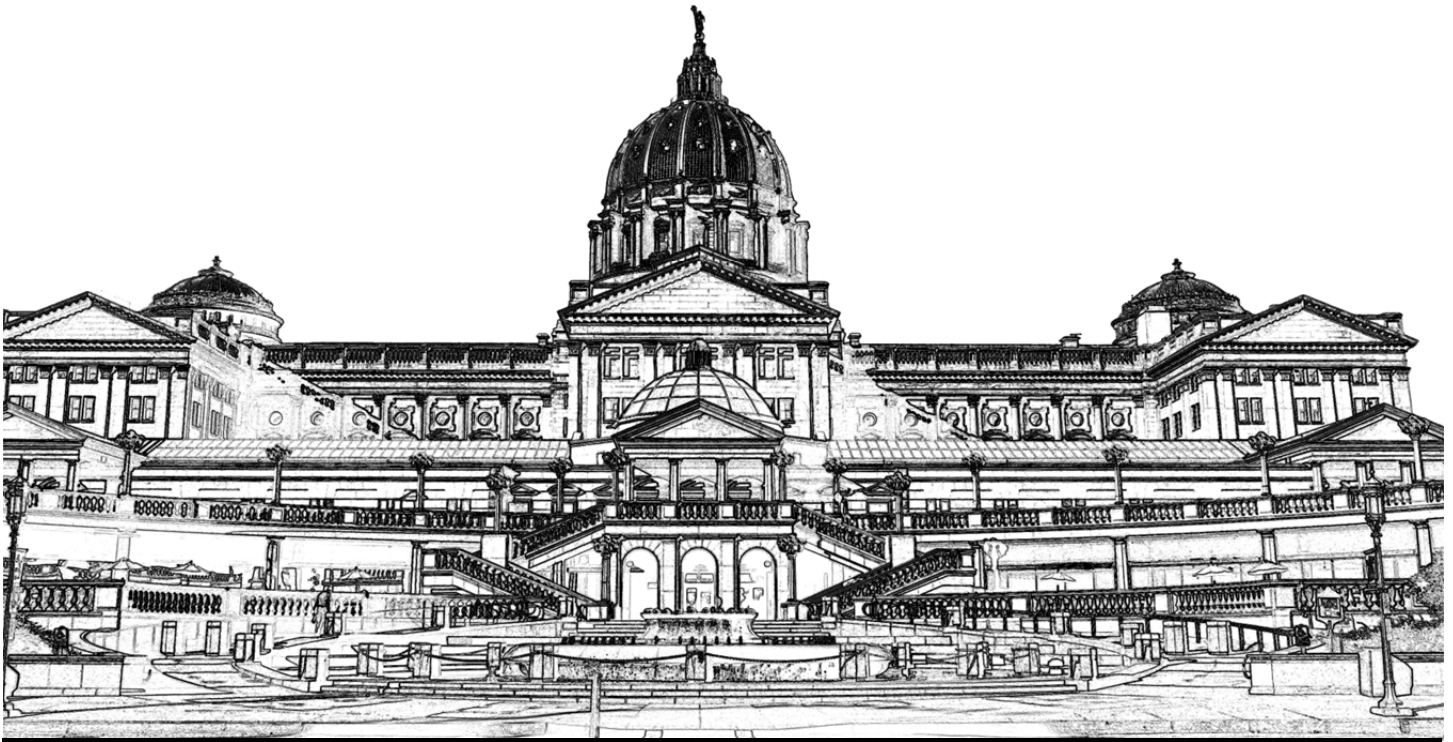

Pennsylvania's Economic & Budget Outlook

Fiscal Years 2014–15 to 2019–20



 Independent Fiscal Office

November 2014

About the Independent Fiscal Office

The Independent Fiscal Office (IFO) provides revenue projections for use in the state budget process along with impartial and timely analysis of fiscal, economic and budgetary issues to assist Commonwealth residents and the General Assembly in their evaluation of policy decisions. In that capacity, the IFO will not support or oppose any policies it analyzes, and will disclose all methodologies, data sources and assumptions used in published reports and estimates.

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The Independent Fiscal Office was created
by the Act of Nov. 23, 2010 (P.L.1269, No.120).

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INDEPENDENT FISCAL OFFICE

Second Floor, Rachel Carson State Office Building
400 Market Street
Harrisburg, Pennsylvania 17105

November 13, 2014

The Honorable Members of the Pennsylvania General Assembly:

Act 120 of 2010 specifies that the Independent Fiscal Office (IFO) 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, the IFO submits this report to the residents of the Commonwealth and members of the General Assembly. In accordance with the mission of the office, this report does not make any policy recommendations.

The data and projections presented in this report come from various sources. Economic projections for Pennsylvania are from the IFO, while projections for the U.S. are from the October 2014 forecast by IHS Economics. Demographic projections are from the Pennsylvania 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. All revenue and expenditure projections are from the IFO. Other data sources are noted in the relevant sections of this report.

The office would like to thank all of the individuals, agencies and organizations who assisted in the production of this report. Questions and comments can be submitted to contact@ifostate.pa.us.

Sincerely,

MATTHEW J. KNITTEL
Director

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Executive Summary

This report evaluates the demographic, economic, revenue and expenditure trends that will affect the Commonwealth's fiscal condition through fiscal year (FY) 2019-20. Based on the economic and demographic assumptions used by this report, the evaluation finds that various factors will cause a long-term fiscal imbalance.

The demographic forecast projects modest population growth (3.9 percent) for the current decade. From 2010 to 2020, the forecast projects that:

- The number of residents age 19 and under will contract (-2.6 percent).
- The number of residents age 20 to 64 will remain stagnant (-0.1 percent).
- The 65 and over age group will expand dramatically (29.4 percent).

Economic growth may be constrained by the lack of expansion of working age residents. However, potential pent-up demand for housing, low interest rates and low energy prices could provide some momentum to the state and national economies.

The report projects that General Fund revenues will increase at an average rate of 2.7 percent per annum. Personal income and sales taxes motivate most revenue gains, while other revenue sources (e.g., cigarette and capital stock) continue their long-term decline.

Motivated by statutory pension contributions, expenditures will increase at an average rate of 4.1 percent per annum:

- By FY 2019-20, pension contributions may reach \$1.7 billion above current year levels. Excluding pension contributions, expenditures increase by 3.3 percent per annum.
- Expanding service populations (e.g., older residents) and inflation motivate much of the remaining expenditure growth.

The analysis projects that expenditures will outpace revenues through FY 2019-20 under current laws and policies. The structural imbalance grows each year as tax base expansion is insufficient to maintain the level of real services provided in the current fiscal year and simultaneously provide for required pension contributions.

General Fund Projections¹ (\$ millions)

	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Beginning Balance ²	\$81	--	--	--	--	--
Available Revenue ³	28,700	\$29,023	\$29,897	\$30,836	\$31,794	\$32,835
Expenditures	<u>-29,027</u>	<u>-30,777</u>	<u>-32,079</u>	<u>-33,280</u>	<u>-34,358</u>	<u>-35,464</u>
Current Year Balance	-327	-1,754	-2,182	-2,444	-2,564	-2,629
Lapses and Supplementals	<u>75</u>	<u>75</u>	<u>75</u>	<u>75</u>	<u>75</u>	<u>75</u>
Ending Balance	-171	-1,679	-2,107	-2,369	-2,489	-2,554

¹ Based on the extension of current law and policies.

