

# The Economic Outlook And Revenue Forecast Through Fiscal Year 2012 

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

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## Introduction

A little less than one year ago the economic downturn was accelerating, with the housing crash and financial crisis spreading to the broader economy. Job losses were mounting, placing additional stress on consumers who were already facing higher food and energy prices, tighter credit, and reduced wealth. While economic forecasts at the time included a recession, the contraction became much deeper than anticipated. With recent positive developments in the economy, most analysts consider it to be in recovery, albeit a sluggish one. The economy's prospects are still uncertain, with the risks to growth decidedly on the downside.

Due to the underperformance of revenue collections and continued economic uncertainty, the Governor ordered the Secretary of Finance in mid-June to produce interim economic and revenue forecasts, which were released in August. The economic forecast that best represented deliberations of the Governor's Advisory Board of Economists (GABE) and Governor's Advisory Council on Revenue Estimates (GACRE) was the June 2009 pessimistic alternative forecast from Global Insight. The interim economic outlook incorporated a more severe recession and later economic recovery than had been projected in the November 2008 forecast. As a result, total general fund revenues for fiscal year 2010 were reduced by \$1.2 billion in the August interim revenue forecast.

The GABE met in October to review Global Insight's September standard and pessimistic alternative forecasts, along with Economy.com's August standard forecast. The members were about evenly split between Global Insight's standard and alternative forecasts. The October standard forecast discussed in this book is very similar to the September standard considered by the GABE, while the October alternative scenario is somewhat more pessimistic than the September alternative forecast. The October standard economic outlook for the U.S. and Virginia supports the interim economic forecast for fiscal year 2010. While economic activity as measured by real GDP is significantly stronger, revenue model drivers such as employment and income are similar to interim estimates.

The purpose of this meeting of the Governor's Advisory Council on Revenue Estimates is to evaluate and recommend a "most probable" path for the Virginia economy and general fund revenues.

In the November standard forecast, total general fund revenues have been reduced an additional $\$ 229.8$ million in fiscal year 2010. Total general fund revenues are expected to fall 3.3 percent from fiscal year 2009.

Section 1 of this book contains a review of the national economic performance during fiscal year 2009. Following this review, summaries of Global Insight's October standard and alternative national outlooks are presented.

Section 2 contains a review of Virginia's economic performance during fiscal year 2009. This is followed by a summary of the standard forecast developed by the Department of Taxation using the Global Insight November standard national forecast. The section closes with discussion of the alternative forecast for the Virginia economy.

Section 3 addresses fiscal year 2009 collections of general fund tax revenues and the November 2009 standard and alternative general fund revenue forecasts. Section 4 discusses nongeneral fund revenue collections and forecasts.

Historical and forecast economic data are contained in Appendix A. Historical general fund revenue data are contained in Appendix $B$. Detailed econometric output for major revenue sources is presented in Appendix C .

## SECTION 1 <br> THE U.S. ECONOMY

## Section 1

The U.S. Economy

## Introduction

This section reviews U.S. economic activity in fiscal year 2009 compared with the official forecast, the November 2008 standard forecast provided by Global Insight and approved by the GABE and the GACRE. Following this review, two economic forecasts are presented for consideration: Global Insight's October 2009 standard forecast and the 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 2007 through fiscal year 2009. AppendixA-2 shows quarterly data for the two forecasts through fiscal year 2012. Appendix A-3 displays annual historical and forecast data from fiscal year 1992 through fiscal year 2012.

## Review of Fiscal Year 2009

At the time of Global Insight's November 2008 standard forecast, the economic downturn was accelerating, with the housing crash and financial crisis spreading to the broader economy. Job losses were mounting. Consumer spending was constrained by the weak labor market, high energy and food prices, tighter credit, and lower stock market wealth. Although the forecast predicted a recession, the downturn became much deeper than anticipated.

Following is a summary of key assumptions included in Global Insight's November 2008 standard forecast and how those assumptions fared over the fiscal year. Table 1.1 compares the official forecast and actual results for fiscal year 2009.

- Real GDP fell 2.2 percent for the fiscal year, compared with the forecast of a 0.4 percent decline.

■ Total nonagricultural employment fell 2.3 percent, more than twice the 1.0 percent drop predicted in the forecast. Manufacturing, construction, financial activities, and professional and business services experienced the greatest deterioration from the prior year and the greatest variance from forecast. With the exception of government, job growth in all sectors finished the year behind their respective forecasts.

Table 1.1-Fiscal Year 2009 U.S. Forecast Performance

|  |  |  | Actual Minus |
| :---: | :---: | :---: | :---: |
|  | Forecast | Actual | Forecast |
| Output, Income, and Spending (\% Change) |  |  |  |
| Real GDP | (0.4) | (2.2) | (1.8) |
| Total Personal Income | 3.1 | (0.1) | (3.2) |
| Wages and Salaries (53\%) | 2.4 | (1.3) | (3.7) |
| Average Wage | 3.4 | 1.0 | (2.4) |
| Real Consumer Spending | (0.7) | (1.4) | (0.7) |
| Employment and Labor Markets (\% Change) |  |  |  |
| Total Nonagricultural Employment | (1.0) | (2.3) | (1.3) |
| Construction (5\%) | (5.8) | (9.6) | (3.8) |
| Manufacturing (10\%) | (4.8) | (7.2) | (2.4) |
| Trade, Transportation, and Utilities (19\%) | (2.2) | (3.1) | (0.9) |
| Information (2\%) | (2.8) | (3.0) | (0.2) |
| Financial Activities (6\%) | (1.4) | (3.2) | (1.8) |
| Professional and Business Services (13\%) | (2.1) | (4.0) | (1.9) |
| Education and Health Services (14\%) | 3.0 | 2.6 | (0.4) |
| Leisure and Hospitality (10\%) | 0.0 | (1.5) | (1.5) |
| Other Services (4\%) | 1.5 | (0.8) | (2.3) |
| Government (17\%) | 0.8 | 0.9 | 0.1 |
| Unemployment Rate (\%) | 6.8 | 7.6 | 0.8 |
| Interest Rates (\% Change) |  |  |  |
| 3-Month Treasury Bills | 0.9 | 0.6 | (0.3) |
| 30-Year Treasury Bonds | 4.2 | 3.9 | (0.3) |
| Prices (\% Change) |  |  |  |
| CPI | 1.6 | 1.4 | (0.2) |
| GDP Deflator | 2.5 | 2.0 | (0.5) |

The forecast data are from the November 2008 Global Insight Standard outlook.

- Total personal income was essentially flat with the prior year level in fiscal year 2009 compared with the forecast of 3.1 percent growth. Similarly, wages and salaries fell 1.3 percent, 3.7 percentage points behind the forecast of 2.4 percent growth.
- Real consumer spending fell 1.4 percent in fiscal year 2009, lagging the forecast of a 0.7 percent decline.

■ The actual increase in the CPI of 1.4 percent was close to expectations of 1.6 percent growth, while the GDP deflator increased 2.0 percent -- 0.5 percentage point lower than the predicted growth rate.

■ Global Insight expected the Fed to trim the federal funds rate from 1.0 percent to 0.5 percent and hold it there throughout 2009. In December 2008, the Fed established a target range for the federal funds rate of 0.0 to 0.25 percent, where it remains. In addition, to provide greater support to mortgage lending and housing markets, the Fed engaged in various forms of easing credit, expanded its lending facilities, and provided guarantees on troubled assets.

## The Global Insight U.S. Standard Forecast for Fiscal Years 2010-2012

Due to the underperformance of revenue collections and continued economic uncertainty, the Governor ordered the Secretary of Finance in mid-June to produce interim economic and revenue forecasts, which were released in August. The economic forecast that best represented deliberations of the GABE and GACRE was the June 2009 pessimistic alternative forecast from Global Insight. Tables 1.2 and 1.3 compare this interim forecast with two other forecasts: Global Insight's October 2009 standard and pessimistic alternative forecasts.

At its October meeting, the GABE was presented with Global Insight's September standard and pessimistic alternative forecasts, along with Economy.com's August standard forecast. The members were about evenly split, with five choosing the Global Insight standard, five choosing the pessimistic alternative scenario, and one choosing an economic path somewhere in between. The October standard forecast discussed in this section is very similar to the September standard considered by the GABE, while the October pessimistic alternative is somewhat more pessimistic than the September alternative forecast. The October standard forecast is assigned a 60 percent probability of occurring.

According to Global Insight, the economy is recovering, having probably hit bottom in June. The ISM manufacturing index has risen above the expansionary 50 mark, home sales have improved and prices are stabilizing. Business equipment spending and exports are improving. However, with continuing job losses and tight credit impeding consumer spending, the recovery is expected to be slow and uneven.

The October 2009 standard forecast is substantially stronger than the June interim forecast. Following a decline of 0.7 percent in the second quarter, Global Insight expected real GDP growth to bounce back to 3.6 percent in the third quarter of this year (BEA's advance estimate was 3.5 percent), and then moderate to 1.8 percent in the first quarter of 2010. Real GDP is projected to grow 0.4 percent in fiscal year 2010, 2.3 percent in fiscal year 2011, and 3.5 percent in 2012 -- substantially higher than the interim forecast of a 3.0 percent decline in fiscal year 2010 and 1.0 percent and 2.9 percent growth in fiscal years 2011 and 2012.

## U.S. ECONOMY

In its October forecast, Global Insight paints a less bleak picture of the job market than the interim forecast, although it is far from rosy. Payroll employment is expected to decline by 2.9 percent in fiscal year 2010, compared with the interim estimate of a 3.5 percent decline. While the interim forecast expected job losses to continue in fiscal year 2011, the October forecast expects growth of 1.0 percent, followed by 2.3 percent growth in fiscal year 2012. In the October forecast, the unemployment rate rises to 9.9 percent in fiscal year 2010, stays relatively flat at 9.7 percent in fiscal year 2011, and then falls to 9.0 percent in fiscal year 2012.

Consumers rebound more quickly in the October forecast. Real consumer spending is expected to grow 0.7 percent in fiscal year 2010, 2.2 percent in fiscal year 2011, and 2.4 percent in fiscal year 2012, significantly stronger than the interim forecast of a 0.7 percent decline in fiscal year 2010 and 0.8 and 0.5 percent growth in fiscal years 2011 and 2012.

Total personal income is expected to fall by 0.2 percent in fiscal year 2010, up from the interim forecast of a 0.9 percent decline. Income growth then picks up to 3.8 percent in fiscal year 2011 and 4.6 percent in fiscal year 2012. The largest component of personal income, wages and salaries, is expected to fall 2.1 percent in fiscal year 2010, compared with a 1.9 percent decline in the interim forecast. Growth of 3.5 percent and 4.4 percent is higher than the interim forecast over the following two fiscal years.

With little risk of inflation, the Fed is expected to keep the current federal funds target range of 0.0 percent to 0.25 percent through 2009, then begin to tighten in the third quarter of 2010.

## Global Insight Pessimistic Alternative Forecast

The October pessimistic alternative forecast (assigned a 20 percent probability) assumes that the cash for clunkers and first-time homebuyers' tax credit programs boost the economy in the second half, but lower consumer spending, weaker business investment, slower foreign growth, and weak productivity growth derail the advance.

This scenario assumes that the financial crisis worsens and continues into 2010. This recession is W -shaped and lasts 11 quarters. Credit markets remain tight, domestic spending contracts and the housing market falls further. Real GDP contracts 0.7 percent in 2010, then expands 0.3 percent in fiscal year 2011 and 2.6 percent in 2012. Employment and personal income growth are close to the June interim forecast. Growth in wages and salaries is even weaker than the June interim forecast.

## Table 1.2-Fiscal Years 2007-2012 Interim and October Forecasts

 U.S. Economic Forecasts - Income and Other Indicators|  |  | FY07 | FY08 | FY09 | FY10 | FY11 | FY12 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Output, Income, and Spending (\% Change) - - - |  |  |  |  |  |  |  |
| Real GDP | Interim (Jun '09) | 2.0 | 2.4 | (1.7) | (3.0) | 1.0 | 2.9 |
|  | Oct Standard |  | 2.2 | (2.2) | 0.4 | 2.3 | 3.5 |
|  | Oct Pessimistic |  |  |  | (0.7) | 0.3 | 2.6 |
| Total Personal Income | Interim (Jun '09) | 6.5 | 5.3 | 1.6 | (0.9) | 1.3 | 4.4 |
|  | Oct Standard | 6.5 | 4.5 | (0.1) | (0.2) | 3.8 | 4.6 |
|  | Oct Pessimistic |  |  |  | (0.8) | 2.0 | 4.0 |
| Wages and Salaries (53\%) | Interim (Jun '09) | 5.8 | 4.4 | 0.7 | (1.9) | 0.9 | 3.6 |
|  | Oct Standard | 6.1 | 4.0 | (1.3) | (2.1) | 3.5 | 4.4 |
|  | Oct Pessimistic |  |  |  | (2.6) | 1.8 | 3.6 |
| Average Wage | Interim (Jun '09) | 4.3 | 3.8 | 3.1 | 1.6 | 1.5 | 2.0 |
|  | Oct Standard | 4.5 | 3.4 | 1.0 | 0.9 | 2.5 | 2.0 |
|  | Oct Pessimistic |  |  |  | 0.8 | 2.2 | 2.0 |
| Real Consumer Spending | Interim (Jun '09) | 3.0 | 1.9 | (1.3) | (0.7) | 0.8 | 0.5 |
|  | Oct Standard |  | 1.5 | (1.4) | 0.7 | 2.2 | 2.4 |
|  | Oct Pessimistic |  |  |  | 0.2 | 0.5 | 0.7 |
| Interest Rates (\%) |  |  |  |  |  |  |  |
| 3-Month Treasury Bills | Interim (Jun '09) | 4.9 | 2.9 | 0.6 | 0.3 | 1.1 | 3.9 |
|  | Oct Standard |  |  |  | 0.2 | 1.2 | 2.9 |
|  | Oct Pessimistic |  |  |  | 0.2 | 1.1 | 3.9 |
| 30-Year Treasury Bonds | Interim (Jun '09) | 4.9 | 4.6 | 3.9 | 4.2 | 4.4 | 5.7 |
|  | Oct Standard |  |  |  | 4.2 | 4.4 | 4.7 |
|  | Oct Pessimistic |  |  |  | 4.0 | 4.3 | 5.6 |
| Prices (\% Change) |  |  |  |  |  |  |  |
| CPI | Interim (Jun '09) | 2.6 | 3.7 | 1.4 | (0.9) | 2.3 | 4.0 |
|  | Oct Standard |  |  |  | 0.7 | 1.6 | 2.3 |
|  | Oct Pessimistic |  |  |  | 0.2 | 1.9 | 3.6 |
| GDP Deflator | Interim (Jun '09) | 2.9 | 2.3 | 2.2 | 0.8 | 1.0 | 1.8 |
|  | Oct Standard |  |  |  | 0.9 | 1.4 | 1.5 |
|  | Oct Pessimistic |  |  |  | 1.0 | 1.3 | 1.9 |

The Interim forecast is Global Insight's June 2009 U.S. pessimistic alternative scenario.
The Oct Standard forecast is Global Insight's October 2009 U.S. standard forecast.
The Oct Pessimistic forecast is Global Insight's October 2009 U.S. pessimistic alter native scenario.

Table 1.3-Fiscal Years 2007-2012 Interim and October Forecasts
U.S. Economic Forecasts - Employment and Labor Markets

|  |  | FY07 | FY08 | FY09 | FY10 | FY11 | FY12 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Employment and Labor Markets (\% Change) |  |  |  |  |  |  |  |
| Total Nonagricultural Employment | Interim (Jun '09) | 1.4 | 0.6 | (2.3) | (3.5) | (0.6) | 1.6 |
|  | Oct Standard |  |  | (2.3) | (2.9) | 1.0 | 2.3 |
|  | Oct Pessimistic |  |  |  | (3.3) | (0.3) | 1.5 |
| Construction (5\%) | Interim (Jun '09) | 1.7 | (2.9) | (9.7) | (15.1) | (10.0) | 2.4 |
|  | Oct Standard |  |  | (9.6) | (13.4) | (4.6) | 5.2 |
|  | Oct Pessimistic |  |  |  | (13.7) | (7.7) | 1.3 |
| Manufacturing (10\%) | Interim (Jun '09) | (1.2) | (2.3) | (7.2) | (13.4) | (6.2) | 4.6 |
|  | Oct Standard |  |  | (7.2) | (9.0) | (1.4) | 3.5 |
|  | Oct Pessimistic |  |  |  | (10.6) | (3.8) | 3.9 |
| Trade, Transportation, and Utilities (19\%) | Interim (Jun '09) | 1.2 | 0.6 | (3.1) | (3.8) | (0.5) | (0.1) |
|  | Oct Standard |  |  | (3.1) | (3.2) | 0.7 | 1.9 |
|  | Oct Pessimistic |  |  |  | (3.7) | (0.9) | 0.8 |
| Financial Activities (6\%) | Interim (Jun '09) | 1.0 | (1.2) | (3.2) | (3.5) | (1.9) | 1.0 |
|  | Oct Standard |  |  | (3.2) | (4.0) | (0.4) | 2.4 |
|  | Oct Pessimistic |  |  |  | (4.3) | (1.4) | 0.9 |
| Professional and Business Services (13\%) | Interim (Jun '09) | 3.0 | 1.0 | (4.0) | (5.7) | 3.2 | 8.4 |
|  | Oct Standard |  |  | (4.0) | (3.1) | 5.8 | 6.7 |
|  | Oct Pessimistic |  |  |  | (4.1) | 2.4 | 6.4 |
| Education and Health Services (14\%) | Interim (Jun '09) | 2.6 | 3.0 | 2.6 | 3.1 | 4.2 | 1.5 |
|  | Oct Standard |  |  | 2.6 | 1.9 | 3.2 | 2.2 |
|  | Oct Pessimistic |  |  |  | 2.1 | 3.7 | 2.0 |
| Leisure and Hospitality (10\%) | Interim (Jun '09) | 2.6 | 1.6 | (1.4) | (0.2) | (1.0) | (1.4) |
|  | Oct Standard |  |  | (1.5) | (0.8) | 1.6 | 0.3 |
|  | Oct Pessimistic |  |  |  | (0.2) | 1.7 | (0.5) |
| Government (17\%) | Interim (Jun '09) | 1.0 | 1.2 | 0.8 | (0.9) | (2.7) | (0.7) |
|  | Oct Standard |  |  | 0.9 | (0.4) | (1.0) | 0.1 |
|  | Oct Pessimistic |  |  |  | (0.7) | (2.4) | (0.5) |
| Unemployment Rate (\%) | Interim (Jun '09) | 4.5 | 5.0 | 7.6 | 10.7 | 11.4 | 10.8 |
|  | Oct Standard |  |  | 7.6 | 9.9 | 9.7 | 9.0 |
|  | Oct Pessimistic |  |  |  | 10.1 | 10.7 | 10.4 |

The Interim forecast is Global Insight's June 2009 U.S. pessimistic alternative scenario.
The Oct Standard forecast is Global Insight's October 2009 U.S. standard forecast.
The Oct Pessimistic forecast is Global Insight's October 2009 U.S. pessimistic alternative scenario.

## SECTION 2 THE VIRGINIA ECONOMY

# Section 2 <br> The Virginia Economy 

## Introduction

This section begins with a review of fiscal year 2009, comparing actual economic results in Virginia to the official forecast for the year. The official forecast for fiscal year 2009 was based on the November 2008 standard U.S. forecast of Global Insight and the corresponding Virginia forecast developed by the Department of Taxation, and incorporated input from the GABE and the GACRE. Following this review, the October standard and pessimistic alternative forecasts are presented.

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 2007 through fiscal year 2009. Appendix A-2 shows quarterly data for the two forecasts through fiscal year 2012. Appendix A-3 displays annual historical and forecast data from fiscal year 1992 through fiscal year 2012.

The state and regional employment data used in the forecast are the result of a methodology which 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 2008 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 forecast incorporates revised state personal income data released by the Bureau of Economic Analysis (BEA) on October 16, 2009. The release included significant downward revisions, especially for fiscal year 2009, offering a much different view of Virginia's recent economic performance than was presented to the GABE. However, the downward revisions were expected given the recent performance of withholding and sales tax collections, the two general fund revenue sources that most closely correspond to current economic activity in the Commonwealth.

Table 2.1-Fiscal Year 2009 Virginia Forecast Performance

|  |  |  | Actual <br> Minus |
| :--- | :---: | :---: | :---: |
| Forecast | Actual | Forecast |  |
| Income (\% Change) |  |  |  |
| Total Personal Income | 2.1 | 1.1 | $(1.0)$ |
| Wages and Salaries (56\%) | 2.6 | 0.7 | $(1.9)$ |
| Average Wage | 3.2 | 2.0 | $(1.2)$ |
| Dividends, Interest, and Rent (17\%) | 1.0 | $(2.3)$ | $(3.3)$ |
| Supplements to Wages and Salaries (14\%) | 3.0 | 4.1 | 1.1 |
| Proprietor's Income (6\%) | $(0.7)$ | $(3.8)$ | $(3.1)$ |
| Net Transfer Payments (4\%) | 3.1 | 28.3 | 25.2 |
|  |  |  |  |
| Employment and Labor Markets (\% Change) |  |  |  |
| Total Nonagricultural Employment | $(0.6)$ | $(1.3)$ | $(0.7)$ |
| Construction and Mining (6\%) | $(3.5)$ | $(10.1)$ | $(6.6)$ |
| Manufacturing (7\%) | $(4.7)$ | $(6.3)$ | $(1.6)$ |
| Trade, Transportation, and Utilities (18\%) | $(2.5)$ | $(2.0)$ | 0.5 |
| Information (2\%) | $(1.2)$ | $(5.2)$ | $(4.0)$ |
| Financial Activities (5\%) | $(1.8)$ | $(4.0)$ | $(2.2)$ |
| Professional and Business Services (17\%) | 2.2 | $(1.0)$ | $(3.2)$ |
| Education and Health Services (12\%) | 2.8 | 4.8 | 2.0 |
| Leisure and Hospitality (9\%) | $(0.1)$ | $(0.3)$ | $(0.2)$ |
| Other Services (5\%) | 2.9 | $(3.6)$ | $(6.5)$ |
| Government (19\%) | $(1.6)$ | 1.6 | 3.2 |
| Unemployment Rate (\%) | 4.7 | 5.5 | 0.8 |

The fore cast data are based on the November 2008 Global Insight Standard outlook and the corresponding Virginia state forecast developed by the Department of Taxation.

## Review of Fiscal Year 2009

In the official forecast, the Virginia economy was expected to contract slightly in fiscal year 2009, with the downturn in housing and its broad impact on other sectors of the economy resulting in job losses and weak income growth. The economy was expected to stagnate in fiscal year 2010, with growth in employment and income remaining below trend rates through fiscal year 2012. Overall, annual growth in key indicators was projected to follow a U-shape over the forecast horizon, with fiscal year 2009 the low point for employment and income.

Following is a review of key assumptions included in the November 2008 official forecast compared with the actual performance. Table 2.1 compares the official forecast and actual results for fiscal year 2009.

## Income

Prior to BEA's revision to state income data, Virginia's income statistics were somewhat better than forecast. The October release indicated that Virginia's major income variables actually trailed projected growth in fiscal year 2009. Total personal income increased 1.1 percent - a full percentage point below the forecast. Income from wages and salaries, which accounts for close to sixty percent of total personal income, grew 0.7 percent, almost two percentage points below the forecast of a 2.6 percent increase. Average wage growth of 2.0 percent was 1.2 percentage points below the forecast. Dividends, interest, and rental income fell 2.3 percent - well below projection - while net transfer payments rose 28.3 percent compared with the forecast of 3.1 percent growth.

## Employment

Although modest job losses were expected, payroll employment fell much further than anticipated in fiscal year 2009. Employment fell 1.3 percent from the prior year, 0.7 percent below the annual forecast of a 0.6 percent decline. Total nonagricultural employment fell by 49,600 jobs - more than twice as many jobs as anticipated in the official forecast. Seven out of ten major employment sectors fell short of forecast.

In terms of the number of jobs, the largest variance was in the government sector, which was expected to lose 11,200 jobs, but instead gained 10,900. Professional and business services, typically the driver of growth, was expected to add 14,700 jobs in fiscal year 2009, but declined by 6,300 . The construction sector experienced the largest employment loss, shedding 24,600 jobs, nearly triple the projected loss.

The three major metropolitan areas all lost more jobs than expected in fiscal year 2009. Table 2.4 on page 2-8 provides an overview of regional employment in Virginia. In Northern Virginia, which represents 35 percent of all jobs in the state, total employment fell by 0.5 percent ( 6,400 jobs) compared with the forecast of a 0.9 percent increase. The housing slowdown hit Northern Virginia hard again in fiscal year 2009, with the construction sector shedding 9,700 jobs for the year, about the same amount as were lost last year and far ahead of the projected loss of 3,600 jobs. Professional and business services grew much more slowly than anticipated. Government, trade, education and health services, and leisure and hospitality services all posted larger than expected gains.

The Norfolk-Virginia Beach-Newport News MSA (20 percent of state employment) also experienced a job loss of 2.0 percent, or 15,800 jobs, in fiscal year 2009, compared to the forecast of a 0.1 percent decline. As in the other regions, construction losses were underestimated in the forecast. It was projected that 1,500 construction jobs would be lost, but the actual number was 4,100 . Similar to Northern Virginia, professional and business services was expected to grow, but employment in that sector declined. Employment in the tourism industry, long a staple of the area economy, was expected to remain relatively flat, but declined by 2.9 percent.

Employment in the Richmond-Petersburg MSA (17 percent of state employment) fell 2.0 percent (12,400 jobs) in fiscal year 2009, close to the forecast of a 1.7 percent decline. The construction sector accounted for half of the loss (6,500 jobs) -- 5,100 more than expected. The financial activities sector and professional and business services both experienced larger losses than expected. Education and health services, projected to decline modestly, gained 6,000 jobs.

Outside of the three major metro areas, the remainder of the state (28 percent of state employment) shed 15,000 jobs in fiscal year 2009, less than the forecast of 23,300 . Losses in construction and professional business services were larger than anticipated. Government employment, projected to fall by 7,600 jobs actually gained 4,600.

## Housing

The depression in housing continued to adversely affect Virginia's economic performance in fiscal year 2009. Based on data from the Virginia Association of Realtors (VAR), home sales in Virginia declined 2.3 percent in fiscal year 2009, the fourth consecutive annual decline. Sales volume for the year was down to 1998 levels. Volumes statewide have been suggesting a bottom; however, this is a phenomenon driven primarily by Northern Virginia, and more specifically Prince William County, where drastic price declines have fueled a surge in sales activity. As of the second quarter of 2009, the average sale price in Northern Virginia was down over \$150,000 from the peak of \$525,000 reached in the fourth quarter of 2005. Sales activity in Hampton Roads and Richmond declined at a double-digit rate for the third consecutive year in fiscal year 2009. For the state as a whole, housing prices extended their streak of consecutive quarterly declines to six, with all three major regions declining at nearly a double-digit rate during the second quarter of 2009. Overall, the average sale price in Virginia declined 12.3 percent in fiscal year 2009 and is now at its lowest level since mid2004.

## The October Standard Forecast for Fiscal Years 2010-2012

Due to the underperformance of revenue collections and continued economic uncertainty, the Governor ordered the Secretary of Finance in mid-June to produce interim economic and revenue forecasts, which were released in August. The economic forecast that best represented deliberations of the GABE and GACRE was the June 2009 pessimistic alternative forecast. Tables 2.2 and 2.3 compare this interim forecast with two other forecasts: the October 2009 standard and pessimistic alternative forecasts.

In the interim forecast, the U-shaped growth path for the Virginia economy became longer and deeper, with annual growth in employment and income reaching a low point in fiscal year 2010. Annual employment growth was not expected to turn positive until fiscal year 2012. In the October 2009 standard forecast, the economy begins recovery earlier and grows a bit faster than in the interim forecast.

According to the October standard forecast, after declining 1.3 percent in fiscal year 2009, total nonagricultural employment is expected to fall 2.3 percent ( 85,300 jobs) in fiscal year 2010, close to the interim forecast. Further losses are expected in most major sectors, with positive growth in education and health services, leisure and hospitality services, and government. Employment growth turns positive in fiscal year 2011, growing 1.1 percent, followed by 2.1 percent growth in fiscal year 2012. This compares with a 0.4 percent decline in fiscal year 2011 and a 0.9 percent increase in fiscal year 2012 in the interim forecast.

The October standard forecast anticipates an unemployment rate of 7.3 percent in fiscal year 2010, the same as the standard. In fiscal years 2011 and 2012, however, it is expected to fall to 6.9 percent and 6.1 percent, respectively. The interim forecast had assumed the unemployment rate would rise to 7.7 percent in fiscal year 2011 and fall back to 7.2 percent in fiscal year 2012.

Total personal income growth is stronger than the interim forecast over the next two fiscal years, primarily due to stronger growth in supplements to wages and salaries and net transfer payments. Income from wages and salaries in the October forecast grows much more slowly than the interim forecast, 0.4 percent in fiscal year 2010, compared with 1.0 percent in the interim forecast. In fiscal year 2011, wages and salaries was revised up to 3.0 percent growth, twice the rate of growth in the interim estimate. Estimates for dividends, interest, and rental income and proprietor's income have been updated to reflect the projected performance of financial markets.

## Global Insight Pessimistic Alternative Forecast

In the Virginia pessimistic alternative forecast, a deeper housing recession, worse conditions in financial markets, and constrained consumer spending result in a more protracted economic slowdown in Virginia. Both employment and income growth are slightly below the October standard in fiscal year 2010 and a full percentage point lower in fiscal year 2011.

Table 2.2-Fiscal Years 2007-2012 Interim and October Forecasts
Virginia Economic Forecasts - Employment and Labor Markets

|  |  | FY07 | FY08 | FY09 | FY10 | FY11 | FY12 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Employment and Labor Markets (\% Change) |  |  |  |  |  |  |  |
| Total Nonagricultural Employment | Interim (Jun '09) | 1.2 | 0.6 | (1.4) | (2.1) | (0.4) | 0.9 |
|  | Oct Standard |  | 0.5 | (1.3) | (2.3) | 1.1 | 2.1 |
|  | Oct Pessimistic |  |  |  | (2.6) | (0.0) | 1.2 |
| Construction and Mining (6\%) | Interim (Jun '09) | (1.6) | (4.9) | (10.2) | (11.3) | (5.8) | (0.5) |
|  | Oct Standard |  | (5.0) | (10.1) | (11.9) | (5.1) | 5.4 |
|  | Oct Pessimistic |  |  |  | (12.3) | (8.5) | 1.2 |
| Manufacturing (7\%) | Interim (Jun '09) | (3.4) | (4.0) | (6.2) | (10.5) | (4.6) | 3.9 |
|  | Oct Standard |  | (4.0) | (6.3) | (9.7) | (1.7) | 4.0 |
|  | Oct Pessimistic |  |  |  | (11.5) | (4.3) | 4.4 |
| Trade, Transportation, and Utilities (18\%) | Interim (Jun '09) | 0.6 | 0.1 | (2.7) | (3.8) | (1.2) | (0.5) |
|  | Oct Standard |  | 0.1 | (2.0) | (2.5) | 0.5 | 1.1 |
|  | Oct Pessimistic |  |  |  | (2.9) | (0.8) | 0.4 |
| Financial Activities (5\%) | Interim (Jun '09) | 0.6 | (2.0) | (2.1) | (2.6) | (1.3) | 0.7 |
|  | Oct Standard |  | (2.2) | (4.0) | (4.5) | (0.6) | 3.4 |
|  | Oct Pessimistic |  |  |  | (5.0) | (2.0) | 1.3 |
| Professional and Business Services (17\%) | Interim (Jun '09) | 3.1 | 2.4 | (0.8) | (3.9) | 1.8 | 4.6 |
|  | Oct Standard |  | 2.2 | (1.0) | (2.8) | 4.3 | 5.9 |
|  | Oct Pessimistic |  |  |  | (3.4) | 1.5 | 5.0 |
| Education and Health Services (12\%) | Interim (Jun '09) | 3.1 | 4.4 | 2.8 | 3.1 | 4.2 | 2.4 |
|  | Oct Standard |  | 4.6 | 4.8 | 1.5 | 2.3 | 2.4 |
|  | Oct Pessimistic |  |  |  | 1.8 | 2.8 | 2.2 |
| Leisure and Hospitality (9\%) | Interim (Jun '09) | 2.4 | 1.8 | (1.5) | (0.7) | (1.8) | (1.2) |
|  | Oct Standard |  | 1.7 | (0.3) | 1.2 | 1.3 | 0.2 |
|  | Oct Pessimistic |  |  |  | 1.7 | 1.4 | (0.4) |
| Government (19\%) | Interim (Jun '09) | 1.6 | 1.2 | 1.7 | 1.3 | (1.0) | (0.2) |
|  | Oct Standard |  | 1.2 | 1.6 | 0.8 | 0.6 | (1.0) |
|  | Oct Pessimistic |  |  |  | 0.7 | 0.4 | (0.9) |
| Unemployment Rate (\%) | Interim (Jun '09) | 2.9 | 3.4 | 5.5 | 7.3 | 7.7 | 7.2 |
|  | Oct Standard |  | 3.4 | 5.5 | 7.3 | 6.9 | 6.1 |
|  | Oct Pessimistic |  |  |  | 7.5 | 7.7 | 7.3 |

The Interim forecast from the Department of Taxation is based on Global Insight's June 2009 U.S. pessimistic alternative scenario.
The Oct Standard forecast from the Department of Taxation is based on Global Insight's October 2009 U.S. standard forecast.
The Oct Pessimistic forecast from the Department of Taxation is based on Global Insight's October 2009 U.S. pessimistic alternative scenario.

