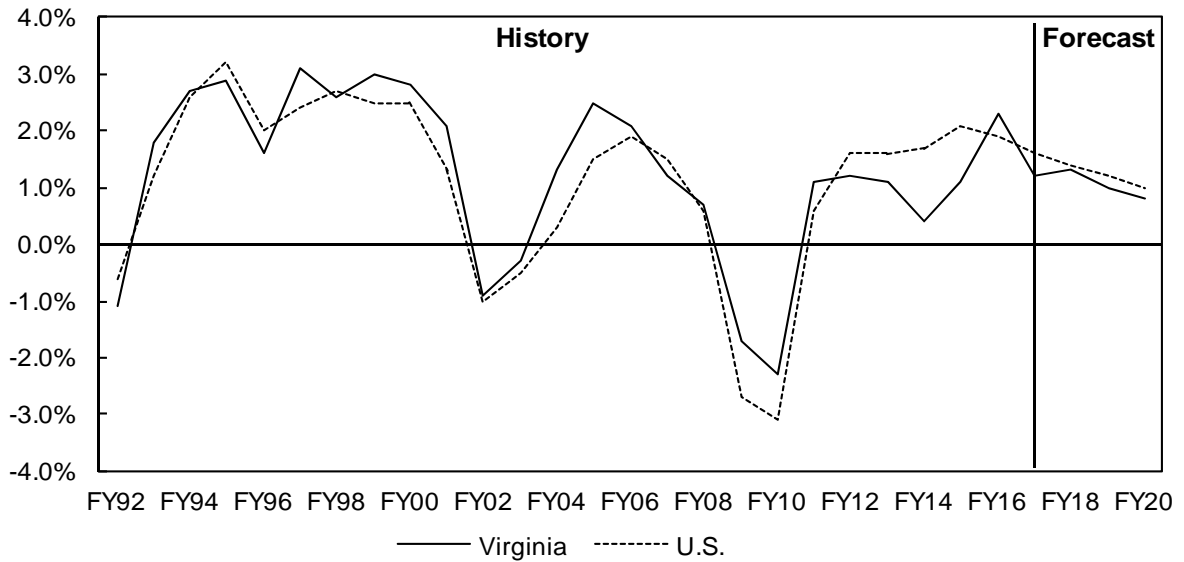


Figure 2.3
U.S. AND VIRGINIA PERSONAL INCOME GROWTH
HISTORY AND FORECAST - FISCAL YEARS 1992-2020

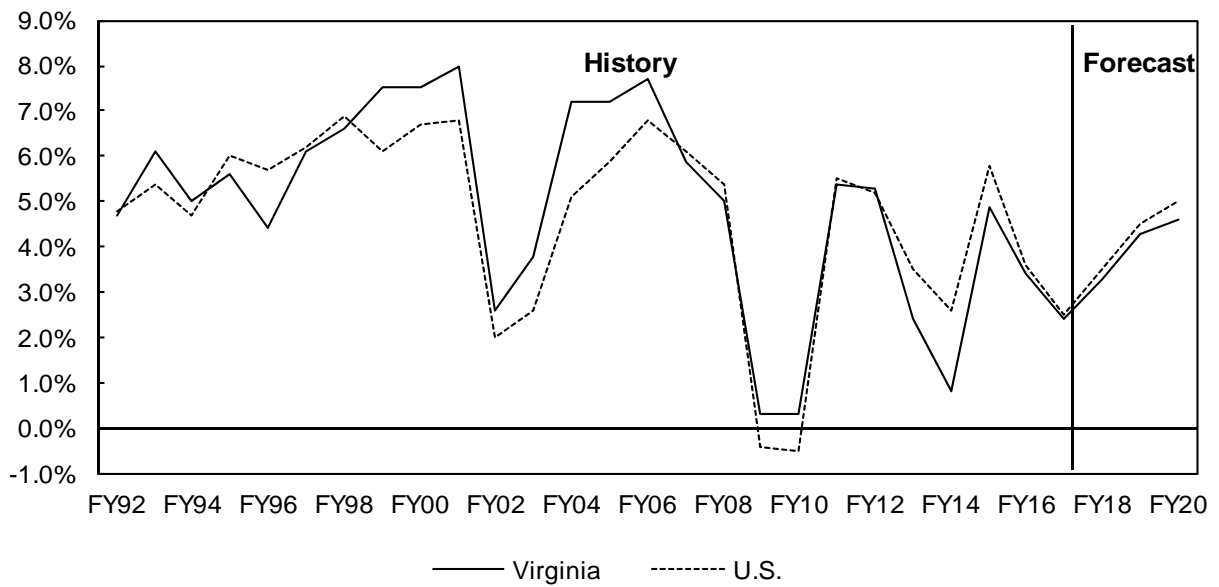
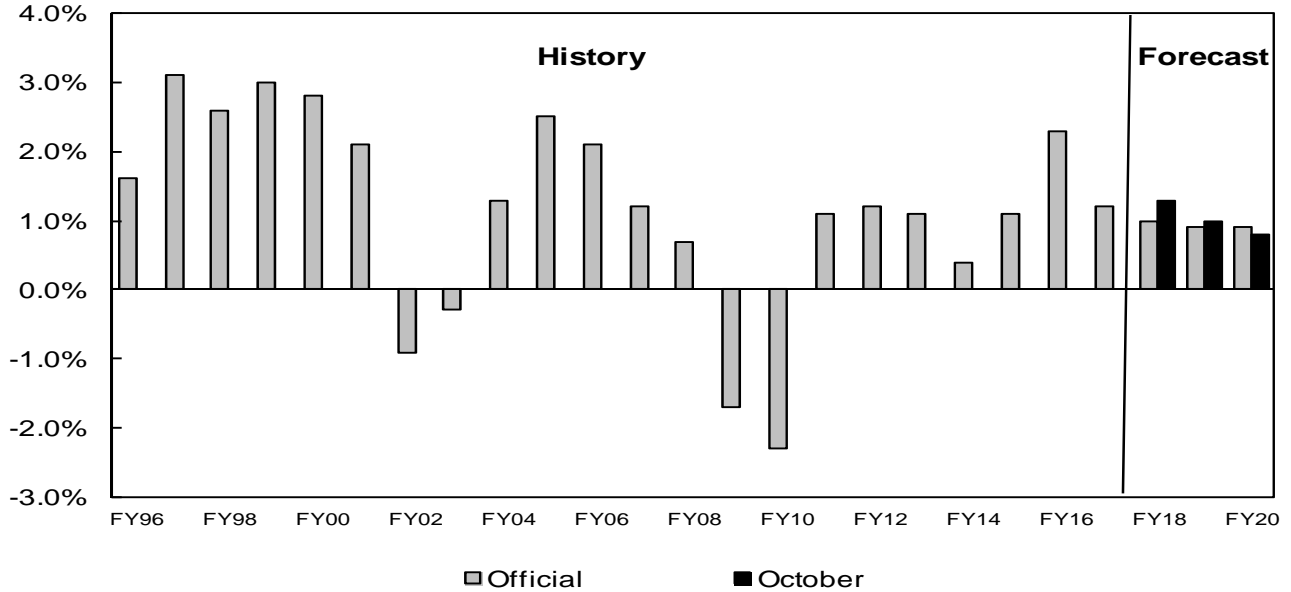


Figure 2.4
VIRGINIA EMPLOYMENT GROWTH
FY 1996-17 ACTUAL AND FY 2018-20 FORECAST



In the October standard forecast, total personal income is expected to grow somewhat slower in fiscal years 2018, 2019 and 2020 than in the official forecast. Growth of 3.3 percent is expected in fiscal year 2018, then trails the official forecast by about 0.4 percentage points in fiscal years 2019 and 2020. Personal income growth increases to 4.3 percent in fiscal year 2019 and to 4.6 percent by fiscal year 2020. Income from wages and salaries is expected to grow 3.6 percent in fiscal year 2018 and 4.4 percent in fiscal year 2019, 0.3 percentage points below the official forecast for fiscal year 2018 and 0.5 percentage points below for fiscal year 2019. Growth of dividends, interest, and rental income is expected to increase 3.2 percent in fiscal year 2018, and then accelerate to 5.3 percent in fiscal year 2019.

The outlook for proprietor’s income in the October standard forecast predicts a 2.9 percent increase in fiscal year 2018 and a decline of 0.2 percent in 2019 and a decline of 3.7 percent in 2020. Net transfer payments are expected to increase 3.9 percent in fiscal year 2018, and then increase to 6.7 percent and 10.0 percent in fiscal years 2019 and 2020, respectively. Figures 2.5 and 2.6 on the following page chart the annual percent change in personal income and wages and salaries, comparing the official forecast with the October standard forecast.

Figure 2.5
VIRGINIA PERSONAL INCOME GROWTH
FY 1996-17 ACTUAL AND FY 2018-20 FORECAST

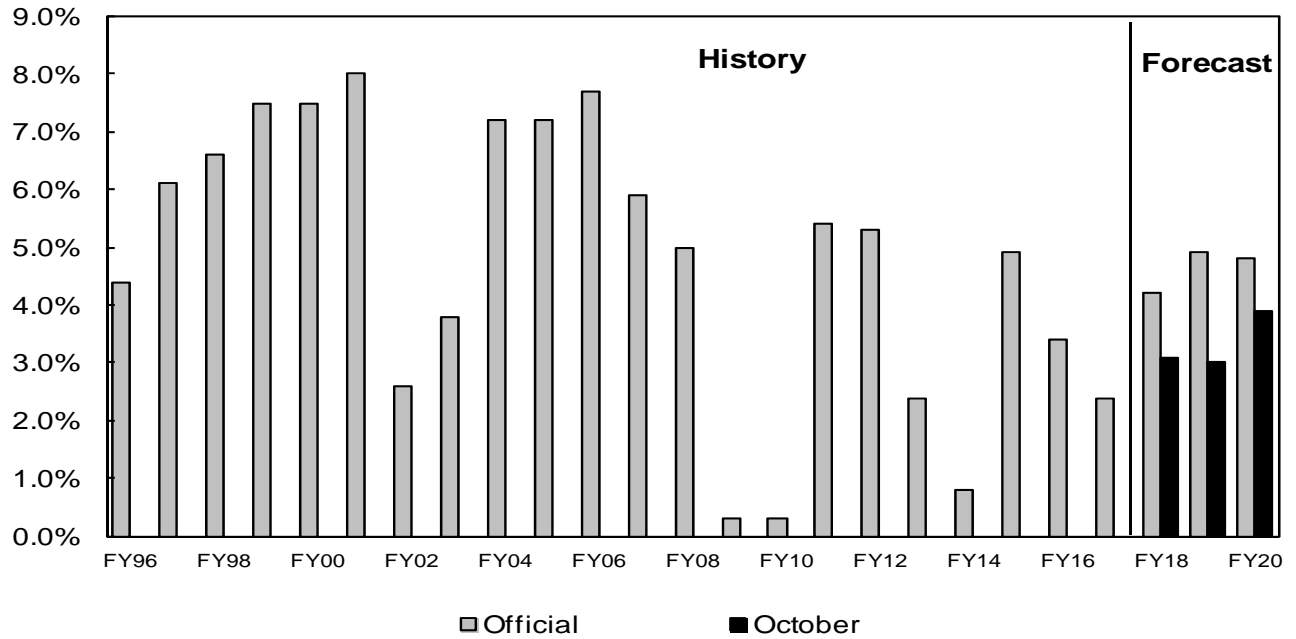
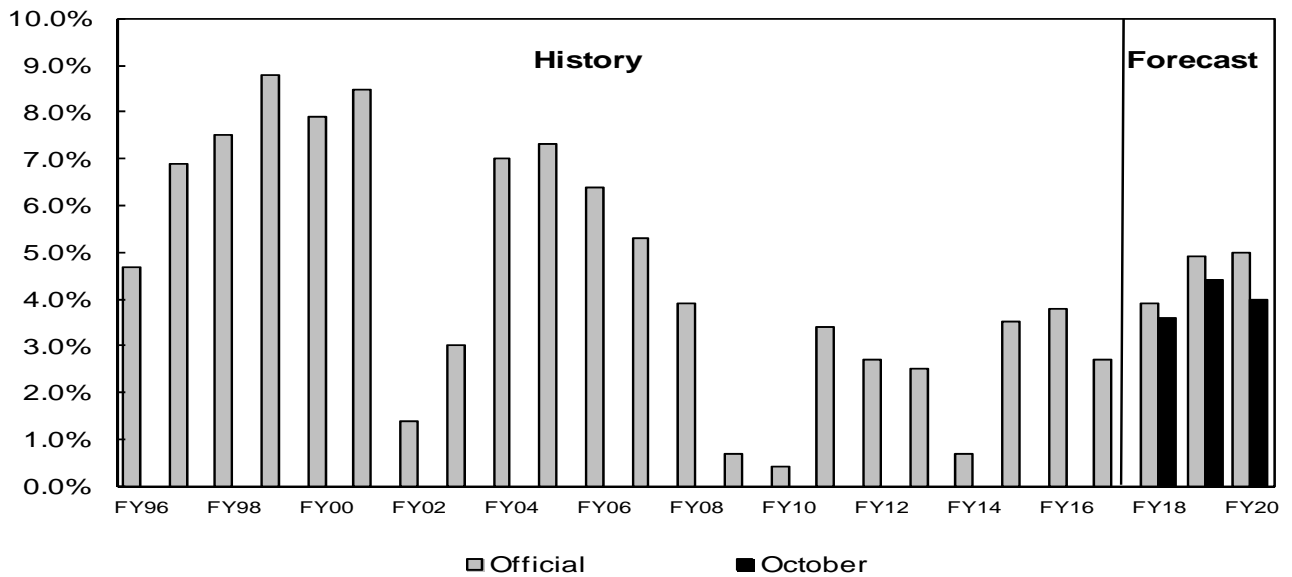


Figure 2.6
VIRGINIA WAGES AND SALARIES GROWTH
FY 1996-17 ACTUAL AND FY 2018-20 FORECAST



IHS Markit Pessimistic Alternative Scenario

In the Virginia pessimistic alternative forecast, economic growth significantly slows, as confidence is dampened by federal government action/inaction which triggers a downturn in the US stock market. Consumer confidence falls and the housing recovery stalls. Employment growth is 1.0 percent in fiscal year 2018, then declines 0.5 percent in fiscal year 2019, followed by a gain of 0.3 percent in fiscal year 2020. Total personal income grows 3.0 percent in fiscal year 2019 and 3.9 percent in fiscal year 2020, compared with 4.3 percent and 4.6 percent in the October standard forecast. Wages and salaries grow 3.3 percent, 2.9 percent and 3.3 percent in fiscal years 2018-20. These growth rates are between 0.3 and 1.5 percentage points below the October standard forecast.

Virginia Economy

Table 2.2 - Fiscal Years 2015-2020 Official and October Forecasts
Virginia Economic Forecasts - Employment and Labor Markets

		<u>FY15</u>	<u>FY16</u>	<u>FY17</u>	<u>FY18</u>	<u>FY19</u>	<u>FY20</u>
<u>Employment and Labor Markets (% Change)</u>							
Total Nonagricultural Employment	Official (Oct '16)	1.1	2.4	1.5	1.0	0.9	0.9
	Oct Standard	1.1	2.3	1.2	1.3	1.0	0.8
	Oct Pessimistic			1.2	1.0	(0.5)	0.3
Construction and Mining (5%)	Official (Oct '16)	1.7	2.1	4.6	3.5	3.8	3.2
	Oct Standard	1.8	2.5	1.5	1.9	3.5	4.4
	Oct Pessimistic			1.5	1.2	(2.2)	(0.0)
Manufacturing (6%)	Official (Oct '16)	0.5	0.2	1.2	1.4	1.1	1.1
	Oct Standard	0.5	0.5	(0.5)	(0.7)	1.3	1.3
	Oct Pessimistic			(0.5)	(1.0)	(0.5)	0.1
Trade, Transportation, and Utilities (17%)	Official (Oct '16)	1.0	2.9	1.3	0.0	0.3	0.3
	Oct Standard	1.1	2.2	0.2	0.3	0.1	(0.1)
	Oct Pessimistic			0.2	0.1	(1.2)	(0.7)
Financial Activities (5%)	Official (Oct '16)	1.3	2.2	(0.4)	(1.6)	(1.4)	(0.2)
	Oct Standard	1.3	1.8	2.1	1.7	1.1	0.3
	Oct Pessimistic			2.1	0.9	(1.1)	1.0
Professional and Business Services (19%)	Official (Oct '16)	1.4	3.7	3.5	2.3	1.5	1.7
	Oct Standard	1.5	3.1	2.6	2.6	2.8	2.0
	Oct Pessimistic			2.6	1.4	(1.2)	3.2
Education and Health Services (14%)	Official (Oct '16)	1.7	3.5	2.0	1.3	1.6	1.4
	Oct Standard	1.9	4.1	1.4	2.0	0.8	0.5
	Oct Pessimistic			1.4	2.1	1.5	(0.1)
Leisure and Hospitality (10%)	Official (Oct '16)	2.0	4.1	1.0	1.1	1.5	0.9
	Oct Standard	2.1	4.9	2.1	1.8	0.8	0.2
	Oct Pessimistic			2.1	2.0	0.7	(0.7)
Government (18%)	Official (Oct '16)	0.2	0.2	0.5	0.5	0.1	0.1
	Oct Standard	0.1	0.2	0.3	0.4	(0.0)	0.2
	Oct Pessimistic			0.3	0.4	(0.1)	0.2
Unemployment Rate (%)	Official (Oct '16)	4.9	4.7	4.3	4.0	4.0	4.0
	Oct Standard	4.8	4.1	4.0	3.6	3.5	3.5
	Oct Pessimistic			4.0	3.7	4.1	4.3

The Official forecast is based on IHS Markit October 2016 U.S. standard forecast and as recommended by JABE and GACRE.

The Oct Standard forecast is IHS Markit October 2017 U.S. standard forecast.

The Oct Pessimistic forecast is IHS Markit October 2017 U.S. pessimistic alternative scenario.

Table 2.3 - Fiscal Years 2015-2020 Official and October Forecasts
Virginia Economic Forecasts - Income

		<u>FY15</u>	<u>FY16</u>	<u>FY17</u>	<u>FY18</u>	<u>FY19</u>	<u>FY20</u>
<u>Income (% Change)</u>							
Total Personal Income	Official (Oct '16)	4.8	4.1	3.9	4.2	4.9	4.8
	Oct Standard	4.9	3.4	2.4	3.3	4.3	4.6
	Oct Pessimistic			2.4	3.1	3.0	3.9
Wages and Salaries (52%)	Official (Oct '16)	3.2	4.7	4.4	3.9	4.9	5.0
	Oct Standard	3.5	3.8	2.7	3.6	4.4	4.0
	Oct Pessimistic			2.7	3.3	2.9	3.3
Average Wage	Official (Oct '16)	2.1	2.3	2.8	2.9	4.0	4.1
	Oct Standard	2.4	1.5	1.5	2.2	3.4	3.1
	Oct Pessimistic			1.5	2.3	3.4	3.0
Dividends, Interest, and Rent (20%)	Official (Oct '16)	6.4	2.0	3.7	6.3	7.3	6.0
	Oct Standard	7.6	2.5	2.2	3.2	5.3	7.2
	Oct Pessimistic			2.2	2.9	2.2	5.3
Supplements to Wages and Salaries (12%)	Official (Oct '16)	3.9	4.6	3.5	4.4	3.9	3.8
	Oct Standard	5.5	3.6	(0.1)	1.9	3.0	3.6
	Oct Pessimistic			(0.1)	2.1	3.7	3.2
Proprietor's Income (6%)	Official (Oct '16)	6.1	5.7	1.3	3.9	(1.7)	(0.7)
	Oct Standard	1.9	(0.8)	2.6	2.9	(0.2)	(3.7)
	Oct Pessimistic			2.6	1.2	(4.5)	0.5
Net Transfer Payments (6%)	Official (Oct '16)	8.6	6.9	4.4	0.5	6.4	7.5
	Oct Standard	9.4	5.3	3.8	3.9	6.7	10.0
	Oct Pessimistic			3.8	5.0	10.8	9.3

The Official forecast is based on IHS Markit October 2016 U.S. standard forecast and as recommended by JABE and GACRE.

The Oct Standard forecast is IHS Markit October 2017 U.S. standard forecast.

The Oct Pessimistic forecast is IHS Markit October 2017 U.S. pessimistic alternative scenario.

Virginia Economy

Table 2.4 - Fiscal Years 2015-2020 October Standard Forecast
Virginia Economic Forecast - Regional Employment

<u>Region by Sector (% Change)</u>		<u>FY15</u>	<u>FY16</u>	<u>FY17</u>	<u>FY18</u>	<u>FY19</u>	<u>FY20</u>
Northern Virginia (37%) *	Total Nonagricultural Employment	0.9	2.7	1.7	2.1	1.2	0.9
	Construction and Mining (5%) **	(0.6)	3.3	4.0	3.5	4.2	5.2
	Trade, Transportation, and Utilities (15%)	0.9	2.0	0.7	1.0	0.1	(0.2)
	Financial Activities (5%)	0.9	3.8	4.4	2.7	1.1	0.3
	Professional and Business Services (28%)	0.5	2.8	2.4	2.5	2.3	1.2
	Education and Health Services (11%)	2.3	5.0	3.3	3.6	1.1	0.6
	Leisure and Hospitality (10%)	2.8	6.0	1.0	1.2	0.8	0.2
	Government (17%)	0.2	0.4	0.4	0.3	0.2	0.5
Hampton Roads (20%)	Total Nonagricultural Employment	0.5	1.3	0.5	0.4	0.5	0.7
	Construction and Mining (5%)	1.6	3.8	(0.3)	(0.2)	2.2	3.0
	Trade, Transportation, and Utilities (17%)	1.4	1.6	0.5	1.2	0.1	(0.1)
	Financial Activities (5%)	0.5	(0.7)	(1.1)	(0.7)	0.9	0.2
	Professional and Business Services (14%)	1.3	(0.1)	2.5	2.0	2.2	3.3
	Education and Health Services (14%)	1.3	4.0	0.5	(0.4)	0.6	0.4
	Leisure and Hospitality (12%)	0.4	4.8	1.6	(0.2)	0.7	0.2
	Government (21%)	(0.7)	0.0	0.1	(0.1)	(0.8)	(0.2)
Richmond (17%)	Total Nonagricultural Employment	2.0	3.2	1.6	1.4	1.7	1.0
	Construction and Mining (6%)	5.3	4.4	2.5	3.6	3.3	4.1
	Trade, Transportation, and Utilities (18%)	1.5	3.2	0.6	0.2	0.5	0.0
	Financial Activities (8%)	2.8	1.4	0.8	(0.2)	1.1	0.3
	Professional and Business Services (17%)	3.6	6.7	3.8	4.0	5.8	3.1
	Education and Health Services (15%)	2.1	2.9	0.8	1.6	1.0	0.6
	Leisure and Hospitality (10%)	2.5	5.9	2.4	0.9	1.0	0.3
	Government (17%)	0.4	0.3	1.0	2.4	0.2	0.3
Balance (26%)	Total Nonagricultural Employment	1.4	1.9	0.6	0.9	0.7	0.7
	Construction and Mining (5%)	3.0	(0.9)	(1.6)	(0.1)	3.6	4.5
	Trade, Transportation, and Utilities (18%)	0.9	2.4	(0.8)	(1.1)	(0.1)	(0.3)
	Financial Activities (4%)	0.8	1.2	2.7	4.2	1.3	0.3
	Professional and Business Services (10%)	2.9	4.0	1.8	2.1	1.9	2.8
	Education and Health Services (15%)	1.8	4.1	0.5	2.2	0.6	0.4
	Leisure and Hospitality (9%)	2.4	2.7	3.9	4.9	0.8	0.2
	Government (21%)	0.5	0.1	(0.0)	(0.3)	0.2	0.2

The October Standard forecast from the Department of Taxation is based on IHS Markit October 2017 U.S. standard forecast.

* Represents the percentage share of Virginia in fiscal year 2017.

** Represents the percentage share of total employment within the region in fiscal year 2017.

Table 2.5 - Fiscal Years 2015-2020 October Pessimistic Scenario
Virginia Economic Forecast - Regional Employment

		<u>FY15</u>	<u>FY16</u>	<u>FY17</u>	<u>FY18</u>	<u>FY19</u>	<u>FY20</u>
<u>Region by Sector (% Change)</u>							
Northern Virginia (37%) *	Total Nonagricultural Employment	0.9	2.7	1.7	1.8	(0.4)	0.3
	Construction and Mining (5%) **	(0.6)	3.3	4.0	2.7	(2.2)	0.2
	Trade, Transportation, and Utilities (15%)	0.9	2.0	0.7	0.8	(1.5)	(0.8)
	Financial Activities (5%)	0.9	3.8	4.4	1.9	(1.1)	1.0
	Professional and Business Services (28%)	0.5	2.8	2.4	1.6	(0.8)	1.8
	Education and Health Services (11%)	2.3	5.0	3.3	3.8	1.9	(0.1)
	Leisure and Hospitality (10%)	2.8	6.0	1.0	1.4	0.7	(0.8)
	Government (17%)	0.2	0.4	0.4	0.3	0.2	0.5
Hampton Roads (20%)	Total Nonagricultural Employment	0.5	1.3	0.5	0.2	(0.8)	0.3
	Construction and Mining (5%)	1.6	3.8	(0.3)	(0.8)	(3.1)	(1.2)
	Trade, Transportation, and Utilities (17%)	1.4	1.6	0.5	1.0	(1.2)	(0.7)
	Financial Activities (5%)	0.5	(0.7)	(1.1)	(1.3)	(1.0)	0.8
	Professional and Business Services (14%)	1.3	(0.1)	2.5	0.5	(2.7)	5.0
	Education and Health Services (14%)	1.3	4.0	0.5	(0.3)	1.2	(0.1)
	Leisure and Hospitality (12%)	0.4	4.8	1.6	(0.0)	0.6	(0.6)
	Government (21%)	(0.7)	0.0	0.1	(0.1)	(0.8)	(0.1)
Richmond (17%)	Total Nonagricultural Employment	2.0	3.2	1.6	1.1	0.1	0.6
	Construction and Mining (6%)	5.3	4.4	2.5	3.0	(1.7)	0.1
	Trade, Transportation, and Utilities (18%)	1.5	3.2	0.6	(0.1)	(1.1)	(0.6)
	Financial Activities (8%)	2.8	1.4	0.8	(0.9)	(1.2)	1.0
	Professional and Business Services (17%)	3.6	6.7	3.8	2.4	0.7	4.9
	Education and Health Services (15%)	2.1	2.9	0.8	1.8	1.7	(0.1)
	Leisure and Hospitality (10%)	2.5	5.9	2.4	1.1	0.8	(0.9)
	Government (17%)	0.4	0.3	1.0	2.4	0.2	0.4
Balance (26%)	Total Nonagricultural Employment	1.4	1.9	0.6	0.6	(0.7)	0.1
	Construction and Mining (5%)	3.0	(0.9)	(1.6)	(0.7)	(1.8)	0.3
	Trade, Transportation, and Utilities (18%)	0.9	2.4	(0.8)	(1.2)	(1.0)	(0.5)
	Financial Activities (4%)	0.8	1.2	2.7	3.3	(1.2)	1.2
	Professional and Business Services (10%)	2.9	4.0	1.8	0.5	(3.4)	5.1
	Education and Health Services (15%)	1.8	4.1	0.5	2.3	1.1	(0.1)
	Leisure and Hospitality (9%)	2.4	2.7	3.9	5.1	0.6	(0.7)
	Government (21%)	0.5	0.1	(0.0)	(0.4)	(0.0)	(0.1)

The October Pessimistic scenario from the Department of Taxation is based on IHS Markit October 2017 U.S. pessimistic alternative scenario.

* Represents the percentage share of Virginia in fiscal year 2017.

** Represents the percentage share of total employment within the region in fiscal year 2017.

SECTION 3
GENERAL FUND REVENUES

Section 3
General Fund Revenues

Fiscal Year 2017 in Review

In fiscal year 2017, total general fund revenues rose 3.6 percent to \$18,695.1 million, with a surplus of \$134.1 million – 0.7 percent variance from forecast. Surpluses in individual withholding and corporate income tax offset deficits in the remaining major sources.

Table 3.1 on the next page compares actual revenues for fiscal year 2017 with the official forecast. The official revenue forecast was based on the October 2016 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 2017 General Assembly – Chapter 836.

Only two major sources exceeded expectations: Payroll withholding finished the year \$182.1 million above the estimate, a 1.6 percent variance; and corporate income taxes were \$32.8 million ahead of the forecast (4.1 percent variance). The other major sources ended the year below expectations. Collections in nonwithholding were \$30.0 million short of the estimate, a variance of -1.0 percent. In addition, refunds were \$13.0 million higher than expected. Sales tax collections were 29.7 million short of the forecast, a -0.9 percent variance. Wills, suits and deeds, mainly recordation taxes, missed its forecast by \$4.2 million, a -1.1 percent variance. Collections of taxes on insurance premiums were \$3.2 million short of the forecast.

Taken together, withholding and sales tax collections, which comprise 82 percent of total revenues and are closely related to economic activity, finished with a variance of 1.0 percent from forecast. Collectively, the five major sources ended the year \$134.7 million above the forecast (0.8 percent variance). Collections of miscellaneous taxes and other revenues were \$0.6 million below the forecast in fiscal year 2017 (-0.1 percent variance).

Table 3.2 provides an evolutionary perspective of the fiscal year 2017 forecasts used by the Governor and General Assembly, in terms of their variance from actual collections. The variances for total revenues ranged from 1.9 percent in the August 2016 interim forecast to 0.7 percent in the April 2017 official forecast (the most recent) and the December 2016 introduced forecast.

General Fund Revenues

Table 3.1
Fiscal Year 2017 General Fund Collections: Actual and Official Forecast
(Dollars in Millions)

	Fiscal Year 2016		Fiscal Year 2017					
	Actual	% Growth	Official Forecast	Actual	Forecast Variance		% Growth Over FY 16	
					Dollars	Percent	Official	Actual
MAJOR TAX SOURCES								
Corporate Income	\$ 764.9	(8.0) %	\$ 794.2	\$ 827.0	\$ 32.8	4.1 %	3.8 %	8.1 %
Individual Income Tax:								
Gross	14,376.4	2.1	14,761.8	14,913.9	152.1	1.0	2.7	3.7
Withholding	11,306.3	2.4	11,713.3	11,895.4	182.1	1.6	3.6	5.2
Nonwithholding	3,070.1	0.9	3,048.5	3,018.5	(30.0)	(1.0)	(0.7)	(1.7)
Refunds	<u>(1,820.7)</u>	<u>3.6</u>	<u>(1,848.0)</u>	<u>(1,861.0)</u>	<u>(13.0)</u>	<u>0.7</u>	<u>1.5</u>	<u>2.2</u>
Net	12,555.6	1.8	12,913.8	13,052.9	139.1	1.1	2.9	4.0
Insurance Company Premiums	339.1	12.8	344.1	340.9	(3.2)	(0.9)	1.5	0.5
State Sales & Use Tax	3,295.9	1.9	3,386.8	3,357.1	(29.7)	(0.9)	2.8	1.9
Wills, Suits, Deeds, & Contract Fees	<u>369.1</u>	<u>6.6</u>	<u>398.6</u>	<u>394.4</u>	<u>(4.2)</u>	<u>(1.1)</u>	<u>8.0</u>	<u>6.9</u>
Total Major Tax Sources	\$ 17,324.6	1.7 %	\$ 17,837.5	\$ 17,972.2	\$ 134.7	0.8 %	3.0 %	3.7 %
MISCELLANEOUS TAXES AND OTHER REVENUES								
Alcoholic Beverage State Tax	\$ 175.3	5.6 %	\$ 183.2	\$ 180.7	\$ (2.5)	(1.4) %	4.5 %	3.1 %
Bank Franchise Tax	17.8	(6.5)	18.4	22.0	3.6	19.8	3.4	23.9
Beer & Beverage Excise Tax	42.3	1.0	42.3	41.7	(0.6)	(1.5)	0.1	(1.4)
Corporate Franchise & Charter Fees	53.6	10.4	50.0	53.4	3.4	6.7	(6.8)	(0.5)
Excess & Other Fees from Officers	(7.4)	(8.5)	(7.1)	(7.9)	(0.8)	11.8	3.4	(7.9)
Estate & Gifts	0.2	126.5	0.0	8.2	8.2	n/a	n/a	n/a
Institutional Revenues	5.3	(28.8)	6.0	2.3	(3.7)	(62.4)	14.2	(57.0)
Interest & Rents	52.6	7.3	61.8	56.0	(5.8)	(9.4)	17.5	6.4
Licenses & Permits	4.1	1.6	4.1	4.2	0.1	1.5	(0.6)	0.9
Miscellaneous Taxes and Penalties	240.3	3.5	230.0	237.3	7.3	3.2	(4.3)	(1.3)
Other Miscellaneous Revenues	38.8	18.3	37.0	30.1	(6.9)	(18.6)	(4.6)	(22.3)
Public Service GR / Consumption Tax	<u>92.6</u>	<u>(6.0)</u>	<u>97.8</u>	<u>95.1</u>	<u>(2.7)</u>	<u>(2.8)</u>	<u>5.6</u>	<u>2.7</u>
Total Misc. Taxes and Other Revenues	\$ 715.5	3.3 %	\$ 723.5	\$ 722.9	\$ (0.6)	(0.1) %	1.1 %	1.0 %
TOTAL GF REVENUES	\$ 18,040.1	1.7 %	\$ 18,561.0	\$ 18,695.1	\$ 134.1	0.7 %	2.9 %	3.6 %
TRANSFERS								
A.B.C. Profits	\$ 86.5	3.8 %	\$ 108.4	\$ 110.5	\$ 2.1	1.9 %	25.3 %	27.7 %
Sales Tax (0.25%)	355.5	0.9	365.4	365.9	0.5	0.1	2.8	2.9
Transfers Per Appropriations Act	<u>119.6</u>	<u>(13.7)</u>	<u>177.0</u>	<u>176.9</u>	<u>(0.1)</u>	<u>(0.1)</u>	<u>48.0</u>	<u>47.9</u>
Total Transfers	\$ 561.6	(11.4) %	\$ 650.8	\$ 653.3	\$ 2.5	0.4 %	15.9 %	16.3 %
TOTAL GENERAL FUND	\$ 18,601.7	1.3 %	\$ 19,211.8	\$ 19,348.4	\$ 136.6	0.7 %	3.3 %	4.0 %

The Official forecast is based on the October 2016 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 2017 General Assembly -

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

	April 28 2017 Official		December 16 2016 Introduced		August 2016 Interim		May 25 2016 Official		December 17 2015 Introduced	
Major Tax Sources (96%)										
Corporate Income (4%)	4.1	%	4.1	%	11.4	%	8.1	%	6.3	%
Individual Income (70%)	1.1		1.1		2.1		(1.3)		(0.8)	
Insurance Company Premiums (2%)	(0.9)		(0.9)		(0.8)		1.6		3.1	
State Sales & Use Tax (18%)	(0.9)		(0.8)		(0.7)		(4.1)		(4.9)	
Wills, Suits, Deeds & Contracts (2%)	(1.1)		(1.1)		1.3		1.3		4.0	
Total Major Tax Sources	0.8	%	0.8	%	1.9	%	(1.4)	%	(1.1)	%
Miscellaneous Taxes & Other Revenues (4%)	(0.1)	%	0.3	%	3.8	%	6.1	%	6.1	%
Total Revenues	0.7	%	0.7	%	1.9	%	(1.1)	%	(0.9)	%

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 28, 2017 forecast is based on the October 2016 IHS Markit Standard outlook and the corresponding Virginia state forecast developed by the Department of Taxation and includes actions of the 2017 General Assembly Session, Chapter 836.

The December 16, 2016 forecast is based on the October 2016 IHS Markit US Standard outlook and includes recommendations from GACRE. The forecast also includes policy recommendations from the Governor including a collar in individual nonwithholding to one percent of total revenues.

The Interim August, 2016 forecast is based on the May 2016 IHS Markit Standard outlook and includes recommendations from GACRE. The forecast also includes a collar in individual nonwithholding to one percent of total revenues as contained in Chapter 780 and a withholding model bias adjustment.

The May 25, 2016 forecast is based on the November 2015 IHS Markit Standard outlook and the corresponding Virginia state forecast developed by the Department of Taxation with recommendations from the GACRE. It includes actions of the 2016 General Assembly, Chapters 732 and 780.

The December 17, 2015 forecast is based on the November 2015 IHS Markit US Standard outlook and includes recommendations from GACRE. The forecast also includes policy recommendations from the Governor including a collar in individual nonwithholding to one percent of total revenues.