² Beginning balance omitted for FY 2015-16 and thereafter.

³ Available revenues are net of refunds.

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Section 1: Introduction

This report provides an overview of the demographic, economic, revenue and expenditure trends that will affect the Commonwealth's fiscal condition through fiscal year (FY) 2019-20. The report examines long-term trends to facilitate the assessment of current tax and spending policies. In order to craft effective policy, policymakers should be aware of potential future imbalances.

The projections contained in this report are best viewed as plausible outcomes from the application of reasonable economic assumptions and demographic trends. Actual revenues and expenditures could deviate significantly from projections due to the uncertainty of economic forecasts and technical factors, such as new federal match rates for spending programs or the renegotiation of collective bargaining agreements.

The report designates FY 2014-15 as the base year. All revenue and expenditure projections use that year as a reference year and assume that the policy choices embedded therein do not change through FY 2019-20. Based on administrative guidance from the Office of the Budget issued for the past three budget years, the report assumes that complements across all executive agencies remain unchanged, except for Corrections, Probation and Parole, State Police and Human Services.

The report assumes that the real level of services provided in the base year does not change over time. Therefore, all expenditure projections include an inflation factor to compensate for rising prices. Relevant service populations are allowed to expand (e.g., older residents who require long-term care) or contract (e.g., elementary school students) based on demographic projections.

The report projects General Fund revenues and the expenditures supported by those revenues. The report assumes that certain other funds that support General Fund spending such as the Motor License Fund (pensions for State Police) and the Lottery Fund (Property Tax Rent Rebate) supply the same share of funding as supplied in the base year. However, if those funds grow more slowly than the needs they support, then additional stress may be placed upon General Fund revenues.

The economic, demographic, revenue and expenditure projections contained in this report can be used as neutral benchmarks to assess pertinent issues such as:

- What implications do broad demographic trends have for revenues and expenditures?
- If economic conditions revert to historical norms, are current tax and spending policies fiscally sustainable?
- What factors drive any fiscal imbalance over the next five years?

The remainder of this report proceeds as follows. The Demographic Outlook presents new population projections from the Pennsylvania State Data Center. The Economic Outlook presents the baseline economic forecast for the U.S. and Pennsylvania. The Revenue Outlook presents revenue projections for all General Fund revenue sources. The Expenditure Outlook presents expenditure projections funded by General Fund revenues. Pennsylvania's Fiscal Condition compares revenue and expenditure projections to identify any structural imbalance. Four appendices provide additional detail and context for this report.

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Section 2: Demographic Outlook

Demographics are a fundamental element of economic, revenue and expenditure trends. Demographic trends determine important populations such as the labor force, elementary and secondary students who require education services and elderly residents who may require long-term care. The projections are generally more reliable than economic forecasts due to the inherent stability of factors that drive population growth such as fertility and survival rates.

Trends by Age Group

Demographic projections reveal the following trends for 2015 through 2020 (see Table 2.1):¹

- Total population increases by 253,500 (2.0 percent).
- Nursery, preschool and elementary students (age 0 to 9) increase by 11,900 (0.8 percent).
- Middle and high school students (age 10 to 19) decline by 48,300 (-2.9 percent).
- The 20 to 39 age cohort increases by 149,300 (4.6 percent). This group includes “Generation Y” or “Millennials” in 2020.
- The 40 to 59 age cohort declines by 264,900 (-7.6 percent). This group includes “Generation X” in 2020.
- The 60 to 79 age cohort increases by 385,600 (15.8 percent). This group includes most of the “baby boom” generation in 2020.
- The 80 and over age cohort increases by 19,800 (3.2 percent).

These demographic trends have implications for revenue and expenditure projections. For revenues, three demographic trends are pertinent:

- The forecast projects that the working age cohort (age 20 to 64) will contract. (See bottom of Table 2.1.) If labor force participation rates do not increase, then this trend suggests limited growth in wages, output and the personal income tax base.
- The aging population may cause subtle shifts in spending patterns that restrain growth of the sales tax base. Older individuals spend a higher proportion of their disposable income on non-taxable goods and services (e.g., prescription drugs and healthcare).
- As life expectancy continues to increase, more retirees may find that they have insufficient savings to maintain their standard of living. These individuals may curtail discretionary spending, or possibly rely on children as a means of support.

For expenditures, two demographic trends are pertinent:

- The forecast projects a contraction for residents under age 20 (-1.2 percent) from 2015 to 2020. That trend should reduce budget pressures for education and certain social assistance programs.
- The large increase in the 65 and older age cohort (14.9 percent) implies significant growth for general healthcare and long-term care services.

¹ See Appendix A for annual detail for 2010 through 2020.

Table 2.1
Demographic Projections
(thousands of residents)

Age Cohort	Number of Residents			Number Change		Percent Change		Population Share	
	2010	2015	2020	2010-15	2015-20	2010-15	2015-20	2010	2020
0-4	728.5	711.2	739.7	-17.3	28.5	-2.4%	4.0%	5.7%	5.6%
5-9	752.1	735.1	718.5	-17.1	-16.6	-2.3	-2.3	5.9	5.4
10-14	790.5	756.6	740.3	-33.9	-16.2	-4.3	-2.1	6.2	5.6
15-19	901.9	925.2	893.1	23.3	-32.0	2.6	-3.5	7.1	6.8
20-24	878.1	925.0	945.5	46.9	20.5	5.3	2.2	6.9	7.2
25-29	782.9	804.5	847.9	21.6	43.4	2.8	5.4	6.2	6.4
30-34	733.4	795.2	817.9	61.9	22.7	8.4	2.9	5.8	6.2
35-39	758.7	737.4	800.1	-21.3	62.7	-2.8	8.5	6.0	6.1
40-44	850.8	758.3	738.1	-92.5	-20.3	-10.9	-2.7	6.7	5.6
45-49	951.2	842.6	751.9	-108.6	-90.7	-11.4	-10.8	7.5	5.7
50-54	985.9	934.4	828.9	-51.5	-105.5	-5.2	-11.3	7.8	6.3
55-59	884.1	961.3	912.8	77.1	-48.5	8.7	-5.0	7.0	6.9
60-64	750.3	850.7	927.5	100.5	76.8	13.4	9.0	5.9	7.0
65-69	555.1	705.6	803.2	150.5	97.5	27.1	13.8	4.4	6.1
70-74	427.8	506.6	647.0	78.7	140.4	18.4	27.7	3.4	4.9
75-79	361.1	370.4	441.4	9.3	71.0	2.6	19.2	2.8	3.3
80-84	311.5	286.7	296.6	-24.8	9.8	-7.9	3.4	2.5	2.2
85-89	203.3	234.5	235.3	31.2	0.8	15.3	0.3	1.6	1.8
90-94	81.8	91.1	100.3	9.3	9.2	11.1	10.1	0.6	0.8
95+	<u>22.3</u>	<u>16.7</u>	<u>16.6</u>	<u>-5.6</u>	<u>-0.1</u>	<u>-25.1</u>	<u>-0.4</u>	<u>0.2</u>	<u>0.1</u>
Total	12,711.3	12,949.1	13,202.6	237.8	253.5	1.9	2.0	100.0	100.0