Table 2.3-Fiscal Years 2007-2012 Interim and October Forecasts Virginia Economic Forecasts - Income

| Virginia Economic Forecasts - Income |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | FY07 | FY08 | FY09 | FY10 | FY11 | FY12 |
| Income (\% Change) |  |  |  |  |  |  |  |
| Total Personal Income | Interim (Jun '09) | 5.5 | 4.5 | 2.6 | 0.5 | 1.4 | 4.0 |
|  | Oct Standard | 6.2 | 4.5 | 1.1 | 1.6 | 3.0 | 3.7 |
|  | Oct Pessimistic |  |  |  | 1.3 | 2.0 | 3.4 |
| Wages and Salaries (56\%) | Interim (Jun '09) | 5.1 | 4.4 | 2.8 | 1.0 | 1.5 | 3.4 |
|  | Oct Standard | 5.2 | 3.9 | 0.7 | 0.4 | 3.0 | 3.7 |
|  | Oct Pessimistic |  |  |  | 0.1 | 2.0 | 2.9 |
| Average Wage | Interim (Jun '09) | $3.8$ | $3.8$ | 4.3 | 3.2 | 1.9 | 2.5 |
|  | Oct Standard | $4.0$ | $3.4$ | 2.0 | 2.7 | 1.9 | 1.6 |
|  | Oct Pessimistic |  |  |  | 2.8 | 2.0 | 1.6 |
| Dividends, Interest, and Rent (17\%) | Interim (Jun '09) | $8.8$ | $3.6$ | (2.9) | (2.6) | 0.2 | 8.3 |
|  | Oct Standard | $12.5$ | $6.2$ | (2.3) | (0.5) | 2.7 | 5.1 |
|  | Oct Pessimistic |  |  |  | (1.7) | (0.7) | 4.6 |
| Supplements to Wages and Salaries (14\%) | Interim (Jun '09) | 3.8 | 4.1 | 4.8 | 3.2 | 2.7 | 3.7 |
|  | Oct Standard | 4.1 | 3.5 | 4.1 | 5.5 | 4.3 | 5.4 |
|  | Oct Pessimistic |  |  |  | 5.7 | 4.3 | 4.9 |
| Proprietor's Income (6\%) | Interim (Jun '09) | (0.5) | 1.2 | (0.9) | (5.6) | (2.0) | (9.2) |
|  | Oct Standard | (0.9) | (1.9) | (3.8) | 0.5 | 5.2 | 1.9 |
|  | Oct Pessimistic |  |  |  | 0.3 | 4.8 | 1.4 |
| Net Transfer Payments (4\%) | Interim (Jun '09) | $23.8$ | $21.2$ | $21.7$ |  |  | 18.7 |
|  | Oct Standard | $22.0$ | $26.0$ | $28.3$ | 18.1 | (5.8) | (3.6) |
|  | Oct Pessimistic |  |  |  | 19.5 | (0.2) | 4.0 |

The Interim forecast from the De partment of Taxation is based on Global Insight's June 2009 U.S. pessimistic alternative scenario.
The Oct Standard forecast from the Department of Taxation is based on Global Insight's October 2009 U.S. standard forecast.
The Oct Pessimistic forecast from the Department of Taxation is based on Global Insight's October 2009 U.S. pe ssimistic alternative scenario.

## Table 2.4-Fiscal Years 2009-2012 October Standard Forecast

Virginia Economic Forecast - Regional Employment

|  |  | FY09 | FY10 | FY11 | FY12 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Region by Sector (\% Change) |  |  |  |  |  |
| Northern Virginia (35\%) * | Total Nonagricultural Employment | (0.5) | (1.5) | 0.6 | 1.9 |
|  | Construction and Mining (6\%) ** | (11.7) | (12.5) | (7.4) | 7.2 |
|  | Trade, Transportation, and Utilities (16\%) | (2.3) | (4.6) | (0.7) | 1.1 |
|  | Financial Activities (5\%) | (2.7) | (5.0) | (0.6) | 3.5 |
|  | Professional and Business Services (27\%) | 0.9 | (1.4) | 2.7 | 4.7 |
|  | Education and Health Services (10\%) | 5.7 | 1.2 | 1.8 | 1.5 |
|  | Leisure and Hospitality (9\%) | 1.7 | 3.1 | 1.0 | 0.2 |
|  | Government (17\%) | 2.6 | 1.3 | (0.7) | (1.2) |
| Hampton Roads (20\%) | Total Nonagricultural Employment | (2.0) | (1.1) | 1.8 | 1.6 |
|  | Construction and Mining (6\%) | (8.8) | (8.8) | (3.4) | 4.0 |
|  | Trade, Transportation, and Utilities (18\%) | (4.0) | (1.4) | 1.0 | 1.1 |
|  | Financial Activities (5\%) | (6.4) | (4.3) | (0.6) | 3.8 |
|  | Professional and Business Services (14\%) | (0.4) | (2.9) | 6.1 | 7.1 |
|  | Education and Health Services (12\%) | 2.8 | 3.4 | 1.1 | 2.0 |
|  | Leisure and Hospitality (11\%) | (2.9) | (1.4) | 1.4 | 0.3 |
|  | Government (21\%) | 0.8 | 2.3 | 3.3 | (1.5) |
| Richmond (17\%) | Total Nonagricultural Employment | (2.0) | (2.4) | 1.5 | 2.5 |
|  | Construction and Mining (6\%) | (14.5) | (16.0) | (5.1) | 5.9 |
|  | Trade, Transportation, and Utilities (19\%) | (1.2) | (3.6) | 0.7 | 1.7 |
|  | Financial Activities (7\%) | (6.7) | (3.0) | (0.5) | 2.8 |
|  | Professional and Business Services (16\%) | (2.8) | (2.1) | 4.2 | 5.2 |
|  | Education and Health Services (13\%) | 7.8 | 4.9 | 3.5 | 4.1 |
|  | Leisure and Hospitality (8\%) | (1.0) | (1.1) | 1.5 | 0.3 |
|  | Government (18\%) | (0.6) | 2.4 | 1.7 | 0.2 |
| Balance (28\%) | Total Nonagricultural Employment | (1.4) | (4.2) | 1.0 | 2.2 |
|  | Construction and Mining (6\%) | (6.1) | (10.8) | (3.6) | 4.1 |
|  | Trade, Transportation, and Utilities (19\%) | (0.8) | (0.4) | 1.2 | 0.7 |
|  | Financial Activities (4\%) | (0.3) | (5.7) | (0.6) | 3.3 |
|  | Professional and Business Services (9\%) | (6.4) | (8.7) | 8.9 | 9.8 |
|  | Education and Health Services (14\%) | 3.6 | (1.2) | 2.7 | 2.5 |
|  | Leisure and Hospitality (9\%) | 0.1 | 2.3 | 1.6 | 0.3 |
|  | Government (20\%) | 2.3 | (1.8) | (0.7) | (1.0) |

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## Section 3 <br> General Fund Revenues

## Fiscal Year 2009 in Review

In fiscal year 2009, total general fund revenues declined 9.2 percent to $\$ 14,315.1$ million, falling short of the official forecast ( 7.3 percent decline) by $\$ 298.8$ million. Adjusted for the repeal of the estate tax and transfers to transportation from insurance and recordation per HB 3202, year-to-date collections declined 7.3 percent compared with the forecast of a 5.3 percent decline. Total general fund revenues finished the year at the lowest level since fiscal year 2005. Table 3.1 on the following page compares actual revenue collections for fiscal year 2009 with the official forecast for the year.

Withholding and sales tax collections (83 percent of total general fund revenues), the two revenue sources most closely tied to economic activity in the Commonwealth, finished a combined 0.6 percent below forecast. Withholding tax collections slowed considerably during the second half of the year, reflecting the acceleration in layoff activity. Sales tax collections in the final quarter of fiscal year 2009 declined at the sharpest rate since 1991, driven by accelerated declines in taxable sales related to housing and department stores and slower growth at warehouse clubs, supercenters, and grocery stores. Taken together, the two sources fell short of expectations by $\$ 73.4$ million.

The three most volatile revenue sources -- individual nonwithholding, corporate income tax, and wills, suits, deeds, and contracts (primarily recordation tax receipts) -- finished a combined $\$ 58.7$ million below forecast, 1.8 percent below the annual forecast for the three sources. Individual nonwithholding and corporate income tax receipts fell short of their forecasts, while recordation tax collections declined less than anticipated. Insurance premiums tax collections were close to expectations.

The major driver of the fiscal year 2009 revenue shortfall was unexpected growth in individual refunds. Individual refunds exceeded the annual estimate by $\$ 162.4$ million. Compared to fiscal year 2008, the Department of Taxation issued 28.8 percent more refunds between April and June, with June's total 110.2 percent above the prior year. Taken together, the five major revenue sources finished $\$ 296.9$ million below the annual estimate, a forecast variance of 2.1 percent.

Collections of miscellaneous taxes and other revenues were $\$ 1.9$ million below the annual estimate, a forecast variance of 0.3 percent. A shortfall in interest income and fines was partially offset by unexpected gains in other minor sources.

Table 3.1
Fiscal Year 2009 General Fund Collections: Actual and Forecast
(Dollars in Millions)


The Official forecast is based on the November 2008 Global Insight Standard outlook and the corresponding Virginia state forecast developed by the Department of Taxation and incorporates revenue collections data through January and actions of the 2009 General Assembly.
HB 3202 (2007 Acts of Assembly -- Chapter 896) required the Comptroller to deposit one-third of insurance company premiums tax collected in the most recently ended fiscal year and the revenues collected from $\$ 0.03$ of the recordation tax to various transportation funds beginning in FY09.

Table 3.2 provides an evolutionary perspective of the fiscal year 2009 forecast, used by the Governor and General Assembly, in terms of their variance from actual collections. The variance ranged from 13.8 percent in the December 2007 forecast to 2.0 percent in the April 2009 forecast.

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

|  | $\begin{gathered} \text { April } 8 \\ 2009 \end{gathered}$ <br> Official |  | December 2008 Introduc |  | April 23 2008 Official |  | December 2007 Introduce |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Major Tax Sources (95\%) |  |  |  |  |  |  |  |  |
| Corporate Income (5\%) | (5.4) | \% | (5.4) | \% | (8.2) | \% | (12.9) | \% |
| Individual Income (66\%) | (2.2) |  | (5.6) |  | (12.0) |  | (14.5) |  |
| Insurance Company Premiums (2\%) | (1.0) |  | (1.0) |  | (13.5) |  | (10.3) |  |
| State Sales \& Use Tax (20\%) | (1.9) |  | (3.6) |  | (10.0) |  | (12.0) |  |
| Wills, Suits, Deeds \& Contracts (2\%) | 5.4 |  | 5.4 |  | (17.5) |  | (30.1) |  |
| Total Major Tax Sources | (2.1) | \% | (4.9) | \% | (11.6) | \% | (14.3) | \% |
| Miscellaneous Taxes |  |  |  |  |  |  |  |  |
| \& Other Revenues (5\%) | (0.3) | \% | (0.7) | \% | 1.1 | \% | (4.5) | \% |
| Total Revenues | (2.0) | \% | (4.7) | \% | (11.0) | \% | (13.8) | \% |

Numbers in parentheses immediately following each source indicate collections as a percentage of total general fund revenues.
The April 8, 2009 Official forecast is based on the November 2008 Global Insight Standard outlook and the corresponding Virginia state forecast developed by the Department of Taxation and reflects actions of the 2009 General Assembly, Chapter 781.

The December 17, 2008 Introduced forecast is based on the November 2008 Global Insight Standard outlook and the corresponding Virginia state forecast developed by the Department of Taxation and accompanied the Governor's Budget Bill.

The April 23, 2008 Official forecast is based on the January 2008 Global Insight Standard outlook and the corresponding Virginia forecast developed by the Department of Taxation and reflects actions of the 2008 General Assembly, Chapter 879.

The December 17, 2007 Introduced forecast is based on the October 2007 Global Insight Standard outlook and the corresponding Virginia forecast developed by the Department of Taxation and accompanied the Governor's Budget Bill.

## The August Interim General Fund Forecast for Fiscal Years 2010 through 2012

Due to the underperformance of revenue collections and continued economic uncertainty, the Governor ordered the Secretary of Finance in mid-June to conduct a reforecast of revenues. As part of the reestimation process, the Governor's Advisory Board of Economists (GABE) met July 14, 2009 to discuss the economic outlook for fiscal year 2010 and the next biennium. Recommendations from the Board, primarily downward adjustments to employment and income growth over the next three fiscal years, were incorporated into the Global Insight June 2009 standard economic outlook. The June 2009 GABE economic forecast and associated revenue forecast were presented to the Governor's Advisory Council on Revenue Estimates (GACRE) on August 5, 2009. The GACRE was more pessimistic than the baseline scenario. As a result, the interim revenue forecast relied on a blend of the standard and pessimistic outlooks. However, over 80\% of general fund revenues (withholding, sales, and corporate income tax) were based on the pessimistic alternative scenario. Governor Kaine released the interim revenue forecast on August 19, 2009, announcing reductions of $\$ 1.2$ billion for fiscal year 2010.

## The November Standard General Fund Forecast for Fiscal Years 2010 through 2012

Table 3.3 on the following pages provides a comparison of the November 2009 standard revenue forecast for fiscal year 2010 with the August interim revenue forecast and the outlook for the next biennium. In the November standard forecast, total general fund revenues have been reduced an additional $\$ 229.8$ million in fiscal year 2010. Total general fund revenues are expected to fall 3.3 percent from fiscal year 2009. Combined with the 9.2 percent decline in fiscal year 2009, total general fund revenues are projected to experience a two-year contraction of 12.2 percent, with fiscal year 2010 collections at the lowest level since fiscal year 2005. Revenues are projected to recover over fiscal years 2011 and 2012, with annual growth averaging 4.4 percent. However, even with this modest recovery, total general fund revenues in fiscal year 2012 are expected to be below fiscal year 2007 levels.

The November standard forecast is based on the October economic outlook and revenue collections through the first four months of fiscal year 2010. As expected, most major revenue sources were below year-ago levels through the first third of the year. However, the largest component of general fund revenues, individual income tax withholding, was significantly behind expectations. Collections of withholding tax declined 3.9 percent through October, reflecting the acceleration in layoff activity and stagnant wage conditions in the Commonwealth. Combined with the reduced outlook for wages and salaries, withholding has been reduced $\$ 178.4$ million from the interim forecast. Individual refunds, another component of net individual income tax, have continued to outpace expectations. Activity through October, reflecting primarily high-income extension returns, illustrates the magnitude of the financial crisis last October. The outlook for individual refunds has been increased $\$ 45.3$ million to reflect current trends.

Outside of withholding and refunds, model results, year-to-date collection trends, and recent economic indicators are mixed as it relates to other major revenue sources. Consumer confidence, financial markets, and corporate profitability have all improved since the interim forecast was completed. Model results confirmed this point, with small upward revisions to sales tax, individual nonwithholding, and corporate income tax revenues. However, revenue trends through October, while close to expectations, paint an uncertain picture. As a result, the interim forecast for other major revenue sources remains the "best" forecast at this time.

## Alternative General Fund Revenue Forecast

Table 3.4 on the following pages provides a comparison of the November pessimistic alternative revenue forecast for fiscal year 2010 with the August interim revenue forecast and the alternative outlook for fiscal years 2011 and 2012. Overall, the deeper economic downturn reduces total general fund revenues for fiscal year 2010 by $\$ 344.5$ million, an annual decline from fiscal year 2009 of 4.1 percent. The recovery is much weaker than the standard outlook in fiscal year 2011, with annual growth of 2.5 percent followed by a 5.1 percent increase in fiscal year 2012.

Table 3.3
The August Interim and November Standard General Fund Forecast for Fiscal Year 2010
(Dollars in Millions)
November 23, 2009

|  |  | Fiscal Year 2010 |  |  |  |  |  |  | 2008-2010 Biennium |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Interim orecast | November Forecast |  | Change |  | \% Growth Over FY 09  <br> Interim November |  | Interim Forecast |  | November Forecast |  | Change |  |
| MAJOR TAX SOURCES |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Corporate Income | \$ | 662.2 | \$ | 662.2 | \$ | 0.0 | 2.2 \% | 2.2 \% | \$ | 1,310.2 | \$ | 1,310.2 | \$ | 0.0 |
| Individual Income Tax: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Gross |  | 11,255.2 |  | 11,076.8 |  | (178.4) | (1.7) | (3.2) |  | 22,703.7 |  | 22,525.3 |  | (178.4) |
| Withholding |  | 9,331.8 |  | 9,153.4 |  | (178.4) | 2.1 | 0.2 |  | 18,469.9 |  | 18,291.5 |  | (178.4) |
| Nonwithholding |  | 1,923.4 |  | 1,923.4 |  | 0.0 | (16.8) | (16.8) |  | 4,233.8 |  | 4,233.8 |  | 0.0 |
| Refunds |  | (1,944.4) |  | (1,989,7) |  | (45.3) | (1.2) | 1.1 |  | (3,911.8) |  | (3,957.1) |  | (45.3) |
| Net |  | 9,310.8 |  | 9,087.1 |  | (223.7) | (1.8) | (4.2) |  | 18,791.9 |  | 18,568.2 |  | (223.7) |
| Insurance Company Premiums |  | 255.5 |  | 255.5 |  | 0.0 | 0.2 | 0.2 |  | 510.5 |  | 510.5 |  | 0.0 |
| State Sales \& Use Tax |  | 2,892.0 |  | 2,877.9 |  | (14.1) | (0.4) | (0.9) |  | 5,795.4 |  | 5,781.3 |  | (14.1) |
| Wills, Suits, Deeds, \& Contract Fees |  | 284.0 |  | 284.0 |  | 0.0 | (9.6) | (9.6) |  | 598.3 |  | 598.3 |  | 0.0 |
| Total Major Tax Sources | \$ | 13,404.5 | \$ | 13,166.7 | \$ | (237.8) | (1.5) \% | (3.2) \% | \$ | 27,006.4 | \$ | 26,768.6 | \$ | (237.8) |
| MISCELLANEOUS TAXES AND OTHER REVENUES |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Alcoholic Beverage State Tax | \$ | 136.7 | \$ | 131.4 | \$ | (5.3) | 5.5 \% | 1.4 \% | \$ | 266.3 | \$ | 261.0 | \$ | (5.3) |
| Bank Franchise Tax |  | 13.7 |  | 20.0 |  | 6.3 | (39.0) | (11.0) |  | 36.2 |  | 42.5 |  | 6.3 |
| Beer \& Beverage Excise Tax |  | 44.3 |  | 43.4 |  | (0.9) | 1.6 | (0.5) |  | 87.9 |  | 87.0 |  | (0.9) |
| Corporate Franchise \& Charter Fees |  | 44.4 |  | 46.2 |  | 1.8 | (10.1) | (6.5) |  | 93.8 |  | 95.6 |  | 1.8 |
| Excess \& Other Fees from Officers |  | (15.7) |  | (8.1) |  | 7.6 | 8.4 | 52.8 |  | (32.8) |  | (25.2) |  | 7.6 |
| Estate \& Gifts |  | 0.0 |  | 0.0 |  | 0.0 | n/a | n/a |  | 6.0 |  | 6.0 |  | 0.0 |
| Institutional Revenues |  | 7.5 |  | 5.9 |  | (1.6) | 17.2 | (7.8) |  | 13.9 |  | 12.3 |  | (1.6) |
| Interest \& Rents |  | 101.1 |  | 98.1 |  | (3.0) | (3.3) | (6.2) |  | 205.7 |  | 202.7 |  | (3.0) |
| Licenses \& Permits |  | 4.6 |  | 4.2 |  | (0.4) | 7.0 | (2.3) |  | 8.9 |  | 8.5 |  | (0.4) |
| Miscellaneous Taxes and Penalties |  | 211.9 |  | 213.9 |  | 2.0 | (4.2) | (3.2) |  | 433.0 |  | 435.0 |  | 2.0 |
| Other Miscellaneous Revenues |  | 32.5 |  | 33.3 |  | 0.8 | (37.0) | (35.4) |  | 84.1 |  | 84.9 |  | 0.8 |
| Public Service GR / Consumption Tax |  | 93.9 |  | 94.6 |  | 0.7 | 2.8 | 3.6 |  | 185.2 |  | 185.9 |  | 0.7 |
| Total Misc. Taxes and Other Revenues | \$ | 674.9 | \$ | 682.9 | \$ | 8.0 | (5.4) \% | (4.2) \% | \$ | 1,388.1 | \$ | 1,396.1 | \$ | 8.0 |
| TOTAL GF REVENUES | \$ | 14,079.4 | \$ | 13,849.6 | \$ | (229.8) | (1.6) \% | (3.3) \% | \$ | 28,394.5 | \$ | 28,164.7 | \$ | (229.8) |
| TRANSFERS |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| A.B.C. Profits | \$ | 37.0 | \$ | 40.5 | \$ | 3.5 | (16.1) \% | (8.2) \% | \$ | 81.1 | \$ | 84.6 | \$ | 3.5 |
| Sales Tax (0.25\%) |  | 203.1 |  | 204.5 |  | 1.4 | (4.8) | (4.2) |  | 416.5 |  | 417.9 |  | 1.4 |
| Transfers Per Appropriations Act |  | 175.2 |  | 175.2 |  | 0.0 | 17.6 | 17.6 |  | 324.2 |  | 324.2 |  | 0.0 |
| Total Transfers | \$ | 415.3 | \$ | 420.2 | \$ | 4.9 | 2.2 \% | 3.4 \% | \$ | 821.8 | \$ | 826.7 | \$ | 4.9 |
| TOTAL GENERAL FUND | \$ | 14,494.7 | \$ | 14,269.8 | \$ | (224.9) | (1.5) $\%$ | (3.1) $\%$ | \$ | 29,216.3 | \$ | 28,991.4 | \$ | (224.9) |

[^1]Table 3.3
The November Standard General Fund Forecast for Fiscal Years 2011-2012
(Dollars in Millions)
November 23, 2009


The November Standard forecast is based on the October 2009 Global Insight Standard outlook and the corresponding Virginia state forecast developed by the Department of Taxation.

Table 3.4
The August Interim and November Pessimistic Alternative General Fund Forecast for Fiscal Year 2010
(Dollars in Millions)
November 23, 2009


[^2]Table 3.4
The November Pessimistic Alternative General Fund Forecast for Fiscal Years 2011-2012
(Dollars in Millions)
November 23, 2009


The November Pessimistic Alternative forecast is based on the October 2009 Global Insight Pessimistic Alternative outlook and the corresponding Virginia state forecast developed by the Department of Taxation.

## Legislative Changes Affecting the Forecast

Table 3.5 below lists the legislative and policy changes that affect the revenue forecast.

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

|  | FY10 | FY11 | FY12 |
| :---: | :---: | :---: | :---: |
| CORPORATE INCOME TAX |  |  |  |
| C. 781, 2009 - Captive REIT | 5.0 | 10.0 | 10.0 |
| C. 781, 2009 - TAX Compliance Initiatives | 2.3 | 2.9 | 3.1 |
| INDIVIDUAL INCOME TAX |  |  |  |
| C. 3, 2006 - Cap Land Preservation Tax Credit (Total Cost) | (150.0) | (125.0) | (150.0) |
| C. 847, 2007 - IRS Tax Conformity | (3.0) | 14.8 | 14.6 |
| C. 879, 2008 - IRS Tax Conformity | (4.1) |  |  |
| C. 781, 2009 - IRS Tax Conformity | 0.0 | 11.9 | 10.1 |
| C. 781, 2009 - TAX Compliance Initiatives | 13.3 | 16.2 | 17.1 |
| C. 781, 2009 - TAX Amnesty | 19.0 |  |  |
| STATE SALES AND USE TAX |  |  |  |
| C. 781, 2009 - TAX Compliance Initiatives | 2.8 | 3.7 | 3.9 |
| C. 781, 2009 - Bi-monthly sales tax remittance program | 83.7 |  |  |
| C. 781, 2009 - TAX Amnesty | 9.5 |  |  |
| WILLS, SUITS, DEEDS, AND CONTRACTS |  |  |  |
| C. 847, 2007-\$0.03 of Recordation Tax to Transportation | (33.5) | (33.5) | (33.5) |
| INSURANCE PREMIUMS TAX |  |  |  |
| C. 847, 2007-1/3 of Insurance Premiums Tax to Transportation | (129.1) | (128.2) | (134.2) |
| ESTATE TAXES |  |  |  |
| C. 3, 2006 - Repeal Estate Tax | (140.0) | (140.0) | (140.0) |
| INTEREST |  |  |  |
| C. 781, 2009 - Interest from nongeneral fund | 10.0 |  |  |
| C. 781, 2009 - Enhance bank services | 2.6 |  |  |
| C. 781, 2009 - TAX Compliance Initiatives | 1.5 | 1.7 | 1.8 |
| C. 781, 2009 - TAX Amnesty | 9.5 |  |  |
| FINES, FORFEITURES, AND FEES |  |  |  |
| C. 781, 2009 - TAX Compliance Initiatives | 1.8 | 2.2 | 2.3 |

## SECTION 4 <br> NON-GENERAL FUND <br> REVENUES

## Section 4 <br> 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). Maintenance and operating costs are financed by the HMOF, which consists of the traditional highway user taxes and fees. Construction costs are financed by the TTF, a fund created in 1986 by a special session of the General Assembly. The TTF consists of dedicated portions of highway user taxes and fees as well as a portion of the state sales and recordation taxes, interest earnings, and several miscellaneous sources. Within the Transportation Trust Fund is the Priority Transportation Fund (PTF) which was created in the 2000 legislative session. The PTF consists of Motor Fuel Tax revenues which are derived from the implementation of new procedures for taxing motor fuel at the terminal rack, insurance premiums, and interest payments.

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

- Motor Fuels and Road Use Taxes,
- a 3 percent Vehicle Sales and Use Tax,
- licensing fees,
- one-half cent State Retail Sales Tax,
- three cents of the State Recordation Tax,
- one-third of State Insurance Premiums Tax,
- International Registration Plan Fees,
- interest earnings, and
- other miscellaneous taxes and fees.

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

## Fiscal Year 2009 In Review

Table 4.1 compares actual collections in fiscal year 2009 to the official forecast for the Commonwealth Transportation Fund (CTF). Total transportation revenues totaled approximately $\$ 2.3$ billion, a decline of $\$ 63.9$ million over last year. Revenue collections fell by 2.7 percent as compared to the official forecast of a 1.5 percent decline, resulting in a forecast variance of 1.2 percent. The deficit in fiscal year 2009 collections can be attributed to a record-low year in motor vehicle sales and the slump in retail sales due to the ongoing economic recession.

Adjusted for transfers to the CTF from insurance premiums and recordation taxes per HB3202 (2007), annual collections declined 9.8 percent. Adjusted fiscal year 2009's collections were equivalent to the fiscal year 2004 level of revenue collections.

Table 4.1
Commonwealth Transportation Revenues
Actual Collections Compared to the Official Forecast for Fiscal Year 2009
(Millions of Dollars)

| Revenue Sources | $\begin{gathered} \text { FY2008 } \\ \text { Actual } \end{gathered}$ |  | $\begin{gathered} \text { FY2009 } \\ \text { Actual } \end{gathered}$ |  | FY2009 <br> Forecast |  | Percent Change2008-2009 |  | Forecast Variance |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Actual | Forecast |  |  |  | mount | Percent |
| Motor Fuels Tax | \$ | 851.2 |  |  | \$ | 827.9 | \$ | 830.9 | -2.7\% | -2.4\% | \$ | (3.0) | -0.4\% |
| Road Use Tax |  | 9.7 |  | 9.4 |  | 9.4 | -3.5\% | -3.5\% |  | - | 0.0\% |
| Vehicle Sales Tax |  | 541.7 |  | 413.2 |  | 430.1 | -23.7\% | -20.6\% |  | (16.9) | -3.9\% |
| Vehicle Licenses |  | 242.1 |  | 241.6 |  | 239.2 | -0.2\% | -1.2\% |  | 2.4 | 1.0\% |
| State Sales Tax |  | 524.9 |  | 499.4 |  | 514.5 | -4.9\% | -2.0\% |  | (15.1) | -2.9\% |
| Recordation Tax |  | - |  | 35.7 |  | 35.4 | n/a | n/a |  | n/a | n/a |
| Priority Transportation Fund |  | 20.0 |  | 20.0 |  | 20.0 | 0.0\% | 0.0\% |  | - | 0.0\% |
| Insurance Premiums Tax |  | - |  | 132.3 |  | 132.3 | n/a | n/a |  | n/a | n/a |
| Int'I Registration Plan |  | 74.1 |  | 59.0 |  | 51.4 | -20.4\% | -30.6\% |  | 7.6 | 14.8\% |
| Interest Earnings |  | 62.1 |  | 27.7 |  | 30.7 | -55.4\% | -50.6\% |  | (3.0) | -9.8\% |
| Rental Tax |  | 31.3 |  | 29.1 |  | 30.2 | -7.0\% | -3.5\% |  | (1.1) | -3.6\% |
| Aviation Fuels Tax |  | 2.1 |  | 2.1 |  | 2.0 | 0.0\% | -6.0\% |  | 0.1 | 6.3\% |
| Miscellaneous |  | 14.9 |  | 12.9 |  | 13.2 | -13.4\% | -11.4\% |  | (0.3) | -2.3\% |
| TOTAL | \$ | 2,374.2 | \$ | 2,310.3 | \$ | 2,339.3 | -2.7\% | -1.5\% | \$ | (29.0) | -1.2\% |

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 ( 36 percent of the CTF) fell short of the forecast by $\$ 3.0$ million in fiscal year 2009. Motor fuels tax collections declined by 2.7 percent in fiscal year 2009. The average price of gasoline has fallen by 36 percent over the last 12 months. Despite the strong decline in prices, demand for motor fuels has fallen sharply as the deepest recession since the 1930's severely constrained consumption. In the first half of calendar year 2009, consumption of liquid fuels in the U.S. fell by 6.3 percent, the steepest decline on record. Monthly average motor gasoline consumption in June 2009 showed an increase over the same month from the prior year for the first time since September 2007. In Virginia, gasoline consumption was flat in fiscal year 2009.

Diesel fuel consumption reflects a different market than 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 may purchase fuel in a state because fuel tax rates are lower than in other states. Motor carriers respond to the general economy more than passenger traffic. They tend to travel more miles when the economy is in expansion than when the economy is in recession. In Virginia, diesel fuel consumption declined by 7.6 percent in fiscal year 2009.

Revenues from the motor vehicle sales and use tax (18 percent of the CTF) fell by 23.7 percent in fiscal year 2009, the largest annual decline on record. Sales of both new and used vehicles fell precipitously in fiscal year 2009. New car sales fell by 27.5 percent. The volume of new car sales in fiscal year 2009 was equivalent to the fiscal year 1992 level. Used car sales fell by 10.8 percent, the largest single yearly decline. In addition, the average sales price of a used vehicle fell by 9.8 percent.

Revenues from the transportation share of the state retail sales tax (22 percent of the CTF) declined by 4.9 percent, more than double the anticipated decline of 2.0 percent.

Motor vehicle license fees (11 percent of the CTF) were $\$ 2.4$ million ahead of the forecast in fiscal year 2009.

International Registration Plan fees (3 percent of the CTF), the registration fees paid by interstate motor carriers, declined by 20.4 percent in fiscal year 2009. These fees, paid by all trucks driving through the Commonwealth, are based on vehicle weight and the miles traveled in Virginia.

Collectively, all other taxes and revenues (10 percent of the CTF) were $\$ 4.0$ million below the forecast in fiscal year 2009.

## Outlook for Key Tax Base Variables

## Motor Fuel Consumption

Gasoline consumption was flat in fiscal year 2009 compared to the official forecast of a 2.9 percent decline. Diesel fuel consumption fell by 8.1 percent, compared to the forecast of a 5.5 percent decline.

In fiscal year 2009, the average price of gasoline fell by 34\% from its high of \$4.12 a gallon in July, 2008 to around $\$ 2.70$ a gallon by the end of the fiscal year. The demand for gasoline is relatively inelastic in the short-term and involves mainly a reduction in discretionary travel and changes in driving and maintenance habits. Although the price of gasoline declined considerably from its record-high levels, the economic recession curtailed demand.

The Energy Information Administration forecasts total consumption of liquid fuels and other petroleum products decreasing by about 3.7 percent in 2009. During the first half of the year, consumption declined by almost 6.3 percent from the same period last year, one of the steepest declines on record. The year-over-year projected decline in petroleum consumption slows to 1.1 percent in the second half of 2009 as economic recovery begins to take hold.

The price of West Texas Intermediate (WTI) crude oil is expected to average about \$70 per barrel this winter (October-March), a $\$ 19$ increase over last winter. The forecast for average WTI prices rises gradually to about $\$ 75$ per barrel by December 2010 as U.S. and world economic conditions improve. The monthly average regular-grade gasoline retail price is projected to fall to an average of $\$ 2.44$ per gallon for the last 3 months of the year. Higher projected crude oil prices in 2010 lead to an expected increase in regular-grade gasoline prices to an average of $\$ 2.65$ per gallon next year. Projected diesel fuel retail prices will average $\$ 2.60$ during the fourth quarter of 2009 in the forecast, as the winter heating fuel season begins.

Table 4.2
Motor Fuel Consumption
History and Forecast, Fiscal Years 2009-2012
(Percent Growth)

|  | $\underline{2009}$ |  | $\underline{2010}$ | $\underline{2011}$ | $\underline{2012}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Taxable Gallons - Gasoline |  |  |  |  |  |
| Official | $(2.9)$ | 1.6 |  | $(1.5)$ | $(0.1)$ |
| Standard | 0.0 | 0.7 | 0.4 | 0.1 |  |
| Alternative | 0.0 | $(0.8)$ | $(3.3)$ | $(1.8)$ |  |
|  |  |  |  |  |  |
| Taxable Gallons - Diesel |  |  |  |  |  |
| Official | $(5.5)$ | $(0.4)$ | 0.4 | 0.1 |  |
| Standard | $(8.1)$ | $(3.8)$ | 4.8 | 5.2 |  |
| Alternative | $(8.1)$ | $(7.0)$ | $(3.5)$ | $(2.0)$ |  |

## Vehicle Sales

The official forecast anticipated the steepest decline over the last thirty years in car sales. New vehicle sales were worse than the dismal forecast for fiscal year 2009. New car sales fell by 27.5 percent and used car sales fell by 10.8 percent.

Table 4.3 shows the official and November 2009 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 2009-2012
(Percent Growth)

|  | Fiscal Years |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\underline{2009}$ |  | $\underline{2010}$ | $\underline{2011}$ | $\underline{2012}$ |
| New Taxable Titles |  |  |  |  |  |
| Official | $(21.7)$ | 10.7 | 1.9 | 0.3 |  |
| Standard | $(27.5)$ | $(8.3)$ | 13.6 | 5.7 |  |
| Alternative | $(27.5)$ | $(17.9)$ | 10.0 | 15.9 |  |
| Used Taxable Titles |  |  |  |  |  |
| Official | $(13.2)$ | $(2.4)$ | 8.3 | 10.0 |  |
| Standard | $(10.8)$ | $(1.7)$ | 2.7 | 3.6 |  |
| Alternative | $(10.8)$ | $(4.6)$ | $(3.0)$ | 5.9 |  |

New Taxable Titles: In fiscal year 2009, approximately 273,500 new vehicles were titled in Virginia, a decline of about 103,900 from fiscal year 2008. The official forecast anticipated a decline of about 82,000 new cars. Fiscal year 2009's new car sales fell to a level last seen in fiscal year 1992.

