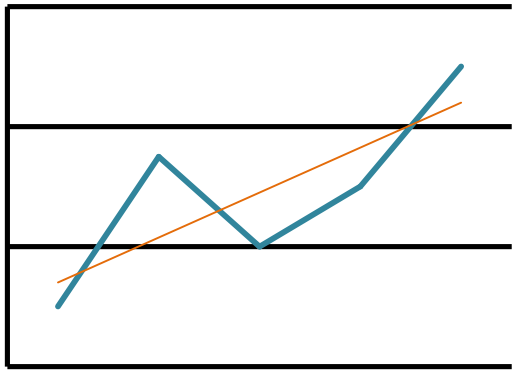
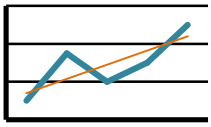
January 2012

The Economic & Budget Outlook: Fiscal Years 2013-2017



Independent Fiscal Office Commonwealth of Pennsylvania



Forward

Act 120 of 2010 establishes the Independent Fiscal Office. Section 4104 of the Act specifies that the Office shall "provide an assessment of the state's current fiscal condition and a projection of what the fiscal condition will be during the next five years. The assessment shall take into account the state of the economy, demographics, revenues and expenditures." In fulfillment of that obligation, we submit this report to the residents of the Commonwealth and the General Assembly. In accordance with the mission of the Office, this report does not offer any policy recommendations.

The data and projections used by this report come from various sources. Economic projections for the US and Pennsylvania are from the January 2012 forecast by Global Insight, Inc. Demographic projections are from the Penn State Data Center based on tabulations from the 2010 Census. Historical revenue and expenditure data are from the Commonwealth's Consolidated Annual Financial Report, the Governor's Executive Budget and various departmental reports. Other data sources are noted in the relevant sections of this report.

The Independent Fiscal Office would like to thank all of the individuals, agencies and organizations who assisted in the production of this report. Staff making significant contributions to this report include Mark Ryan and Jennifer Boger. Questions and comments can be submitted at www.ifo.state.pa.us.

Matthew J. Knittel
Director

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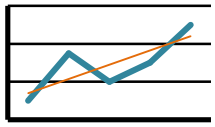

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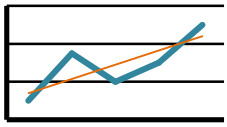


Executive Summary

This report discusses economic and demographic trends that will impact the Commonwealth's fiscal condition during the next five fiscal years. Highlights and conclusions are as follows:

Economic Trends

The economic forecast projects moderate growth. In particular:

- Real growth remains modest for the US (2.0 percent) and the Commonwealth (1.6 percent) for 2012.
- Unemployment remains elevated for the US (8.8 percent) and the Commonwealth (7.9 percent) for 2012.
- Real growth for the US peaks in 2014 (3.4 percent) with elevated unemployment (7.9 percent).
- Real growth for the Commonwealth peaks in 2014 (3.2 percent) with elevated unemployment (7.1 percent).

Demographic Trends

From 2010 to 2020, the Penn State Data Center projects that:

- Total population will increase 2.3 percent (0.2 percent per annum).
- Elderly residents over age 65 will increase 25.0 percent (2.3 percent per annum).
- Working age residents will decline by -1.8 percent (-0.2 percent per annum).

General Fund Revenue Trends

Based on demographic and economic forecasts:

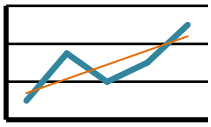
- For FY 2010-11 to FY 2013-14, revenues will increase by 1.6 percent per annum.
- For FY 2014-15 to FY 2016-17, revenues will increase by 4.0 percent per annum.

- The Pennsylvania tax base will continue its long-term contraction due to demographic factors.

General Fund Expenditure Trends

Based on demographic and economic forecasts:

- General Fund expenditures will outpace revenues, assuming no further policy actions to bring the two series into balance.
- Demographic trends will cause significant growth in the number of residents eligible for Medical Assistance, creating budgetary pressures.
- Pension contributions will comprise a rapidly increasing share of General Fund expenditures: 4.2 percent for FY 2011-12 growing to 11.6 percent for FY 2016-17.



Methodology

In fulfillment of Act 120 of 2010, this report provides a review of the economic, demographic, revenue and expenditure trends that will affect the Commonwealth's fiscal position for the current fiscal year (FY 2011-12) and five subsequent fiscal years (FY 2012-13 to FY 2016-17). Due to its broad scope, the report makes many simplifying assumptions and uses basic modeling techniques so that the factors driving trends will be transparent and their implications easily followed over time. The revenue and expenditure projections used by this report represent one potential outcome given reasonable economic assumptions and the extrapolation of demographic trends. Projections will change significantly during the next five fiscal years due to various economic and technical factors. Policymakers will also make many unanticipated decisions that will affect both series. For these reasons, five-year revenue and expenditure projections are best viewed as a neutral benchmark against which readers may assess broad trends in the Commonwealth's fiscal condition over the next five fiscal years. Revenue and expenditure projections are not intended to be used as point estimates of future outcomes.

Method of Presentation

In order to illustrate broad trends and convey their impact, it is useful to provide both historical and relative context. Historical context helps readers determine if trends are new or whether a particular series simply reverts to some historical norm. For example, it is known that personal income tax collections have increased since the previous recession. But merely knowing the level of collections does not provide a useful benchmark against which one may assess whether collections have reverted to a "normal" level, nor does it reveal the pattern of that reversion. Relative context is useful because it helps readers determine if the growth rate of a particular series is less than or greater than some "general" growth rate that might be expected to prevail, such as overall economic growth. For example, we would expect sales tax revenues to increase as the economy expands, but we would also expect that the relative growth rate of sales tax revenues might vary based on the stage of the economic cycle (i.e., recession vs. recovery). The divergence of growth rates from an economy-wide average suggests the presence of technical factors which might require closer examination.

A convenient method that conveys trends and provides context is the depiction of revenue and expenditure projections relative to a larger economic series such as total state output (i.e., gross state product) or total state income (i.e., personal income). These larger series reflect the overall performance of the economy and also serve as a "default" growth rate. When revenue and expenditure projections are depicted graphically relative to these larger series, trends are easily identified, and it is readily apparent if projected revenue and expenditure levels are "typical" compared to historical levels. For these reasons, graphs used by this report depict revenues and expenditures relative to personal income over a twenty-year budget window that spans FY 1997-98 to FY 2016-17.[1] For tabular presentations, a fifteen-year window is used.

Revenue and Expenditure Projections

Whenever possible, the economic and demographic forecasts provide motivation for the revenue and expenditure projections contained in this report. However, in certain instances, it is also necessary that projections incorporate technical adjustments. For example, corporate net income tax revenues are temporarily low due to conformity with the federal provision that provides for the full expensing of eligible investment placed in service during the last four months of 2010 and all of calendar year 2011. Because that provision merely pulls tax deductions forward in time, future corporate income tax liability will be higher, all else equal. This unusual pattern is not captured by the economic forecast and must be incorporated as a technical adjustment. Alternatively, the capital stock and franchise tax is scheduled to phase-out by 2014, and the pattern of that phase-out must also be incorporated as a technical adjustment. All significant technical adjustments are noted in the text. A brief summary that describes the basic methodology used to derive revenue projections may be found in the Appendix.

Unless stated otherwise, all revenue and expenditure projections represent a "current policy" or "current services" baseline. For revenue projections, the "current policy" baseline assumes that taxpayer behavior and tax law as enacted does not change from the base year (2012).[2] Therefore, projections assume that technical factors such as compliance rates, tax base erosion, and utilization of available tax credits remain constant, unless those factors are reflected in the economic assumptions.

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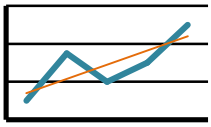
[1] For the purposes of this report, it does not matter which macroeconomic series is used to demonstrate trends. This report uses state personal income because that series is published in a more timely manner. Personal income is equal to the sum of wages, proprietor, rental, dividend, and interest income plus various government transfers such as social security and unemployment compensation.

[2] For the FY 2011-12 base year, model projections are calibrated based on receipts through December 2011.

For expenditure projections, the "current services" baseline assumes that policy choices implicitly reflected in the FY 2011-12 budget are carried forward to all future years. For example, the projections assume that structural parameters such as staff-to-inmate (corrections) and pupil-to-teacher (education) ratios remain constant. Some of these parameters reflect explicit policy choices; others do not and are determined in a more ad hoc fashion. In either case, these structural parameters are held constant based on data provided by the relevant departments for the baseline year (FY 2011-12).[3] Once those parameters are held constant, the projections then allow demographic growth of the target population that receives services (e.g., inmates, pupils, or medical assistance recipients) and inflationary growth in the average cost to provide those services. This methodology yields expenditure projections that provide a level of per capita services which should be roughly equivalent in real terms to per capita services provided in the base year.

[3] However, if the data suggest that a structural parameter trends in a predictable manner, then expenditure projections assume that trend will hold over the five-year window used by this report.



The Economic Outlook

On July 19, 2007, the Dow Jones Industrial Average closed above 14,000 for the first time in its history. Yet, investors maintained a guarded outlook as indicators provided mixed signals about the economy's prospects. Events in subsequent months would confirm their apprehension. August witnessed the bankruptcy or near bankruptcy of three large mortgage lenders.[4] Large financial institutions began to conserve capital and sharply reduced loans to consumers, businesses and other financial institutions. In an effort to restore liquidity to financial markets, the Federal Reserve lowered the federal funds rate by 150 basis points and established special programs to make funds available to financial and depository institutions. Those actions would prove inadequate to stem the impending financial crisis. By December 2007, economic data would reveal that the US economy had lurched into the downturn now called the Great Recession.

In September 2009, the National Bureau of Economic Research declared that the recession had officially ended in June 2009. The recession spanned nineteen months, making it the longest downturn since World War II. The Bureau was careful to note that the recession's end did not imply that robust growth would soon return. Rather, the announcement merely reflected the Bureau's determination that economic activity had reached a trough in June 2009. That trough marked the end of the declining phase of the economic cycle. The start of the "recovery" phase merely required that a modicum of real economic growth occur.