Age Cohort Summary

0-19	3,173.0	3,128.0	3,091.7	-45.0	-36.3	-1.4%	-1.2%	25.0%	23.4%
20-64	7,575.4	7,609.4	7,570.6	34.1	-38.8	0.4	-0.5	59.6	57.3
65-84	1,655.6	1,869.3	2,188.1	213.8	318.7	12.9	17.1	13.0	16.6
85+	<u>307.4</u>	<u>342.2</u>	<u>352.2</u>	<u>34.9</u>	<u>10.0</u>	<u>11.3</u>	<u>2.9</u>	<u>2.4</u>	<u>2.7</u>
Total	12,711.3	12,949.1	13,202.6	237.8	253.5	1.9	2.0	100.0	100.0

Source: Pennsylvania State Data Center.

To illustrate broad trends over the current decade, Figure 2.1 displays the shift in age composition from 2010 to 2020. Overall, the age distribution shifts to the right, especially at the higher end of the age spectrum. Much of that trend is due to the aging of the baby boom generation. In 2010, that age cohort ranged from age 46 to 64. By 2020, baby boomers will range from age 56 to 74, and many will have entered retirement.

Net migration into Pennsylvania also has a significant impact on the change in the age distribution. The data reveal a large in-migration of younger residents. For example,

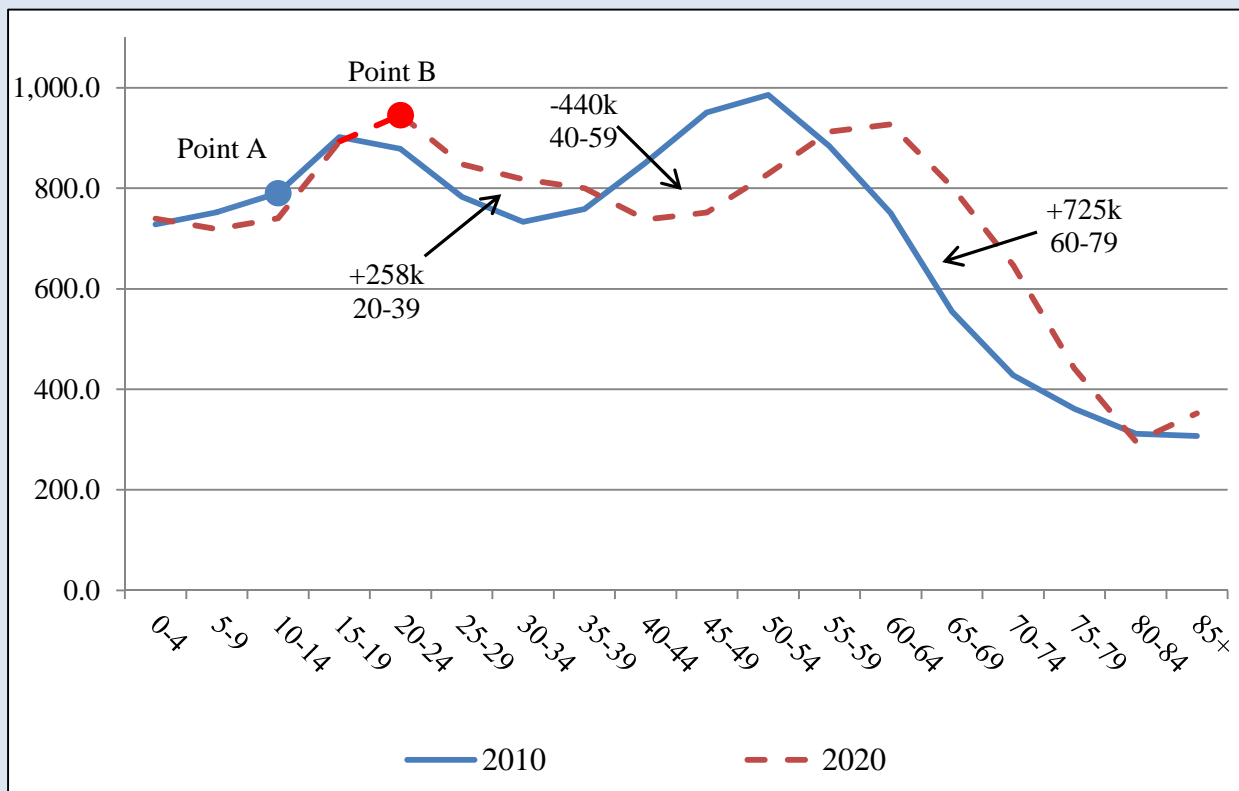
- In 2010, the 10 to 14 year age cohort totals 790,500 (Point A). By 2020, that group becomes the 20 to 24 year age cohort, and in-

creases to 945,500 (Point B), a net gain of 155,000. The gain is largely due to the influx of college students from other states and overseas, as well as general migration for that age group.

- This phenomenon partially reverses itself as many students return to their home state or move to other states for work. In 2010, the 20 to 24 year age cohort totals 878,100. By 2020, that same group becomes the 30 to 34 year age cohort and declines to 817,900, a reduction of 60,200.

See Appendix Tables A.5 and A.6 for detail regarding the number of residents who have moved into Pennsylvania during the past year.

Figure 2.1
Distribution of Pennsylvania Population: 2010 vs. 2020
 (thousands of residents)



Source: Pennsylvania State Data Center. Calculations by the IFO.

Median Age Over Time

A convenient summary statistic that reflects the changing age distribution over time is the median age. Table 2.2 displays median ages for Pennsylvania and the U.S. for 1990, 2000, 2010 and 2020. For Pennsylvania, the median age roughly exceeds the U.S. by two to three years. For both Pennsylvania and the U.S., the increase in the median age has slowed each decade, but the differential in median age between Pennsylvania and the U.S. continues to grow.

The wave of baby boomers moving towards retirement is one factor that drives the increase in the median age over time. Another factor is increasing life expectancy. From 2000 to 2010, life expectancy at birth for the average U.S. resident increased by 1.9 years. For the current decade, the U.S. Census projects that life expectancy will increase by roughly the same magnitude.

Most of the increase in life expectancy is due to longer life spans for those who reach the typical retirement age of 65. Census data show that life expectancy for those age 65 increased by 1.5 years in the prior decade. The U.S. Social Security Administration projects that lifespans for those age 65 will further increase by 1.2 years through 2020.

The large wave of baby boomers reaching retirement age and increasing life expectancy suggest that policymakers should anticipate increased demands for healthcare, long-term care and transportation services. Moreover, due to the labor intensive nature of many of those services, it is likely that the cost to provide such services could increase faster than general inflation.