The November forecast expects a further decline of 8.3 percent in fiscal year 2009. Although the federal government's Cash for Clunkers program did provide a temporary spike in new vehicle sales, it is assumed that most of these sales would have taken place regardless over the course of fiscal year 2010. Vehicle sales are being affected by the downturn in the housing market and the rising energy costs in a number of ways.

The new vehicle market faces strong headwinds over the remainder of the fiscal year. Labor market conditions remain bleak; although the pace of job cuts is abating, there is little new hiring that is taking place. Credit conditions remain tight and consumer confidence remains depressed as well. As far as businesses, large businesses have not yet increased their purchases of vehicles, and rental companies are holding onto vehicles longer.

Used Taxable Titles: About one million used cars were sold in Virginia in fiscal year 2009, a decline of 10.8 percent. The fiscal year 2009 decline was the largest annual decline over the last thirty years. Used car sales generally follow a sales pattern similar to new car sales. High unemployment rates and the uncertainty surrounding the availability of credit, particularly access to credit for subprime buyers, are expected to result in another slow year for used vehicle sales.

## November 2009 Commonwealth Transportation Fund Forecast

Table 4.4 on the following pages presents a comparison of the November 2009 standard forecast and the August 2009 Interim forecast.

During the 2007 session of the General Assembly, House Bill 3202 was passed by both houses of the General Assembly and signed into law by the Governor. House Bill 3202 provided a considerable influx of new revenues into the Commonwealth Transportation Fund. Motor vehicle license fees, motor fuels taxes, and miscellaneous revenues have been adjusted to reflect these new revenues. In addition, House Bill 3202 provided for one-third of the insurance premiums tax and 3 cents (of the 25 cents) of the recordation tax to be deposited into the Commonwealth Transportation Fund beginning in fiscal year 2009.

As compared to the interim forecast, total state taxes and fees are $\$ 5.9$ million lower in fiscal year 2010. Fiscal years 2011 and 2012 show similar marginal changes in the November forecast. Fiscal year 2010 revenue collections are estimated to decline 2.8 percent, marking the first time that Commonwealth Transportation Fund revenues are expected to decline for two consecutive years.

The motor fuels tax is the single largest revenue source in the Commonwealth Transportation Fund and is expected to decline by 1.8 percent in fiscal year 2010 and increase by 2.2 percent in fiscal year 2011.

Motor vehicle sales and use tax collections are expected to fall by 4.9 percent in fiscal year 2010 and increase by 7.4 percent in fiscal year 2011.

State retail sales and use tax revenues are expected to drop again in fiscal year 2010 followed by a sluggish rebound in fiscal year 2011.

Table 4.4
The Interim and November CommonwealthTransportation Fund Forecast for Fiscal Year 2010
(Dollars in Millions)

|  | Fiscal Year 2009 |  |  | Fiscal Year 2010 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Actual |  | \% Growth | Interim Forecast |  | November Forecast |  | Change |  | \% Growth over FY 09 |  |
| Highway Maintenance \& Operating Fund |  |  |  |  |  |  |  |  |  |  |  |
| Motor Fuels Tax | \$ | 721.1 | (2.5) \% | \$ | 713.8 | \$ | 709.3 | \$ | (4.5) | (1.0) \% | (1.6) \% |
| Road Tax |  | 1.6 | 33.3 |  | 1.0 |  | 1.5 |  | 0.5 | 37.5 | 6.3 |
| Motor Vehicle Sales And Use Tax |  | 269.7 | (24.0) |  | 241.1 |  | 253.2 |  | 12.1 | (10.6) | (6.1) |
| Motor Vehicle License Fees |  | 220.0 | (0.4) |  | 221.0 |  | 218.7 |  | (2.3) | 0.5 | (0.6) |
| International Registration Plan |  | 58.8 | (20.6) |  | 59.0 |  | 58.6 |  | (0.4) | 0.3 | (0.3) |
| Recordation Tax (1 cent) |  | 11.9 | n/a |  | 11.2 |  | 11.2 |  | 0.0 | (5.9) | (5.9) |
| Miscellaneous |  | 12.9 | (13.4) |  | 13.2 |  | 12.7 |  | (0.5) | 2.3 | (1.6) |
| Total State Taxes and Fees (HMOF) | \$ | 1,296.1 | (7.8) \% | \$ | 1,260.3 | \$ | 1,265.2 | \$ | 4.9 | (2.8) \% | (2.4) \% |

## Transportation Trust Fund

| Motor Fuels Tax | \$ | 106.9 | (4.3) \% | \$ | 103.3 | \$ | 104.0 | \$ | 0.7 | (3.4) \% | (2.7) \% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Priority Transportation Trust Fund |  | 152.3 | 661.5 |  | 149.1 |  | 149.1 |  | 0.0 | (2.1) | (2.1) |
| Base |  | 20.0 | 0.0 |  | 20.0 |  | 20.0 |  | 0.0 | 0.0 | 0.0 |
| Insurance Premiums Tax (1/3) |  | 132.3 | n/a |  | 129.1 |  | 129.1 |  | 0.0 | (2.4) | (2.4) |
| Road Tax |  | 7.9 | (7.5) |  | 8.4 |  | 7.1 |  | (1.3) | 6.3 | (10.1) |
| Motor Vehicle Sales And Use Tax |  | 143.5 | (23.1) |  | 132.4 |  | 139.6 |  | 7.2 | (7.7) | (2.7) |
| Motor Vehicle License Fees |  | 21.6 | 1.2 |  | 20.9 |  | 21.2 |  | 0.3 | (3.2) | (1.9) |
| Retail Sales and Use Tax |  | 499.4 | (4.9) |  | 478.4 |  | 478.3 |  | (0.1) | (4.2) | (4.2) |
| Recordation Tax (2 cents) |  | 23.8 | n/a |  | 22.3 |  | 22.3 |  | 0.0 | (6.3) | (6.3) |
| Interest Earnings |  | 27.7 | (55.4) |  | 41.2 |  | 23.9 |  | (17.3) | 48.7 | (13.7) |
| Rental Tax |  | 29.1 | (7.0) |  | 27.6 |  | 27.3 |  | (0.3) | (5.2) | (6.2) |
| Aviation Fuels Tax |  | 2.1 | 0.0 |  | 2.1 |  | 2.1 |  | 0.0 | (1.3) | (1.3) |
| Total State Taxes and Fees (TTF) | \$ | 1,014.2 | 4.7 \% | \$ | 985.7 | \$ | 974.9 | \$ | (10.8) | (2.8) \% | (3.9) \% |

Total HMOF And TTF

| Motor Fuels Tax | \$ | 828.0 | (2.7) \% | \$ | 817.1 | \$ | 813.3 | \$ | (3.8) | (1.3) \% | (1.8) \% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Priority Transportation Trust Fund |  | 152.3 | 661.5 |  | 149.1 |  | 149.1 |  | 0.0 | (2.1) | (2.1) |
| Base |  | 20.0 | 0.0 |  | 20.0 |  | 20.0 |  | 0.0 | 0.0 | 0.0 |
| Insurance Premiums Tax (1/3) |  | 132.3 | n/a |  | 129.1 |  | 129.1 |  | 0.0 | (2.4) | (2.4) |
| Road Tax |  | 9.5 | (2.4) |  | 9.4 |  | 8.6 |  | (0.8) | (1.1) | (9.5) |
| Motor Vehicle Sales and Use Tax |  | 413.2 | (23.7) |  | 373.5 |  | 392.8 |  | 19.3 | (9.6) | (4.9) |
| Motor Vehicle License Fees |  | 241.6 | (0.2) |  | 241.9 |  | 239.9 |  | (2.0) | 0.1 | (0.7) |
| International Registration Plan |  | 58.8 | (20.6) |  | 59.0 |  | 58.6 |  | (0.4) | 0.3 | (0.3) |
| Retail Sales and Use Tax |  | 499.4 | (4.9) |  | 478.4 |  | 478.3 |  | (0.1) | (4.2) | (4.2) |
| Recordation Tax (3 cents) |  | 35.7 | n/a |  | 33.5 |  | 33.5 |  | 0.0 | (6.2) | (6.2) |
| Interest Earnings |  | 27.7 | (55.4) |  | 41.2 |  | 23.9 |  | (17.3) | 48.7 | (13.7) |
| Rental Tax |  | 29.1 | (7.0) |  | 27.6 |  | 27.3 |  | (0.3) | (5.2) | (6.2) |
| Aviation Fuels Tax |  | 2.1 | 0.0 |  | 2.1 |  | 2.1 |  | 0.0 | (1.3) | (1.3) |
| Miscellaneous |  | 12.9 | (13.4) |  | 13.2 |  | 12.7 |  | (0.5) | 2.3 | (1.6) |
| Total State Taxes and Fees | \$ | 2,310.3 | (2.7) \% | \$ | 2,246.0 | \$ | 2,240.1 | \$ | (5.9) | (2.8) \% | (3.0) \% |
| Transfers per the Appropriations Act |  |  |  |  |  |  |  |  |  |  |  |
| Priority Transportation Trust Fund |  | 0.0 | $\mathrm{n} / \mathrm{a}$ | \$ | 0.0 | \$ | 0.0 | \$ | 0.0 | $\mathrm{n} / \mathrm{a}$ \% | n/a \% |
| General Fund Transfer |  | 0.0 | n/a |  | 0.0 |  | 0.0 |  | 0.0 | n/a | n/a |
| Retail Sales Tax - AST Retention |  | 0.0 | n/a |  | 0.0 |  | 0.0 |  | 0.0 | n/a | n/a |
| Increased Registration Fees |  | 0.0 | n/a |  | 0.0 |  | 0.0 |  | 0.0 | n/a | n/a |
| Auto Insurance Premiums Tax |  | 0.0 | (100.0) |  | 0.0 |  | 0.0 |  | 0.0 | n/a | n/a |
| Total Transfers |  | 0.0 | (100.0) | \$ | 0.0 | \$ | 0.0 | \$ | 0.0 | n/a | n/a \% |
| Total Transportation Fund |  | 2,310.3 | (7.0) | \$ | 2,246.0 | \$ | 2,240.1 | \$ | (5.9) | (2.8) $\%$ | (3.0) $\%$ |

Table 4.4
The Interim and November CommonwealthTransportation Fund Forecast for Fiscal Year 2011 (Dollars in Millions)


## Transportation Trust Fund

Motor Fuels Tax
Priority Transportation Trust Fund
Base
Insurance Premiums Tax (1/3)
Road Tax
Motor Vehicle Sales And Use Tax
Motor Vehicle License Fees
Retail Sales and Use Tax
Recordation Tax (2 cents)
Interest Earnings
Rental Tax
Aviation Fuels Tax
Total State Taxes and Fees (TTF)

Total HMOF And TTF

| Motor Fuels Tax | \$ | 823.4 | \$ | 831.2 | \$ | 7.8 |  |  | 2.2 \% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Priority Transportation Trust Fund |  | 148.2 |  | 148.2 |  | 0.0 | (0.6) |  | (0.6) |
| Base |  | 20.0 |  | 20.0 |  | 0.0 | 0.0 |  | 0.0 |
| Insurance Premiums Tax (1/3) |  | 128.2 |  | 128.2 |  | 0.0 | (0.7) |  | (0.7) |
| Road Tax |  | 9.5 |  | 8.0 |  | (1.5) | 1.1 |  | (7.0) |
| Motor Vehicle Sales and Use Tax |  | 403.2 |  | 422.0 |  | 18.8 | 8.0 |  | 7.4 |
| Motor Vehicle License Fees |  | 246.3 |  | 242.5 |  | (3.8) | 1.8 |  | 1.1 |
| International Registration Plan |  | 59.0 |  | 60.3 |  | 1.3 | 0.0 |  | 2.9 |
| Retail Sales and Use Tax |  | 478.0 |  | 488.6 |  | 10.6 | (0.1) |  | 2.2 |
| Recordation Tax (3 cents) |  | 33.5 |  | 33.5 |  | 0.0 | 0.0 |  | 0.0 |
| Interest Earnings |  | 45.7 |  | 30.6 |  | (15.1) | 10.9 |  | 28.0 |
| Rental Tax |  | 26.9 |  | 26.7 |  | (0.2) | (2.5) |  | (2.2) |
| Aviation Fuels Tax |  | 2.0 |  | 2.1 |  | 0.1 | (3.0) |  | 0.0 |
| Miscellaneous |  | 13.2 |  | 12.7 |  | (0.5) | 0.0 |  | 0.0 |
| Total State Taxes and Fees | \$ | 2,288.9 | \$ | 2,306.4 | \$ | 17.5 | 1.9 | \% | 3.0 \% |
| Transfers per the Appropriations Act |  |  |  |  |  |  |  |  |  |
| Priority Transportation Trust Fund | \$ | 0.0 | \$ | 0.0 | \$ | 0.0 | n/a | \% | n/a \% |
| General Fund Transfer |  | 0.0 |  | 0.0 |  | 0.0 | n/a |  | n/a |
| Retail Sales Tax - AST Retention |  | 0.0 |  | 0.0 |  | 0.0 | n/a |  | n/a |
| Increased Registration Fees |  | 0.0 |  | 0.0 |  | 0.0 | n/a |  | n/a |
| Auto Insurance Premiums Tax |  | 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 | \$ | 2,288.9 | \$ | 2,306.4 | \$ | 17.5 | 1.9 | \% | 3.0 \% |

Table 4.4
The Interim and November CommonwealthTransportation Fund Forecast for Fiscal Year 2012
(Dollars in Millions)

| (Dollars in Millions) |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Fiscal Year 2012 |  |  |  |  |  |  |  |
|  | Interim Forecast |  | November Forecast |  | Change |  | \% Growth over FY 11 |  |
| Highway Maintenance \& Operating Fund |  |  |  |  |  |  |  |  |
| Motor Fuels Tax | \$ | 723.0 | \$ | 735.3 | \$ | 12.3 | 0.5 \% | 1.2 \% |
| Road Tax |  | 1.0 |  | 0.3 |  | (0.7) | 0.0 | (40.0) |
| Motor Vehicle Sales And Use Tax |  | 289.1 |  | 288.9 |  | (0.2) | 10.8 | 5.9 |
| Motor Vehicle License Fees |  | 228.8 |  | 222.2 |  | (6.6) | 1.7 | 0.4 |
| International Registration Plan |  | 59.0 |  | 62.0 |  | 3.0 | 0.0 | 2.8 |
| Recordation Tax (1 cent) |  | 11.2 |  | 11.2 |  | 0.0 | 0.0 | 0.0 |
| Miscellaneous |  | 13.2 |  | 12.7 |  | (0.5) | 0.0 | 0.0 |
| Total State Taxes and Fees (HMOF) | \$ | 1,325.3 | \$ | 1,332.6 | \$ | 7.3 | 2.8 \% | 2.1 \% |

## Transportation Trust Fund

Motor Fuels Tax
Priority Transportation Trust Fund
Base
Insurance Premiums Tax (1/3)
Road Tax
Motor Vehicle Sales And Use Tax
Motor Vehicle License Fees
Retail Sales and Use Tax
Recordation Tax (2 cents)
Interest Earnings
Rental Tax
Aviation Fuels Tax
Total State Taxes and Fees (TTF)

## Total HMOF And TTF

| Motor Fuels Tax | \$ | 827.7 | \$ | 840.8 | \$ | 13.1 | 0.5 | \% | 1.2 | \% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Priority Transportation Trust Fund |  | 154.0 |  | 154.2 |  | 0.2 | 3.9 |  | 4.0 |  |
| Base |  | 20.0 |  | 20.0 |  | 0.0 | 0.0 |  | 0.0 |  |
| Insurance Premiums Tax (1/3) |  | 134.0 |  | 134.2 |  | 0.2 | 4.5 |  | 4.7 |  |
| Road Tax |  | 9.5 |  | 8.2 |  | (1.3) | 0.0 |  | 2.5 |  |
| Motor Vehicle Sales and Use Tax |  | 445.5 |  | 446.3 |  | 0.8 | 10.5 |  | 5.8 |  |
| Motor Vehicle License Fees |  | 250.4 |  | 243.5 |  | (6.9) | 1.7 |  | 0.4 |  |
| International Registration Plan |  | 59.0 |  | 62.0 |  | 3.0 | 0.0 |  | 2.8 |  |
| Retail Sales and Use Tax |  | 495.4 |  | 504.4 |  | 9.0 | 3.6 |  | 3.2 |  |
| Recordation Tax (3 cents) |  | 33.5 |  | 33.5 |  | 0.0 | 0.0 |  | 0.0 |  |
| Interest Earnings |  | 42.6 |  | 28.7 |  | (13.9) | (6.8) |  | (6.2) |  |
| Rental Tax |  | 27.2 |  | 26.9 |  | (0.3) | 1.1 |  | 0.7 |  |
| Aviation Fuels Tax |  | 2.0 |  | 2.1 |  | 0.1 | (1.8) |  | 0.0 |  |
| Miscellaneous |  | 13.2 |  | 12.7 |  | (0.5) | 0.0 |  | 0.0 |  |
| Total State Taxes and Fees | \$ | 2,360.0 | \$ | 2,363.3 | \$ | 3.3 | 3.1 | \% | 2.5 | \% |
| Transfers per the Appropriations Act |  |  |  |  |  |  |  |  |  |  |
| Priority Transportation Trust Fund | \$ | 0.0 | \$ | 0.0 | \$ | 0.0 | n/a | \% | n/a | \% |
| General Fund Transfer |  | 0.0 |  | 0.0 |  | 0.0 | n/a |  | n/a |  |
| Retail Sales Tax - AST Retention |  | 0.0 |  | 0.0 |  | 0.0 | n/a |  | n/a |  |
| Increased Registration Fees |  | 0.0 |  | 0.0 |  | 0.0 | n/a |  | n/a |  |
| Auto Insurance Premiums Tax |  | 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 | \$ | 2,360.0 | \$ | 2,363.3 | \$ | 3.3 | 3.1 | \% | 2.5 | \% |

## NON-GENERAL FUND REVENUES

## The Alternative Forecast

Table 4.5 on the following pages compares the August 2009 Interim and November alternative low growth Commonwealth Transportation Fund forecasts. Under the alternative forecast, total state taxes and fees are expected to be \$54.2 million lower in fiscal year 2010 and $\$ 100.5$ million and $\$ 46.9$ million lower in fiscal years 2011 and 2012, respectively.

This forecast is based on an economic scenario in which the financial crisis worsens, prolonging the deep recession. The recession is W -shaped and lasts 11 quarters.

Table 4.5
The November Alternative CommonwealthTransportation Fund Forecast for Fiscal Year 2010
(Dollars in Millions)

|  | Fiscal Year 2009 |  |  | Fiscal Year 2010 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Actual |  | \% Growth | Interim Forecast |  | November Forecast |  | Change |  | \% Growth ov Interim | $\begin{aligned} & \text { er FY } 09 \\ & \text { November } \end{aligned}$ |
| Highway Maintenance \& Operating Fund |  |  |  |  |  |  |  |  |  |  |  |
| Motor Fuels Tax | \$ | 721.1 | (2.5) \% | \$ | 713.8 | \$ | 695.9 | \$ | (17.9) | (1.0) \% | (3.5) \% |
| Road Tax |  | 1.6 | 33.3 |  | 1.0 |  | 1.1 |  | 0.1 | 37.5 | 31.3 |
| Motor Vehicle Sales And Use Tax |  | 269.7 | (24.0) |  | 241.1 |  | 236.2 |  | (4.9) | (10.6) | (12.4) |
| Motor Vehicle License Fees |  | 220.0 | (0.4) |  | 221.0 |  | 217.3 |  | (3.7) | 0.5 | (1.2) |
| International Registration Plan |  | 58.8 | (20.6) |  | 59.0 |  | 55.4 |  | (3.6) | 0.3 | (5.8) |
| Recordation Tax (1 cent) |  | 11.9 | n/a |  | 11.2 |  | 11.2 |  | 0.0 | (5.9) | (5.9) |
| Miscellaneous |  | 12.9 | (13.4) |  | 13.2 |  | 12.7 |  | (0.5) | 2.3 | (1.6) |
| Total State Taxes and Fees (HMOF) | \$ | 1,296.1 | (7.8) \% | \$ | 1,260.3 | \$ | 1,229.8 | \$ | (30.5) | (2.8) \% | (5.1) \% |

## Transportation Trust Fund

Motor Fuels Tax
Priority Transportation Trust Fund
Base
Insurance Premiums Tax (1/3)
Road Tax
Motor Vehicle Sales And Use Tax
Motor Vehicle License Fees
Retail Sales and Use Tax
Recordation Tax (2 cents)
Interest Earnings
Rental Tax
Aviation Fuels Tax
Total State Taxes and Fees (TTF)

| \$ | 106.9 | (4.3) \% | \$ | 103.3 | \$ | 102.3 | \$ | (1.0) | (3.4) \% | (4.3) \% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 152.3 | 661.5 |  | 149.1 |  | 149.1 |  | 0.0 | (2.1) | (2.1) |
|  | 20.0 | 0.0 |  | 20.0 |  | 20.0 |  | 0.0 | 0.0 | 0.0 |
|  | 132.3 | n/a |  | 129.1 |  | 129.1 |  | 0.0 | (2.4) | (2.4) |
|  | 7.9 | (7.5) |  | 8.4 |  | 6.9 |  | (1.5) | 6.3 | (12.7) |
|  | 143.5 | (23.1) |  | 132.4 |  | 130.0 |  | (2.4) | (7.7) | (9.4) |
|  | 21.6 | 1.2 |  | 20.9 |  | 21.2 |  | 0.3 | (3.2) | (1.9) |
|  | 499.4 | (4.9) |  | 478.4 |  | 477.5 |  | (0.9) | (4.2) | (4.4) |
|  | 23.8 | n/a |  | 22.3 |  | 22.3 |  | 0.0 | (6.3) | (6.3) |
|  | 27.7 | (55.4) |  | 41.2 |  | 23.9 |  | (17.3) | 48.7 | (13.7) |
|  | 29.1 | (7.0) |  | 27.6 |  | 26.7 |  | (0.9) | (5.2) | (8.2) |
|  | 2.1 | 0.0 |  | 2.1 |  | 2.1 |  | 0.0 | (1.3) | (1.3) |
| \$ | 1,014.2 | 4.7 \% | \$ | 985.7 | \$ | 962.0 | \$ | (23.7) | (2.8) \% | (5.1) \% |

Total HMOF And TTF

| Motor Fuels Tax | \$ | 828.0 | (2.7) \% | \$ | 817.1 | \$ | 798.2 | \$ | (18.9) | (1.3) \% | (3.6) \% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Priority Transportation Trust Fund |  | 152.3 | 661.5 |  | 149.1 |  | 149.1 |  | 0.0 | (2.1) | (2.1) |
| Base |  | 20.0 | 0.0 |  | 20.0 |  | 20.0 |  | 0.0 | 0.0 | 0.0 |
| Insurance Premiums Tax (1/3) |  | 132.3 | n/a |  | 129.1 |  | 129.1 |  | 0.0 | (2.4) | (2.4) |
| Road Tax |  | 9.5 | (2.4) |  | 9.4 |  | 8.0 |  | (1.4) | (1.1) | (15.8) |
| Motor Vehicle Sales and Use Tax |  | 413.2 | (23.7) |  | 373.5 |  | 366.2 |  | (7.3) | (9.6) | (11.4) |
| Motor Vehicle License Fees |  | 241.6 | (0.2) |  | 241.9 |  | 238.5 |  | (3.4) | 0.1 | (1.3) |
| International Registration Plan |  | 58.8 | (20.6) |  | 59.0 |  | 55.4 |  | (3.6) | 0.3 | (5.8) |
| Retail Sales and Use Tax |  | 499.4 | (4.9) |  | 478.4 |  | 477.5 |  | (0.9) | (4.2) | (4.4) |
| Recordation Tax (3 cents) |  | 35.7 | n/a |  | 33.5 |  | 33.5 |  | 0.0 | (6.2) | (6.2) |
| Interest Earnings |  | 27.7 | (55.4) |  | 41.2 |  | 23.9 |  | (17.3) | 48.7 | (13.7) |
| Rental Tax |  | 29.1 | (7.0) |  | 27.6 |  | 26.7 |  | (0.9) | (5.2) | (8.2) |
| Aviation Fuels Tax |  | 2.1 | 0.0 |  | 2.1 |  | 2.1 |  | 0.0 | (1.3) | (1.3) |
| Miscellaneous |  | 12.9 | (13.4) |  | 13.2 |  | 12.7 |  | (0.5) | 2.3 | (1.6) |
| Total State Taxes and Fees | \$ | 2,310.3 | (2.7) \% | \$ | 2,246.0 | \$ | 2,191.8 | \$ | (54.2) | (2.8) \% | (5.1) \% |
| Transfers per the Appropriations Act |  |  |  |  |  |  |  |  |  |  |  |
| Priority Transportation Trust Fund |  | 0.0 | n/a | \$ | 0.0 | \$ | 0.0 | \$ | 0.0 | n/a \% | n/a \% |
| General Fund Transfer |  | 0.0 | n/a |  | 0.0 |  | 0.0 |  | 0.0 | n/a | n/a |
| Retail Sales Tax - AST Retention |  | 0.0 | n/a |  | 0.0 |  | 0.0 |  | 0.0 | n/a | n/a |
| Increased Registration Fees |  | 0.0 | n/a |  | 0.0 |  | 0.0 |  | 0.0 | n/a | n/a |
| Auto Insurance Premiums Tax |  | 0.0 | (100.0) |  | 0.0 |  | 0.0 |  | 0.0 | n/a | n/a |
| Total Transfers |  | 0.0 | (100.0) | \$ | 0.0 | \$ | 0.0 | \$ | 0.0 | n/a | n/a \% |
| Total Transportation Fund |  | 2,310.3 | (7.0) | \$ | 2,246.0 | \$ | 2,191.8 | \$ | (54.2) | (2.8) \% | (5.1) $\%$ |

Table 4.5
The November Alternative CommonwealthTransportation Fund Forecast for Fiscal Year 2011
(Dollars in Millions)

|  | Fiscal Year 2011 |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Interim Forecast |  | November Forecast |  | Change |  | \% Growth over FY 10 |  |  |
| Highway Maintenance \& Operating Fund |  |  |  |  |  |  |  |  |  |
| Motor Fuels Tax | \$ | 719.2 | \$ | 679.4 | \$ | (39.8) | 0.8 \% | \% | (2.4) \% |
| Road Tax |  | 1.0 |  | 0.1 |  | (0.9) | 0.0 |  | (90.9) |
| Motor Vehicle Sales And Use Tax |  | 260.9 |  | 242.8 |  | (18.1) | 8.2 |  | 2.8 |
| Motor Vehicle License Fees |  | 225.0 |  | 218.6 |  | (6.4) | 1.8 |  | 0.6 |
| International Registration Plan |  | 59.0 |  | 55.4 |  | (3.6) | 0.0 |  | 0.0 |
| Recordation Tax (1 cent) |  | 11.2 |  | 11.2 |  | 0.0 | 0.0 |  | 0.0 |
| Miscellaneous |  | 13.2 |  | 12.7 |  | (0.5) | 0.0 |  | 0.0 |
| Total State Taxes and Fees (HMOF) | \$ | 1,289.5 | \$ | 1,220.2 | \$ | (69.3) | 2.3 \% |  | (0.8) \% |

## Transportation Trust Fund

Motor Fuels Tax
Priority Transportation Trust Fund
Base
Insurance Premiums Tax (1/3)
Road Tax
Motor Vehicle Sales And Use Tax
Motor Vehicle License Fees
Retail Sales and Use Tax
Recordation Tax (2 cents)
Interest Earnings
Rental Tax
Aviation Fuels Tax
Total State Taxes and Fees (TTF)

Total HMOF And TTF

| Motor Fuels Tax | \$ | 823.4 | \$ | 778.3 | \$ | (45.1) |  |  | (2.5) \% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Priority Transportation Trust Fund |  | 148.2 |  | 145.9 |  | (2.3) | (0.6) |  | (2.1) |
| Base |  | 20.0 |  | 20.0 |  | 0.0 | 0.0 |  | 0.0 |
| Insurance Premiums Tax (1/3) |  | 128.2 |  | 125.9 |  | (2.3) | (0.7) |  | (2.5) |
| Road Tax |  | 9.5 |  | 6.8 |  | (2.7) | 1.1 |  | (15.0) |
| Motor Vehicle Sales and Use Tax |  | 403.2 |  | 376.1 |  | (27.1) | 8.0 |  | 2.7 |
| Motor Vehicle License Fees |  | 246.3 |  | 239.4 |  | (6.9) | 1.8 |  | 0.4 |
| International Registration Plan |  | 59.0 |  | 55.4 |  | (3.6) | 0.0 |  | 0.0 |
| Retail Sales and Use Tax |  | 478.0 |  | 482.3 |  | 4.3 | (0.1) |  | 1.0 |
| Recordation Tax (3 cents) |  | 33.5 |  | 33.5 |  | 0.0 | 0.0 |  | 0.0 |
| Interest Earnings |  | 45.7 |  | 30.6 |  | (15.1) | 10.9 |  | 28.0 |
| Rental Tax |  | 26.9 |  | 25.3 |  | (1.6) | (2.5) |  | (5.2) |
| Aviation Fuels Tax |  | 2.0 |  | 2.1 |  | 0.1 | (3.0) |  | 0.0 |
| Miscellaneous |  | 13.2 |  | 12.7 |  | (0.5) | 0.0 |  | 0.0 |
| otal State Taxes and Fees | \$ | 2,288.9 | \$ | 2,188.4 | \$ | (100.5) | 1.9 | \% | (0.2) \% |
| ransfers per the Appropriations Act |  |  |  |  |  |  |  |  |  |
| Priority Transportation Trust Fund | \$ | 0.0 | \$ | 0.0 | \$ | 0.0 | n/a | \% | $\mathrm{n} / \mathrm{a}$ \% |
| General Fund Transfer |  | 0.0 |  | 0.0 |  | 0.0 | n/a |  | n/a |
| Retail Sales Tax - AST Retention |  | 0.0 |  | 0.0 |  | 0.0 | n/a |  | n/a |
| Increased Registration Fees |  | 0.0 |  | 0.0 |  | 0.0 | n/a |  | n/a |
| Auto Insurance Premiums Tax |  | 0.0 |  | 0.0 |  | 0.0 | n/a |  | n/a |
| Total Transfers | \$ | 0.0 | \$ | 0.0 | \$ | 0.0 | n/a | \% | $\mathrm{n} / \mathrm{a}$ \% |
| Total Transportation Fund | \$ | 2,288.9 | \$ | 2,188.4 | \$ | (100.5) | 1.9 | \% | (0.2) $\%$ |

Table 4.5
The November Alternative CommonwealthTransportation Fund Forecast for Fiscal Year 2012
(Dollars in Millions)


## Transportation Trust Fund

Motor Fuels Tax
Priority Transportation Trust Fund
Base
Insurance Premiums Tax (1/3)
Road Tax
Motor Vehicle Sales And Use Tax
Motor Vehicle License Fees
Retail Sales and Use Tax
Recordation Tax (2 cents)
Interest Earnings
Rental Tax
Aviation Fuels Tax
Total State Taxes and Fees (TTF)

## Total HMOF And TTF

| Motor Fuels Tax | \$ | 827.7 | \$ | 780.0 | \$ | (47.7) | 0.5 | \% | 0.2 | \% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Priority Transportation Trust Fund |  | 154.0 |  | 151.2 |  | (2.8) | 3.9 |  | 3.6 |  |
| Base |  | 20.0 |  | 20.0 |  | 0.0 | 0.0 |  | 0.0 |  |
| Insurance Premiums Tax (1/3) |  | 134.0 |  | 131.2 |  | (2.8) | 4.5 |  | 4.2 |  |
| Road Tax |  | 9.5 |  | 6.7 |  | (2.8) | 0.0 |  | (1.5) |  |
| Motor Vehicle Sales and Use Tax |  | 445.5 |  | 478.1 |  | 32.6 | 10.5 |  | 27.1 |  |
| Motor Vehicle License Fees |  | 250.4 |  | 240.4 |  | (10.0) | 1.7 |  | 0.4 |  |
| International Registration Plan |  | 59.0 |  | 58.0 |  | (1.0) | 0.0 |  | 4.7 |  |
| Retail Sales and Use Tax |  | 495.4 |  | 495.7 |  | 0.3 | 3.6 |  | 2.8 |  |
| Recordation Tax (3 cents) |  | 33.5 |  | 33.5 |  | 0.0 | 0.0 |  | 0.0 |  |
| Interest Earnings |  | 42.6 |  | 28.7 |  | (13.9) | (6.8) |  | (6.2) |  |
| Rental Tax |  | 27.2 |  | 26.0 |  | (1.2) | 1.1 |  | 2.8 |  |
| Aviation Fuels Tax |  | 2.0 |  | 2.1 |  | 0.1 | (1.8) |  | 0.0 |  |
| Miscellaneous |  | 13.2 |  | 12.7 |  | (0.5) | 0.0 |  | 0.0 |  |
| Total State Taxes and Fees | \$ | 2,360.0 | \$ | 2,313.1 | \$ | (46.9) | 3.1 | \% | 5.7 | \% |
| Transfers per the Appropriations Act |  |  |  |  |  |  |  |  |  |  |
| Priority Transportation Trust Fund | \$ | 0.0 | \$ | 0.0 | \$ | 0.0 | n/a | \% | n/a | \% |
| General Fund Transfer |  | 0.0 |  | 0.0 |  | 0.0 | n/a |  | n/a |  |
| Retail Sales Tax - AST Retention |  | 0.0 |  | 0.0 |  | 0.0 | n/a |  | n/a |  |
| Increased Registration Fees |  | 0.0 |  | 0.0 |  | 0.0 | n/a |  | n/a |  |
| Auto Insurance Premiums Tax |  | 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 | \$ | 2,360.0 | \$ | 2,313.1 | \$ | (46.9) | 3.1 | \% | 5.7 | \% |

## NON-GENERAL FUND REVENUES

## ABC Revenues and Profits Fiscal Year 2009

In fiscal year 2009, ABC's total income, excluding state tax receipts, was \$576.0 million. Gross sales of alcoholic beverages in the retail stores accounted for 96.5 percent of this income. The remaining 3.5 percent of income was generated largely through the Department's regulatory and licensing activities. Table 4.6 shows ABC's revenues, costs, and profits for fiscal years 2006 through 2009. 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 2006-2009 (\$ millions)

|  | $\underline{\mathbf{2 0 0 6}}$ | $\underline{\mathbf{2 0 0 7}}$ | $\underline{\mathbf{2 0 0 8}}$ | $\underline{\mathbf{2 0 0 9}}$ |
| :--- | :---: | :---: | :---: | :---: |
| Total Revenue* 497.9 527.1 555.0 | 576.0 |  |  |  |
| Cost of Goods \& Total <br> Operating Expenses <br> Net ABC Profit | 404.6 | 432.7 | 451.6 | 464.5 |
| Transfer to the General Fund: <br> Reimbursement for Appropriations <br> as provided by the Acts of the Assembly <br> Net Profits for Distribution | 93.3 | 94.4 | 103.4 | 111.5 |

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

## ABC Revenues and Profit Forecast for 2010-2012

Comparisons of ABC's performance in fiscal year 2008, estimated performance for fiscal year 2009, and actual performance in fiscal year 2009, are included in Table 4.7.