Lingering Effects of the Great Recession

Since the Bureau's announcement, national and state economies have struggled to recover from the recession. Numerous metrics demonstrate that the current recovery is the weakest since World War II. For example, payroll employment had reverted to its pre-recession peak within an average of thirty-six months following the previous three recessions (1981-82, 1991 and 2001). By comparison, current payroll employment remains 4.4

[4] In August 2007, American Home Mortgage filed for bankruptcy, Ameriquest discontinued its mortgage operations and Countrywide Financial Corporation accepted an $11 billion emergency loan from a consortium of banks. In 2006, Countrywide Financial financed nearly 20 percent of all mortgages in the US. The firm would later file for bankruptcy in 2008.

percent (6.1 million employees) below its pre-recession peak, despite the fact that the recession began forty-nine months ago. Other broad measures confirm the lethargic nature of the recovery. Based on the January 2012 economic forecast, real business investment will need six years to surpass its pre-recession peak, while real housing investment fails to ever attain its pre-recession peak over the next decade.

The feeble recovery is not unusual when compared to others that followed financial crises. Recovery from a financial crisis is much slower than "typical" recoveries because the fiscal imbalances that precipitated the crisis take many years to unwind.[5] In the current instance, many homeowners found themselves overleveraged due to the rapid decline in home values coupled with a slumping stock market. To correct this imbalance, excessive debt had to be eliminated through bankruptcy proceedings or a slow deleveraging process where borrowers pay down debt over many years.

Data show that debtors have used both methods to reduce leverage. Tabulations from the US Bankruptcy Court reveal that annual bankruptcy filings peaked at 1.59 million in 2010, an increase of 87 percent (742,000) from 2007 filings. Data through September suggest that filings will decline modestly in 2011 (-8.1 percent). The Federal Reserve's Flow of Funds Account confirms that a gradual deleveraging process has been underway for several years. Since the onset of the recession, the dollar value of outstanding mortgages has declined at an average rate of -1.9 percent per annum, while consumer credit debt has declined by -1.0 percent per annum. Although these reductions seem minor, they reveal a substantial deleveraging process by homeowners and consumers. When viewed relative to personal disposable income (i.e., after-tax income), debt burdens have declined significantly. In 2007, outstanding mortgage debt (106.7 percent) and consumer credit (24.5 percent) reached historical peaks relative to personal disposable income. By 2011, data show those relative debt burdens had been reduced to 89.1 percent and 21.5 percent respectively.[6]

Similar to homeowners and consumers, many financial institutions found themselves overleveraged and thinly capitalized. The recession triggered large reductions in the value of mortgages, consumer loans and mortgage-backed securities held by these firms. Financial institutions incurred significant capital losses and wrote-off unprecedented amounts of bad loans from their balance sheets. Data from the Federal Deposit Insurance Corporation (FDIC) show that members wrote off more than $200 billion of bad loans in

[5] Factors that might precipitate a "typical" recession include contractionary monetary policy, price shocks (e.g., fuel), and insufficient demand.

[6] Federal Reserve Flow of Funds Account, Tables L.218 and L.222. Despite the reduction in relative debt burdens, levels remain elevated compared to historical averages.

2009 and 2010, compared to pre-recession levels of approximately $40 billion. Recent data show that bad loan write-offs have declined for the past four quarters and will total roughly $130 billion for 2011. In response to these write-downs, financial institutions tightened lending standards and curtailed loans to individuals and businesses. FDIC data show that net loans to businesses decreased at an average rate of -5.8 percent per annum from the third quarter of 2008 through the third quarter of 2011. However, recent data also show that net loans to businesses have increased modestly the past two quarters.

While non-financial firms endured this credit contraction, they also faced a precipitous drop in sales volume. Firms responded by reducing labor costs and postponing investment to preserve profit margins. From their pre-recession peaks to recession trough, data reveal steep declines in payroll employment (-5.9 percent, 8.2 million jobs) and real non-residential investment (-18.5 percent, $287 billion). Although recent data show that real investment spending has partially recovered, most new investment merely replaces worn out capital rather than expand operations. For 2009, the nation's capital stock actually contracted as private real investment ($1.46 trillion) was insufficient to offset the depreciation of existing capital and the depletion of inventories. For 2010 and 2011, the relative increase in the nation's capital stock from real net investment was the lowest level in decades. A lower capital stock reduces the economy's potential output in all future years and will generally reduce living standards.

Data from the Census' *Quarterly Financial Report* show that aggressive cost cutting measures have preserved, and even strengthened, profit levels and profit margins. For 2011, the pre-tax net income of manufacturers, wholesalers and retailers is projected to exceed its pre-recession peak (2006) by approximately 20 percent.[7] Data from the National Income and Product Accounts confirm this result. For 2011, economic profits' share of GDP will likely surpass 13 percent, a post-World War II high.

These trends suggest that the Great Recession continues to have implications for national and state economies. Consumers remain reluctant to spend as the deleveraging process continues to unfold. Financial institutions are slow to relax lending standards as they continue to write-off high levels of bad loans. Non-financial businesses maintain robust profit margins and are hesitant to hire, invest and expand operations until strong evidence of increased demand appears. Yet, recent data also suggest that these adjustment

[7] The Census report shows pre-tax profits of $830 billion for 2006 and $984 billion for 2011 (based on data through the third quarter). Relative to sales volume, pre-tax profits comprised 8.6 percent of sales in 2006 and 8.7 percent in 2011.

processes are winding down. It remains an open question as to when those processes might end.

The 2011 Economy: The Recovery Continues

In order to assess the current state of the economy, analysts typically rely on real gross domestic product (GDP), or its state-level counterpart, real gross state product (GSP). Real GDP measures the final value of all goods and services produced by the economy during the calendar year. Alternatively, it measures total spending on all goods and services by their final users. Four types of spending comprise real GDP: (1) personal consumption, (2) investment, (3) net imports and (4) federal and state-local government spending. Real measures are a superior measure of economic activity because they eliminate inflationary growth. Inflationary growth does not improve living standards or increase the real purchasing power of consumers.

Figure 1

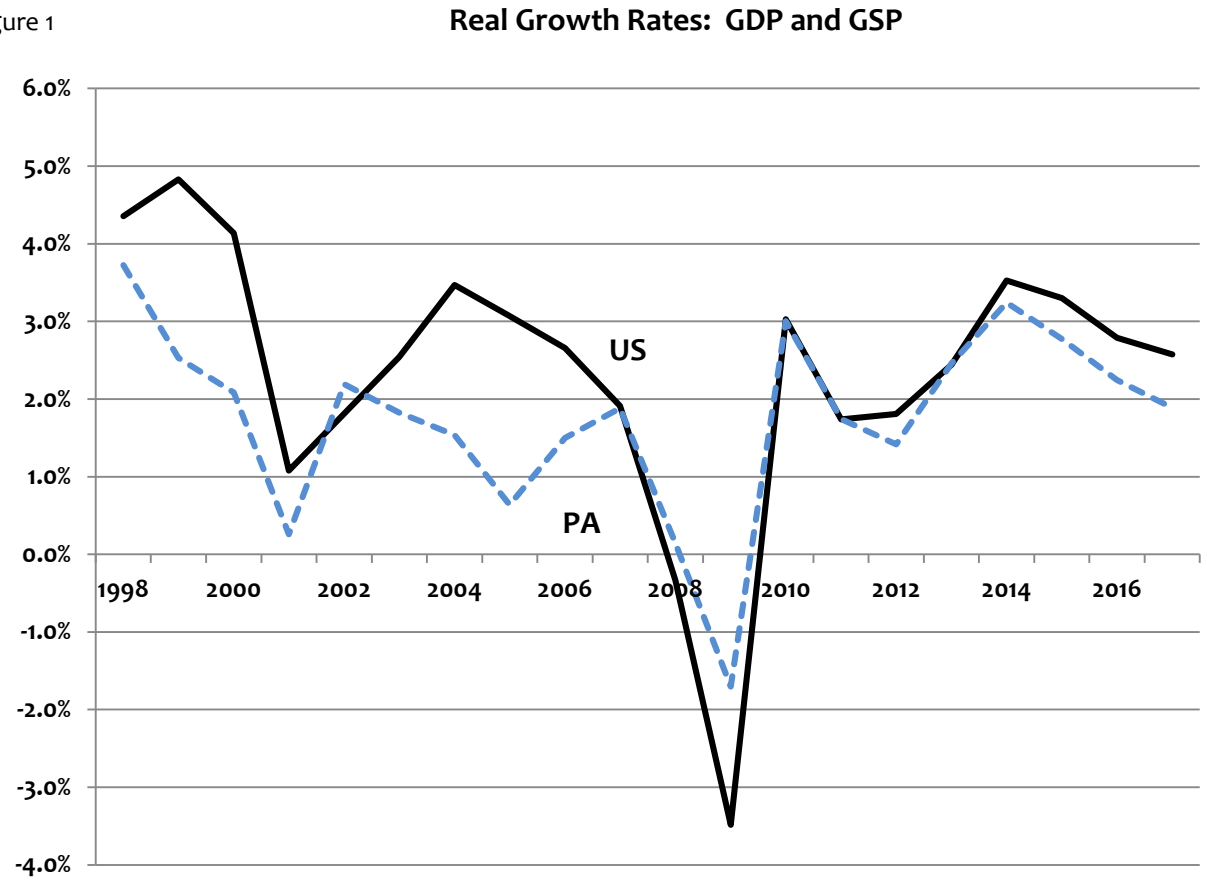


Figure 1 plots real GDP and GSP trends for the twenty-year period 1998-2017 for the US and the Commonwealth. This time series illustrates the significant decline in real output caused

by the 2008-09 recession. For the US, the -3.5 percent decline in real output was the largest decline since 1946. By comparison, the recession years of 1974 (-0.6 percent decline in real output), 1982 (-1.9 percent), 1991 (-0.2 percent) and 2001 (1.1 percent) appear mild. For Pennsylvania, the -1.7 percent decline in real output marks the only year of falling real output since the GSP series was computed at the state level (1987).

By the third quarter of 2009, real output growth turned positive and expanded by 3.0 percentage points during 2010. For the US, the increase in real output was driven by personal consumption expenditures (contributing 1.4 percentage points of total real growth), gross investment (2.2 percentage points), and spending by the federal government (0.4 percentage points), partially offset by an increase in net imports (-0.5 percentage points) and a decline in state-local government spending (-0.2 percentage points). Expansive fiscal policy provided broad support to the 2010 economy. The Congressional Budget Office estimates that the stimulative impact of the American Recovery and Reinvestment Act (ARRA) of 2009 peaked in 2010, increasing real GDP by 1.5 to 4.1 percentage points and boosting employment by 1.3 to 3.3 million.[8] Comparable data are not available for the Commonwealth, but it is likely that ARRA also had a non-trivial impact on the Pennsylvania economy.[9]

Data through the third quarter suggest a real growth rate of 1.8 percent for 2011 at both the national and state levels, 1.2 percentage points lower than 2010. A portion of the slower real growth can be attributed to the waning effect of federal stimulus. Data from the National Income and Product Accounts show that spending by the federal government contributed 0.4 percentage points of real GDP growth for 2010, but reduced real growth by -0.1 percentage points for 2011 due to lower levels of spending. Another factor reducing real 2011 growth was the significant deceleration of investment spending. Real investment growth was robust for 2010 because firms replenished inventories depleted during the recession. Additions to inventories are counted as investment. For 2011, firms slightly reduced inventories.