Currently, it is not known whether individuals have increased their savings enough to offset projected increases in longevity. Data from the Employment Benefit Research Institute reveal that the number of workers who have defined benefit plans is declining. This trend suggests that increased savings must be relied upon in the future to offset longer life expectancies. In 1990, 62 percent of private sector workers with an employment-based retirement plan had a defined benefit or a combination of a defined benefit and defined contribution plan. By 2000, that share declined to 40 percent. For 2011 (latest data available), the share stands at 31 percent. The great majority of plans (24 percent) use both types; only 7 percent use a defined benefit plan exclusively.

Table 2.2
Median Age and Life Expectancy

	Age in Years				Change in Years		
	1990	2000	2010	2020	1990-00	2000-10	2010-20
Median Age - Pennsylvania	35.0	38.0	40.2	41.6	3.0	2.2	1.4
Median Age - U.S.	32.9	35.3	37.2	38.3	2.4	1.9	1.1
Life Expectancy at Birth - U.S.	75.4	76.8	78.7	80.2	1.4	1.9	1.5
Life Expectancy at Age 65 - U.S.	17.2	17.6	19.1	20.3	0.4	1.5	1.2

Source: U.S. Census Bureau and U.S. Social Security Administration, 2014 OASDI Trustees Report.

Population Change

Table 2.3 decomposes the change in the Pennsylvania population from 2010 to 2015 and 2015 to 2020 into births, deaths, net domestic migration, net international migration and the change in group quarters.² From 2015 to 2020, the projections show that:

- Net organic growth (births less deaths) will comprise less than half (45.9 percent) of total population gains.
- Net domestic migration will add 14,200 new residents (5.6 percent).
- Net international migration comprises nearly half (48.5 percent) of total population gains.

For historical years, data from the American Community Survey (ACS) reveal significant migration into Pennsylvania. For 2008-2012, the data show an average influx of 53,100 individuals each year from abroad.³ Most international migrants are from Latin America and Asia.

For a typical year, the ACS data also show that the great majority (87.8 percent) of Pennsylvanians did not move during the past year. Residents age 50 or older were much more likely to maintain their current residence during the past year (roughly 95 percent) compared to residents age 18 to 29 (71.5 percent) and residents age 30 to 39 (84.8 percent).

For residents who did move during the past year (12.2 percent), the ACS data show that:

- 7.3 percent of all residents moved within the same county;
- 2.6 percent moved within Pennsylvania;
- 1.8 percent moved from a different state, and 0.4 percent moved from abroad.

See Appendix A for additional detail regarding Pennsylvania residents who moved during the past year by age cohort.

Table 2.3
Components of Population Change
(thousands of residents)

Change Component	Change in Number of Residents	
	2010 to 2015	2015 to 2020
Net Organic Growth	97.6	116.4
Births	702.9	730.0
Deaths	605.2	613.6
Net Domestic Migration	14.8	14.2
Net International Migration	109.1	123.0
Group Quarters	<u>16.2</u>	<u>0.0</u>
Total	237.8	253.5

Source: Pennsylvania State Data Center.

² Group quarters include residents housed in nursing homes, dormitories and correctional facilities. Those individuals are projected separately from the rest of the population.

³ These data do not capture Pennsylvania residents who move abroad. The data include international students who attend higher education institutions but do not capture the return of such students to their home country.

Labor Force Participation Rates

Population growth and labor force participation rates determine the size of the Pennsylvania labor force. The labor force includes all employed individuals and those unemployed who actively seek work. The participation rate is equal to the ratio of the labor force to all residents age 16 and older.

From 2000 to 2014 (data through September), U.S. labor force participation rates declined from 67.1 to 62.9 percent, a reduction of 4.2 percentage points and the lowest rate since 1977. Many analysts attribute the decline to the aging of the U.S. population, since older residents have lower participation rates. Other analysts note that the recent severe recession may have encouraged individuals to exit the labor force.

For Pennsylvania, the decline in the overall labor force participation rate has been much less dramatic, dropping only 1.6 percentage points since 2000. However, the underlying detail reveals trends similar to those at the national level:

- Participation rates for those under age 24 have declined due in part to higher attendance at post-secondary institutions.
- Rates for those age 25 to 54 have also declined. The factors motivating that trend are not clear.
- Rates for those age 55 or older have increased significantly. Analysts project that trend will continue.

If labor force participation rates do not generally increase, then the size of the Pennsylvania labor force will likely remain stagnant, or could even contract. This may occur because demographic projections show that the number of individuals age 20 to 64 will decline slightly from 2015 to 2020. Participation rates must generally increase for that age group to generate labor force expansion. Over time, a larger labor force increases the potential output of the Pennsylvania economy and provides a solid foundation for future growth.

Table 2.4
Pennsylvania Labor Force Participation Rates by Age and Gender

Year	Total	Gender		Age Groups (Both Genders)					
		Male	Female	16-19	20-24	25-44	45-54	55-64	65+
2000	64.3	72.2	57.1	52.8	76.5	84.3	83.8	59.9	10.9
2001	65.3	72.2	59.1	51.2	75.3	85.3	83.7	60.7	12.0
2002	65.7	72.7	59.3	51.6	77.3	84.9	83.7	62.9	12.6
2003	63.9	70.9	57.5	46.7	74.2	83.4	82.8	63.4	13.1
2004	64.5	71.6	58.1	48.8	73.9	84.3	82.7	63.3	13.0
2005	64.4	71.2	58.3	46.0	74.9	83.6	83.1	65.2	12.4
2006	64.4	71.8	57.6	45.2	73.3	84.3	82.2	64.8	14.4
2007	64.5	71.4	58.1	45.3	74.0	83.2	83.2	62.6	15.7
2008	65.3	71.7	59.5	47.2	75.7	84.3	84.3	64.7	16.3
2009	64.3	70.5	58.6	44.4	74.3	84.0	82.5	66.1	16.7
2010	63.2	69.9	57.1	40.7	70.6	83.6	81.9	65.4	16.5
2011	63.2	69.7	57.1	45.3	72.3	82.9	80.1	64.1	16.1
2012	64.0	70.6	57.9	41.8	73.6	83.9	80.6	65.5	17.2
2013	63.4	69.6	57.7	40.4	71.1	82.8	80.3	66.1	17.6
2014	62.7	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Source: Current Population Survey (U.S. Census Bureau) and PA Department of Labor and Industry, Center for Workforce Information & Analysis.

Age Composition of Workforce

Due to rapidly increasing labor force participation rates and a tepid recovery that restrains new hiring, workers age 55 or older comprise a much larger share of the Pennsylvania workforce compared to pre-recession levels. Table 2.5 displays the share of the workforce across seven age groups. The data show that workers age 55 or older comprised 19.1 percent of the workforce in 2007, and 23.4 percent in 2013.

By contrast, workers age 35 to 54 declined from 47.5 percent (2007) of the workforce to 43.1 percent (2013). The 25 to 34 year age cohort was the only younger age cohort to realize job gains from 2007 to 2013.