Table 4.7
A Comparison of Fiscal Year 2008 Results to Fiscal Year 2009 Estimated and Actual Results, (\$ millions)

|  |  |  |  |  | FY08 v. FY09 |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
|  | FY09 Actual | FY08 Est. | FY09 Actual |  | \$ Var. |  | \% Var. | Estimate |
| Actual |  |  |  |  |  |  |  |  |
| Total Store Sales* | 641.2 | 670.0 | 665.5 | $(4.5)$ | $-0.7 \%$ | 28.8 | 24.3 |  |
| Net ABC Profit |  |  |  |  |  |  |  |  |
| for Distribution | 37.2 | 34.6 | 43.9 | 9.3 | $26.9 \%$ | $(2.6)$ | 6.7 |  |
| State Tax Revenue** | 125.3 | 110.6 | 129.8 | 19.2 | $17.4 \%$ | $(14.7)$ | 4.5 |  |

*These figures include state tax on alcoholic beverages and exclude the general sales tax collected at ABC stores
**State Tax Revenue does not include $\$ 9.9 \mathrm{~m}$ wine liter tax transferred to MHMRSAS

Fiscal Year 2009 compared to 2008 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 2009 results for store sales, profits for distribution and state tax revenues along with the 2010 through 2012 forecasts. Profit forecasts in Table 4.8 are net of any transfers mandated by the Appropriations Act.

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

|  | Actual |  | orecast |  |
| :---: | :---: | :---: | :---: | :---: |
|  | $\underline{2009}$ | $\underline{2010}$ | $\underline{2011}$ | $\underline{2012}$ |
| Total ABC Store Sales: (1) | 665.5 | 675.0 | 694.8 | 714.3 |
| Adjusted Net Profits for Distribution: (2) (3) | 43.9 | 40.5 | 40.9 | 41.4 |
| ABC State Tax Revenues:(1) |  |  |  |  |
| Spirits | 109.8 | 111.4 | 114.6 | 117.9 |
| Wine (4) | 19.7 | 20.0 | 20.0 | 20.0 |
| Total Tax Revenue: | 129.5 | 131.4 | 134.6 | 137.9 |

(1) Excludes the 5 percent 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

ABC's profit forecast is a factor of two elements: sales performance and trends in expenses. In both cases, forecasts beyond fiscal year 2010 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 2010, ABC expects sales to continue to grow, but at a much slower rate than in previous years. This is due to a general slowdown in Virginia's economy combined with a reduced growth rate in new locations during the fiscal year. Uncontrollable factors such as holiday season sales and sales from mixed beverage licensees (restaurants) have the potential to significantly impact the accuracy of ABC's sales forecast. Currently, ABC is experiencing slight growth in retail sales but a five percent decline in restaurant sales.

On the expense side, $A B C$ 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

## NON-GENERAL FUND REVENUES

57 percent of $A B C$ non-merchandise expenditures, 17 percent are for continuous charges such as rent and utilities, 12 percent are for contractual services such as shipping product to stores and telecommunications, and 14 percent are for miscellaneous expenses such as depreciation and credit card discount fees. In fiscal years 2010 and 2011, increases in expenditures are exacerbated by the need to make significant infrastructure improvements in order to comply with data security standards mandated by the Payment Card Industry. Changes in salary and benefit cost rates mandated by the Appropriations Act can also significantly impact the accuracy of ABC's expense forecasts.

## Distribution of ABC Profits and ABC State Tax Revenues

During fiscal year 2009, ABC contributed $\$ 111.5$ million of net profits to the Commonwealth, and collected $\$ 184.3$ million of taxes on store sales, wine, and beer and an additional $\$ 26.2$ million of general sales tax totaling $\$ 322$ million.

While 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 are the Department of Mental Health, Mental Retardation, Substance Abuse Services' programs for the treatment of alcoholics as well as testing services and the Breathalyzer Training Program. The transfers for these programs and others were \$67.6 million in fiscal year 2009. These appropriations are charged against net ABC profits before being transferred to the General Fund.

In any given time period, amounts transferred to the General Fund will not correspond to net $A B C$ 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

Each fiscal year, the Lottery makes periodic transfers of net income, or sales minus expenses plus other income, to the Lottery Proceeds Fund. Expenses are comprised of prizes to players, commissions to retailers, ticket printing and distribution, computer gaming contract fees, and administrative operating costs. The primary drivers of the net income transferred are sales of lottery products and prizes paid to players.

## Actual Results - Fiscal Year 2009

The Virginia Lottery transferred net proceeds of \$439.1 million to the Lottery Proceeds Fund for fiscal year 2009. The Lottery also transferred $\$ 1.1$ million for debt set-off to the Department of Taxation and $\$ 13.3$ million from unclaimed prizes to the Literary Fund.

Sales for fiscal year 2009 were $\$ 1.4$ billion, a decline of $\$ 20.8$ million ( -1.5 percent) from fiscal year 2008, and $\$ 25.7$ million (-2 percent) less than the fiscal year 2009 forecast. Net income was $\$ 9.0$ million (+2 percent) more than forecast for the fiscal year, primarily because of unusually low prize expense rates.

## Forecast Overview - Fiscal Years 2010 to 2012

The Virginia Lottery developed its sales and revenue forecasts based upon a variety of baseline assumptions, including:
the economic outlook as endorsed by the Governor's Advisory Board of Economists, in particular with respect to long-term interest rates and US Treasury-issued bond yields;
continued lottery gaming competition from North Carolina, which began in the fourth quarter of fiscal year 2006 and is expected to continue with new and enhanced product offerings throughout the current and future years;
no legislatively-mandated change in the overall compensation rate paid to retailers offering Lottery products;
no new constraints on the Lottery's sales and marketing efforts, including the ability to advertise products and establish prizes paid to players; and
no new, non-traditional product-line offerings.
For fiscal year 2010, the Lottery is projecting sales of $\$ 1.4$ billion and net income (turnover to the Lottery Proceeds Fund) of $\$ 430.2$ million. Prize expense is estimated to be $\$ 813.9$ million, or 58.3 percent of sales; retailer compensation is forecast to be $\$ 78.8$ million, or 5.7 percent of sales. This forecast takes into account current trends and simulation models
for jackpot progressions and sales, and statistically expected prize expense rates. The estimated $\$ 430.2$ million net income plus the $\$ 8.9$ million of residual fiscal year 2009 profits transferred in fiscal year 2010 brings the total expected transfers to the Lottery Proceeds Fund for FY2010 to \$439.1 million.

For the 2010-2012 biennium, the Lottery expects that sales and net income will remain near fiscal year 2010 levels, or $\$ 1.4$ billion in sales creating revenue for the Lottery Proceeds Fund of $\$ 430.2$ million each year.

## Sales Projections for Fiscal Years 2010 through 2012

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 half of total lottery sales. Sales of scratch games are expected to experience minimal overall growth for the current year and subsequent biennia 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 levels.

## The Jackpot-Style Games: Mega Millions and Win for Life

About 14 percent of the Lottery's sales come from jackpot-style games - those games offering top prizes in the millions of dollars. The Lottery now offers two such games: Win for Life and Mega Millions. "Luck of the draw" plays a major role in the sales performance of Mega Millions. 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 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.

Win for Life, the other jackpot-style game offered in Virginia, offers a fixed prize to players without regard to the number of winners resulting from any single drawing. The grand prize is a fixed weekly payment to a winner for the remainder of the winner's natural life. This prize has been highly appealing to players when offered on a scratch ticket; offering the prize as a guaranteed prize for a bi-weekly drawing game also appealed to players during qualitative testing. Since the game's inception in March 2006, it has become clear that player awareness of this game offering is key to its success.

Escalating efforts to expand multi-state jackpot game offerings among all U.S. Lottery states have led to recent breakthrough agreements between the two major consortia - Mega Millions and Powerball - that may lead to further product offerings with a national jackpot. These initiatives have experienced many interruptions and setbacks over the years, and there are no anticipated revenues in the current forecast for any of these potential future products. If such products become available for sale in Virginia, a forecast adjustment will be made at that time.

## 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, 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 to slightly declining 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 new products to players: the limitedtime offering of raffle tickets, and a new line of "fast 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. Fast play style games are offered for sale through retailer terminals, and offer an instant-win experience for consumers.

## Net Income for Fiscal Years 2010 through 2012

The Lottery is forecasting net income of $\$ 430.2$ million for fiscal year 2010, as well as each year in the next biennium. The Lottery's largest expense, prizes to players, is expected to increase slightly 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 5.7 percent of sales. Operating expenses are projected to remain low, forecast to stabilize around 5.5 percent -6.0 percent of total sales.

The Virginia Lottery, celebrating its $21^{\text {st }}$ year in fiscal year 2010, with its current product mix, has reached the maturity stage. Virginia continues to support sustaining sales and net income through innovations in existing products, ongoing operating efficiencies, retailer recruitment and expansion initiatives, and crucial marketing endeavors.

## 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. Since the basis of many of the Lottery's products is a random drawing, in the relatively short period of one year, a wide range of outcomes can occur. If the Lottery experiences unusually high payouts in its daily games in any given year, sales may be higher than projected, but 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.

A second risk is the prospect that North Carolina, as it further develops its lottery operation, will launch product offerings not available in Virginia. Prior to the inception of the North Carolina Education Lottery, approximately 10 percent of Virginia Lottery sales were to residents of North Carolina. Since inception, that percentage has declined to about 5 percent, meaning that the other 5 percent of sales were lost. Virginia may continue to experience a further erosion of sales to North Carolinians because their lottery increased the percentage of sales returned in prizes in 2008, eliminating the competitive advantage that Virginia had. Also, if North Carolina was to introduce different products than those available in Virginia, the impact on Virginia Lottery sales and revenues could be more than anticipated in this current forecast. Specifically, the offering of internet gaming, video lottery, or other non-traditional products in North Carolina could cause a more significant decline in Virginia lottery revenues.

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 relaunched in the marketplace. Advertising funds are necessary to ensure this is effective.

## Unemployment Insurance Trust Fund

The current unemployment benefit financing system, put in place in 1981, 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 additive 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. Much higher unemployment caused UI tax collections to fall below the projection by $\$ 13.3$ million, or 3.9 percent, in fiscal year 2009 (see Table 4.9). Despite lower tax revenues and much higher benefits, interest revenues were below the projection by only $\$ 0.7$ million, or 2.5 percent, because the interest rate on the Trust Fund was slightly higher than expected.

## Discussion of Forecast

The estimates in Tables 4.9 and 4.10 represent projections from the Unemployment Insurance Benefit Financing Model. The current estimates' increase in tax revenue in fiscal years 2010-2012 reflects increases in the four year moving average of benefit charges and in the pool tax rate and a decrease in the Fund Balance Factor. In the Baseline Scenario, pool taxes of 0.43 percent, 0.75 percent, and 0.91 percent are projected for Calendar Years 2010-2012 respectively. A fund-building tax is imposed in Calendar Years 2010-2012. The decline in interest revenues to zero is the result of the trust fund being depleted. In the pessimistic Alternate Scenario, pool taxes of 0.43 percent, 0.78 percent, and 0.96 percent are projected for Calendar Years 2010-2012 respectively. A fund-building tax is imposed in Calendar Years 2010-2012. Tax revenues are lower in 2010 in the Alternate Scenario because employment is lower. Due to higher benefit payments in the Alternate Scenario, average benefit ratios are higher for Calendar Years 2011 and 2012. This, combined with the higher pool tax rates, produces higher tax revenue than the Baseline Scenario for fiscal years 2011 and 2012. The Alternate Scenario produces the same interest revenue as the Baseline Scenario because both their balances are depleted.

TABLE 4.9
Financial Forecasts Fiscal Years 2010, 2011, and 2012
Baseline Scenario (Global Insight STANDARD)
(Millions of Dollars)

| Revenue Source | Fiscal Year 2010 |  | Fiscal Year 2011 |  | Fiscal Year 2012 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Standard <br> Estimate | \% Change From Actual Fiscal Year 2009 | Standard Estimate | \% Change From Estimated Fiscal Year 2010 | Standard Estimate | \% Change From Estimated Fiscal Year 2011 |
| Unemployment Insurance Tax | 505.7 | 54.5\% | 746.1 | 47.5\% | 921.8 | 23.5\% |
| Interest on |  |  |  |  |  |  |
| Trust Fund | 2.8 | -89.9\% | - | -100.0\% | - | N/A |
| Total Revenue | 508.5 | 43.2\% | 746.1 | 46.7\% | 921.8 | 23.5\% |

TABLE 4.10
Financial Forecasts Fiscal Years 2010, 2011, and 2012
Pessimistic Alternate Scenario (Global Insight FALSE DAWN)
(Millions of Dollars)

| Revenue Source | Fiscal Year 2010 |  | Fiscal Year 2011 |  | Fiscal Year 2012 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Standard <br> Estimate | \% Change From Actual Fiscal Year 2009 | Standard Estimate | \% Change From Estimated Fiscal Year 2010 | Standard Estimate | \% Change From Estimated Fiscal Year 2011 |
| Unemployment Insurance Tax | 503.3 | 53.7\% | 752.4 | 49.5\% | 944.2 | 25.5\% |
| Interest on |  |  |  |  |  |  |
| Trust Fund | 2.8 | -89.9\% | - | -100.0\% | - | N/A |
| Total Revenue | 506.1 | 42.5\% | 752.4 | 48.7\% | 944.2 | 25.5\% |

## APPENDIX A ECONOMIC DATA

TABLE A. 1 - QUARTERLY NATIONAL AND VIRGINIA ECONOMIC VARIABLES

| History |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 20063 | 20064 | 20071 | 20072 | 20073 | 20074 | 20081 | 20082 | 20083 | 20084 | 20091 | 20092 |
| 12,965.9 | 13,060.7 | 13,099.9 | 13,204.0 | 13,321.1 | 13,391.2 | 13,366.9 | 13,415.3 | 13,324.6 | 13,141.9 | 12,925.4 | 12,901.5 |
| 0.1 | 3.0 | 1.2 | 3.2 | 3.6 | 2.1 | (0.7) | 1.5 | (2.7) | (5.4) | (6.4) | (0.7) |
| 2.2 | 2.4 | 1.4 | 1.9 | 2.7 | 2.5 | 2.0 | 1.6 | 0.0 | (1.9) | (3.3) | (3.8) |
| 9,090.7 | 9,181.6 | 9,265.1 | 9,291.5 | 9,335.6 | 9,363.6 | 9,349.6 | 9,351.0 | 9,267.7 | 9,195.3 | 9,209.2 | 9,189.0 |
| 2.5 | 4.1 | 3.7 | 1.1 | 1.9 | 1.2 | (0.6) | 0.1 | (3.5) | (3.1) | 0.6 | (0.9) |
| 2.5 | 3.3 | 3.1 | 2.8 | 2.7 | 2.0 | 0.9 | 0.6 | (0.7) | (1.8) | (1.5) | (1.7) |
| 11,336.9 | 11,504.8 | 11,706.9 | 11,823.4 | 11,945.6 | 12,100.3 | 12,142.2 | 12,292.9 | 12,286.6 | 12,233.5 | 11,952.7 | 11,971.8 |
| 4.8 | 6.1 | 7.2 | 4.0 | 4.2 | 5.3 | 1.4 | 5.1 | (0.2) | (1.7) | (8.9) | 0.6 |
| 7.2 | 7.1 | 6.2 | 5.5 | 5.4 | 5.2 | 3.7 | 4.0 | 2.9 | 1.1 | (1.6) | (2.6) |
| 317,271.0 | 320,708.0 | 328,885.0 | 331,332.0 | 335,040.0 | 337,410.0 | 339,770.0 | 344,077.0 | 345,189.0 | 345,285.0 | 339,761.0 | 340,692.0 |
| 4.0 | 4.4 | 10.6 | 3.0 | 4.6 | 2.9 | 2.8 | 5.2 | 1.3 | 0.1 | (6.2) | 1.1 |
| 6.9 | 6.5 | 6.1 | 5.5 | 5.6 | 5.2 | 3.3 | 3.8 | 3.0 | 2.3 | (0.0) | (1.0) |
| 179,009.0 | 181,730.0 | 187,329.0 | 187,794.0 | 189,146.0 | 190,445.0 | 191,992.0 | 192,966.0 | 194,457.0 | 194,585.0 | 191,069.0 | 189,794.0 |
| 2.2 | 6.2 | 12.9 | 1.0 | 2.9 | 2.8 | 3.3 | 2.0 | 3.1 | 0.3 | (7.0) | (2.6) |
| 4.5 | 5.5 | 5.3 | 5.5 | 5.7 | 4.8 | 2.5 | 2.8 | 2.8 | 2.2 | (0.5) | (1.6) |
| 54,351.0 | 54,785.0 | 55,962.0 | 57,550.0 | 58,960.0 | 59,584.0 | 58,832.0 | 59,007.0 | 59,834.0 | 59,119.0 | 56,588.0 | 55,406.0 |
| 11.1 | 3.2 | 8.9 | 11.8 | 10.2 | 4.3 | (5.0) | 1.2 | 5.7 | (4.7) | (16.1) | (8.1) |
| 17.4 | 12.8 | 11.5 | 8.7 | 8.5 | 8.8 | 5.1 | 2.5 | 1.5 | (0.8) | (3.8) | (6.1) |
| 23,011.0 | 23,045.0 | 22,607.0 | 22,639.0 | 22,516.0 | 22,414.0 | 22,377.0 | 22,232.0 | 22,316.0 | 21,873.0 | 21,093.0 | 20,854.0 |
| (3.7) | 0.6 | (7.4) | 0.6 | (2.2) | (1.8) | (0.7) | (2.6) | 1.5 | (7.7) | (13.5) | (4.5) |
| 1.6 | 0.2 | (2.8) | (2.5) | (2.2) | (2.7) | (1.0) | (1.8) | (0.9) | (2.4) | (5.7) | (6.2) |

## TABLE A. 1 - QUARTERLY NATIONAL AND VIRGINIA ECONOMIC VARIABLES

|  | History |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 20063 | 20064 | 20071 | 20072 | 20073 | 20074 | 20081 | 20082 | 20083 | 20084 | 20091 | 20092 |
| Total U.S. Employment, |  |  |  |  |  |  |  |  |  |  |  |  |
| Millions, SA | 136.3 | 136.8 | 137.3 | 137.6 | 137.6 | 138.0 | 137.9 | 137.5 | 137.0 | 135.7 | 133.7 | 132.1 |
| Annualized \% Change | 1.1 | 1.4 | 1.5 | 0.9 | 0.1 | 1.2 | (0.2) | (1.3) | (1.5) | (3.7) | (5.9) | (4.5) |
| \% Change from Prior Year's Quarter | 1.6 | 1.6 | 1.4 | 1.2 | 1.0 | 0.9 | 0.5 | (0.0) | (0.4) | (1.6) | (3.1) | (3.9) |
| Virginia Total Nonag. Employment, |  |  |  |  |  |  |  |  |  |  |  |  |
| Thousands, SA | 3,725.5 | 3,739.4 | 3,754.7 | 3,762.4 | 3,760.0 | 3,769.1 | 3,771.5 | 3,757.3 | 3,761.9 | 3,724.8 | 3,694.0 | 3,678.7 |
| Annualized \% Change | (0.1) | 1.5 | 1.6 | 0.8 | (0.3) | 1.0 | 0.3 | (1.5) | 0.5 | (3.9) | (3.3) | (1.7) |
| \% Change from Prior Year's Quarter | 1.3 | 1.3 | 1.1 | 1.0 | 0.9 | 0.8 | 0.4 | (0.1) | 0.1 | (1.2) | (2.1) | (2.1) |
| CPI, All Urban, |  |  |  |  |  |  |  |  |  |  |  |  |
| $2000=100, S A$ | 2.0 | 2.0 | 2.0 | 2.1 | 2.1 | 2.1 | 2.1 | 2.2 | 2.2 | 2.1 | 2.1 | 2.1 |
| Annualized \% Change | 3.6 | (1.0) | 3.9 | 4.2 | 2.4 | 5.8 | 4.5 | 4.5 | 6.2 | (8.3) | (2.4) | 1.3 |
| \% Change from Prior Year's Quarter | 3.3 | 1.9 | 2.4 | 2.6 | 2.3 | 4.0 | 4.2 | 4.3 | 5.2 | 1.5 | (0.2) | (0.9) |
| Refiner's Acquisition Cost of Oil, |  |  |  |  |  |  |  |  |  |  |  |  |
| \$ per Barrel | 65.1 | 54.5 | 54.0 | 62.5 | 71.4 | 84.0 | 91.2 | 117.1 | 113.9 | 55.1 | 40.4 | 56.8 |
| Quarterly Change | 0.6 | (10.6) | (0.5) | 8.5 | 8.9 | 12.6 | 7.2 | 25.9 | (3.2) | (58.8) | (14.7) | 16.4 |
| Change from Prior Year's Quarter | 7.3 | 0.6 | (2.2) | (2.1) | 6.3 | 29.4 | 37.2 | 54.6 | 42.5 | (28.9) | (50.8) | (60.3) |
| Before-Tax Corporate Profits, |  |  |  |  |  |  |  |  |  |  |  |  |
| Billions \$, SAAR | 1,865.1 | 1,790.7 | 1,747.6 | 1,808.6 | 1,758.2 | 1,783.1 | 1,620.8 | 1,593.5 | 1,576.6 | 1,060.1 | 1,246.5 | 1,337.1 |
| Annualized \% Change | 10.3 | (15.0) | (9.3) | 14.7 | (10.7) | 5.8 | (31.7) | (6.6) | (4.2) | (79.6) | 91.2 | 32.4 |
| \% Change from Prior Year's Quarter | 13.6 | 2.5 | (3.7) | (0.6) | (5.7) | (0.4) | (7.3) | (11.9) | (10.3) | (40.5) | (23.1) | (16.1) |
| S\&P 500 Stock Market Index, |  |  |  |  |  |  |  |  |  |  |  |  |
| Level | 1,288.4 | 1,389.5 | 1,425.3 | 1,496.4 | 1,490.8 | 1,494.1 | 1,350.2 | 1,371.6 | 1,251.9 | 909.8 | 809.3 | 892.2 |
| Annualized \% Change | 2.1 | 35.3 | 10.7 | 21.5 | (1.5) | 0.9 | (33.3) | 6.5 | (30.6) | (72.1) | (37.4) | 47.7 |
| \% Change from Prior Year's Quarter | 5.2 | 12.9 | 11.1 | 16.7 | 15.7 | 7.5 | (5.3) | (8.3) | (16.0) | (39.1) | (40.1) | (35.0) |
| 30-Year Treasury Bonds, |  |  |  |  |  |  |  |  |  |  |  |  |
| Level | 5.0 | 4.7 | 4.8 | 5.0 | 4.9 | 4.6 | 4.4 | 4.6 | 4.4 | 3.7 | 3.5 | 4.2 |
| Quarterly Change | (0.1) | (0.3) | 0.1 | 0.2 | (0.0) | (0.3) | (0.2) | 0.2 | (0.1) | (0.8) | (0.2) | 0.7 |
| Change from Prior Year's Quarter | 0.6 | 0.1 | 0.2 | (0.1) | (0.0) | (0.1) | (0.4) | (0.4) | (0.5) | (0.9) | (1.0) | (0.4) |
| SAAR: Seasonally Adjusted at Annual Rates SA: Seasonally Adjusted |  |  |  |  |  |  |  |  |  |  |  |  |

TABLE A. 2 - QUARTERLY NATIONAL AND VIRGINIA ECONOMIC VARIABLES

|  | October Standard Forecast |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 20093 | 20094 | 20101 | 20102 | 20103 | 20104 | 20111 | 20112 | 20113 | 20114 | 20121 | 20122 |
| Real Gross Domestic Product, Billions \$, SAAR | 13,014.6 | 13,097.9 | 13,155.3 | 13,214.5 | 13,286.6 | 13,374.6 | 13,466.7 | 13,585.4 | 13,708.8 | 13,829.7 | 13,959.7 | 14,091.2 |
| Annualized \% Change | 3.6 | 2.6 | 1.8 | 1.8 | 2.2 | 2.7 | 2.8 | 3.6 | 3.7 | 3.6 | 3.8 | 3.8 |
| \% Change from Prior Year's Quarter | (2.3) | (0.3) | 1.8 | 2.4 | 2.1 | 2.1 | 2.4 | 2.8 | 3.2 | 3.4 | 3.7 | 3.7 |
| Real Consumer Spending, |  |  |  |  |  |  |  |  |  |  |  |  |
| Billions \$, SAAR | 9,254.8 | 9,262.3 | 9,287.3 | 9,323.9 | 9,401.3 | 9,465.8 | 9,508.9 | 9,551.7 | 9,612.5 | 9,683.2 | 9,741.5 | 9,804.9 |
| Annualized \% Change | 2.9 | 0.3 | 1.1 | 1.6 | 3.4 | 2.8 | 1.8 | 1.8 | 2.6 | 3.0 | 2.4 | 2.6 |
| \% Change from Prior Year's Quarter | (0.1) | 0.7 | 0.8 | 1.5 | 1.6 | 2.2 | 2.4 | 2.4 | 2.2 | 2.3 | 2.4 | 2.7 |
| U.S. Personal Income, |  |  |  |  |  |  |  |  |  |  |  |  |
| Billions \$, SAAR | 11,959.4 | 12,021.9 | 12,127.4 | 12,248.9 | 12,378.5 | 12,485.2 | 12,593.5 | 12,721.5 | 12,870.7 | 13,019.3 | 13,192.8 | 13,381.5 |
| Annualized \% Change | (0.4) | 2.1 | 3.6 | 4.1 | 4.3 | 3.5 | 3.5 | 4.1 | 4.8 | 4.7 | 5.4 | 5.8 |
| \% Change from Prior Year's Quarter | (2.7) | (1.7) | 1.5 | 2.3 | 3.5 | 3.9 | 3.8 | 3.9 | 4.0 | 4.3 | 4.8 | 5.2 |
| Virginia Personal Income, |  |  |  |  |  |  |  |  |  |  |  |  |
| Millions \$, SAAR | 344,318.8 | 346,464.4 | 349,529.1 | 352,038.9 | 354,546.7 | 356,922.5 | 360,091.4 | 362,253.6 | 365,671.9 | 369,649.4 | 374,026.8 | 378,189.8 |
| Annualized \% Change | 4.3 | 2.5 | 3.6 | 2.9 | 2.9 | 2.7 | 3.6 | 2.4 | 3.8 | 4.4 | 4.8 | 4.5 |
| \% Change from Prior Year's Quarter | (0.3) | 0.3 | 2.9 | 3.3 | 3.0 | 3.0 | 3.0 | 2.9 | 3.1 | 3.6 | 3.9 | 4.4 |
| Virginia Wages and Salaries, |  |  |  |  |  |  |  |  |  |  |  |  |
| Millions \$, SAAR | 191,669.6 | 192,127.2 | 193,792.8 | 195,259.4 | 197,153.6 | 198,330.8 | 199,898.5 | 200,959.4 | 203,158.7 | 205,510.0 | 207,627.2 | 209,567.7 |
| Annualized \% Change | 4.0 | 1.0 | 3.5 | 3.1 | 3.9 | 2.4 | 3.2 | 2.1 | 4.5 | 4.7 | 4.2 | 3.8 |
| \% Change from Prior Year's Quarter | (1.4) | (1.3) | 1.4 | 2.9 | 2.9 | 3.2 | 3.2 | 2.9 | 3.0 | 3.6 | 3.9 | 4.3 |
| Virginia Dividends, Interest, and Rent, |  |  |  |  |  |  |  |  |  |  |  |  |
| Millions \$, SAAR | 56,184.3 | 56,932.8 | 57,882.3 | 58,758.2 | 58,954.5 | 58,596.4 | 58,988.5 | 59,515.0 | 60,328.3 | 61,295.3 | 62,516.9 | 63,879.8 |
| Annualized \% Change | 5.7 | 5.4 | 6.8 | 6.2 | 1.3 | (2.4) | 2.7 | 3.6 | 5.6 | 6.6 | 8.2 | 9.0 |
| \% Change from Prior Year's Quarter | (6.1) | (3.7) | 2.3 | 6.1 | 4.9 | 2.9 | 1.9 | 1.3 | 2.3 | 4.6 | 6.0 | 7.3 |
| Virginia Total Proprietor's Income, |  |  |  |  |  |  |  |  |  |  |  |  |
| Millions \$, SAAR | 21,236.3 | 21,516.0 | 21,747.9 | 22,062.0 | 22,238.5 | 22,691.2 | 23,014.3 | 23,143.9 | 23,193.1 | 23,225.0 | 23,217.6 | 23,202.6 |
| Annualized \% Change | 7.5 | 5.4 | 4.4 | 5.9 | 3.2 | 8.4 | 5.8 | 2.3 | 0.9 | 0.6 | (0.1) | (0.3) |
| \% Change from Prior Year's Quarter | (4.8) | (1.6) | 3.1 | 5.8 | 4.7 | 5.5 | 5.8 | 4.9 | 4.3 | 2.4 | 0.9 | 0.3 |

TABLE A． 2 －QUARTERLY NATIONAL AND VIRGINIA ECONOMIC VARIABLES

|  | October Standard Forecast |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 20093 | 20094 | 20101 | 20102 | 20103 | 20104 | 20111 | 20112 | 20113 | 20114 | 20121 | 20122 |
| Total U．S．Employment， Millions，SA | 131.2 | 130.6 | 130.4 | 130.7 | 131.1 | 131.7 | 132.3 | 133.1 | 133.9 | 134.6 | 135.5 | 136.4 |
| Annualized \％Change | （2．8） | （1．8） | （0．6） | 0.7 | 1.3 | 1.8 | 1.9 | 2.4 | 2.4 | 2.4 | 2.5 | 2.7 |
| \％Change from Prior Year＇s Quarter | （4．2） | （3．8） | （2．4） | （1．1） | （0．1） | 0.8 | 1.4 | 1.8 | 2.1 | 2.3 | 2.4 | 2.5 |
| Virginia Total Nonag．Employment， Thousands，SA | 3，639．2 | 3，624．8 | 3，624．9 | 3，629．2 | 3，647．4 | 3，662．9 | 3，677．7 | 3，691．1 | 3，711．8 | 3，733．5 | 3，755．8 | 3，779．1 |
| Annualized \％Change | （4．2） | （1．6） | 0.0 | 0.5 | 2.0 | 1.7 | 1.6 | 1.5 | 2.3 | 2.4 | 2.4 | 2.5 |
| \％Change from Prior Year＇s Quarter | （3．3） | （2．7） | （1．9） | （1．3） | 0.2 | 1.1 | 1.5 | 1.7 | 1.8 | 1.9 | 2.1 | 2.4 |
| CPI，All Urban， |  |  |  |  |  |  |  |  |  |  |  |  |
| 2000＝100，SA | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.3 | 2.3 |
| Annualized \％Change | 3.6 | 2.1 | （0．3） | 1.0 | 2.0 | 2.0 | 2.5 | 2.5 | 2.6 | 2.1 | 2.1 | 1.7 |
| \％Change from Prior Year＇s Quarter | （1．5） | 1.1 | 1.7 | 1.6 | 1.2 | 1.2 | 1.9 | 2.3 | 2.4 | 2.4 | 2.3 | 2.1 |
| Refiner＇s Acquisition Cost of Oil， | 64.6 | 65.8 | 60.3 |  | 62.2 | 65.0 | 67.9 | 70.7 | 73.5 | 75.0 | 76.0 | 76.9 |
| Quarterly Change | 7.8 | 1.1 | （5．4） | （0．9） | 2.8 | 2．8 | 2.9 | 2.8 | 2.8 | 1.6 | 1.0 | 0.9 |
| Change from Prior Year＇s Quarter | （49．3） | 10.7 | 19.9 | 2.6 | （2．4） | （0．7） | 7.5 | 11.3 | 11.3 | 10.0 | 8.2 | 6.3 |
| Before－Tax Corporate Profits， |  |  |  |  |  |  |  |  |  |  |  |  |
| Billions \＄，SAAR | 1，487．9 | 1，517．4 | 1，547．6 | 1，551．5 | 1，556．5 | 1，587．4 | 1，715．6 | 1，767．0 | 1，800．2 | 1，818．5 | 1，816．4 | 1，821．7 |
| Annualized \％Change | 53.3 | 8.2 | 8.2 | 1.0 | 1.3 | 8.2 | 36.4 | 12.5 | 7.7 | 4.1 | （0．5） | 1.2 |
| \％Change from Prior Year＇s Quarter | （5．6） | 43.1 | 24.2 | 16.0 | 4.6 | 4.6 | 10.9 | 13.9 | 15.7 | 14.6 | 5.9 | 3.1 |
| S\＆P 500 Stock Market Index， Level | 996.7 | 1，030．0 | 1，032．7 | 1，058．8 | 1，084．5 | 1，109．8 | 1，134．8 | 1，160．2 | 1，186．3 | 1，212．1 | 1，237．7 | 1，263．4 |
| Annualized \％Change | 55.7 | 14.0 | 1.0 | 10.5 | 10.1 | 9.7 | 9.3 | 9.3 | 9.3 | 9.0 | 8.7 | 8.6 |
| \％Change from Prior Year＇s Quarter | （20．4） | 13.2 | 27.6 | 18.7 | 8.8 | 7.7 | 9.9 | 9.6 | 9.4 | 9.2 | 9.1 | 8.9 |
| 30－Year Treasury Bonds， Level | 4.3 | 4.1 | 4.2 | 4.2 | 4.3 | 4.4 | 4.5 | 4.5 | 4.5 | 4.6 | 4.7 | 4.9 |
| Quarterly Change | 0.2 | （0．2） | 0.1 | 0.0 | 0.1 | 0.1 | 0.1 | 0.0 | （0．0） | 0.1 | 0.1 | 0.2 |
| Change from Prior Year＇s Quarter | （0．1） | 0.4 | 0.7 | 0.0 | （0．1） | 0.3 | 0.3 | 0.3 | 0.2 | 0.2 | 0.2 | 0.4 |
| SAAR：Seasonally Adjusted at Annual Rates SA：Seasonally Adjusted |  |  |  |  |  |  |  |  |  |  |  |  |