Individual Income Taxes

Most of the surplus in fiscal year 2017 was attributable to individual income taxes. Collections of net individual income taxes (70 percent of total revenues) rose 4.0 percent in fiscal year 2017, well above the annual forecast of 2.9 percent growth. Receipts of \$13,052.9 million were \$139.1 million ahead of the official estimate, a variance of 1.1 percent from the forecast. Withholding taxes accounted for the surplus, offsetting lower than expected nonwithholding receipts and refunds which were somewhat higher than forecast.

Withholding: In fiscal year 2017, withholding receipts (64 percent of total revenues) increased 5.2 percent, significantly exceeding the forecast growth rate of 3.6 percent. Collections of \$11,895.4 million were \$182.1 million above the forecast, a variance of 1.6 percent. Both employment and wage and salary gains are the drivers of this source. The acceleration in collections was broad-based across industries and included strong growth in large businesses.

General Fund Revenues

Nonwithholding: Collections of individual nonwithholding (16 percent of total revenues) fell 1.7 percent in fiscal year 2017, trailing the annual forecast of a 0.7 percent decline. Receipts of \$3,018.5 million were \$30.0 million short of the annual estimate, a forecast variance of -1.0 percent. Had the collar of \$185 million not been applied, the shortfall would have been much larger. These payments are historically tied to non-wage income sources – mainly the financial markets -- and are extremely volatile.

Refunds: Individual income tax refunds totaled \$1,861.0 million in fiscal year 2017, \$13.0 million more than expected. The amount of refunds issued grew 2.2 percent over last year, compared with the forecast of 1.5 percent growth.

Sales Taxes

Collections of sales and use taxes (18 percent of total revenues) were \$3,357.1 million in fiscal year 2017, \$29.7 million below the forecast. Collections rose 1.9 percent for the year compared with the forecast of 2.8 percent growth. Sales tax collections were stronger in the second half of the fiscal year as economic conditions continued to improve.

Corporate Income Taxes

Corporate income tax collections (4 percent of total revenues), historically the most volatile revenue source, exceeded the forecast. Collections of \$827.0 million were \$32.8 million above expectations. The fiscal year growth of 8.1 percent was better than the forecast of 3.8 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, fell short of the forecast in fiscal year 2017. Collections in this source were \$4.2 million short of the forecast, a variance of -1.1 percent. Collections finished the year at \$394.4 million, a 6.9 percent increase from fiscal year 2016 but below the official forecast of 8.0 percent growth. The first half of the fiscal year saw continued gains in the housing market, while the last 5 months were flat.

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 \$340.9 million in fiscal year 2017 – \$3.2 million below the annual estimate. Growth of 0.5 percent trailed the annual estimate of 1.5 percent growth.

Miscellaneous Taxes and Other Revenues

Collectively, minor revenue sources finished the fiscal year only 0.6 million below the annual forecast. Collections of \$722.9 million were 1.0 percent above fiscal year 2016, close to the forecast of 1.1 percent growth.

The Revised General Fund Revenue Forecasts for Fiscal Years 2018-2020

This section presents two revised general fund revenue forecasts: the November standard and alternative pessimistic forecasts. The standard forecast is based on the IHS Markit October standard economic outlook and the corresponding state forecast developed by TAX with recommendations of the JABE and contains the same policy assumptions in Chapter 836. The basis for the alternative forecast is the IHS Markit alternative pessimistic economic scenario. These updated forecasts are compared with the official forecast based on the IHS Markit October 2016 standard outlook and the corresponding Virginia state forecast developed by the Department of Taxation, and reflects actions of the 2017 General Assembly, Chapter 836.

November Standard General Fund Revenue Forecast

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

In the November standard forecast, total general fund revenues have been raised by \$184.7 million in fiscal year 2018. The increase from the official forecast comes mainly from upward revisions to individual withholding, sales, and corporate income taxes which are partially offset by downward revisions to individual nonwithholding and various minor sources. Revenues are now expected to grow by 3.7 percent in fiscal year 2018, compared with a 3.4 percent increase in the official forecast. Revenues are expected to also grow by 3.7 percent in fiscal year 2019, and 3.9 percent in fiscal year 2020.

Net Individual Income Taxes

The outlook for net individual income taxes in fiscal year 2018 has been revised upward from the official forecast by \$118.9 million for growth of 3.5 percent. Collections in this source are predicted to increase 4.4 percent in fiscal year 2019 and 4.7 percent in fiscal year 2020.

Withholding

The withholding revenue model is based on a direct relationship with wages and salaries (52 percent of total personal income) and net transfer payments (6 percent of total personal income) in Virginia. Last year, the historical data series in the withholding revenue model was shortened to eliminate the strong growth due to high levels of defense spending prior to 2006.

Withholding in the November standard forecast has been raised by \$216.6 million in fiscal year 2018 for growth of 3.6 percent versus the 3.3 percent in the official forecast mainly due to strong first quarter collections, i.e. money in the bank. Withholding collections are projected to increase by 4.0 percent in fiscal year 2019 and 3.9 percent in 2020.

General Fund Revenues

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.

The forecast for nonwithholding lowers expected collections by \$72.6 million in fiscal year 2018 from the official forecast, dropping growth from 5.9 percent to 4.6 percent. The forecast predicts growth of 6.3 percent in fiscal year 2019 and 7.8 percent in 2020. This includes a collar of 15.96 percent of total that is limited to one percent of total revenue in all three years.

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. Historical data are adjusted for the land preservation tax credit and the low-income credit. Future values of these credits are estimated and these amounts are added to the base refund forecast.

In the November standard revenue forecast, individual refunds are projected to grow 5.8 percent in fiscal year 2018 compared with the official forecast of a 5.2 percent increase. The forecast increases refunds by \$25.1 million in fiscal year 2018. Land preservation credits are projected to be \$83.7 million each year. The outlook for low income credits is \$139.2 million in fiscal year 2018, then increase by about \$4.0 million a year over the forecast horizon.

Sales

The sales tax revenue model is based on a direct relationship with total personal income in Virginia. The November standard forecast increases sales tax collections by \$8.0 million in fiscal year 2018 for growth of 3.0 percent, compared with 1.9 percent in the official forecast. Growth in this source is expected to be 2.6 percent in fiscal year 2019 and 2.2 percent in 2020. This forecast continues to assume the policy adjustments as contained in Chapter 836.

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. The November standard forecast increases corporate income tax collections by \$73.1 million from the official forecast in fiscal year 2018 for growth of 10.5 percent compared with the official rate of 5.8 percent. Collections are expected to decline by 0.2 percent in fiscal year 2019 and rise 1.6 percent in 2020.

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. The November standard forecast for this source is 3.3 percent growth in fiscal year 2018, a downward revision of \$0.7 million. The estimate assumes collections will be flat through fiscal year 2020.

Insurance

In the November standard forecast, insurance premiums growth is raised from 6.0 percent to 6.2 percent in fiscal year 2018. The model calls for growth of 4.0 percent in fiscal year 2019 and 2.1 percent in 2020.

Miscellaneous Taxes and Other Revenues

Collectively, minor revenue sources have been revised downward by \$11.9 million in fiscal year 2018 for an increase of 0.6 percent compared with a 2.2 percent increase in the official forecast. The forecast expects collections of minor sources to grow 2.2 percent in fiscal year 2019 and 2.7 percent in 2020.

General Fund Revenues

Table 3.3
The Official to November Standard General Fund Forecast for Fiscal Year 2018
(Dollars in Millions)

November 17, 2017

	Fiscal Year 2018					2016-2018 Biennium		
	Official Forecast	November Forecast	Change	% Growth Over FY 17 Official November		Official Forecast	November Forecast	Change
MAJOR TAX SOURCES								
Corporate Income	\$ 840.6	\$ 913.7	\$ 73.1	5.8 %	10.5 %	\$ 1,634.8	\$ 1,740.7	\$ 105.9
Individual Income Tax								
Gross	15,333.6	15,477.6	144.0	3.9	3.8	30,095.4	30,391.5	296.1
Withholding	12,103.9	12,320.5	216.6	3.3	3.6	23,817.2	24,215.9	398.7
Nonwithholding	3,229.7	3,157.1	(72.6)	5.9	4.6	6,278.2	6,175.6	(102.6)
Refunds	<u>(1,943.6)</u>	<u>(1,968.7)</u>	<u>(25.1)</u>	<u>5.2</u>	<u>5.8</u>	<u>(3,791.6)</u>	<u>(3,829.7)</u>	<u>(38.1)</u>
Net	13,390.0	13,508.9	118.9	3.7	3.5	26,303.8	26,561.8	258.0
Insurance Company Premiums	364.8	362.1	(2.7)	6.0	6.2	708.9	703.0	(5.9)
State Sales & Use Tax	3,450.6	3,458.6	8.0	1.9	3.0	6,837.4	6,815.7	(21.7)
Wills, Suits, Deeds, & Contract Fees	<u>407.9</u>	<u>407.2</u>	<u>(0.7)</u>	<u>2.3</u>	<u>3.3</u>	<u>806.5</u>	<u>801.6</u>	<u>(4.9)</u>
Total Major Tax Sources	\$ 18,453.9	\$ 18,650.5	\$ 196.6	3.5 %	3.8 %	\$ 36,291.4	\$ 36,622.7	\$ 331.3
MISCELLANEOUS TAXES AND OTHER REVENUES								
Alcoholic Beverage State Tax	\$ 191.4	\$ 189.7	\$ (1.7)	4.5 %	5.0 %	\$ 374.6	\$ 370.4	\$ (4.2)
Bank Franchise Tax	18.4	22.0	3.6	0.0	(0.2)	36.8	44.0	7.2
Beer & Beverage Excise Tax	42.3	42.3	0.0	0.0	1.5	84.6	84.0	(0.6)
Corporate Franchise & Charter Fees	50.0	51.2	1.2	0.0	(4.0)	100.0	104.6	4.6
Excess & Other Fees from Officers	(7.1)	(7.9)	(0.8)	0.0	0.4	(14.2)	(15.8)	(1.6)
Estate & Gifts	0.0	0.0	0.0	n/a	n/a	0.0	8.2	n/a
Institutional Revenues	6.0	2.1	(3.9)	0.0	(7.0)	12.0	4.4	(7.6)
Interest & Rents	61.8	61.6	(0.2)	0.0	10.0	123.6	117.6	(6.0)
Licenses & Permits	4.1	4.2	0.1	0.0	0.9	8.2	8.4	0.2
Miscellaneous Taxes and Penalties	237.8	231.5	(6.3)	3.4	(2.4)	467.8	468.8	1.0
Other Miscellaneous Revenues	36.9	32.8	(4.1)	(0.3)	9.0	73.9	62.9	(11.0)
Public Service GR / Consumption Tax	<u>97.8</u>	<u>98.0</u>	<u>0.2</u>	<u>0.0</u>	<u>3.1</u>	<u>195.6</u>	<u>193.1</u>	<u>(2.5)</u>
Total Misc. Taxes and Other Revenues	\$ 739.4	\$ 727.5	\$ (11.9)	2.2 %	0.6 %	\$ 1,462.9	\$ 1,450.4	\$ (12.5)
TOTAL GF REVENUES	\$ 19,193.3	\$ 19,378.0	\$ 184.7	3.4 %	3.7 %	\$ 37,754.3	\$ 38,073.1	\$ 318.8
TRANSFERS								
A.B.C. Profits	\$ 103.0	\$ 104.1	\$ 1.1	(5.0) %	(5.8) %	\$ 211.4	\$ 214.6	\$ 3.2
Sales Tax (0.375%)	374.3	379.1	4.8	2.4	3.6	739.7	745.0	5.3
Transfers Per Appropriations Act	<u>163.5</u>	<u>163.5</u>	<u>0.0</u>	<u>(7.6)</u>	<u>(7.6)</u>	<u>340.5</u>	<u>340.4</u>	<u>(0.1)</u>
Total Transfers	\$ 640.8	\$ 646.7	\$ 5.9	(1.5) %	(1.0) %	\$ 1,291.6	\$ 1,300.0	\$ 8.4
TOTAL GENERAL FUND	\$ 19,834.1	\$ 20,024.7	\$ 190.6	3.2 %	3.5 %	\$ 39,045.9	\$ 39,373.1	\$ 327.2

The Official forecast is based on the October 2016 IHS Markit Standard Outlook and the corresponding Virginia state forecast developed by the Department of Taxation and includes actions of the 2017 General Assembly Session -- Chapter 836.

The November forecast is based on the October 2017 IHS Markit Standard Outlook and the corresponding Virginia state forecast developed by the Department of Taxation with recommendations from JABE and contains the same policy assumptions in Chapter 836.

Table 3.3
The November Standard General Fund Forecast for Fiscal Years 2019-2020
(Dollars in Millions)

November 20, 2017

	Fiscal Year 2019		Fiscal Year 2020		2018-2020 Biennium	
	November Forecast	% Growth Over FY 18	November Forecast	% Growth Over FY 19	November Forecast	% Growth Over 16-18
MAJOR TAX SOURCES						
Corporate Income	\$ 912.0	(0.2) %	\$ 926.4	1.6 %	\$ 1,838.4	5.6 %
Individual Income Tax:						
Gross	16,167.1	4.5	16,928.9	4.7	33,096.0	8.9
Withholding	12,810.2	4.0	13,308.5	3.9	26,118.7	7.9
Nonwithholding	3,356.9	6.3	3,620.4	7.8	6,977.3	13.0
Refunds	<u>(2,061.6)</u>	<u>4.7</u>	<u>(2,154.2)</u>	<u>4.5</u>	<u>(4,215.8)</u>	<u>10.1</u>
Net	14,105.5	4.4	14,774.7	4.7	28,880.2	8.7
Insurance Company Premiums	376.6	4.0	384.6	2.1	761.2	8.3
State Sales & Use Tax	3,547.1	2.6	3,625.0	2.2	7,172.1	5.2
Wills, Suits, Deeds, & Contract Fees	<u>407.2</u>	<u>0.0</u>	<u>407.2</u>	<u>0.0</u>	<u>814.4</u>	<u>1.6</u>
Total Major Tax Sources	\$ 19,348.4	3.7 %	\$ 20,117.9	4.0 %	\$ 39,466.3	7.8 %
MISCELLANEOUS TAXES AND OTHER REVENUES						
Alcoholic Beverage State Tax	\$ 197.5	4.1 %	\$ 205.9	4.3 %	\$ 403.4	8.9 %
Bank Franchise Tax	22.0	0.0	22.0	0.0	44.0	(0.1)
Beer & Beverage Excise Tax	42.3	0.0	42.3	0.0	84.6	0.7
Corporate Franchise & Charter Fees	51.2	0.0	51.2	0.0	102.4	(2.1)
Excess & Other Fees from Officers	(7.9)	0.0	(7.9)	0.0	(15.8)	(0.2)
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	(3.6)
Interest & Rents	66.5	8.0	73.0	9.8	139.5	18.6
Licenses & Permits	4.2	0.0	4.2	0.0	8.4	0.5
Miscellaneous Taxes and Penalties	234.8	1.4	240.2	2.3	475.0	1.3
Other Miscellaneous Revenues	32.5	(0.9)	32.5	0.0	65.0	3.3
Public Service GR / Consumption Tax	<u>98.0</u>	<u>0.0</u>	<u>98.0</u>	<u>0.0</u>	<u>196.0</u>	<u>1.5</u>
Total Misc. Taxes and Other Revenues	\$ 743.2	2.2 %	\$ 763.5	2.7 %	\$ 1,506.7	3.9 %
TOTAL GF REVENUES	\$ 20,091.6	3.7 %	\$ 20,881.4	3.9 %	\$ 40,973.0	7.6 %
TRANSFERS						
A.B.C. Profits	\$ 109.8	5.5 %	\$ 115.5	5.2 %	\$ 225.3	5.0 %
Sales Tax (0.375%)	386.7	2.0	395.2	2.2	781.9	5.0
Transfers Per Appropriations Act	<u>110.5</u>	<u>(32.4)</u>	<u>110.5</u>	<u>0.0</u>	<u>221.0</u>	<u>(35.1)</u>
Total Transfers	\$ 607.0	(6.1) %	\$ 621.2	2.3 %	\$ 1,228.2	(5.5) %
TOTAL GENERAL FUND	\$ 20,698.6	3.4 %	\$ 21,502.6	3.9 %	\$ 42,201.2	7.2 %

The Official forecast is based on the October 2016 IHS Markit Standard Outlook and the corresponding Virginia state forecast developed by the Department of Taxation and includes actions of the 2017 General Assembly Session -- Chapter 836.

The November forecast is based on the October 2017 IHS Markit Standard Outlook and the corresponding Virginia state forecast developed by the Department of Taxation with recommendations from JABE and contains the same policy assumptions in Chapter 836.

General Fund Revenues

The November Pessimistic Alternative Forecast for Fiscal Years 2018 - 2020

Table 3.4 at the end of this section compares the official forecast and the November alternative pessimistic general fund forecast. Although the forecast is more pessimistic than the current November standard, the forecast still calls for more revenue than the official forecast. The November alternative scenario increases the official forecast by \$79.3 million in fiscal year 2018, as growth falls from 3.4 percent decline to 3.1 percent. The pessimistic forecast expects total revenue growth of 2.2 percent in fiscal year 2019, and 3.1 percent in fiscal year 2020.

Individual Income Taxes

In the November alternative forecast, the outlook for net individual income taxes has been revised upward from the official forecast, as the projected increase is expected to be \$27.5 million more than the official forecast in fiscal year 2018, for growth of 2.8 percent. Growth of 3.0 percent is predicted in fiscal year 2019, and 3.3 percent in 2020. Additions to individual withholding are partially offset by a reduction in nonwithholding.

Withholding

The withholding revenue model is based on a direct relationship with wages and salaries (52 percent of total personal income) and net transfer payments (6 percent of total personal income) in Virginia. Withholding in the November alternative forecast is raised by \$206.3 million in fiscal year 2018 for growth of 3.5 percent, compared with the current forecast of 3.3 percent growth. Under this scenario, withholding collections are projected to increase by 3.5 percent each year in fiscal years 2019 and 2020.

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.

The November alternative forecast for nonwithholding lowers growth from 5.9 percent to 1.9 percent in fiscal year 2018, a reduction of \$153.7 million from the current official forecast. The forecast predicts 2.2 percent growth in fiscal year 2019 and 3.1 percent growth in 2020.

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. Historical data are adjusted for the land preservation tax credit and the low-income credit. Future values of these credits are estimated and these amounts are added to the base refund forecast.

In the alternative forecast, individual refunds are increased by \$25.1 million in fiscal year 2018, for growth of 5.8 percent compared with the interim forecast of 5.2 percent. The forecast predicts grow of 4.7 percent in fiscal year 2019, and 4.5 percent in 2020. Land preservation credits are projected to be \$83.7 million each year over the forecast horizon. The outlook for low income credits is \$139.2 million in fiscal year 2018, then increase by about \$4.0 million each year through 2020.

Sales

The sales tax revenue model is based on a direct relationship with total personal income in Virginia. The November alternative forecast for sales tax collections increases the interim forecast by \$4.1 million in fiscal year 2018, for growth of 2.9 percent compared with the official forecast of 1.9 percent growth. Growth in this source is expected to be 1.8 percent in fiscal year 2019, and 1.9 percent in 2020.

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. The November pessimistic forecast increases corporate collections by \$63.0 million from the official forecast in fiscal year 2018, for growth of 9.3 percent compared with the interim forecast of 5.8 percent. Collections are expected to fall by 1.2 percent in fiscal year 2019, and rise by 7.6 percent in 2020.

Wills, Suits, Deeds, and Contracts (Recordation)

The revenue model for wills, suits, deeds and contracts is based on mortgage originations, mortgage refinancing activity 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. The November alternative forecast calls for 3.3 percent growth in fiscal year 2018, a downward revision of \$0.7 million. The estimate assumes a decline of 12.0 percent in fiscal year 2019, and remain flat in 2020.

Insurance

The November alternative forecast for taxes on the premiums of insurance companies is for growth of 6.2 percent in fiscal year 2018, close to the current forecast of 6.0 percent. The model calls for 1.5 percent growth in fiscal year 2019, and 1.9 percent in 2020.

Miscellaneous Taxes and Other Revenues

Collectively, minor revenue sources have been lowered by \$11.9 million in fiscal year 2018 for growth of 0.6 percent compared with 2.2 percent in the official forecast. Collections in these sources are predicted to rise by 2.2 percent in fiscal year 2019, and 2.7 percent in 2020.

General Fund Revenues

Table 3.4
The Official to November Pessimistic General Fund Forecast for Fiscal Year 2018
(Dollars in Millions)

November 17, 2017

	Fiscal Year 2018					2016-2018 Biennium		
	Official	Nov Pess	Change	% Growth Over FY 17		Official	Nov Pess	Change
	Forecast	Forecast		Official	Nov Pess	Forecast	Forecast	
MAJOR TAX SOURCES								
Corporate Income	\$ 840.6	\$ 903.6	\$ 63.0	5.8 %	9.3 %	\$ 1,634.8	\$ 1,730.6	\$ 95.8
Individual Income Tax:								
Gross	15,333.6	15,386.2	52.6	3.9	3.2	30,095.4	30,300.1	204.7
Withholding	12,103.9	12,310.2	206.3	3.3	3.5	23,817.2	24,205.6	388.4
Nonwithholding	3,229.7	3,076.0	(153.7)	5.9	1.9	6,278.2	6,094.5	(183.7)
Refunds	(1,943.6)	(1,968.7)	(25.1)	5.2	5.8	(3,791.6)	(3,829.7)	(38.1)
Net	13,390.0	13,417.5	27.5	3.7	2.8	26,303.8	26,470.4	166.6
Insurance Company Premiums	364.8	362.1	(2.7)	6.0	6.2	708.9	703.0	(5.9)
State Sales & Use Tax	3,450.6	3,454.7	4.1	1.9	2.9	6,837.4	6,811.8	(25.6)
Wills, Suits, Deeds, & Contract Fees	407.9	407.2	(0.7)	2.3	3.3	806.5	801.6	(4.9)
Total Major Tax Sources	\$ 18,453.9	\$ 18,545.1	\$ 91.2	3.5 %	3.2 %	\$ 36,291.4	\$ 36,517.3	\$ 225.9
MISCELLANEOUS TAXES AND OTHER REVENUES								
Alcoholic Beverage State Tax	\$ 191.4	\$ 189.7	\$ (1.7)	4.5 %	5.0 %	\$ 374.6	\$ 370.4	\$ (4.2)
Bank Franchise Tax	18.4	22.0	3.6	0.0	(0.2)	36.8	44.0	7.2
Beer & Beverage Excise Tax	42.3	42.3	0.0	0.0	1.5	84.6	84.0	(0.6)
Corporate Franchise & Charter Fees	50.0	51.2	1.2	0.0	(4.0)	100.0	104.6	4.6
Excess & Other Fees from Officers	(7.1)	(7.9)	(0.8)	0.0	0.4	(14.2)	(15.8)	(1.6)
Estate & Gifts	0.0	0.0	0.0	n/a	n/a	0.0	8.2	n/a
Institutional Revenues	6.0	2.1	(3.9)	0.0	(7.0)	12.0	4.4	(7.6)
Interest & Rents	61.8	61.6	(0.2)	0.0	10.0	123.6	117.6	(6.0)
Licenses & Permits	4.1	4.2	0.1	0.0	0.9	8.2	8.4	0.2
Miscellaneous Taxes and Penalties	237.8	231.5	(6.3)	3.4	(2.4)	467.8	468.8	1.0
Other Miscellaneous Revenues	36.9	32.8	(4.1)	(0.3)	9.0	73.9	62.9	(11.0)
Public Service GR / Consumption Tax	97.8	98.0	0.2	0.0	3.1	195.6	193.1	(2.5)
Total Misc. Taxes and Other Revenues	\$ 739.4	\$ 727.5	\$ (11.9)	2.2 %	0.6 %	\$ 1,462.9	\$ 1,450.4	\$ (12.5)
TOTAL GF REVENUES	\$ 19,193.3	\$ 19,272.6	\$ 79.3	3.4 %	3.1 %	\$ 37,754.3	\$ 37,967.7	\$ 213.4
TRANSFERS								
A.B.C. Profits	\$ 103.0	\$ 104.1	\$ 1.1	(5.0) %	(5.8) %	\$ 211.4	\$ 214.6	\$ 3.2
Sales Tax (0.375%)	374.3	379.1	4.8	2.4	3.6	739.7	745.0	5.3
Transfers Per Appropriations Act	163.5	163.5	0.0	(7.6)	(7.6)	340.5	340.4	(0.1)
Total Transfers	\$ 640.8	\$ 646.7	\$ 5.9	(1.5) %	(1.0) %	\$ 1,291.6	\$ 1,300.0	\$ 8.4
TOTAL GENERAL FUND	\$ 19,834.1	\$ 19,919.3	\$ 85.2	3.2 %	3.0 %	\$ 39,045.9	\$ 39,267.7	\$ 221.8

The Official forecast is based on the October 2016 IHS Markit Standard Outlook and the corresponding Virginia state forecast developed by the Department of Taxation and includes actions of the 2017 General Assembly Session -- Chapter 836.

The November Pessimistic forecast is based on the October 2017 IHS Markit Pessimistic Outlook and the corresponding Virginia state forecast developed by the Department of Taxation with recommendations from JABE and contains the same policy assumptions in Chapter 836.

Table 3.4
The November Pessimistic General Fund Forecast for Fiscal Years 2019-2020
(Dollars in Millions)

November 20, 2017

	Fiscal Year 2019		Fiscal Year 2020		2018-2020 Biennium	
	Nov Pess Forecast	% Growth Over FY 18	Nov Pess Forecast	% Growth Over FY 19	Nov Pess Forecast	% Growth Over 16-18
MAJOR TAX SOURCES						
Corporate Income	\$ 893.2	(1.2) %	\$ 960.8	7.6 %	\$ 1,854.0	7.1 %
Individual Income Tax:						
Gross	15,877.6	3.2	16,423.6	3.4	32,301.2	6.6
Withholding	12,735.4	3.5	13,182.7	3.5	25,918.1	7.1
Nonwithholding	3,142.2	2.2	3,240.9	3.1	6,383.1	4.7
Refunds	<u>(2,061.6)</u>	<u>4.7</u>	<u>(2,154.2)</u>	<u>4.5</u>	<u>(4,215.8)</u>	<u>10.1</u>
Net	13,816.0	3.0	14,269.4	3.3	28,085.4	6.1
Insurance Company Premiums	367.7	1.5	374.7	1.9	742.4	5.6
State Sales & Use Tax	3,518.1	1.8	3,583.2	1.9	7,101.3	4.3
Wills, Suits, Deeds, & Contract Fees	<u>358.3</u>	<u>(12.0)</u>	<u>358.3</u>	<u>0.0</u>	<u>716.7</u>	<u>(10.6)</u>
Total Major Tax Sources	\$ 18,953.3	2.2 %	\$ 19,546.5	3.1 %	\$ 38,499.8	5.4 %
MISCELLANEOUS TAXES AND OTHER REVENUES						
Alcoholic Beverage State Tax	\$ 197.5	4.1 %	\$ 205.9	4.3 %	\$ 403.4	8.9 %
Bank Franchise Tax	22.0	0.0	22.0	0.0	44.0	(0.1)
Beer & Beverage Excise Tax	42.3	0.0	42.3	0.0	84.6	0.7
Corporate Franchise & Charter Fees	51.2	0.0	51.2	0.0	102.4	(2.1)
Excess & Other Fees from Officers	(7.9)	0.0	(7.9)	0.0	(15.8)	(0.2)
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	(3.6)
Interest & Rents	66.5	8.0	73.0	9.8	139.5	18.6
Licenses & Permits	4.2	0.0	4.2	0.0	8.4	0.5
Miscellaneous Taxes and Penalties	234.8	1.4	240.2	2.3	475.0	1.3
Other Miscellaneous Revenues	32.5	(0.9)	32.5	0.0	65.0	3.3
Public Service GR / Consumption Tax	<u>98.0</u>	<u>0.0</u>	<u>98.0</u>	<u>0.0</u>	<u>196.0</u>	<u>1.5</u>
Total Misc. Taxes and Other Revenues	\$ 743.2	2.2 %	\$ 763.5	2.7 %	\$ 1,506.7	3.9 %
TOTAL GF REVENUES	\$ 19,696.5	2.2 %	\$ 20,310.0	3.1 %	\$ 40,006.5	5.4 %
TRANSFERS						
A.B.C. Profits	\$ 109.8	5.5 %	\$ 115.5	5.2 %	\$ 225.3	5.0 %
Sales Tax (0.375%)	386.7	2.0	395.2	2.2	781.9	5.0
Transfers Per Appropriations Act	<u>110.5</u>	<u>(32.4)</u>	<u>110.5</u>	<u>0.0</u>	<u>221.0</u>	<u>(35.1)</u>
Total Transfers	\$ 607.0	(6.1) %	\$ 621.2	2.3 %	\$ 1,228.2	(5.5) %
TOTAL GENERAL FUND	\$ 20,303.5	1.9 %	\$ 20,931.2	3.1 %	\$ 41,234.7	5.0 %

The Official forecast is based on the October 2016 IHS Markit Standard Outlook and the corresponding Virginia state forecast developed by the Department of Taxation and includes actions of the 2017 General Assembly Session -- Chapter 836.

The November Pessimistic forecast is based on the October 2017 IHS Markit Pessimistic Outlook and the corresponding Virginia state forecast developed by the Department of Taxation with recommendations from JABE and contains the same policy assumptions in Chapter 836.

General Fund Revenues

Legislative Changes Affecting the Forecast

Table 3.5 below lists the legislative and policy changes that affect the revenue forecast for fiscal years 2018-2020.

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

	FY18	FY19	FY20
CORPORATE INCOME TAX			
C. 2, 2014 - Cap Scholarship -- (HB321/SB131,2012) (SB269,2014) 2015 update	(5.0)	(5.0)	(5.0)
2015 Federal TOPS Program	0.2	0.2	0.2
2015 Expiration of Coalfield Employment Enhancement Credit	1.6	1.5	1.4
Increase Existing R&D Expenses Tax Credit Cap -- HB884, 2016	(1.0)	(1.0)	(1.0)
New Large R&D Tax Credit -- (HB884, 2016)	(20.0)	(20.0)	(20.0)
Tax Amnesty Program	44.6		
INDIVIDUAL INCOME TAX			
Repeal Subtraction for Land for Open Space -- SB1012, 2015	0.4	0.4	0.4
Land Preservation Tax Credit (Total Cost)	83.7	83.7	83.7
ABLE Act Contribution Deduction -- HB30, 2016	(0.5)	(1.3)	(2.3)
Food Bank Tax Credit --HB1093/SB580, 2016	(0.3)	(0.3)	(0.3)
Eliminate Tax Credit for Political Contributions -- HB22/SB115, 2016	0.7	0.7	0.7
Federal Tax Conformity -- HB402, 2016	(0.1)	0.1	0.2
TAX Refund Review Initiative -- HB30, 2016	(5.2)	(5.2)	(5.2)
Tax Amnesty Program	36.9		
Telework Tax Credit Sunset (SB 176, 2017)	0.1		
Retain \$20,000 limit on Land Preservation Tax Credit	(6.1)		
Notification of payroll system breaches	0.8	0.8	0.8
STATE SALES AND USE TAX			
C. 247, 2015 - Additional Enforcement of Sales Tax - SB1010	1.0	1.0	1.0
C. 382, 2015 Consolidation of Sales Tax Holidays - SB1319	1.0	1.0	1.1
C. 620, 2015 Sales Tax Exemption for Bullion - HB1648	(0.2)	(0.2)	(0.2)
TAX Enhanced Sales Tax - Cigarettes	1.5	1.5	1.5
Unwind AST 10/25	(27.0)		
Sales Tax Exemption Refunds -- HB398, 2016	1.9	1.9	1.9
Tax Amnesty	8.0		
C. 836, 2017 Accelerated Sales Tax to \$2.5/\$4.0 Million -- HB1500	12.8		
Tighten Sales Tax Nexus	11.1	11.1	11.1
Reflect SB1390 Sales Tax Enforcement	2.3	5.4	5.4
INSURANCE COMPANY PREMIUMS			
Historic Rehab Tax Credit (\$5 million limit) (HB2460/SB1034, 2017)	9.9	9.9	

SECTION 4
NON-GENERAL FUND REVENUES

Section 4 Non-General Fund Revenues

Transportation Revenues

Most state taxes and fees used to finance the state's transportation programs are deposited into two funds: the Highway Maintenance and Operating Fund (HMOF) and the Transportation Trust Fund (TTF). The HMOF, which finances maintenance and operating costs, consists of traditional highway user taxes and fees. The TTF, which finances construction costs, consists of dedicated portions of highway user taxes and fees, as well as a portion of state sales and recordation taxes, interest earnings, and several miscellaneous sources. Within the TTF, which was created by a special session of the General Assembly in 1986, is the Priority Transportation Fund (PTF). This fund, which was created during the 2000 legislative session, consists of insurance premiums, interest payments, and a portion of the motor fuels tax.

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 (The rate of 4.15 percent will be phased in over four years, beginning in fiscal year 2014.),
- licensing fees,
- 0.60 cent State Retail Sales and Use Tax (The share of existing general sales and use tax revenues used for transportation from a 0.50 percent to 0.675 percent, phased in over four years. Since the U.S. Congress did not pass the Marketplace Fairness Act by January 1, 2015, the share of sales tax revenues used for transportation will remain at 0.60 percent.),
- 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.

NON-GENERAL FUND REVENUES

Fiscal Year 2017 in Review

Table 4.1 compares actual collections in fiscal year 2017 to the official forecast for the Commonwealth Transportation Fund (CTF). Total transportation revenues totaled over \$3.4 billion, an increase of \$96.6 million over last year. Revenue collections grew by 2.9 percent, exceeding the official forecast of 1.9 percent growth, resulting in a forecast variance of 0.9 percent.

Table 4.1
Actual Collections Compared to the Official Forecast for Fiscal Year 2017
(Millions of Dollars)

Revenue Sources	FY2016 Actual	FY2017 Actual	FY2017 Forecast	Percent Change 2016-2017		Forecast Variance	
				Actual	Forecast	Amount	Percent
Motor Fuels Tax	848.3	857.9	856.0	1.1%	0.9%	1.9	0.2%
Road Use Tax	10.9	12.3	11.1	12.8	1.8	1.2	10.8
Vehicle Sales Tax	918.9	957.7	938.0	4.2	2.1	19.7	2.1
Vehicle Licenses	253.4	260.2	253.0	2.7	(0.2)	7.2	2.8
State Sales Tax	1,000.5	1,020.4	1,023.1	2.0	2.3	-2.7	-0.3
Recordation Tax	44.2	48.1	47.2	8.8	6.8	0.9	1.9
Insurance Premiums Tax	150.3	163.1	163.1	8.5	8.5	0.0	0.0
Int'l Registration Plan	67.7	66.2	68.1	(2.2)	0.6	-1.9	-2.8
Interest Earnings	3.7	6.4	3.3	73.0	(10.8)	3.1	93.9
Rental Tax	37.5	39.5	38.5	5.3	2.7	1.0	2.6
Aviation Fuels Tax	1.8	2.0	1.8	11.1	0.0	0.2	11.1
Miscellaneous	18.4	18.4	17.3	0.0	(6.0)	1.1	6.4
TOTAL	\$3,355.6	\$3,452.2	\$3,420.5	2.9%	1.9%	\$31.7	0.9%

As required by Section 33.1-23.03:8A(2) of the Code of Virginia, all revenues that exceed the official forecast are deposited into the Priority Transportation Fund.

Revenues from motor fuels taxes (25 percent of the CTF in fiscal year 2016) exceeded the forecast by \$1.9 million in fiscal year 2017. Motor fuels tax collections increased by 1.1 percent in fiscal year 2017.

Gasoline consumption had been on a declining trend since reaching its peak consumption year in 2003. The fuel-economy of both cars and trucks has increased even faster than mandated by federal regulations as manufacturers have responded to demands from customers. As a result, the average vehicle being driven on U.S. highways is becoming steadily more fuel efficient as old cars and light trucks are retired and replaced by newer models.

The market for diesel fuel is different than the market for gasoline. Most diesel fuel is purchased and consumed by motor carriers, and reflects movement of freight through the state rather than commuter passenger travel. Motor carriers are sensitive to prices and are likely to purchase fuel in a state that has lower fuel tax rates. Motor carriers respond to the general economy more than passenger traffic: they tend to travel more miles when the economy is in an expansion and less when the economy is in a recession.

Revenues from the motor vehicle sales and use tax (28 percent of the CTF in fiscal year 2017) increased by 4.2 percent in fiscal year 2017. HB2313 (2013) amended the tax on the sale of motor vehicles (the "titling tax"). Previously, the titling tax was 3 percent. A new rate of 4.15 percent will be phased in over four years. In fiscal year 2017, the rate was 4.15 percent. New car sales were flat and used car sales increased by 3.3 percent in fiscal year 2017.

Revenues from the transportation share of the state retail sales tax (30 percent of the CTF in fiscal year 2017) increased by 2.0 percent. HB2313 (2013) raised the state sales and use tax across the Commonwealth from 4 percent to 4.3 percent and designated the increased revenues to the Commonwealth Transportation Fund.