The data also reveal wide disparities in the age composition of the workforce across industries (see Appendix Table A.4 for industry detail):

- In the accommodation and food service sector, only 11.4 percent of the workforce is age 55 or older.

- Conversely, the utility (31.4 percent), transportation (28.4 percent) and manufacturing (27.5 percent) sectors employ much higher shares of workers age 55 or older.

Since the start of the recession, the share of the workforce age 55 or older has increased across all sectors except the mining sector. That exception is likely due to the dramatic increase in employment over the past decade as well as the physical demands of the work.

For the Commonwealth, data from the State Employee's Retirement System (SERS) show that the state workforce is older than the private sector. For 2013, SERS executive agency data show that 28.4 percent of active members were age 55 or older. The pending retirements of many individuals with significant seniority may depress future wage expenses as younger workers replace their older counterparts. In recognition of this dynamic, the General Fund expenditure projections include a longevity factor that captures this churning of personnel.

Table 2.5
Age Composition of the Pennsylvania Workforce: 2007 vs. 2013
(thousands)

	14-18	19-24	25-34	35-44	45-54	55-64	65+	All Ages
2007 Q4 Employment	180	598	1,091	1,263	1,392	836	237	5,596
Share of Workforce	3.2%	10.7%	19.5%	22.6%	24.9%	14.9%	4.2%	
2013 Q4 Employment	117	582	1,159	1,101	1,288	1,003	296	5,545
Share of Workforce	2.1%	10.5%	20.9%	19.9%	23.2%	18.1%	5.3%	
Change Number	-63	-15	68	-162	-104	167	59	-51
Change Percent	-35.2%	-2.6%	6.2%	-12.8%	-7.5%	19.9%	24.8%	-0.9%

Source: Employment data are from the U.S. Census Bureau. Quarterly Workforce Indicators Data. "Longitudinal-Employer Household Dynamics Program." <http://ledextract.ces.census.gov/>.

Long-Term Outlook

The long-term demographic outlook shows the future impact of the three major population waves: baby boomers, Generation X and Millennials. During the two decades following 2020:

- Residents age 19 or younger begin to expand again as Millennials enter marriage and have children.
- The working age cohort continues to decline with the retirements of baby boomers, but then increases once that entire age cohort reaches age 65.
- Residents age 65 to 84 continue to expand significantly, then contract.
- Residents age 85 or older expand dramatically due to the aging of baby boomers and increased life expectancies.

International migration will play a much larger role in population growth over the next two decades. For 2020 to 2030, the forecast projects that organic population growth (births less deaths) will decline to 174,000 and then turn negative (-31,800) in the following decade. For 2030 to 2040, net international migration fuels all growth in the Pennsylvania population. Currently, the typical international migrant is younger than the median Pennsylvania resident, and that characteristic holds over the next two decades. Therefore, international migration will provide needed growth to the Pennsylvania labor force.

Across the three decades, the forecast projects that the Pennsylvania population will expand by 1.3 million residents (10.4 percent). Nearly all of the increase (99.3 percent) is comprised of individuals age 65 or older.

Table 2.6
Pennsylvania Long-Term Demographic Trends
 (percentage change and thousands of residents)

	2010-2020	2020-2030	2030-2040	2010-2040
Age Cohorts				
0-19	-2.6%	1.6%	2.0%	1.0%
20-64	-0.1%	-2.5%	2.4%	-0.3%
65-84	32.2%	26.4%	-3.7%	60.9%
> 84	14.6%	17.8%	47.0%	98.3%
All Ages	3.9%	3.8%	2.4%	10.4%
Components of Change				
Net Organic Growth ¹	230.2	174.0	-31.8	372.4
Net Domestic Migration	29.0	28.9	31.1	89.0
Net International Migration	232.1	295.5	331.1	858.7
Total Change	491.3	498.4	330.4	1,320.1

¹ Includes change in group quarters.

Source: Pennsylvania State Data Center.

Section 3: Economic Outlook

Six indicators provide a broad snapshot of the Pennsylvania economy: (1) real state gross domestic product (GDP, excludes inflation), (2) nominal GDP, (3) personal income, (4) wages and salaries, (5) the regional consumer price index (CPI-U) and (6) the change in payroll employment. These variables motivate most General Fund revenue projections contained in this report. Table 3.1 displays historical and projected average annual growth rates for these measures for recent six-year intervals (2002-08 and 2008-14) and the six-year forecast period (2014-20) for Pennsylvania and the U.S.

As shown by Table 3.1, the projected average growth rates exceed certain recent historical averages. That outcome is attributable to (1) the relatively mild 2001-02 recession and (2) the more severe 2008-09 recession caused by the housing and financial crisis. Both recessions impact the historical growth rates shown in Table 3.1. This point underscores the fact that the

economic forecast used by this report assumes that the state and national economies do not endure another recession and the economies return to a historical, non-recession rate of growth. The economic forecast represents a projection of typical economic activity that can be used by policymakers to evaluate whether current fiscal policies are sustainable over many years. It provides policymakers with a neutral benchmark to compare revenue and expenditure growth.

The forecast assumes that real and nominal economic growth will accelerate in the current year and converge to a long-run average growth rate. (See Table 3.2 on next page.) Economic growth is typically quantified by the change in real GDP, which measures the value of final output for the Pennsylvania economy during a calendar year. The measure includes all goods and services produced by the government and private sectors.

Table 3.1
Average Annual Growth Rates for Major Economic Variables

	Pennsylvania			United States		
	2002-08	2008-14	2014-20	2002-08	2008-14	2014-20
Real GDP	1.5%	0.8%	1.9%	2.3%	1.3%	2.8%
Nominal GDP	4.4%	2.5%	3.9%	5.0%	2.9%	4.7%
Personal Income	4.6%	2.7%	4.3%	5.2%	2.9%	5.1%
Wages and Salaries	4.1%	2.1%	4.0%	4.6%	2.3%	5.0%
Consumer Price Index	3.3%	1.4%	1.9%	3.0%	1.6%	1.9%
Average Job Gains (000s)	26.2	-2.7	52.1	1,090.3	279.6	1,782.6
10-Year Note Yield	n.a.	n.a.	n.a.	4.3%	2.8%	3.8%

Source: Historical data from U.S. Bureau of Economic Analysis and U.S. Bureau of Labor Statistics. Pennsylvania forecast by IFO based on published data through August 2014. U.S. forecast by IHS Economics, October 2014.