TABLE A. 2 - QUARTERLY NATIONAL AND VIRGINIA ECONOMIC VARIABLES

|  | October Pessimistic Alternative Scenario |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 20093 | 20094 | 20101 | 20102 | 20103 | 20104 | 20111 | 20112 | 20113 | 20114 | 20121 | 20122 |
| Real Gross Domestic Product, Billions \$, SAAR | 12,993.2 | 13,004.6 | 12,987.9 | 12,954.5 | 12,948.0 | 12,989.7 | 13,037.0 | 13,123.8 | 13,217.7 | 13,305.0 | 13,410.0 | 13,508.2 |
| Annualized \% Change | 2.9 | 0.4 | (0.5) | (1.0) | (0.2) | 1.3 | 1.5 | 2.7 | 2.9 | 2.7 | 3.2 | 3.0 |
| \% Change from Prior Year's Quarter | (2.5) | (1.0) | 0.5 | 0.4 | (0.3) | (0.1) | 0.4 | 1.3 | 2.1 | 2.4 | 2.9 | 2.9 |
| Real Consumer Spending, |  |  |  |  |  |  |  |  |  |  |  |  |
| Billions \$, SAAR | 9,250.7 | 9,233.0 | 9,228.0 | 9,223.5 | 9,257.1 | 9,286.9 | 9,288.8 | 9,290.0 | 9,306.4 | 9,330.3 | 9,351.3 | 9,379.9 |
| Annualized \% Change | 2.7 | (0.8) | (0.2) | (0.2) | 1.5 | 1.3 | 0.1 | 0.1 | 0.7 | 1.0 | 0.9 | 1.2 |
| \% Change from Prior Year's Quarter | (0.2) | 0.4 | 0.2 | 0.4 | 0.1 | 0.6 | 0.7 | 0.7 | 0.5 | 0.5 | 0.7 | 1.0 |
| U.S. Personal Income, |  |  |  |  |  |  |  |  |  |  |  |  |
| Billions \$, SAAR | 11,937.2 | 11,980.4 | 12,046.9 | 12,112.4 | 12,171.2 | 12,217.9 | 12,274.9 | 12,374.4 | 12,510.2 | 12,646.5 | 12,824.1 | 13,016.5 |
| Annualized \% Change | (1.2) | 1.5 | 2.2 | 2.2 | 2.0 | 1.5 | 1.9 | 3.3 | 4.5 | 4.4 | 5.7 | 6.1 |
| \% Change from Prior Year's Quarter | (2.8) | (2.1) | 0.8 | 1.2 | 2.0 | 2.0 | 1.9 | 2.2 | 2.8 | 3.5 | 4.5 | 5.2 |
| Virginia Personal Income, |  |  |  |  |  |  |  |  |  |  |  |  |
| Millions \$, SAAR | 343,952.1 | 345,918.7 | 348,437.0 | 350,275.8 | 351,696.0 | 353,046.8 | 355,257.7 | 356,880.1 | 360,147.2 | 363,932.1 | 368,320.0 | 372,494.0 |
| Annualized \% Change | 3.9 | 2.3 | 2.9 | 2.1 | 1.6 | 1.5 | 2.5 | 1.8 | 3.7 | 4.3 | 4.9 | 4.6 |
| \% Change from Prior Year's Quarter | (0.4) | 0.2 | 2.6 | 2.8 | 2.3 | 2.1 | 2.0 | 1.9 | 2.4 | 3.1 | 3.7 | 4.4 |
| Virginia Wages and Salaries, |  |  |  |  |  |  |  |  |  |  |  |  |
| Millions \$, SAAR | 191,594.4 | 191,942.8 | 193,242.4 | 194,132.9 | 195,368.4 | 196,018.9 | 197,077.6 | 197,662.1 | 199,449.9 | 201,327.7 | 203,063.9 | 204,751.5 |
| Annualized \% Change | 3.8 | 0.7 | 2.7 | 1.9 | 2.6 | 1.3 | 2.2 | 1.2 | 3.7 | 3.8 | 3.5 | 3.4 |
| \% Change from Prior Year's Quarter | (1.5) | (1.4) | 1.1 | 2.3 | 2.0 | 2.1 | 2.0 | 1.8 | 2.1 | 2.7 | 3.0 | 3.6 |
| Virginia Dividends, Interest, and Rent, |  |  |  |  |  |  |  |  |  |  |  |  |
| Millions \$, SAAR | 55,823.4 | 56,454.0 | 57,096.1 | 57,621.5 | 57,156.1 | 56,122.7 | 55,965.7 | 56,243.5 | 57,097.0 | 58,169.2 | 59,528.9 | 61,082.7 |
| Annualized \% Change | 3.0 | 4.6 | 4.6 | 3.7 | (3.2) | (7.0) | (1.1) | 2.0 | 6.2 | 7.7 | 9.7 | 10.9 |
| \% Change from Prior Year's Quarter | (6.7) | (4.5) | 0.9 | 4.0 | 2.4 | (0.6) | (2.0) | (2.4) | (0.1) | 3.6 | 6.4 | 8.6 |
| Virginia Total Proprietor's Income, |  |  |  |  |  |  |  |  |  |  |  |  |
| Millions \$, SAAR | 21,223.7 | 21,499.8 | 21,713.6 | 21,977.4 | 22,121.9 | 22,557.1 | 22,869.1 | 22,977.9 | 22,988.6 | 22,976.1 | 22,937.8 | 22,898.3 |
| Annualized \% Change | 7.3 | 5.3 | 4.0 | 4.9 | 2.7 | 8.1 | 5.6 | 1.9 | 0.2 | (0.2) | (0.7) | (0.7) |
| \% Change from Prior Year's Quarter | (4.9) | (1.7) | 2.9 | 5.4 | 4.2 | 4.9 | 5.3 | 4.6 | 3.9 | 1.9 | 0.3 | (0.3) |

TABLE A． 2 －QUARTERLY NATIONAL AND VIRGINIA ECONOMIC VARIABLES

|  | October Pessimistic Alternative Scenario |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 20093 | 20094 | 20101 | 20102 | 20103 | 20104 | 20111 | 20112 | 20113 | 20114 | 20121 | 20122 |
| Total U．S．Employment， Millions，SA | 131.2 | 130.3 | 129.8 | 129.6 | 129.4 | 129.6 | 129.8 | 130.3 | 130.8 | 131.4 | 132.0 | 132.8 |
| Annualized \％Change | （2．8） | （2．7） | （1．6） | （0．7） | （0．4） | 0.4 | 0.7 | 1.5 | 1.6 | 1.7 | 2.0 | 2.3 |
| \％Change from Prior Year＇s Quarter | （4．2） | （4．0） | （2．9） | （1．9） | （1．3） | （0．6） | 0.0 | 0.5 | 1.1 | 1.4 | 1.7 | 1.9 |
| Virginia Total Nonag．Employment， |  |  |  |  |  |  |  |  |  |  |  |  |
| Thousands，SA | 3，639．2 | 3，619．7 | 3，612．0 | 3，606．1 | 3，611．2 | 3，615．7 | 3，620．3 | 3，625．5 | 3，639．0 | 3，654．1 | 3，669．9 | 3，687．4 |
| Annualized \％Change | （4．2） | （2．1） | （0．8） | （0．7） | 0.6 | 0.5 | 0.5 | 0.6 | 1.5 | 1.7 | 1.7 | 1.9 |
| \％Change from Prior Year＇s Quarter | （3．3） | （2．8） | （2．2） | （2．0） | （0．8） | （0．1） | 0.2 | 0.5 | 0.8 | 1.1 | 1.4 | 1.7 |
| CPI，All Urban， |  |  |  |  |  |  |  |  |  |  |  |  |
| $2000=100$, SA | 2.2 | 2.2 | 2.1 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.3 | 2.3 | 2.3 |
| Annualized \％Change | 3.6 | 0.0 | （1．1） | 1.1 | 2.4 | 2.7 | 3.6 | 3.7 | 4.1 | 3.9 | 3.0 | 2.6 |
| \％Change from Prior Year＇s Quarter | （1．6） | 0.6 | 1.0 | 0.9 | 0.6 | 1.3 | 2.5 | 3.1 | 3.5 | 3.8 | 3.7 | 3.4 |
| Refiner＇s Acquisition Cost of Oil， |  |  |  |  |  |  |  |  |  |  |  |  |
| \＄per Barrel | 64.6 | 55.3 | 47.4 | 48.5 | 53.3 | 59.1 | 66.9 | 73.8 | 81.6 | 89.1 | 90.1 | 91.0 |
| Quarterly Change | 7.8 | （9．3） | （7．9） | 1.1 | 4.8 | 5.8 | 7.9 | 6.8 | 7.8 | 7.6 | 1.0 | 0.9 |
| Change from Prior Year＇s Quarter | （49．3） | 0.3 | 7.0 | （8．3） | （11．3） | 3.8 | 19.5 | 25.3 | 28.3 | 30.0 | 23.2 | 17.3 |
| Before－Tax Corporate Profits， |  |  |  |  |  |  |  |  |  |  |  |  |
| Billions \＄，SAAR | 1，455．4 | 1，419．5 | 1，425．0 | 1，381．8 | 1，360．3 | 1，398．0 | 1，521．0 | 1，566．4 | 1，597．4 | 1，615．6 | 1，604．7 | 1，604．1 |
| Annualized \％Change | 40.4 | （9．5） | 1.6 | （11．6） | （6．1） | 11.5 | 40.1 | 12.5 | 8.2 | 4.6 | （2．6） | （0．2） |
| \％Change from Prior Year＇s Quarter | （7．7） | 33.9 | 14.3 | 3.3 | （6．5） | （1．5） | 6.7 | 13.4 | 17.4 | 15.6 | 5.5 | 2.4 |
| S\＆P 500 Stock Market Index， |  |  |  |  |  |  |  |  |  |  |  |  |
| Level | 996.7 | 929.0 | 887.7 | 895.7 | 932.0 | 967.6 | 1，001．7 | 1，046．0 | 1，090．4 | 1，129．5 | 1，161．6 | 1，186．1 |
| Annualized \％Change | 55.7 | （24．5） | （16．6） | 3.7 | 17.2 | 16.2 | 14.9 | 18.9 | 18.1 | 15.2 | 11.9 | 8.7 |
| \％Change from Prior Year＇s Quarter | （20．4） | 2.1 | 9.7 | 0.4 | （6．5） | 4.2 | 12.8 | 16.8 | 17.0 | 16.7 | 16.0 | 13.4 |
| 30－Year Treasury Bonds， |  |  |  |  |  |  |  |  |  |  |  |  |
| Level | 4.3 | 3.8 | 3.9 | 3.9 | 4.0 | 4.0 | 4.5 | 4.9 | 5.1 | 5.4 | 5.8 | 6.2 |
| Quarterly Change | 0.2 | （0．5） | 0.1 | 0.1 | 0.0 | 0.0 | 0.5 | 0.4 | 0.2 | 0.3 | 0.3 | 0.5 |
| Change from Prior Year＇s Quarter | （0．1） | 0.1 | 0.4 | （0．2） | （0．4） | 0.1 | 0.6 | 0.9 | 1.1 | 1.5 | 1.3 | 1.3 |
| SAAR：Seasonally Adjusted at Annual Rates <br> SA：Seasonally Adjusted |  |  |  |  |  |  |  |  |  |  |  |  |

TABLE A. 3 - ANNUAL NATIONAL AND VIRGINIA ECONOMIC VARIABLES

| Ni\| |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\bar{\sim}$ |  |  |  |  |  |  |  |
| o | $\begin{aligned} & 0 \underset{\sim}{O} \underset{\sim}{\infty} \underset{\sim}{\infty} \\ & \underset{\sim}{\sim} \\ & \underset{F}{F} \\ & \underset{F}{F} \end{aligned}$ |  |  |  |  |  |  |
| $\stackrel{\text { ® }}{\text { ® }}$ |  |  |  |  |  |  |  |
| $\stackrel{\infty}{\circ}$ |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| $\begin{aligned} & \circ \\ & \stackrel{\circ}{\square} \end{aligned}$ | $\begin{aligned} & \infty N \\ & \underset{\sim}{\infty} \underset{\sim}{\infty} \underset{\sim}{\infty} \underset{\sim}{N} \\ & \dot{\omega} \end{aligned}$ |  |  |  |  |  |  |
| $\begin{aligned} & \stackrel{\leftrightarrow}{\circ} \\ & \stackrel{\circ}{\circ} \end{aligned}$ |  |  |  |  |  |  |  |
| $\stackrel{\star}{\stackrel{\circ}{\sigma}}$ |  |  |  |  |  |  |  |
| $\stackrel{\oplus}{\circ}$ |  |  |  |  |  |  |  |
| $\stackrel{\AA}{\stackrel{\circ}{\sigma}}$ |  |  | $\stackrel{m}{\underset{\sim}{m}} \stackrel{m}{\stackrel{N}{\sim}} \stackrel{\infty}{\stackrel{\infty}{\sim}}$ |  |  |  |  |


| $\stackrel{N}{\stackrel{N}{N}}$ |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |
| $\overline{\bar{\omega}} \stackrel{\Gamma}{\mathrm{N}}$ |  |  |  |  |  |  |  |
| $\begin{array}{ll} \bar{\circ} & 0 \\ \hline \end{array}$ |  |  |  |  |  |  |  |

TABLE A． 3 －ANNUAL NATIONAL AND VIRGINIA ECONOMIC VARIABLES

| $\stackrel{\infty}{\infty}$ |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\hat{N}$ |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| $\begin{array}{ll} \stackrel{n}{\sim} & 0 \\ & 0 \\ \hline \end{array}$ |  |  |  |  |  |  |  |
| $\underset{\sim}{\text { tiv }}$ |  |  |  |  |  |  |  |
| $\stackrel{0}{0}$ |  |  |  |  |  |  |  |


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|  |  | $\bigcirc \bigcirc \bigcirc \bigcirc$ | $\bigcirc \bigcirc \bigcirc \bigcirc \bigcirc$ | ¢ ¢－－ | $\cdots$ ¢ 0 | $\infty$ | $\bigcirc \bigcirc \bigcirc \bigcirc \bigcirc$ |
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|  |  |  | N | 8 |  | $\bigcirc$ ¢ | N N |
|  |  | の | $\ulcorner\llcorner\sim \infty$ | の $\downarrow$ の |  |  |  |
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|  | $\stackrel{\circ}{\circ}$ | N N |  | $\infty$ |  |  | \％ |
|  | $\stackrel{\text { N }}{ }$ | が ${ }^{\text {oj }}$ | $\underset{\sim}{\mathrm{N}}$ |  |  | $\stackrel{\circ}{\circ}$ | N |
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|  | Nた | に $0^{\circ}$ | にलへ下 | の $\mathrm{m}^{\circ}$ | べヘ | ¢ | $\infty$ |
|  |  | －${ }^{\circ} \mathrm{L}$－ | $\bigcirc \stackrel{\text { ¢ }}{ }$ | ¢ ¢ ¢ | ㄷo | へ－ |  |
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TABLE A． 3 －ANNUAL NATIONAL AND VIRGINIA ECONOMIC VARIABLES

| $\stackrel{\infty}{\circ}$ |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\hat{N}$ |  |  |  |  |  |  |  |
| $\begin{aligned} & 0 \\ & \hline \end{aligned}$ |  |  |  |  |  |  |  |
| $\frac{\stackrel{\rightharpoonup}{n}}{\underline{1}}$ |  |  |  |  |  |  |  |
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| గ్ |  |  |  |  |  |  |  |

TABLE A. 3 - ANNUAL NATIONAL AND VIRGINIA ECONOMIC VARIABLES

| $\stackrel{\sim}{\circ}$ | mন্ |  | $\stackrel{\infty}{\stackrel{\infty}{\sim}} \stackrel{\infty}{\square} \stackrel{\infty}{\bullet}$ |  |  |  | is |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\stackrel{\rightharpoonup}{0}$ |  |  | $\stackrel{\infty}{\stackrel{\infty}{\sim}} \stackrel{\infty}{\square} \stackrel{\oplus}{\oplus}$ | ○ |  |  |  |  |
| $\stackrel{\circ}{0}$ |  |  | $\underset{\sim}{\underset{\sim}{\oplus} \stackrel{+}{-} \underset{\sim}{\circ}}$ | $\stackrel{N}{\infty} \stackrel{\infty}{\sim} \stackrel{\sim}{\dot{\sim}} \underset{\sim}{\dot{\sim}}$ |  |  | oro |  |
| $\stackrel{8}{\circ}$ |  |  | $\underset{\leftarrow}{\sim} \underset{\sim}{N} \stackrel{+}{+}$ | $\underset{\underset{\sim}{\forall}}{\underset{\sim}{\infty} \underset{\sim}{\sim} \underset{\sim}{\sim}}$ |  |  |  |  |
| $\stackrel{\infty}{\circ}$ |  |  | $\stackrel{\oplus}{\stackrel{\circ}{\sim}} \stackrel{+}{\sim} \stackrel{\infty}{\Gamma}$ | $\bullet \widehat{\sim}$ <br> $\stackrel{(1)}{\circ} \stackrel{\oplus}{\circ}$ | N্N |  |  |  |
|  |  |  | $\stackrel{\varrho}{\bullet} \stackrel{\varrho}{\mathrm{N}} \stackrel{\infty}{\square} \stackrel{\infty}{\mathrm{~N}}$ |  | $\stackrel{\infty}{\infty} \underset{\infty}{\infty} \underset{\sim}{\infty} \stackrel{N}{\sim}$ |  |  |  |
| $\begin{aligned} & \stackrel{\circ}{\circ} \\ & \stackrel{-}{2} \end{aligned}$ |  |  |  | No n No No |  | $\begin{aligned} & \infty \\ & \underset{\sim}{\infty} \underset{\sim}{\sim} \stackrel{N}{\dot{j}} \stackrel{N}{N} \end{aligned}$ | $\underset{o}{\hat{N}} \stackrel{N}{\circ} \stackrel{0}{0} \stackrel{0}{=}$ |  |
| $\begin{aligned} & \stackrel{\circ}{\circ} \\ & \stackrel{\circ}{\circ} \end{aligned}$ |  |  | $\stackrel{\sim}{\sim} \stackrel{\infty}{\sim} \stackrel{\infty}{\sim} \stackrel{\infty}{\sim}$ | $\underset{\sim}{N} \underset{\sim}{\sim} \underset{\sim}{\sim}$ |  |  | $\stackrel{\substack{0}}{\substack{0}} \stackrel{0}{\sim}$ |  |
|  |  |  |  |  |  | Mo OM M |  |  |
| $\stackrel{\circ}{\circ}$ |  |  |  |  |  |  | O듣 |  |
| $\begin{aligned} & \stackrel{\sim}{\sigma} \\ & \hline \sim \end{aligned}$ |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |


| $\stackrel{N}{N}$ |  |  | $\stackrel{m}{i} \stackrel{O}{i} \underset{\sim}{N}$ | $\underset{\sim}{\text { N. }}$ |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | $\underset{\sim}{N} \underset{\sim}{N} \underset{\sim}{\sim}$ |  |  |  | $\underset{\sim}{n} \mathfrak{O}$ |
|  |  |  | $\underset{\sim}{N} \underset{\sim}{\sim} \underset{\sim}{\sim}$ |  |  |  | $\underset{\sim}{\circ}$ |
| $\stackrel{\stackrel{\rightharpoonup}{\circ}}{\circ}$ |  |  | $\overline{\mathrm{N}} \stackrel{\overparen{V}}{\stackrel{\rightharpoonup}{\mathrm{O}}} \stackrel{\rightharpoonup}{\dot{\sim}}$ |  | $\underset{\sim}{\text { No }}$ |  | - |

TABLE A． 3 －ANNUAL NATIONAL AND VIRGINIA ECONOMIC VARIABLES

| $\stackrel{\infty}{\circ}$ |  |  | $\underset{\sim}{N} \underset{\sim}{\infty} \underset{\sim}{\sim} \underset{m}{n}$ |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\hat{N}$ |  |  | $\overline{\mathrm{i}} \stackrel{0}{\mathrm{~N}} \stackrel{\mathrm{O}}{\mathrm{i}} \stackrel{\circ}{\mathrm{i}}$ |  |  |  |  |
| $\stackrel{\circ}{0}$ |  |  | ON N NO |  |  |  |  |
| $\begin{array}{ll} \stackrel{\rightharpoonup}{\omega} & 0 \\ \hline \mathbf{I} \\ \hline \end{array}$ |  |  |  |  |  |  |  |
| $\underset{\sim}{\text { O}}$ | 두ㄷㅜㅜ둥 |  | $\stackrel{O}{\Gamma} \stackrel{\mathfrak{N}}{\dot{N}} \stackrel{O}{\Gamma} \underset{\sim}{N}$ |  |  | $\stackrel{0}{\infty} \stackrel{m}{\underset{\sim}{\sim}} \underset{\sim}{\sim} \underset{\sim}{\infty} \stackrel{n}{\infty}$ |  |
| $\stackrel{0}{0}$ | OMぶ |  | $\stackrel{\infty}{\bullet} \stackrel{\infty}{\sim} \stackrel{\sim}{\sim} \stackrel{N}{\sim}$ | $\stackrel{\oplus}{\sim} \stackrel{\bullet}{\sim} \stackrel{0}{\sim}$ |  |  | 둥ㅇㅇㅇ |


| Total U．S．Employment， Millions，SA | Calendar Year <br> \％Change <br> Fiscal Year \％Change |
| :---: | :---: |
| Virginia Total Nonag．Employment， Thousands，SA | Calendar Year <br> \％Change <br> Fiscal Year <br> \％Change |
| CPI，All Urban， $2000=100, S A$ | Calendar Year \％Change Fiscal Year \％Change |
| Refiner＇s Acquisition Cost of Oil， \＄per Barrel | Calendar Year Change Fiscal Year Change |
| Before－Tax Corporate Profits， Billions \＄，SAAR | Calendar Year <br> \％Change <br> Fiscal Year <br> \％Change |
| S\＆P 500 Stock Market Index， Level | Calendar Year \％Change Fiscal Year \％Change |
| 30－Year Treasury Bonds， Level | Calendar Year Change Fiscal Year Change |
| SAAR：Seasonally Adjusted at Ann SA：Seasonally Adjusted |  |


| on |  |  |  |  |  |  | $\stackrel{\text { Nָ }}{\substack{\text { ¢ }}}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\stackrel{\oplus}{\circ}$ |  |  | $\stackrel{\sim}{\sim}$ |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  <br>  | $\bar{\sim}$ | ๓ $\widehat{\circ} \curvearrowleft$付 |  | $\infty$ ®iccos \％ |  |

TABLE A． 3 －ANNUAL NATIONAL AND VIRGINIA ECONOMIC VARIABLES

| $\stackrel{\infty}{\infty}$ |  |  | $\stackrel{\infty}{N} \stackrel{\infty}{\sim} \stackrel{N}{\sim}$ |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\stackrel{\rightharpoonup}{\mathrm{O}}$ |  |  |  |  |  |  |  |
| $\begin{aligned} & \circ \\ & \hline \mathrm{N} \end{aligned}$ |  |  | $\begin{aligned} & \circ \\ & \cdots \\ & \cdots \end{aligned}$ | $\underset{\sim}{\sigma} \times \underset{\sim}{\infty} \underset{\sim}{\infty}$ |  |  |  |
|  |  |  | ○ |  |  |  |  |
| $\stackrel{\rightharpoonup}{\mathrm{O}}$ |  |  |  |  |  |  | $\underset{\sim}{\circ} \boldsymbol{\sigma} \text { N N N }$ |
| $\stackrel{0}{\mathrm{O}}$ |  |  | $\stackrel{\infty}{\leftarrow} \stackrel{\infty}{\sim} \stackrel{\infty}{\leftarrow} \stackrel{N}{N}$ |  | $\begin{aligned} & n \\ & \underset{\infty}{\circ} \underset{\infty}{\infty} \underset{\infty}{\sim} \underset{\sim}{\sim} \end{aligned}$ |  | 下ণ |


| Total U．S．Employment， Millions，SA | Calendar Year <br> \％Change <br> Fiscal Year <br> \％Change |
| :---: | :---: |
| Virginia Total Nonag．Employment， Thousands，SA | Calendar Year \％Change Fiscal Year \％Change |
| CPI，All Urban， $2000=100, S A$ | Calendar Year <br> \％Change <br> Fiscal Year <br> \％Change |
| Refiner＇s Acquisition Cost of Oil， \＄per Barrel | Calendar Year Change Fiscal Year Change |
| Before－Tax Corporate Profits， Billions \＄，SAAR | Calendar Year <br> \％Change <br> Fiscal Year <br> \％Change |
| S\＆P 500 Stock Market Index， Level | Calendar Year <br> \％Change <br> Fiscal Year <br> \％Change |
| 30－Year Treasury Bonds， Level | Calendar Year <br> Change <br> Fiscal Year <br> Change |
| SAAR：Seasonally Adjusted at Ann SA：Seasonally Adjusted |  |

TABLE A. 3 - ANNUAL NATIONAL AND VIRGINIA ECONOMIC VARIABLES


| $\stackrel{\sim}{\sim}$ |  |  | $\stackrel{\circ}{\dot{C}}$ |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | $\stackrel{\substack{\circ \\ \sim}}{\sim}$ |  |  |  |  |
| 骨 |  |  |  | $\stackrel{\substack{c}}{\substack{c}}$ | $\stackrel{\infty}{\infty}$ |  |  |  |
| $$ |  |  <br>  |  |  | $\bigcirc \stackrel{\rightharpoonup}{0}+\stackrel{\rightharpoonup}{\square}$ <br>  |  |  |  |

TABLE A. 3 - ANNUAL NATIONAL AND VIRGINIA ECONOMIC VARIABLES


| $\bigcirc \stackrel{N}{\stackrel{N}{2}}$ |  | $\underset{\sim}{\sim}$ |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $$ |  |  |  |  |  | $\stackrel{\infty}{\underset{\sim}{N}} \stackrel{\sim}{i} \stackrel{\sim}{\sim} \underset{\sim}{\infty}$ |  |  |
| $\frac{2}{4} \frac{0}{2}$ |  |  |  |  |  |  | ${\underset{\sim N}{N}}_{\mathfrak{N}}^{\sim} \underset{\sim}{N}$ |  |
| $\begin{array}{ll} \bar{\theta} \\ 0 \\ 0 & 0 \\ 0 & 0 \end{array}$ |  |  | No |  |  |  |  |  |

TABLE A. 3 - ANNUAL NATIONAL AND VIRGINIA ECONOMIC VARIABLES


## APPENDIX B <br> GENERAL FUND DATA

TABLE B. 1 - QUARTERLY GENERAL FUND REVENUES

|  | 19973 | 19974 | 19981 | 19982 | 19983 | 19984 | 19991 | 19992 | 19993 | 19994 | 20001 | 20002 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Withholding | 1,090.0 | 1,202.0 | 1,260.8 | 1,206.2 | 1,226.7 | 1,285.4 | 1,432.4 | 1,367.4 | 1,351.5 | 1,521.9 | 1,513.7 | 1,474.2 |
| Annual \% Change | 12.0 | 12.2 | 7.7 | 10.9 | 12.5 | 6.9 | 13.6 | 13.4 | 10.2 | 18.4 | 5.7 | 7.8 |
| Nonwithholding | 179.5 | 96.2 | 246.6 | 762.4 | 209.7 | 99.0 | 313.4 | 865.8 | 235.3 | 181.9 | 304.5 | 947.9 |
| Annual \% Change | 18.9 | 17.0 | 12.3 | 29.4 | 16.8 | 2.9 | 27.1 | 13.6 | 12.2 | 83.8 | (2.9) | 9.5 |
| Gross Individual Income Tax | 1,269.5 | 1,298.2 | 1,507.4 | 1,968.6 | 1,436.3 | 1,384.4 | 1,745.9 | 2,233.2 | 1,586.8 | 1,703.8 | 1,818.2 | 2,422.1 |
| Annual \% Change | 13.0 | 12.6 | 8.4 | 17.4 | 13.1 | 6.6 | 15.8 | 13.4 | 10.5 | 23.1 | 4.1 | 8.5 |
| Individual Refunds | 53.4 | 33.6 | 280.3 | 271.0 | 56.5 | 47.4 | 288.7 | 319.4 | 69.7 | 39.6 | 322.8 | 269.8 |
| Annual \% Change | 14.1 | 17.1 | 6.8 | (2.9) | 5.9 | 41.2 | 3.0 | 17.8 | 23.4 | (16.4) | 11.8 | (15.5) |
| Net Individual Income Tax | 1,216.1 | 1,264.6 | 1,227.1 | 1,697.6 | 1,379.8 | 1,337.0 | 1,457.2 | 1,913.9 | 1,517.1 | 1,664.2 | 1,495.4 | 2,152.3 |
| Annual \% Change | 12.9 | 12.4 | 8.8 | 21.4 | 13.5 | 5.7 | 18.7 | 12.7 | 9.9 | 24.5 | 2.6 | 12.5 |
| Sales and Use Tax | 478.6 | 478.6 | 483.5 | 478.5 | 508.3 | 522.1 | 515.6 | 519.3 | 550.0 | 555.8 | 542.4 | 553.3 |
| Annual \% Change | 6.0 | 4.0 | 6.5 | 3.7 | 6.2 | 9.1 | 6.6 | 8.5 | 8.2 | 6.5 | 5.2 | 6.6 |
| Corporate Income Tax | 105.4 | 66.3 | 63.3 | 215.7 | 102.1 | 77.0 | 50.2 | 191.2 | 139.0 | 82.4 | 52.0 | 292.5 |
| Annual \% Change | 23.9 | (5.4) | 25.1 | (4.7) | (3.2) | 16.1 | (20.8) | (11.4) | 36.2 | 7.0 | 3.6 | 53.0 |
| Wills, Suits, Deeds, Contracts | 27.3 | 32.0 | 28.9 | 38.6 | 40.4 | 40.6 | 35.3 | 41.6 | 38.5 | 35.9 | 30.3 | 41.6 |
| Annual \% Change | 7.5 | 28.7 | 27.1 | 26.9 | 47.8 | 26.8 | 22.2 | 7.8 | (4.6) | (11.6) | (14.2) | (0.1) |
| Insurance Premiums | 41.1 | 53.3 | 25.2 | 117.3 | 57.8 | 43.3 | 23.0 | 120.9 | 60.5 | 43.9 | 24.7 | 122.0 |
| Annual \% Change | (22.5) | 33.4 | 66.6 | 5.8 | 40.4 | (18.8) | (9.0) | 3.0 | 4.8 | 1.3 | 7.4 | 0.9 |
| Interest Income | 45.2 | 24.8 | 36.9 | (1.1) | 58.8 | 30.4 | 33.7 | 3.2 | 52.6 | 28.7 | 40.0 | 9.9 |
| Annual \% Change | (3.7) | 15.2 | 14.3 | (108.0) | 30.1 | 22.3 | (8.7) | (384.2) | (10.6) | (5.4) | 18.5 | 207.1 |
| Alcoholic Beverage Sales | 11.5 | 24.3 | 28.5 | 41.2 | 11.7 | 25.7 | 29.8 | 43.3 | 11.5 | 27.4 | 32.1 | 46.3 |
| Annual \% Change | 5.1 | (1.1) | 1.3 | 3.4 | 1.7 | 6.0 | 4.5 | 5.1 | (2.3) | 6.3 | 7.5 | 7.0 |
| All Other Revenues | 83.4 | 108.7 | 82.0 | 148.9 | 96.3 | 105.4 | 109.1 | 178.9 | 133.8 | 138.8 | 77.4 | 196.5 |
| Annual \% Change | (10.8) | 20.3 | 16.6 | (11.1) | 15.5 | (3.0) | 33.1 | 20.2 | 39.0 | 31.7 | (29.1) | 9.8 |
| Total General Fund Revenues | 2,008.7 | 2,052.6 | 1,975.5 | 2,736.7 | 2,255.2 | 2,181.4 | 2,253.9 | 3,012.3 | 2,503.0 | 2,577.0 | 2,294.1 | 3,414.4 |
| Annual \% Change | 9.0 | 10.6 | 9.7 | 11.8 | 12.3 | 6.3 | 14.1 | 10.1 | 11.0 | 18.1 | 1.8 | 13.3 |

TABLE B． 1 －QUARTERLY GENERAL FUND REVENUES

| 20003 | 20004 | 20011 | 20012 | 20013 | 20014 | 20021 | 20022 | 20023 | 20024 | 20031 | 20032 |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| $1,444.0$ | $1,575.6$ | $1,659.1$ | $1,576.2$ | $1,494.4$ | $1,617.8$ | $1,693.4$ | $1,616.8$ | $1,535.8$ | $1,667.1$ | $1,706.3$ | $1,658.2$ |
| 6.8 | 3.5 | 9.6 | 6.9 | 3.5 | 2.7 | 2.1 | 2.6 | 2.8 | 3.0 | 0.8 | 2.6 |
|  |  |  |  |  |  |  |  |  |  |  |  |
| 261.0 | 127.2 | 395.6 | $1,023.1$ | 243.1 | 139.9 | 316.6 | 759.9 | 236.6 | 143.4 | 288.4 | 734.3 |
| 10.9 | $(30.1)$ | 29.9 | 7.9 | $(6.8)$ | 10.0 | $(20.0)$ | $(25.7)$ | $(2.7)$ | 2.5 | $(8.9)$ | $(3.4)$ |
| $1,704.9$ | $1,702.8$ | $2,054.7$ | $2,599.3$ | $1,737.5$ | $1,757.8$ | $2,010.0$ | $2,376.6$ | $1,772.4$ | $1,810.4$ | $1,994.7$ | $2,392.6$ |
| 7.4 | $(0.1)$ | 13.0 | 7.3 | 1.9 | 3.2 | $(2.2)$ | $(8.6)$ | 2.0 | 3.0 | $(0.8)$ | 0.7 |
|  |  |  |  |  |  |  |  |  |  |  |  |
| 124.5 | 56.6 | 322.9 | 331.4 | 175.3 | 73.1 | 451.2 | 471.6 | 119.6 | 66.4 | 518.4 | 490.0 |
| 78.6 | 42.9 | 0.0 | 22.8 | 40.8 | 29.1 | 39.8 | 42.3 | $(31.8)$ | $(9.1)$ | 14.9 | 3.9 |
|  |  |  |  |  |  |  |  |  |  |  |  |
| $1,580.4$ | $1,646.2$ | $1,731.9$ | $2,267.8$ | $1,562.2$ | $1,684.7$ | $1,558.8$ | $1,905.1$ | $1,652.8$ | $1,744.0$ | $1,476.3$ | $1,902.6$ |
| 4.2 | $(1.1)$ | 15.8 | 5.4 | $(1.2)$ | 2.3 | $(10.0)$ | $(16.0)$ | 5.8 | 3.5 | $(5.3)$ | $(0.1)$ |
| 573.6 | 564.0 | 573.9 | 561.5 | 575.0 | 579.1 | 551.9 | 723.8 | 457.6 | 576.6 | 564.9 | 737.0 |
| 4.3 | 1.5 | 5.8 | 1.5 | 0.3 | 2.7 | $(3.8)$ | 28.9 | $(20.4)$ | $(0.4)$ | 2.3 | 1.8 |
| 125.3 | 27.7 | 34.0 | 176.8 | 77.5 | 37.9 | 26.7 | 148.1 | 89.8 | 55.9 | 16.3 | 181.4 |
| $(9.9)$ | $(66.4)$ | $(34.6)$ | $(39.6)$ | $(38.1)$ | 37.0 | $(21.4)$ | $(16.2)$ | 15.8 | 47.3 | $(39.0)$ | 22.5 |
| 39.1 | 39.8 | 36.8 | 51.8 | 51.9 | 54.9 | 49.4 | 58.2 | 65.3 | 74.3 | 63.7 | 82.6 |
| 1.5 | 11.0 | 21.7 | 24.6 | 32.7 | 37.8 | 34.2 | 12.2 | 25.8 | 35.2 | 28.9 | 42.0 |