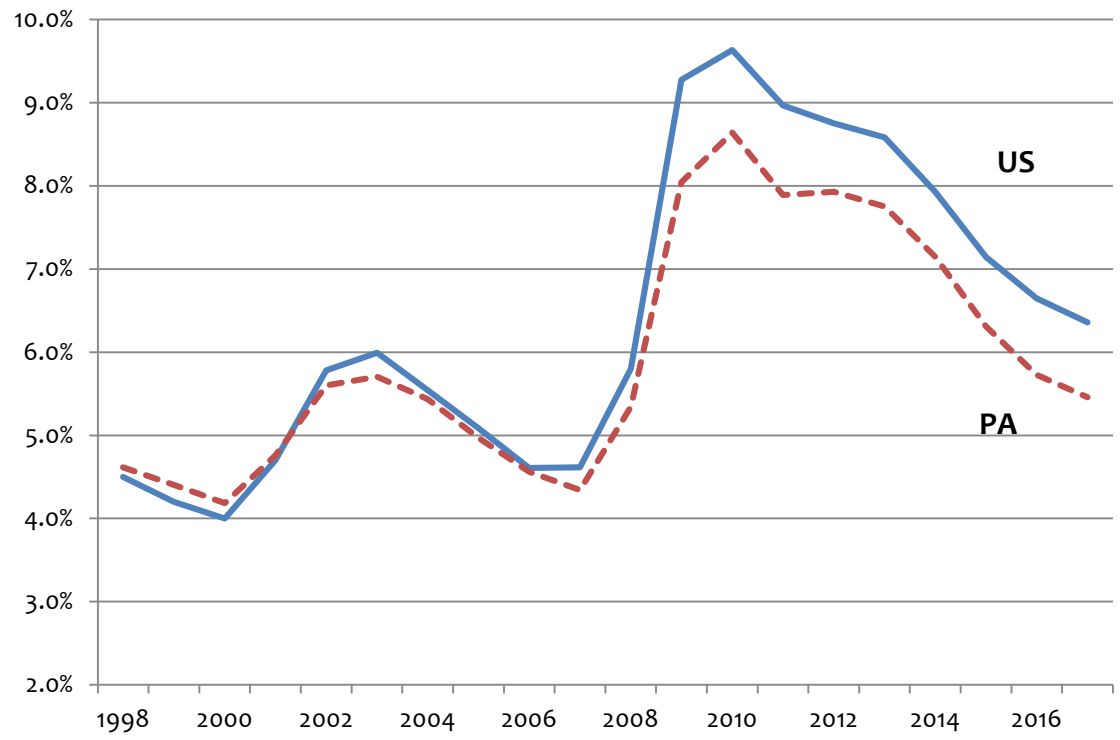
[8] *The CBO Budget and Economic Outlook for 2011 to 2021* (February 2011). The CBO estimates that ARRA increased federal outlays through 2019 by $637 billion and reduced tax receipts by -$184 billion. But, for 2009-10 only, the CBO estimates that ARRA reduced federal tax receipts by -$238 billion. The loss in tax revenues is higher for those two years due to the fact that 50 percent "bonus" depreciation, which was extended by ARRA, merely pulls deductions forward from future tax years and thereby increases future tax obligations. Hence, all ARRA tax cuts were concentrated in 2009-10.

[9] The Recovery.gov website estimates that Pennsylvania received $9.5 billion in ARRA contracts, grants and loans. Most contracts, grants and loans were awarded for education, transportation, research and other infrastructure purposes.

The modest real growth of national and state economies has had limited impact on labor markets and unemployment rates remain highly elevated compared to historical levels. Prior to the recession, official unemployment rates ranged from five to six percent for the US and the Commonwealth. (See Figure 2.) As the recession intensified in 2009, the US unemployment rate increased to 9.3 percent, 1.3 percentage points higher than the Commonwealth, and that differential has largely persisted. The milder recession experienced by the Commonwealth explains some of this divergence. The composition of Commonwealth employment is another factor. For 2007, payroll employment data show that 13.3 percent of US employees and 18.5 percent of Commonwealth employees were employed by the education and health services sector. That sector is the only industry to report employment gains in all years since the recession.

Figure 2

Unemployment Rates



Several positive reports closed out the 2011 calendar year. For December, the US unemployment rate fell to 8.5 percent, the lowest level since February 2009, as the economy added 200,000 jobs. Consumers reflect the improving labor market in their outlook. The University of Michigan's Index of Consumer Sentiment increased for the fourth straight month in December and many consumers attributed their improved outlook to positive reports about the labor market.

However, the positive news is tempered by the composition of recent job gains. The employment report shows that the transportation and warehousing sector reported one quarter of December job gains. Several analysts have speculated that those gains might prove temporary due to unusually high levels of internet sales during the holiday season (i.e., the employment of couriers and delivery firms). Moreover, the decline in the national unemployment rate was partly attributable to a reduction in the labor force, as opposed to a pure reduction in the number of unemployed individuals. Additional data are needed to assess whether the recent improvement in the labor market will be sustained.

The Outlook: Some Short-Run Weakness and Higher Unemployment

Despite recent encouraging signs, the revised economic outlook for the US and the Commonwealth has generally weakened since the budget was enacted in June. Table 1 shows the impact of the revised economic forecast on annual growth rates for 2011 to 2017 (2015-2017 is a three-year average). The revised forecast lowers real GSP growth for 2011 (2.5 to 1.8 percent) and 2012 (2.5 to 1.6 percent). Total non-farm payroll employment was revised down for all years. The number of unemployed residents was revised up, causing an upward revision to the unemployment rate for all years.

Table 1: Changes to Economic Forecast

	Annual Average Growth Rates or Levels				
	2011	2012	2013	2014	2015-17
US Real GDP					
June 2011	2.5%	2.7%	2.8%	3.4%	2.9%
January 2012	1.8%	2.0%	2.4%	3.4%	2.9%
PA Real GSP					
June 2011	2.5%	2.5%	2.6%	2.9%	2.2%
January 2012	1.8%	1.6%	2.4%	3.2%	2.3%
US Payroll Employment (millions)					
June 2011	131.4	133.5	135.6	138.4	143.1
January 2012	131.1	132.8	134.9	137.5	142.4
PA Payroll Employment (thousands)					
June 2011	5,717	5,828	5,903	5,975	6,100
January 2012	5,682	5,748	5,828	5,915	6,070
US Unemployment Rate					
June 2011	8.8%	8.4%	8.0%	7.3%	6.2%
January 2012	9.0%	8.8%	8.6%	7.9%	6.7%
PA Unemployment Rate					
June 2011	7.5%	6.9%	6.5%	6.0%	5.0%
January 2012	7.9%	7.9%	7.8%	7.1%	5.8%

Although many factors contribute to the weaker outlook since the June economic forecast, an unexpected uptick in the Commonwealth's unemployment rate seems especially relevant. Prior to the June forecast, the unemployment rate had declined each month from its March 2010 peak (8.8 percent) through May 2011 (7.4 percent). Once the budget passed, the rate increased through September (8.3 percent), then declined again through November (7.9 percent). A similar phenomenon occurred nationally, as the US unemployment rate recorded a slight uptick in May through September prior to declining to its current rate (8.5 percent).

Data from the Current Employment Statistics report show that Pennsylvania non-farm employment peaked in April 2011 at 5.693 million, then declined slightly through the summer and fall. By November, employment returned to its April level. The reports show that reductions in the state-local government sector was the primary factor causing the weak labor market, largely offsetting employment gains reported by most other sectors.

The impact of the (unexpected) labor market weakness is reflected in a downward revision in the growth rate of payroll employment, real wages and real personal consumption for the third and fourth quarters of 2011 (not shown in table). The impact of that revision is carried into 2012 through the downward revision to the payroll employment (-80,000), real wage growth (-1.2 percentage points) and real output (-0.9 percent). The unanticipated reduction in payroll employment is largely viewed as permanent as those job losses are carried forward to future years in the economic forecast.

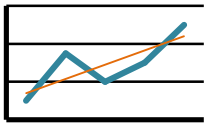
The revised forecast also projects a much higher long-run unemployment rate. The long-run unemployment rate is approximately one percentage point higher than the June forecast. While the exact cause of this revision is not known, slight improvements to the economy may have encouraged individuals to re-enter the labor force in search of employment. Alternatively, forecasters might now view the much higher average spells of unemployment as a permanent feature of the economy. Longer average unemployment spells could also increase the long-run unemployment rate. Regardless of the cause, higher long-run rates might affect consumers' outlook. If consumers have not adjusted their expectations to incorporate higher long-run unemployment rates, they might interpret higher rates as a pessimistic signal of the economy's health. Consumers will be less inclined to spend until they adjust their expectations to this new reality.

Downside Risks to Economic Forecast

All economic forecasts are susceptible to upside or downside risks which can dramatically alter projections. The current forecast contains two such risks. The forecast assumes that Europe avoids a sovereign debt crisis, but endures a mild recession beginning in the fourth quarter of 2011. The recession causes lower US exports and corporate profits. If a debt crisis does unfold, then it is likely that most European countries will experience a major recession. Under an alternative pessimistic economic scenario, Global Insight projects that a European debt crisis, coupled with fiscal contraction in the US, could reduce real GDP growth from 2.0 to 0.2 percent for 2012 and push the national unemployment rate back to 10 percent by 2013.

A second downside risk is the uncertain state of federal tax policy. The economic forecast assumes the following: (1) emergency unemployment benefits and the payroll tax cut are extended through 2012 and then phased-out over several years; (2) the Bush-era tax cuts are extended into 2013; (3) the higher tax rate on non-wage income from the Affordable Care Act is fully implemented in 2014, and (4) the automatic spending cuts scheduled to take effect January 2013 do not occur. Rather, the baseline economic forecast assumes that a "grand bargain" is achieved that contains some combination of entitlement cuts and tax increases.

If these assumptions do not hold, then the economic forecast could be very different. For example, the Joint Committee on Taxation scored the two-month extension of the payroll tax cut as a -$20 billion reduction in federal tax revenues. Using a simple pro-ration to a full year (-$120 billion) and Pennsylvania's share of total wages (4.1 percent) implies a -$5 billion payroll tax cut for Commonwealth residents from full extension. Research suggests that most of that tax cut would be spent immediately, providing a boost to real economic growth. For the US, Global Insight projects that the discontinuation of extended unemployment benefits and the payroll tax cut would reduce real GDP growth by 0.5 percentage points ($140 billion) for 2012.