Table 3.2
Annual Growth Rates or Change for Pennsylvania Economic Variables

	2013	2014	2015	2016	2017	2018	2019	2020
Real GDP	0.7%	1.1%	1.6%	1.8%	1.9%	1.9%	2.0%	2.0%
Nominal GDP	2.4%	2.8%	3.3%	3.8%	3.9%	4.0%	4.1%	4.1%
Personal Income	1.4%	3.3%	3.8%	4.0%	4.4%	4.5%	4.5%	4.4%
Wages and Salaries	1.9%	3.2%	3.6%	3.9%	4.0%	4.0%	4.1%	4.1%
Regional CPI-U	1.2%	1.4%	1.6%	1.8%	1.9%	2.0%	2.1%	2.1%
Payroll Job Gains (000s)	16.9	41.4	55.2	58.4	52.8	47.7	49.5	49.1

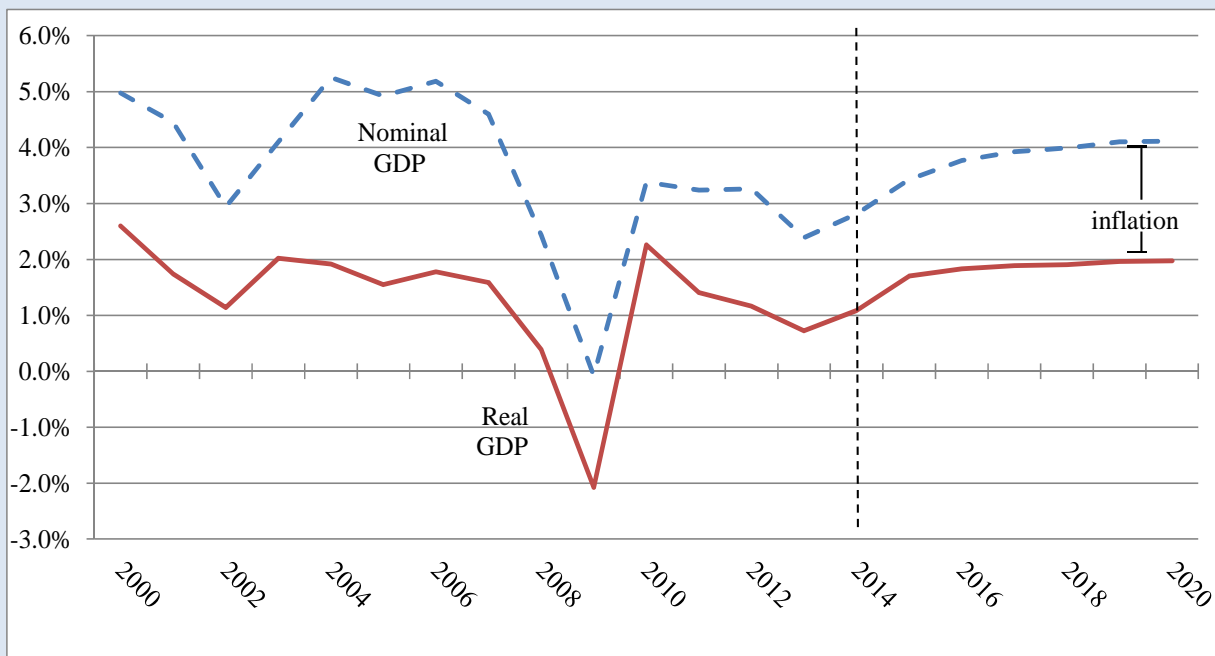
Source: Historical data from U.S. Bureau of Economic Analysis and U.S. Bureau of Labor Statistics. Forecast by IFO.

The forecast assumes modest inflation as measured by the regional CPI-U, which reflects consumer prices in the Philadelphia metro region. That inflation measure also motivates some of the wage growth displayed in Table 3.2. Other wage growth is driven by new workers and real wage gains, such as pay raises for workers who become more productive. Wages comprise nearly 80 percent of the personal income tax base

and motivate roughly the same share of consumer purchases. Hence, wages are a key determinant of General Fund revenue growth.

The sections that follow provide brief labor market, personal income and consumer outlooks. Appendix B provides historical data regarding the Pennsylvania housing market and energy prices for Pennsylvania consumers.

Figure 3.1
Pennsylvania Nominal and Real GDP Growth Rates



Source: Historical data from U.S. Bureau of Economic Analysis. Forecast by IFO.

Employment Outlook

The employment composition of the Pennsylvania economy continues to evolve. From 2002 to 2014, payroll employment data from the U.S. Bureau of Labor Statistics show (see Table 3.3):

- significant contraction for the manufacturing sector;
- contraction for the wholesale-retail, government, finance and construction sectors; and
- significant expansion for the professional service, healthcare and leisure-hospitality sectors.

Through 2020, the economic forecast projects an employment expansion of roughly 52,000 jobs per annum. That level of job creation is consistent with historical, non-recession years. Due to stagnant growth of the working age populace, a modest increase in labor force participation rates is required to achieve that outcome.

The forecast projects a continuation of recent trends across the various sectors:

- The healthcare service sector expands due to an aging populace and increased demand from Healthy PA.
- The construction sector expands as the housing market continues to recover, fueled by pent-up demand from delayed household formation.
- The federal government sector contracts due to reductions in postal service jobs.
- The state-local government sector contracts slightly due to declining enrollment of elementary and secondary students and fiscal pressures from pension contributions.

Two sectors are not included in the payroll employment projections in Table 3.3: agriculture and military. The forecast assumes modest growth for agriculture while the number of armed forces personnel remains flat. Independent contractors, sole proprietors and certain partners in partnership entities are also not included in the payroll employment tabulations.

Table 3.3
Pennsylvania Payroll Employment Outlook
(thousands of jobs)

Sector	Employment Levels				Change in Employment		
	2002	2008	2014	2020	2002-08	2008-14	2014-20
Construction	249	254	235	269	5	-19	34
Manufacturing	760	644	559	546	-116	-85	-13
Wholesale-Retail	892	887	862	888	-5	-25	26
Transportation-Other	221	239	250	268	18	12	17
Finance-Insurance	268	264	253	264	-4	-11	11
Professional Service	341	431	465	500	90	34	35
Administrative-Other	265	278	293	327	14	15	34
Education	202	218	226	227	16	8	1
Healthcare-Social	761	875	941	1,036	115	66	94
Leisure-Hospitality	467	503	545	617	37	41	72
Federal Gov't	109	104	95	86	-4	-9	-9
State-Local Gov't ¹	636	656	619	614	20	-36	-6
All Other Sectors	476	448	440	457	-28	-7	17
Total	5,645	5,802	5,785	6,098	157	-17	313

¹ Includes public elementary and secondary school teachers.

Source: Historical data from the U.S. Bureau of Labor Statistics. Forecast by IFO.

Personal Income Outlook

Personal income includes five types of income: (1) net wages (wages less payroll taxes), (2) business income (sole proprietorships and partnerships), (3) property income (interest, rent and dividends), (4) government transfers (Social Security, Medicare and Medicaid) and (5) net wage supplements (employer contributions for pensions and health-life insurance plans). Table 3.4 displays how these income sources have grown over time and the forecast period:

- From 2008 to 2014, net wages grew by 2.1 percent per annum. The forecast projects that net wage growth will increase to 4.0 percent per annum from 2014 to 2020.
- The forecast projects much higher growth for property income (5.7 percent per annum) compared to recent years. Higher interest rates and interest income motivate much of that result. Strong dividend growth is also a relevant factor.
- The growth rate of government transfers is projected to remain flat at 4.2 percent per annum. That forecast is motivated by the significant increase in the number of retirees and modest inflation (the cost of living adjustment for Social Security).