TABLE B. 1 - QUARTERLY GENERAL FUND REVENUES

| 20033 | 20034 | 20041 | 20042 | 20043 | 20044 | 20051 | 20052 | 20053 | 20054 | 20061 | 20062 |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| $1,606.0$ | $1,801.6$ | $1,861.8$ | $1,769.9$ | $1,768.0$ | $1,905.5$ | $1,992.0$ | $1,847.5$ | $1,897.2$ | $1,996.5$ | $2,131.5$ | $2,028.5$ |
| 4.6 | 8.1 | 9.1 | 6.7 | 10.1 | 5.8 | 7.0 | 4.4 | 7.3 | 4.8 | 7.0 | 9.8 |
| 240.5 | 160.5 | 304.4 | 857.5 | 286.6 | 209.9 | 415.0 | $1,162.0$ | 349.0 | 225.7 | 483.9 | $1,435.1$ |
| 1.6 | 11.9 | 5.6 | 16.8 | 19.2 | 30.8 | 36.3 | 35.5 | 21.8 | 7.5 | 16.6 | 23.5 |
| $1,846.5$ | $1,962.0$ | $2,166.2$ | $2,627.4$ | $2,054.7$ | $2,115.5$ | $2,407.0$ | $3,009.5$ | $2,246.3$ | $2,222.2$ | $2,615.5$ | $3,463.6$ |
| 4.2 | 8.4 | 8.6 | 9.8 | 11.3 | 7.8 | 11.1 | 14.5 | 9.3 | 5.0 | 8.7 | 15.1 |
| 86.4 | 72.5 | 578.8 | 479.5 | 87.8 | 81.1 | 588.0 | 477.3 | 50.5 | 62.5 | 638.4 | 531.2 |
| $(27.8)$ | 9.2 | 11.7 | $(2.1)$ | 1.6 | 11.8 | 1.6 | $(0.5)$ | $(42.5)$ | $(22.9)$ | 8.6 | 11.3 |
| $1,760.2$ | $1,889.5$ | $1,587.3$ | $2,147.9$ | $1,966.9$ | $2,034.3$ | $1,819.0$ | $2,532.2$ | $2,195.8$ | $2,159.7$ | $1,977.0$ | $2,932.4$ |
| 6.5 | 8.3 | 7.5 | 12.9 | 11.7 | 7.7 | 14.6 | 17.9 | 11.6 | 6.2 | 8.7 | 15.8 |
| 488.6 | 620.0 | 622.9 | 830.8 | 524.3 | 727.0 | 736.0 | 958.8 | 579.3 | 728.6 | 758.5 | 746.3 |
| 6.8 | 7.5 | 10.3 | 12.7 | 7.3 | 17.3 | 18.2 | 15.4 | 10.5 | 0.2 | 3.1 | $(22.2)$ |
| 112.9 | 38.0 | 44.3 | 230.5 | 122.0 | 124.9 | 90.0 | 279.9 | 214.7 | 256.1 | 116.0 | 280.3 |
| 25.8 | $(32.0)$ | 171.7 | 27.1 | 8.1 | 228.4 | 103.2 | 21.4 | 76.0 | 105.1 | 29.0 | 0.2 |
| 93.6 | 79.5 | 67.7 | 99.7 | 113.8 | 150.6 | 141.9 | 189.8 | 202.8 | 170.1 | 149.7 | 172.1 |
| 43.4 | 7.1 | 6.3 | 20.7 | 21.5 | 89.3 | 109.6 | 90.4 | 78.3 | 13.0 | 5.5 | $(9.3)$ |
| 79.7 | 63.1 | 42.6 | 165.8 | 88.0 | 69.0 | 38.3 | 178.3 | 84.1 | 72.1 | 36.3 | 181.3 |
| 3.8 | 5.7 | 20.9 | 2.8 | 10.4 | 9.3 | $(10.1)$ | 7.5 | $(4.4)$ | 4.4 | $(5.2)$ | 1.7 |
| 29.8 | 11.1 | 13.9 | 6.6 | 27.1 | 22.1 | 23.8 | 10.8 | 44.7 | 26.0 | 39.6 | 6.1 |
| $(26.0)$ | $(51.5)$ | 65.3 | $(35.0)$ | $(9.2)$ | 99.7 | 71.0 | 64.5 | 65.0 | 17.7 | 66.4 | $(43.9)$ |
| 12.9 | 32.9 | 37.3 | 55.0 | 12.6 | 34.8 | 38.1 | 59.0 | 13.5 | 36.4 | 40.6 | 62.4 |
| 9.1 | 5.3 | 2.4 | 11.6 | $(2.6)$ | 5.8 | 2.4 | 7.2 | 7.4 | 4.7 | 6.5 | 5.8 |
| 146.5 | 1111.8 | 144.0 | 251.3 | 155.2 | 122.6 | 118.5 | 177.9 | 110.9 | 111.7 | 148.8 | 180.2 |
| 23.2 | $(10.9)$ | 0.5 | 28.7 | 6.0 | 9.6 | $(17.7)$ | $(29.2)$ | $(28.6)$ | $(8.9)$ | 25.7 | 1.3 |
| 27.3 | $2,846.0$ | $2,560.0$ | $3,787.7$ | $3,009.8$ | $3,285.3$ | $3,005.5$ | $4,386.6$ | $3,445.8$ | $3,560.8$ | $3,266.7$ | $4,561.0$ |
| 8.4 | 5.8 | 9.2 | 14.1 | 10.5 | 15.4 | 17.4 | 15.8 | 14.5 | 8.4 | 8.7 | 4.0 |

TABLE B． 1 －QUARTERLY GENERAL FUND REVENUES

| 20063 | 20064 | 20071 | 20072 | 20073 | 20074 | 20081 | 20082 | 20083 | 20084 | 20091 | 20092 |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| $1,970.4$ | $2,110.3$ | $2,292.5$ | $2,192.2$ | $2,062.9$ | $2,244.9$ | $2,411.8$ | $2,213.9$ | $2,175.8$ | $2,384.3$ | $2,306.6$ | $2,271.5$ |
| 3.9 | 5.7 | 7.6 | 8.1 | 4.7 | 6.4 | 5.2 | 1.0 | 5.5 | 6.2 | $(4.4)$ | 2.6 |
| 356.4 | 264.8 | 512.5 | $1,648.3$ | 394.1 | 260.1 | 556.6 | $1,650.4$ | 406.5 | 243.3 | 458.8 | $1,201.8$ |
| 2.1 | 17.3 | 5.9 | 14.9 | 10.6 | $(1.8)$ | 8.6 | 0.1 | 3.1 | $(6.5)$ | $(17.6)$ | $(27.2)$ |
| $2,326.8$ | $2,375.2$ | $2,805.0$ | $3,840.4$ | $2,457.0$ | $2,505.1$ | $2,968.4$ | $3,864.3$ | $2,582.2$ | $2,627.6$ | $2,765.4$ | $3,473.3$ |
| 3.6 | 6.9 | 7.2 | 10.9 | 5.6 | 5.5 | 5.8 | 0.6 | 5.1 | 4.9 | $(6.8)$ | $(10.1)$ |
| 110.2 | 109.8 | 740.4 | 599.5 | 83.6 | 143.9 | 811.3 | 641.1 | 127.2 | 141.3 | 873.2 | 825.8 |
| 118.3 | 75.6 | 16.0 | 12.9 | $(24.1)$ | 31.1 | 9.6 | 6.9 | 52.0 | $(1.8)$ | 7.6 | 28.8 |
| $2,216.7$ | $2,265.4$ | $2,064.6$ | $3,240.9$ | $2,373.3$ | $2,361.2$ | $2,157.2$ | $3,223.2$ | $2,455.0$ | $2,486.3$ | $1,892.2$ | $2,647.5$ |
| 1.0 | 4.9 | 4.4 | 10.5 | 7.1 | 4.2 | 4.5 | $(0.5)$ | 3.4 | 5.3 | $(12.3)$ | $(17.9)$ |
| 762.3 | 746.9 | 774.8 | 765.1 | 785.8 | 798.2 | 723.3 | 768.3 | 769.9 | 729.2 | 708.8 | 695.4 |
| 31.6 | 2.5 | 2.1 | 2.5 | 3.1 | 6.9 | $(6.6)$ | 0.4 | $(2.0)$ | $(8.6)$ | $(2.0)$ | $(9.5)$ |
| 256.9 | 186.6 | 118.7 | 317.4 | 217.7 | 115.4 | 138.7 | 336.0 | 191.4 | 71.9 | 71.1 | 313.6 |
| 19.7 | $(27.2)$ | 2.3 | 13.2 | $(15.2)$ | $(38.1)$ | 16.9 | 5.8 | $(12.1)$ | $(37.7)$ | $(48.7)$ | $(6.7)$ |
| 150.8 | 143.6 | 133.9 | 154.7 | 130.7 | 112.6 | 98.6 | 114.5 | 90.3 | 66.2 | 68.4 | 89.3 |
| $(25.7)$ | $(15.6)$ | $(10.5)$ | $(10.1)$ | $(13.3)$ | $(21.6)$ | $(26.4)$ | $(26.0)$ | $(30.9)$ | $(41.2)$ | $(30.6)$ | $(22.0)$ |
| 87.9 | 61.4 | 38.0 | 197.6 | 101.7 | 61.5 | 32.1 | 201.5 | 0.0 | 75.6 | $(20.2)$ | 199.6 |
| 4.5 | $(14.8)$ | 4.7 | 9.0 | 15.8 | 0.1 | $(15.7)$ | 2.0 | $(100.0)$ | 22.9 | $(163.0)$ | $(0.9)$ |
| 91.7 | 42.9 | 53.8 | $(12.4)$ | 105.5 | 66.2 | 37.5 | $(19.9)$ | 74.6 | 25.4 | 23.3 | $(19.0)$ |
| 105.0 | 64.7 | 35.7 | $(303.9)$ | 15.1 | 54.4 | $(30.3)$ | 60.5 | $(29.3)$ | $(61.7)$ | $(37.8)$ | $(4.2)$ |
| 14.3 | 38.0 | 42.1 | 67.5 | 13.8 | 39.6 | 45.5 | 70.0 | 12.8 | 41.5 | 47.1 | 71.8 |
| 5.5 | 4.2 | 3.6 | 8.2 | $(3.4)$ | 4.5 | 8.0 | 3.6 | $(7.2)$ | 4.7 | 3.5 | 2.7 |
| 127.2 | 1111.1 | 128.6 | 176.9 | 113.6 | 144.0 | 147.2 | 152.6 | 85.8 | 102.9 | 103.4 | 143.7 |
| 14.7 | $(0.5)$ | $(13.6)$ | $(1.8)$ | $(10.7)$ | 29.6 | 14.4 | $(13.8)$ | $(24.5)$ | $(28.5)$ | $(29.8)$ | $(5.8)$ |
| 3707.7 | $3,595.9$ | $3,354.5$ | $4,907.7$ | $3,842.1$ | $3,698.7$ | $3,380.0$ | $4,846.1$ | $3,679.9$ | $3,599.0$ | $2,894.2$ | $4,142.0$ |
| 7.6 | 1.0 | 2.7 | 7.6 | 3.6 | 2.9 | 0.8 | $(1.3)$ | $(4.2)$ | $(2.7)$ | $(14.4)$ | $(14.5)$ |

TABLE B. 2 - ANNUAL GENERAL FUND REVENUES

|  |  | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Withholding | Calendar Year | 2,936.5 | 3,037.5 | 3,217.7 | 3,446.5 | 3,658.7 | 3,922.3 | 4,148.0 | 4,550.9 | 4,979.1 | 5,673.3 |
|  | \% Change | 6.7 | 3.4 | 5.9 | 7.1 | 6.2 | 7.2 | 5.8 | 9.7 | 9.4 | 13.9 |
|  | Fiscal Year | 2,851.2 | 2,958.9 | 3,099.1 | 3,347.8 | 3,562.6 | 3,798.6 | 4,049.0 | 4,303.0 | 4,759.0 | 5,311.9 |
|  | \% Change | 4.2 | 3.8 | 4.7 | 8.0 | 6.4 | 6.6 | 6.6 | 6.3 | 10.6 | 11.6 |
| Nonwithholding | Calendar Year | 781.8 | 775.1 | 748.1 | 764.0 | 772.3 | 794.6 | 890.4 | 1,084.4 | 1,317.7 | 1,596.4 |
|  | \% Change | (3.4) | (0.9) | (3.5) | 2.1 | 1.1 | 2.9 | 12.1 | 21.8 | 21.5 | 21.2 |
|  | Fiscal Year | 790.8 | 775.6 | 728.3 | 751.3 | 775.3 | 783.4 | 878.1 | 1,041.9 | 1,284.7 | 1,487.8 |
|  | \% Change | (3.4) | (1.9) | (6.1) | 3.1 | 3.2 | 1.0 | 12.1 | 18.6 | 23.3 | 15.8 |
| Gross Individual Income Tax | Calendar Year | 3,718.3 | 3,812.6 | 3,965.8 | 4,210.5 | 4,431.0 | 4,716.9 | 5,038.4 | 5,635.3 | 6,296.7 | 7,269.7 |
|  | \% Change | 4.4 | 2.5 | 4.0 | 6.2 | 5.2 | 6.5 | 6.8 | 11.8 | 11.7 | 15.5 |
|  | Fiscal Year | 3,642.1 | 3,734.6 | 3,827.5 | 4,099.0 | 4,338.0 | 4,581.9 | 4,927.2 | 5,344.9 | 6,043.7 | 6,799.8 |
|  | \% Change | 2.4 | 2.5 | 2.5 | 7.1 | 5.8 | 5.6 | 7.5 | 8.5 | 13.1 | 12.5 |
| Individual Refunds | Calendar Year | 540.3 | 498.5 | 499.9 | 512.7 | 530.6 | 547.4 | 587.5 | 628.5 | 655.2 | 717.4 |
|  | \% Change | 12.5 | (7.7) | 0.3 | 2.6 | 3.5 | 3.2 | 7.3 | 7.0 | 4.2 | 9.5 |
|  | Fiscal Year | 559.9 | 498.6 | 506.2 | 514.3 | 526.1 | 553.8 | 579.1 | 617.1 | 638.2 | 711.9 |
|  | \% Change | 24.6 | (11.0) | 1.5 | 1.6 | 2.3 | 5.3 | 4.6 | 6.6 | 3.4 | 11.5 |
| Net Individual Income Tax | Calendar Year | 3,178.0 | 3,314.0 | 3,465.9 | 3,697.8 | 3,900.4 | 4,169.5 | 4,451.0 | 5,006.8 | 5,641.5 | 6,552.3 |
|  | \% Change | 3.1 | 4.3 | 4.6 | 6.7 | 5.5 | 6.9 | 6.8 | 12.5 | 12.7 | 16.1 |
|  | Fiscal Year | 3,082.2 | 3,236.0 | 3,321.2 | 3,584.8 | 3,811.9 | 4,028.1 | 4,348.0 | 4,727.8 | 5,405.4 | 6,087.9 |
|  | \% Change | (0.8) | 5.0 | 2.6 | 7.9 | 6.3 | 5.7 | 7.9 | 8.7 | 14.3 | 12.6 |
| Sales and Use Tax | Calendar Year | 1,381.0 | 1,327.1 | 1,391.5 | 1,479.4 | 1,612.1 | 1,682.8 | 1,783.1 | 1,872.4 | 1,992.4 | 2,140.7 |
|  | \% Change | 5.1 | (3.9) | 4.9 | 6.3 | 9.0 | 4.4 | 6.0 | 5.0 | 6.4 | 7.4 |
|  | Fiscal Year | 1,357.6 | 1,336.5 | 1,348.8 | 1,441.6 | 1,539.1 | 1,657.7 | 1,722.0 | 1,826.8 | 1,919.2 | 2,065.3 |
|  | \% Change | 5.0 | (1.6) | 0.9 | 6.9 | 6.8 | 7.7 | 3.9 | 6.1 | 5.1 | 7.6 |
| Corporate Income Tax | Calendar Year | 283.7 | 277.2 | 279.6 | 384.7 | 323.1 | 411.8 | 386.9 | 448.8 | 458.1 | 462.8 |
|  | \% Change | (18.5) | (2.3) | 0.9 | 37.6 | (16.0) | 27.4 | (6.0) | 16.0 | 2.1 | 1.0 |
|  | Fiscal Year | 310.4 | 279.2 | 275.9 | 371.5 | 312.1 | 376.4 | 402.3 | 432.3 | 450.8 | 420.4 |
|  | \% Change | (11.3) | (10.0) | (1.2) | 34.6 | (16.0) | 20.6 | 6.9 | 7.4 | 4.3 | (6.7) |
| Wills, Suits, Deeds, Contracts | Calendar Year | 80.0 | 73.7 | 96.1 | 110.2 | 99.0 | 86.4 | 99.1 | 112.5 | 148.5 | 151.3 |
|  | \% Change | (16.6) | (7.8) | 30.4 | 14.7 | (10.2) | (12.7) | 14.7 | 13.5 | 32.0 | 1.9 |
|  | Fiscal Year | 91.6 | 71.9 | 83.7 | 99.6 | 114.9 | 84.7 | 95.5 | 103.4 | 126.8 | 157.9 |
|  | \% Change | (9.4) | (21.6) | 16.4 | 19.0 | 15.4 | (26.3) | 12.7 | 8.3 | 22.6 | 24.5 |

TABLE B. 2 - ANNUAL GENERAL FUND REVENUES

|  |  | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Withholding | Calendar Year | 6,007.5 | 6,347.5 | 6,513.0 | 6,772.2 | 7,305.3 | 7,733.2 | 8,240.8 | 8,792.5 | 9,185.8 |  |
|  | \% Change | 5.9 | 5.7 | 2.6 | 4.0 | 7.9 | 5.9 | 6.6 | 6.7 | 4.5 |  |
|  | Fiscal Year | 5,861.3 | 6,254.9 | 6,422.4 | 6,567.4 | 7,039.3 | 7,513.0 | 8,053.7 | 8,565.5 | 8,933.6 | 9,138.1 |
|  | \% Change | 10.3 | 6.7 | 2.7 | 2.3 | 7.2 | 6.7 | 7.2 | 6.4 | 4.3 | 2.3 |
| Nonwithholding | Calendar Year | 1,640.6 | 1,801.7 | 1,456.4 | 1,423.7 | 1,658.4 | 2,151.8 | 2,540.3 | 2,815.0 | 2,856.7 |  |
|  | \% Change | 2.8 | 9.8 | (19.2) | (2.2) | 16.5 | 29.7 | 18.1 | 10.8 | 1.5 |  |
|  | Fiscal Year | 1,669.7 | 1,806.8 | 1,459.5 | 1,402.7 | 1,562.8 | 2,073.5 | 2,493.8 | 2,782.0 | 2,861.2 | 2,310.4 |
|  | \% Change | 12.2 | 8.2 | (19.2) | (3.9) | 11.4 | 32.7 | 20.3 | 11.6 | 2.8 | (19.2) |
| Gross Individual Income Tax | Calendar Year | 7,648.1 | 8,149.2 | 7,969.4 | 8,195.9 | 8,963.7 | 9,884.9 | 10,781.0 | 11,607.5 | 12,042.5 |  |
|  | \% Change | 5.2 | 6.6 | (2.2) | 2.8 | 9.4 | 10.3 | 9.1 | 7.7 | 3.7 |  |
|  | Fiscal Year | 7,530.9 | 8,061.7 | 7,881.9 | 7,970.1 | 8,602.1 | 9,586.6 | 10,547.5 | 11,347.4 | 11,794.7 | 11,448.5 |
|  | \% Change | 10.8 | 7.0 | (2.2) | 1.1 | 7.9 | 11.4 | 10.0 | 7.6 | 3.9 | (2.9) |
| Individual Refunds | Calendar Year | 773.8 | 902.6 | 1,108.8 | 1,167.3 | 1,227.3 | 1,178.3 | 1,389.6 | 1,567.4 | 1,720.8 |  |
|  | \% Change | 7.9 | 16.6 | 22.8 | 5.3 | 5.1 | (4.0) | 17.9 | 12.8 | 9.8 |  |
|  | Fiscal Year | 702.0 | 835.4 | 1,171.1 | 1,194.4 | 1,217.2 | 1,234.2 | 1,282.6 | 1,559.8 | 1,679.9 | 1,967.4 |
|  | \% Change | (1.4) | 19.0 | 40.2 | 2.0 | 1.9 | 1.4 | 3.9 | 21.6 | 7.7 | 17.1 |
| Net Individual Income Tax | Calendar Year | 6,874.3 | 7,246.6 | 6,860.6 | 7,028.6 | 7,736.4 | 8,706.7 | 9,391.4 | 10,040.0 | 10,321.7 |  |
|  | \% Change | 4.9 | 5.4 | (5.3) | 2.4 | 10.1 | 12.5 | 7.9 | 6.9 | 2.8 |  |
|  | Fiscal Year | 6,828.9 | 7,226.3 | 6,710.8 | 6,775.7 | 7,384.9 | 8,352.4 | 9,264.9 | 9,787.6 | 10,114.8 | 9,481.1 |
|  | \% Change | 12.2 | 5.8 | (7.1) | 1.0 | 9.0 | 13.1 | 10.9 | 5.6 | 3.3 | (6.3) |
| Sales and Use Tax | Calendar Year | 2,233.3 | 2,289.5 | 2,309.9 | 2,410.4 | 2,705.1 | 3,002.6 | 3,014.1 | 3,123.8 | 2,990.8 |  |
|  | \% Change | 4.3 | 2.5 | 0.9 | 4.4 | 12.2 | 11.0 | 0.4 | 3.6 | (4.3) |  |
|  | Fiscal Year | 2,201.5 | 2,273.0 | 2,429.8 | 2,336.0 | 2,562.3 | 2,946.1 | 2,812.7 | 3,049.1 | 3,075.5 | 2,903.4 |
|  | \% Change | 6.6 | 3.2 | 6.9 | (3.9) | 9.7 | 15.0 | (4.5) | 8.4 | 0.9 | (5.6) |
| Corporate Income Tax | Calendar Year | 497.5 | 326.2 | 320.5 | 348.6 | 521.7 | 840.6 | 839.8 | 769.3 | 738.0 |  |
|  | \% Change | 7.5 | (34.4) | (1.8) | 8.8 | 49.7 | 61.1 | (0.1) | (8.4) | (4.1) |  |
|  | Fiscal Year | 565.9 | 363.8 | 290.2 | 343.3 | 425.7 | 616.7 | 867.1 | 879.6 | 807.9 | 648.0 |
|  | \% Change | 34.6 | (35.7) | (20.2) | 18.3 | 24.0 | 44.9 | 40.6 | 1.4 | (8.2) | (19.8) |
| Wills, Suits, Deeds, Contracts | Calendar Year | 150.8 | 195.5 | 247.2 | 319.5 | 431.7 | 704.7 | 616.2 | 531.9 | 369.5 |  |
|  | \% Change | (0.3) | 29.6 | 26.4 | 29.3 | 35.1 | 63.2 | (12.6) | (13.7) | (30.5) |  |
|  | Fiscal Year | 146.3 | 167.6 | 214.4 | 285.8 | 340.6 | 596.1 | 694.7 | 582.9 | 456.3 | 314.3 |
|  | \% Change | (7.3) | 14.6 | 27.9 | 33.3 | 19.1 | 75.0 | 16.6 | (16.1) | (21.7) | (31.1) |

## APPENDIX C MODELS \& METHODOLOGIES

## Corporate Income Tax

## DIFFYA(CORP)

$$
\begin{array}{ccc}
=2.82825 * \text { DIFFYA(ZBVA })+0.29737 * ~ D I F F Y A(S P 500 V A)+ & 2.37776 \\
(3.7598) & (0.3990)
\end{array}
$$

R Sq 0.2276
R Bar Sq 0.2061
F 2, 7210.6069
D.W.(1) 2.1570
D.W.(4) 2.2050

QUARTERLY data for 75 periods from 1991Q1 to 2009Q3

CORP
DIFFYA
ZBVA
SP500VA

Corporate income tax, gross receipts
Year over year difference function
Virginia portion of national pre-tax profits
Virginia specific Standard and Poor's 500 stock index

## GENERAL FUND METHODOLOGY

## Corporate Income Tax, Gross Receipts

| Fiscal Year |  | Actual | Fitted | Residual | \% Residual |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1994 | 93Q3 | 83.9 | 85.8 | (1.9) | -2.3\% |
|  | 93Q4 | 81.6 | 84.9 | (3.4) | -4.1\% |
|  | 94Q1 | 43.7 | 52.8 | (9.1) | -20.9\% |
|  | 94Q2 | 169.2 | 160.0 | 9.1 | 5.4\% |
|  | Total | 378.3 | 383.6 | (5.3) | -1.4\% |
| 1995 | 94Q3 | 89.6 | 93.6 | (4.1) | -4.5\% |
|  | 94Q4 | 88.3 | 89.4 | (1.1) | -1.3\% |
|  | 95Q1 | 55.6 | 53.1 | 2.5 | 4.5\% |
|  | 95Q2 | 223.8 | 179.0 | 44.9 | 20.0\% |
|  | Total | 457.3 | 415.1 | 42.2 | 9.2\% |
| 1996 | 95Q3 | 112.9 | 98.0 | 14.8 | 13.2\% |
|  | 95Q4 | 103.1 | 95.6 | 7.5 | 7.3\% |
|  | 96Q1 | 56.9 | 63.6 | (6.7) | -11.7\% |
|  | 96Q2 | 198.6 | 230.9 | (32.3) | -16.3\% |
|  | Total | 471.5 | 488.1 | (16.6) | -3.5\% |
| 1997 | 96Q3 | 97.6 | 118.7 | (21.1) | -21.6\% |
|  | 96Q4 | 107.5 | 110.1 | (2.6) | -2.5\% |
|  | 97Q1 | 67.8 | 63.6 | 4.2 | 6.1\% |
|  | 97Q2 | 242.1 | 206.2 | 35.9 | 14.8\% |
|  | Total | 515.0 | 498.6 | 16.4 | 3.2\% |
| 1998 | 97Q3 | 117.5 | 108.5 | 9.0 | 7.7\% |
|  | 97Q4 | 110.2 | 115.9 | (5.7) | -5.2\% |
|  | 98Q1 | 79.6 | 68.2 | 11.3 | 14.3\% |
|  | 98Q2 | 229.5 | 241.0 | (11.6) | -5.0\% |
|  | Total | 536.7 | 533.6 | 3.1 | 0.6\% |
| 1999 | 98Q3 | 111.7 | 113.4 | (1.7) | -1.6\% |
|  | 98Q4 | 131.6 | 106.2 | 25.4 | 19.3\% |
|  | 99Q1 | 76.2 | 87.0 | (10.8) | -14.1\% |
|  | 99Q2 | 206.1 | 237.9 | (31.8) | -15.4\% |
|  | Total | 525.6 | 544.5 | (18.9) | -3.6\% |
| 2000 | 99Q3 | 153.2 | 120.9 | 32.3 | 21.1\% |
|  | 99Q4 | 141.4 | 144.0 | (2.7) | -1.9\% |
|  | 00Q1 | 75.1 | 81.9 | (6.9) | -9.1\% |
|  | 00Q2 | 251.7 | 210.4 | 41.3 | 16.4\% |
|  | Total | 621.3 | 557.3 | 64.1 | 10.3\% |
| 2001 | 00Q3 | 145.1 | 155.2 | (10.1) | -7.0\% |
|  | 00Q4 | 102.3 | 138.9 | (36.6) | -35.8\% |
|  | 01Q1 | 73.0 | 76.0 | (2.9) | -4.0\% |
|  | 01Q2 | 193.3 | 253.8 | (60.5) | -31.3\% |
|  | Total | 513.7 | 623.9 | (110.2) | -21.5\% |

## Corporate Income Tax, Gross Receipts

| Fiscal Year |  | Actual | Fitted | Residual | \% Residual |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2002 | 01Q3 | 100.2 | 142.0 | (41.8) | -41.7\% |
|  | 01Q4 | 117.7 | 97.8 | 19.9 | 16.9\% |
|  | 02Q1 | 83.8 | 70.0 | 13.8 | 16.4\% |
|  | 02Q2 | 171.8 | 192.2 | (20.4) | -11.9\% |
|  | Total | 473.4 | 502.0 | (28.5) | -6.0\% |
| 2003 | 02Q3 | 117.7 | 108.5 | 9.2 | 7.8\% |
|  | 02Q4 | 124.2 | 134.8 | (10.7) | -8.6\% |
|  | 03Q1 | 68.5 | 98.1 | (29.6) | -43.2\% |
|  | 03Q2 | 202.0 | 182.8 | 19.3 | 9.5\% |
|  | Total | 512.4 | 524.2 | (11.8) | -2.3\% |
| 2004 | 03Q3 | 135.8 | 131.7 | 4.0 | 3.0\% |
|  | 03Q4 | 124.9 | 140.0 | (15.1) | -12.1\% |
|  | 04Q1 | 82.5 | 95.9 | (13.4) | -16.2\% |
|  | 04Q2 | 252.5 | 234.8 | 17.7 | 7.0\% |
|  | Total | 595.7 | 602.5 | (6.8) | -1.1\% |
| 2005 | 04Q3 | 140.9 | 168.4 | (27.5) | -19.5\% |
|  | 04Q4 | 190.2 | 151.2 | 39.0 | 20.5\% |
|  | 05Q1 | 109.7 | 121.6 | (11.8) | -10.8\% |
|  | 05Q2 | 305.3 | 287.3 | 17.9 | 5.9\% |
|  | Total | 746.1 | 728.5 | 17.6 | 2.4\% |
| 2006 | 05Q3 | 219.0 | 174.4 | 44.6 | 20.4\% |
|  | 05Q4 | 262.8 | 230.8 | 32.0 | 12.2\% |
|  | 06Q1 | 136.7 | 131.9 | 4.7 | 3.5\% |
|  | 06Q2 | 368.3 | 326.4 | 41.9 | 11.4\% |
|  | Total | 986.8 | 863.5 | 123.3 | 12.5\% |
| 2007 | 06Q3 | 283.8 | 259.1 | 24.7 | 8.7\% |
|  | 06Q4 | 225.4 | 274.9 | (49.5) | -22.0\% |
|  | 07Q1 | 164.8 | 138.3 | 26.5 | 16.1\% |
|  | 07Q2 | 356.2 | 370.3 | (14.1) | -3.9\% |
|  | Total | 1,030.2 | 1,042.6 | (12.3) | -1.2\% |
| 2008 | 07Q3 | 244.3 | 279.8 | (35.5) | -14.5\% |
|  | 07Q4 | 165.0 | 228.1 | (63.1) | -38.2\% |
|  | 08Q1 | 197.4 | 155.9 | 41.5 | 21.0\% |
|  | 08Q2 | 361.7 | 340.4 | 21.4 | 5.9\% |
|  | Total | 968.4 | 1,004.1 | (35.7) | -3.7\% |
| 2009 | 08Q3 | 220.0 | 230.5 | (10.5) | -4.8\% |
|  | 08Q4 | 201.5 | 106.6 | 94.9 | 47.1\% |
|  | 09Q1 | 113.6 | 167.3 | (53.7) | -47.3\% |
|  | 09Q2 | 339.2 | 341.7 | (2.5) | -0.7\% |
|  | Total | 874.3 | 846.2 | 28.2 | 3.2\% |

## GENERAL FUND METHODOLOGY

## Individual Income Tax - Withholding

DIFFYA(WITH)
$=0.01068 *$ DIFFYA(YWSTRAN) $+123.064 *$ Q994 +5.43915
( 9.4521 ( 3.6262 ) (0.6140)
$\begin{array}{llllll}R & 0.5665 & R \text { Bar Sq } 0.5471 & F & 3,67 & 29.1886\end{array}$
D.W.(1) 1.9895 D.W.(4) 1.9847

AR_0 $=-0.2653^{*}$ AR_4
(-2.0078)

QUARTERLY data for 71 periods from 1992Q1 to 2009Q3

WITH Withholding tax receipts
DIFFYA
YWSTRAN
Q994
Year over year difference function
Virginia income from wages and salaries and transfer payments
1 in 1999Q4; 0 in all other quarters