Motor vehicle license fees (8 percent of the CTF in fiscal year 2016) increased by 2.7 percent in fiscal year 2017.

Collectively, all other taxes and revenues (10 percent of the CTF in fiscal year 2017) increased by 6.4 percent in fiscal year 2017.

Outlook for Key Tax Base Variables

Motor Fuel Consumption

Table 4.2 on the next page shows that gasoline consumption increased by 3.0 percent and diesel fuel consumption grew by 7.7 percent in fiscal year 2017.

The recent improvement in the economic outlook and the sharp decline in motor fuels prices is expected to provide a short-term boost to motor fuels consumption. Several years of low gasoline prices have upended a decade-long shift towards more fuel efficient vehicles in the United States. For two years in a row, the U.S. auto industry broke new records for total sales, as an improving labor market and cheap gas induced more motorists to take to the roads. In addition, the makeup of the U.S. auto fleet is changing, with 60 percent of auto sales in 2016 coming in the form of light trucks, which is an increase from the 56 percent share that trucks captured in 2015. For a stretch of time back in 2012-2013, when oil traded above \$90 per barrel, auto sales were roughly split between cars and trucks. In short, the three-year surge in gasoline consumption between 2014 and 2016 could be fleeting. Over the next year or two, gasoline prices will rise, which could put an end to expanding demand. Over the longer-term, not only are smaller cars becoming more efficient and even electrified, but so are gas guzzling SUVs and trucks.

NON-GENERAL FUND REVENUES

In addition to improvements in fuel efficiency, the expected future decline in gasoline consumption is attributable in large part to some powerful secular changes in U.S. demographics and cultural in general:

- As the aging population leaves the workforce, the employment-population ratio has contracted.
- There is growing trend toward a portable workplace and the ability to work from home.
- Social media have provided powerful alternatives to face-to-face interaction requiring transportation (Internet apps, games, the ubiquitous mobile phone for talk and texting).
- There has been a general trend in young adults to drive less (related to points two and three above).
- The US is experiencing accelerating urban population growth, which reduces the per-capita dependence on gasoline.

Table 4.2
Motor Fuel Consumption, History and Forecast, Fiscal Years 2017 - 2020
(Percent Growth)

	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>
Taxable Gallons - Gasoline				
Official	2.0	1.1	1.1	0.9
Standard	3.0	0.8	1.5	1.3
Alternative		0.8	0.6	1.3
Taxable Gallons - Diesel				
Official	1.9	0.9	0.7	0.0
Standard	7.7	2.6	2.3	1.4
Alternative		2.2	(3.4)	(1.1)

Vehicle Sales

The official forecast anticipated that fiscal year 2017 new car sales would continue to grow. New car sales were flat, slightly ahead of the forecast of a 0.3 percent decline.

Used car sales were expected to increase by 4.1 percent in fiscal year 2017. Used car sales increased by 3.3 percent in fiscal year 2017.

Table 4.3 shows the official and November 2017 forecast 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 2017 - 2020
(Percent Growth)

	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>
New Taxable Titles				
Official	(0.3)	(0.1)	1.9	0.5
Standard	0.0	(1.3)	2.7	1.7
Alternative		(3.4)	(2.7)	0.8
Used Taxable Titles				
Official	4.1	0.2	0.6	(0.4)
Standard	3.3	2.6	0.2	0.2
Alternative		(0.5)	(0.1)	0.5

New Taxable Titles: In fiscal year 2017, over 390,000 new vehicles were titled in Virginia, a decline of 15,800 units from fiscal year 2017.

The November forecast expects a slight decline from the above-trend level of the past few years as the replacement cycle begins to wane. Sales will remain solid as conditions are supported by a steadily improving job market, favorable financing conditions including long-term loans, favorable leasing terms, and broader credit availability than for other loan products.

Used Taxable Titles: About 1.2 million used cars were sold in Virginia in fiscal year 2017, an increase of 3.3 percent. 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.

NON-GENERAL FUND REVENUES

November 2017 Standard Commonwealth Transportation Fund Forecast

Table 4.4 on the following pages presents a comparison of the November 2016 standard forecast and the official forecast. In the Virginia standard forecast, economic growth continues to improve, but performs below the national economy.

Beginning in fiscal year 2014, Chapter 766 (2013) provided a considerable influx of new revenues into the Commonwealth Transportation Fund:

- The bill eliminated the \$0.175 per gallon tax on motor fuels, and replaced it with a percentage-based tax of 3.5 percent for gasoline and 6 percent for diesel fuel. (Given that the U.S. Congress did not pass the Marketplace Fairness Act by January 1, 2015, the rate on gasoline rose to 5.1 percent.)
- The bill raised the state sales and use tax across the Commonwealth from 4 percent to 4.3 percent and designated the increased revenues to the Commonwealth Transportation Fund.
- The bill increased the share of existing general sales and use tax revenues used for transportation from 0.50 percent to 0.675 percent, phased in over four years. (Given that the U.S. Congress did not pass the Marketplace Fairness Act by January 1, 2015, the share of sales tax revenues used for transportation will remain at 0.60 percent.)
- The bill amended the tax on the sale of motor vehicles (the "titling tax"). Previously, the titling tax was 3 percent. A new rate of 4.15 percent will be phased in over four years.

The November forecast shows a revenue increase of \$3.3 million, \$23.3 million, and \$32.4 million in fiscal years 2018 through 2020, respectively.

NON-GENERAL FUND REVENUES

Table 4.4
The Official and November Commonwealth Transportation Fund Forecast for Fiscal Year 2018
(Dollars in Millions)

November 1, 2017

	Fiscal Year 2017		Fiscal Year 2018					
	Actual	% Growth	Official Forecast	November Forecast	Change	% Growth over FY 17		
						Official	November	
Highway Maintenance & Operating Fund								
Motor Fuels Tax	\$ 695.1	1.5 %	\$ 699.0	\$ 716.2	\$ 17.2	0.6 %	3.0 %	
Road Tax	4.2	44.8	2.7	2.0	(0.7)	(35.7)	(52.4)	
Motor Vehicle Sales And Use Tax	721.8	4.5	712.1	692.8	(19.3)	(1.3)	(4.0)	
Motor Vehicle License Fees	237.9	2.6	233.5	236.6	3.1	(1.8)	(0.5)	
Retail Sales and Use Tax	277.1	0.1	291.7	287.0	(4.7)	5.3	3.6	
International Registration Plan	66.2	(2.2)	64.0	64.4	0.4	(3.3)	(2.7)	
Miscellaneous	18.4	0.0	17.3	17.2	(0.1)	(6.0)	(6.5)	
Total State Taxes and Fees	\$ 2,020.7	1.6 %	\$ 2,020.3	\$ 2,016.2	\$ (4.1)	(0.0) %	(0.2) %	
Transportation Trust Fund								
Motor Fuels Tax	\$ 162.8	(0.4) %	\$ 166.0	\$ 170.1	\$ 4.1	2.0 %	4.5 %	
Insurance Premiums Tax (1/3)	163.1	8.5	169.1	168.0	(1.1)	3.7	3.0	
Road Tax	8.1	1.3	8.0	8.5	0.5	(1.2)	4.9	
Motor Vehicle Sales And Use Tax	235.9	3.5	235.2	229.6	(5.6)	(0.3)	(2.7)	
Motor Vehicle License Fees	22.2	2.8	21.9	22.6	0.7	(1.4)	1.8	
Retail Sales and Use Tax	743.3	2.7	753.5	760.0	6.5	1.4	2.2	
Recordation Tax	48.1	63.1	48.4	48.3	(0.1)	0.5	0.4	
Interest Earnings	6.4	73.0	2.3	3.3	1.0	(64.1)	(48.4)	
Rental Tax	39.5	5.3	39.6	40.9	1.3	0.3	3.5	
Aviation Fuels Tax	2.0	11.1	1.8	1.9	0.1	(10.0)	(5.0)	
Total State Taxes and Fees	\$ 1,431.4	4.7 %	\$ 1,445.8	\$ 1,453.2	\$ 7.4	1.0 %	1.5 %	
Total HMOF And TTF								
Motor Fuels Tax	\$ 857.9	1.1 %	\$ 865.0	\$ 886.3	\$ 21.3	0.8 %	3.3 %	
Insurance Premiums Tax (1/3)	163.1	8.5	169.1	168.0	(1.1)	3.7	3.0	
Road Tax	12.3	12.8	10.7	10.5	(0.2)	(13.0)	(14.6)	
Motor Vehicle Sales and Use Tax	957.7	4.2	947.3	922.4	(24.9)	(1.1)	(3.7)	
Motor Vehicle License Fees	260.1	2.6	255.4	259.2	3.8	(1.8)	(0.3)	
International Registration Plan	66.2	(2.2)	64.0	64.4	0.4	(3.3)	(2.7)	
Retail Sales and Use Tax	1,020.4	2.0	1,045.2	1,047.0	1.8	2.4	2.6	
Recordation Tax (3 cents)	48.1	8.8	48.4	48.3	(0.1)	0.5	0.4	
Interest Earnings	6.4	73.0	2.3	3.3	1.0	(64.1)	(48.4)	
Rental Tax	39.5	5.3	39.6	40.9	1.3	0.3	3.5	
Aviation Fuels Tax	2.0	11.1	1.8	1.9	0.1	(10.0)	(5.0)	
Miscellaneous	18.4	0.0	17.3	17.2	(0.1)	(6.0)	(6.5)	
Total State Taxes and Fees	\$ 3,452.2	2.9 %	\$ 3,466.1	\$ 3,469.4	\$ 3.3	0.4 %	0.5 %	
Transfers per the Appropriations Act								
Retail Sales Tax - AST (TTF)	0.0	n/a	0.0	0.0	0.0	n/a	n/a	
Total Transfers	\$ 0.0	n/a	\$ 0.0	\$ 0.0	\$ 0.0	n/a	n/a %	
Total Transportation Fund	\$ 3,452.2	2.9	\$ 3,466.1	\$ 3,469.4	\$ 3.3	0.4 %	0.5 %	

The Official forecast is based on the October 2016 Global Insight Standard outlook and the corresponding Virginia state forecast developed by the Department of Taxation.

The November forecast is based on the October 2017 IHS Markit Standard outlook and the corresponding Virginia state forecast developed by the Department of Taxation.

NON-GENERAL FUND REVENUES

Table 4.4
The Official and November Commonwealth Transportation Fund Forecast for Fiscal Year 2019
(Dollars in Millions)

November 1, 2017

	Fiscal Year 2019				
	Official	November	Change	% Growth over FY 18	
	Forecast	Forecast		Official	November
Highway Maintenance & Operating Fund					
Motor Fuels Tax	\$ 705.9	\$ 724.4	\$ 18.5	1.0 %	1.1 %
Road Tax	2.7	1.7	(1.0)	0.0	(15.0)
Motor Vehicle Sales And Use Tax	725.5	715.7	(9.8)	1.9	3.3
Motor Vehicle License Fees	233.5	236.7	3.2	0.0	0.0
Retail Sales and Use Tax	297.7	292.7	(5.0)	2.1	2.0
International Registration Plan	65.2	64.2	(1.0)	1.9	(0.3)
Miscellaneous	17.3	17.2	(0.1)	0.0	0.0
Total State Taxes and Fees (HMOF)	\$ 2,047.8	\$ 2,052.6	\$ 4.8	1.4 %	1.8 %
Transportation Trust Fund					
Motor Fuels Tax	\$ 167.6	\$ 172.1	\$ 4.5	1.0 %	1.2 %
Insurance Premiums Tax (1/3)	174.7	176.7	2.0	3.3	5.2
Road Tax	8.0	8.6	0.6	0.0	1.2
Motor Vehicle Sales And Use Tax	239.5	236.9	(2.6)	1.8	3.2
Motor Vehicle License Fees	22.0	22.5	0.5	0.5	(0.4)
Retail Sales and Use Tax	767.3	775.1	7.8	1.8	2.0
Recordation Tax	45.7	48.3	2.6	(5.5)	0.0
Interest Earnings	2.3	4.2	1.9	0.0	27.3
Rental Tax	41.2	42.4	1.2	4.0	3.7
Aviation Fuels Tax	1.9	1.9	0.0	5.6	0.0
Total State Taxes and Fees (TTF)	\$ 1,470.2	\$ 1,488.7	\$ 18.5	1.7 %	2.4 %
Total HMOF And TTF					
Motor Fuels Tax	\$ 873.5	\$ 896.5	\$ 23.0	1.0 %	1.2 %
Insurance Premiums Tax (1/3)	174.7	176.7	2.0	3.3	5.2
Road Tax	10.7	10.3	(0.4)	0.0	(1.9)
Motor Vehicle Sales and Use Tax	965.0	952.6	(12.4)	1.9	3.3
Motor Vehicle License Fees	255.5	259.2	3.7	0.0	0.0
International Registration Plan	65.2	64.2	(1.0)	1.9	(0.3)
Retail Sales and Use Tax	1,065.0	1,067.8	2.8	1.9	2.0
Recordation Tax (3 cents)	45.7	48.3	2.6	(5.5)	0.0
Interest Earnings	2.3	4.2	1.9	0.0	27.3
Rental Tax	41.2	42.4	1.2	4.0	3.7
Aviation Fuels Tax	1.9	1.9	0.0	5.6	0.0
Miscellaneous	17.3	17.2	(0.1)	0.0	0.0
Total State Taxes and Fees	\$ 3,518.0	\$ 3,541.3	\$ 23.3	1.5 %	2.1 %
Transfers per the Appropriations Act					
Retail Sales Tax - AST (TTF)	0.0	0.0	0.0	n/a	n/a
Total Transfers	\$ 0.0	\$ 0.0	\$ 0.0	n/a %	n/a %
Total Transportation Fund	\$ 3,518.0	\$ 3,541.3	\$ 23.3	1.5 %	2.1 %

The Official forecast is based on the October 2016 Global Insight Standard outlook and the corresponding Virginia state forecast developed by the Department of Taxation.

The November forecast is based on the October 2017 IHS Markit Standard outlook and the corresponding Virginia state forecast developed by the Department of Taxation.

NON-GENERAL FUND REVENUES

Table 4.4
The Official and November Commonwealth Transportation Fund Forecast for Fiscal Year 2020
(Dollars in Millions)

November 1, 2017

	Fiscal Year 2020				
	Official	November	Change	% Growth over FY 19	
	Forecast	Forecast		Official	November
Highway Maintenance & Operating Fund					
Motor Fuels Tax	\$ 710.6	\$ 730.1	\$ 19.5	0.7 %	0.8 %
Road Tax	2.7	1.4	(1.3)	0.0	(17.6)
Motor Vehicle Sales And Use Tax	730.7	723.2	(7.5)	0.7	1.0
Motor Vehicle License Fees	233.9	239.1	5.2	0.2	1.0
Retail Sales and Use Tax	304.0	299.2	(4.8)	0.2	2.2
International Registration Plan	65.6	65.0	(0.6)	0.6	1.2
Miscellaneous	17.3	17.2	(0.1)	0.0	0.0
Total State Taxes and Fees (HMOF)	\$ 2,064.8	\$ 2,075.2	\$ 10.4	0.8 %	1.1 %
Transportation Trust Fund					
Motor Fuels Tax	\$ 168.7	\$ 173.4	\$ 4.7	0.7 %	0.8 %
Insurance Premiums Tax (1/3)	183.3	184.4	1.1	4.9	4.4
Road Tax	8.0	8.6	0.6	0.0	0.0
Motor Vehicle Sales And Use Tax	241.1	239.3	(1.8)	0.7	1.0
Motor Vehicle License Fees	22.0	22.9	0.9	0.0	1.8
Retail Sales and Use Tax	783.3	792.2	8.9	2.1	2.2
Recordation Tax	43.1	48.3	5.2	(5.8)	0.0
Interest Earnings	2.3	4.5	2.2	0.0	7.1
Rental Tax	42.9	43.2	0.3	4.1	1.9
Aviation Fuels Tax	2.0	1.9	(0.1)	5.3	0.0
Total State Taxes and Fees (TTF)	\$ 1,496.7	\$ 1,518.7	\$ 22.0	1.8 %	2.0 %
Total HMOF And TTF					
Motor Fuels Tax	\$ 879.3	\$ 903.5	\$ 24.2	0.7 %	0.8 %
Insurance Premiums Tax (1/3)	183.3	184.4	1.1	4.9	4.4
Road Tax	10.7	10.0	(0.7)	0.0	(2.9)
Motor Vehicle Sales and Use Tax	971.8	962.5	(9.3)	0.7	1.0
Motor Vehicle License Fees	255.9	262.0	6.1	0.2	1.1
International Registration Plan	65.6	65.0	(0.6)	0.6	1.2
Retail Sales and Use Tax	1,087.3	1,091.4	4.1	2.1	2.2
Recordation Tax (3 cents)	43.1	48.3	5.2	(5.8)	0.0
Interest Earnings	2.3	4.5	2.2	0.0	7.1
Rental Tax	42.9	43.2	0.3	4.1	1.9
Aviation Fuels Tax	2.0	1.9	(0.1)	5.3	0.0
Miscellaneous	17.3	17.2	(0.1)	0.0	0.0
Total State Taxes and Fees	\$ 3,561.5	\$ 3,593.9	\$ 32.4	1.2 %	1.5 %
0					
Retail Sales Tax - AST (TTF)	0.0	0.0	0.0	n/a	n/a
Total Transfers	\$ 0.0	\$ 0.0	\$ 0.0	n/a %	n/a %
Total Transportation Fund	\$ 3,561.5	\$ 3,593.9	\$ 32.4	1.2 %	1.5 %

The Official forecast is based on the October 2016 Global Insight Standard outlook and the corresponding Virginia state forecast developed by the Department of Taxation.

The November forecast is based on the October 2017 IHS Markit Standard outlook and the corresponding Virginia state forecast developed by the Department of Taxation.

NON-GENERAL FUND REVENUES

The Alternative Forecast

Table 4.5 on the following pages compares the official and November alternative Commonwealth Transportation Fund forecasts. Under the alternative forecast, total transportation fund revenues are reduced by a total of \$134.9 million over the next three fiscal years.

This forecast is based on IHS Markit October 2017 alternative forecast and the corresponding Virginia state forecast.

NON-GENERAL FUND REVENUES

Table 4.5
The Official and Nov. Alternative Commonwealth Transportation Fund Forecast for Fiscal Year 2018
(Dollars in Millions)

November 1, 2017

	Fiscal Year 2017		Fiscal Year 2018				
	Actual	% Growth	Official Forecast	November Forecast	Change	% Growth over FY 17	
						Official	November
Highway Maintenance & Operating Fund							
Motor Fuels Tax	\$ 695.1	1.5 %	\$ 699.0	\$ 714.4	\$ 15.4	0.6 %	2.8 %
Road Tax	4.2	44.8	2.7	2.0	(0.7)	(35.7)	(52.4)
Motor Vehicle Sales And Use Tax	721.8	4.5	712.1	683.8	(28.3)	(1.3)	(5.3)
Motor Vehicle License Fees	237.9	2.6	233.5	236.6	3.1	(1.8)	(0.5)
Retail Sales and Use Tax	277.1	0.1	291.7	286.7	(5.0)	5.3	3.5
International Registration Plan	66.2	(2.2)	64.0	64.4	0.4	(3.3)	(2.7)
Miscellaneous	18.4	0.0	17.3	17.2	(0.1)	(6.0)	(6.5)
Total State Taxes and Fees	\$ 2,020.7	1.6 %	\$ 2,020.3	\$ 2,005.1	\$ (15.2)	(0.0) %	(0.8) %
Transportation Trust Fund							
Motor Fuels Tax	\$ 162.8	(0.4) %	\$ 166.0	\$ 169.6	\$ 3.6	2.0 %	4.2 %
Insurance Premiums Tax (1/3)	163.1	8.5	169.1	168.0	(1.1)	3.7	3.0
Road Tax	8.1	1.3	8.0	8.5	0.5	(1.2)	4.9
Motor Vehicle Sales And Use Tax	235.9	3.5	235.2	229.6	(5.6)	(0.3)	(2.7)
Motor Vehicle License Fees	22.2	2.8	21.9	22.6	0.7	(1.4)	1.8
Retail Sales and Use Tax	743.3	2.7	753.5	747.1	(6.4)	1.4	0.5
Recordation Tax	48.1	63.1	48.4	48.3	(0.1)	0.5	0.4
Interest Earnings	6.4	73.0	2.3	3.3	1.0	(64.1)	(48.4)
Rental Tax	39.5	5.3	39.6	40.9	1.3	0.3	3.5
Aviation Fuels Tax	2.0	11.1	1.8	1.9	0.1	(10.0)	(5.0)
Total State Taxes and Fees	\$ 1,431.4	4.7 %	\$ 1,445.8	\$ 1,439.8	\$ (6.0)	1.0 %	0.6 %
Total HMOF And TTF							
Motor Fuels Tax	\$ 857.9	1.1 %	\$ 865.0	\$ 884.0	\$ 19.0	0.8 %	3.0 %
Insurance Premiums Tax (1/3)	163.1	8.5	169.1	168.0	(1.1)	3.7	3.0
Road Tax	12.3	12.8	10.7	10.5	(0.2)	(13.0)	(14.6)
Motor Vehicle Sales and Use Tax	957.7	4.2	947.3	913.4	(33.9)	(1.1)	(4.6)
Motor Vehicle License Fees	260.1	2.6	255.4	259.2	3.8	(1.8)	(0.3)
International Registration Plan	66.2	(2.2)	64.0	64.4	0.4	(3.3)	(2.7)
Retail Sales and Use Tax	1,020.4	2.0	1,045.2	1,033.8	(11.4)	2.4	1.3
Recordation Tax (3 cents)	48.1	8.8	48.4	48.3	(0.1)	0.5	0.4
Interest Earnings	6.4	73.0	2.3	3.3	1.0	(64.1)	(48.4)
Rental Tax	39.5	5.3	39.6	40.9	1.3	0.3	3.5
Aviation Fuels Tax	2.0	11.1	1.8	1.9	0.1	(10.0)	(5.0)
Miscellaneous	18.4	0.0	17.3	17.2	(0.1)	(6.0)	(6.5)
Total State Taxes and Fees	\$ 3,452.2	2.9 %	\$ 3,466.1	\$ 3,444.9	\$ (21.2)	0.4 %	(0.2) %
Transfers per the Appropriations Act							
Retail Sales Tax - AST (TTF)	0.0	n/a	0.0	0.0	0.0	n/a	n/a
Total Transfers	\$ 0.0	n/a	\$ 0.0	\$ 0.0	\$ 0.0	n/a	n/a %
Total Transportation Fund	\$ 3,452.2	2.9	\$ 3,466.1	\$ 3,444.9	\$ (21.2)	0.4 %	(0.2) %

The Official forecast is based on the October 2016 Global Insight Standard outlook and the corresponding Virginia state forecast developed by the Department of Taxation.

The November Alternative forecast is based on the October 2017 IHS Markit Alternative outlook and the corresponding Virginia state forecast developed by the Department of Taxation.

NON-GENERAL FUND REVENUES

Table 4.5
The Official and Nov. Alternative Commonwealth Transportation Fund Forecast for Fiscal Year 2019
(Dollars in Millions)

November 1, 2017

	Fiscal Year 2019					
	Official Forecast	November Forecast	Change	% Growth over FY 18		
				Official	November	
Highway Maintenance & Operating Fund						
Motor Fuels Tax	\$ 705.9	\$ 707.2	\$ 1.3	1.0 %	(1.0) %	
Road Tax	2.7	1.7	(1.0)	0.0	(15.0)	
Motor Vehicle Sales And Use Tax	725.5	679.2	(46.3)	1.9	(0.7)	
Motor Vehicle License Fees	233.5	236.7	3.2	0.0	0.0	
Retail Sales and Use Tax	297.7	290.3	(7.4)	2.1	1.3	
International Registration Plan	65.2	64.2	(1.0)	1.9	(0.3)	
Miscellaneous	17.3	17.2	(0.1)	0.0	0.0	
Total State Taxes and Fees (HMOF)	\$ 2,047.8	\$ 1,996.5	\$ (51.3)	1.4 %	(0.4) %	
Transportation Trust Fund						
Motor Fuels Tax	\$ 167.6	\$ 168.0	\$ 0.4	1.0 %	(0.9) %	
Insurance Premiums Tax (1/3)	174.7	176.7	2.0	3.3	5.2	
Road Tax	8.0	8.6	0.6	0.0	1.2	
Motor Vehicle Sales And Use Tax	239.5	236.9	(2.6)	1.8	3.2	
Motor Vehicle License Fees	22.0	22.5	0.5	0.5	(0.4)	
Retail Sales and Use Tax	767.3	756.5	(10.8)	1.8	1.3	
Recordation Tax	45.7	48.3	2.6	(5.5)	0.0	
Interest Earnings	2.3	4.2	1.9	0.0	27.3	
Rental Tax	41.2	42.4	1.2	4.0	3.7	
Aviation Fuels Tax	1.9	2.0	0.1	5.6	5.6	
Total State Taxes and Fees (TTF)	\$ 1,470.2	\$ 1,466.1	\$ (4.1)	1.7 %	1.8 %	
Total HMOF And TTF						
Motor Fuels Tax	\$ 873.5	\$ 875.2	\$ 1.7	1.0 %	(1.0) %	
Insurance Premiums Tax (1/3)	174.7	176.7	2.0	3.3	5.2	
Road Tax	10.7	10.3	(0.4)	0.0	(1.9)	
Motor Vehicle Sales and Use Tax	965.0	916.1	(48.9)	1.9	0.3	
Motor Vehicle License Fees	255.5	259.2	3.7	0.0	0.0	
International Registration Plan	65.2	64.2	(1.0)	1.9	(0.3)	
Retail Sales and Use Tax	1,065.0	1,046.8	(18.2)	1.9	1.3	
Recordation Tax (3 cents)	45.7	48.3	2.6	(5.5)	0.0	
Interest Earnings	2.3	4.2	1.9	0.0	27.3	
Rental Tax	41.2	42.4	1.2	4.0	3.7	
Aviation Fuels Tax	1.9	2.0	0.1	5.6	5.6	
Miscellaneous	17.3	17.2	(0.1)	0.0	0.0	
Total State Taxes and Fees	\$ 3,518.0	\$ 3,462.6	\$ (55.4)	1.5 %	0.5 %	
Transfers per the Appropriations Act						
Retail Sales Tax - AST (TTF)	0.0	0.0	0.0	n/a	n/a	
Total Transfers	\$ 0.0	\$ 0.0	\$ 0.0	n/a %	n/a %	
Total Transportation Fund	\$ 3,518.0	\$ 3,462.6	\$ (55.4)	1.5 %	0.5 %	

The Official forecast is based on the October 2016 Global Insight Standard outlook and the corresponding Virginia state forecast developed by the Department of Taxation.

The November Alternative forecast is based on the October 2017 IHS Markit Alternative outlook and the corresponding Virginia state forecast developed by the Department of Taxation.

NON-GENERAL FUND REVENUES

Table 4.5
The Official and Nov. Alternative Commonwealth Transportation Fund Forecast for Fiscal Year 2020
(Dollars in Millions)

November 1, 2017

	Fiscal Year 2020					
	Official	November	Change	% Growth over FY 19		
	Forecast	Forecast		Official	November	
Highway Maintenance & Operating Fund						
Motor Fuels Tax	\$ 710.6	\$ 708.6	\$ (2.0)	0.7 %	0.2 %	
Road Tax	2.7	1.4	(1.3)	0.0	(17.6)	
Motor Vehicle Sales And Use Tax	730.7	684.3	(46.4)	0.7	0.8	
Motor Vehicle License Fees	233.9	239.1	5.2	0.2	1.0	
Retail Sales and Use Tax	304.0	295.7	(8.3)	(102.5)	1.9	
International Registration Plan	65.6	65.0	(0.6)	0.6	1.2	
Miscellaneous	17.3	17.2	(0.1)	0.0	0.0	
Total State Taxes and Fees (HMOF)	\$ 2,064.8	\$ 2,011.3	\$ (53.5)	0.8 %	0.7 %	
Transportation Trust Fund						
Motor Fuels Tax	\$ 168.7	\$ 168.2	\$ (0.5)	0.7 %	0.1 %	
Insurance Premiums Tax (1/3)	183.3	184.4	1.1	4.9	4.4	
Road Tax	8.0	8.6	0.6	0.0	0.0	
Motor Vehicle Sales And Use Tax	241.1	239.3	(1.8)	0.7	1.0	
Motor Vehicle License Fees	22.0	22.9	0.9	0.0	1.8	
Retail Sales and Use Tax	783.3	770.6	(12.7)	2.1	1.9	
Recordation Tax	43.1	48.3	5.2	(5.8)	0.0	
Interest Earnings	2.3	4.5	2.2	0.0	7.1	
Rental Tax	42.9	43.2	0.3	4.1	1.9	
Aviation Fuels Tax	2.0	1.9	(0.1)	5.3	(5.3)	
Total State Taxes and Fees (TTF)	\$ 1,496.7	\$ 1,491.9	\$ (4.8)	1.8 %	1.8 %	
Total HMOF And TTF						
Motor Fuels Tax	\$ 879.3	\$ 876.8	\$ (2.5)	0.7 %	0.2 %	
Insurance Premiums Tax (1/3)	183.3	184.4	1.1	4.9	4.4	
Road Tax	10.7	10.0	(0.7)	0.0	(2.9)	
Motor Vehicle Sales and Use Tax	971.8	923.6	(48.2)	0.7	0.8	
Motor Vehicle License Fees	255.9	262.0	6.1	0.2	1.1	
International Registration Plan	65.6	65.0	(0.6)	0.6	1.2	
Retail Sales and Use Tax	1,087.3	1,066.3	(21.0)	2.1	1.9	
Recordation Tax (3 cents)	43.1	48.3	5.2	(5.8)	0.0	
Interest Earnings	2.3	4.5	2.2	0.0	7.1	
Rental Tax	42.9	43.2	0.3	4.1	1.9	
Aviation Fuels Tax	2.0	1.9	(0.1)	5.3	(5.3)	
Miscellaneous	17.3	17.2	(0.1)	0.0	0.0	
Total State Taxes and Fees	\$ 3,561.5	\$ 3,503.2	\$ (58.3)	1.2 %	1.2 %	
Transfers per the Appropriations Act						
Retail Sales Tax - AST (TTF)	0.0	0.0	0.0	n/a	n/a	
Total Transfers	\$ 0.0	\$ 0.0	\$ 0.0	n/a %	n/a %	
Total Transportation Fund	\$ 3,561.5	\$ 3,503.2	\$ (58.3)	1.2 %	1.2 %	

The Official forecast is based on the October 2016 Global Insight Standard outlook and the corresponding Virginia state forecast developed by the Department of Taxation.

The November Alternative forecast is based on the October 2017 IHS Markit Alternative outlook and the corresponding Virginia state forecast developed by the Department of Taxation.

NON-GENERAL FUND REVENUES

ABC Revenues and Profits Fiscal Year 2017

In fiscal year 2017, ABC's total revenue, excluding state tax receipts, was \$807.6 million. Gross sales of alcoholic beverages in the retail stores accounted for 97 percent of the revenue. The remaining 3 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 2014 through 2017. 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
Department of Alcoholic Beverage Control Components
of the Enterprise Fund - Revenues, Expenses, and Disbursements
Fiscal Years 2014-2017 (\$ millions)

	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>
Total Revenue*	689.5	730.1	771.9	807.6
Cost of Goods & Total Operating Expenses	549.7	577.7	606.6	637.0
Net ABC Profit	139.9	152.5	165.2	172.9
Transfer to the General Fund:				
Reimbursement for Appropriations as provided by the Acts of the Assembly	67.1	67.5	68.0	69.4
Net Profits for Distribution	72.9	84.6	96.9	101.7

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

ABC Revenues and Profit Forecast for 2018-2020

Comparisons of ABC's performance in fiscal year 2016, estimated performance for fiscal year 2017, and actual performance in fiscal year 2017, are included in Table 4.7 on the following page. Fiscal Year 2017 compared to 2016 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 2017 results for store sales, profits for distribution and state tax revenues along with the 2018 through 2020 forecasts. Profit forecasts in Table 4.8 are net of any transfers mandated by the Appropriation Act.

Table 4.7
A Comparison of Fiscal Year 2016 Results
to Fiscal Year 2017 Estimated and Actual Results
(\$ millions)

	<u>FY16</u>	<u>FY17</u>	<u>FY17</u>	<u>Variance</u>		<u>FY17 v. FY16</u>	
	<u>Actual</u>	<u>Estimate</u>	<u>Actual</u>	<u>Amount</u>	<u>Percent</u>	<u>Estimate</u>	<u>Actual</u>
Total Store Sales*	897.6	935.9	940.1	4.2	0.0	38.3	42.5
Net ABC Profit for Distribution	96.9	97.3	101.7	4.4	0.0	0.4	4.8
State Tax Revenue**	174.9	181.3	182.1	0.8	0.0	6.4	7.2

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

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

ABC's profit forecast is a factor of two elements: sales performance and trends in expenses. In both cases, forecasts beyond fiscal year 2018 are more prone to forecast error given the uncertainty with the economy and impacts on customer behavior and ABC's cost structure.

In fiscal year 2018, ABC expects sales to continue to grow in both the retail and mixed beverage licensee (restaurant) segments. Sales from ABC's retail outlets continue to increase year over year, while sales to restaurants remain variable due to the slow economic recovery in Virginia and the nation. Uncontrollable factors such as holiday season sales and sales from restaurants have the potential to significantly impact the accuracy of ABC's sales forecast. Currently, ABC is experiencing slight growth in both retail and restaurant sales.

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. Personnel costs account for 58 percent of ABC non-merchandise expenditures, 17 percent are for continuous charges such as rent and utilities, 19 percent are for contractual services such as credit cards fees, shipping product to stores and telecommunications, and 6 percent are for miscellaneous expenses such as supplies and materials, equipment and depreciation. In fiscal years 2018 through 2020, 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. 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.

NON-GENERAL FUND REVENUES

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

	<u>Actual</u> <u>2017</u>	<u>2018</u>	<u>Forecast</u> <u>2019</u>	<u>2020</u>
Total ABC Store Sales: (1)	\$ 940.1	\$ 981.6	\$ 1,026.3	\$ 1,073.5
Adjusted Net Profits for Distribution: (2) (3) (5)	101.7	104.1	109.8	115.5
ABC State Tax Revenues:(1)				
Spirits	154.6	161.4	168.7	176.5
Wine (4)	<u>27.7</u>	<u>28.3</u>	<u>28.8</u>	<u>29.4</u>
Total Tax Revenue:	\$ 182.3	\$ 189.7	\$ 197.5	\$ 205.9

(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) FY2017 Cash transfer amount was \$110.5, to accommodate a one-time General Assembly action that required VA ABC to transfer the "Accrual Residual" profits.

Distribution of ABC Profits and ABC State Tax Revenues

During fiscal year 2017, ABC contributed \$172.9 million (accrual basis) of net profits to the Commonwealth, and collected \$234.1 million of taxes on store sales, wine and beer and an additional \$43.3 million of general sales tax totaling \$450.3 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. Such programs include the Department of Behavioral Health and Developmental Services' programs for the treatment of alcoholics. The transfers for these programs and others were \$69.4 million in fiscal year 2017. 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.

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. This issue is exacerbated at year-end when ABC must estimate fourth quarter profits and make the transfer in advance of year-end closing.

Virginia Lottery

Actual Results - Fiscal Year 2017

The Virginia Lottery transferred \$600.0 million to the Lottery Proceeds Fund during fiscal year 2017. The Lottery also transferred \$2.2 million for debt set-off to the Department of Taxation and \$12.3 million from unclaimed prizes to the Literary Fund.

Sales for fiscal year 2017 were \$2.0 billion, a decline of \$17.0 million (-0.9 percent) from fiscal year 2016. Net income was \$558.3 million, \$29.9 million (-5.1 percent) less than fiscal year 2016, primarily due to exceptionally strong FY16 sales from the historic \$1.6 billion jackpot run, and an overall lower prize expense rate in FY16.

Total transfers to the Lottery Proceeds Fund during fiscal year 2017 were as follows: \$53.5 million in residual profits from fiscal year 2016, and \$546.6 in estimated profits from fiscal year 2017. The \$11.8 million of residual fiscal year 2017 profits, transferred in August 2017 after the 2017 fiscal year results were certified by the Auditor of Public Accounts, will be included in the total fiscal year 2018 transfers.

Forecast Overview - Fiscal Years 2018 through 2020

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

- the economic outlook as endorsed by the Joint Advisory Board of Economists, in particular with respect to long-term interest rates and US Treasury-issued bond yields;
- continued traditional lottery gaming competition from neighboring jurisdictions, as well as the increased competition from internet lottery sales and casino-style gaming in nearby jurisdictions including Maryland, Washington, D.C., 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 games that appeal to consumers; and
- no new, non-traditional product-line offerings such as video lottery game offerings, and no expansion of internet gaming in Virginia.