- Business income is sensitive to economic expansions and contractions because much of the income represents profits. The forecast projects business income will expand at a rate (4.6 percent) that exceeds the expansion of the overall economy (3.9 percent).
- The forecast projects modest growth for net wage supplements as employers continue to shift away from defined benefit pension plans.

Over time, there has been a gradual shift from net wages to other types of income sources. In 2002, net wages comprised 48.5 percent of all personal income. In 2014, net wages will comprise roughly 45.4 percent of personal income. The forecast projects that share will drop to 44.6 percent by 2020.

Typically, wages comprise 78 to 80 percent of the Pennsylvania personal income tax base, while the shares for interest, dividends and rent (5 to 7 percent) and net business income (9 to 11 percent) are much smaller. The growth rates of those three income sources motivate the expansion of the personal income tax base and tax revenues.

Table 3.4
Pennsylvania Personal Income
(\$ billions)

	Dollar Amounts				Average Annual Growth Rates		
	2002	2008	2014	2020	2002-08	2008-14	2014-20
Personal Income							
Net Wages	\$192.3	\$245.0	\$276.8	\$349.4	4.1%	2.1%	4.0%
Business Income	35.2	42.9	54.7	71.6	3.4	4.1	4.6
Property Income	67.7	92.1	106.8	149.0	5.3	2.5	5.7
Government Transfers	65.5	91.6	116.9	149.7	5.7	4.2	4.2
Net Wage Supplements	<u>35.6</u>	<u>47.7</u>	<u>54.6</u>	<u>63.5</u>	<u>5.0</u>	<u>2.3</u>	<u>2.5</u>
Total	396.3	519.2	609.8	783.2	4.6	2.7	4.3

Source: Historical data from U.S. Bureau of Economic Analysis. Forecast by IFO.

Consumer Outlook

The previous decade's housing and financial boom were partially fueled by an unprecedented increase in consumer debt. From 2002 to 2008, Pennsylvania per capita consumer debt increased at an average rate of 10.1 percent per annum. (See Table 3.5.) Debt levels peaked in 2008 and then declined in each subsequent year through 2013. By the second quarter of 2014, per capita debt had declined by \$2,430, an average decline of 1.0 percent per annum.

Roughly two-thirds of total consumer debt is attributable to mortgages and home equity loans.

personal income ratio peaked at 80.3 percent. For the second quarter of 2014, that ratio now stands at 63.7 percent.

The only category of debt that has increased in every year is student loans. Table 3.5 shows that student loans continue to increase at a rapid pace since the 2008-09 recession. Pennsylvania has consistently ranked near the top of all states for the highest student loan debt per graduate with loans; for 2012, Pennsylvania ranked second highest with an average loan balance of \$31,675.⁴ Research suggests that the higher debt

Table 3.5
Pennsylvania Per Capita Consumer Debt Levels¹

	Dollar Amounts			Average Annual Growth Rates		
	2002	2008	2014 ²	2002-08	2008-14	2002-14
Student Loan	\$1,120	\$3,200	\$5,100	19.1%	8.1%	13.5%
Mortgage ³	15,460	28,210	26,210	10.5	-1.2	4.5
Auto	2,410	2,880	3,260	3.0	2.1	2.5
Credit Card	2,790	3,350	2,620	3.1	-4.0	-0.5
Other ³	1,120	3,110	1,130	18.6	-15.5	0.1
Total	22,900	40,750	38,320	10.1	-1.0	4.4
Debt / Personal Income	58.4%	80.3%	63.7%			

¹ Data based on all persons with a credit report and members of their immediate family (year-end levels).

² 2014 data through Q2.

³ Mortgage debt includes home equity loans. Other debt includes personal loans.

Source: Federal Reserve Bank of New York.

From 2002 to 2008, Pennsylvania per capita mortgage debt expanded at an average rate of 10.5 percent per annum, but has since declined. Some of the decline is due to fewer home equity loans. The recent high volume of foreclosures also reduced debt levels because foreclosures eliminate debt that cannot be repaid.

The improvement in household balance sheets may yield more confident consumers who are willing to increase spending in the near term. Relative to income levels, consumers are in much better financial shape now than just prior to the recession. In 2008, the total debt to total

burden may cause borrowers to postpone certain milestone purchases, such as homes and cars. However, a recent study found that although student loan debt may delay homeownership, it does not reduce homeownership rates compared to individuals without student loan debt.⁵

⁴ See "The Project on Student Debt" at http://projectonstudentdebt.org/state_by_state-data.php.

⁵ See "How Much Will Student Debt Drag on Housing?" at http://blogs.wsj.com/economics/2014/10/21/how-much-will-student-debt-drag-on-housing/?mod=djemRTE_h.

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Section 4: Revenue Outlook

For FY 2013-14, General Fund revenues totaled \$28.6 billion. For FY 2014-15, the forecast projects General Fund revenues of \$29.9 billion, a \$1.3 billion (4.7 percent) increase over the prior fiscal year. (See Table 4.1.) The forecast projects that revenues will grow at an average rate of 2.7 percent per annum from the base year through FY 2019-20. Major trends include:

- As the baby boom generation retires and the 65 or older age cohort increases dramatically, a larger share of personal income will be attributable to sources not subject to the personal income tax (pensions and Social Security).
- The improvement in household balance sheets should motivate consumer spending.
- Recent tax law changes (e.g., addbacks, sales factor market sourcing and the higher net operating loss cap) will impact corporate income tax revenues.

Five taxes comprise roughly 90 percent of General Fund revenues: personal income, sales and use, corporate net income, gross receipts and cigarette taxes. The text that follows provides a brief outlook for each of those taxes. The final section provides a general review of all other

revenue sources. Historical detail for General Fund revenues can also be found in Appendix C.

Figure 4.1 (next page) displays cumulative growth rates for state economic growth (GDP), personal income tax, sales and use tax and corporate net income tax revenues. For the purpose of this comparison, FY 1998-99 is used as the base year and dollar amounts for that year are set equal to one. Figure 4.1 illustrates that all three major revenue sources have failed to keep pace with the general expansion of the Pennsylvania economy. Different factors motivate the divergence depending on the revenue source.

The personal income tax (PIT) tracks closest to statewide economic growth because wages drive most PIT remittances (withholding) and also comprise more than half of the economic activity included in state GDP. In FY 2008-09 and FY 2009-10, revenues declined due to the severe housing and financial recession. Since then, PIT revenues have generally expanded at the same rate as the state economy. The forecast projects that trend will continue.