The Demographic Outlook

For the purposes of this report, the Pennsylvania State Data Center (PaSDC) generated "interim" population projections for the Commonwealth based on the official 2000-2020 projections developed in 2008. The interim projections use 2010 Census tabulations to construct its "base" population, whereas the official projections used the 2000 Census for that purpose. These projections are termed "interim" projections because certain parameters of the PaSDC population model were not updated. Those parameters include fertility rates, survival rates and components of migration. Those parameters will be updated when official projections are released. The Appendix details the impact from updating the base population used by the model across five-year age cohorts for 2010 (actual values) and 2020 (projections).

Table 2: Interim Population Projections

thousands of residents

	Levels			Share of Total			Decade Growth Rate	
Age Cohort	2000	2010	2020	2000	2010	2020	2000-10	2010-20
0 - 19 Age Cohort	3,271	3,179	3,124	26.6%	25.0%	24.0%	-2.8%	-1.7%
20 - 39 Age Cohort	3,258	3,150	3,295	26.5%	24.8%	25.3%	-3.3%	4.6%
40 - 54 Age Cohort	2,702	2,792	2,307	22.0%	22.0%	17.7%	3.3%	-17.4%
55 - 64 Age Cohort	1,132	1,622	1,824	9.2%	12.8%	14.0%	43.4%	12.4%
>= 65 Age Cohort	1,919	1,959	2,450	15.6%	15.4%	18.8%	2.1%	25.0%
Total	12,281	12,702	13,000	100.0%	100.0%	100.0%	3.4%	2.3%

The interim projections largely reinforce two pre-existing trends: (1) the aging of Pennsylvania's population and (2) modest increases in total population. From 2000 to 2010, total population increased by 3.4 percent and the interim projections estimate slower gains over the next decade (2.3 percent). (See Table 2.) However, the modest growth in total population masks significant variation across age cohorts. From 2010 to 2020, the model projects a decline of -1.7 percent for the cohort under age 19. The decline is generally attributable to stagnant fertility rates combined with longer delays to begin child bearing. For the 20-39 year age cohort, the model projects an expansion of 4.6 percent. For the 40-54 year age cohort, the model projects a -17.4 percent decline in residents, largely due to the

aging of the baby boom generation (individuals born between 1946 and 1964). During the next decade, many baby boomers will shift into the 55-64 year age cohort, increasing that cohort by 12.4 percent. For the 65 and older age cohort, the model projects a 25.0 percent increase through 2020, an increase of one-half million residents. By 2020, that age cohort will comprise nearly one out of five Commonwealth residents.

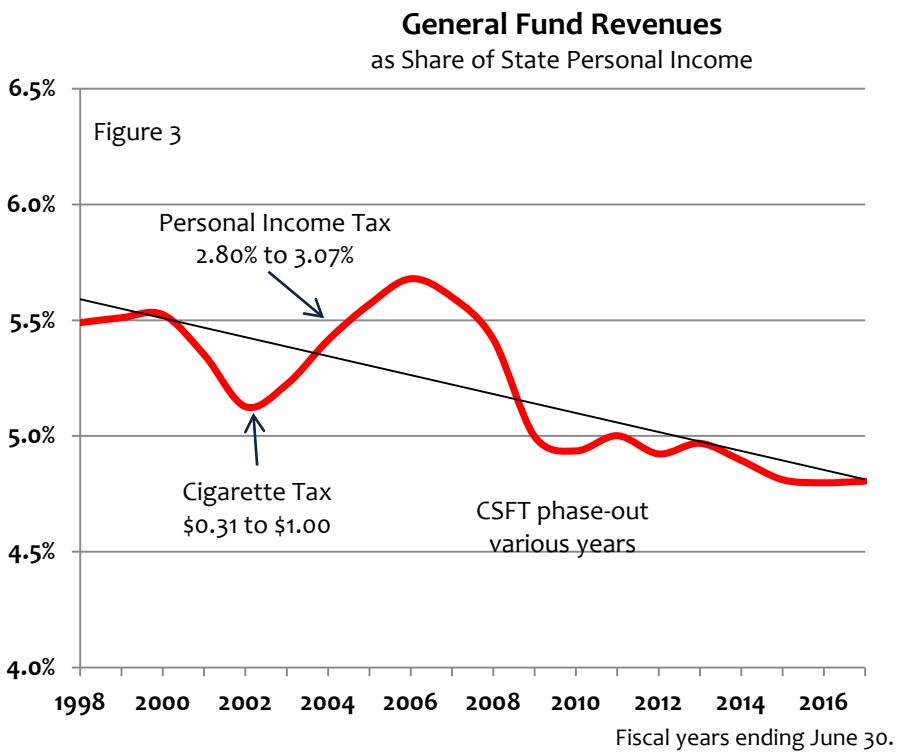
From a budget prospective, the age cohorts at the bottom and top ends of the population spectrum place the most demands on resources through expenditures for education and health care. The decline in the pre-K through grade 12 population will be reflected in flat to modest projected growth rates for the Department of Education budget. The significant increase in elderly residents will be reflected in much higher projected outlays for the Department of Public Welfare budget.

Between those two age cohorts reside working-age adults. The model projects that age cohort will decline by -1.8 percent (-137,200 residents) through 2020. Without corresponding changes in labor force participation rates, the decline in working-age adults implies stagnant statewide employment levels and minimal real growth in economic output. Overall, the demographic outlook for the Commonwealth suggests that budgetary pressures will increase due to higher demands for health care coupled with a smaller base (both in relative and absolute terms) of workers who supply those funds.

The Revenue Outlook

General Fund tax revenues peaked at $27.3 billion in FY 2007-08, a level that has not been achieved since that period. From that peak to the trough in FY 2009-10, tax revenues declined by $2.4 billion (-8.8 percent). In FY 2010-11, General Fund tax revenues increased for the first time since the onset of the recession. The economic forecast suggests that revenues will continue to grow over the next several years, but at a lower rate compared to other recoveries. The long-term growth rate will also fall short of the rate that prevailed prior to the recession.

Although tax revenue growth has resumed, it is likely that nominal General Fund revenues will not recover fully and surpass the FY 2007-08 peak until FY 2012-13, a period spanning five fiscal years. Projections suggest that tax revenue growth will be modest compared to a broad measure of economic activity such as state personal income.[10] It is uncertain when, or if, tax revenues will return to prior levels when measured against such a baseline.



General Fund tax revenues as a share of state personal income

[10] Personal income is equal to the sum of wages, proprietor, rental, interest and dividend income plus all transfer payments from the federal or state government (e.g. Social Security, unemployment benefits and veterans' benefits).

are projected to decline slightly over the forecast horizon of this report. Figure 3 illustrates that trend as well as the general decline over the prior fifteen years. The declining ratio of tax revenues to personal income underscores the long-term contraction of the Pennsylvania tax base. For example, because elderly residents comprise a higher share of state residents, non-taxable transfer payments comprise a larger portion of state personal income over time. Moreover, the elderly typically spend a higher proportion of their incomes on items that are exempt from sales tax such as food, clothing, pharmaceuticals and medical services.

Table 3 displays annual average growth rates for key Pennsylvania economic variables across four periods: pre-recession (2003-07), recession and early recovery (2008-10), recovery (2011-14) and steady state (2015-17). A summary review of the table reveals that economic growth rates are not projected to revert to pre-recession levels until 2015. However, even when growth rates revert to pre-recession levels, tax revenues do not return to their previous levels relative to a broad measure of the economy such as personal income. Relevant factors include the phase-out of the capital stock tax, the continued contraction of the Pennsylvania tax base and modest growth in wages due to demographic factors.

Table 3: General Fund Revenues
fiscal years ending, millions of dollars

		Average Annual Growth Rates			
Economic Variables	2011	2003-07	2008-10	2011-14	2015-17
Gross State Product	579,278	4.6%	2.4%	3.6%	4.6%
Personal Income	529,064	4.5%	1.9%	3.8%	4.6%
Wage Disbursements	266,018	4.1%	1.2%	3.6%	4.3%
Payroll Employment	5,653	0.4%	-1.1%	1.2%	1.3%
General Fund Revenues					
Personal Income	10,436	5.6%[a]	-1.0%	4.1%	4.5%
Sales and Use	8,590	3.3%	-2.2%	4.4%	4.7%
Corporate Net Income	2,131	11.9%	-10.4%	8.5%	3.6%
Gross Receipts	1,225	12.7%	-0.2%	0.4%	4.4%
Cigarette	1,075	23.9%	7.8%	2.4%	0.0%
Inheritance and Estate	805	-0.6%	-0.1%	9.0%	4.7%
All Other	3,234	6.0%	13.9%	-17.5%	0.3%
Total General Fund	27,497	6.5%	0.2%	1.6%	4.0%

[a] Rate adjusted for the personal income tax increase taking effect for taxable years beginning on or after January 1, 2004. The unadjusted rate is 7.5%.

General Fund Revenue Projections

Six tax levies comprise more than ninety percent of General Fund revenues: personal income, sales and use, corporate net income, gross receipts, cigarette and inheritance taxes.

These revenue sources were examined and five-year projections made based on historical trends and, where applicable, the economic forecast. (The treatment of other revenue sources is discussed at the end of this section.) As noted, revenue projections do not represent point estimates of future outcomes because the methodology used to make them differs from the methodology one would use to make a specific estimate for the current or succeeding fiscal year. Rather, revenue projections convey potential outcomes based on reasonable economic assumptions, the extrapolation of demographic trends and the assumption that certain technical parameters remain constant.

Personal Income Tax

The Commonwealth levies a tax of 3.07 percent on taxable compensation (wages and salaries), business net profits (income from proprietorships, partnerships or other unincorporated business entities), and other taxable income (interest, dividends, rents, capital gains, trusts and estates, and gambling). For most tax years, wage compensation comprises 75 to 80 percent of the personal income tax base, business net profits comprise eight to ten percent, and other types of income comprise the residual. Based on these shares, it is clear that the economic forecast of (nominal) wages and salaries is the primary driver of personal income taxes. The economic forecast projects annual wage and salary growth of 4.1 percent per annum over the 2012-2017 forecast horizon.

Projections of income not subject to withholding (i.e., non-wage income such as net business profits, interest, dividends and capital gains) use the US proprietor's income, interest, dividends and rent forecasts. For the purpose of revenue projections, growth rates for such income are weighted to reflect the relative share of the Pennsylvania tax base for each form of income. The forecast indicates that non-wage income will grow at an average rate of 4.8 percent per annum through the forecast horizon.