For fiscal year 2018, the Lottery is projecting sales of \$2.1 billion and net income (turnover to the Lottery Proceeds Fund) of \$586.7 million. Prize expense is estimated to be \$1.3 billion, or 61.1 percent of sales; retailer compensation is forecast to be \$117.8 million, or 5.6 percent of sales. This forecast takes into account current trends and simulation

NON-GENERAL FUND REVENUES

models for jackpot progressions and sales, and statistically expected prize expense rates. The estimated \$586.7 million net income, plus the residual \$11.8 million of fiscal year 2017 profits that will be transferred during fiscal year 2018, brings the total expected transfers to the Lottery Proceeds Fund for fiscal year 2018 to \$598.5 million. This is an increase of \$52.0 million over the figure in Chapter 836 for fiscal year 2018.

For fiscal year 2019 and fiscal year 2020, the Lottery expects that sales will grow to \$2.126 billion, creating revenue for the Lottery Proceeds Fund of \$586.7 million for fiscal year 2019, and holds this annual profit estimate steady through the next year of the biennium.

Sales Projections for Fiscal Years 2018 through 2020

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, product life cycle, and the Lottery's future plans for each of the products.

Scratch Games

Scratch games account for about 55 percent of total lottery sales. Sales of scratch games are expected to sustain the recent growth in prior years over the forecast period, as players continue to support the variety of games offered in Virginia. The key to the maintenance and growth of scratch sales over the forecast horizon will be actively managing our comprehensive portfolio of games at various price points and prize levels, as well as continuing to maintain and expand our retail distribution network and improve the use of technology for our 5,300 retail partners across Virginia.

The Jackpot-Style Games: Mega Millions, Powerball, Bank a Million, and Cash 4 Life

About 10 percent of the Lottery's sales come from jackpot-style games - those games offering top prizes in the millions of dollars. The Lottery currently offers four such games - Mega Millions, Powerball, Bank a Million and Cash 4 Life. "Luck of the draw" plays a major role in the sales performance of Mega Millions and Powerball. Drawings of random numbers determine whether the jackpot prize is won or whether it "rolls" and continues to grow. High jackpots increase levels of play. Conversely, high frequency of jackpot winners means less jackpot growth and lower sales. Since drawings of random numbers determine the frequency of jackpot wins, which is a large determinant of sales levels for these games, there is inherently a large degree of uncertainty in any forecast for these large jackpot games.

Another key determinant of sales levels for these games is the prevailing interest rate. The Lottery invests the prize pool for each jackpot prize in U.S. Treasury Bonds to create the necessary annuity income stream. At a given level of sales and resulting cash

pool, the higher the yield of the bonds, the higher an annuity jackpot prize may be advertised. Higher advertised jackpots lead to higher sales. Thus in periods of high interest rates, jackpots grow relatively quickly and sales are stable. In periods of low interest rates, jackpots grow slowly and sales decline. Current bond yields continue to be very low.

Bank a Million and Cash 4 Life, the other jackpot-style games currently offered in Virginia, offer a fixed prize to players without regard to the number of winners resulting from any single drawing. Player awareness of these types of games, and frequent game refreshes, are key to these products' success. These games also pose a short-term profitability risk because of the large fixed prizes available for each drawing.

Efforts to expand multi-state jackpot game offerings among all U.S. Lottery states led to the 2010 breakthrough agreement between the two major consortia – Mega Millions and Powerball. Those efforts were intended to strengthen both the current games and potentially lead to further collaborative game offerings. Because there are so many states involved in these types of national agreements, these types of initiatives have experienced delays and setbacks over the years. The Mega Millions game will undergo a significant structural change in the 2nd quarter of fiscal year 2018 – the price per ticket will increase from \$1 to \$2, and the range of numbers selected will also change. This design modification is statistically expected to improve the growth of the jackpot and therefore increase player interest in the game. The sales and profit forecast includes the expected impact of this game change; it is similar to the Powerball game change implemented in 2015.

Daily Games

The Lottery's other drawing games – those games sold through the network of Lottery computer terminals and where winners are determined by a random drawing – collectively referred to as “daily games,” are Pick 3, Pick 4 and Cash 5. Daily games comprise about a third of total Lottery sales. Each of these products operates on approximately the same profit margin. While Pick 3 and Pick 4 are very mature products, total sales are forecast to continue increasing slightly. Some play is expected to continue to shift from Pick 3 to Pick 4 over time. Cash 5 is expected to continue to exhibit stable sales, an unusual phenomenon and contrary to the experiences of other U.S. lotteries that have seen their Cash 5 sales decline more significantly.

Other Products

Since fiscal year 2007, the Lottery has offered two additional products to players: the limited-time offering of raffle tickets, and a new line of “print and play” style games. Raffle style games offer a fixed number of tickets for sale, and each ticket has an equal chance to win predetermined prizes. Print and play style games are printed at retailer terminals, and offer an instant-win experience for consumers. These offerings were re-branded in fiscal year 2016, with a new look, new game offerings, and the new “Print n’ Play” name, and

NON-GENERAL FUND REVENUES

players have responded with strong sales growth in these products. These other products comprise less than 5 percent of total lottery sales.

Net Income for Fiscal Years 2018 through 2020

The Lottery is forecasting net income of \$586.7 million for fiscal year 2018, and \$586.7 million for each fiscal year in the 2018-2020 biennium. The Lottery's largest expense, prizes to players, is expected to increase over this period as players continue to buy more of the higher price point scratch games, which pay a higher portion of sales back in prizes. Retailers should continue to earn commissions and incentives equal to about 5.6 percent of sales. Operating expenses are projected to remain low, forecast to stabilize around 5.3 percent of total sales – about half of the 10 percent statutory maximum.

Table 4.9
Forecast of Lottery Sales and Transfers
to the Lottery Proceeds Fund
(\$ millions)

	FY2018	FY2019	FY2020
Sales	2,090.2	2,126.3	2,126.3
- Prize Expense	1,276.3	1,309.2	1,309.2
- Retailer Compensation	117.8	120.1	120.1
- Operating Expense	110.0	110.9	110.9
+ Other Income	0.5	0.5	0.5
Net Income	586.6	586.6	586.6
Other Transfers	11.8	-	-
Total Available	598.4	586.6	586.6

Ongoing Risks to the Forecast

There are always 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. If the Lottery experiences unusually high payouts in its daily games in any given year, sales may be higher than projected, but income lower simply due to players winning more money. Conversely, a prolonged period of low payouts can lead to higher current profit margin, but dampen players' enthusiasm and reduce future sales and profits. 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. Many state lotteries, including North Carolina, Kentucky and Georgia, have either initiated or are actively working to launch internet-based product offerings not available in Virginia. Increased competition from casino offerings in Maryland, which began in 2010, may have an increasingly negative impact on traditional lottery product sales in Virginia – in particular, the casino just across the Virginia border at National Harbor on the Potomac River which opened in late 2016. Expanded gaming options in West Virginia and Delaware are also aggressively advertised in Virginia markets. Perhaps most significant is the potential competition from internet gaming. With the December 2011 Department of Justice ruling that helped clarify the legality of internet gaming, many states are progressing toward offering internet gaming that would provide Virginia consumers a more readily available outlet for their gaming dollars. Other digital gaming opportunities readily available to Virginia consumers include online pari-mutuel wagering on out-of-state horse races, and fantasy sports offerings like Fan Duel and Draft Kings which were specifically legalized in the Commonwealth during the 2016 Legislative Session. The Fantasy Sports Trade Association estimates that 18 percent of adults in the US play fantasy sports and that 64 percent of them play daily fantasy sports (DFS). Most DFS contests require an entry fee and offer cash prizes. That equates to over 750,000 Virginians entering DFS contests annually. If those players are spending the national average of \$318 per capita, then that would equate to \$238.6 million. Prevalence of play in the Commonwealth may be higher than nationally, since Virginia has expressly legalized the games and required consumer protection measures.

A third risk is the prospect of the Lottery being constrained even further in its ability to launch, promote and support products. For example, if the advertising budget were reduced to sub-optimal levels, sales would suffer. It is likely that some products will need to be repositioned or re-launched in the marketplace. Advertising funds are necessary to ensure this is effective.

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 for the expansion of the Lottery retailer network, advertising, and contractual commitments to vendor partners that are primarily based on percentage of sales agreements.

NON-GENERAL FUND REVENUES

Unemployment Insurance Trust Fund

The unemployment benefit financing system calculates an employer's tax liability by computing the ratio of benefit charges to taxable wages for the last four fiscal years. An appropriate tax rate, subject to a maximum and minimum, is then assigned based on the employer's benefit ratio. A determining factor of tax schedules is the fund balance factor—a ratio related to the Trust Fund's solvency level. Generally, a lower fund balance factor means higher tax schedules.

The Unemployment Insurance (UI) Trust Fund also may receive tax revenues from two other sources—the pool tax and the fund-building tax. The pool tax is an added tax imposed on all employers to cover those benefits that cannot be charged to a particular employer because the employer is inactive or the employer is already subject to the maximum tax. When the fund balance factor exceeds 50 percent, interest income is used to offset these benefit charges. The fund-building tax of 0.2 percent is added to each employer's tax rate unless the fund balance factor exceeds 50 percent. UI tax collections were above the projection by \$49.6 million, or 10.6 percent, in fiscal year 2017 due to improved employment growth. Projected interest revenues were \$0.4 million, or 1.8 percent, above the forecast because higher tax revenue and lower benefit payments resulted in higher balances.

Discussion of Forecast

The estimates in Tables 4.10 and 4.11 represent projections from the Unemployment Insurance Benefit Financing Model. The current estimates' decrease in tax revenue in fiscal years 2018 through 2020 reflects improvements in the fund balance factor and decreases in the four year moving average of benefit charges overwhelming the small increase in the pool tax rate. In the Baseline Scenario, pool taxes of 0.04 percent, 0.08 percent, and 0.08 percent are projected for Calendar Years 2018—2020, respectively. The fund-building tax is not imposed during the forecast period. Interest revenues increase the first two fiscal years with increasing balances, but fall when benefits begin to exceed total revenues.

In the pessimistic Alternate Scenario, pool taxes of 0.04 percent, 0.10 percent, and 0.14 percent are projected for Calendar Years 2018--2020 respectively. The fund-building tax is not imposed during the forecast period. Tax revenues are slightly lower in 2018 in the Alternate Scenario than the Baseline Scenario because employment at the end of the year is lower. Due to higher benefit payments in the Alternate Scenario, average benefit ratios are higher for fiscal years 2018 through 2020. In fiscal year 2019, the higher tax rates in the Alternate Scenario are offset by lower employment, but still produce higher tax revenue than the Baseline Scenario. For fiscal year 2020, despite continued lower employment, higher tax rates produce higher tax revenue than the Baseline Scenario. The Alternate Scenario produces lower interest revenue because balances are lower throughout the forecast period due to benefits rising faster than taxes.

TABLE 4.10
Financial Forecasts Fiscal Years 2018, 2019, and 2020
Baseline Scenario
(Millions of Dollars)

Revenue Source	Fiscal Year 2018		Fiscal Year 2019		Fiscal Year 2020	
	Standard Estimate	% Change From Actual Fiscal Year 2017	Standard Estimate	% Change From Estimated Fiscal Year 2018	Standard Estimate	% Change From Estimated Fiscal Year 2019
Unemployment Insurance Tax	395.0	-23.8%	362.0	-8.4%	357.7	-1.2%
Interest on Trust Fund	29.2	29.2%	33.6	15.1%	32.9	-2.1%
Total Revenue	424.2	-21.5%	395.6	-6.7%	390.6	-1.3%

TABLE 4.11
Financial Forecasts Fiscal Years 2018, 2019, and 2020
Pessimistic Alternate Scenario
(Millions of Dollars)

Revenue Source	Fiscal Year 2018		Fiscal Year 2019		Fiscal Year 2020	
	Standard Estimate	% Change From Actual Fiscal Year 2017	Standard Estimate	% Change From Estimated Fiscal Year 2018	Standard Estimate	% Change From Estimated Fiscal Year 2019
Unemployment Insurance Tax	394.7	-23.8%	365.2	-7.5%	415.8	13.9%
Interest on Trust Fund	29.1	28.8%	30.6	5.2%	23.5	-23.2%
Total Revenue	423.8	-21.6%	395.8	-6.6%	439.3	11.0%

**APPENDIX A
ECONOMIC DATA**

TABLE A.1 - QUARTERLY NATIONAL AND VIRGINIA ECONOMIC VARIABLES

	History											
	2014.3	2014.4	2015.1	2015.2	2015.3	2015.4	2016.1	2016.2	2016.3	2016.4	2017.1	2017.2
Real Gross Domestic Product, Billions \$, SAAR	16,139.5	16,220.2	16,350.0	16,460.9	16,527.6	16,547.6	16,571.6	16,663.5	16,778.1	16,851.4	16,903.2	17,031.1
Annualized % Change	5.2	2.0	3.2	2.7	1.6	0.5	0.6	2.2	2.8	1.8	1.2	3.1
% Change from Prior Year's Quarter	3.2	2.7	3.8	3.3	2.4	2.0	1.4	1.2	1.5	1.8	2.0	2.2
Real Consumer Spending, Billions \$, SAAR	10,909.9	11,045.2	11,145.3	11,227.9	11,304.6	11,379.3	11,430.5	11,537.7	11,618.1	11,702.1	11,758.0	11,853.0
Annualized % Change	3.9	5.1	3.7	3.0	2.8	2.7	1.8	3.8	2.8	2.9	1.9	3.3
% Change from Prior Year's Quarter	3.2	3.6	4.0	3.9	3.6	3.0	2.6	2.8	2.8	2.8	2.9	2.7
U.S. Personal Income, Billions \$, SAAR	14,924.8	15,148.7	15,301.0	15,516.1	15,625.5	15,769.2	15,751.0	15,910.1	16,028.0	16,025.7	16,245.2	16,364.4
Annualized % Change	5.9	6.1	4.1	5.7	2.9	3.7	(0.5)	4.1	3.0	(0.1)	5.6	3.0
% Change from Prior Year's Quarter	5.6	6.4	5.6	5.5	4.7	4.1	2.9	2.5	2.6	1.6	3.1	2.9
Virginia Personal Income, Millions \$, SAAR	419,401.7	424,777.9	428,797.7	436,258.5	439,380.3	442,184.4	440,794.8	444,533.0	447,824.5	448,694.3	455,190.4	458,365.7
Annualized % Change	4.3	5.2	3.8	7.1	2.9	2.6	(1.3)	3.4	3.0	0.8	5.9	2.8
% Change from Prior Year's Quarter	4.6	5.3	4.7	5.1	4.8	4.1	2.8	1.9	1.9	1.5	3.3	3.1
Virginia Wages and Salaries, Millions \$, SAAR	215,955.4	218,994.7	220,855.6	224,667.9	226,645.9	229,825.5	227,239.4	230,486.4	233,165.8	232,614.2	235,476.1	237,523.9
Annualized % Change	2.1	5.7	3.4	7.1	3.6	5.7	(4.4)	5.8	4.7	(0.9)	5.0	3.5
% Change from Prior Year's Quarter	2.6	3.6	3.2	4.6	5.0	4.9	2.9	2.6	2.9	1.2	3.6	3.1
Virginia Dividends, Interest, and Rent, Millions \$, SAAR	85,865.6	86,788.8	87,294.4	88,980.1	89,396.2	88,852.0	89,502.1	89,797.6	90,050.4	90,876.7	92,048.9	92,611.6
Annualized % Change	8.3	4.4	2.4	8.0	1.9	(2.4)	3.0	1.3	1.1	3.7	5.3	2.5
% Change from Prior Year's Quarter	8.9	9.1	6.9	5.7	4.1	2.4	2.5	0.9	0.7	2.3	2.8	3.1
Virginia Total Proprietor's Income, Millions \$, SAAR	24,402.6	24,689.4	24,019.6	24,232.5	24,397.1	24,553.8	23,671.0	23,976.6	24,229.7	24,488.0	25,199.1	25,213.1
Annualized % Change	2.0	4.8	(10.4)	3.6	2.7	2.6	(13.6)	5.3	4.3	4.3	12.1	0.2
% Change from Prior Year's Quarter	3.1	4.3	0.5	(0.2)	(0.0)	(0.5)	(1.5)	(1.1)	(0.7)	(0.3)	6.5	5.2

SAAR: Seasonally Adjusted at Annual Rates

SA: Seasonally Adjusted

TABLE A.1 - QUARTERLY NATIONAL AND VIRGINIA ECONOMIC VARIABLES

	2014.3	2014.4	2015.1	2015.2	2015.3	2015.4	2016.1	2016.2	2016.3	2016.4	2017.1	2017.2
	History											
Total U.S. Employment, Millions, SA	139.3	140.1	140.8	141.5	142.1	142.8	143.4	144.0	144.7	145.2	145.7	146.2
Annualized % Change	2.1	2.3	2.0	2.0	1.8	2.0	1.7	1.4	2.0	1.4	1.5	1.3
% Change from Prior Year's Quarter	2.0	2.1	2.2	2.1	2.0	2.0	1.9	1.7	1.8	1.6	1.6	1.6
Virginia Total Nonag. Employment, Thousands, SA	3,788.5	3,795.2	3,816.0	3,843.6	3,875.6	3,899.6	3,904.5	3,912.4	3,918.8	3,928.4	3,962.1	3,964.7
Annualized % Change	0.5	0.7	2.2	2.9	3.4	2.5	0.5	0.8	0.7	1.0	3.5	0.3
% Change from Prior Year's Quarter	0.7	0.8	1.4	1.6	2.3	2.8	2.3	1.8	1.1	0.7	1.5	1.3
CPI, All Urban, 1982-1984=1.0, SA	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
Annualized % Change	1.0	(0.7)	(2.5)	2.4	1.5	0.4	0.1	2.3	1.8	3.0	3.1	(0.3)
% Change from Prior Year's Quarter	1.8	1.2	(0.1)	0.0	0.1	0.4	1.1	1.1	1.1	1.8	2.6	1.9
Refiner's Acquisition Cost of Oil, \$ per Barrel	96.4	73.8	48.0	57.4	47.6	40.6	30.8	42.2	42.9	46.5	50.0	47.7
Quarterly Change	(4.7)	(22.6)	(25.8)	9.5	(9.8)	(7.0)	(9.8)	11.4	0.7	3.6	3.4	(2.3)
Change from Prior Year's Quarter	(8.9)	(22.2)	(49.7)	(43.7)	(48.8)	(33.2)	(17.2)	(15.2)	(4.7)	5.9	19.2	5.5
Before-Tax Corporate Profits, Billions \$, SAAR	2,284.8	2,292.5	2,201.2	2,260.8	2,171.7	2,000.5	2,075.6	2,123.6	2,179.6	2,256.8	2,276.8	2,254.3
Annualized % Change	3.8	1.4	(15.0)	11.3	(14.9)	(28.0)	15.9	9.6	11.0	14.9	3.6	(3.9)
% Change from Prior Year's Quarter	5.8	3.5	2.1	(0.1)	(5.0)	(12.7)	(5.7)	(6.1)	0.4	12.8	9.7	6.2
S&P 500 Stock Market Index, Level	1,976.0	2,012.0	2,063.5	2,102.0	2,026.1	2,053.2	1,948.3	2,075.0	2,161.4	2,184.9	2,323.9	2,396.2
Annualized % Change	16.9	7.5	10.6	7.7	(13.7)	5.4	(18.9)	28.7	17.7	4.4	28.0	13.0
% Change from Prior Year's Quarter	17.9	13.6	12.5	10.6	2.5	2.0	(5.6)	(1.3)	6.7	6.4	19.3	15.5
30-Year Treasury Bonds, Level	3.3	3.0	2.5	2.9	3.0	3.0	2.7	2.6	2.3	2.8	3.0	2.9
Quarterly Change	(0.2)	(0.3)	(0.4)	0.3	0.1	0.0	(0.2)	(0.2)	(0.3)	0.5	0.2	(0.1)
Change from Prior Year's Quarter	(0.5)	(0.8)	(1.1)	(0.6)	(0.3)	(0.0)	0.2	(0.3)	(0.7)	(0.1)	0.3	0.3

SAAR: Seasonally Adjusted at Annual Rates

SA: Seasonally Adjusted

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

	October Standard Forecast											
	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	17,130.8	17,252.5	17,344.7	17,429.9	17,525.0	17,637.7	17,731.5	17,828.6	17,925.1	18,019.9	18,113.5	18,208.1
Annualized % Change	2.4	2.9	2.2	2.0	2.2	2.6	2.1	2.2	2.2	2.1	2.1	2.1
% Change from Prior Year's Quarter	2.1	2.4	2.6	2.3	2.3	2.2	2.2	2.3	2.3	2.2	2.2	2.1
Real Consumer Spending, Billions \$, SAAR	11,910.2	11,997.3	12,069.2	12,139.2	12,209.0	12,282.6	12,350.5	12,423.2	12,496.3	12,570.7	12,643.9	12,717.3
Annualized % Change	1.9	3.0	2.4	2.3	2.3	2.4	2.2	2.4	2.4	2.4	2.4	2.3
% Change from Prior Year's Quarter	2.5	2.5	2.6	2.4	2.5	2.4	2.3	2.3	2.4	2.3	2.4	2.4
U.S. Personal Income, Billions \$, SAAR	16,471.4	16,618.1	16,820.5	16,985.5	17,165.5	17,369.1	17,592.0	17,795.2	18,010.6	18,232.7	18,484.6	18,703.0
Annualized % Change	2.6	3.6	5.0	4.0	4.3	4.8	5.2	4.7	4.9	5.0	5.6	4.8
% Change from Prior Year's Quarter	2.8	3.7	3.5	3.8	4.2	4.5	4.6	4.8	4.9	5.0	5.1	5.1
Virginia Personal Income, Millions \$, SAAR	464,345.2	464,230.7	468,595.3	472,380.4	478,834.7	484,868.9	490,712.2	495,664.9	501,196.6	506,508.7	512,837.9	518,283.5
Annualized % Change	5.3	(0.1)	3.8	3.3	5.6	5.1	4.9	4.1	4.5	4.3	5.1	4.3
% Change from Prior Year's Quarter	3.7	3.5	2.9	3.1	3.1	4.4	4.7	4.9	4.7	4.5	4.5	4.6
Virginia Wages and Salaries, Millions \$, SAAR	242,584.8	241,375.5	243,470.3	245,306.4	249,411.7	252,745.3	255,528.1	257,873.7	260,250.6	262,652.4	265,402.8	267,464.5
Annualized % Change	8.8	(2.0)	3.5	3.1	6.9	5.5	4.5	3.7	3.7	3.7	4.3	3.1
% Change from Prior Year's Quarter	4.0	3.8	3.4	3.3	2.8	4.7	5.0	5.1	4.3	3.9	3.9	3.7
Virginia Dividends, Interest, and Rent, Millions \$, SAAR	93,252.8	93,841.2	94,669.4	95,471.7	96,925.2	98,590.7	100,125.6	101,768.2	103,803.0	105,546.6	107,388.3	109,169.0
Annualized % Change	2.8	2.5	3.6	3.4	6.2	7.1	6.4	6.7	8.2	6.9	7.2	6.8
% Change from Prior Year's Quarter	3.6	3.3	2.8	3.1	3.9	5.1	5.8	6.6	7.1	7.1	7.3	7.3
Virginia Total Proprietor's Income, Millions \$, SAAR	25,282.6	25,425.9	25,495.7	25,763.7	25,638.9	25,584.2	25,401.2	25,111.9	24,841.6	24,600.5	24,041.9	24,446.8
Annualized % Change	1.1	2.3	1.1	4.3	(1.9)	(0.9)	(2.8)	(4.5)	(4.2)	(3.8)	(8.8)	6.9
% Change from Prior Year's Quarter	4.3	3.8	1.2	2.2	1.4	0.6	(0.4)	(2.5)	(3.1)	(3.8)	(5.4)	(2.6)

SAAR: Seasonally Adjusted at Annual Rates
SA: Seasonally Adjusted

TABLE A.2 - QUARTERLY NATIONAL AND VIRGINIA ECONOMIC VARIABLES

	October Standard Forecast											
	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	146.6	147.3	147.7	148.1	148.6	149.0	149.4	149.8	150.2	150.5	150.8	151.3
Annualized % Change	1.2	1.8	1.1	1.3	1.1	1.2	1.1	1.1	1.0	0.9	0.8	1.4
% Change from Prior Year's Quarter	1.4	1.4	1.3	1.3	1.3	1.2	1.2	1.1	1.1	1.0	0.9	1.0
Virginia Total Nonag. Employment, Thousands, SA	3,983.7	3,991.7	3,999.4	4,011.3	4,021.1	4,031.8	4,042.7	4,051.5	4,059.1	4,064.3	4,072.5	4,078.3
Annualized % Change	1.9	0.8	0.8	1.2	1.0	1.1	1.1	0.9	0.7	0.5	0.8	0.6
% Change from Prior Year's Quarter	1.7	1.6	0.9	1.2	0.9	1.0	1.1	1.0	0.9	0.8	0.7	0.7
CPI, All Urban, 1982-1984=1.0, SA	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.6	2.6	2.6	2.6
Annualized % Change	2.2	2.2	1.6	1.3	2.3	2.3	2.0	2.5	2.1	3.0	2.9	2.6
% Change from Prior Year's Quarter	2.0	1.8	1.4	1.8	1.8	1.9	2.0	2.3	2.2	2.4	2.6	2.7
Refiner's Acquisition Cost of Oil, \$ per Barrel	45.3	47.0	40.6	43.5	47.4	49.5	48.6	50.9	49.8	53.8	57.0	59.7
Quarterly Change	(2.4)	1.7	(6.3)	2.8	4.0	2.0	(0.8)	2.3	(1.1)	4.0	3.2	2.7
Change from Prior Year's Quarter	2.4	0.4	(9.3)	(4.2)	2.1	2.5	8.0	7.4	2.4	4.3	8.3	8.8
Before-Tax Corporate Profits, Billions \$, SAAR	2,313.7	2,398.4	2,403.1	2,452.0	2,508.6	2,558.0	2,598.7	2,602.7	2,585.7	2,617.5	2,603.8	2,612.5
Annualized % Change	11.0	15.5	0.8	8.4	9.6	8.1	6.5	0.6	(2.6)	5.0	(2.1)	1.3
% Change from Prior Year's Quarter	6.2	6.3	5.5	8.8	8.4	6.7	8.1	6.1	3.1	2.3	0.2	0.4
S&P 500 Stock Market Index, Level	2,467.7	2,507.8	2,533.8	2,554.2	2,575.1	2,596.1	2,617.4	2,638.8	2,667.8	2,697.2	2,724.3	2,750.3
Annualized % Change	12.5	6.7	4.2	3.3	3.3	3.3	3.3	3.3	4.5	4.5	4.1	3.9
% Change from Prior Year's Quarter	14.2	14.8	9.0	6.6	4.4	3.5	3.3	3.3	3.6	3.9	4.1	4.2
30-Year Treasury Bonds, Level	2.8	3.1	3.4	3.7	3.8	3.9	4.1	4.3	4.5	4.6	4.6	4.6
Quarterly Change	(0.1)	0.3	0.3	0.2	0.2	0.1	0.2	0.2	0.2	0.0	0.0	(0.0)
Change from Prior Year's Quarter	0.5	0.3	0.4	0.8	1.0	0.8	0.6	0.6	0.7	0.6	0.5	0.3

SAAR: Seasonally Adjusted at Annual Rates

SA: Seasonally Adjusted

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

Pessimistic Alternative Scenario

	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	17,130.8	17,178.4	17,205.7	17,224.0	17,185.4	17,117.7	17,177.0	17,290.3	17,412.9	17,545.1	17,682.2	17,814.1
Annualized % Change	2.4	1.1	0.6	0.4	(0.9)	(1.6)	1.4	2.7	2.9	3.1	3.2	3.0
% Change from Prior Year's Quarter	2.1	1.9	1.8	1.1	0.3	(0.4)	(0.2)	0.4	1.3	2.5	2.9	3.0
Real Consumer Spending,												
Billions \$, SAAR	11,910.2	11,967.5	12,011.0	12,060.2	12,061.4	12,040.5	12,077.7	12,137.3	12,205.2	12,281.0	12,355.1	12,431.0
Annualized % Change	1.9	1.9	1.5	1.6	0.0	(0.7)	1.2	2.0	2.3	2.5	2.4	2.5
% Change from Prior Year's Quarter	2.5	2.3	2.2	1.7	1.3	0.6	0.6	0.6	1.2	2.0	2.3	2.4
U.S. Personal Income,												
Billions \$, SAAR	16,471.4	16,598.8	16,764.6	16,883.6	16,986.6	17,075.3	17,201.8	17,344.9	17,531.0	17,749.8	18,019.7	18,273.9
Annualized % Change	2.6	3.1	4.1	2.9	2.5	2.1	3.0	3.4	4.4	5.1	6.2	5.8
% Change from Prior Year's Quarter	2.8	3.6	3.2	3.2	3.1	2.9	2.6	2.7	3.2	4.0	4.8	5.4
Virginia Personal Income,												
Millions \$, SAAR	464,345.3	463,734.4	467,351.2	470,146.0	474,809.6	478,140.8	482,029.9	485,737.2	490,455.7	495,497.9	502,149.8	508,247.5
Annualized % Change	5.3	(0.5)	3.2	2.4	4.0	2.8	3.3	3.1	3.9	4.2	5.5	4.9
% Change from Prior Year's Quarter	3.7	3.4	2.7	2.6	2.3	3.1	3.1	3.3	3.3	3.6	4.2	4.6
Virginia Wages and Salaries,												
Millions \$, SAAR	242,584.8	240,964.3	242,620.8	243,847.7	246,861.3	248,615.5	250,496.3	252,260.3	254,124.9	256,281.7	259,107.8	261,289.3
Annualized % Change	8.8	(2.6)	2.8	2.0	5.0	2.9	3.1	2.8	3.0	3.4	4.5	3.4
% Change from Prior Year's Quarter	4.0	3.6	3.0	2.7	1.8	3.2	3.2	3.4	2.9	3.1	3.4	3.6
Virginia Dividends, Interest, and Rent,												
Millions \$, SAAR	93,252.8	93,834.0	94,363.9	94,785.7	95,577.6	96,099.4	96,194.3	96,820.8	98,310.5	99,981.2	102,146.6	104,621.6
Annualized % Change	2.8	2.5	2.3	1.8	3.4	2.2	0.4	2.6	6.3	7.0	8.9	10.0
% Change from Prior Year's Quarter	3.6	3.3	2.5	2.3	2.5	2.4	1.9	2.1	2.9	4.0	6.2	8.1
Virginia Total Proprietor's Income,												
Millions \$, SAAR	25,282.6	25,107.9	24,947.8	24,959.7	24,338.3	23,776.5	23,798.6	23,864.7	23,942.1	24,064.9	23,833.5	24,397.0
Annualized % Change	1.1	(2.7)	(2.5)	0.2	(9.6)	(8.9)	0.4	1.1	1.3	2.1	(3.8)	9.8
% Change from Prior Year's Quarter	4.3	2.5	(1.0)	(1.0)	(3.7)	(5.3)	(4.6)	(4.4)	(1.6)	1.2	0.1	2.2

SAAR: Seasonally Adjusted at Annual Rates

SA: Seasonally Adjusted

TABLE A.2 - QUARTERLY NATIONAL AND VIRGINIA ECONOMIC VARIABLES

	Pessimistic Alternative Scenario											
	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	146.6	147.0	147.1	147.2	147.0	146.6	146.4	146.5	146.7	147.0	147.4	148.1
Annualized % Change	1.2	1.1	0.3	0.3	(0.5)	(1.3)	(0.4)	0.2	0.5	0.8	1.2	1.8
% Change from Prior Year's Quarter	1.4	1.3	1.0	0.7	0.3	(0.3)	(0.5)	(0.5)	(0.2)	0.3	0.7	1.1
Virginia Total Nonag. Employment, Thousands, SA	3,983.7	3,984.7	3,984.4	3,986.0	3,978.1	3,963.9	3,960.9	3,961.6	3,964.6	3,970.3	3,983.3	3,993.1
Annualized % Change	1.9	0.1	(0.0)	0.2	(0.8)	(1.4)	(0.3)	0.1	0.3	0.6	1.3	1.0
% Change from Prior Year's Quarter	1.7	1.4	0.6	0.5	(0.1)	(0.5)	(0.6)	(0.6)	(0.3)	0.2	0.6	0.8
CPI, All Urban, 1982-1984=1.0, SA	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.6	2.6	2.6
Annualized % Change	2.2	2.2	1.6	1.3	2.2	2.2	1.8	2.3	1.9	2.9	2.8	2.6
% Change from Prior Year's Quarter	2.0	1.8	1.4	1.8	1.8	1.8	1.9	2.1	2.1	2.2	2.5	2.6
Refiner's Acquisition Cost of Oil, \$ per Barrel	45.3	47.0	40.6	43.4	47.4	49.4	48.4	50.6	49.4	53.2	56.2	58.8
Quarterly Change	(2.4)	1.7	(6.3)	2.8	4.0	2.0	(0.9)	2.1	(1.2)	3.8	3.0	2.6
Change from Prior Year's Quarter	2.4	0.4	(9.3)	(4.2)	2.1	2.4	7.8	7.1	2.0	3.8	7.7	8.2
Before-Tax Corporate Profits, Billions \$, SAAR	2,313.7	2,336.3	2,295.8	2,296.3	2,297.8	2,274.3	2,399.4	2,518.6	2,625.6	2,742.2	2,773.5	2,801.6
Annualized % Change	11.0	4.0	(6.8)	0.1	0.3	(4.0)	23.9	21.4	18.1	19.0	4.7	4.1
% Change from Prior Year's Quarter	6.2	3.5	0.8	1.9	(0.7)	(2.7)	4.5	9.7	14.3	20.6	15.6	11.2
S&P 500 Stock Market Index, Level	2,467.7	2,360.7	2,360.0	2,334.2	2,234.1	2,136.9	2,095.5	2,278.2	2,416.1	2,537.2	2,601.7	2,647.4
Annualized % Change	12.5	(16.2)	(0.1)	(4.3)	(16.1)	(16.3)	(7.5)	39.7	26.5	21.6	10.6	7.2
% Change from Prior Year's Quarter	14.2	8.0	1.6	(2.6)	(9.5)	(9.5)	(11.2)	(2.4)	8.1	18.7	24.2	16.2
30-Year Treasury Bonds, Level	2.8	3.3	3.8	4.2	4.3	4.3	4.1	3.8	3.6	3.7	3.8	4.0
Quarterly Change	(0.1)	0.4	0.5	0.4	0.1	0.0	(0.2)	(0.2)	(0.2)	0.1	0.2	0.2
Change from Prior Year's Quarter	0.5	0.4	0.7	1.3	1.5	1.0	0.3	(0.4)	(0.7)	(0.6)	(0.2)	0.1