## Individual Income Tax - Withholding

| Fiscal Year |  | Actual | Fitted | Residual | \% Residual |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1994 | 93Q3 | 819.8 | 816.7 | 3.1 | 0.4\% |
|  | 93Q4 | 905.6 | 902.5 | 3.0 | 0.3\% |
|  | 94Q1 | 904.7 | 887.6 | 17.1 | 1.9\% |
|  | 94Q2 | 932.6 | 923.9 | 8.7 | 0.9\% |
|  | Total | 3,562.6 | 3,530.8 | 31.9 | 0.9\% |
| 1995 | 94Q3 | 873.6 | 869.6 | 4.1 | 0.5\% |
|  | 94Q4 | 947.7 | 947.4 | 0.3 | 0.0\% |
|  | 95Q1 | 993.0 | 976.8 | 16.1 | 1.6\% |
|  | 95Q2 | 984.3 | 980.1 | 4.1 | 0.4\% |
|  | Total | 3,798.6 | 3,773.9 | 24.6 | 0.6\% |
| 1996 | 95Q3 | 911.1 | 925.5 | (14.4) | -1.6\% |
|  | 95Q4 | 1,034.0 | 997.2 | 36.8 | 3.6\% |
|  | 96Q1 | 1,028.8 | 1,044.3 | (15.5) | -1.5\% |
|  | 96Q2 | 1,075.2 | 1,054.5 | 20.7 | 1.9\% |
|  | Total | 4,049.1 | 4,021.5 | 27.6 | 0.7\% |
| 1997 | 96Q3 | 972.9 | 991.4 | (18.5) | -1.9\% |
|  | 96Q4 | 1,071.1 | 1,102.0 | (30.9) | -2.9\% |
|  | 97Q1 | 1,171.1 | 1,115.9 | 55.2 | 4.7\% |
|  | 97Q2 | 1,087.9 | 1,137.0 | (49.1) | -4.5\% |
|  | Total | 4,303.0 | 4,346.3 | (43.3) | -1.0\% |
| 1998 | 97Q3 | 1,090.0 | 1,049.4 | 40.6 | 3.7\% |
|  | 97Q4 | 1,202.0 | 1,166.1 | 35.9 | 3.0\% |
|  | 98Q1 | 1,260.8 | 1,229.1 | 31.7 | 2.5\% |
|  | 98Q2 | 1,206.2 | 1,193.2 | 13.0 | 1.1\% |
|  | Total | 4,759.0 | 4,637.8 | 121.2 | 2.5\% |
| 1999 | 98Q3 | 1,226.7 | 1,170.8 | 55.9 | 4.6\% |
|  | 98Q4 | 1,285.4 | 1,291.0 | (5.6) | -0.4\% |
|  | 99Q1 | 1,432.4 | 1,380.2 | 52.2 | 3.6\% |
|  | 99Q2 | 1,367.4 | 1,283.2 | 84.2 | 6.2\% |
|  | Total | 5,311.9 | 5,125.3 | 186.6 | 3.5\% |
| 2000 | 99Q3 | 1,351.5 | 1,303.7 | 47.8 | 3.5\% |
|  | 99Q4 | 1,521.9 | 1,505.9 | 16.0 | 1.1\% |
|  | 00Q1 | 1,513.7 | 1,520.8 | (7.1) | -0.5\% |
|  | 00Q2 | 1,474.2 | 1,486.1 | (11.9) | -0.8\% |
|  | Total | 5,861.3 | 5,816.4 | 44.9 | 0.8\% |
| 2001 | 00Q3 | 1,444.0 | 1,484.7 | (40.7) | -2.8\% |
|  | 00Q4 | 1,575.6 | 1,635.9 | (60.3) | -3.8\% |
|  | 01Q1 | 1,659.1 | 1,646.8 | 12.3 | 0.7\% |
|  | 01Q2 | 1,576.2 | 1,598.7 | (22.5) | -1.4\% |
|  | Total | 6,254.9 | 6,366.1 | (111.2) | -1.8\% |

## GENERAL FUND METHODOLOGY

ndividual Income Tax - Withholding

| Fiscal Year |  | Actual | Fitted | Residual | \% Residual |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2002 | 01Q3 | 1,494.4 | 1,521.0 | (26.6) | -1.8\% |
|  | 01Q4 | 1,617.8 | 1,666.9 | (49.1) | -3.0\% |
|  | 02Q1 | 1,693.4 | 1,681.0 | 12.4 | 0.7\% |
|  | 02Q2 | 1,616.8 | 1,600.9 | 15.9 | 1.0\% |
|  | Total | 6,422.4 | 6,469.7 | (47.3) | -0.7\% |
| 2003 | 02Q3 | 1,535.8 | 1,556.3 | (20.5) | -1.3\% |
|  | 02Q4 | 1,667.1 | 1,664.1 | 3.0 | 0.2\% |
|  | 03Q1 | 1,706.3 | 1,751.9 | (45.6) | -2.7\% |
|  | 03Q2 | 1,658.2 | 1,684.8 | (26.6) | -1.6\% |
|  | Total | 6,567.4 | 6,657.2 | (89.8) | -1.4\% |
| 2004 | 03Q3 | 1,606.0 | 1,632.6 | (26.6) | -1.7\% |
|  | 03Q4 | 1,801.6 | 1,788.9 | 12.7 | 0.7\% |
|  | 04Q1 | 1,861.8 | 1,835.6 | 26.2 | 1.4\% |
|  | 04Q2 | 1,769.9 | 1,789.3 | (19.4) | -1.1\% |
|  | Total | 7,039.3 | 7,046.5 | (7.2) | -0.1\% |
| 2005 | 04Q3 | 1,768.0 | 1,736.5 | 31.5 | 1.8\% |
|  | 04Q4 | 1,905.5 | 1,922.0 | (16.5) | -0.9\% |
|  | 05Q1 | 1,992.0 | 1,978.9 | 13.1 | 0.7\% |
|  | 05Q2 | 1,847.5 | 1,908.0 | (60.5) | -3.3\% |
|  | Total | 7,513.0 | 7,545.4 | (32.4) | -0.4\% |
| 2006 | 05Q3 | 1,897.2 | 1,887.7 | 9.5 | 0.5\% |
|  | 05Q4 | 1,996.5 | 2,022.3 | (25.8) | -1.3\% |
|  | 06Q1 | 2,131.5 | 2,137.0 | (5.5) | -0.3\% |
|  | 06Q2 | 2,028.5 | 1,984.5 | 44.0 | 2.2\% |
|  | Total | 8,053.7 | 8,031.5 | 22.2 | 0.3\% |
| 2007 | 06Q3 | 1,970.4 | 2,003.6 | (33.2) | -1.7\% |
|  | 06Q4 | 2,110.3 | 2,123.4 | (13.1) | -0.6\% |
|  | 07Q1 | 2,292.5 | 2,259.6 | 32.9 | 1.4\% |
|  | 07Q2 | 2,192.2 | 2,135.1 | 57.1 | 2.6\% |
|  | Total | 8,565.4 | 8,521.7 | 43.7 | 0.5\% |
| 2008 | 07Q3 | 2,062.9 | 2,104.9 | (42.0) | -2.0\% |
|  | 07Q4 | 2,244.9 | 2,228.3 | 16.6 | 0.7\% |
|  | 08Q1 | 2,411.8 | 2,355.3 | 56.5 | 2.3\% |
|  | 08Q2 | 2,213.9 | 2,289.8 | (75.8) | -3.4\% |
|  | Total | 8,933.6 | 8,978.3 | (44.7) | -0.5\% |
| 2009 | 08Q3 | 2,175.8 | 2,158.9 | 16.8 | 0.8\% |
|  | 08Q4 | 2,304.3 | 2,313.5 | (9.2) | -0.4\% |
|  | 09Q1 | 2,386.6 | 2,434.0 | (47.4) | -2.0\% |
|  | 09Q2 | 2,271.5 | 2,249.7 | 21.7 | 1.0\% |
|  | Total | 9,138.1 | 9,156.1 | (18.0) | -0.2\% |

## Individual Income Tax - Estimated Payments

```
DIFFYA(EP)
    = 0.08378*DIFFYA(SP500) + 0.00820*DIFFYA(YWPPTVA) +
    (5.7189)
    (4.1238)
    0.00590* DIFFYA(YRDIRVA) - 8.06481
        (4.3680)
    (2.4151)
R Sq 0.5797 R Bar Sq 0.5557 F 4,70 24.1403
D.W.(1) }1.941
    D.W.(4) 1.7938
MA_0 = -0.25186* MA_4
    (-2.0411)
```

QUARTERLY data for 75 periods from 1991Q1 to 2009Q3

| EP | Estimated payments |
| :--- | :--- |
| DIFFYA | Year over year difference function |
| YWPPTVA | Virginia total proprietor's income |
| YRDIRVA | Virginia dividends, interest, and rental income |
| SP500 | Standard and Poor's 500 stock index |

## GENERAL FUND METHODOLOGY

Individual Income Tax - Estimated Payments

| Fiscal Year |  | Actual | Fitted | Residual | \% Residual |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1994 | 93Q3 | 129.0 | 139.1 | (10.1) | -7.8\% |
|  | 93Q4 | 74.4 | 59.9 | 14.5 | 19.5\% |
|  | 94Q1 | 148.3 | 147.0 | 1.3 | 0.9\% |
|  | 94Q2 | 189.4 | 188.0 | 1.4 | 0.7\% |
|  | Total | 541.0 | 534.0 | 7.0 | 1.3\% |
| 1995 | 94Q3 | 139.1 | 140.8 | (1.7) | -1.3\% |
|  | 94Q4 | 64.1 | 81.2 | (17.1) | -26.6\% |
|  | 95Q1 | 141.6 | 157.4 | (15.8) | -11.2\% |
|  | 95Q2 | 207.8 | 199.9 | 7.9 | 3.8\% |
|  | Total | 552.6 | 579.4 | (26.8) | -4.8\% |
| 1996 | 95Q3 | 131.0 | 149.4 | (18.4) | -14.1\% |
|  | 95Q4 | 53.2 | 80.4 | (27.2) | -51.1\% |
|  | 96Q1 | 165.5 | 162.9 | 2.6 | 1.6\% |
|  | 96Q2 | 225.1 | 223.4 | 1.7 | 0.8\% |
|  | Total | 574.8 | 616.1 | (41.3) | -7.2\% |
| 1997 | 96Q3 | 140.1 | 151.1 | (11.0) | -7.9\% |
|  | 96Q4 | 68.0 | 78.8 | (10.8) | -15.8\% |
|  | 97Q1 | 203.9 | 185.5 | 18.4 | 9.0\% |
|  | 97Q2 | 251.4 | 246.7 | 4.7 | 1.9\% |
|  | Total | 663.4 | 662.1 | 1.3 | 0.2\% |
| 1998 | 97Q3 | 164.6 | 175.2 | (10.6) | -6.4\% |
|  | 97Q4 | 80.5 | 99.0 | (18.5) | -23.0\% |
|  | 98Q1 | 223.1 | 230.6 | (7.5) | -3.4\% |
|  | 98Q2 | 308.0 | 287.9 | 20.1 | 6.5\% |
|  | Total | 776.2 | 792.7 | (16.5) | -2.1\% |
| 1999 | 98Q3 | 187.3 | 193.2 | (5.9) | -3.1\% |
|  | 98Q4 | 98.0 | 108.7 | (10.7) | -10.9\% |
|  | 99Q1 | 279.8 | 247.4 | 32.4 | 11.6\% |
|  | 99Q2 | 333.4 | 321.2 | 12.2 | 3.7\% |
|  | Total | 898.5 | 870.5 | 28.0 | 3.1\% |
| 2000 | 99Q3 | 205.2 | 208.7 | (3.5) | -1.7\% |
|  | 99Q4 | 128.7 | 127.6 | 1.1 | 0.9\% |
|  | 00Q1 | 283.1 | 303.6 | (20.5) | -7.2\% |
|  | 00Q2 | 368.3 | 362.8 | 5.5 | 1.5\% |
|  | Total | 985.3 | 1,002.7 | (17.4) | -1.8\% |
| 2001 | 00Q3 | 252.5 | 242.9 | 9.6 | 3.8\% |
|  | 00Q4 | 117.0 | 149.0 | (32.0) | -27.4\% |
|  | 01Q1 | 361.7 | 334.6 | 27.1 | 7.5\% |
|  | 01Q2 | 358.6 | 398.1 | (39.5) | -11.0\% |
|  | Total | 1,089.8 | 1,124.6 | (34.8) | -3.2\% |

GENERAL FUND METHODOLOGY
Individual Income Tax - Estimated Payments

| Fiscal Year |  | Actual | Fitted | Residual | Residual |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2002 | 01Q3 | 241.2 | 266.5 | (25.3) | -10.5\% |
|  | 01Q4 | 133.4 | 142.8 | (9.4) | -7.1\% |
|  | 02Q1 | 298.2 | 335.4 | (37.2) | -12.5\% |
|  | 02Q2 | 340.9 | 352.4 | (11.5) | -3.4\% |
|  | Total | 1,013.7 | 1,097.2 | (83.5) | -8.2\% |
| 2003 | 02Q3 | 228.1 | 223.1 | 5.0 | 2.2\% |
|  | 02Q4 | 144.0 | 115.2 | 28.8 | 20.0\% |
|  | 03Q1 | 275.9 | 278.3 | (2.4) | -0.9\% |
|  | 03Q2 | 328.1 | 327.7 | 0.4 | 0.1\% |
|  | Total | 976.1 | 944.3 | 31.8 | 3.3\% |
| 2004 | 03Q3 | 222.7 | 233.8 | (11.1) | -5.0\% |
|  | 03Q4 | 166.1 | 156.8 | 9.3 | 5.6\% |
|  | 04Q1 | 269.2 | 313.4 | (44.2) | -16.4\% |
|  | 04Q2 | 359.4 | 357.7 | 1.7 | 0.5\% |
|  | Total | 1,017.4 | 1,061.6 | (44.2) | -4.3\% |
| 2005 | 04Q3 | 260.4 | 249.7 | 10.7 | 4.1\% |
|  | 04Q4 | 205.6 | 194.0 | 11.6 | 5.7\% |
|  | 05Q1 | 345.7 | 302.5 | 43.2 | 12.5\% |
|  | 05Q2 | 427.4 | 381.9 | 45.5 | 10.7\% |
|  | Total | 1,239.1 | 1,128.1 | 111.0 | 9.0\% |
| 2006 | 05Q3 | 328.0 | 293.8 | 34.2 | 10.4\% |
|  | 05Q4 | 235.9 | 236.7 | (0.8) | -0.3\% |
|  | 06Q1 | 408.8 | 380.0 | 28.8 | 7.1\% |
|  | 06Q2 | 511.8 | 472.1 | 39.7 | 7.7\% |
|  | Total | 1,484.5 | 1,382.6 | 101.9 | 6.9\% |
| 2007 | 06Q3 | 327.4 | 367.2 | (39.8) | -12.1\% |
|  | 06Q4 | 279.6 | 278.3 | 1.3 | 0.4\% |
|  | 07Q1 | 460.8 | 434.2 | 26.6 | 5.8\% |
|  | 07Q2 | 517.3 | 534.1 | (16.8) | -3.2\% |
|  | Total | 1,585.1 | 1,613.8 | (28.7) | -1.8\% |
| 2008 | 07Q3 | 344.2 | 369.4 | (25.3) | -7.3\% |
|  | 07Q4 | 260.9 | 303.2 | (42.3) | -16.2\% |
|  | 08Q1 | 491.4 | 454.8 | 36.6 | 7.5\% |
|  | 08Q2 | 514.5 | 508.2 | 6.3 | 1.2\% |
|  | Total | 1,611.0 | 1,635.6 | (24.7) | -1.5\% |
| 2008 | 08Q3 | 374.4 | 326.0 | 48.5 | 12.9\% |
|  | 08Q4 | 201.6 | 207.3 | (5.7) | -2.9\% |
|  | 09Q1 | 412.2 | 405.0 | 7.1 | 1.7\% |
|  | 09Q2 | 447.4 | 432.2 | 15.2 | 3.4\% |
|  | Total | 1,435.6 | 1,370.5 | 65.1 | 4.5\% |

## Individual Income Tax - Final Payments

```
PCH(FP)
    = 1.39419 * PCH(CYSP500) - 1.78505
    (4.3376)
    (0.3334)
\begin{tabular}{llllll} 
R Sq & \(0.4610 \quad\) R Bar Sq \(0.4365 \quad\) F 1, 22 & 18.8144
\end{tabular}
D.W.(1) 1.1649 D.W.(2) 1.7206
```

Annual data for 24 periods from 1985 to 2008

| PCH | Percent change function |
| :--- | :--- |
| FP | Final payments |
| CYSP500 | Standard \& Poor's 500 stock index, calendar year |

Individual Income Tax - Final Payments Percent Growth

| Fiscal Year | Actual | Fitted | Residual |
| :---: | :---: | :---: | :---: |
| 1991 | -6.3 | 2.0 | (8.3) |
| 1992 | -6.9 | 22.7 | (29.6) |
| 1993 | -3.4 | 8.9 | (12.3) |
| 1994 | 2.3 | 10.6 | (8.3) |
| 1995 | -1.5 | 5.2 | (6.7) |
| 1996 | 31.4 | 27.6 | 3.8 |
| 1997 | 24.7 | 18.9 | 5.8 |
| 1998 | 34.5 | 25.6 | 8.9 |
| 1999 | 15.9 | 22.9 | (7.0) |
| 2000 | 9.7 | 18.4 | (8.7) |
| 2001 | 10.9 | -0.2 | 11.1 |
| 2002 | -37.8 | -2.1 | (35.7) |
| 2003 | -4.4 | -8.6 | 4.2 |
| 2004 | 27.9 | 22.7 | 5.2 |
| 2005 | 53.0 | 11.8 | 41.2 |
| 2006 | 21.0 | 8.0 | 13.0 |
| 2007 | 18.6 | 14.7 | 3.9 |
| 2008 | 4.5 | 8.4 | (3.9) |
| 2009 | -30.0 | -18.1 | (11.9) |

## GENERAL FUND METHODOLOGY

## State Sales Tax

## DIFF(SALES)

$=0.00258^{*} \operatorname{DIFF}($ YRPICVA $)+19.9615^{*}$ QD3-7.6015
(3.8989) (4.5071) (2.8795)

R Sq $0.3499 \quad$ R Bar Sq $0.3232 \quad$ F 3, 7313.0988
D.W.(1) 2.2236
D.W.(4) 1.5175

AR_0 $=-0.43509^{*}$ AR_1
(-4.0214)

QUARTERLY data for 77 periods from 1990Q3 to 2009Q3

SALES State sales tax receipts (base collections)
DIFF Quarter over quarter difference function
YRPICVA
QD3
Virginia total personal income
1 in third quarter of all years; 0 in all other quarters

## State Sales Tax

| Fiscal Year |  | Actual | Fitted | Residual | \% Residual |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1994 | 93Q3 | 376.7 | 378.7 | (2.0) | -0.5\% |
|  | 93Q4 | 375.6 | 377.5 | (1.9) | -0.5\% |
|  | 94Q1 | 391.1 | 367.3 | 23.8 | 6.1\% |
|  | 94Q2 | 395.7 | 384.7 | 11.0 | 2.8\% |
|  | Total | 1,539.1 | 1,508.1 | 31.0 | 2.0\% |
| 1995 | 94Q3 | 411.2 | 411.8 | (0.6) | -0.1\% |
|  | 94Q4 | 414.1 | 408.7 | 5.4 | 1.3\% |
|  | 95Q1 | 414.0 | 408.4 | 5.6 | 1.4\% |
|  | 95Q2 | 418.3 | 408.4 | 9.9 | 2.4\% |
|  | Total | 1,657.6 | 1,637.2 | 20.4 | 1.2\% |
| 1996 | 95Q3 | 423.4 | 429.5 | (6.1) | -1.4\% |
|  | 95Q4 | 427.0 | 424.1 | 2.9 | 0.7\% |
|  | 96Q1 | 437.7 | 423.8 | 13.9 | 3.2\% |
|  | 96Q2 | 433.8 | 432.1 | 1.7 | 0.4\% |
|  | Total | 1,721.9 | 1,709.6 | 12.3 | 0.7\% |
| 1997 | 96Q3 | 451.6 | 453.6 | (2.0) | -0.4\% |
|  | 96Q4 | 460.0 | 449.4 | 10.6 | 2.3\% |
|  | 97Q1 | 454.0 | 457.9 | (3.9) | -0.8\% |
|  | 97Q2 | 461.2 | 453.8 | 7.4 | 1.6\% |
|  | Total | 1,826.8 | 1,814.7 | 12.1 | 0.7\% |
| 1998 | 97Q3 | 478.6 | 476.7 | 1.9 | 0.4\% |
|  | 97Q4 | 478.6 | 480.2 | (1.6) | -0.3\% |
|  | 98Q1 | 483.5 | 477.5 | 6.0 | 1.2\% |
|  | 98Q2 | 478.5 | 483.4 | (4.9) | -1.0\% |
|  | Total | 1,919.2 | 1,917.8 | 1.4 | 0.1\% |
| 1999 | 98Q3 | 508.3 | 503.0 | 5.3 | 1.0\% |
|  | 98Q4 | 522.1 | 504.6 | 17.5 | 3.4\% |
|  | 99Q1 | 515.6 | 521.3 | (5.7) | -1.1\% |
|  | 99Q2 | 519.3 | 512.8 | 6.5 | 1.3\% |
|  | Total | 2,065.3 | 2,041.7 | 23.6 | 1.1\% |
| 2000 | 99Q3 | 550.0 | 535.6 | 14.4 | 2.6\% |
|  | 99Q4 | 555.8 | 552.3 | 3.5 | 0.6\% |
|  | 00Q1 | 542.4 | 560.7 | (18.3) | -3.4\% |
|  | 00Q2 | 553.3 | 553.3 | 0.0 | 0.0\% |
|  | Total | 2,201.5 | 2,201.9 | (0.4) | 0.0\% |
| 2001 | 00Q3 | 573.6 | 572.7 | 0.9 | 0.2\% |
|  | 00Q4 | 564.0 | 573.6 | (9.6) | -1.7\% |
|  | 01Q1 | 573.9 | 591.7 | (17.8) | -3.1\% |
|  | 01Q2 | 561.5 | 577.2 | (15.7) | -2.8\% |
|  | Total | 2,273.0 | 2,315.2 | (42.2) | -1.9\% |

## GENERAL FUND METHODOLOGY

## State Sales Tax

| Fiscal Year |  | Actual | Fitted | Residual | \% Residual |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2002 | 01Q3 | 575.0 | 573.9 | 1.1 | 0.2\% |
|  | 01Q4 | 579.1 | 570.3 | 8.8 | 1.5\% |
|  | 02Q1 | 551.9 | 577.4 | (25.5) | -4.6\% |
|  | 02Q2 | 574.4 | 560.4 | 14.0 | 2.4\% |
|  | Total | 2,280.4 | 2,282.0 | (1.6) | -0.1\% |
| 2003 | 02Q3 | 585.6 | 579.8 | 5.8 | 1.0\% |
|  | 02Q4 | 576.6 | 582.2 | (5.6) | -1.0\% |
|  | 03Q1 | 564.9 | 582.0 | (17.1) | -3.0\% |
|  | 03Q2 | 574.3 | 573.1 | 1.2 | 0.2\% |
|  | Total | 2,301.4 | 2,317.0 | (15.6) | -0.7\% |
| 2004 | 03Q3 | 627.7 | 593.5 | 34.2 | 5.4\% |
|  | 03Q4 | 620.0 | 619.9 | 0.1 | 0.0\% |
|  | 04Q1 | 622.9 | 628.5 | (5.6) | -0.9\% |
|  | 04Q2 | 663.3 | 624.6 | 38.7 | 5.8\% |
|  | Total | 2,533.9 | 2,466.6 | 67.3 | 2.7\% |
| 2005 | 04Q3 | 667.9 | 666.4 | 1.5 | 0.2\% |
|  | 04Q4 | 679.7 | 686.1 | (6.4) | -0.9\% |
|  | 05Q1 | 687.4 | 684.6 | 2.8 | 0.4\% |
|  | 05Q2 | 725.5 | 691.6 | 33.9 | 4.7\% |
|  | Total | 2,760.5 | 2,728.7 | 31.8 | 1.2\% |
| 2006 | 05Q3 | 718.3 | 736.6 | (18.3) | -2.5\% |
|  | 05Q4 | 721.8 | 736.0 | (14.2) | -2.0\% |
|  | 06Q1 | 754.9 | 737.4 | 17.5 | 2.3\% |
|  | 06Q2 | 733.0 | 750.2 | (17.2) | -2.3\% |
|  | Total | 2,928.0 | 2,960.2 | (32.2) | -1.1\% |
| 2007 | 06Q3 | 756.1 | 764.1 | (8.0) | -1.1\% |
|  | 06Q4 | 739.4 | 756.2 | (16.8) | -2.3\% |
|  | 07Q1 | 769.3 | 760.8 | 8.5 | 1.1\% |
|  | 07Q2 | 752.1 | 760.9 | (8.8) | -1.2\% |
|  | Total | 3,016.9 | 3,042.0 | (25.1) | -0.8\% |
| 2008 | 07Q3 | 782.6 | 780.9 | 1.7 | 0.2\% |
|  | 07Q4 | 794.4 | 777.4 | 17.0 | 2.1\% |
|  | 08Q1 | 720.0 | 787.1 | (67.1) | -9.3\% |
|  | 08Q2 | 761.5 | 755.2 | 6.3 | 0.8\% |
|  | Total | 3,058.5 | 3,100.7 | (42.1) | -1.4\% |
| 2009 | 08Q3 | 768.8 | 760.2 | 8.6 | 1.1\% |
|  | 08Q4 | 728.5 | 764.9 | (36.4) | -5.0\% |
|  | 09Q1 | 710.2 | 721.0 | (10.8) | -1.5\% |
|  | 09Q2 | 693.5 | 703.5 | (10.0) | -1.4\% |
|  | Total | 2,901.0 | 2,949.6 | (48.6) | -1.7\% |

## Recordation Taxes

```
DIFF(REC)
= 0.00016* DIFF(REFIMORT) + 0.33787* DIFF(MEDHOME)
    (4.0680)
- 3.85629*DIFF(RTBOND30Y.1) - 2.97009* QD1 + 10.8472* QD2
            (2.5859) (2.5219)
                                    (9.6131)
-2.3973
(-3.5968)
\begin{tabular}{llll} 
R Sq & 0.6977 & R Bar Sq 0.6797 & F 5, 84 38.7683 \\
D.W.(1) 2.4394 & D.W.(4) 0.8549 &
\end{tabular}
```

QUARTERLY data for 90 periods from 1987Q2 to 2009Q3

REC Recordation tax receipts
DIFF
Quarter over quarter difference function
REFIMORT
MEDHOME
RTBOND30Y. 1
QD1
QD2

Refinancing mortgage originations
Median home prices
30-year treasury bond yield, lagged one quarter
1 in the first quarter of all years; 0 in all other quarters
1 in the second quarter of all years; 0 in all other quarters

## GENERAL FUND METHODOLOGY

## Recordation Taxes

| Fiscal Year |  | Actual | Fitted | Residual | \% Residual |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1994 | 93Q3 | 26.4 | 24.6 | 1.8 | 6.8\% |
|  | 93Q4 | 27.2 | 27.0 | 0.2 | 0.6\% |
|  | 94Q1 | 21.9 | 18.8 | 3.1 | 14.2\% |
|  | 94Q2 | 24.3 | 26.7 | (2.4) | -9.7\% |
|  | Total | 99.8 | 97.1 | 2.7 | 2.7\% |
| 1995 | 94Q3 | 20.4 | 17.7 | 2.7 | 13.1\% |
|  | 94Q4 | 17.5 | 17.5 | 0.0 | 0.2\% |
|  | 95Q1 | 14.7 | 10.1 | 4.6 | 31.5\% |
|  | 95Q2 | 18.1 | 24.2 | (6.1) | -33.7\% |
|  | Total | 70.7 | 69.5 | 1.2 | 1.7\% |
| 1996 | 95Q3 | 19.8 | 20.4 | (0.6) | -2.8\% |
|  | 95Q4 | 19.3 | 18.3 | 1.0 | 5.2\% |
|  | 96Q1 | 17.6 | 16.3 | 1.3 | 7.5\% |
|  | 96Q2 | 23.7 | 26.8 | (3.1) | -13.2\% |
|  | Total | 80.4 | 81.8 | (1.4) | -1.7\% |
| 1997 | 96Q3 | 21.3 | 18.8 | 2.5 | 11.8\% |
|  | 96Q4 | 21.0 | 18.4 | 2.6 | 12.5\% |
|  | 97Q1 | 18.9 | 17.6 | 1.3 | 6.8\% |
|  | 97Q2 | 25.3 | 27.5 | (2.2) | -8.7\% |
|  | Total | 86.5 | 82.3 | 4.2 | 4.9\% |
| 1998 | 97Q3 | 23.1 | 23.1 | 0.0 | 0.2\% |
|  | 97Q4 | 27.5 | 23.1 | 4.4 | 16.2\% |
|  | 98Q1 | 24.8 | 25.4 | (0.6) | -2.2\% |
|  | 98Q2 | 33.4 | 35.6 | (2.2) | -6.7\% |
|  | Total | 108.8 | 107.1 | 1.7 | 1.6\% |
| 1999 | 98Q3 | 34.9 | 31.6 | 3.3 | 9.3\% |
|  | 98Q4 | 35.4 | 34.5 | 0.9 | 2.4\% |
|  | 99Q1 | 29.8 | 31.0 | (1.2) | -3.9\% |
|  | 99Q2 | 35.7 | 37.3 | (1.6) | -4.5\% |
|  | Total | 135.8 | 134.5 | 1.3 | 1.0\% |
| 2000 | 99Q3 | 32.7 | 30.2 | 2.5 | 7.7\% |
|  | 99Q4 | 29.9 | 29.3 | 0.6 | 2.1\% |
|  | 00Q1 | 25.8 | 22.9 | 2.9 | 11.3\% |
|  | 00Q2 | 35.2 | 33.7 | 1.5 | 4.2\% |
|  | Total | 123.6 | 116.1 | 7.5 | 6.1\% |
| 2001 | 00Q3 | 32.9 | 35.8 | (2.9) | -8.8\% |
|  | 00Q4 | 33.9 | 32.8 | 1.1 | 3.4\% |
|  | 01Q1 | 31.5 | 33.1 | (1.6) | -5.2\% |
|  | 01Q2 | 45.1 | 43.1 | 2.0 | 4.4\% |
|  | Total | 143.4 | 144.8 | (1.4) | -1.0\% |

## Recordation Taxes

| Fiscal Year |  | Actual | Fitted | Residual | \% Residual |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2002 | 01Q3 | 45.0 | 43.8 | 1.2 | 2.7\% |
|  | 01Q4 | 48.5 | 47.3 | 1.2 | 2.5\% |
|  | 02Q1 | 43.5 | 45.4 | (1.9) | -4.3\% |
|  | 02Q2 | 50.0 | 48.6 | 1.4 | 2.8\% |
|  | Total | 187.0 | 185.0 | 2.0 | 1.1\% |
| 2003 | 02Q3 | 56.6 | 54.7 | 1.9 | 3.3\% |
|  | 02Q4 | 65.8 | 63.4 | 2.4 | 3.7\% |
|  | 03Q1 | 56.6 | 62.8 | (6.2) | -11.0\% |
|  | 03Q2 | 73.1 | 70.7 | 2.4 | 3.3\% |
|  | Total | 252.1 | 251.7 | 0.4 | 0.2\% |
| 2004 | 03Q3 | 83.0 | 75.7 | 7.3 | 8.9\% |
|  | 03Q4 | 69.1 | 66.5 | 2.6 | 3.7\% |
|  | 04Q1 | 58.8 | 66.7 | (7.9) | -13.5\% |
|  | 04Q2 | 86.1 | 74.6 | 11.5 | 13.4\% |
|  | Total | 297.0 | 283.5 | 13.5 | 4.5\% |
| 2005 | 04Q3 | 81.1 | 82.2 | (1.1) | -1.4\% |
|  | 04Q4 | 80.7 | 85.4 | (4.7) | -5.9\% |
|  | 05Q1 | 76.1 | 81.8 | (5.7) | -7.5\% |
|  | 05Q2 | 102.0 | 87.9 | 14.1 | 13.8\% |
|  | Total | 339.9 | 337.3 | 2.6 | 0.8\% |
| 2006 | 05Q3 | 109.3 | 106.7 | 2.6 | 2.4\% |
|  | 05Q4 | 91.6 | 108.4 | (16.8) | -18.3\% |
|  | 06Q1 | 80.2 | 83.8 | (3.6) | -4.5\% |
|  | 06Q2 | 92.4 | 87.4 | 5.0 | 5.4\% |
|  | Total | 373.5 | 386.3 | (12.8) | -3.4\% |
| 2007 | 06Q3 | 80.8 | 87.3 | (6.5) | -8.0\% |
|  | 06Q4 | 77.6 | 79.1 | (1.5) | -1.9\% |
|  | 07Q1 | 71.9 | 76.0 | (4.1) | -5.7\% |
|  | 07Q2 | 83.0 | 78.1 | 4.9 | 5.9\% |
|  | Total | 313.3 | 320.5 | (7.2) | -2.3\% |
| 2008 | 07Q3 | 69.7 | 78.2 | (8.5) | -12.2\% |
|  | 07Q4 | 60.3 | 63.3 | (2.9) | -4.9\% |
|  | 08Q1 | 52.5 | 51.7 | 0.9 | 1.6\% |
|  | 08Q2 | 60.9 | 57.8 | 3.1 | 5.0\% |
|  | Total | 243.5 | 251.0 | (7.5) | -3.1\% |
| 2009 | 08Q3 | 52.5 | 51.3 | 1.2 | 2.2\% |
|  | 08Q4 | 38.5 | 45.7 | (7.1) | -18.5\% |
|  | 09Q1 | 41.1 | 33.8 | 7.3 | 17.8\% |
|  | 09Q2 | 53.2 | 52.7 | 0.5 | 0.9\% |
|  | Total | 185.3 | 183.5 | 1.8 | 1.0\% |

## Motor Fuels Tax

GAS

$$
\begin{equation*}
=-125.557 \text { * movavg(3,pdccengas/pdcce) } \tag{5.25973}
\end{equation*}
$$

+0.00222 * movavg(3,cyrpicva) +66.3571 * season_2 (21.9251) (7.49652)
+94.1660 * season_3 + 56.0271 * season_4 + 391.641
(10.7796) (6.33172) (23.6135)
$\begin{array}{llllll}\text { Sum Sq } & 52790.2 & \text { Std Err } & 27.2676 & \text { LHS Mean } & 886.370 \\ \text { R Sq } & 0.9314 & \text { R Bar Sq } & 0.9265 & \text { F 5, 71 } & 192.732 \\ \text { D.W.(1) } & 1.8077 & \text { D.W.(4) } & 1.5681 & & \end{array}$