Sales and Use Tax

The Commonwealth levies a sales and use tax at a rate of six percent on the retail sale of certain tangible goods and services as well as certain business inputs.[11] A six percent use tax is also due on taxable purchases of tangible goods or services used or consumed in Pennsylvania where no sales tax is paid to the vendor. Items exempt from tax include food purchases (not ready-to-eat), most clothing, candy, textbooks, prescription and non-prescription drugs, and residential heating fuels. Most services are also exempt from tax.

[11] Research suggests that up to 40 percent of the sales tax base is derived from business inputs. See Ring, "Consumers' and Producer's Share of the General Sales Tax," *National Tax Journal*, Vol. 52, pp. 79-90 (1999) and Cline, Mikesell, Neubig and Phillips, "Sales Taxation of Business Inputs," Council on State Taxation (2005).

Data from the National Income and Product Accounts show that purchases of services typically comprise about two-thirds of personal consumption expenditures.

Over the past decade, growth in sales and use tax revenues has been weak compared to a broad measure of economic activity such as personal income. As shown by Table 3, average growth rates of sales and use tax revenues were considerably lower prior to the recession. For non-motor vehicle sales taxes, that trend is projected to continue through FY 2016-17. Potential explanations include shifts in consumption patterns towards exempt goods and services and an increase in internet sales upon which sales or use taxes are generally not remitted.

The economic forecast for Pennsylvania does not provide separate forecasts for sales of goods (generally taxable) versus services (generally exempt). Therefore, sales and use tax projections use a composite growth rate constructed from the specific components of US personal consumption expenditures from the US economic forecast. Components were selected to approximate the Pennsylvania sales tax base. Certain non-residential fixed investment was included to capture sales of business inputs that are included in the tax base. The sales and use tax base, excluding motor vehicle sales, is projected to grow at an average rate of 4.3 percent per annum over the 2012-2017 forecast horizon. Based on a strong forecast for vehicle sales, the motor vehicle sales tax base is projected to grow at an average rate of 6.2 percent per annum over the same period.

Corporate Net Income Tax

The Commonwealth levies a flat 9.99 percent tax on the net income of corporations with nexus in Pennsylvania. Pass through entities such as S corporations, partnerships and sole proprietorships are not subject to this separate entity level tax. Banks, savings institutions, insurance companies and non-profits are also exempt from the corporate net income tax. The tax base is equal to federal net income prior to any deductions for net operating losses or domestic dividends. The base is then modified by various additions and deductions to determine Pennsylvania taxable income. The largest deduction from federal net income is dividends received from foreign corporations and the foreign dividend gross-up. For recent years, the largest addition to federal net income has been federal "bonus" depreciation claimed under the 50 percent expensing provision for calendar years 2002-04 and 2008-2010. Once the firm modifies the federal tax base, the base is then apportioned to Pennsylvania using the relevant apportionment formula.

Although corporate profits are robust, corporate net income taxes are projected to decline significantly in FY 2011-12. The decline in revenues is generally attributable to the federal provision that allows full expensing of investment for qualified property acquired after September 8, 2010 and before January 1, 2012, and placed in service before January 1, 2012.[12] For previous years in which the fifty percent "bonus" depreciation was effective, the Commonwealth elected to decouple from the federal provision, requiring firms to add back bonus depreciation they claimed on the federal return. However, the Commonwealth's interpretation of the relevant state statute resulted in conformity with the federal provision for full expensing.[13]

The temporary expensing provision should provide firms with a strong incentive to increase investment since it greatly reduces their cost of capital and marginal effective tax rate on new investment. Yet, even if firms do not increase investment, they would still benefit from claiming the provision because it reduces current taxes and improves cash flow. The full expensing provision reduces taxes because it pulls tax deductions forward in time. Over many years, the impact on tax revenues will be roughly neutral because firms that use the provision will claim fewer depreciation deductions in the future. For most investment using the full expensing provision, the tax benefit will "reverse" itself within a few years.[14]

Year by Year Effect of 100% Bonus Depreciation[1]

Year	MACRS Depreciation	100% Expensing	Increase (Decrease)
1	$200	$1,000	$800
2	$320		($320)
3	$192		($192)
4	$115		($115)
5	$115		($115)
6	$58		($58)
Total	$1,000	$1,000	0

[1] $1,000 office equipment with 5-year tax life. Half-year convention applies.

The adjacent table shows the difference in annual tax deductions between "normal" or MACRS depreciation and the 100 percent expensing provision. For example, most equipment (approximately 75 percent) eligible for the full expensing provision has a tax life of five to seven years (e.g., computers and office furniture), and those purchases will be depreciated over that tax life. Because the provision simply changes the timing of deductions, the differential between the two methods sums to zero over the six years the asset would have been written off using "normal" depreciation.

[12] Authorized under the Tax Relief, Unemployment Insurance Reauthorization and Job Creation Act of 2010. The act temporarily increased the bonus depreciation deduction to 100 percent for depreciation claimed and allowable under section 168(k) of the Internal Revenue Code.

[13] Corporate Tax Bulletin 2011-01, issued February 24, 2011.

[14] However, for the longest-lived equipment eligible for the provision, full reversal of the tax benefit would not occur for twenty years.

It is likely that the full expensing provision will have a substantial impact on FY 2011-12 corporate net income tax revenues due to the provision's size and timing. For many firms, the provision would have been large enough to eliminate all federal taxable income. Regarding timing, the fact that the provision was only effective for the last four months of 2010 and did not pass until December 2010 suggests that a large portion of the 2010 effect could have been pushed forward into FY 2011-12 through higher corporate refunds and overpayments used to offset future estimated payments. Most of the impact from 2011 full expensing should also manifest itself in FY 2011-12.

Due to this large federal provision, the current weakness in corporate net income tax revenues should be viewed as temporary and largely attributable to a tax incentive that merely affects the timing of payments. For FY 2012-13, the economic forecast projects that corporate profits will remain strong. If that assumption holds, then corporate net income tax receipts should rebound strongly in that fiscal year.

Gross Receipts Tax

The Commonwealth levies a tax on the gross receipts of various transportation companies, telecommunication firms, utility firms, and certain managed care organizations. The rate is 59 mills for sales of electricity and 50 mills for all other sales.[15] Gross receipts tax revenues totaled $1.23 billion in FY 2010-11 and typically comprise four to five percent of General Fund revenues.

A large portion of the tax base is composed of electricity sales to residential, commercial and industrial users. Historical demand for electricity is highly correlated with the real growth of the Pennsylvania economy. Therefore, the forecast of real GSP is used to project electrical energy demand for Pennsylvania based on the latest data from the Energy Information Agency. Average residential, industrial and commercial electricity prices are then applied as provided by the economic forecast. Expenditures on telecommunications services are more variable and tax revenues from that portion of the base have been declining for recent years. Real GSP is also used to project demand, but average prices are assumed flat. Based on these assumptions, Gross Receipts tax revenues are projected to increase by 3.3 percent per annum over the forecast window.

[15] The 59 mill rate for sales of electricity is comprised of a 44 mill regular rate and a 15 mill revenue neutral reconciliation rate that was made permanent for tax year 2003 and thereafter.

Cigarette Tax

Pennsylvania levies an excise tax of eight cents per cigarette ($1.60 per pack). For 2011, the Commonwealth's cigarette excise tax rate ranked 20th highest in the nation. New York levied the highest tax per pack ($4.35, includes New York City tax of $1.50); Virginia levied the lowest tax (30 cents). The US median tax rate was $1.25 per pack. The federal government also levies an excise tax of $1.01 per pack.

Data from the Centers for Disease Control reveal that 21.3 percent of Pennsylvania adults smoke regularly, compared to a national average of 18.4 percent. Residents in the 18-24 year age cohort reported the highest rates of usage (28.6 percent). Smoking rates are much lower for older residents: 25-44 year age cohort (26.9 percent), 45-64 year age cohort (21.5 percent) and the over 65 age cohort (7.7 percent). The general aging of Pennsylvania's population suggests lower demand for tobacco products. That demographic effect is largely offset by the increase in demand due to general population growth. Hence, cigarette excise tax revenues are projected to remain flat over the five-year forecast. The forecast assumes that the federal excise tax rate and tax rates in adjacent states remain unchanged.

Inheritance and Estate Taxes

The Commonwealth levies an inheritance tax on the value of a decedent's estate that is transferred to a beneficiary by will or intestacy. No taxes are collected on assets transferred to the spouse of the decedent or to the parent of a decedent if the decedent was age 21 or younger. The rates for transfers to lineal descendants, siblings and all others are 4.5 percent, 12 percent and 15 percent, respectively.

Inheritance taxes are due nine months after the death of the decedent. The lag between the date a decedent dies and the due date of the inheritance tax return largely mutes the effect of changes in economic conditions on tax collections. The performance of financial markets and overall asset growth will, over time, have a more direct impact on inheritance tax collections than other economic factors such as income and employment changes. Projections for the inheritance tax are based primarily on forecasted average annual growth of 3.9 percent in financial assets over the 2012-2017 forecast horizon.

A provision of federal tax law that is scheduled to expire at the end of 2012 will impact Pennsylvania's estate tax, which has been dormant since the complete phase-out of the federal credit for state death taxes. Like many other states, the Pennsylvania estate tax is a "pick-up" tax designed to absorb the maximum amount of credit for state death taxes allowed under the federal estate tax. If the federal estate tax re-emerges as scheduled in

2013 and the credit for state death taxes is reinstated, then the Pennsylvania estate tax will begin producing revenue. Because this report uses a "current law" methodology, it assumes that the federal credit will be re-instated and that the Pennsylvania estate tax will generate revenues beginning with FY 2013-14.

All Other General Fund Revenues

Other major General Fund revenues include the capital stock and franchise tax ($819 million for FY 2010-11), realty transfer tax ($279 million), insurance premiums tax ($429 million), financial institutions tax ($238 million), liquor store profits ($105 million) and escheats ($107 million). Under current law, the capital stock and franchise tax will phase-out by tax year 2014. Projections of realty transfer taxes use the economic forecasts of home sales and the average price of home sales. The insurance premiums and financial institutions tax trend with real GSP because long-run historical growth rates are highly correlated with that series. Escheats ($116 million) and liquor store profits are assumed flat from FY 2010-11. Miscellaneous revenues, which include transfers from other funds, are excluded from projections.