SAAR: Seasonally Adjusted at Annual Rates
 SA: Seasonally Adjusted

TABLE A.3 - ANNUAL NATIONAL AND VIRGINIA ECONOMIC VARIABLES

	History											
	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Real Gross Domestic Product, Billions \$, SAAR	11,525.9 4.4	12,065.9 4.7	12,559.7 4.1	12,682.3 1.0	12,908.8 1.8	13,271.1 2.8	13,773.5 3.8	14,234.3 3.3	14,613.8 2.7	14,873.8 1.8	14,830.4 (0.3)	14,418.8 (2.8)
Fiscal Year % Change	11,271.6 4.4	11,794.6 4.6	12,347.0 4.7	12,660.2 2.5	12,772.7 0.9	13,025.8 2.0	13,553.5 4.1	14,013.3 3.4	14,450.2 3.1	14,721.1 1.9	14,945.8 1.5	14,549.8 (2.6)
Real Consumer Spending, Billions \$, SAAR	7,384.7 5.3	7,775.9 5.3	8,170.7 5.1	8,382.6 2.6	8,598.8 2.6	8,867.6 3.1	9,208.2 3.8	9,531.8 3.5	9,821.7 3.0	10,041.6 2.2	10,007.2 (0.3)	9,847.0 (1.6)
Fiscal Year % Change	7,187.7 4.7	7,583.6 5.5	7,985.1 5.3	8,289.0 3.8	8,490.8 2.4	8,706.1 2.5	9,050.0 4.0	9,375.4 3.6	9,679.2 3.2	9,947.9 2.8	10,072.5 1.3	9,886.8 (1.8)
U.S. Personal Income, Billions \$, SAAR	7,593.7 7.2	7,988.4 5.2	8,637.1 8.1	8,991.6 4.1	9,153.9 1.8	9,491.1 3.7	10,052.9 5.9	10,614.1 5.6	11,394.0 7.3	12,000.2 5.3	12,502.2 4.2	12,094.8 (3.3)
Fiscal Year % Change	7,337.8 6.9	7,788.2 6.1	8,307.0 6.7	8,871.7 6.8	9,051.2 2.0	9,285.6 2.6	9,754.6 5.1	10,327.6 5.9	11,029.8 6.8	11,701.1 6.1	12,329.8 5.4	12,275.3 (0.4)
Virginia Personal Income, Millions \$, SAAR	200,056.1 7.1	214,416.6 7.2	232,452.9 8.4	245,204.7 5.5	250,408.3 2.1	265,269.5 5.9	284,567.2 7.3	305,505.0 7.4	327,318.4 7.1	345,335.5 5.5	358,043.5 3.7	350,577.7 (2.1)
Fiscal Year % Change	192,924.9 6.6	207,427.6 7.5	222,894.5 7.5	240,748.6 8.0	247,070.0 2.6	256,418.1 3.8	274,944.3 7.2	294,808.5 7.2	317,553.9 7.7	336,224.6 5.9	353,069.7 5.0	354,225.5 0.3
Virginia Wages and Salaries, Millions \$, SAAR	112,115.3 8.0	120,992.0 7.9	132,384.5 9.4	138,736.6 4.8	140,596.7 1.3	147,600.8 5.0	158,793.2 7.6	169,119.0 6.5	178,959.9 5.8	188,704.1 5.4	193,674.0 2.6	191,642.8 (1.0)
Fiscal Year % Change	107,560.1 7.5	117,062.7 8.8	126,298.8 7.9	137,029.1 8.5	138,927.5 1.4	143,048.7 3.0	153,069.0 7.0	164,251.0 7.3	174,765.4 6.4	183,998.6 5.3	191,228.6 3.9	192,613.1 0.7
Virginia Dividends, Interest, and Rent, Millions \$, SAAR	42,859.6 5.2	43,690.1 1.9	47,512.0 8.7	48,580.4 2.2	48,976.3 0.8	51,774.7 5.7	53,359.9 3.1	57,824.5 8.4	65,249.6 12.8	71,330.1 9.3	72,359.7 1.4	65,672.1 (9.2)
Fiscal Year % Change	41,837.3 5.4	43,105.0 3.0	45,520.1 5.6	48,492.8 6.5	48,650.8 0.3	50,154.4 3.1	52,588.4 4.9	55,142.8 4.9	61,505.5 11.5	68,377.9 11.2	72,703.9 6.3	69,681.1 (4.2)
Virginia Total Proprietor's Income, Millions \$, SAAR	12,094.5 18.3	13,556.9 12.1	16,121.3 18.9	18,252.9 13.2	18,738.2 2.7	19,393.4 3.5	21,622.8 11.5	22,705.4 5.0	24,024.8 5.8	21,522.9 (10.4)	21,032.6 (2.3)	17,344.4 (17.5)
Fiscal Year % Change	11,072.7 13.0	12,846.3 16.0	14,757.2 14.9	17,261.9 17.0	18,594.5 7.7	18,933.8 1.8	20,544.1 8.5	22,006.9 7.1	23,830.4 8.3	22,711.0 (4.7)	21,232.5 (6.5)	19,013.3 (10.5)

SAAR: Seasonally Adjusted at Annual Rates
SA: Seasonally Adjusted

TABLE A.3 - ANNUAL NATIONAL AND VIRGINIA ECONOMIC VARIABLES

	History										October Standard Forecast		
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020		
Real Gross Domestic Product, Billions \$, SAAR	14,783.8 2.5	15,020.6 1.6	15,354.6 2.2	15,612.2 1.7	16,013.3 2.6	16,471.5 2.9	16,716.2 1.5	17,079.4 2.2	17,484.3 2.4	17,876.3 2.2	18,260.9 2.2		
Fiscal Year % Change	14,573.8 0.2	14,913.9 2.3	15,216.2 2.0	15,444.7 1.5	15,782.2 2.2	16,292.7 3.2	16,577.6 1.7	16,891.0 1.9	17,289.5 2.4	17,680.7 2.3	18,066.7 2.2		
Real Consumer Spending, Billions \$, SAAR	10,036.3 1.9	10,263.5 2.3	10,413.2 1.5	10,565.4 1.5	10,868.4 2.9	11,264.3 3.6	11,572.1 2.7	11,879.6 2.7	12,175.0 2.5	12,460.2 2.3	12,757.1 2.4		
Fiscal Year % Change	9,911.7 0.3	10,171.0 2.6	10,343.7 1.7	10,475.9 1.3	10,688.5 2.0	11,082.1 3.7	11,413.0 3.0	11,732.8 2.8	12,029.0 2.5	12,316.3 2.4	12,607.0 2.4		
U.S. Personal Income, Billions \$, SAAR	12,477.1 3.2	13,254.5 6.2	13,915.1 5.0	14,073.7 1.1	14,818.2 5.3	15,553.0 5.0	15,928.7 2.4	16,424.8 3.1	17,085.1 4.0	17,907.6 4.8	18,810.0 5.0		
Fiscal Year % Change	12,212.0 (0.5)	12,883.2 5.5	13,555.6 5.2	14,026.4 3.5	14,393.2 2.6	15,222.7 5.8	15,764.0 3.6	16,165.8 2.5	16,723.9 3.5	17,480.4 4.5	18,357.7 5.0		
Virginia Personal Income, Millions \$, SAAR	363,889.0 3.8	385,615.4 6.0	403,880.4 4.7	400,660.4 (0.8)	417,173.3 4.1	436,655.2 4.7	445,461.7 2.0	460,533.0 3.4	476,169.8 3.4	498,520.6 4.7	521,204.6 4.6		
Fiscal Year % Change	355,404.7 0.3	374,732.0 5.4	394,481.9 5.3	403,852.3 2.4	407,189.8 0.8	427,309.0 4.9	441,723.1 3.4	452,518.7 2.4	467,387.9 3.3	487,520.2 4.3	509,706.7 4.6		
Virginia Wages and Salaries, Millions \$, SAAR	196,650.3 2.6	202,354.2 2.9	208,327.0 3.0	210,531.1 1.1	215,927.2 2.6	225,498.7 4.4	230,876.4 2.4	239,240.1 3.6	247,733.4 3.6	259,076.2 4.6	269,076.8 3.9		
Fiscal Year % Change	193,431.8 0.4	200,032.3 3.4	205,034.2 2.5	210,148.4 2.5	212,671.3 1.2	220,118.4 3.5	228,549.3 3.8	234,695.0 2.7	243,184.2 3.6	253,899.7 4.4	263,942.6 4.0		
Virginia Dividends, Interest, and Rent, Millions \$, SAAR	65,596.8 (0.1)	72,666.3 10.8	80,982.7 11.4	78,744.3 (2.8)	84,614.5 7.5	88,630.7 4.7	90,056.7 1.6	92,938.6 3.2	96,414.3 3.7	102,810.9 6.6	109,889.0 6.9		
Fiscal Year % Change	64,210.7 (7.9)	68,881.8 7.3	76,691.6 11.3	80,598.4 5.1	81,037.3 0.5	87,232.2 7.6	89,387.0 2.5	91,396.9 2.2	94,308.8 3.2	99,352.4 5.3	106,476.8 7.2		
Virginia Total Proprietor's Income, Millions \$, SAAR	20,427.9 17.8	22,671.8 11.0	25,998.0 14.7	23,686.7 (8.9)	24,318.3 2.7	24,300.7 (0.1)	24,091.3 (0.9)	25,280.2 4.9	25,620.6 1.3	24,988.8 (2.5)	24,385.7 (2.4)		
Fiscal Year % Change	18,936.2 (0.4)	21,249.5 12.2	24,513.7 15.4	25,044.4 2.2	23,878.0 (4.7)	24,336.0 1.9	24,149.6 (0.8)	24,782.5 2.6	25,492.0 2.9	25,434.0 (0.2)	24,482.7 (3.7)		

SAAR: Seasonally Adjusted at Annual Rates
SA: Seasonally Adjusted

TABLE A.3 - ANNUAL NATIONAL AND VIRGINIA ECONOMIC VARIABLES

	Pessimistic Alternative Scenario			
	2017	2018	2019	2020
Real Gross Domestic Product, Billions \$, SAAR	17,060.9	17,183.2	17,356.3	17,865.4
Calendar Year	2.1	0.7	1.0	2.9
% Change	16,891.0	17,184.7	17,192.6	17,613.6
Fiscal Year	1.9	1.7	0.0	2.4
% Change				
Real Consumer Spending, Billions \$, SAAR	11,872.2	12,043.3	12,175.3	12,469.4
Calendar Year	2.6	1.4	1.1	2.4
% Change	11,732.8	11,987.2	12,079.2	12,318.1
Fiscal Year	2.8	2.2	0.8	2.0
% Change				
U.S. Personal Income, Billions \$, SAAR	16,420.0	16,927.5	17,456.9	18,395.9
Calendar Year	3.1	3.1	3.1	5.4
% Change	16,165.8	16,679.6	17,152.1	17,893.6
Fiscal Year	2.5	3.2	2.8	4.3
% Change				
Virginia Personal Income, Millions \$, SAAR	460,408.9	472,611.9	488,430.2	511,425.0
Calendar Year	3.4	2.7	3.3	4.7
% Change	452,518.7	466,394.2	480,179.4	499,087.7
Fiscal Year	2.4	3.1	3.0	3.9
% Change				
Virginia Wages and Salaries, Millions \$, SAAR	239,137.3	245,486.3	253,290.8	262,975.7
Calendar Year	3.6	2.7	3.2	3.8
% Change	234,695.0	242,504.4	249,558.4	257,700.9
Fiscal Year	2.7	3.3	2.9	3.3
% Change				
Virginia Dividends, Interest, and Rent, Millions \$, SAAR	92,936.8	95,206.7	97,826.7	105,741.0
Calendar Year	3.2	2.4	2.8	8.1
% Change	91,396.9	94,059.1	96,173.0	101,265.0
Fiscal Year	2.2	2.9	2.2	5.3
% Change				
Virginia Total Proprietor's Income, Millions \$, SAAR	25,200.7	24,505.6	23,917.6	24,287.6
Calendar Year	4.6	(2.8)	(2.4)	1.5
% Change	24,782.5	25,074.5	23,944.5	24,059.4
Fiscal Year	2.6	1.2	(4.5)	0.5
% Change				

SAAR: Seasonally Adjusted at Annual Rates

SA: Seasonally Adjusted

TABLE A.3 - ANNUAL NATIONAL AND VIRGINIA ECONOMIC VARIABLES

	History											
	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Total U.S. Employment, Millions, SA	126.1	129.2	132.0	132.1	130.6	130.3	131.8	134.0	136.5	138.0	137.2	131.3
% Change	2.6	2.5	2.2	0.0	(1.1)	(0.2)	1.1	1.7	1.8	1.1	(0.5)	(4.3)
Fiscal Year	124.6	127.7	130.8	132.5	131.2	130.4	130.8	132.8	135.4	137.4	138.2	134.4
% Change	2.7	2.5	2.5	1.3	(1.0)	(0.5)	0.3	1.5	1.9	1.5	0.6	(2.7)
Virginia Total Nonag. Employment, Thousands, SA	3,322.4	3,415.2	3,519.4	3,522.2	3,499.3	3,501.8	3,587.4	3,667.0	3,732.2	3,769.4	3,772.5	3,650.5
% Change	2.7	2.8	3.1	0.1	(0.6)	0.1	2.4	2.2	1.8	1.0	0.1	(3.2)
Fiscal Year	3,273.6	3,372.6	3,466.2	3,538.0	3,504.5	3,494.8	3,539.1	3,628.9	3,706.3	3,752.4	3,778.6	3,716.1
% Change	2.6	3.0	2.8	2.1	(0.9)	(0.3)	1.3	2.5	2.1	1.2	0.7	(1.7)
CPI, All Urban, 1982-1984=1.0, SA	1.6	1.7	1.7	1.8	1.8	1.8	1.9	2.0	2.0	2.1	2.2	2.1
% Change	1.5	2.2	3.4	2.8	1.6	2.3	2.7	3.4	3.2	2.9	3.8	(0.3)
Fiscal Year	1.6	1.6	1.7	1.8	1.8	1.8	1.9	1.9	2.0	2.0	2.1	2.1
% Change	1.8	1.7	2.9	3.4	1.8	2.2	2.2	3.0	3.8	2.6	3.7	1.4
Refiner's Acquisition Cost of Oil, \$ per Barrel	12.5	17.4	28.2	23.0	24.0	28.6	36.9	50.3	60.1	68.0	94.3	59.2
Change	(6.5)	4.9	10.8	(5.3)	1.1	4.6	8.3	13.4	9.8	7.9	26.3	(35.1)
Fiscal Year	15.7	12.6	24.2	27.2	21.4	27.6	30.8	42.6	58.1	59.1	90.9	66.5
Change	(5.2)	(3.2)	11.7	3.0	(5.8)	6.2	3.2	11.8	15.5	1.0	31.8	(24.4)
Before-Tax Corporate Profits, Billions \$, SAAR	728.1	766.2	747.1	690.7	788.9	969.5	1,254.6	1,653.3	1,851.4	1,748.4	1,382.5	1,472.6
% Change	(8.6)	5.2	(2.5)	(7.6)	14.2	22.9	29.4	31.8	12.0	(5.6)	(20.9)	6.5
Fiscal Year	775.7	738.8	771.8	727.8	685.6	890.0	1,113.7	1,448.5	1,775.3	1,820.0	1,642.9	1,254.4
% Change	2.0	(4.8)	4.5	(5.7)	(5.8)	29.8	25.1	30.1	22.6	2.5	(9.7)	(23.6)
S&P 500 Stock Market Index, Level	1,084.3	1,326.1	1,426.8	1,192.1	995.6	963.7	1,130.6	1,207.1	1,310.7	1,476.7	1,220.9	946.7
% Change	24.2	22.3	7.6	(16.4)	(16.5)	(3.2)	17.3	6.8	8.6	12.7	(17.3)	(22.5)
Fiscal Year	1,003.0	1,198.8	1,395.4	1,337.4	1,114.9	895.1	1,078.3	1,160.0	1,254.9	1,399.9	1,426.7	965.8
% Change	33.8	19.5	16.4	(4.2)	(16.6)	(19.7)	20.5	7.6	8.2	11.6	1.9	(32.3)
30-Year Treasury Bonds, Level	5.6	5.9	5.9	5.5	5.4	5.1	5.1	4.6	4.9	4.8	4.3	4.1
Change	(1.0)	0.3	0.1	(0.4)	(0.1)	(0.4)	0.1	(0.6)	0.3	(0.0)	(0.6)	(0.2)
Fiscal Year	6.1	5.4	6.1	5.7	5.5	5.0	5.2	4.8	4.7	4.9	4.6	3.9
Change	(0.7)	(0.7)	0.7	(0.5)	(0.1)	(0.5)	0.2	(0.4)	(0.1)	0.2	(0.2)	(0.7)

SAAR: Seasonally Adjusted at Annual Rates
SA: Seasonally Adjusted

TABLE A.3 - ANNUAL NATIONAL AND VIRGINIA ECONOMIC VARIABLES

	History										October Standard Forecast		
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020		
Total U.S. Employment, Millions, SA	130.4 (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	146.5 1.5	148.3 1.3	150.0 1.1	151.3 0.9		
Fiscal Year % Change	130.2 (3.1)	131.0 0.6	133.1 1.6	135.2 1.6	137.6 1.7	140.4 2.1	143.1 1.9	145.4 1.6	147.4 1.4	149.2 1.2	150.7 1.0		
Virginia Total Nonag. Employment, Thousands, SA	3,646.4 (0.1)	3,692.7 1.3	3,735.7 1.2	3,762.2 0.7	3,783.2 0.6	3,858.7 2.0	3,916.0 1.5	3,975.6 1.5	4,015.9 1.0	4,054.4 1.0	4,083.1 0.7		
Fiscal Year % Change	3,631.3 (2.3)	3,670.4 1.1	3,714.6 1.2	3,753.9 1.1	3,768.8 0.4	3,810.8 1.1	3,898.0 2.3	3,943.5 1.2	3,996.5 1.3	4,036.8 1.0	4,068.6 0.8		
CPI, All Urban, 1982-1984=1.0, SA	2.2	2.2	2.3	2.3	2.4	2.4	2.4	2.4	2.5	2.5	2.6		
Fiscal Year % Change	1.6	3.1	2.1	1.5	1.6	0.1	1.3	2.1	1.7	2.2	2.7		
Fiscal Year % Change	2.2	2.2	2.3	2.3	2.3	2.4	2.4	2.4	2.5	2.5	2.6		
Fiscal Year % Change	1.0	2.0	2.9	1.7	1.6	0.7	0.7	1.9	1.8	2.0	2.5		
Refiner's Acquisition Cost of Oil, \$ per Barrel	76.7	101.8	101.0	100.5	92.2	48.4	40.6	47.5	45.2	50.8	60.5		
Change	17.5	25.1	(0.8)	(0.5)	(8.2)	(43.8)	(7.8)	6.9	(2.2)	5.5	9.7		
Fiscal Year Change	72.7	89.4	103.6	98.8	100.0	68.9	40.3	46.8	44.1	49.1	55.1		
Change	6.2	16.7	14.2	(4.7)	1.2	(31.1)	(28.6)	6.5	(2.7)	5.0	6.0		
Before-Tax Corporate Profits, Billions \$, SAAR	1,840.7	1,806.8	2,130.8	2,156.1	2,249.1	2,158.6	2,158.9	2,310.8	2,480.4	2,601.1	2,635.4		
Change	25.0	(1.8)	17.9	1.2	4.3	(4.0)	0.0	7.0	7.3	4.9	1.3		
Fiscal Year % Change	1,713.3	1,833.4	1,987.0	2,125.0	2,198.0	2,259.8	2,092.9	2,241.9	2,391.8	2,567.0	2,604.9		
Change	36.6	7.0	8.4	6.9	3.4	2.8	(7.4)	7.1	6.7	7.3	1.5		
S&P 500 Stock Market Index, Level	1,139.3	1,268.9	1,379.6	1,642.5	1,930.7	2,061.2	2,092.4	2,423.9	2,564.8	2,655.3	2,764.5		
Change	20.3	11.4	8.7	19.1	17.5	6.8	1.5	15.8	5.8	3.5	4.1		
Fiscal Year % Change	1,085.6	1,230.5	1,287.9	1,486.2	1,795.1	2,038.4	2,025.7	2,266.6	2,515.9	2,606.8	2,709.9		
Change	12.4	13.4	4.7	15.4	20.8	13.6	(0.6)	11.9	11.0	3.6	4.0		
30-Year Treasury Bonds, Level	4.3	3.9	2.9	3.4	3.3	2.8	2.6	3.0	3.7	4.4	4.6		
Change	0.2	(0.3)	(1.0)	0.5	(0.1)	(0.5)	(0.2)	0.4	0.8	0.6	0.2		
Fiscal Year Change	4.4	4.2	3.2	3.0	3.7	2.9	2.8	2.8	3.3	4.0	4.6		
Change	0.5	(0.2)	(1.0)	(0.2)	0.7	(0.7)	(0.1)	(0.0)	0.5	0.8	0.5		

SAAR: Seasonally Adjusted at Annual Rates
SA: Seasonally Adjusted

TABLE A.3 - ANNUAL NATIONAL AND VIRGINIA ECONOMIC VARIABLES

	Pessimistic Alternative Scenario			
	2017	2018	2019	2020
Total U.S. Employment, Millions, SA	146.4	147.0	146.6	148.1
Calendar Year % Change	1.4	0.4	(0.2)	1.0
Fiscal Year	145.4	147.0	146.6	147.3
% Change	1.6	1.1	(0.3)	0.4
Virginia Total Nonag. Employment, Thousands, SA	3,973.8	3,978.1	3,964.3	3,999.7
Calendar Year % Change	1.5	0.1	(0.3)	0.9
Fiscal Year	3,943.5	3,984.7	3,966.1	3,977.8
% Change	1.2	1.0	(0.5)	0.3
CPI, All Urban, 1982-1984=1.0, SA	2.4	2.5	2.5	2.6
Calendar Year % Change	2.1	1.7	2.1	2.6
Fiscal Year	2.4	2.5	2.5	2.6
% Change	1.9	1.8	1.9	2.3
Refiner's Acquisition Cost of Oil, \$ per Barrel	47.5	45.2	50.4	59.6
Calendar Year Change	6.9	(2.3)	5.2	9.2
Fiscal Year	46.8	44.1	48.9	54.4
Change	6.5	(2.7)	4.9	5.4
Before-Tax Corporate Profits, Billions \$, SAAR	2,295.3	2,291.0	2,571.5	2,809.8
Calendar Year % Change	6.3	(0.2)	12.2	9.3
Fiscal Year	2,241.9	2,310.5	2,372.5	2,735.7
% Change	7.1	3.1	2.7	15.3
S&P 500 Stock Market Index, Level	2,387.1	2,266.3	2,331.7	2,666.5
Calendar Year % Change	14.1	(5.1)	2.9	14.4
Fiscal Year	2,266.6	2,380.7	2,186.2	2,550.6
% Change	11.9	5.0	(8.2)	16.7
30-Year Treasury Bonds, Level	3.0	4.1	3.8	4.0
Calendar Year Change	0.4	1.1	(0.4)	0.2
Fiscal Year	2.8	3.5	4.1	3.8
Change	(0.0)	0.8	0.6	(0.4)

SAAR: Seasonally Adjusted at Annual Rates

SA: Seasonally Adjusted

TABLE A.3 - ANNUAL NATIONAL AND VIRGINIA ECONOMIC VARIABLES

Virginia		History											
		1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Construction and Mining Thousands, SA	Calendar Year	203.7	210.5	221.6	228.4	224.9	227.6	241.1	254.2	260.0	250.7	234.1	200.6
	% Change	1.1	3.3	5.3	3.1	(1.5)	1.2	5.9	5.4	2.3	(3.6)	(6.6)	(14.3)
	Fiscal Year	201.1	208.4	215.2	226.3	226.7	224.1	234.5	247.7	260.0	255.9	243.6	216.9
	% Change	1.8	3.6	3.3	5.2	0.2	(1.1)	4.7	5.6	4.9	(4.8)	(10.9)	
Manufacturing Thousands, SA	Calendar Year	375.6	366.9	363.6	341.3	320.1	305.0	298.7	295.8	288.1	277.8	264.8	239.3
	% Change	0.3	(2.3)	(0.9)	(6.1)	(6.2)	(4.7)	(2.1)	(1.0)	(2.6)	(3.6)	(4.7)	(9.6)
	Fiscal Year	376.0	370.6	366.7	354.6	328.4	313.8	299.3	298.0	292.7	282.9	271.6	252.5
	% Change	1.1	(1.4)	(1.1)	(3.3)	(7.4)	(4.4)	(4.6)	(0.4)	(1.8)	(3.4)	(4.0)	(7.0)
Trade, Transportation, and Utilities Thousands, SA	Calendar Year	618.7	637.0	650.7	644.8	636.5	635.2	646.5	657.2	663.0	668.1	659.2	624.4
	% Change	1.5	3.0	2.2	(0.9)	(1.3)	(0.2)	1.8	1.7	0.9	0.8	(1.3)	(5.3)
	Fiscal Year	612.9	628.6	644.1	650.6	639.4	634.1	641.3	651.6	661.3	665.5	666.3	642.0
	% Change	1.3	2.6	2.5	1.0	(1.7)	(0.8)	1.1	1.6	1.5	0.6	0.1	(3.7)
Financial Activities Thousands, SA	Calendar Year	165.2	173.4	178.9	179.9	182.2	186.5	189.0	192.5	194.8	193.6	188.6	179.9
	% Change	4.1	5.0	3.2	0.6	1.2	2.4	1.4	1.8	1.2	(0.6)	(2.6)	(4.6)
	Fiscal Year	160.9	170.1	175.7	180.3	180.7	184.2	187.6	190.8	194.0	195.1	191.1	184.5
	% Change	3.0	5.7	3.3	2.6	0.2	1.9	1.8	1.7	1.7	0.6	(2.1)	(3.4)
Professional and Business Services Thousands, SA	Calendar Year	507.7	538.5	567.9	559.5	547.0	549.3	578.5	606.0	628.5	646.3	657.0	640.1
	% Change	7.8	6.1	5.5	(1.5)	(2.2)	0.4	5.3	4.8	3.7	2.8	1.7	(2.6)
	Fiscal Year	488.1	524.2	552.7	569.2	552.0	545.2	561.4	593.6	618.6	637.6	653.3	649.8
	% Change	6.0	7.4	5.4	3.0	(3.0)	(1.2)	3.0	5.7	4.2	3.1	2.5	(0.5)
Education and Health Services Thousands, SA	Calendar Year	318.3	328.4	335.1	350.4	366.8	374.3	384.9	396.4	411.1	428.2	447.8	455.9
	% Change	2.5	3.2	2.1	4.6	4.7	2.0	2.8	3.0	3.7	4.2	4.6	1.8
	Fiscal Year	314.7	323.6	331.1	342.4	358.8	371.4	379.3	390.0	403.7	418.7	439.6	452.6
	% Change	3.6	2.8	2.3	3.4	4.8	3.5	2.1	2.8	3.5	3.7	5.0	3.0
Leisure and Hospitality Thousands, SA	Calendar Year	281.8	287.1	297.1	301.2	303.9	308.5	320.1	329.4	338.8	345.3	349.3	341.6
	% Change	1.2	1.9	3.5	1.4	0.9	1.5	3.8	2.9	2.8	1.9	1.2	(2.2)
	Fiscal Year	279.4	284.9	291.9	300.1	301.3	305.9	314.3	325.1	334.4	342.4	348.6	345.0
	% Change	1.5	2.0	2.4	2.8	0.4	1.5	2.8	2.9	2.4	1.8	(1.0)	
Government Thousands, SA	Calendar Year	602.0	611.2	624.6	629.2	634.9	637.5	650.9	661.9	674.8	683.4	695.5	701.7
	% Change	0.9	1.5	2.2	0.7	0.9	0.4	2.1	1.7	2.0	1.3	1.8	0.9
	Fiscal Year	597.8	606.1	618.5	627.6	631.5	636.0	643.6	656.6	668.5	679.6	688.2	700.3
	% Change	0.1	1.4	2.0	1.5	0.6	0.7	1.2	2.0	1.8	1.7	1.3	1.8

SAAR: Seasonally Adjusted at Annual Rates

SA: Seasonally Adjusted

TABLE A.3 - ANNUAL NATIONAL AND VIRGINIA ECONOMIC VARIABLES

Virginia		History										October Standard Forecast			
		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020			
Construction and Mining Thousands, SA	Calendar Year	193.4	189.4	187.5	186.9	187.9	193.7	194.4	200.6	204.2	213.9	220.9			
	% Change	(3.6)	(2.0)	(1.0)	(0.3)	0.5	3.1	0.3	3.2	1.8	4.7	3.3			
	Fiscal Year	194.2	192.1	188.3	187.1	186.8	190.2	194.9	197.7	201.5	208.6	217.9			
	% Change	(10.5)	(1.1)	(1.9)	(0.6)	(0.2)	1.8	2.5	1.5	1.9	3.5	4.4			
Manufacturing Thousands, SA	Calendar Year	230.5	231.0	231.5	230.8	231.8	233.6	232.2	231.5	231.8	235.3	237.8			
	% Change	(3.7)	0.2	0.2	(0.3)	0.4	0.8	(0.6)	(0.3)	0.1	1.5	1.0			
	Fiscal Year	233.1	230.0	231.5	231.2	231.2	232.3	233.4	232.2	230.7	233.7	236.7			
	% Change	(7.7)	(1.3)	0.6	(0.1)	(0.0)	0.5	0.5	(0.5)	(0.7)	1.3	1.3			
Trade, Transportation, and Utilities Thousands, SA	Calendar Year	621.1	628.7	633.5	635.2	641.5	653.5	661.2	663.1	663.5	664.8	662.9			
	% Change	(0.5)	1.2	0.8	0.3	1.0	1.9	1.2	0.3	0.1	0.2	(0.3)			
	Fiscal Year	618.9	625.4	631.3	633.7	638.5	645.7	660.1	661.5	663.6	664.5	663.7			
	% Change	(3.6)	1.1	0.9	0.4	0.8	1.1	2.2	0.2	0.3	0.1	(0.1)			
Financial Activities Thousands, SA	Calendar Year	179.1	182.5	188.3	192.5	194.0	197.7	200.6	205.7	208.1	209.5	210.0			
	% Change	(0.5)	2.0	3.1	2.2	0.8	1.9	1.4	2.6	1.2	0.7	0.3			
	Fiscal Year	178.1	180.6	185.3	190.9	193.2	195.7	199.2	203.4	206.8	209.1	209.6			
	% Change	(3.5)	1.4	2.6	3.0	1.2	1.3	1.8	2.1	1.7	1.1	0.3			
Professional and Business Services Thousands, SA	Calendar Year	650.3	667.5	678.4	681.3	682.1	702.3	715.7	741.5	757.8	778.5	790.0			
	% Change	1.6	2.6	1.6	0.4	0.1	3.0	1.9	3.6	2.2	2.7	1.5			
	Fiscal Year	641.3	660.0	673.3	682.4	679.4	689.4	710.9	729.1	748.0	769.1	784.8			
	% Change	(1.3)	2.9	2.0	1.4	(0.4)	1.5	3.1	2.6	2.6	2.8	2.0			
Education and Health Services Thousands, SA	Calendar Year	463.1	469.7	480.4	491.5	497.7	513.8	529.7	536.8	545.8	548.0	551.9			
	% Change	1.6	1.4	2.3	2.3	1.3	3.2	3.1	1.3	1.7	0.4	0.7			
	Fiscal Year	458.0	467.7	473.6	487.3	494.3	503.7	524.5	532.0	542.5	547.0	549.7			
	% Change	1.2	2.1	1.3	2.9	1.4	1.9	4.1	1.4	2.0	0.8	0.5			
Leisure and Hospitality Thousands, SA	Calendar Year	341.3	349.2	358.9	366.1	371.3	386.0	398.8	407.6	412.4	413.6	416.3			
	% Change	(0.1)	2.3	2.8	2.0	1.4	4.0	3.3	2.2	1.2	0.3	0.7			
	Fiscal Year	339.5	345.5	354.2	362.8	368.7	376.5	394.7	403.0	410.2	413.5	414.5			
	% Change	(1.6)	1.8	2.5	2.4	1.6	2.1	4.9	2.1	1.8	0.8	0.2			
Government Thousands, SA	Calendar Year	707.0	713.2	713.4	712.5	710.5	711.3	714.2	715.7	717.2	717.4	719.9			
	% Change	0.8	0.9	0.0	(0.1)	(0.3)	0.1	0.4	0.2	0.2	0.0	0.3			
	Fiscal Year	705.4	708.2	714.5	713.5	710.3	711.1	712.6	714.7	717.2	717.0	718.6			
	% Change	0.7	0.4	0.9	(0.1)	(0.5)	0.1	0.2	0.3	0.4	(0.0)	0.2			

SAAR: Seasonally Adjusted at Annual Rates

SA: Seasonally Adjusted

TABLE A.3 - ANNUAL NATIONAL AND VIRGINIA ECONOMIC VARIABLES

Virginia		Pessimistic Alternative Scenario			
		2017	2018	2019	2020
Construction and Mining Thousands, SA	Calendar Year	200.5	198.6	194.6	199.4
	% Change	3.1	(0.9)	(2.0)	2.5
	Fiscal Year	197.7	200.2	195.8	195.8
	% Change	1.5	1.2	(2.2)	(0.0)
Manufacturing Thousands, SA	Calendar Year	231.4	229.4	228.0	231.4
	% Change	(0.4)	(0.9)	(0.6)	1.5
	Fiscal Year	232.2	229.8	228.7	229.0
	% Change	(0.5)	(1.0)	(0.5)	0.1
Trade, Transportation, and Utilities Thousands, SA	Calendar Year	662.9	658.7	651.2	648.8
	% Change	0.3	(0.6)	(1.1)	(0.4)
	Fiscal Year	661.5	662.3	654.4	650.0
	% Change	0.2	0.1	(1.2)	(0.7)
Financial Activities Thousands, SA	Calendar Year	205.5	204.1	203.1	206.9
	% Change	2.5	(0.7)	(0.5)	1.9
	Fiscal Year	203.4	205.2	202.9	204.9
	% Change	2.1	0.9	(1.1)	1.0
Professional and Business Services Thousands, SA	Calendar Year	740.3	733.8	738.2	769.4
	% Change	3.4	(0.9)	0.6	4.2
	Fiscal Year	729.1	739.5	730.4	754.0
	% Change	2.6	1.4	(1.2)	3.2
Education and Health Services Thousands, SA	Calendar Year	536.7	548.2	551.6	550.1
	% Change	1.3	2.1	0.6	(0.3)
	Fiscal Year	532.0	543.3	551.3	550.6
	% Change	1.4	2.1	1.5	(0.1)
Leisure and Hospitality Thousands, SA	Calendar Year	407.7	413.7	412.3	409.9
	% Change	2.2	1.5	(0.3)	(0.6)
	Fiscal Year	403.0	411.1	413.8	410.8
	% Change	2.1	2.0	0.7	(0.7)
Government Thousands, SA	Calendar Year	715.7	717.1	716.7	719.2
	% Change	0.2	0.2	(0.1)	0.4
	Fiscal Year	714.7	717.2	716.6	717.7
	% Change	0.3	0.4	(0.1)	0.2

SAAR: Seasonally Adjusted at Annual Rates

SA: Seasonally Adjusted

TABLE A.4 - ANNUAL VIRGINIA REGIONAL EMPLOYMENT

Northern Virginia	History												
	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	
Total Nonagricultural Employment Thousands, SA	Calendar Year	1,033.4	1,090.1	1,159.2	1,176.5	1,165.2	1,180.4	1,233.8	1,278.7	1,309.7	1,325.6	1,328.8	1,305.8
	% Change	4.1	5.5	6.3	1.5	(1.0)	1.3	4.5	3.6	2.4	1.2	0.2	(1.7)
	Fiscal Year	1,011.7	1,059.0	1,125.7	1,176.8	1,169.5	1,166.0	1,207.0	1,256.7	1,298.6	1,318.8	1,329.2	1,316.6
	% Change	3.6	4.7	6.3	4.5	(0.6)	(0.3)	3.5	4.1	3.3	1.6	0.8	(0.9)
Construction and Mining Thousands, SA	Calendar Year	63.1	67.8	74.7	79.9	79.4	79.8	87.1	94.0	96.7	89.0	80.7	70.1
	% Change	4.4	7.6	10.1	7.0	(0.6)	0.4	9.1	8.0	2.8	(7.9)	(9.3)	(13.2)
	Fiscal Year	61.2	65.5	71.2	77.9	79.8	78.4	83.7	90.4	97.1	93.2	84.9	74.9
	% Change	3.5	7.1	8.8	9.3	2.5	(1.8)	6.7	8.1	7.4	(4.1)	(8.8)	(11.8)
Trade, Transportation, and Utilities Thousands, SA	Calendar Year	185.0	193.6	200.0	201.2	200.1	200.6	207.8	213.8	212.2	212.8	210.9	200.7
	% Change	2.7	4.6	3.3	0.6	(0.6)	0.3	3.6	2.9	(0.7)	0.3	(0.9)	(4.8)
	Fiscal Year	182.7	188.9	197.3	201.4	200.2	199.9	203.8	211.8	213.2	212.4	212.8	205.5
	% Change	2.3	3.4	4.4	2.1	(0.6)	(0.2)	2.0	3.9	0.7	(0.4)	0.2	(3.4)
Financial Activities Thousands, SA	Calendar Year	58.9	60.7	62.7	63.3	65.4	66.3	67.4	69.5	70.4	69.4	66.9	64.5
	% Change	5.0	3.0	3.3	1.0	3.4	1.4	1.6	3.1	1.3	(1.4)	(3.6)	(3.6)
	Fiscal Year	57.3	59.9	61.7	63.0	64.2	65.9	66.7	68.4	70.3	70.3	68.0	65.5
	% Change	4.3	4.5	3.0	2.0	2.0	2.6	1.2	2.6	2.8	(0.0)	(3.2)	(3.7)
Professional and Business Services Thousands, SA	Calendar Year	240.9	263.4	286.1	287.2	277.9	284.3	307.5	324.0	338.0	348.7	356.3	356.4
	% Change	8.5	9.4	8.6	0.4	(3.2)	2.3	8.2	5.4	4.3	3.2	2.2	0.0
	Fiscal Year	230.8	251.4	275.1	290.5	281.9	277.9	295.5	316.8	331.6	343.7	353.0	356.5
	% Change	6.2	8.9	9.4	5.6	(2.9)	(1.4)	6.3	7.2	4.7	3.7	2.7	1.0
Education and Health Services Thousands, SA	Calendar Year	85.6	89.7	95.9	101.2	105.2	107.4	110.3	115.6	119.1	122.9	127.3	131.7
	% Change	3.7	4.8	6.9	5.4	3.9	2.1	2.7	4.9	3.0	3.2	3.5	3.5
	Fiscal Year	84.4	87.4	92.7	98.5	103.4	106.7	108.3	113.1	117.3	121.1	125.0	129.3
	% Change	5.5	3.6	6.1	6.3	5.0	3.1	1.5	4.5	3.7	3.3	3.2	3.4
Leisure and Hospitality Thousands, SA	Calendar Year	88.6	91.3	97.1	99.0	101.2	103.8	108.8	111.6	113.2	115.9	118.7	116.0
	% Change	0.9	3.1	6.3	2.0	2.2	2.5	4.8	2.6	1.4	2.4	2.4	(2.3)
	Fiscal Year	88.0	89.9	94.2	98.4	99.8	102.3	106.4	110.6	112.3	114.4	117.9	117.3
	% Change	1.9	2.2	4.8	4.4	1.5	2.5	4.0	1.5	1.5	1.8	3.0	(0.4)
Government Thousands, SA	Calendar Year	168.1	171.5	176.8	180.1	184.6	191.2	198.2	203.5	209.8	215.1	218.9	224.1
	% Change	(0.6)	2.0	3.1	1.9	2.5	3.5	3.7	2.6	3.1	2.5	1.8	2.4
	Fiscal Year	167.7	169.3	174.9	178.1	182.5	187.1	195.2	200.6	207.1	212.5	216.8	221.6
	% Change	(1.6)	0.9	3.3	1.8	2.4	2.5	4.3	2.8	3.3	2.6	2.0	2.2