## DIESEL

$$
=0.03870 * \underset{(29.7325)}{ }=0.0269 * \text { movavg (3,ppirpp) }-155.610
$$

| Sum Sq | 12098.4 | Std Err | 12.7864 | LHS Mean | 228.923 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| R Sq | 0.9515 | R Bar Sq | 0.9502 | F 2, 74 | 726.083 |
| D.W.(1) | 1.4955 | D.W.(4) | 0.8937 |  |  |


| 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 |

## Gasoline Consumption

| Fiscal Year |  | Actual | Fitted | Residual | \% Residual |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2000 | 99Q 3 | 930.692 | 930.1488 | 0.5 | $0.1 \%$ |
|  | 99Q4 | 908.783 | 891.0585 | 17.7 | $2.0 \%$ |
|  | 00Q 1 | 849.885 | 837.4664 | 12.4 | $1.5 \%$ |
|  | 00Q 2 | 902.719 | 907.5541 | (4.8) | -0.5\% |
|  | Total | 3,592.1 | 3,566.2 | 25.9 | $0.7 \%$ |
| 2001 | 00Q 3 | 930.8 | 938.4 | (7.6) | -0.8\% |
|  | 00Q4 | 904.0 | 904.7 | (0.7) | -0.1\% |
|  | 01Q 1 | 917.7 | 861.1 | 56.5 | $6.2 \%$ |
|  | 02Q 2 | 917.0 | 937.4 | (20.4) | -2.2\% |
|  | Total | 3,669.4 | 3,641.7 | 27.8 | 0.8\% |
| 2002 | 01Q 3 | 992.8 | 975.2 | 17.7 | $1.8 \%$ |
|  | 01Q4 | 943.6 | 942.9 | 0.6 | $0.1 \%$ |
|  | 02Q 1 | 876.7 | 896.8 | (20.1) | -2.3\% |
|  | 02Q 2 | 953.6 | 968.8 | (15.2) | -1.6\% |
|  | Total | 3,766.7 | 3,783.7 | (17.0) | -0.5\% |
| 2003 | 02Q 3 | 980.6 | 996.4 | (15.8) | -1.6\% |
|  | 02Q4 | 905.3 | 953.3 | (48.0) | -5.3\% |
|  | 03Q 1 | 845.9 | 893.6 | (47.7) | -5.6\% |
|  | 03Q 2 | 894.8 | 963.6 | (68.8) | -7.7\% |
|  | Total | 3,626.6 | 3,806.9 | (180.3) | -5.0\% |
| 2004 | 03Q 3 | 1,018.0 | 996.0 | 21.9 | $2.2 \%$ |
|  | 03Q4 | 990.7 | 967.2 | 23.4 | $2.4 \%$ |
|  | 04Q 1 | 938.6 | 912.3 | 26.3 | $2.8 \%$ |
|  | 04Q 2 | 1,009.0 | 981.0 | 28.0 | $2.8 \%$ |
|  | Total | 3,956.2 | 3,856.5 | 99.7 | 2.5\% |
| 2005 | 04 Q 3 | 1,016.9 | 1,009.7 | 7.2 | $0.7 \%$ |
|  | 04Q 4 | 990.2 | 973.0 | 17.2 | $1.7 \%$ |
|  | 05Q 1 | 939.1 | 920.3 | 18.8 | 2.0\% |
|  | 05Q 2 | 992.0 | 990.8 | 1.2 | 0.1\% |
|  | Total | 3,938.3 | 3,893.8 | 44.5 | 1.1\% |
| 2006 | 05Q 3 | 1,057.2 | 1,016.7 | 40.4 | 3.8\% |
|  | 05Q 4 | 956.3 | 975.3 | (19.0) | -2.0\% |
|  | 06Q 1 | 945.1 | 920.3 | 24.8 | $2.6 \%$ |
|  | 06Q 2 | 987.0 | 993.4 | (6.4) | -0.6\% |
|  | Total | 3,945.6 | 3,905.8 | 39.9 | 1.0\% |
| 2007 | 06Q 3 | 1,042.9 | 1,025.4 | 17.6 | $1.7 \%$ |
|  | 06Q 4 | 981.0 | 993.9 | (12.9) | -1.3\% |
|  | 07 Q 1 | 960.3 | 947.2 | 13.1 | $1.4 \%$ |
|  | 07Q 2 | 1,026.9 | 1,020.8 | 6.1 | $0.6 \%$ |
|  | Total | 4,011.1 | 3,987.2 | 23.9 | 0.6\% |
| 2008 | 07Q 3 | 1,057.1 | 1,048.0 | 9.1 | $0.9 \%$ |
|  | 07Q 4 | 1,006.3 | 1,000.9 | 5.5 | 0.5\% |
|  | 08Q 1 | 944.4 | 936.2 | 8.2 | $0.9 \%$ |
|  | 08Q 2 | 945.5 | 991.8 | (46.3) | -4.9\% |
|  | Total | 3,953.3 | 3,976.9 | (23.5) | -0.6\% |
| 2009 | 08Q 3 | 1,037.1 | 1,009.3 | 27.8 | $2.7 \%$ |
|  | 08Q 4 | 986.9 | 987.0 | (0.1) | 0.0\% |
|  | 09Q 1 | 937.4 | 951.9 | (14.5) | -1.5\% |
|  | 09Q 2 | 992.5 | 1,044.0 | (51.5) | -5.2\% |
|  | Total | 3,953.9 | 3,992.2 | (38.3) | -1.0\% |

## Diesel Fuel Consumption

| Fiscal Year |  | Actual | Fitted | Residual | \% Residual |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2000 | 99Q 3 | 247.2 | 245.7 | 1.5 | $0.6 \%$ |
|  | 99Q 4 | 245.0 | 250.9 | (5.9) | -2.4\% |
|  | 00Q 1 | 231.7 | 248.6 | (17.0) | -7.3\% |
|  | 00Q 2 | 254.6 | 254.9 | (0.3) | -0.1\% |
|  | Total | 978.5 | 1,000.0 | (21.6) | -2.2\% |
| 2001 | 00Q 3 | 256.8 | 252.9 | 3.9 | 1.5\% |
|  | 00Q 4 | 249.3 | 255.3 | (5.9) | -2.4\% |
|  | 01Q1 | 256.4 | 252.6 | 3.8 | $1.5 \%$ |
|  | 02Q 2 | 258.6 | 255.6 | 3.0 | $1.2 \%$ |
|  | Total | 1,021.2 | 1,016.4 | 4.8 | 0.5\% |
| 2002 | 01 Q 3 | 263.2 | 255.0 | 8.2 | $3.1 \%$ |
|  | 01Q4 | 265.6 | 261.8 | 3.8 | $1.4 \%$ |
|  | 02Q1 | 245.5 | 266.6 | (21.2) | -8.6\% |
|  | 02Q 2 | 275.5 | 269.0 | 6.5 | $2.4 \%$ |
|  | Total | 1,049.8 | 1,052.4 | (2.6) | -0.2\% |
| 2003 | 02Q 3 | 270.6 | 270.4 | 0.2 | $0.1 \%$ |
|  | 02Q 4 | 265.5 | 268.7 | (3.2) | -1.2\% |
|  | 03Q 1 | 255.1 | 266.1 | (11.0) | -4.3\% |
|  | 03Q 2 | 287.2 | 269.3 | 17.9 | $6.2 \%$ |
|  | Total | 1,078.4 | 1,074.5 | 3.9 | $0.4 \%$ |
| 2004 | 03Q 3 | 285.8 | 276.5 | 9.4 | 3.3\% |
|  | 03Q4 | 276.1 | 283.3 | (7.2) | -2.6\% |
|  | 04Q 1 | 274.4 | 285.1 | (10.7) | -3.9\% |
|  | 04Q 2 | 294.3 | 285.4 | 8.9 | $3.0 \%$ |
|  | Total | 1,130.7 | 1,130.4 | 0.3 | 0.0\% |
| 2005 | 04Q 3 | 304.2 | 286.8 | 17.4 | $5.7 \%$ |
|  | 04Q 4 | 301.7 | 286.8 | 14.9 | $4.9 \%$ |
|  | 05Q 1 | 281.9 | 289.6 | (7.7) | -2.7\% |
|  | 05Q 2 | 301.3 | 288.1 | 13.2 | $4.4 \%$ |
|  | Total | 1,189.1 | 1,151.4 | 37.7 | $3.2 \%$ |
| 2006 | 05Q 3 | 313.8 | 287.9 | 25.9 | 8.3\% |
|  | 05Q 4 | 290.1 | 283.8 | 6.2 | $2.2 \%$ |
|  | 06 Q 1 | 282.6 | 286.1 | (3.5) | -1.2\% |
|  | 06Q 2 | 302.6 | 284.7 | 18.0 | $5.9 \%$ |
|  | Total | 1,189.1 | 1,142.5 | 46.6 | $3.9 \%$ |
| 2007 | 06Q 3 | 286.3 | 283.4 | 2.8 | $1.0 \%$ |
|  | 06Q 4 | 310.3 | 288.2 | 22.2 | 7.1\% |
|  | 07 Q 1 | 288.7 | 291.4 | (2.6) | -0.9\% |
|  | 07Q 2 | 318.0 | 294.8 | 23.2 | $7.3 \%$ |
|  | Total | 1,203.3 | 1,157.8 | 45.5 | 3.8\% |
| 2008 | 07Q 3 | 305.0 | 297.9 | 7.1 | 2.3\% |
|  | 07Q 4 | 286.7 | 295.5 | (8.8) | -3.1\% |
|  | 08Q 1 | 272.2 | 287.0 | (14.8) | -5.4\% |
|  | 08Q 2 | 262.1 | 277.8 | (15.6) | -6.0\% |
|  | Total | 1,125.9 | 1,158.1 | (32.2) | -2.9\% |
| 2009 | 08Q 3 | 290.3 | 267.7 | 22.5 | $7.8 \%$ |
|  | 08Q 4 | 264.6 | 268.1 | (3.5) | -1.3\% |
|  | 09Q 1 | 231.6 | 276.6 | (45.0) | -19.4\% |
|  | 09Q 2 | 247.9 | 292.7 | (44.8) | -18.1\% |
|  | Total | 1,034.3 | 1,105.1 | (70.8) | -6.8\% |

## Motor Vehicle Sales and Use Tax

$\log (t t c a r s q)$

$$
\begin{gathered}
=-0.96837 * \text { dlogya(pdcgdp) } \\
(0.50179)
\end{gathered}
$$

- 0.06795 * movavg(2,dlogya(xtnemva.4))
(0.10766)
+ 0.00001 * diffya(yrpicva) +0.10715 * season_2
(6.11608)
(4.41580)
+ 0.10016 * season_3-0.09248 * season_4 + 5.76040
(4.12419) (3.75692) (153.336)

| Sum Sq | 0.3236 | Std Err | 0.0717 | LHS Mean | 5.9258 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| R Sq | 0.7052 | R Bar Sq | 0.6771 | F 6, 63 | 25.1124 |
| D.W.(1) | 0.4515 | D.W.( 4) | 1.1013 |  |  |

newcar

$$
\begin{aligned}
& =0.00655 \text { * suvlv }-0.00434 \text { * rmcblv }+0.01800 \text { * season_2 } \\
& \text { (20.6482) (9.04133) (10.6715) } \\
& \text { + 0.02144 * season_3-0.00097 * season_4 + } 0.01810 \\
& \text { (12.8734) ( } 0.57670 \text { ) }
\end{aligned}
$$

| Sum Sq | 0.0019 | Std Err | 0.0052 | LHS Mean | 0.0915 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| R Sq | 0.9299 | R Bar Sq | 0.9249 | F 5, 71 | 188.328 |
| D.W.(1) | 0.9234 | D.W.( 4) | 1.2383 |  |  |


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

New Taxable Titles (in thousands)

| Fiscal Year |  | Actual | Fitted | Residual | \% Residual |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2000 | 99Q 3 | 109.3 | 115.2 | (5.9) | -5.4\% |
|  | 99Q4 | 90.6 | 93.1 | (2.5) | -2.8\% |
|  | 00Q1 | 96.8 | 99.8 | (3.0) | -3.1\% |
|  | 00Q 2 | 112.7 | 109.7 | 3.0 | $2.6 \%$ |
|  | Total | 409.4 | 417.8 | (8.4) | -2.1\% |
| 2001 | 00Q 3 | 111.4 | 111.1 | 0.3 | $0.3 \%$ |
|  | 00Q4 | 90.3 | 82.7 | 7.6 | 8.4\% |
|  | 01Q 1 | 90.6 | 90.9 | (0.3) | -0.3\% |
|  | 02Q 2 | 105.6 | 107.9 | (2.3) | -2.2\% |
|  | Total | 397.9 | 392.6 | 5.3 | $1.3 \%$ |
| 2002 | 01Q3 | 107.0 | 108.7 | (1.8) | -1.7\% |
|  | 01Q4 | 106.5 | 104.4 | 2.1 | $1.9 \%$ |
|  | 02Q1 | 92.9 | 93.5 | (0.5) | -0.6\% |
|  | $02 \mathrm{Q} 2$ | 110.0 | 111.3 | (1.3) | -1.2\% |
|  | Total | 416.4 | 417.9 | (1.5) | -0.4\% |
| 2003 | 02Q 3 | 118.6 | 120.8 | (2.2) | -1.9\% |
|  | 02Q4 | 89.8 | 93.9 | (4.0) | -4.5\% |
|  | 03Q 1 | 90.0 | 93.1 | (3.1) | -3.4\% |
|  | 03Q 2 | 115.7 | 113.1 | 2.6 | $2.2 \%$ |
|  | Total | 414.2 | 420.9 | (6.7) | -1.6\% |
| 2004 | 03Q 3 | 127.8 | 123.1 | 4.7 | $3.7 \%$ |
|  | 03Q 4 | 105.6 | 97.5 | 8.1 | $7.7 \%$ |
|  | 04Q 1 | 103.8 | 97.7 | 6.1 | $5.9 \%$ |
|  | 04Q 2 | 123.0 | 117.4 | 5.6 | $4.6 \%$ |
|  | Total | 460.2 | 435.6 | 24.6 | $5.3 \%$ |
| 2005 | 04 Q 3 | 126.9 | 122.5 | 4.3 | $3.4 \%$ |
|  | 04Q 4 | 103.0 | 100.7 | 2.2 | $2.2 \%$ |
|  | 05Q 1 | 98.8 | 96.9 | 1.9 | $1.9 \%$ |
|  | 05Q 2 | 122.0 | 120.0 | 2.0 | $1.6 \%$ |
|  | Total | 450.6 | 440.2 | 10.4 | $2.3 \%$ |
| 2006 | 05Q 3 | 140.2 | 126.7 | 13.5 | 9.7\% |
|  | 05Q 4 | 89.0 | 88.8 | 0.2 | $0.3 \%$ |
|  | 06 Q 1 | 97.9 | 96.3 | 1.6 | $1.6 \%$ |
|  | 06Q 2 | 117.5 | 110.3 | 7.2 | 6.1\% |
|  | Total | 444.6 | 422.1 | 22.5 | 5.1\% |
| 2007 | 06Q 3 | 120.2 | 113.0 | 7.2 | 6.0\% |
|  | 06Q4 | 92.0 | 89.9 | 2.2 | $2.3 \%$ |
|  | 07 Q 1 | 92.3 | 91.6 | 0.7 | $0.7 \%$ |
|  | 07Q 2 | 119.4 | 106.9 | 12.4 | $10.4 \%$ |
|  | Total | 423.9 | 401.5 | 22.4 | $5.3 \%$ |
| 2008 | 07 Q 3 | 109.3 | 109.6 | (0.3) | -0.3\% |
|  | 07Q 4 | 85.7 | 89.6 | (4.0) | -4.6\% |
|  | 08Q 1 | 83.4 | 86.6 | (3.3) | -3.9\% |
|  | 08Q 2 | 99.1 | 98.9 | 0.1 | $0.1 \%$ |
|  | Total | 377.4 | 384.8 | (7.4) | -2.0\% |
| 2009 | 08Q 3 | 91.8 | 94.1 | (2.3) | -2.5\% |
|  | 08Q 4 | 57.2 | 55.2 | 2.0 | 3.5\% |
|  | 09Q1 | 55.8 | 50.2 | 5.6 | 10.1\% |
|  | 09Q 2 | 68.8 | 69.4 | (0.6) | -0.9\% |
|  | Total | 273.5 | 268.8 | 4.7 | $1.7 \%$ |

Used Taxable Titles (in thousands)

| Fiscal Year |  | Actual | Fitted | Residual | \% Residual |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2000 | 99Q 3 | 302.8 | 285.0 | 17.8 | 5.9\% |
|  | 99Q 4 | 264.9 | 247.3 | 17.6 | 6.6\% |
|  | 00Q 1 | 299.5 | 271.3 | 28.2 | 9.4\% |
|  | 00Q 2 | 314.2 | 326.5 | (12.4) | -3.9\% |
|  | Total | 1,181.3 | 1,130.1 | 51.2 | 4.3\% |
| 2001 | 00Q 3 | 305.9 | 324.5 | (18.6) | -6.1\% |
|  | 00Q 4 | 257.5 | 263.0 | (5.5) | -2.1\% |
|  | 01Q 1 | 291.1 | 327.5 | (36.3) | -12.5\% |
|  | 02Q 2 | 312.2 | 343.2 | (31.0) | -9.9\% |
|  | Total | 1,166.8 | 1,258.2 | (91.4) | -7.8\% |
| 2002 | 01 Q 3 | 307.9 | 308.4 | (0.5) | -0.2\% |
|  | 01Q 4 | 274.0 | 238.1 | 35.9 | 13.1\% |
|  | 02Q 1 | 306.4 | 242.3 | 64.1 | 20.9\% |
|  | 02Q 2 | 319.9 | 261.9 | 58.0 | 18.1\% |
|  | Total | 1,208.3 | 1,050.7 | 157.5 | 13.0\% |
| 2003 | 02Q 3 | 315.1 | 266.1 | 49.0 | 15.6\% |
|  | 02Q 4 | 256.4 | 219.0 | 37.4 | 14.6\% |
|  | 03Q 1 | 280.3 | 254.1 | 26.2 | 9.4\% |
|  | 03Q 2 | 324.4 | 284.0 | 40.3 | 12.4\% |
|  | Total | 1,176.2 | 1,023.2 | 152.9 | 13.0\% |
| 2004 | 03Q 3 | 325.2 | 282.9 | 42.3 | 13.0\% |
|  | 03Q 4 | 289.6 | 257.3 | 32.3 | 11.1\% |
|  | 04Q 1 | 317.9 | 288.4 | 29.5 | 9.3\% |
|  | 04Q 2 | 332.9 | 311.0 | 22.0 | 6.6\% |
|  | Total | 1,265.6 | 1,139.6 | 126.0 | 10.0\% |
| 2005 | 04Q3 | 329.3 | 304.9 | 24.4 | 7.4\% |
|  | 04Q 4 | 288.0 | 255.9 | 32.0 | 11.1\% |
|  | 05Q 1 | 314.3 | 294.3 | 20.0 | 6.4\% |
|  | 05Q 2 | 332.8 | 321.5 | 11.3 | 3.4\% |
|  | Total | 1,264.4 | 1,176.6 | 87.7 | 6.9\% |
| 2006 | 05Q 3 | 335.8 | 314.3 | 21.5 | 6.4\% |
|  | 05Q 4 | 272.0 | 265.5 | 6.5 | 2.4\% |
|  | 06Q 1 | 307.0 | 318.9 | (11.9) | -3.9\% |
|  | 06Q 2 | 320.8 | 347.7 | (26.8) | -8.4\% |
|  | Total | 1,235.6 | 1,246.4 | (10.8) | -0.9\% |
| 2007 | 06Q 3 | 311.6 | 330.5 | (18.9) | -6.1\% |
|  | 06Q 4 | 269.9 | 273.5 | (3.6) | -1.4\% |
|  | 07Q 1 | 299.5 | 301.6 | (2.0) | -0.7\% |
|  | 07 Q 2 | 323.4 | 322.6 | 0.8 | 0.2\% |
|  | Total | 1,204.3 | 1,228.1 | (23.8) | -2.0\% |
| 2008 | 07 Q 3 | 303.9 | 321.9 | (18.0) | -5.9\% |
|  | 07Q4 | 254.1 | 261.0 | (6.9) | -2.7\% |
|  | 08Q 1 | 285.3 | 271.7 | 13.6 | 4.8\% |
|  | 08Q 2 | 297.4 | 310.7 | (13.3) | -4.5\% |
|  | Total | 1,140.7 | 1,165.3 | (24.6) | -2.2\% |
| 2009 | 08Q 3 | 278.0 | 297.0 | (18.9) | -6.8\% |
|  | 08Q 4 | 212.2 | 259.5 | (47.4) | -22.3\% |
|  | 09Q 1 | 255.8 | 261.3 | (5.5) | -2.1\% |
|  | 09Q 2 | 271.2 | 263.9 | 7.3 | 2.7\% |
|  | Total | 1,017.2 | 1,081.7 | (64.5) | -6.3\% |

## Motor Vehicle License Revenues

vehreg1

$$
=0.79577 \text { * vehreg1 }[-4]+0.59042 \text { * vehreg2[-8] }
$$

(12.8575)
(2.95033)

+ 49298.2 * origvttf + 133679
(1.64632) (2.47694)

| Sum Sq | 2E+11 | Std Err | 57986.4 | LHS Mean | 1207429 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| R Sq | 0.8675 | R Bar Sq | 0.8619 | F 3, 71 | 155.008 |
| D.W.(1) | 1.9477 | D.W.(4) | 2.1614 |  |  |

vehreg2

$$
\begin{gathered}
=0.89954 *(\text { vehreg } 2.8 * \text { renew })+6333.08 * \text { qd2 }+61514.9 \\
(12.8993)
\end{gathered}
$$

| Sum Sq | $4 E+10$ | Std Err | 24069.2 | LHS Mean | 216643 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| R Sq | 0.7153 | R Bar Sq | 0.7074 | F 2, 72 | 90.4446 |
| D.W.(1) | 0.8087 | D.W.(4) | 1.3758 |  |  |

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

One Year Registrations

| Fiscal Year |  | Actual | Fitted | Residual | \% Residual |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2000 | 99Q 3 | 1,339,334 | 1,251,847 | 87,487 | 6.5\% |
|  | 99Q 4 | 1,104,872 | 1,047,414 | 57,458 | 5.2\% |
|  | 00Q 1 | 1,224,410 | 1,165,864 | 58,546 | 4.8\% |
|  | 00Q 2 | 1,413,748 | 1,320,425 | 93,323 | 6.6\% |
|  | Total | 5,082,364 | 4,785,550 | 296,814 | 5.8\% |
| 2001 | 00Q 3 | 1,280,287 | 1,306,042 | $(25,755)$ | -2.0\% |
|  | 00Q 4 | 1,058,456 | 1,101,643 | $(43,187)$ | -4.1\% |
|  | 01 Q 1 | 1,268,990 | 1,215,222 | 53,768 | 4.2\% |
|  | 02Q 2 | 1,408,479 | 1,382,672 | 25,807 | 1.8\% |
|  | Total | 5,016,212 | 5,005,579 | 10,633 | 0.2\% |
| 2002 | 01 Q 3 | 1,273,549 | 1,278,743 | $(5,194)$ | -0.4\% |
|  | 01 Q 4 | 1,072,798 | 1,072,674 | 124 | 0.0\% |
|  | 02Q 1 | 1,228,538 | 1,250,695 | $(22,157)$ | -1.8\% |
|  | 02Q 2 | 1,294,029 | 1,387,042 | $(93,013)$ | -7.2\% |
|  | Total | 4,868,914 | 4,989,154 | $(120,240)$ | -2.5\% |
| 2003 | 02Q 3 | 1,470,196 | 1,274,535 | 195,661 | 13.3\% |
|  | 02Q 4 | 1,117,834 | 1,089,687 | 28,147 | 2.5\% |
|  | 03Q 1 | 1,163,163 | 1,242,680 | $(79,517)$ | -6.8\% |
|  | 03Q 2 | 1,465,491 | 1,310,950 | 154,541 | 10.5\% |
|  | Total | 5,216,684 | 4,917,853 | 298,831 | $5.7 \%$ |
| 2004 | 03Q 3 | 1,377,265 | 1,442,500 | $(65,235)$ | -4.7\% |
|  | 03Q 4 | 1,182,994 | 1,134,253 | 48,741 | 4.1\% |
|  | 04Q 1 | 1,298,254 | 1,191,141 | 107,113 | 8.3\% |
|  | 04Q 2 | 1,439,911 | 1,422,947 | 16,964 | 1.2\% |
|  | Total | 5,298,424 | 5,190,841 | 107,583 | 2.0\% |
| 2005 | 04Q 3 | 1,367,213 | 1,378,508 | $(11,295)$ | -0.8\% |
|  | 04Q 4 | 1,133,817 | 1,185,772 | $(51,955)$ | -4.6\% |
|  | 05Q 1 | 1,273,050 | 1,287,557 | $(14,507)$ | -1.1\% |
|  | 05Q 2 | 1,475,608 | 1,433,056 | 42,552 | 2.9\% |
|  | Total | 5,249,688 | 5,284,893 | $(35,205)$ | -0.7\% |
| 2006 | 05Q 3 | 1,453,834 | 1,369,791 | 84,043 | 5.8\% |
|  | 05Q 4 | 1,131,645 | 1,161,860 | $(30,215)$ | -2.7\% |
|  | 06Q 1 | 1,282,905 | 1,287,055 | $(4,150)$ | -0.3\% |
|  | 06Q 2 | 1,411,435 | 1,457,787 | $(46,352)$ | -3.3\% |
|  | Total | 5,279,819 | 5,276,494 | 3,325 | 0.1\% |
| 2007 | 06Q 3 | 1,412,785 | 1,439,176 | $(26,391)$ | -1.9\% |
|  | 06Q 4 | 1,153,708 | 1,154,328 | (620) | -0.1\% |
|  | 07Q 1 | 1,280,834 | 1,292,307 | $(11,473)$ | -0.9\% |
|  | 07Q 2 | 1,411,435 | 1,421,267 | $(9,832)$ | -0.7\% |
|  | Total | 5,258,762 | 5,307,078 | $(48,316)$ | -0.9\% |
| 2008 | 07Q 3 | 1,400,808 | 1,432,993 | $(32,185)$ | -2.3\% |
|  | 07Q 4 | 1,231,785 | 1,185,615 | 46,170 | 3.7\% |
|  | 08Q 1 | 1,312,356 | 1,304,030 | 8,326 | 0.6\% |
|  | 08Q 2 | 1,391,387 | 1,424,047 | $(32,660)$ | -2.3\% |
|  | Total | 5,336,336 | 5,346,684 | $(10,348)$ | -0.2\% |
| 2009 | 08Q 3 | 1,388,357 | 1,425,124 | $(36,767)$ | -2.6\% |
|  | 08Q 4 | 1,081,591 | 1,256,432 | $(174,841)$ | -16.2\% |
|  | 09Q 1 | 1,291,207 | 1,337,857 | $(46,650)$ | -3.6\% |
|  | 09Q 2 | 1,419,707 | 1,408,093 | 11,614 | 0.8\% |
|  | Total | 5,180,862 | 5,427,506 | $(246,644)$ | -4.8\% |

C2-8

NONGENERAL FUND METHODOLOGY

## Two Year Registrations

| Fiscal Year |  | Actual | Fitted | Residual | \% Residual |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2000 | 99Q3 | 213,826 | 223,279 | $(9,453)$ | -4.4\% |
|  | 99Q4 | 163,790 | 177,591 | $(13,801)$ | -8.4\% |
|  | 00Q1 | 181,547 | 191,840 | $(10,293)$ | -5.7\% |
|  | 00Q 2 | 224,476 | 220,687 | 3,789 | $1.7 \%$ |
|  | Total | 783,639 | 813,397 | $(29,758)$ | -3.8\% |
| 2001 | 00Q 3 | 215,781 | 199,511 | 16,270 | 7.5\% |
|  | 00Q4 | 173,276 | 176,433 | $(3,157)$ | -1.8\% |
|  | 01Q 1 | 222,494 | 200,331 | 22,163 | 10.0\% |
|  | 02Q 2 | 249,854 | 228,395 | 21,459 | 8.6\% |
|  | Total | 861,405 | 804,670 | 56,735 | $6.6 \%$ |
| 2002 | 01Q 3 | 235,222 | 225,008 | 10,214 | 4.3\% |
|  | 01Q4 | 188,058 | 186,750 | 1,308 | $0.7 \%$ |
|  | 02Q1 | 223,314 | 200,328 | 22,986 | 10.3\% |
|  | 02Q 2 | 208,447 | 239,485 | $(31,038)$ | -14.9\% |
|  | Total | 855,041 | 851,571 | 3,470 | $0.4 \%$ |
| 2003 | 02Q 3 | 252,092 | 226,503 | 25,589 | $10.2 \%$ |
|  | 02Q4 | 187,492 | 194,003 | $(6,511)$ | -3.5\% |
|  | 03Q 1 | 204,539 | 231,636 | $(27,097)$ | -13.2\% |
|  | 03Q 2 | 260,046 | 258,889 | 1,157 | $0.4 \%$ |
|  | Total | 904,169 | 911,032 | $(6,863)$ | -0.8\% |
| 2004 | 03Q 3 | 250,876 | 241,368 | 9,508 | 3.8\% |
|  | 03Q4 | 213,274 | 205,306 | 7,968 | $3.7 \%$ |
|  | 04Q1 | 237,659 | 232,263 | 5,396 | 2.3\% |
|  | 04Q 2 | 253,820 | 227,229 | 26,591 | $10.5 \%$ |
|  | Total | 955,629 | 906,166 | 49,463 | $5.2 \%$ |
| 2005 | 04Q 3 | 251,646 | 254,267 | $(2,621)$ | -1.0\% |
|  | 04Q 4 | 203,444 | 204,873 | $(1,429)$ | -0.7\% |
|  | 05Q 1 | 233,271 | 217,907 | 15,364 | $6.6 \%$ |
|  | 05Q 2 | 278,458 | 266,682 | 11,776 | $4.2 \%$ |
|  | Total | 966,819 | 943,729 | 23,090 | $2.4 \%$ |
| 2006 | 05Q 3 | 296,499 | 253,337 | 43,162 | $14.6 \%$ |
|  | 05Q 4 | 226,698 | 224,586 | 2,112 | $0.9 \%$ |
|  | 06Q 1 | 255,918 | 243,231 | 12,687 | 5.0\% |
|  | 06Q 2 | 283,167 | 261,921 | 21,246 | 7.5\% |
|  | Total | 1,062,282 | 983,076 | 79,206 | $7.5 \%$ |
| 2007 | 06Q 3 | 299,315 | 253,926 | 45,389 | 15.2 \% |
|  | 06Q 4 | 241,409 | 217,070 | 24,339 | $10.1 \%$ |
|  | 07 Q 1 | 270,725 | 239,876 | 30,849 | $11.4 \%$ |
|  | 07Q 2 | 283,167 | 280,760 | 2,407 | $0.9 \%$ |
|  | Total | 1,094,616 | 991,632 | 102,984 | 9.4\% |
| 2008 | 07 Q 3 | 278,906 | 288,221 | $(9,315)$ | -3.3\% |
|  | 07Q 4 | 235,108 | 234,850 | 258 | $0.1 \%$ |
|  | 08Q 1 | 244,137 | 257,192 | $(13,055)$ | -5.3\% |
|  | 08Q 2 | 277,234 | 284,360 | $(7,126)$ | -2.6\% |
|  | Total | 1,035,385 | 1,064,624 | $(29,239)$ | -2.8\% |
| 2009 | 08Q 3 | 315,988 | 290,374 | 25,614 | 8.1\% |
|  | 08Q 4 | 238,209 | 246,099 | $(7,890)$ | -3.3\% |
|  | 09Q 1 | 286,888 | 268,514 | 18,374 | $6.4 \%$ |
|  | 09Q 2 | 316,656 | 284,360 | 32,296 | $10.2 \%$ |
|  | Total | 1,157,741 | 1,089,347 | 68,394 | $5.9 \%$ |

## ABC Revenue Estimating Methodology

Distilled spirit sales 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 = . 02
$\mathrm{R}^{2}=99.5$ percent

## 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
$R^{2}=98.8$ percent

## The Unemployment Insurance Trust Fund

## Equation Specifications For Taxable Wages:

$$
\left(\mathrm{TAX}_{x} / \mathrm{TOT}_{x}\right)=\mathrm{f}\left(\mathrm{TBAAW}_{x}, \mathrm{MTWB}^{2} \mathrm{QI}_{x}\right)
$$

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 12 observations used in the equations, the years 1996 to 2007 inclusive.

## First Quarter

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

$$
\begin{equation*}
\left(\mathrm{TAX}_{1} / \mathrm{TOT}_{1}\right)=0.241+1.526\left(\mathrm{TBAAW}_{1}\right)+0.01\left(\mathrm{QI}_{1}\right) \tag{21.02}
\end{equation*}
$$

The summary statistics are:

| Adjusted R | 0.992 |
| :--- | :--- |
| MSE | $3.116 \times 10^{-5}$ |

## Second Quarter

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

$$
\begin{align*}
\left(\mathrm{TAX}_{2} / \mathrm{TOT}_{2}\right)= & -0.049+1.167\left(\mathrm{TBAAW}_{2}\right)-0.009\left(\mathrm{QI}_{2}\right) \\
& {[-5.599][37.755] } \tag{-2.978}
\end{align*}
$$

The summary statistics are:

Adjusted R2 0.993
MSE
$1.442 \times 10^{-5}$

## NONGENERAL FUND METHODOLOGY

## Third Quarter

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

$$
\begin{gathered}
\left(\mathrm{TAX}_{3} / \mathrm{TOT}_{3}\right)=2.228 \times 10^{-4}+0.603\left(\mathrm{TBAAW}_{3}\right)-0.009\left(\mathrm{QI}_{3}\right) \\
{[0.03]}
\end{gathered}
$$

The summary statistics are:

Adjusted $\mathrm{R}^{2} \quad 0.985$
MSE $\quad 9.245 \times 10^{-6}$

## Fourth Quarter

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

$$
\begin{array}{r}
\left.\left(\mathrm{TAX}_{4} / \mathrm{TOT}_{4}\right)=\begin{array}{c}
0.007+0.479\left(\mathrm{TBAAW}_{4}\right)-0.008\left(\mathrm{Ql}_{4}\right) \\
{[0.868]}
\end{array}\right][15.406][-2.842]
\end{array}
$$

The summary statistics are:

| Adjusted R $R^{2}$ | 0.965 |
| :--- | :--- |
| MSE | $1.03 \times 10^{-5}$ |


[^0]:    The Oct Standard forecast from the Department of Taxation is based on Global Insight's October 2009 U.S. standard forecast.

    * Represents the percentage share of Virginia.
    ** Represents the percentage share of total employment within the region.

[^1]:    The August Interim forecast is based on the June 2009 Global Insight Standard outlook and the corresponding Virginia state forecast developed by the Department of Taxation and reflects recommendations of the GABE and GACRE.
    The November Standard forecast is based on the October 2009 Global Insight Standard outlook and the corresponding Virginia state forecast developed by the Department of Taxation.

[^2]:    The August Interim forecast is based on the June 2009 Global Insight Standard outlook and the corresponding Virginia state forecast developed by the Department of Taxation and reflects recommendations of the GABE and GACRE.
    The November Pessimistic Alternative forecast is based on the October 2009 Global Insight Pessimistic Alternative outlook and the corresponding Virginia state forecast developed by the Department of Taxation.