Motor License Fund

Although separate from the General Fund, the Motor License Fund provides significant revenues to fund various transportation projects. Primary sources of revenue for the Motor License Fund include the liquid fuels and fuels taxes, the oil company franchise tax, fees from operator's licenses, learner's permits, vehicle registration and titling and transfers from the Pennsylvania Turnpike Commission. For FY 2011-12, Motor Fund License revenues totaled $2.15 billion.

Revenues deposited into the Motor License Fund have exhibited minimal growth, a reflection of the tax base upon which the excise taxes are levied. The liquid fuels and fuels taxes are imposed at a flat rate of 12 cents per gallon, and as fuel economy standards increase, the tax revenue per mile travelled declines. In addition, the oil company franchise tax is imposed on cents per gallon equivalent basis using the average wholesale price, but the amount of tax is currently capped and it does not change with the price of fuel. The transfer from the Pennsylvania Turnpike Commission is fixed at $200 million per year per Act 44 of 2007.

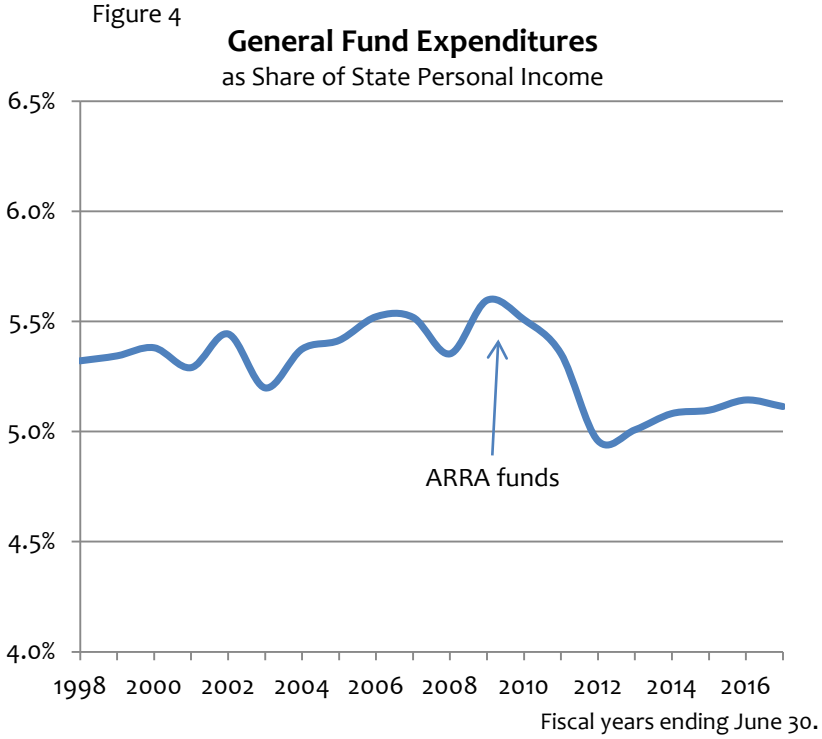
Total Motor License Fund revenues are projected to grow by less than one percent through the forecast horizon.

The Expenditure Outlook

Fiscal year 2011-12 marks the first year since FY 2007-08 that the Commonwealth will not receive federal stimulus funds through the American Recovery and Reinvestment Act of 2009 (ARRA). For the past three fiscal years, General Fund expenditures included large federal ARRA grants: 2008-09 ($1.2 billion), 2009-10 ($2.6 billion) and 2010-11 ($3.1 billion). The absence of ARRA funds is a primary cause of the -4.1 percent (-$1.2 billion) reduction in General Fund appropriations for FY 2011-12 relative to FY 2010-11 levels.

As discussed previously, the expenditure projections made for this report assume a "current services" or "current policy" baseline. In theory, that baseline holds real per capita services constant for service recipient populations over the forecast window. When possible, expenditure projections use forecasts of service recipient population published in the most recent executive budget. The average cost per service recipient is computed for the base year (FY 2011-12) based on the same data source. The average cost is extrapolated over the five-year forecast window using an appropriate inflation factor. Expenditure projections are then equal to the product of forecasted service recipients and the average cost to provide services to those recipients in future years. This methodology assumes that explicit and implicit policy choices reflected in FY 2011-12 appropriations are carried forward to all future years.

Figure 4



This report provides discussion for five categories of expenditures: Department of Public Welfare, Department of Corrections, Department of Education, Pension Contributions, and Debt Service (See Table 4). Those categories comprise roughly ninety percent of total General Fund expenditures. Pension Contributions include the Public School Employee Retirement System (PSERS) and the State Employee Retirement System (SERS). Those projections are based on data published in the PSERS and SERS annual financial reports (actuarial section). Due to the significant growth in contributions, this report removes projected SERS pension contributions from individual agencies and tracks those contributions separately. The current services methodology assumes that agencies will not be forced to absorb the huge increase in future contributions and that funding will be sufficient to provide a constant level of service to recipients relative to the base year (FY 2011-12). All other expenditures are extrapolated from the base appropriation year using a general demographic growth factor and the Pennsylvania consumer price index (CPI).

Table 4: General Fund Expenditures

fiscal years ending, millions of dollars

		Average Annual Growth Rates			
Demographics and Populations	2011	2003-07	2008-10	2011-14	2015-17
Total State Population	12,730,377	0.3%	0.5%	0.2%	0.2%
Age Cohort 20-64	7,559,206	0.7%	0.5%	-0.1%	-0.2%
Age Cohort > 65	1,999,617	0.1%	1.1%	1.9%	2.4%
Medical Assistance Population	2,174,704	5.0%	3.2%	4.5%	4.1%
Inmate Population	51,467	2.8%	3.7%	1.6%	1.7%
Total Pupil Enrollment	2,053,732	-0.7%	-0.3%	-1.1%	1.2%
General Fund Expenditures					
Public Welfare	8,783	6.8%	-2.7%	8.0%	5.0%
Corrections	1,629	3.7%	3.8%	6.9%	3.7%
Education	9,744	4.2%	0.5%	-1.0%	2.9%
Pension Contributions	747	61.4%	0.2%	40.4%	19.7%
Debt Service	1,169	4.4%	7.2%	7.3%	0.5%
ARRA Funds	3,066	na	na	na	na
All Other	3,183	0.7%	-7.9%	-0.5%	2.0%
Total General Fund	28,321	4.8%	1.9%	2.0%	5.1%

Note: Pension contributions are tracked separately. Departmental totals exclude any pension contributions.

Department of Public Welfare

Reimbursements for Medicaid services comprise a significant portion of General Fund expenditures made through the Department of Public Welfare (DPW). Medicaid is the nation's public health insurance program for low-income Americans. Nationally, the system finances health and long-term care services for more than 55 million adults, children, elderly

and disabled recipients. Many recipients often rely on Medicaid to plug gaps in their Medicare coverage. The federal government provides the majority of these funds and sets minimum standards for eligibility and benefits. However, states may elect to exceed the minimum standards if they wish.

Data from the Kaiser Foundation show that national Medicaid enrollment has grown by nearly 8.8 million since the start of the recession. Two factors explain this robust growth. First, child enrollments are particularly sensitive to economic conditions compared to other groups. From December 2007 to December 2010, an additional 4.9 million non-disabled children enrolled for Medicaid coverage, comprising more than half of the total growth across all eligible groups during that period.[16] Second, federal policy changes also increased Medicaid enrollment. Maintenance of effort requirements enacted as part of ARRA and the Affordable Care Act (ACA) prevent states from reducing eligibility levels or enacting more restrictive enrollment procedures.

The Commonwealth's DPW budget is dominated by spending related to the Medical Assistance (MA) program, which receives significant matching federal funds through Medicaid.[17] For FY 2011-12, DPW estimates that 2.2 million Pennsylvania residents will receive services through the MA program. The program includes the following services: Outpatient care (non-hospital, $648 million), Inpatient care (hospital, $364 million), Capitation ($3,272 million), Long-Term care (nursing homes, $730 million), and Medicare Part D (reimbursement to federal government for certain pharmaceuticals, $481 million). Over the past decade, MA expenditures increased by nearly sixty percent. The increase in MA enrollment explains most of that increase. For FY 2002-03, MA enrollment was 1.5 million. By FY 2011-12, enrollment will increase to 2.2 million, an expansion of forty percent.

MA Population and Expenditures, FY 2011-12

	% Population	% Expenditure
Elderly	15%	30%
Disabled	21%	42%
Children & Families	58%	22%
Adults w/o kids	6%	6%

Source: Governor's Executive Budget for FY 2011-12.

As shown by the adjacent table, most MA recipients (58 percent) are families with children. However, disabled and elderly recipients account for nearly three quarters of total expenditures.

[16] The percentage of uninsured children actually declined slightly during this period, largely due to more children gaining coverage through Medicaid or CHIP. See "Medicaid Facts," Kaiser Foundation (December 2011).

[17] The federal matching rate for Medicaid expenditures was 55 percent for FY 2011-12. Projections assume that rate does not change over the forecast widow.

The department projects MA enrollment will increase at an average rate of 4.2 percent per annum for FY 2011-12 through FY 2016-17.[18] If that projection is accurate, then the MA population will total 2.8 million by FY 2016-17, an increase of 513,000 recipients from FY 2011-12.[19] The MA expenditure projection assumes that the average cost per enrollee increases with the health price deflator from personal consumption expenditures. Based on these assumptions, MA expenditures are projected to increase at an average rate of six to seven percent per annum through FY 2016-17.

Expenditure projections for other major DPW functions use the same methodology employed for MA appropriations. Based on that framework, annual average growth rates for other major programs for FY 2011-12 through FY 2016-17 were as follows: Long-Term Living (4.0 percent), Child Development (2.5 percent), Intellectual Disability (3.2 percent), Income Maintenance (4.5 percent), and Human Services (2.0 percent). Across all functions, the current services methodology implies an average growth rate of 4.9 percent per annum for FY 2011-12 through FY 2016-17.