SAAR: Seasonally Adjusted at Annual Rates

SA: Seasonally Adjusted

TABLE A.4 - ANNUAL VIRGINIA REGIONAL EMPLOYMENT

Northern Virginia		History										October Standard Forecast		
		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020		
Total Nonagricultural Employment Thousands, SA	Calendar Year	1,317.5	1,344.5	1,369.3	1,378.5	1,379.3	1,409.0	1,438.6	1,468.5	1,491.6	1,507.1	1,518.6		
	% Change	0.9	2.1	1.8	0.7	0.1	2.2	2.1	2.1	1.6	1.0	0.8		
	Fiscal Year	1,307.0	1,332.0	1,357.0	1,377.9	1,376.7	1,389.1	1,427.2	1,451.5	1,482.5	1,500.1	1,512.9		
	% Change	(0.7)	1.9	1.9	1.5	(0.1)	0.9	2.7	1.7	2.1	1.2	0.9		
Construction and Mining Thousands, SA	Calendar Year	68.2	67.8	68.2	68.9	68.8	69.5	71.5	75.7	77.5	81.8	85.0		
	% Change	(2.6)	(0.6)	0.6	0.9	(0.1)	0.9	2.9	5.8	2.4	5.6	3.9		
	Fiscal Year	68.2	68.2	68.2	68.5	69.0	68.6	70.8	73.7	76.2	79.5	83.6		
	% Change	(9.0)	(0.0)	0.0	0.4	0.8	(0.6)	3.3	4.0	3.5	4.2	5.2		
Trade, Transportation, and Utilities Thousands, SA	Calendar Year	200.6	204.5	206.6	207.6	208.9	212.4	214.3	217.5	217.8	218.2	217.5		
	% Change	(0.1)	2.0	1.0	0.5	0.6	1.7	0.9	1.5	0.2	0.2	(0.3)		
	Fiscal Year	199.4	203.0	205.6	207.2	208.1	210.0	214.2	215.6	217.9	218.2	217.8		
	% Change	(3.0)	1.8	1.3	0.8	0.4	0.9	2.0	0.7	1.0	0.1	(0.2)		
Financial Activities Thousands, SA	Calendar Year	64.8	65.5	66.9	68.6	68.6	70.3	73.4	76.3	77.5	78.0	78.2		
	% Change	0.5	1.1	2.2	2.5	0.0	2.5	4.3	4.0	1.6	0.7	0.3		
	Fiscal Year	64.4	65.3	66.0	68.0	68.6	69.2	71.9	75.0	77.0	77.8	78.0		
	% Change	(1.7)	1.4	1.1	3.0	0.9	0.9	3.8	4.4	2.7	1.1	0.3		
Professional and Business Services Thousands, SA	Calendar Year	364.8	375.1	383.5	381.1	376.2	384.8	394.1	404.2	414.0	421.7	425.3		
	% Change	2.4	2.8	2.2	(0.6)	(1.3)	2.3	2.4	2.6	2.4	1.9	0.8		
	Fiscal Year	359.0	370.5	380.1	384.2	377.1	379.2	389.7	399.2	409.1	418.6	423.7		
	% Change	0.7	3.2	2.6	1.1	(1.8)	0.5	2.8	2.4	2.5	2.3	1.2		
Education and Health Services Thousands, SA	Calendar Year	135.8	141.4	145.5	147.9	149.9	155.6	162.4	168.1	172.2	173.1	174.6		
	% Change	3.1	4.1	2.9	1.7	1.3	3.8	4.4	3.5	2.4	0.5	0.9		
	Fiscal Year	134.0	138.5	143.2	147.4	148.6	152.0	159.6	164.9	170.8	172.7	173.8		
	% Change	3.6	3.4	3.3	3.0	0.8	2.3	5.0	3.3	3.6	1.1	0.6		
Leisure and Hospitality Thousands, SA	Calendar Year	116.8	121.3	126.2	130.0	132.6	139.5	144.6	145.2	147.2	147.6	148.6		
	% Change	0.7	3.8	4.1	3.1	2.0	5.2	3.6	0.4	1.4	0.3	0.7		
	Fiscal Year	115.6	119.3	123.7	128.2	131.4	135.1	143.2	144.7	146.4	147.6	147.9		
	% Change	(1.4)	3.2	3.6	3.7	2.5	2.8	6.0	1.0	1.2	0.8	0.2		
Government Thousands, SA	Calendar Year	228.9	231.1	233.6	234.6	233.2	234.5	235.0	236.2	236.9	237.5	238.8		
	% Change	2.1	0.9	1.1	0.4	(0.6)	0.5	0.2	0.5	0.3	0.2	0.5		
	Fiscal Year	227.0	229.6	232.2	235.1	233.3	233.8	234.7	235.8	236.6	237.0	238.1		
	% Change	2.4	1.1	1.2	1.2	(0.8)	0.2	0.4	0.4	0.3	0.2	0.5		

SAAR: Seasonally Adjusted at Annual Rates

SA: Seasonally Adjusted

TABLE A.4 - ANNUAL VIRGINIA REGIONAL EMPLOYMENT

	Pessimistic Alternative Scenario			
	2017	2018	2019	2020
Northern Virginia				
Total Nonagricultural Employment Thousands, SA	1,467.8 2.0 1,451.5 1.7	1,476.5 0.6 1,477.8 1.8	1,470.7 (0.4) 1,471.7 (0.4)	1,485.1 1.0 1,475.9 0.3
	Calendar Year % Change			
	Fiscal Year % Change			
Construction and Mining Thousands, SA	75.6 5.7 73.7 4.0	75.1 (0.7) 75.7 2.7	73.6 (2.0) 74.0 (2.2)	75.8 3.0 74.2 0.2
	Calendar Year % Change			
	Fiscal Year % Change			
Trade, Transportation, and Utilities Thousands, SA	217.4 1.4 215.6 0.7	216.0 (0.7) 217.4 0.8	212.9 (1.4) 214.2 (1.5)	211.9 (0.5) 212.4 (0.8)
	Calendar Year % Change			
	Fiscal Year % Change			
Financial Activities Thousands, SA	76.2 3.9 75.0 4.4	76.0 (0.3) 76.4 1.9	75.6 (0.5) 75.6 (1.1)	77.0 1.9 76.3 1.0
	Calendar Year % Change			
	Fiscal Year % Change			
Professional and Business Services Thousands, SA	403.7 2.4 399.2 2.4	404.2 0.1 405.6 1.6	404.2 (0.0) 402.4 (0.8)	415.6 2.8 409.5 1.8
	Calendar Year % Change			
	Fiscal Year % Change			
Education and Health Services Thousands, SA	168.1 3.5 164.9 3.3	173.1 3.0 171.1 3.8	174.5 0.8 174.4 1.9	173.9 (0.3) 174.1 (0.1)
	Calendar Year % Change			
	Fiscal Year % Change			
Leisure and Hospitality Thousands, SA	145.3 0.5 144.7 1.0	147.6 1.6 146.7 1.4	147.1 (0.4) 147.7 0.7	146.2 (0.6) 146.6 (0.8)
	Calendar Year % Change			
	Fiscal Year % Change			
Government Thousands, SA	236.2 0.5 235.8 0.4	236.9 0.3 236.6 0.3	237.4 0.2 237.0 0.2	238.8 0.6 238.2 0.5
	Calendar Year % Change			
	Fiscal Year % Change			

SAAR: Seasonally Adjusted at Annual Rates

SA: Seasonally Adjusted

TABLE A.4 - ANNUAL VIRGINIA REGIONAL EMPLOYMENT

Hampton Roads		History											
		1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Total Nonagricultural Employment Thousands, SA	Calendar Year	693.9	706.6	720.3	730.5	733.9	737.6	749.9	761.0	767.4	775.5	767.2	742.2
	% Change	2.4	1.8	1.9	1.4	0.5	0.5	1.7	1.5	0.8	1.1	(1.1)	(3.3)
	Fiscal Year	684.4	701.3	714.3	725.0	733.2	735.4	742.9	756.0	765.0	771.5	773.4	755.2
	% Change	2.1	2.5	1.9	1.5	1.1	0.3	1.0	1.8	1.2	0.8	0.2	(2.4)
Construction and Mining Thousands, SA	Calendar Year	42.3	42.9	43.9	45.9	44.6	47.1	48.7	49.9	49.8	48.4	45.2	38.4
	% Change	0.1	1.5	2.4	4.4	(2.8)	5.6	3.4	2.5	(0.2)	(2.7)	(6.5)	(15.2)
	Fiscal Year	42.1	42.8	43.3	45.0	45.3	45.2	48.2	49.4	50.2	49.1	47.1	41.8
	% Change	0.7	1.8	1.1	4.1	0.7	(0.4)	6.8	2.4	1.6	(2.2)	(4.1)	(11.2)
Trade, Transportation, and Utilities Thousands, SA	Calendar Year	131.8	135.2	137.4	138.7	138.8	135.7	138.6	140.5	141.5	142.7	138.0	128.8
	% Change	2.1	2.6	1.6	1.0	0.0	(2.3)	2.2	1.3	0.7	0.9	(3.3)	(6.6)
	Fiscal Year	130.0	134.1	136.2	138.4	138.7	137.5	136.6	139.5	141.3	142.1	141.2	133.0
	% Change	1.5	3.2	1.5	1.6	0.2	(0.9)	(0.6)	2.1	1.2	0.6	(0.7)	(5.8)
Financial Activities Thousands, SA	Calendar Year	34.1	36.0	36.5	36.7	36.8	37.6	39.7	39.9	40.7	41.5	40.2	37.5
	% Change	5.7	5.5	1.2	0.6	0.2	2.2	5.6	0.7	1.9	2.1	(3.3)	(6.7)
	Fiscal Year	32.9	35.4	36.1	36.7	36.7	37.1	38.6	39.8	40.2	41.4	41.0	39.0
	% Change	3.0	7.4	2.0	1.8	(0.1)	1.1	4.2	3.1	0.9	3.0	(0.9)	(5.0)
Professional and Business Services Thousands, SA	Calendar Year	92.5	98.0	98.9	103.0	104.7	104.3	100.2	101.4	101.7	102.6	104.7	99.5
	% Change	6.5	5.9	0.9	4.1	1.7	(0.4)	(3.9)	1.2	0.3	0.9	2.0	(5.0)
	Fiscal Year	89.2	95.6	99.3	100.1	104.7	104.4	102.0	101.1	101.5	101.9	104.0	102.6
	% Change	5.5	7.1	3.9	0.8	4.6	(0.3)	(2.3)	(0.9)	0.4	0.5	2.0	(1.3)
Education and Health Services Thousands, SA	Calendar Year	69.6	71.6	73.4	74.8	77.5	78.8	82.8	85.6	88.0	90.6	91.7	93.7
	% Change	3.2	2.8	2.6	1.9	3.7	1.6	5.0	3.4	2.8	3.0	1.2	2.2
	Fiscal Year	68.6	70.5	72.4	74.1	76.2	78.1	80.9	84.0	86.9	89.3	91.2	92.8
	% Change	3.2	2.8	2.6	2.4	2.8	2.6	3.6	3.8	3.5	2.7	2.2	1.7
Leisure and Hospitality Thousands, SA	Calendar Year	72.3	72.9	74.2	76.2	76.5	76.5	79.0	82.0	84.6	85.9	85.9	83.3
	% Change	0.9	0.9	1.7	2.7	0.4	(0.0)	3.2	3.8	3.2	1.6	(0.1)	(3.0)
	Fiscal Year	71.8	72.9	73.4	75.4	76.1	76.7	77.4	80.6	83.4	85.2	86.5	84.2
	% Change	1.2	1.5	0.7	2.7	1.0	0.8	0.9	4.1	3.6	2.2	1.5	(2.8)
Government Thousands, SA	Calendar Year	144.5	144.5	146.0	147.7	149.6	149.5	151.5	151.7	153.1	155.6	158.1	159.9
	% Change	1.3	(0.0)	1.1	1.1	1.3	(0.0)	1.3	0.1	1.0	1.6	1.6	1.1
	Fiscal Year	143.3	144.6	145.3	146.7	148.9	149.6	150.4	151.6	152.2	154.3	156.8	159.4
	% Change	0.5	1.0	0.4	1.0	1.5	0.5	0.5	0.8	1.4	1.6	1.7	1.7

SAAR: Seasonally Adjusted at Annual Rates

SA: Seasonally Adjusted

TABLE A.4 - ANNUAL VIRGINIA REGIONAL EMPLOYMENT

Hampton Roads		History										October Standard Forecast		
		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020		
Total Nonagricultural Employment Thousands, SA	Calendar Year	737.1	740.1	746.8	756.5	758.3	766.9	771.5	778.1	779.3	784.9	789.6		
	% Change	(0.7)	0.4	0.9	1.3	0.2	1.1	0.6	0.9	0.1	0.7	0.6		
	Fiscal Year	737.3	737.9	743.2	752.4	757.6	761.0	770.9	774.8	778.2	782.0	787.2		
	% Change	(2.4)	0.1	0.7	1.2	0.7	0.5	1.3	0.5	0.4	0.5	0.7		
Construction and Mining Thousands, SA	Calendar Year	36.9	35.1	34.5	34.7	34.5	36.0	36.3	36.2	36.5	37.6	38.5		
	% Change	(3.9)	(4.7)	(1.6)	0.5	(0.7)	4.4	0.8	(0.3)	0.8	3.2	2.3		
	Fiscal Year	37.2	36.2	34.5	34.7	34.5	35.0	36.3	36.3	36.2	37.0	38.1		
	% Change	(11.1)	(2.6)	(4.5)	0.4	(0.6)	1.6	3.8	(0.3)	(0.2)	2.2	3.0		
Trade, Transportation, and Utilities Thousands, SA	Calendar Year	128.0	127.7	127.4	128.3	129.5	131.6	133.5	134.1	135.0	135.3	135.0		
	% Change	(0.6)	(0.2)	(0.3)	0.7	0.9	1.7	1.4	0.4	0.7	0.2	(0.2)		
	Fiscal Year	127.9	128.1	127.4	127.4	128.8	130.6	132.7	133.4	135.0	135.2	135.1		
	% Change	(3.9)	0.2	(0.6)	(0.0)	1.1	1.4	1.6	0.5	1.2	0.1	(0.1)		
Financial Activities Thousands, SA	Calendar Year	36.4	36.8	37.5	37.8	37.8	38.0	37.5	37.0	37.2	37.4	37.5		
	% Change	(2.8)	1.1	1.7	1.0	(0.2)	0.5	(1.2)	(1.4)	0.6	0.5	0.2		
	Fiscal Year	36.6	36.6	37.1	37.8	37.8	38.0	37.7	37.3	37.0	37.4	37.4		
	% Change	(6.2)	0.2	1.1	1.9	0.0	0.5	(0.7)	(1.1)	(0.7)	0.9	0.2		
Professional and Business Services Thousands, SA	Calendar Year	97.9	98.6	99.7	102.5	104.4	105.0	104.1	109.7	109.7	113.8	116.4		
	% Change	(1.6)	0.7	1.2	2.8	1.8	0.6	(0.9)	5.5	(0.0)	3.8	2.2		
	Fiscal Year	98.0	98.1	99.2	101.5	103.2	104.6	104.5	107.1	109.3	111.7	115.4		
	% Change	(4.5)	0.1	1.1	2.3	1.7	1.3	(0.1)	2.5	2.0	2.2	3.3		
Education and Health Services Thousands, SA	Calendar Year	94.7	98.0	100.4	104.2	105.3	108.6	111.2	110.8	111.2	111.6	112.3		
	% Change	1.1	3.4	2.5	3.8	1.1	3.1	2.4	(0.4)	0.4	0.4	0.6		
	Fiscal Year	94.1	96.4	99.0	102.4	105.0	106.4	110.6	111.2	110.7	111.4	111.9		
	% Change	1.4	2.4	2.8	3.4	2.5	1.3	4.0	0.5	(0.4)	0.6	0.4		
Leisure and Hospitality Thousands, SA	Calendar Year	83.4	83.3	84.0	85.3	85.5	87.8	90.7	91.8	91.7	91.9	92.4		
	% Change	0.1	(0.0)	0.8	1.6	0.3	2.6	3.3	1.2	(0.1)	0.2	0.6		
	Fiscal Year	83.0	83.5	83.6	84.6	85.6	85.9	90.0	91.5	91.3	91.9	92.1		
	% Change	(1.3)	0.5	0.2	1.1	1.3	0.4	4.8	1.6	(0.2)	0.7	0.2		
Government Thousands, SA	Calendar Year	161.6	162.5	162.8	161.7	159.9	159.7	159.9	159.9	159.0	158.1	158.4		
	% Change	1.1	0.6	0.1	(0.7)	(1.1)	(0.1)	0.2	(0.0)	(0.6)	(0.6)	0.2		
	Fiscal Year	161.0	161.4	163.2	162.3	160.8	159.7	159.8	159.9	159.7	158.4	158.1		
	% Change	1.0	0.3	1.1	(0.6)	(0.9)	(0.7)	0.0	0.1	(0.1)	(0.8)	(0.2)		

SAAR: Seasonally Adjusted at Annual Rates

SA: Seasonally Adjusted

TABLE A.4 - ANNUAL VIRGINIA REGIONAL EMPLOYMENT

		Pessimistic Alternative Scenario			
		2017	2018	2019	2020
Hampton Roads					
Total Nonagricultural Employment Thousands, SA	Calendar Year	777.8	772.8	769.9	775.5
	% Change	0.8	(0.6)	(0.4)	0.7
	Fiscal Year	774.8	776.2	770.1	772.2
	% Change	0.5	0.2	(0.8)	0.3
Construction and Mining Thousands, SA	Calendar Year	36.1	35.5	34.4	34.9
	% Change	(0.4)	(1.7)	(3.1)	1.4
	Fiscal Year	36.3	36.0	34.9	34.4
	% Change	(0.3)	(0.8)	(3.1)	(1.2)
Trade, Transportation, and Utilities Thousands, SA	Calendar Year	134.0	134.0	132.5	132.0
	% Change	0.4	(0.0)	(1.2)	(0.4)
	Fiscal Year	133.4	134.8	133.1	132.2
	% Change	0.5	1.0	(1.2)	(0.7)
Financial Activities Thousands, SA	Calendar Year	37.0	36.6	36.5	37.0
	% Change	(1.4)	(0.9)	(0.5)	1.5
	Fiscal Year	37.3	36.8	36.4	36.7
	% Change	(1.1)	(1.3)	(1.0)	0.8
Professional and Business Services Thousands, SA	Calendar Year	109.5	105.3	106.7	112.8
	% Change	5.3	(3.8)	1.3	5.7
	Fiscal Year	107.1	107.7	104.7	110.0
	% Change	2.5	0.5	(2.7)	5.0
Education and Health Services Thousands, SA	Calendar Year	110.8	111.6	112.2	111.9
	% Change	(0.4)	0.8	0.6	(0.3)
	Fiscal Year	111.2	110.8	112.2	112.0
	% Change	0.5	(0.3)	1.2	(0.1)
Leisure and Hospitality Thousands, SA	Calendar Year	91.8	92.0	91.7	91.3
	% Change	1.2	0.2	(0.3)	(0.5)
	Fiscal Year	91.5	91.5	92.0	91.4
	% Change	1.6	(0.0)	0.6	(0.6)
Government Thousands, SA	Calendar Year	159.9	159.0	158.1	158.5
	% Change	(0.0)	(0.6)	(0.6)	0.2
	Fiscal Year	159.9	159.7	158.4	158.1
	% Change	0.1	(0.1)	(0.8)	(0.1)

SAAR: Seasonally Adjusted at Annual Rates

SA: Seasonally Adjusted

TABLE A.4 - ANNUAL VIRGINIA REGIONAL EMPLOYMENT

Richmond		History											
		1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Total Nonagricultural Employment Thousands, SA	Calendar Year	551.7	565.1	578.8	580.3	578.2	578.7	593.8	606.0	615.2	622.7	620.0	595.4
	% Change	1.5	2.4	2.4	0.2	(0.4)	0.1	2.6	2.1	1.5	1.2	(0.4)	(4.0)
	Fiscal Year	548.1	558.1	572.3	581.6	578.6	576.8	586.2	600.7	609.6	620.6	622.3	609.7
	% Change	2.3	1.8	2.6	1.6	(0.5)	(0.3)	1.6	2.5	1.5	1.8	0.3	(2.0)
Construction and Mining Thousands, SA	Calendar Year	35.4	36.9	38.8	39.2	39.1	39.2	40.7	43.1	44.0	45.0	41.4	34.6
	% Change	(0.9)	4.2	5.1	1.0	(0.3)	0.2	3.8	5.9	2.2	2.1	(8.0)	(16.4)
	Fiscal Year	35.5	36.4	37.7	39.3	38.9	39.0	39.6	42.2	43.7	44.5	43.9	37.9
	% Change	2.6	2.7	3.6	4.2	(1.0)	0.3	1.4	6.5	3.8	1.8	(1.5)	(13.5)
Trade, Transportation, and Utilities Thousands, SA	Calendar Year	105.2	108.0	110.6	109.9	109.6	109.5	110.4	110.4	112.6	115.2	114.1	108.2
	% Change	1.0	2.7	2.4	(0.7)	(0.2)	(0.2)	0.8	0.0	2.0	2.3	(0.9)	(5.1)
	Fiscal Year	104.4	106.5	109.7	110.7	109.4	109.5	110.3	109.8	111.6	113.9	115.0	111.7
	% Change	1.3	2.0	3.0	0.9	(1.2)	0.1	0.8	(0.4)	1.6	2.1	1.0	(2.9)
Financial Activities Thousands, SA	Calendar Year	40.1	43.5	44.9	46.8	46.5	46.2	46.7	46.5	46.3	45.6	44.0	42.9
	% Change	(0.8)	8.5	3.3	4.3	(0.8)	(0.6)	1.1	(0.4)	(0.3)	(1.7)	(3.5)	(2.4)
	Fiscal Year	39.7	41.8	44.3	45.9	47.1	45.9	46.7	46.5	46.5	46.0	44.7	43.5
	% Change	(1.8)	5.1	6.1	3.6	2.6	(2.6)	1.8	(0.3)	(0.1)	(1.1)	(2.7)	(2.6)
Professional and Business Services Thousands, SA	Calendar Year	87.0	88.2	91.5	89.2	87.3	83.5	87.7	92.5	95.1	98.4	98.9	92.2
	% Change	7.2	1.4	3.8	(2.5)	(2.1)	(4.4)	5.0	5.5	2.8	3.4	0.5	(6.7)
	Fiscal Year	84.1	88.4	89.4	91.2	88.1	84.8	85.0	90.5	93.7	97.2	99.3	95.7
	% Change	6.5	5.2	1.1	2.0	(3.4)	(3.7)	0.3	6.4	3.5	3.7	2.2	(3.7)
Education and Health Services Thousands, SA	Calendar Year	50.2	51.7	51.7	53.9	56.7	60.6	65.1	68.5	71.3	73.9	80.4	82.9
	% Change	(1.8)	3.1	(0.1)	4.3	5.2	6.9	7.4	5.3	4.1	3.7	8.8	3.1
	Fiscal Year	51.0	50.6	51.8	52.4	55.3	58.6	62.9	66.7	69.8	72.3	77.5	81.9
	% Change	1.7	(0.8)	2.5	1.1	5.5	6.0	7.3	6.1	4.6	3.6	7.1	5.7
Leisure and Hospitality Thousands, SA	Calendar Year	42.9	42.9	43.9	44.8	44.2	45.7	48.0	49.0	51.1	51.9	52.3	51.4
	% Change	1.0	0.0	2.4	2.2	(1.5)	3.5	5.1	2.0	4.4	1.5	0.8	(1.8)
	Fiscal Year	42.9	42.7	43.6	44.4	44.5	44.6	47.0	48.4	50.0	51.7	52.3	51.9
	% Change	3.5	(0.4)	2.1	1.9	0.2	0.3	5.3	3.0	3.3	3.4	1.1	(0.8)
Government Thousands, SA	Calendar Year	100.9	103.0	105.6	107.0	108.3	109.4	110.4	111.4	111.4	110.3	109.0	110.3
	% Change	1.2	2.0	2.5	1.4	1.2	1.1	0.9	1.0	(0.1)	(0.9)	(1.2)	1.2
	Fiscal Year	100.6	101.7	104.2	106.4	107.8	109.0	109.5	111.7	110.8	111.8	108.6	110.1
	% Change	1.9	1.1	2.4	2.2	1.3	1.1	0.5	2.0	0.9	(2.9)	1.4	

SAAR: Seasonally Adjusted at Annual Rates

SA: Seasonally Adjusted

TABLE A.4 - ANNUAL VIRGINIA REGIONAL EMPLOYMENT

Richmond		History										October Standard Forecast		
		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020		
Total Nonagricultural Employment Thousands, SA	Calendar Year	591.9	600.5	612.9	622.6	633.3	651.4	664.2	677.3	686.8	696.3	701.9		
	% Change	(0.6)	1.5	2.1	1.6	1.7	2.9	2.0	2.0	1.4	1.4	0.8		
	Fiscal Year	590.3	594.9	606.6	618.0	627.9	640.3	660.5	671.2	680.8	692.2	699.1		
	% Change	(3.2)	0.8	2.0	1.9	1.6	2.0	3.2	1.6	1.4	1.7	1.0		
Construction and Mining Thousands, SA	Calendar Year	32.4	31.8	32.5	33.2	33.9	36.2	36.6	38.4	39.3	41.0	42.2		
	% Change	(6.4)	(1.9)	2.4	2.0	2.0	6.8	1.2	5.0	2.3	4.3	3.0		
	Fiscal Year	32.9	32.1	32.0	33.0	33.2	35.0	36.5	37.4	38.8	40.1	41.7		
	% Change	(13.3)	(2.2)	(0.3)	3.1	0.6	5.3	4.4	2.5	3.6	3.3	4.1		
Trade, Transportation, and Utilities Thousands, SA	Calendar Year	107.4	109.4	112.0	114.4	117.5	119.8	122.0	123.0	123.0	123.6	123.4		
	% Change	(0.8)	1.9	2.4	2.2	2.7	2.0	1.8	0.8	0.0	0.5	(0.1)		
	Fiscal Year	107.0	108.2	110.5	113.4	116.3	118.0	121.8	122.5	122.8	123.4	123.5		
	% Change	(4.2)	1.0	2.1	2.6	2.5	1.5	3.2	0.6	0.2	0.5	0.0		
Financial Activities Thousands, SA	Calendar Year	42.4	44.0	46.5	47.8	48.7	50.4	50.3	50.7	51.0	51.3	51.5		
	% Change	(1.0)	3.6	5.8	2.7	2.0	3.4	(0.2)	0.8	0.5	0.7	0.3		
	Fiscal Year	42.4	42.8	45.4	47.2	48.3	49.6	50.3	50.7	50.6	51.2	51.3		
	% Change	(2.6)	1.0	5.9	4.1	2.2	2.8	1.4	0.8	(0.2)	1.1	0.3		
Professional and Business Services Thousands, SA	Calendar Year	92.6	96.3	98.8	100.4	102.5	109.4	112.6	119.5	124.6	130.5	133.2		
	% Change	0.4	4.0	2.6	1.6	2.1	6.7	3.0	6.1	4.3	4.7	2.1		
	Fiscal Year	91.2	94.8	97.3	99.6	101.4	105.1	112.1	116.4	121.0	128.0	131.9		
	% Change	(4.7)	4.0	2.6	2.3	1.8	3.6	6.7	3.8	4.0	5.8	3.1		
Education and Health Services Thousands, SA	Calendar Year	84.5	86.1	88.7	91.0	93.2	95.6	97.6	98.4	100.1	100.6	101.4		
	% Change	1.9	1.8	3.1	2.5	2.5	2.5	2.1	0.8	1.7	0.5	0.8		
	Fiscal Year	84.1	84.7	87.4	90.0	92.3	94.2	97.0	97.8	99.4	100.4	100.9		
	% Change	2.6	0.8	3.2	2.9	2.6	2.1	2.9	0.8	1.6	1.0	0.6		
Leisure and Hospitality Thousands, SA	Calendar Year	51.0	53.0	55.5	57.1	58.0	60.9	63.5	64.3	65.0	65.2	65.8		
	% Change	(0.8)	4.0	4.6	2.9	1.6	5.0	4.2	1.3	1.1	0.3	0.8		
	Fiscal Year	50.8	51.7	54.6	56.3	57.6	59.1	62.5	64.0	64.6	65.2	65.4		
	% Change	(2.1)	1.7	5.5	3.2	2.3	2.5	5.9	2.4	0.9	1.0	0.3		
Government Thousands, SA	Calendar Year	111.1	110.7	110.2	109.5	109.8	109.5	110.5	112.7	113.9	114.2	114.6		
	% Change	0.7	(0.3)	(0.5)	(0.7)	0.3	(0.3)	0.9	2.0	1.1	0.3	0.3		
	Fiscal Year	110.8	110.6	110.8	109.7	109.3	109.8	110.0	111.2	113.8	114.1	114.4		
	% Change	0.6	(0.1)	0.1	(1.0)	(0.3)	0.4	1.0	2.4	0.2	0.3			

SAAR: Seasonally Adjusted at Annual Rates

SA: Seasonally Adjusted

TABLE A.4 - ANNUAL VIRGINIA REGIONAL EMPLOYMENT

	Pessimistic Alternative Scenario			
	2017	2018	2019	2020
Richmond				
Total Nonagricultural Employment Thousands, SA	676.9 1.9 671.2 1.6	679.3 0.3 678.3 1.1	679.8 0.1 678.8 0.1	687.1 1.1 683.0 0.6
	Calendar Year % Change			
	Fiscal Year % Change			
Construction and Mining Thousands, SA	38.4 5.0 37.4 2.5	38.3 (0.1) 38.6 3.0	37.7 (1.6) 37.9 (1.7)	38.6 2.3 38.0 0.1
	Calendar Year % Change			
	Fiscal Year % Change			
Trade, Transportation, and Utilities Thousands, SA	123.0 0.8 122.5 0.6	121.9 (0.9) 122.5 (0.1)	120.6 (1.1) 121.1 (1.1)	120.2 (0.3) 120.4 (0.6)
	Calendar Year % Change			
	Fiscal Year % Change			
Financial Activities Thousands, SA	50.6 0.7 50.7 0.8	50.0 (1.3) 50.2 (0.9)	49.7 (0.5) 49.7 (1.2)	50.7 1.9 50.2 1.0
	Calendar Year % Change			
	Fiscal Year % Change			
Professional and Business Services Thousands, SA	119.3 5.9 116.4 3.8	119.5 0.2 119.2 2.4	122.3 2.3 120.0 0.7	129.2 5.7 125.9 4.9
	Calendar Year % Change			
	Fiscal Year % Change			
Education and Health Services Thousands, SA	98.4 0.8 97.8 0.8	100.6 2.2 99.6 1.8	101.3 0.7 101.3 1.7	101.0 (0.3) 101.1 (0.1)
	Calendar Year % Change			
	Fiscal Year % Change			
Leisure and Hospitality Thousands, SA	64.3 1.4 64.0 2.4	65.3 1.4 64.8 1.1	65.0 (0.4) 65.3 0.8	64.5 (0.7) 64.7 (0.9)
	Calendar Year % Change			
	Fiscal Year % Change			
Government Thousands, SA	112.7 2.0 111.2 1.0	113.9 1.1 113.8 2.4	114.2 0.3 114.1 0.2	114.7 0.4 114.5 0.4
	Calendar Year % Change			
	Fiscal Year % Change			

SAAR: Seasonally Adjusted at Annual Rates

SA: Seasonally Adjusted

APPENDIX B
GENERAL FUND DATA

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

	2003.3	2003.4	2004.1	2004.2	2004.3	2004.4	2005.1	2005.2	2005.3	2005.4	2006.1	2006.2	2006.3	2006.4	2007.1
Withholding	1,606.0	1,801.6	1,861.8	1,769.9	1,768.0	1,905.5	1,992.0	1,847.5	1,897.2	1,996.5	2,131.5	2,028.5	1,970.4	2,110.3	2,292.5
Annual % Change	4.6	8.1	9.1	6.7	10.1	5.8	7.0	4.4	7.3	4.8	7.0	9.8	3.9	5.7	7.6
Nonwithholding	240.5	160.5	304.4	857.5	286.6	209.9	415.0	1,162.0	349.0	225.7	483.9	1,435.1	356.4	264.8	512.5
Annual % Change	1.6	11.9	5.6	16.8	19.2	30.8	36.3	35.5	21.8	7.5	16.6	23.5	2.1	17.3	5.9
Gross Individual Income Tax	1,846.5	1,962.0	2,166.2	2,627.4	2,054.7	2,115.5	2,407.0	3,009.5	2,246.3	2,222.2	2,615.5	3,463.6	2,326.8	2,375.2	2,805.0
Annual % Change	4.2	8.4	8.6	9.8	11.3	7.8	11.1	14.5	9.3	5.0	8.7	15.1	3.6	6.9	7.2
Individual Refunds	86.4	72.5	578.8	479.5	87.8	81.1	588.0	477.3	50.5	62.5	638.4	531.2	110.2	109.8	740.4
Annual % Change	(27.8)	9.2	11.7	(2.1)	1.6	11.8	1.6	(0.5)	(42.5)	(22.9)	8.6	11.3	118.3	75.6	16.0
Net Individual Income Tax	1,760.2	1,889.5	1,587.3	2,147.9	1,966.9	2,034.3	1,819.0	2,532.2	2,195.8	2,159.7	1,977.0	2,932.4	2,216.7	2,265.4	2,064.6
Annual % Change	6.5	8.3	7.5	12.9	11.7	7.7	14.6	17.9	11.6	6.2	8.7	15.8	1.0	4.9	4.4
Sales and Use Tax	488.6	620.0	622.9	830.8	524.3	727.0	736.0	958.8	579.3	728.6	758.5	746.3	762.3	746.9	774.8
Annual % Change	6.8	7.5	10.3	12.7	7.3	17.3	18.2	15.4	10.5	0.2	3.1	(22.2)	31.6	2.5	2.1
Corporate Income Tax	112.9	38.0	44.3	230.5	122.0	124.9	90.0	279.9	214.7	256.1	116.0	280.3	256.9	186.6	118.7
Annual % Change	25.8	(32.0)	171.7	27.1	8.1	228.4	103.2	21.4	76.0	105.1	29.0	0.2	19.7	(27.2)	2.3
Wills, Suits, Deeds, Contracts	93.6	79.5	67.7	99.7	113.8	150.6	141.9	189.8	202.8	170.1	149.7	172.1	150.8	143.6	133.9
Annual % Change	43.4	7.1	6.3	20.7	21.5	89.3	109.6	90.4	78.3	13.0	5.5	(9.3)	(25.7)	(15.6)	(10.5)
Insurance Premiums	79.7	63.1	42.6	165.8	88.0	69.0	38.3	178.3	84.1	72.1	36.3	181.3	87.9	61.4	38.0
Annual % Change	3.8	5.7	20.9	2.8	10.4	9.3	(10.1)	7.5	(4.4)	4.4	(5.2)	1.7	4.5	(14.8)	4.7
Interest Income	29.8	11.1	13.9	6.6	27.1	22.1	23.8	10.8	44.7	26.0	39.6	6.1	91.7	42.9	53.8
Annual % Change	(26.0)	(51.5)	65.3	(35.0)	(9.2)	99.7	71.0	64.5	65.0	17.7	66.4	(43.9)	105.0	64.7	35.7
Alcoholic Beverage Sales	12.9	32.9	37.3	55.0	12.6	34.8	38.1	59.0	13.5	36.4	40.6	62.4	14.3	38.0	42.1
Annual % Change	9.1	5.3	2.4	11.6	(2.6)	5.8	2.4	7.2	7.4	4.7	6.5	5.8	5.5	4.2	3.6
All Other Revenues	146.5	111.8	144.0	251.3	155.2	122.6	118.5	177.9	110.9	111.7	148.8	180.2	127.2	111.1	128.6
Annual % Change	23.2	(10.9)	0.5	28.7	6.0	9.6	(17.7)	(29.2)	(28.6)	(8.9)	25.7	1.3	14.7	(0.5)	(13.6)
Total General Fund Revenues	2,724.3	2,846.0	2,560.0	3,787.7	3,009.8	3,285.3	3,005.5	4,386.6	3,445.8	3,560.8	3,266.7	4,561.0	3,707.7	3,595.9	3,354.5
Annual % Change	8.4	5.8	9.2	14.1	10.5	15.4	17.4	15.8	14.5	8.4	8.7	4.0	7.6	1.0	2.7