All expenditure projections assume that supplemental appropriations will not be necessary so that amounts appropriated in the base year (FY 2011-12) will be sufficient to cover all spending needs. If a supplemental appropriation is necessary, then all future projected outlays would increase by that amount, including any inflationary growth. In addition, DPW expenditure projections assume that policy decisions reflected in FY 2011-12 appropriations are not impacted by executive actions that would reduce those appropriation levels. For the current fiscal year, the Secretary has been granted expedited rule making authority to redesign public assistance programs such as Medical Assistance and Child Care. The Secretary has not, as yet, exercised that authority. [20]

Department of Corrections

According to the US Department of Justice, the US prison population totaled 1.6 million inmates in 2010, a -0.6 percent reduction (9,228 inmates) over 2009 levels. The decline marked the first reduction in the inmate population since 1972. The 2010 data also show that

[18] Projections are from the FY 2011-12 Governor's Executive Budget.
[19] The Affordable Care Act of 2010 expanded eligibility for medical assistance benefits beginning in 2014. DPW projections include the impact of that Act on the MA population.
[20] On January 4, 2012, the Budget Office was directed to place $157 million of appropriated funds in a budgetary reserve due to anticipated revenue shortfalls. Due to that executive action, $55 million of DPW appropriations have been placed in the reserve.

federal prison releases exceeded admissions for the first time since those data were collected (1977).[21]

These national trends are generally mirrored by the Commonwealth. For recent years, the Commonwealth's inmate population has been relatively flat: 51,487 (end of year 2009), 51,321 (2010) and 51,467 (2011). The flat growth of the inmate population is a recent trend. For calendar years 2000-2009, the Commonwealth's inmate population increased at an average rate of 3.8 percent per annum. That trend was not unique to Pennsylvania. Due to various factors, many states are coping with large inmate populations and insufficient prison capacity. [22] According to The Pew Charitable Trusts, "Correction costs have risen from $9 billion 25 years ago to $60 billion today, with nearly 1.5 million people in prison and recidivism rates remaining stubbornly high. Correction spending is the second fastest growing state budget category behind Medicaid and one out of every 100 adults is now behind bars."[23]

For FY 2011-12, the Department of Corrections (DOC) appropriation was $1.87 billion, a 10.2 percent increase ($173 million) over the prior fiscal year. Most of that funding increase replaces federal ARRA monies that are no longer available. Expenditure projections rely on DOC's projection of the inmate population. Those projections assume that the current inmate population will increase by 1.9 percent per annum through FY 2016-17.[24] Department data reveal that the inmate to staff ratio was 3.2 to 1 for FY 2010-11, and that ratio is held constant. The product of that ratio and the projected number of inmates yields the projected number of staff. Departmental data show that the average cost per staff in the base year was $116,100. The average staff cost is extrapolated through 2017 using the Pennsylvania CPI forecast. Total DOC expenditure projections are then equal to the projected number of staff times projected average cost. Expenditure projections grow at an average rate of 3.7 percent per annum through FY 2016-17.

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21 "Prisoners in 2010 Report," US Department of Justice (December 2011).

22 The department forecasts a critical need for new bed capacity to keep pace with the anticipated inmate population. Recent population/bed capacity reports show that at the end of November 2011, total inmate population at state institutions was 49,967, with bed capacity at 48,072, an overcapacity of 104 percent (1,895 inmates). By 2016, the DOC projects it will operate at 113 percent of bed capacity.

23 "One in 100: Behind Bars in America," Pew Charitable Trusts (February 2008).

24 Act 81 of 2008 eliminates a judge's discretion in determining whether an inmate sentenced to 2-5 years will serve time at a county or state facility. Rather, the inmate must serve time at a state facility. Due to this change in law, the DOC anticipates an increase of 2,300 inmates per year. The DOC's inmate projections include the impact of Act 81.

Department of Education

For FY 2011-12, the Pennsylvania Department of Education (PDE) appropriation totaled $10.1 billion, a 0.7 percent increase over the prior fiscal year. For the purposes of this report, payments to school districts for the state share of employer contributions to the Public School Employee Retirement System (PSERS) are excluded from PDE projections and tracked separately. Excluding PSERS contributions, PDE appropriations were $9.5 billion for FY 2011-12, a -2.4 percent decline over the prior fiscal year.

PDE's enacted general fund budget reflects many policy choices that are held constant over the projection window. For example, the final budget includes $100 million for the Accountability Block Grant program, a decrease of $260 million (38.5 percent) over FY 2010-11 levels. In addition, other appropriations were eliminated, such as Education Assistance (tutoring) and Reimbursement to Charter Schools. These changes reflect recent policy decisions and projections assume those programs are not increased or reinstated in future years. The Higher Education budget also received lower appropriations in FY 2011-12 (-$150 million, -16.1 percent), and projections assume those reductions are permanent.

Public, private and non-public school enrollment is the primary driver of PDE expenditures. Department projections assume that public school enrollment will increase at an average rate of 1.0 percent per annum for FY 2011-12 through FY 2016-17. Projections assume that non-public and charter school enrollment will decline by -1.6 percent per annum for the same time period. Across all pupils, enrollment is projected to increase by 0.7 percent per annum.

Expenditures for pupils include the Basic Education Subsidy, Special Education, Pupil Transportation, Reimbursement of Charter Schools and Services to Non-public Schools. For FY 2011-12, data show that the average cost per pupil for those services was $3,580. The average cost per pupil is extrapolated by the Pennsylvania CPI and multiplied by the number of projected future pupils. The resulting projections for these five expenditure categories increase at an average rate of 2.5 percent per annum.

Reimbursement for School Employee's Social Security is the next largest item in the PDE budget. Various public school entities are eligible for this subsidy. For eligible entities, the Commonwealth will reimburse Social Security and Medicare tax contributions paid on behalf of employees. The reimbursement is equal to the sum of (1) 50 percent of contributions for existing employees and (2) the greater of 50 percent or the market value /personal income aid ratio for new employees. Existing employees are those hired before July 1, 1994 or previously employed by the Pennsylvania public school system prior to that date. New

employees are all other employees. To derive this projection, the model assumes that the ratio of pupils to total school staff remains constant from the base year (13.1 to 1). The projection of pupils from PDE multiplied by that ratio yields projected future staff. The department also publishes average staff salaries and the ratio of the average reimbursement level to average salary yields an average reimbursement ratio. That ratio is assumed constant over the forecast window. Average salaries are then extrapolated from the base year using the Pennsylvania CPI. Total expenditures for this budget category are then equal to the projected number of staff times the average salary times the average reimbursement ratio. The projections yield an average annual growth rate of 1.9 percent per annum through FY 2016-17.

Other expenditures include General Government, the Public Library Subsidy, Career and Technical Education, Adult and Family Literacy and Pre-K Counts and Head Start Supplemental Assistance. Those expenditures are extrapolated from the base year using the Pennsylvania CPI and a general demographic growth factor. Across all spending categories, the average growth rate for PDE expenditures is 2.4 percent per annum.

Pension Contributions

In Pennsylvania, the Public School Employees' Retirement System (PSERS) and the State Employees' Retirement System (SERS) administer the retirement funds for school and state employees. The PSERS and SERS funds are supported by three sources of income: investment earnings, employee contributions, and employer contributions. Historically, investment earnings have been the primary source of funding for both funds, generating roughly 70 percent of the income for a typical year. For the past decade, employer contribution rates for the PSERS and SERS have been significantly lower than the "employer normal cost." As defined by the pension system, the employer normal cost is the amount needed from employers to fund the benefits earned by active members for the current year. Conceptually, the employer normal cost is the minimum payment that would be made by employers if the system's actual experience perfectly matched its economic and demographic operating assumptions and there was no unfunded liability. Low employer contribution rates, recent market losses, enhanced benefits, and various demographic trends have created huge unfunded liabilities for both systems. Through CY 2010, unfunded liabilities totaled $19.7 billion for PSERS and $9.7 billion for SERS.[25]

Act 120 of 2010 reduces pension benefits for new state employees hired beginning January 1, 2011 (Dec 1, 2010 for new lawmakers) and new school employees hired beginning July 1, 2011.

[25] SERS and PSERS presentation to the Senate Finance Committee, September 28, 2011.

It also caps increases in employer contributions, temporarily delaying required payments. The reduction in pension benefits reduces employer costs as new employees replace current workers, whereas the deferral increases taxpayers' costs over 30 years. Under Act 120, the SERS funded ratio—the ratio of assets to accrued pension liabilities—is projected to reach its nadir of 64.4 percent in CY 2012. The PSERS funded ratio is expected to reach its nadir of 56.3 percent in FY 2017-18.[26] Those projections assume an eight percent annual rate of return on investment for the funds. In March, the PSERS board voted to lower the assumed rate of return to 7.5 percent. Any investment losses or returns less than this rate will further reduce the funded ratio and require higher taxpayer contributions.

For FY 2011-12, the Commonwealth will contribute $481 million to SERS and $671 million to PSERS. By FY 2016-17, the Commonwealth's contribution will increase to $1.7 billion for SERS and $2.3 billion for PSERS, a total increase of $2.9 billion over FY 2011-12 contributions.

General Fund Debt Service

Data from the executive budget show that the Commonwealth had outstanding general obligation debt of approximately $11 billion at the end of FY 2011-12. Non-highway capital budget debt, voter approved and disaster debt are serviced from the General Fund. For FY 2011-12, debt service paid from the General Fund is projected to total $1.1 billion.

The FY 2011-12 Executive Budget projects that total net outstanding general obligation debt will increase from $10.2 billion for FY 2010-11 to $12.1 billion in FY 2015-16. The exclusion of debt not serviced through the General Fund reduces those figures to $9.7 and $11.5 billion, respectively. The projections assume that (1) $7.5 billion of bonds will be issued during FY 2011-12 to 2015-16 for currently authorized and proposed capital projects, and (2) a large reduction in debt issued for certain public improvement projects (buildings and structures) and redevelopment assistance projects. Based on those assumptions, General Fund debt service is projected to increase modestly from $1.1 billion in FY 2011-12 to $1.2 billion in FY 2015-16, an average increase of 3.3 percent per annum.

Currently, there exists approximately $5.2 billion of authorized projects for which bonds have yet to be issued. It is not known how much of that amount is included in projections from the executive budget. For the purposes of this report, debt service projections use those tabulations.

[26] Data from the Comprehensive Annual Financial Report for the Year Ended December 31, 2010 (SERS) and the Comprehensive Annual Financial Report, Fiscal Year Ended June 30, 2011 (PSERS).

All Other

Other major expenditures from the General Fund include funding for the following departments: Aging, Agriculture, Attorney and Auditor General, Community and Economic Development, Environmental Protection, Military and Veteran Affairs, Revenue, Treasury, Executive Offices, State Police, Labor and Industry, General Services, Probation and Parole, Judiciary and Legislature. Funding for those departments comprise roughly ten percent of total General Fund outlays. Starting from the base year appropriation, projections apply two growth factors to all remaining departments: a Pennsylvania CPI and an overall demographic growth factor (0.2 percent per annum). Future reports will provide an opportunity for more complete treatment for these departments.

Summary

This report uses demographic and economic forecasts and a "current policy" or "current services" methodology to derive General Fund revenue and expenditure projections. Projections are sensitive to the economic forecast, which will be revised frequently. Moreover, policymakers will make numerous unforeseen changes to tax laws and spending programs. Therefore, the projections used by this report are best used to provide a reasonable benchmark to assess broad trends impacting the Commonwealth's fiscal position.

Figure 5

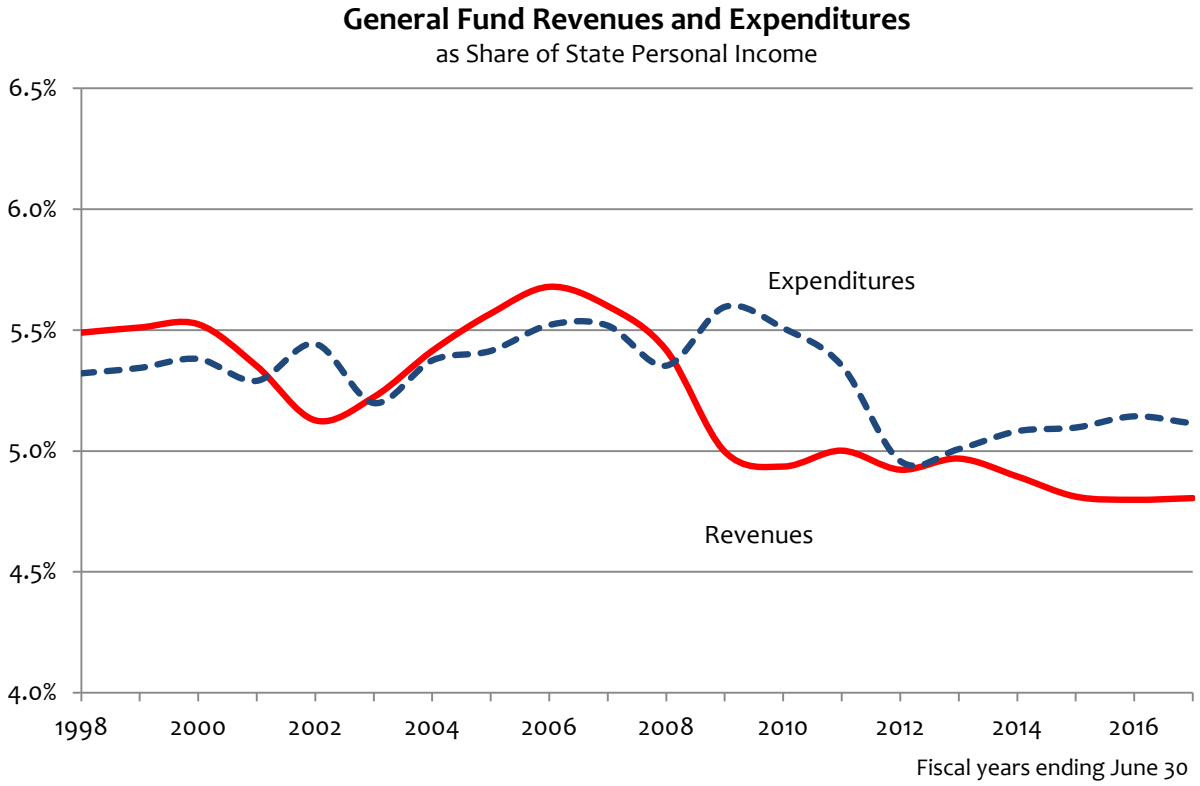

Figure 5 combines the revenue and expenditure projections from the two previous sections. The graph illustrates the increasing gap between projected revenues and expenditures

assuming that tax law and budget policies remain unchanged. For expenditures, demographic trends are increasingly relevant, as elderly residents who might be eligible for Medical Assistance comprise an increasing share of the Commonwealth's population. Pension contributions are another obvious factor. For FY 2002-03, pension contributions comprised 0.5 percent of General Fund expenditures. By FY 2011-12, that share is projected to increase to 4.2 percent. By FY 2016-17, this report projects that SERS and PSERS pension contributions will comprise 11.6 percent of General Fund expenditures.

For revenues, the economic forecast implies modest growth of General Fund revenues over the next five fiscal years. The graphs in this report illustrate the long-term contraction of the Pennsylvania tax base for the two largest revenue sources: personal income taxes and sales-use taxes. Demographic trends explain a portion this contraction. As the Commonwealth's population ages, a greater share of state personal income is received in the form of non-taxable transfers (e.g., social security) or non-taxable pensions. Demographic projections suggest that trend will accelerate. Moreover, data show that the elderly spend a relatively larger share of their disposable income on items exempt from sales tax such as food, clothing, pharmaceuticals and health care services.

The erosion of the sales tax base is likely greater than implied by the revenue forecasts used by this report because that forecast was based on US consumption trends; a forecast of the composition of Pennsylvania consumption (i.e., goods versus services) is not supplied with the economic forecast. Demographic trends show that Pennsylvania is aging more rapidly than the US, causing the Pennsylvania sales tax base to contract somewhat quicker due to the spending patterns of older residents. Finally, it is likely that the growth in remote sales will accelerate, thereby further eroding the sales tax base. Because this report holds structural parameters constant, that effect is not captured.

Although the economic forecast used by this report will be revised many times, the economic assumptions appear plausible and reasonable. Demographic projections will likely closely approximate actual outcomes due to the stable nature of the structural parameters used by population models and the long time lags required to alter pre-existing trends. If the economic assumptions used by this report prove overly pessimistic, it is still likely that current demographic trends and future pension contributions will be sufficient to create budgetary pressures for the long-term outlook, assuming that tax laws and budget policies remain unchanged.

Technical Appendix

Part A: General Revenue Methodology

This report uses a basic methodology to project the various revenue sources that comprise the General Fund. The methodology can be conceptualized in four steps. First, a relevant variable(s) is selected from the economic assumptions that can be used to extrapolate the tax base into the future from the latest year that tax data are available. (If tax data are not available, then receipts from the latest fiscal year are used.) When possible, projections are made on a "tax year" basis and the relevant tax rate is applied to derive tax liability. Projections of tax year liability are then "fiscalized" to convert tax years into fiscal years (FY), or the actual cash flow realized by the Commonwealth.

A comparison is made between model projections for each revenue source and actual FY 2010-11 receipts. (A comparison is also made to a projection of FY 2011-12 revenues based on collections through December 2011.) This comparison allows for the calibration of model projections to actual receipts so that model projections can be adjusted appropriately. For example, if the comparison reveals that the simple model overpredicts revenues by two percent, then that known overprediction is deducted from model projections in all future years. However, if circumstances imply that the error might be transient in nature (e.g., the misestimate of a temporary provision), then the model is not calibrated or only partially calibrated. Once models are calibrated based on actual revenues, the models then apply the appropriate growth rates from the economic forecasts, as well as any technical adjustments as described in the main text.

Part B: Demographic Projections

Table 5: Interim Population Projections

Effect of Technical Revisions

	2010 Levels			2020 Levels			Growth Rate, 2010-20		
Age Cohort	original	revised	change	original	revised	change	original	revised	diff
0-4	724,902	729,538	0.6%	786,020	766,108	-2.5%	8.4%	5.0%	-3.4%
5-9	719,896	753,635	4.7%	763,575	753,057	-1.4%	6.1%	-0.1%	-6.1%
10-14	737,095	791,151	7.3%	733,100	737,732	0.6%	-0.5%	-6.8%	-6.2%
15-19	932,203	905,066	-2.9%	823,463	866,968	5.3%	-11.7%	-4.2%	7.5%
20-24	964,981	874,146	-9.4%	838,580	896,895	7.0%	-13.1%	2.6%	15.7%
25-29	782,304	781,527	-0.1%	855,197	820,903	-4.0%	9.3%	5.0%	-4.3%
30-34	678,328	729,592	7.6%	886,000	794,964	-10.3%	30.6%	9.0%	-21.7%
35-39	737,662	764,287	3.6%	783,124	782,684	-0.1%	6.2%	2.4%	-3.8%
40-44	826,439	851,382	3.0%	677,941	727,071	7.2%	-18.0%	-14.6%	3.4%
45-49	936,638	955,763	2.0%	727,433	753,551	3.6%	-22.3%	-21.2%	1.2%
50-54	965,158	984,641	2.0%	801,698	826,307	3.1%	-16.9%	-16.1%	0.9%
55-59	863,143	879,048	1.8%	892,722	910,032	1.9%	3.4%	3.5%	0.1%
60-64	733,356	743,296	1.4%	896,719	914,062	1.9%	22.3%	23.0%	0.7%
65-69	545,699	553,002	1.3%	768,481	782,451	1.8%	40.8%	41.5%	0.7%
70-74	421,303	426,536	1.2%	615,963	624,169	1.3%	46.2%	46.3%	0.1%
75-79	361,328	362,332	0.3%	421,634	427,050	1.3%	16.7%	17.9%	1.2%
80-84	312,239	311,761	-0.2%	281,584	284,861	1.2%	-9.8%	-8.6%	1.2%
85+	298,044	305,676	2.6%	318,589	331,464	4.0%	6.9%	8.4%	1.5%
Total	12,540,718	12,702,379	1.3%	12,871,823	13,000,328	1.0%	2.6%	2.3%	-0.3%
0 - 19 Age Cohort	3,114,096	3,179,390	2.1%	3,106,158	3,123,865	0.6%	-0.3%	-1.7%	-1.5%
20 - 39 Age Cohort	3,163,275	3,149,552	-0.4%	3,362,901	3,295,445	-2.0%	6.3%	4.6%	-1.7%
40 - 54 Age Cohort	2,728,235	2,791,786	2.3%	2,207,072	2,306,929	4.3%	-19.1%	-17.4%	1.7%
55 - 64 Age Cohort	1,596,499	1,622,344	1.6%	1,789,441	1,824,094	1.9%	12.1%	12.4%	0.4%
>= 65 Age Cohort	1,938,613	1,959,307	1.1%	2,406,251	2,449,994	1.8%	24.1%	25.0%	0.9%
Total	12,540,718	12,702,379	1.3%	12,871,823	13,000,328	1.0%	2.6%	2.3%	-0.3%

Table 5 shows the impact from updating the base population used by the PaSDC model to the 2010 Census. This technical update increased total population by 1.3 percent for 2010, approximately 162,000 additional residents. Most five-year age cohorts were revised by two percent or less, but there were some notable exceptions including the 10-14 age cohort (7.3 percent), the 20-24 age cohort (-9.4 percent) and the 30-34 age cohort (7.6 percent).

For 2020 projections, the technical update increased total population by 1.0 percent (128,500 residents). The technical update produces a slight difference in total growth rates from 2010 to 2020 (2.6 percent vs. 2.3 percent). Most differences are modest, except for the three age cohorts noted above that are vintaged ten years.