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

	2007 2	2007 3	2007 4	2008 1	2008 2	2008 3	2008 4	2009 1	2009 2	2009 3	2009 4	2010 1	2010 2	2010 3	2010 4
Withholding Annual % Change	2,192.2 8.1	2,062.9 4.7	2,244.9 6.4	2,411.8 5.2	2,213.9 1.0	2,175.8 5.5	2,384.3 6.2	2,306.6 (4.4)	2,271.5 2.6	2,125.0 (2.3)	2,328.6 (2.3)	2,416.4 4.8	2,306.1 1.5	2,219.1 4.4	2,459.9 5.6
Nonwithholding Annual % Change	1,648.3 14.9	394.1 10.6	260.1 (1.8)	556.6 8.6	1,650.4 0.1	406.5 3.1	243.3 (6.5)	458.8 (17.6)	1,201.8 (27.2)	311.3 (23.4)	217.8 (10.5)	373.0 (18.7)	1,004.6 (16.4)	292.9 (5.9)	204.6 (6.0)
Gross Individual Income Tax Annual % Change	3,840.4 10.9	2,457.0 5.6	2,505.1 5.5	2,968.4 5.8	3,864.3 0.6	2,582.2 5.1	2,627.6 4.9	2,765.4 (6.8)	3,473.3 (10.1)	2,436.3 (5.6)	2,546.4 (3.1)	2,789.4 0.9	3,310.7 (4.7)	2,512.0 3.1	2,664.5 4.6
Individual Refunds Annual % Change	599.5 12.9	83.6 (24.1)	143.9 31.1	811.3 9.6	641.1 6.9	127.2 52.0	141.3 (1.8)	873.2 7.6	825.8 28.8	150.8 18.6	182.3 29.1	947.1 8.5	714.4 (13.5)	123.1 (18.4)	160.9 (11.8)
Net Individual Income Tax Annual % Change	3,240.9 10.5	2,373.3 7.1	2,361.2 4.2	2,157.2 4.5	3,223.2 (0.5)	2,455.0 3.4	2,486.3 5.3	1,892.2 (12.3)	2,647.5 (17.9)	2,285.5 (6.9)	2,364.1 (4.9)	1,842.3 (2.6)	2,596.4 (1.9)	2,388.9 4.5	2,503.6 5.9
Sales and Use Tax Annual % Change	765.1 2.5	785.8 3.1	798.2 6.9	723.3 (6.6)	768.3 0.4	769.9 (2.0)	729.2 (8.6)	708.8 (2.0)	695.4 (9.5)	724.7 (5.9)	724.0 (0.7)	674.5 (4.8)	959.4 38.0	577.9 (20.3)	746.3 3.1
Corporate Income Tax Annual % Change	317.4 13.2	217.7 (15.2)	115.4 (38.1)	138.7 16.9	336.0 5.8	191.4 (12.1)	71.9 (37.7)	71.1 (48.7)	313.6 (6.7)	176.3 (7.9)	175.6 144.4	56.8 (20.2)	397.8 26.8	177.6 0.7	160.5 (8.6)
Wills, Suits, Deeds, Contracts Annual % Change	154.7 (10.1)	130.7 (13.3)	112.6 (21.6)	98.6 (26.4)	114.5 (26.0)	90.3 (30.9)	66.2 (41.2)	68.4 (30.6)	89.3 (22.0)	80.5 (10.9)	74.6 12.8	60.1 (12.2)	75.0 (16.0)	75.7 (5.9)	77.7 4.1
Insurance Premiums Annual % Change	197.6 9.0	101.7 15.8	61.5 0.1	32.1 (15.7)	201.5 2.0	0.0 (100.0)	75.6 22.9	(20.2) (163.0)	199.6 (0.9)	0.0 NA	75.1 (0.6)	(20.3) 0.4	207.1 3.7	0.0 NA	80.5 7.2
Interest Income Annual % Change	(12.4) (303.9)	105.5 15.1	66.2 54.4	37.5 (30.3)	(19.9) 60.5	74.6 (29.3)	25.4 (61.7)	23.3 (37.8)	(19.0) (4.2)	40.3 (45.9)	26.4 3.9	33.3 42.8	(5.7) (70.0)	25.7 (36.2)	21.6 (18.0)
Alcoholic Beverage Sales Annual % Change	67.5 8.2	13.8 (3.4)	39.6 4.5	45.5 8.0	70.0 3.6	12.8 (7.2)	41.5 4.7	47.1 3.5	71.8 2.7	12.3 (4.0)	42.2 1.7	47.5 1.0	73.0 1.7	12.8 3.9	43.2 2.2
All Other Revenues Annual % Change	176.9 (1.8)	113.6 (10.7)	144.0 29.6	147.2 14.4	152.6 (13.8)	85.8 (24.5)	102.9 (28.5)	103.4 (29.8)	143.7 (5.8)	87.4 1.9	71.8 (30.2)	97.5 (5.7)	164.1 14.2	89.4 2.4	81.1 12.9
Total General Fund Revenues Annual % Change	4,907.7 7.6	3,842.1 3.6	3,698.7 2.9	3,380.0 0.8	4,846.1 (1.3)	3,679.9 (4.2)	3,599.0 (2.7)	2,894.2 (14.4)	4,142.0 (14.5)	3,407.0 (7.4)	3,553.9 (1.3)	2,791.6 (3.5)	4,467.0 7.8	3,348.1 (1.7)	3,714.5 4.5

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

	2011.1	2011.2	2011.3	2011.4	2012.1	2012.2	2012.3	2012.4	2013.1	2013.2	2013.3	2013.4	2014.1	2014.2	2014.3
Withholding	2,538.5	2,417.6	2,308.0	2,510.9	2,640.7	2,580.0	2,292.0	2,606.4	2,761.1	2,591.9	2,403.1	2,659.9	2,803.7	2,617.5	2,554.4
Annual % Change	5.1	4.8	4.0	2.1	4.0	6.7	(0.7)	3.8	4.6	0.5	4.8	2.1	1.5	1.0	6.3
Nonwithholding	435.7	1,245.4	348.0	222.8	468.9	1,318.3	362.4	201.3	575.7	1,668.3	372.8	260.6	496.7	1,394.8	427.7
Annual % Change	16.8	24.0	18.8	8.9	7.6	5.9	4.1	(9.6)	22.8	26.5	2.9	29.4	(13.7)	(16.4)	14.7
Gross Individual Income Tax	2,974.2	3,663.0	2,655.9	2,733.7	3,109.6	3,898.3	2,654.4	2,807.7	3,336.8	4,260.1	2,775.9	2,920.4	3,300.5	4,012.4	2,982.1
Annual % Change	6.6	10.6	5.7	2.6	4.6	6.4	(0.1)	2.7	7.3	9.3	4.6	4.0	(1.1)	(5.8)	7.4
Individual Refunds	888.2	697.1	105.7	132.1	862.9	684.1	98.2	108.9	827.8	684.2	118.6	156.9	820.2	660.1	123.5
Annual % Change	(6.2)	(2.4)	(14.1)	(17.9)	(2.9)	(1.9)	(7.1)	(17.6)	(4.1)	0.0	20.8	44.2	(0.9)	(3.5)	4.1
Net Individual Income Tax	2,086.1	2,965.8	2,550.2	2,601.6	2,246.7	3,214.2	2,556.2	2,698.9	2,509.1	3,575.9	2,657.3	2,763.5	2,480.3	3,352.3	2,858.6
Annual % Change	13.2	14.2	6.8	3.9	7.7	8.4	0.2	3.7	11.7	11.3	4.0	2.4	(1.1)	(6.3)	7.6
Sales and Use Tax	719.7	968.5	620.4	772.0	768.1	961.0	684.7	777.1	787.0	971.0	653.9	766.1	721.1	925.3	684.0
Annual % Change	6.7	0.9	7.3	3.5	6.7	(0.8)	10.4	0.7	2.5	1.0	(4.5)	(1.4)	(8.4)	(4.7)	4.6
Corporate Income Tax	127.8	356.4	191.3	134.4	162.4	371.8	168.8	197.9	84.5	345.6	201.5	102.2	124.0	329.8	226.6
Annual % Change	125.1	(10.4)	7.7	(16.3)	27.1	4.3	(11.8)	47.2	(48.0)	(7.0)	19.4	(48.4)	46.8	(4.6)	12.4
Wills, Suits, Deeds, Contracts	63.3	74.7	78.9	79.8	73.5	89.8	90.7	92.2	91.3	103.3	93.2	76.2	60.6	80.8	87.5
Annual % Change	5.4	(0.4)	4.2	2.8	16.1	20.2	14.9	15.5	24.1	15.1	2.8	(17.3)	(33.6)	(21.8)	(6.1)
Insurance Premiums	(9.4)	210.4	0.0	56.4	(15.2)	211.7	0.0	79.9	(21.0)	203.3	0.0	90.3	3.5	226.7	0.0
Annual % Change	(53.7)	1.6	NA	(29.9)	62.4	0.6	NA	41.7	37.7	(4.0)	NA	12.9	(116.5)	11.5	NA
Interest Income	23.8	10.0	29.5	17.0	19.9	10.8	26.9	15.1	21.8	3.7	18.3	22.8	23.4	9.6	18.0
Annual % Change	(28.5)	(274.5)	14.5	(21.5)	(16.2)	8.0	(8.9)	(10.9)	9.2	(65.4)	(31.7)	50.5	7.3	157.4	(2.0)
Alcoholic Beverage Sales	48.7	74.3	13.8	45.0	50.6	77.0	15.7	46.1	53.2	80.2	14.8	47.7	54.4	82.3	15.2
Annual % Change	2.5	1.7	7.9	4.2	4.0	3.6	13.7	2.6	5.1	4.1	(5.8)	3.4	2.3	2.7	2.8
All Other Revenues	105.7	151.9	89.1	77.2	107.3	140.3	76.6	88.2	101.3	159.6	83.3	79.5	105.0	161.8	82.9
Annual % Change	8.4	(7.4)	(0.3)	(4.9)	1.6	(7.7)	(14.0)	14.3	(5.6)	13.8	8.7	(9.8)	3.6	1.4	(0.5)
Total General Fund Revenues	3,165.6	4,812.0	3,573.2	3,783.4	3,413.4	5,076.6	3,619.5	3,995.5	3,627.1	5,442.5	3,722.3	3,948.3	3,572.3	5,168.5	3,972.6
Annual % Change	13.4	7.7	6.7	1.9	7.8	5.5	1.3	5.6	6.3	7.2	2.8	(1.2)	(1.5)	(5.0)	6.7

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

	2014.4	2015.1	2015.2	2015.3	2015.4	2016.1	2016.2	2016.3	2016.4	2017.1	2017.2	2017.3
Withholding	2,820.0	2,875.3	2,794.7	2,666.5	2,829.2	3,029.1	2,781.5	2,777.0	2,966.4	3,231.3	2,920.7	2,888.1
Annual % Change	6.0	2.6	6.8	4.4	0.3	5.3	(0.5)	4.1	4.8	6.7	5.0	4.0
Nonwithholding	327.6	602.1	1,684.2	472.0	316.8	652.9	1,628.4	470.8	329.5	683.1	1,535.1	463.8
Annual % Change	25.7	21.2	20.7	10.3	(3.3)	8.4	(3.3)	(0.2)	4.0	4.6	(5.7)	(1.5)
Gross Individual Income Tax	3,147.6	3,477.4	4,478.9	3,138.5	3,146.1	3,682.0	4,409.8	3,247.8	3,295.9	3,914.4	4,455.8	3,351.8
Annual % Change	7.8	5.4	11.6	5.2	(0.0)	5.9	(1.5)	3.5	4.8	6.3	1.0	3.2
Individual Refunds	156.8	790.5	686.5	122.9	165.8	844.6	687.4	114.9	143.0	871.4	731.6	126.7
Annual % Change	(0.1)	(3.6)	4.0	(0.5)	5.8	6.8	0.1	(6.5)	(13.7)	3.2	6.4	10.3
Net Individual Income Tax	2,990.8	2,686.9	3,792.3	3,015.6	2,980.2	2,837.4	3,722.4	3,132.9	3,152.8	3,043.0	3,724.2	3,225.1
Annual % Change	8.2	8.3	13.1	5.5	(0.4)	5.6	(1.8)	3.9	5.8	7.2	0.0	2.9
Sales and Use Tax	778.5	764.3	1,008.7	648.9	831.6	781.5	1,033.9	649.9	827.1	820.0	1,060.1	667.2
Annual % Change	1.6	6.0	9.0	(5.1)	6.8	2.2	2.5	0.2	(0.5)	4.9	2.5	2.7
Corporate Income Tax	140.2	144.6	320.6	188.0	101.7	164.3	311.0	197.5	119.8	147.8	361.8	252.7
Annual % Change	37.2	16.6	(2.8)	(17.0)	(27.5)	13.6	(3.0)	5.1	17.8	(10.0)	16.3	27.9
Wills, Suits, Deeds, Contracts	80.9	76.1	101.8	96.0	90.4	78.7	104.0	109.6	98.5	80.4	105.9	107.1
Annual % Change	6.1	25.7	26.1	9.7	11.8	3.4	2.1	14.2	8.9	2.1	1.8	(2.3)
Insurance Premiums	75.5	5.3	219.9	0.0	87.4	8.1	243.5	0.0	90.2	7.0	243.7	0.0
Annual % Change	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Interest Income	14.5	12.7	3.6	18.2	14.6	15.7	3.5	25.0	10.8	18.9	0.9	28.2
Annual % Change	(36.6)	(45.9)	(62.4)	1.5	1.4	24.2	(1.9)	36.8	(26.2)	20.3	(73.4)	12.8
Alcoholic Beverage Sales	49.0	56.8	86.8	11.8	55.1	59.2	91.5	14.1	53.8	60.6	93.9	15.3
Annual % Change	2.7	4.3	5.5	(22.6)	12.5	4.3	5.3	20.3	(2.5)	2.3	2.6	7.9
All Other Revenues	88.0	104.8	160.5	87.9	90.6	97.6	169.7	82.2	87.1	105.8	169.8	86.8
Annual % Change	10.6	(0.2)	(0.8)	6.1	3.0	(6.9)	5.7	(6.5)	(3.9)	8.4	0.1	5.6
Total General Fund Revenues	4,217.2	3,851.4	5,694.3	4,066.3	4,251.8	4,042.5	5,679.5	4,211.3	4,440.0	4,283.4	5,760.3	4,382.3
Annual % Change	6.8	7.8	10.2	2.4	0.8	5.0	(0.3)	3.6	4.4	6.0	1.4	4.1

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

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Withholding											
Calendar Year	4,148.0	4,550.9	4,979.1	5,673.3	6,007.5	6,347.5	6,513.0	6,772.2	7,305.3	7,733.2	8,240.8
% Change	5.8	9.7	9.4	13.9	5.9	5.7	2.6	4.0	7.9	5.9	6.6
Fiscal Year	4,049.0	4,303.0	4,759.0	5,311.9	5,861.3	6,254.9	6,422.4	6,567.4	7,039.3	7,513.0	8,053.7
% Change	6.6	6.3	10.6	11.6	10.3	6.7	2.7	2.3	7.2	6.7	7.2
Nonwithholding											
Calendar Year	890.4	1,084.4	1,317.7	1,596.4	1,640.6	1,801.7	1,456.4	1,423.7	1,658.4	2,151.8	2,540.3
% Change	12.1	21.8	21.5	21.2	2.8	9.8	(19.2)	(2.2)	16.5	29.7	18.1
Fiscal Year	878.1	1,041.9	1,284.7	1,487.8	1,669.7	1,806.8	1,459.5	1,402.7	1,562.8	2,073.5	2,493.8
% Change	12.1	18.6	23.3	15.8	12.2	8.2	(19.2)	(3.9)	11.4	32.7	20.3
Gross Individual Income Tax											
Calendar Year	5,038.4	5,635.3	6,296.7	7,269.7	7,648.1	8,149.2	7,969.4	8,195.9	8,963.7	9,884.9	10,781.0
% Change	6.8	11.8	11.7	15.5	5.2	6.6	(2.2)	2.8	9.4	10.3	9.1
Fiscal Year	4,927.2	5,344.9	6,043.7	6,799.8	7,530.9	8,061.7	7,881.9	7,970.1	8,602.1	9,586.6	10,547.5
% Change	7.5	8.5	13.1	12.5	10.8	7.0	(2.2)	1.1	7.9	11.4	10.0
Individual Refunds											
Calendar Year	587.5	628.5	655.2	717.4	773.8	902.6	1,108.8	1,167.3	1,227.3	1,178.3	1,389.6
% Change	7.3	7.0	4.2	9.5	7.9	16.6	22.8	5.3	5.1	(4.0)	17.9
Fiscal Year	579.1	617.1	638.2	711.9	702.0	835.4	1,171.1	1,194.4	1,217.2	1,234.2	1,282.6
% Change	4.6	6.6	3.4	11.5	(1.4)	19.0	40.2	2.0	1.9	1.4	3.9
Net Individual Income Tax											
Calendar Year	4,451.0	5,006.8	5,641.5	6,552.3	6,874.3	7,246.6	6,860.6	7,028.6	7,736.4	8,706.7	9,391.4
% Change	6.8	12.5	12.7	16.1	4.9	5.4	(5.3)	2.4	10.1	12.5	7.9
Fiscal Year	4,348.0	4,727.8	5,405.4	6,087.9	6,828.9	7,226.3	6,710.8	6,775.7	7,384.9	8,352.4	9,264.9
% Change	7.9	8.7	14.3	12.6	12.2	5.8	(7.1)	1.0	9.0	13.1	10.9
Sales and Use Tax											
Calendar Year	1,783.1	1,872.4	1,992.4	2,140.7	2,233.3	2,289.5	2,309.9	2,410.4	2,705.1	3,002.6	3,014.1
% Change	6.0	5.0	6.4	7.4	4.3	2.5	0.9	4.4	12.2	11.0	0.4
Fiscal Year	1,722.0	1,826.8	1,919.2	2,065.3	2,201.5	2,273.0	2,429.8	2,336.0	2,562.3	2,946.1	2,812.7
% Change	3.9	6.1	5.1	7.6	6.6	3.2	6.9	(3.9)	9.7	15.0	(4.5)
Corporate Income Tax											
Calendar Year	386.9	448.8	458.1	462.8	497.5	326.2	320.5	348.6	521.7	840.6	839.8
% Change	(6.0)	16.0	2.1	1.0	7.5	(34.4)	(1.8)	8.8	49.7	61.1	(0.1)
Fiscal Year	402.3	432.3	450.8	420.4	565.9	363.8	290.2	343.3	425.7	616.7	867.1
% Change	6.9	7.4	4.3	(6.7)	34.6	(35.7)	(20.2)	18.3	24.0	44.9	40.6
Wills, Suits, Deeds, Contracts											
Calendar Year	99.1	112.5	148.5	151.3	150.8	195.5	247.2	319.5	431.7	704.7	616.2
% Change	14.7	13.5	32.0	1.9	(0.3)	29.6	26.4	29.3	35.1	63.2	(12.6)
Fiscal Year	95.5	103.4	126.8	157.9	146.3	167.6	214.4	285.8	340.6	596.1	694.7
% Change	12.7	8.3	22.6	24.5	(7.3)	14.6	27.9	33.3	19.1	75.0	16.6

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

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Withholding											
Calendar Year	8,792.5	9,185.8	9,031.7	9,401.4	9,775.0	10,119.1	10,415.9	10,795.6	11,165.7	11,554.0	
% Change	6.7	4.5	(1.7)	4.1	4.0	3.5	2.9	3.6	3.4	3.5	
Fiscal Year	8,565.5	8,933.6	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
% Change	6.4	4.3	2.3	0.4	5.0	4.2	2.1	2.3	5.3	2.4	5.2
Nonwithholding											
Calendar Year	2,815.0	2,856.7	2,189.8	1,875.2	2,251.8	2,350.9	2,877.3	2,646.9	3,075.1	3,081.5	
% Change	10.8	1.5	(23.3)	(14.4)	20.1	4.4	22.4	(8.0)	16.2	0.2	
Fiscal Year	2,782.0	2,861.2	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
% Change	11.6	2.8	(19.2)	(17.5)	14.3	8.2	19.1	(10.1)	20.5	0.9	(1.7)
Gross Individual Income Tax											
Calendar Year	11,607.5	12,042.5	11,221.4	11,276.6	12,026.8	12,470.0	13,293.3	13,442.5	14,240.8	14,635.5	
% Change	7.7	3.7	(6.8)	0.5	6.7	3.7	6.6	1.1	5.9	2.8	
Fiscal Year	11,347.4	11,794.7	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
% Change	7.6	3.9	(2.9)	(3.2)	6.6	4.9	5.3	(0.4)	8.3	2.1	3.7
Individual Refunds											
Calendar Year	1,567.4	1,720.8	2,032.1	1,945.5	1,823.1	1,754.0	1,787.6	1,760.5	1,765.7	1,790.0	
% Change	12.8	9.8	18.1	(4.3)	(6.3)	(3.8)	1.9	(1.5)	0.3	1.4	
Fiscal Year	1,559.8	1,679.9	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
% Change	21.6	7.7	17.1	1.4	(6.3)	(4.5)	(3.7)	2.1	0.1	3.6	2.2
Net Individual Income Tax											
Calendar Year	10,040.0	10,321.7	9,189.3	9,331.1	10,203.8	10,716.0	11,505.7	11,682.0	12,475.1	12,845.5	
% Change	6.9	2.8	(11.0)	1.5	9.4	5.0	7.4	1.5	6.8	3.0	
Fiscal Year	9,787.6	10,114.8	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
% Change	5.6	3.3	(6.3)	(4.1)	9.4	6.7	6.9	(0.8)	9.6	1.8	4.0
Sales and Use Tax											
Calendar Year	3,123.8	2,990.8	2,853.0	2,958.0	3,080.6	3,190.9	3,178.0	3,108.9	3,253.5	3,292.3	
% Change	3.6	(4.3)	(4.6)	3.7	4.1	3.6	(0.4)	(2.2)	4.7	1.2	
Fiscal Year	3,049.1	3,075.5	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
% Change	8.4	0.9	(5.6)	6.2	(2.3)	3.6	3.1	(4.8)	5.5	1.9	1.9
Corporate Income Tax											
Calendar Year	769.3	738.0	736.7	792.7	809.9	900.9	733.7	820.6	754.8	792.6	
% Change	(8.4)	(4.1)	(0.2)	7.6	2.2	11.2	(18.6)	11.8	(8.0)	5.0	
Fiscal Year	879.6	807.9	648.0	806.5	822.3	859.9	796.7	757.5	831.9	764.9	827.0
% Change	1.4	(8.2)	(19.8)	24.4	2.0	4.6	(7.3)	(4.9)	9.8	(8.0)	8.1
Wills, Suits, Deeds, Contracts											
Calendar Year	531.9	369.5	312.8	288.5	296.8	346.2	364.0	309.7	364.4	390.8	
% Change	(13.7)	(30.5)	(15.3)	(7.8)	2.9	16.6	5.1	(14.9)	17.7	7.2	
Fiscal Year	582.9	456.3	314.3	290.2	291.5	322.1	377.5	310.8	346.3	369.1	394.4
% Change	(16.1)	(21.7)	(31.1)	(7.7)	0.4	10.5	17.2	(17.7)	11.4	6.6	6.9

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

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Insurance Premiums											
Calendar Year	216.6	220.4	243.6	248.3	254.3	280.9	308.7	339.4	365.4	372.8	366.9
% Change	1.7	1.8	10.5	1.9	2.4	10.5	9.9	9.9	7.7	2.0	(1.6)
Fiscal Year	218.0	219.0	237.0	244.9	251.1	268.1	292.7	333.0	351.3	373.6	373.8
% Change	4.7	0.5	8.2	3.4	2.5	6.8	9.2	13.8	5.5	6.3	0.1
Interest Income											
Calendar Year	94.6	116.5	125.0	118.3	147.8	111.9	86.9	59.5	69.7	105.4	180.2
% Change	18.1	23.1	7.3	(5.4)	24.9	(24.3)	(22.4)	(31.5)	17.3	51.2	71.0
Fiscal Year	82.3	114.9	105.8	126.1	131.2	133.2	100.4	81.7	61.4	83.9	116.5
% Change	27.5	39.7	(7.9)	19.2	4.0	1.5	(24.6)	(18.6)	(24.8)	36.6	38.9
Alcoholic Beverage Sales											
Calendar Year	103.0	103.8	107.2	111.9	119.2	123.6	129.0	131.5	139.6	147.0	155.2
% Change	0.9	0.8	3.2	4.4	6.5	3.7	4.3	1.9	6.2	5.3	5.6
Fiscal Year	104.4	103.5	105.5	110.6	117.2	123.0	127.5	128.7	138.0	144.5	153.0
% Change	3.4	(0.9)	1.9	4.8	6.0	4.9	3.6	1.0	7.2	4.7	5.9
All Other Revenues											
Calendar Year	397.5	429.8	432.6	560.6	484.2	549.3	548.2	596.8	673.1	518.9	567.4
% Change	7.0	8.1	0.6	29.6	(13.6)	13.5	(0.2)	8.9	12.8	(22.9)	9.3
Fiscal Year	383.5	421.5	422.9	489.7	546.4	550.4	513.1	582.9	653.6	574.1	551.6
% Change	6.4	9.9	0.3	15.8	11.6	0.7	(6.8)	13.6	12.1	(12.2)	(3.9)
Total General Fund Revenues											
Calendar Year	7,531.8	8,311.0	9,148.7	10,346.2	10,761.3	11,123.6	10,810.9	11,234.2	12,642.8	14,398.7	15,131.3
% Change	5.8	10.3	10.1	13.1	4.0	3.4	(2.8)	3.9	12.5	13.9	5.1
Fiscal Year	7,356.1	7,949.3	8,773.5	9,702.7	10,788.5	11,105.3	10,679.0	10,867.1	11,917.9	13,687.3	14,834.3
% Change	6.9	8.1	10.4	10.6	11.2	2.9	(3.8)	1.8	9.7	14.8	8.4
ABC Profits											
Fiscal Year	26.0	23.8	20.7	25.5	30.1	28.1	25.4	14.2	16.8	24.9	30.0
% Change	36.8	(8.5)	(12.9)	23.0	18.2	(6.8)	(9.6)	(44.1)	18.0	48.9	20.4

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

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Insurance Premiums											
Calendar Year	398.8	309.2	254.5	267.3	257.4	276.4	272.6	305.6	312.6	341.9	
% Change	8.7	(22.5)	(17.7)	5.0	(3.7)	7.4	(1.4)	12.1	2.3	9.4	
Fiscal Year	384.9	396.9	255.0	261.9	281.6	252.9	262.2	320.4	300.6	339.1	340.9
% Change	3.0	3.1	(35.7)	2.7	7.5	(10.2)	3.7	22.2	(6.2)	12.8	0.5
Interest Income											
Calendar Year	213.1	117.6	71.0	75.0	80.2	72.7	66.6	65.4	49.2	55.0	
% Change	18.2	(44.8)	(39.6)	5.5	7.0	(9.4)	(8.3)	(1.8)	(24.8)	11.9	
Fiscal Year	175.9	189.3	104.2	94.3	81.1	77.2	67.5	74.1	48.7	52.2	55.6
% Change	51.1	7.6	(44.9)	(9.5)	(14.0)	(4.9)	(12.5)	9.8	(34.3)	7.1	6.7
Alcoholic Beverage Sales											
Calendar Year	163.1	169.8	173.4	176.5	181.8	189.4	195.9	200.9	210.5	218.6	
% Change	5.0	4.1	2.2	1.8	3.0	4.2	3.4	2.6	4.8	3.8	
Fiscal Year	161.8	168.9	173.2	175.1	178.9	186.4	195.2	199.2	207.8	217.6	222.4
% Change	5.8	4.3	2.6	1.1	2.2	4.2	4.7	2.1	4.3	4.7	2.2
All Other Revenues											
Calendar Year	563.1	488.5	406.3	432.1	423.9	412.4	423.7	437.7	443.8	436.6	
% Change	(0.8)	(13.3)	(16.8)	6.4	(1.9)	(2.7)	2.7	3.3	1.4	(1.6)	
Fiscal Year	543.9	557.4	435.7	420.7	428.1	413.9	425.7	429.6	436.2	445.8	444.9
% Change	(1.4)	2.5	(21.8)	(3.4)	1.8	(3.3)	2.9	0.9	1.5	2.2	(0.2)
Total General Fund Revenues											
Calendar Year	15,803.1	15,505.0	13,997.0	14,321.2	15,334.3	16,105.0	16,740.2	16,930.7	17,863.9	18,373.3	
% Change	4.4	(1.9)	(9.7)	2.3	7.1	5.0	3.9	1.1	5.5	2.9	
Fiscal Year	15,565.8	15,767.0	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
% Change	4.9	1.3	(9.2)	(0.7)	5.8	5.4	5.3	(1.6)	8.1	1.7	3.6
ABC Profits											
Fiscal Year	27.6	36.1	44.1	50.0	50.5	63.8	68.0	72.2	83.3	83.3	83.3
% Change	(8.3)	31.0	22.2	13.4	1.0	26.3	6.6	6.2	15.4	0.0	0.0

APPENDIX C
MODELS AND METHODOLOGIES

GENERAL FUND METHODOLOGY

Corporate Income Tax, Gross Receipts

<u>Fiscal Year</u>		<u>Actual</u>	<u>Fitted</u>	<u>Residual</u>	<u>% Residual</u>
2009	08Q3	220.0	237.5	(17.5)	-8.0%
	08Q4	201.5	125.1	76.3	37.9%
	09Q1	113.6	190.9	(77.2)	-68.0%
	09Q2	339.2	360.5	(21.2)	-6.3%
	Total	874.3	914.0	(39.6)	-4.5%
2010	09Q3	203.7	232.3	(28.6)	-14.0%
	09Q4	249.8	255.5	(5.7)	-2.3%
	10Q1	129.0	148.5	(19.5)	-15.1%
	10Q2	379.4	368.0	11.3	3.0%
	Total	961.9	1,004.4	(42.5)	-4.4%
2011	10Q3	227.0	228.0	(1.1)	-0.5%
	10Q4	238.3	264.3	(26.0)	-10.9%
	11Q1	161.8	127.1	34.7	21.5%
	11Q2	390.4	381.5	8.9	2.3%
	Total	1,017.5	1,000.9	16.6	1.6%
2012	11Q3	241.8	222.4	19.4	8.0%
	11Q4	224.1	242.2	(18.1)	-8.1%
	12Q1	184.9	192.6	(7.7)	-4.2%
	12Q2	397.9	413.2	(15.2)	-3.8%
	Total	1,048.8	1,070.4	(21.6)	-2.1%
2013	12Q3	224.8	266.0	(41.2)	-18.3%
	12Q4	273.1	238.8	34.3	12.6%
	13Q1	134.1	182.6	(48.4)	-36.1%
	13Q2	375.1	397.4	(22.3)	-5.9%
	Total	1,007.1	1,084.8	(77.6)	-7.7%
2014	13Q3	242.2	223.7	18.5	7.6%
	13Q4	225.4	276.5	(51.0)	-22.6%
	14Q1	141.3	133.8	7.5	5.3%
	14Q2	356.1	383.0	(26.9)	-7.6%
	Total	965.0	1,017.0	(52.0)	-5.4%
2015	14Q3	256.6	249.0	7.6	3.0%
	14Q4	242.0	230.0	12.0	5.0%
	15Q1	159.4	144.2	15.2	9.5%
	15Q2	350.5	357.0	(6.5)	-1.8%
	Total	1,008.5	980.1	28.4	2.8%
2016	15Q3	233.5	253.1	(19.5)	-8.4%
	15Q4	219.5	227.5	(8.0)	-3.6%
	16Q1	186.3	157.2	29.1	15.6%
	16Q2	334.5	345.8	(11.3)	-3.4%
	Total	973.8	983.6	(9.7)	-1.0%
2017	16Q3	242.4	235.6	6.8	2.8%
	16Q4	232.2	237.5	(5.3)	-2.3%
	17Q1	165.1	197.9	(32.9)	-19.9%
	17Q2	391.3	342.6	48.7	12.4%
	Total	1,031.1	1,013.8	17.3	1.7%

Individual Income Tax - Withholding

diffya(with)

$$= 0.00644 * \text{diffya}(\text{ywstran}) + 41.6046$$

(3.62285) (2.73376)

Sum Sq	136618	Std Err	53.3498	LHS Mean	92.1791
R Sq	0.2069	R Bar Sq	0.1739	F 2, 48	6.2628
D.W.(1)	2.0942	D.W.(4)	1.9893		

Quarterly data for 51 periods from 2005Q1 to 2017Q3

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

Fiscal Year		Actual	Fitted	Residual	% Residual
2009	08Q3	2,175.8	2,170.8	4.9	0.2%
	08Q4	2,304.3	2,328.1	(23.8)	-1.0%
	09Q1	2,386.6	2,457.2	(70.6)	-3.0%
	09Q2	2,271.5	2,265.3	6.1	0.3%
	Total	9,138.1	9,221.4	(83.4)	-0.9%
2010	09Q3	2,125.0	2,222.0	(96.9)	-4.6%
	09Q4	2,328.6	2,374.8	(46.2)	-2.0%
	10Q1	2,416.4	2,490.4	(74.0)	-3.1%
	10Q2	2,306.1	2,350.0	(43.9)	-1.9%
	Total	9,176.2	9,437.2	(261.0)	-2.8%
2011	10Q3	2,219.1	2,251.1	(32.0)	-1.4%
	10Q4	2,459.9	2,439.6	20.2	0.8%
	11Q1	2,538.5	2,552.9	(14.4)	-0.6%
	11Q2	2,417.6	2,422.4	(4.8)	-0.2%
	Total	9,635.1	9,666.0	(30.9)	-0.3%
2012	11Q3	2,308.0	2,327.5	(19.5)	-0.8%
	11Q4	2,510.9	2,542.5	(31.6)	-1.3%
	12Q1	2,640.7	2,616.8	23.9	0.9%
	12Q2	2,580.0	2,489.2	90.8	3.5%
	Total	10,039.7	9,976.1	63.6	0.6%
2013	12Q3	2,292.0	2,374.2	(82.2)	-3.6%
	12Q4	2,606.4	2,617.8	(11.4)	-0.4%
	13Q1	2,761.1	2,680.1	81.0	2.9%
	13Q2	2,591.9	2,609.7	(17.9)	-0.7%
	Total	10,251.3	10,281.8	(30.5)	-0.3%
2014	13Q3	2,403.1	2,354.3	48.8	2.0%
	13Q4	2,659.9	2,629.7	30.2	1.1%
	14Q1	2,803.7	2,819.2	(15.5)	-0.6%
	14Q2	2,617.5	2,679.2	(61.7)	-2.4%
	Total	10,484.2	10,482.4	1.8	0.0%
2015	14Q3	2,554.4	2,477.0	77.4	3.0%
	14Q4	2,820.0	2,753.8	66.1	2.3%
	15Q1	2,875.3	2,914.8	(39.5)	-1.4%
	15Q2	2,794.7	2,747.5	47.2	1.7%
	Total	11,044.3	10,893.0	151.3	1.4%
2016	15Q3	2,666.5	2,659.1	7.4	0.3%
	15Q4	2,829.2	2,926.5	(97.3)	-3.4%
	16Q1	3,029.1	2,974.6	54.5	1.8%
	16Q2	2,781.4	2,867.1	(85.7)	-3.1%
	Total	11,306.3	11,427.4	(121.1)	-1.1%
2017	16Q3	2,777.0	2,758.3	18.8	0.7%
	16Q4	2,966.4	2,922.1	44.3	1.5%
	17Q1	3,231.3	3,114.3	117.0	3.6%
	17Q2	2,920.7	2,896.0	24.7	0.8%
	Total	11,895.4	11,690.6	204.7	1.7%

GENERAL FUND METHODOLOGY

Individual Income Tax - Estimated Payments

	<u>Fiscal Year</u>	<u>Actual</u>	<u>Fitted</u>	<u>Residual</u>	<u>% Residual</u>
2009	08Q3	374.4	344.6	29.9	8.0%
	08Q4	201.6	229.0	-27.4	-13.6%
	09Q1	412.2	406.3	5.9	1.4%
	09Q2	447.4	444.1	3.3	0.7%
	Total	1,435.6	1,423.9	11.6	0.8%
2010	09Q3	281.6	295.2	-13.6	-4.8%
	09Q4	173.4	193.6	-20.3	-11.7%
	10Q1	352.3	388.7	-36.5	-10.4%
	10Q2	444.6	438.5	6.2	1.4%
	Total	1,251.8	1,316.0	-64.2	-5.1%
2011	10Q3	328.3	346.7	-18.3	-5.6%
	10Q4	223.2	243.0	-19.8	-8.9%
	11Q1	453.2	484.0	-30.8	-6.8%
	11Q2	567.7	607.5	-39.8	-7.0%
	Total	1,572.5	1,681.2	-108.7	-6.9%
2012	11Q3	315.5	309.1	6.5	2.0%
	11Q4	226.7	228.1	-1.4	-0.6%
	12Q1	370.3	414.2	-43.9	-11.9%
	12Q2	522.6	512.4	10.2	1.9%
	Total	1,435.1	1,463.8	-28.7	-2.0%
2013	12Q3	299.0	347.2	-48.2	-16.1%
	12Q4	178.2	284.0	-105.8	-59.4%
	13Q1	492.6	413.3	79.3	16.1%
	13Q2	593.0	530.5	62.6	10.5%
	Total	1,562.8	1,574.9	-12.1	-0.8%
2014	13Q3	328.3	346.7	-18.3	-5.6%
	13Q4	223.2	243.0	-19.8	-8.9%
	14Q1	453.2	484.0	-30.8	-6.8%
	14Q2	567.7	607.5	-39.8	-7.0%
	Total	1,572.5	1,681.2	-108.7	-6.9%
2015	14Q3	372.7	396.4	-23.7	-6.3%
	14Q4	317.8	286.9	30.9	9.7%
	15Q1	516.7	516.9	-0.1	0.0%
	15Q2	642.8	630.0	12.8	2.0%
	Total	1,850.0	1,830.1	19.9	1.1%
2016	15Q3	398.1	404.3	-6.3	-1.6%
	15Q4	383.8	308.4	75.4	19.6%
	16Q1	493.9	513.5	-19.6	-4.0%
	16Q2	646.5	631.3	15.2	2.4%
	Total	1,922.3	1,857.6	64.7	3.4%
2017	16Q3	410.6	411.0	-0.4	-0.1%
	16Q4	335.7	355.7	-20.0	-5.9%
	17Q1	581.4	539.8	41.6	7.2%
	17Q2	621.0	669.8	-48.9	-7.9%
	Total	1,948.7	1,976.3	-27.5	-1.4%

Individual Income Tax – Final Payments

pch(fp)

$$= 1.18499 * \text{pch}(\text{cysp500}) + 1.74292$$

(3.14404) (0.32325)

Sum Sq	6139.7	Std Err	20.9416	LHS Mean	5.7965
R Sq	0.4139	R Bar Sq	0.3720	F 1, 14	9.8850
D.W.(1)	1.8824	D.W.(2)	1.4036		

Annual data for 16 periods from 2001 to 2016

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

GENERAL FUND METHODOLOGY

Individual Income Tax - Final Payments Percent Growth

Fiscal <u>Year</u>	<u>Actual</u>	<u>Fitted</u>	<u>Residual</u>
2002	(37.8)	(4.3)	(33.5)
2003	(4.3)	(10.1)	5.7
2004	27.9	17.8	10.1
2005	53.0	8.0	45.0
2006	21.0	4.7	16.3
2007	18.6	10.6	8.0
2008	4.5	5.0	(0.5)
2009	(30.0)	(18.5)	(11.5)
2010	(25.1)	16.1	(41.3)
2011	34.0	10.2	23.8
2012	5.2	3.0	2.2
2013	34.9	10.5	24.4
2014	(23.5)	19.6	(43.1)
2015	25.1	9.4	15.7
2016	(3.7)	2.6	(6.3)
2017	(6.8)	8.3	(15.1)

State Sales Tax

diff(sales)

$$= 0.00099 * \text{diff}(\text{yrpicva}) - 0.59403$$

(0.86652) (0.11115)

Sum Sq	42874.1	Std Err	33.5897	LHS Mean	2.4049
R Sq	0.0651	R Bar Sq	0.0159	F 2, 38	1.3227
D.W.(1)	2.2723	D.W.(4)	0.7282		

Quarterly data for 41 periods from 2007Q3 to 2017Q3

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

GENERAL FUND METHODOLOGY

State Sales Tax

	<u>Fiscal Year</u>	<u>Actual</u>	<u>Fitted</u>	<u>Residual</u>	<u>% Residual</u>
2009	08Q3	769.9	755.5	14.4	1.9%
	08Q4	729.3	766.1	(36.9)	-5.1%
	09Q1	708.8	729.9	(21.1)	-3.0%
	09Q2	695.4	713.9	(18.4)	-2.6%
	Total	2,903.5	2,965.4	(62.0)	-2.1%
2010	09Q3	724.7	697.5	27.2	3.8%
	09Q4	724.0	717.6	6.3	0.9%
	10Q1	674.5	729.0	(54.5)	-8.1%
	10Q2	735.5	693.2	42.3	5.7%
	Total	2,858.7	2,837.3	21.3	0.7%
2011	10Q3	774.0	723.9	50.1	6.5%
	10Q4	746.3	768.3	(22.1)	-3.0%
	11Q1	719.7	763.1	(43.4)	-6.0%
	11Q2	776.4	731.8	44.6	5.7%
	Total	3,016.4	2,987.2	29.2	1.0%
2012	11Q3	787.1	767.7	19.4	2.5%
	11Q4	772.0	786.5	(14.5)	-1.9%
	12Q1	768.1	782.3	(14.2)	-1.9%
	12Q2	807.6	773.7	33.9	4.2%
	Total	3,134.8	3,110.2	24.6	0.8%
2013	12Q3	817.9	799.7	18.2	2.2%
	12Q4	777.1	825.9	(48.7)	-6.3%
	13Q1	787.0	774.2	12.8	1.6%
	13Q2	813.1	781.2	31.9	3.9%
	Total	3,195.1	3,180.9	14.2	0.4%
2014	13Q3	791.0	807.2	(16.2)	-2.0%
	13Q4	766.1	798.4	(32.3)	-4.2%
	14Q1	721.1	778.4	(57.3)	-7.9%
	14Q2	794.0	738.7	55.3	7.0%
	Total	3,072.2	3,122.6	(50.5)	-1.6%
2015	14Q3	793.3	780.5	12.8	1.6%
	14Q4	778.5	799.1	(20.6)	-2.7%
	15Q1	764.3	786.8	(22.5)	-2.9%
	15Q2	817.2	775.5	41.7	5.1%
	Total	3,153.3	3,141.9	11.4	0.4%
2016	15Q3	827.1	808.0	19.1	2.3%
	15Q4	831.7	827.4	4.2	0.5%
	16Q1	781.5	829.1	(47.6)	-6.1%
	16Q2	828.3	796.8	31.6	3.8%
	Total	3,268.6	3,261.3	7.3	0.2%
2017	16Q3	841.2	819.9	21.3	2.5%
	16Q4	827.1	838.9	(11.8)	-1.4%
	17Q1	820.0	836.5	(16.5)	-2.0%
	17Q2	848.8	825.8	22.9	2.7%
	Total	3,337.0	3,321.1	15.9	0.5%

Recordation Taxes

diff(rec)

$$\begin{aligned}
 &= 0.01131 * \text{diff}(\text{mortorigin}) + 0.00048 * \text{diff}(\text{mortrefi}) + \\
 &\quad (1.06051) \quad (0.08907) \\
 &0.51668 * \text{diff}(\text{homepriceind}) - 12.2950 * \text{diff}(\text{rtbond30y.1}) - \\
 &\quad (2.02289) \quad (2.84480) \\
 &5.34355 * \text{qd1} + 25.2382 * \text{qd2} - 5.80698 \\
 &\quad (1.99644) \quad (9.34092) \quad (3.77745)
 \end{aligned}$$

Sum Sq	1242.53	Std Err	6.4357	LHS Mean	-0.1978
R Sq	0.8163	R Bar Sq	0.7796	F 6, 30	22.2199
D.W.(1)	1.4478	D.W.(4)	1.6917		

Quarterly data for 37 periods from 2008Q1 to 2017Q3

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
2009	08Q3	90.3	102.0	(11.7)	-12.9%
	08Q4	66.2	81.5	(15.3)	-23.2%
	09Q1	68.4	68.5	(0.1)	-0.2%
	09Q2	89.3	84.3	5.0	5.7%
	Total	314.3	336.4	(22.1)	-7.0%
2010	09Q3	80.5	71.3	9.2	11.4%
	09Q4	74.6	72.0	2.7	3.6%
	10Q1	60.1	60.9	(0.8)	-1.3%
	10Q2	75.0	76.0	(1.0)	-1.3%
	Total	290.2	280.1	10.1	3.5%
2011	10Q3	75.7	75.2	0.5	0.7%
	10Q4	77.7	72.9	4.8	6.1%
	11Q1	63.3	59.3	4.0	6.3%
	11Q2	74.7	75.3	(0.6)	-0.8%
	Total	291.5	282.8	8.7	3.0%
2012	11Q3	78.9	71.7	7.3	9.2%
	11Q4	79.8	81.5	(1.7)	-2.1%
	12Q1	73.5	74.5	(1.0)	-1.3%
	12Q2	89.8	92.8	(3.1)	-3.4%
	Total	322.1	320.5	1.6	0.5%
2013	12Q3	90.7	87.6	3.1	3.4%
	12Q4	92.2	87.6	4.6	5.0%
	13Q1	91.3	81.3	10.0	10.9%
	13Q2	103.3	108.7	(5.4)	-5.2%
	Total	377.5	365.2	12.3	3.3%
2014	13Q3	93.2	98.5	(5.3)	-5.6%
	13Q4	76.2	82.2	(6.0)	-7.8%
	14Q1	60.6	67.0	(6.5)	-10.7%
	14Q2	80.8	84.2	(3.5)	-4.3%
	Total	310.8	331.9	(21.2)	-6.8%
2015	14Q3	87.5	79.4	8.1	9.3%
	14Q4	80.9	85.7	(4.8)	-6.0%
	15Q1	76.1	76.6	(0.5)	-0.7%
	15Q2	101.8	102.6	(0.8)	-0.8%
	Total	346.3	344.3	2.0	0.6%
2016	15Q3	96.0	93.0	3.0	3.2%
	15Q4	90.4	91.4	(1.0)	-1.1%
	16Q1	78.7	81.9	(3.2)	-4.0%
	16Q2	104.0	102.1	1.9	1.8%
	Total	369.1	368.3	0.8	0.2%
2017	16Q3	109.6	101.0	8.6	7.8%
	16Q4	98.5	108.8	(10.3)	-10.5%
	17Q1	80.4	82.3	(1.9)	-2.4%
	17Q2	105.9	98.5	7.4	7.0%
	Total	394.4	390.7	3.7	0.9%

Motor Fuels Tax

gas

$$\begin{aligned}
 &= -72.9214 * \text{movavg}(3, \text{pdccengas}/\text{pdcce}) \\
 &\quad (1.67743) \\
 &+ 0.00142 * \text{movavg}(3, \text{cyrpicva}) + 120.948 * \text{season}_2 \\
 &\quad (7.97397) \quad (5.49181) \\
 &+ 25.9875 * \text{season}_3 + 59.3972 * \text{season}_4 + 500.443 \\
 &\quad (1.19105) \quad (2.69781) \quad (13.4746)
 \end{aligned}$$

Sum Sq	673865	Std Err	80.8850	LHS Mean	914.145
R Sq	0.5962	R Bar Sq	0.5766	F 5,103	30.4160
D.W.(1)	2.6495	D.W.(4)	0.3535		

diesel

$$\begin{aligned}
 &= 0.29530 * \text{xtnemva} - 0.00082 * \text{cyrpicva} + 31.2414 * \text{season}_2 \\
 &\quad (10.2357) \quad (5.91765) \quad (4.64534) \\
 &- 0.74086 * \text{season}_3 + 10.5116 * \text{season}_4 - 551.871 \\
 &\quad (0.11116) \quad (1.56270) \quad (9.11716)
 \end{aligned}$$

Sum Sq	62883.9	Std Err	24.7088	LHS Mean	236.204
R Sq	0.7963	R Bar Sq	0.7864	F 5,103	80.5287
D.W.(1)	1.7022	D.W.(4)	0.4831		

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>
2008	07Q3	1,057.1	976.1	81.0	7.7%
	07Q4	1,006.3	1,008.2	(1.9)	-0.2%
	08Q1	944.4	950.1	(5.8)	-0.6%
	08Q2	945.5	1,069.6	(124.0)	-13.1%
	Total	3,953.3	4,004.0	(50.7)	-1.3%
2009	08Q3	1,037.1	970.1	67.0	6.5%
	08Q4	986.9	988.2	(1.3)	-0.1%
	09Q1	937.4	918.4	19.0	2.0%
	09Q2	992.5	1,046.5	(54.0)	-5.4%
	Total	3,953.9	3,923.2	30.7	0.8%
2010	09Q3	1,010.7	944.0	66.7	6.6%
	09Q4	935.7	970.9	(35.2)	-3.8%
	10Q1	955.3	905.4	49.9	5.2%
	10Q2	1,082.9	1,032.8	50.1	4.6%
	Total	3,984.6	3,853.2	131.4	3.3%
2011	10Q3	841.3	938.7	(97.4)	-11.6%
	10Q4	1,021.0	973.2	47.8	4.7%
	11Q1	927.3	911.5	15.8	1.7%
	11Q2	1,144.6	1,034.7	109.9	9.6%
	Total	3,934.3	3,858.1	76.2	1.9%
2012	11Q3	802.7	943.4	(140.7)	-17.5%
	11Q4	944.3	975.2	(30.9)	-3.3%
	12Q1	901.8	918.3	(16.5)	-1.8%
	12Q2	1,246.4	1,037.5	208.9	16.8%
	Total	3,895.3	3,874.5	20.8	0.5%
2013	12Q3	706.8	945.6	(238.7)	-33.8%
	12Q4	1,022.5	986.4	36.2	3.5%
	13Q1	904.7	917.9	(13.2)	-1.5%
	13Q2	1,153.5	1,039.7	113.8	9.9%
	Total	3,787.5	3,889.6	(102.0)	-2.7%
2014	13Q3	737.9	941.2	(203.3)	-27.5%
	13Q4	1,023.3	972.0	51.3	5.0%
	14Q1	977.4	919.4	58.0	5.9%
	14Q2	1,129.4	1,042.3	87.1	7.7%
	Total	3,868.0	3,874.9	(6.9)	-0.2%
2015	14Q3	856.3	949.3	(93.0)	-10.9%
	14Q4	989.3	985.5	3.7	0.4%
	15Q1	914.5	936.4	(21.9)	-2.4%
	15Q2	1,241.9	1,064.5	177.4	14.3%
	Total	4,002.0	3,935.8	66.3	1.7%
2016	15Q3	796.4	977.8	(181.4)	-22.8%
	15Q4	1,038.5	1,014.5	24.0	2.3%
	16Q1	959.3	955.2	4.1	0.4%
	16Q2	1,205.6	1,082.9	122.7	10.2%
	Total	3,999.8	4,030.5	(30.7)	-0.8%
2017	16Q3	824.9	991.5	(166.6)	-20.2%
	16Q4	1,056.9	1,023.8	33.1	3.1%
	17Q1	947.0	968.2	(21.1)	-2.2%
	17Q2	1,292.9	1,088.1	204.7	15.8%
	Total	4,121.7	4,071.6	50.1	1.2%

NON-GENERAL FUND METHODOLOGY

Diesel Fuel Consumption

	<u>Fiscal Year</u>	<u>Actual</u>	<u>Fitted</u>	<u>Residual</u>	<u>% Residual</u>
2008	07Q3	305.0	267.4	37.5	12.3%
	07Q4	286.7	282.1	4.6	1.6%
	08Q1	272.2	274.2	(2.1)	-0.8%
	08Q2	262.1	299.6	(37.5)	-14.3%
	Total	1,125.9	1,123.4	2.5	0.2%
2009	08Q3	290.3	270.3	19.9	6.9%
	08Q4	264.6	271.3	(6.7)	-2.5%
	09Q1	231.6	249.4	(17.7)	-7.7%
	09Q2	247.9	268.9	(21.0)	-8.5%
	Total	1,034.3	1,059.8	(25.5)	-2.5%
2010	09Q3	252.3	232.7	19.6	7.8%
	09Q4	232.3	244.1	(11.8)	-5.1%
	10Q1	249.6	225.4	24.2	9.7%
	10Q2	278.3	265.5	12.8	4.6%
	Total	1,012.5	967.7	44.7	4.4%
2011	10Q3	217.2	231.3	(14.1)	-6.5%
	10Q4	259.2	243.8	15.4	5.9%
	11Q1	237.6	231.8	5.8	2.4%
	11Q2	299.8	265.3	34.5	11.5%
	Total	1,013.8	972.2	41.6	4.1%
2012	11Q3	184.8	234.9	(50.2)	-27.1%
	11Q4	257.0	248.3	8.6	3.4%
	12Q1	235.3	239.3	(4.1)	-1.7%
	12Q2	321.3	268.7	52.6	16.4%
	Total	998.3	991.3	7.0	0.7%
2013	12Q3	191.6	238.8	(47.2)	-24.6%
	12Q4	261.7	250.5	11.2	4.3%
	13Q1	240.4	255.2	(14.8)	-6.2%
	13Q2	323.7	282.9	40.9	12.6%
	Total	1,017.5	1,027.4	(9.9)	-1.0%
2014	13Q3	204.7	252.7	(48.0)	-23.5%
	13Q4	260.1	264.0	(3.9)	-1.5%
	14Q1	257.0	250.7	6.3	2.4%
	14Q2	307.9	284.9	23.0	7.5%
	Total	1,029.7	1,052.3	(22.6)	-2.2%
2015	14Q3	202.4	251.8	(49.4)	-24.4%
	14Q4	266.5	260.8	5.8	2.2%
	15Q1	243.3	252.1	(8.8)	-3.6%
	15Q2	319.4	287.3	32.2	10.1%
	Total	1,031.7	1,051.9	(20.2)	-2.0%
2016	15Q3	210.4	263.4	(53.0)	-25.2%
	15Q4	257.7	279.8	(22.1)	-8.6%
	16Q1	238.9	272.3	(33.4)	-14.0%
	16Q2	291.1	304.8	(13.7)	-4.7%
	Total	998.1	1,120.4	(122.3)	-12.3%
2017	16Q3	229.6	273.7	(44.2)	-19.2%
	16Q4	263.7	288.8	(25.1)	-9.5%
	17Q1	254.0	285.3	(31.3)	-12.3%
	17Q2	328.1	315.2	12.9	3.9%
	Total	1,075.4	1,163.0	(87.7)	-8.2%

NON-GENERAL FUND METHODOLOGY

Motor Vehicle Sales and Use Tax

log(ttcarsq)

$$\begin{aligned} &= 1.86309 * \text{dlogya}(\text{pdcgdp}) \\ &\quad (1.34653) \\ &+ 1.43858 * \text{movavg}(2, \text{dlogya}(\text{xtnemva}.4)) \\ &\quad (3.09402) \\ &+ 0.00000 * \text{diffya}(\text{yrpicva}) + 0.09915 * \text{season}_2 \\ &\quad (4.33868) \quad (4.72985) \\ &+ 0.08928 * \text{season}_3 - 0.09747 * \text{season}_4 + 5.78050 \\ &\quad (4.25926) \quad (4.60559) \quad (210.381) \end{aligned}$$

Sum Sq	0.5317	Std Err	0.0748	LHS Mean	5.9190
R Sq	0.6277	R Bar Sq	0.6042	F 6, 95	26.6918
D.W.(1)	0.3948	D.W.(4)	0.8498		

newcar

$$\begin{aligned} &= 0.00619 * \text{suvlv} + 0.01721 * \text{season}_2 + 0.01972 * \text{season}_3 \\ &\quad (17.4818) \quad (9.7662) \quad (11.3264) \\ &- 0.01304 \\ &\quad (2.38504) \end{aligned}$$

Sum Sq	0.0059	Std Err	0.0075	LHS Mean	0.0904
R Sq	0.8212	R Bar Sq	0.8161	F 3,105	160.741
D.W.(1)	0.4288	D.W.(4)	0.4543		

TTCARSQ	Total taxable titles
PDIGDP	GDP price deflator
XTNEMVA	Virginia non-agricultural employment
YR PICVA	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
RM CBLV	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>
2008	07Q3	109.3	109.7	(0.4)	-0.3%
	07Q4	85.7	86.1	(0.4)	-0.5%
	08Q1	83.4	85.5	(2.1)	-2.5%
	08Q2	99.1	99.7	(0.7)	-0.7%
	Total	377.4	381.0	(3.6)	-1.0%
2009	08Q3	91.8	96.5	(4.7)	-5.1%
	08Q4	57.2	66.4	(9.2)	-16.1%
	09Q1	55.8	68.9	(13.1)	-23.5%
	09Q2	68.8	78.8	(10.0)	-14.6%
	Total	273.5	310.6	(37.1)	-13.6%
2010	09Q3	87.9	86.5	1.4	1.6%
	09Q4	55.7	60.9	(5.2)	-9.4%
	10Q1	59.9	67.0	(7.1)	-11.9%
	10Q2	81.5	87.2	(5.7)	-7.0%
	Total	284.9	301.6	(16.7)	-5.9%
2011	10Q3	79.9	92.8	(12.9)	-16.1%
	10Q4	67.2	75.5	(8.3)	-12.3%
	11Q1	76.0	84.7	(8.7)	-11.5%
	11Q2	85.8	95.7	(9.8)	-11.5%
	Total	308.9	348.6	(39.7)	-12.9%
2012	11Q3	83.2	96.7	(13.6)	-16.3%
	11Q4	74.8	80.5	(5.7)	-7.7%
	12Q1	81.6	89.3	(7.7)	-9.4%
	12Q2	95.4	97.3	(1.9)	-2.0%
	Total	335.0	363.9	(28.9)	-8.6%
2013	12Q3	95.1	99.6	(4.4)	-4.6%
	12Q4	81.6	80.8	0.7	0.9%
	13Q1	86.8	83.9	2.8	3.3%
	13Q2	99.1	98.0	1.1	1.1%
	Total	362.6	362.3	0.3	0.1%
2014	13Q3	99.5	96.9	2.5	2.6%
	13Q4	81.1	73.1	8.0	9.8%
	14Q1	81.4	73.9	7.5	9.2%
	14Q2	90.5	93.4	(2.9)	-3.2%
	Total	352.5	337.3	15.2	4.3%
2015	14Q3	102.3	98.9	3.4	3.3%
	14Q4	84.6	84.2	0.5	0.6%
	15Q1	83.9	83.2	0.7	0.9%
	15Q2	103.8	105.0	(1.2)	-1.2%
	Total	374.6	371.3	3.4	0.9%
2016	15Q3	109.5	109.0	0.4	0.4%
	15Q4	91.6	89.1	2.6	2.8%
	16Q1	88.6	88.4	0.2	0.2%
	16Q2	101.4	102.1	(0.7)	-0.7%
	Total	391.0	388.6	2.4	0.6%
2017	16Q3	108.2	105.8	2.4	2.2%
	16Q4	92.3	86.8	5.5	5.9%
	17Q1	92.0	88.4	3.6	3.9%
	17Q2	98.4	101.5	(3.2)	-3.2%
	Total	390.9	382.5	8.3	2.1%

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>
2008	07Q3	303.9	307.5	(3.6)	-1.2%
	07Q4	254.1	255.4	(1.4)	-0.5%
	08Q1	285.3	278.9	6.4	2.2%
	08Q2	297.4	310.4	(12.9)	-4.3%
	Total	1,140.7	1,152.2	(11.5)	-1.0%
2009	08Q3	278.0	299.3	(21.3)	-7.6%
	08Q4	212.2	254.6	(42.4)	-20.0%
	09Q1	255.8	260.2	(4.4)	-1.7%
	09Q2	271.2	269.3	1.9	0.7%
	Total	1,017.2	1,083.4	(66.2)	-6.5%
2010	09Q3	277.1	255.2	21.9	7.9%
	09Q4	219.5	225.6	(6.1)	-2.8%
	10Q1	266.5	265.1	1.5	0.5%
	10Q2	294.8	282.0	12.8	4.3%
	Total	1,057.9	1,027.8	30.0	2.8%
2011	10Q3	289.2	280.9	8.4	2.9%
	10Q4	237.9	240.4	(2.5)	-1.0%
	11Q1	289.1	276.2	12.9	4.5%
	11Q2	289.8	310.4	(20.6)	-7.1%
	Total	1,106.0	1,107.8	(1.8)	-0.2%
2012	11Q3	276.8	319.3	(42.5)	-15.4%
	11Q4	237.4	260.4	(23.0)	-9.7%
	12Q1	296.0	285.2	10.8	3.6%
	12Q2	285.8	313.2	(27.4)	-9.6%
	Total	1,096.0	1,178.1	(82.1)	-7.5%
2013	12Q3	281.8	298.1	(16.3)	-5.8%
	12Q4	237.1	267.3	(30.2)	-12.8%
	13Q1	280.8	258.6	22.2	7.9%
	13Q2	305.5	274.2	31.3	10.2%
	Total	1,105.1	1,098.3	6.8	0.6%
2014	13Q3	290.0	268.6	21.4	7.4%
	13Q4	241.6	218.9	22.8	9.4%
	14Q1	271.0	285.2	(14.2)	-5.2%
	14Q2	307.7	312.0	(4.4)	-1.4%
	Total	1,110.3	1,084.7	25.6	2.3%
2015	14Q3	289.1	307.8	(18.8)	-6.5%
	14Q4	250.1	254.4	(4.3)	-1.7%
	15Q1	271.6	280.9	(9.3)	-3.4%
	15Q2	306.8	302.7	4.1	1.3%
	Total	1,117.6	1,145.8	(28.2)	-2.5%
2016	15Q3	297.5	293.3	4.1	1.4%
	15Q4	257.4	241.1	16.4	6.4%
	16Q1	291.0	268.3	22.7	7.8%
	16Q2	309.5	287.0	22.5	7.3%
	Total	1,155.4	1,089.7	65.7	5.7%
2017	16Q3	304.0	282.4	21.6	7.1%
	16Q4	266.9	236.7	30.3	11.3%
	17Q1	305.4	285.4	20.0	6.5%
	17Q2	317.8	304.6	13.2	4.1%
	Total	1,194.1	1,109.1	85.0	7.1%

Motor Vehicle License Revenues

vehreg1

$$= 0.86631 * \underset{(17.9061)}{\text{vehreg1}[-4]} + 0.17350 * \underset{(1.44606)}{\text{vehreg2}[-8]}$$

$$+ \underset{(1.82012)}{53198.0 * \text{origvttf}} + \underset{(2.61236)}{124514}$$

Sum Sq	3E+11	Std Err	56692.7	LHS Mean	1209250
R Sq	0.8432	R Bar Sq	0.8386	F 3,103	184.616
D.W.(1)	1.8765	D.W.(4)	2.3184		

vehreg2

$$= 0.99915 * \underset{(22.6131)}{\text{vehreg2.8*renew}} + 4680.18 * \underset{(0.93635)}{\text{qd2}} + \underset{(5.45839)}{46860.5}$$

Sum Sq	5E+10	Std Err	22048.7	LHS Mean	239417
R Sq	0.8384	R Bar Sq	0.8353	F 2,104	269.868
D.W.(1)	0.9118	D.W.(4)	1.4679		

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>
2008	07Q3	1,408,511	1,399,866	8,645	0.6%
	07Q4	1,231,785	1,163,314	68,471	5.6%
	08Q1	1,312,356	1,278,515	33,841	2.6%
	08Q2	1,391,387	1,322,318	69,069	5.0%
	Total	5,344,039	5,164,013	180,026	3.4%
2009	08Q3	1,362,010	1,396,652	(34,642)	-2.5%
	08Q4	1,061,494	1,233,506	(172,012)	-16.2%
	09Q1	1,268,629	1,308,391	(39,762)	-3.1%
	09Q2	1,387,221	1,377,395	9,826	0.7%
	Total	5,079,354	5,315,944	(236,590)	-4.7%
2010	09Q3	1,278,480	1,352,827	(74,347)	-5.8%
	09Q4	1,047,572	1,084,888	(37,316)	-3.6%
	10Q1	1,215,359	1,265,897	(50,538)	-4.2%
	10Q2	1,318,585	1,374,377	(55,792)	-4.2%
	Total	4,859,996	5,077,989	(217,993)	-4.5%
2011	10Q3	1,339,471	1,286,898	52,573	3.9%
	10Q4	1,072,468	1,073,365	(897)	-0.1%
	11Q1	1,241,276	1,225,399	15,877	1.3%
	11Q2	1,287,951	1,319,217	(31,266)	-2.4%
	Total	4,941,166	4,904,878	36,288	0.7%
2012	11Q3	1,320,807	1,333,213	(12,406)	-0.9%
	11Q4	1,054,684	1,092,497	(37,813)	-3.6%
	12Q1	1,235,555	1,244,652	(9,097)	-0.7%
	12Q2	1,251,833	1,291,796	(39,963)	-3.2%
	Total	4,862,879	4,962,157	(99,278)	-2.0%
2013	12Q3	1,330,752	1,321,767	8,985	0.7%
	12Q4	1,059,221	1,079,842	(20,621)	-1.9%
	13Q1	1,207,727	1,242,542	(34,815)	-2.9%
	13Q2	1,370,117	1,259,033	111,084	8.1%
	Total	4,967,817	4,903,184	64,633	1.3%
2014	13Q3	1,286,444	1,329,109	(42,665)	-3.3%
	13Q4	1,070,701	1,082,744	(12,043)	-1.1%
	14Q1	1,177,663	1,220,445	(42,782)	-3.6%
	14Q2	1,324,308	1,362,882	(38,574)	-2.9%
	Total	4,859,116	4,995,181	(136,065)	-2.8%
2015	14Q3	1,303,376	1,296,215	7,161	0.5%
	14Q4	1,043,487	1,095,861	(52,374)	-5.0%
	15Q1	1,125,800	1,194,330	(68,530)	-6.1%
	15Q2	1,353,553	1,328,694	24,859	1.8%
	Total	4,826,216	4,915,100	(88,884)	-1.8%
2016	15Q3	1,310,587	1,307,098	3,489	0.3%
	15Q4	1,091,163	1,072,747	18,416	1.7%
	16Q1	1,203,707	1,148,512	55,195	4.6%
	16Q2	1,305,838	1,353,760	(47,922)	-3.7%
	Total	4,911,295	4,882,117	29,178	0.6%
2017	16Q3	1,284,089	1,317,204	(33,115)	-2.6%
	16Q4	1,065,690	1,114,304	(48,614)	-4.6%
	17Q1	1,194,429	1,214,309	(19,880)	-1.7%
	17Q2	1,302,104	1,314,625	(12,521)	-1.0%
	Total	4,846,312	4,960,442	(114,130)	-2.4%

NON-GENERAL FUND METHODOLOGY

Two Year Registrations

	<u>Fiscal Year</u>	<u>Actual</u>	<u>Fitted</u>	<u>Residual</u>	<u>% Residual</u>
2008	07Q3	278,906	298,672	(19,766)	-7.1%
	07Q4	235,108	239,391	(4,283)	-1.8%
	08Q1	244,137	264,207	(20,070)	-8.2%
	08Q2	277,234	292,029	(14,795)	-5.3%
	Total	1,035,385	1,094,298	(58,913)	-5.7%
2009	08Q3	315,988	301,063	14,925	4.7%
	08Q4	238,209	251,885	(13,676)	-5.7%
	09Q1	276,699	276,782	(83)	0.0%
	09Q2	302,018	284,096	17,922	5.9%
	Total	1,132,914	1,113,826	19,088	1.7%
2010	09Q3	278,398	283,730	(5,332)	-1.9%
	09Q4	224,169	246,533	(22,364)	-10.0%
	10Q1	258,263	254,201	4,062	1.6%
	10Q2	296,929	286,990	9,939	3.3%
	Total	1,057,759	1,071,455	(13,696)	-1.3%
2011	10Q3	305,619	315,223	(9,604)	-3.1%
	10Q4	240,029	249,167	(9,138)	-3.8%
	11Q1	274,668	281,856	(7,188)	-2.6%
	11Q2	288,437	308,039	(19,602)	-6.8%
	Total	1,108,753	1,154,285	(45,532)	-4.1%
2012	11Q3	298,282	283,299	14,983	5.0%
	11Q4	234,104	237,243	(3,139)	-1.3%
	12Q1	286,257	266,198	20,059	7.0%
	12Q2	296,383	303,717	(7,334)	-2.5%
	Total	1,115,026	1,090,457	24,569	2.2%
2013	12Q3	329,923	306,417	23,506	7.1%
	12Q4	252,382	250,713	1,669	0.7%
	13Q1	285,852	280,131	5,721	2.0%
	13Q2	328,063	296,505	31,558	9.6%
	Total	1,196,220	1,133,765	62,455	5.2%
2014	13Q3	308,108	300,186	7,922	2.6%
	13Q4	255,044	245,681	9,363	3.7%
	14Q1	280,728	289,973	(9,245)	-3.3%
	14Q2	326,511	303,253	23,258	7.1%
	Total	1,170,391	1,139,093	31,298	2.7%
2015	14Q3	330,347	327,058	3,289	1.0%
	14Q4	256,512	261,204	(4,692)	-1.8%
	15Q1	270,965	289,629	(18,664)	-6.9%
	15Q2	339,195	330,158	9,037	2.7%
	Total	1,197,019	1,208,050	(11,031)	-0.9%
2016	15Q3	326,940	308,531	18,409	5.6%
	15Q4	268,453	263,465	4,988	1.9%
	16Q1	303,775	285,278	18,497	6.1%
	16Q2	333,097	328,840	4,257	1.3%
	Total	1,232,265	1,186,113	46,152	3.7%
2017	15Q3	344,522	327,418	17,104	5.0%
	15Q4	284,256	264,711	19,545	6.9%
	16Q1	314,861	276,986	37,875	12.0%
	16Q2	345,999	339,613	6,386	1.8%
	Total	1,289,638	1,208,728	80,910	6.3%

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

$R^2 = 98.7\%$

THE UNEMPLOYMENT INSURANCE TRUST FUND

Equation Specifications for Taxable Wages:

$$(TAX_x/TOT_x) = f(TBAAW_x, MTWB, QI_x)$$

The proportion of taxable wages (TAX) to total wages (TOT) in a given quarter is linearly related to the ratio of the maximum taxable wage base to the average annual wage (TBAAW), the maximum taxable wage base (MTWB), and the rate of insured unemployment (QI).

There are four equations—one for each quarter. The ratios derived by the equations are applied to the projections for total wages to produce taxable wages. Total wages are derived by multiplying covered employment by the average quarterly wage.

Projected tax rates are then applied to taxable wages to obtain projections for tax contributions.

The following pages give specifications for the quarterly equations currently used in the model. There are 14 observations used in the equations, the years 2002 to 2015 inclusive.

First Quarter

The first quarter regression equation, with t statistics in brackets, is:

$$(TAX_1/TOT_1) = 0.157 + 2.035 (TBAAW_1) \\ [24.822] \quad [56.336]$$

The summary statistics are:

Adjusted R ²	0.996
MSE	9.692 x 10 ⁻⁶

Second Quarter

The second quarter regression equation, with t statistics in brackets, is:

$$(TAX_2/TOT_2) = -0.047 + 1.124 (TBAAW_2) - 0.004 (QI_2) \\ [-7.014] \quad [32.011] \quad [-3.259]$$

The summary statistics are:

NON-GENERAL FUND METHODOLOGY

Adjusted R ²	0.988
MSE	8.054 x 10 ⁻⁶

Third Quarter

The third quarter regression equation, with t statistics in brackets, is:

$$(\text{TAX}_3/\text{TOT}_3) = -0.011 + 0.64 (\text{TBAAW}_3) - 0.007 (\text{QI}_3)$$

[-1.748] [20.371] [-4.976]

The summary statistics are:

Adjusted R ²	0.971	
MSE		6.542 x 10 ⁻⁶

Fourth Quarter

The fourth quarter regression equation, with t statistics in brackets, is:

$$(\text{TAX}_4/\text{TOT}_4) = -0.008 + 0.557 (\text{TBAAW}_4) - 0.008 (\text{QI}_4)$$

[-1.736] [20.811] [-6.204]

The summary statistics are:

Adjusted R ²	0.973
MSE	3.789 x 10 ⁻⁶