The sales and use tax base has slowly eroded across all years. Spending patterns have gradually shifted towards non-taxable goods and ser-

Table 4.1
General Fund Revenues
(\$ millions)

Revenue Source	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Personal Income	\$11,437	\$12,027	\$12,563	\$13,097	\$13,677	\$14,279	\$14,897
Sales and Use	9,130	9,463	9,773	10,116	10,462	10,799	11,143
Corporate Income	2,502	2,509	2,544	2,551	2,556	2,567	2,598
Gross Receipts	1,279	1,270	1,288	1,265	1,269	1,274	1,278
Cigarette	977	935	912	890	870	849	829
All Other	3,282	3,736	3,203	3,269	3,333	3,397	3,500
Total	28,607	29,940	30,283	31,187	32,166	33,164	34,245
Growth Rate	-0.1%	4.7%	1.1%	3.0%	3.1%	3.1%	3.3%

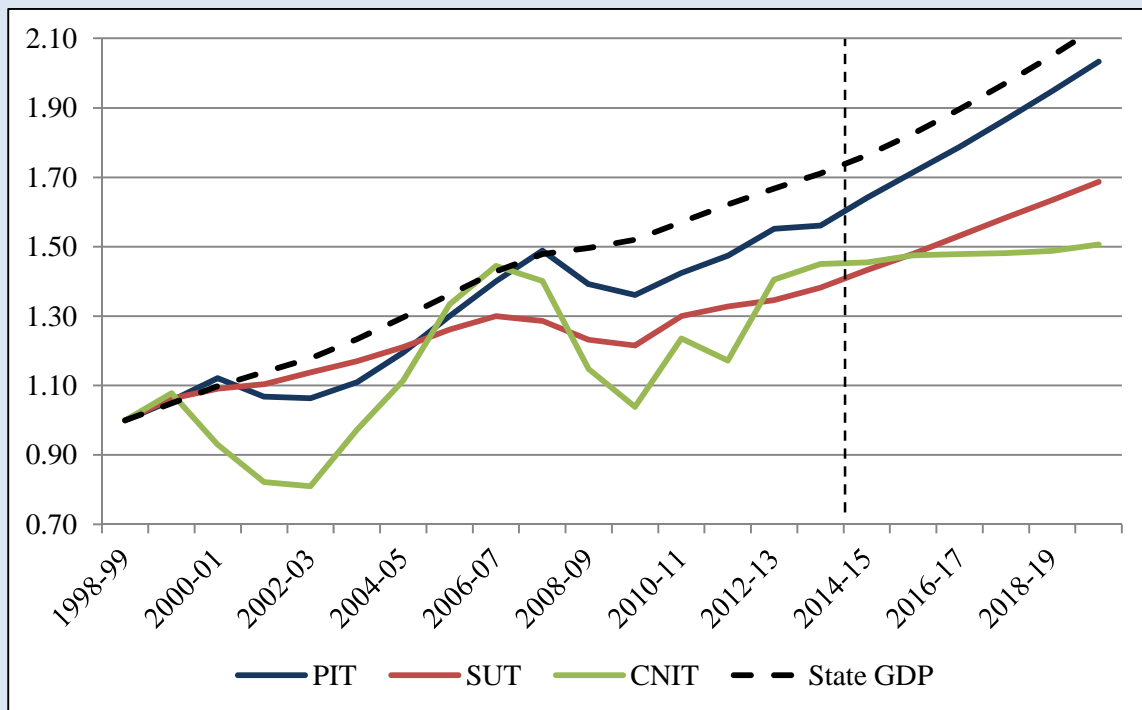
VICES, partly due to the aging of the Pennsylvania population. Moreover, a growing share of taxable items are purchased on-line from vendors that do not have nexus in Pennsylvania, and many consumers fail to remit the associated use tax. The forecast assumes that both trends will continue.

Corporate net income tax (CNIT) revenues achieved a decade peak in FY 1999-00 due to many years of productivity gains and the “dot com” expansion. Revenues then declined precipitously, followed by a rapid acceleration as national profits achieved a historically high share of the economy in 2006 (11.9 percent of GDP). A second profits contraction then ensued, and CNIT revenues have not recovered. Due to vari-

ous policy changes that reduce the effective tax rate (e.g., single sales factor apportionment, more liberal use of net operating losses), the forecast projects that the growth of CNIT revenues will continue to underperform statewide economic growth.

This simple comparison does not imply that tax revenues should grow at the same rate as the general economy. Statewide economic growth will be driven by three factors: inflation, population growth and productivity growth. The state GDP comparison merely provides a convenient benchmark to assess historical growth patterns. Ultimately, policymakers must determine the “appropriate” rate of revenue growth.

Figure 4.1
Cumulative Growth of Major Tax Revenues and State GDP



Note: Historical PIT data are adjusted from 1998-99 to 2004-05 to simulate a tax rate of 3.07 percent.
Source: Historical state GDP data from U.S. Bureau of Economic Analysis. Forecasts by IFO.

Personal Income Tax

The Commonwealth levies a 3.07 percent personal income tax (PIT) on resident and non-resident individuals, estates and trusts and pass-through business entities. Eight categories of income comprise taxable income: (1) compensation for labor services (e.g., wages, salaries, options, bonuses), (2) net profits from business operations, (3) net capital gains, (4) rent and royalty income, (5) dividends, (6) interest, (7) gambling and lottery proceeds and (8) gains or income distributed from estates or trusts. Losses, within a class of income, may only be used to offset gains within the same class of income.

The forecast projects that PIT revenues will grow at an average rate of 4.4 percent per annum from FY 2014-15 to FY 2019-20. Withholding revenues expand at a slower rate (4.0 percent) than non-withholding (5.5 percent). Non-withholding income growth typically outperforms state GDP in expansion years, but lags in recession years. The forecast includes strong growth in annual payments for the current fiscal year due to a weak final payment in 2014. This pattern occurred because some taxpayers pulled taxable events into 2012 from 2013 to take advantage of lower federal tax rates.

Sales and Use Tax

The Commonwealth levies a 6.0 percent sales and use tax on the retail sale of tangible personal property and certain services. Major exemptions include clothing, certain foods, prescription and non-prescription drugs and residential heating fuels.

The forecast projects that sales and use tax revenues will grow at an average rate of 3.3 percent per annum from FY 2014-15 to FY 2019-20. Motor vehicle revenues expand by 2.3 percent per annum, while non-motor vehicle revenues expand by 3.5 percent per annum.

Two technical factors affect the growth of non-motor vehicle revenues. First, e-commerce collections for remote sellers who have nexus in Pennsylvania are expected to grow rapidly. In FY 2013-14, those collections totaled \$71 million, an increase of 64.6 percent over the prior year. Second, the forecast includes the impact of Act 89 of 2014. For FY 2019-20, the forecast assumes that Act 89 will produce roughly \$40 million of sales tax revenue.

Table 4.2
Personal Income and Sales and Use Tax Revenues
(\$ millions)

	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Personal Income							
Withholding	\$8,744	\$9,052	\$9,400	\$9,777	\$10,175	\$10,582	\$11,011
Quarterly	1,493	1,586	1,697	1,785	1,887	1,991	2,092
Annuals	<u>1,200</u>	<u>1,388</u>	<u>1,466</u>	<u>1,535</u>	<u>1,615</u>	<u>1,706</u>	<u>1,794</u>
Total	11,437	12,027	12,563	13,097	13,677	14,279	14,897
Growth Rate	0.6%	5.2%	4.5%	4.2%	4.4%	4.4%	4.3%
Sales and Use							
Non-Motor	\$7,892	\$8,188	\$8,461	\$8,755	\$9,071	\$9,392	\$9,713
Motor	<u>1,238</u>	<u>1,275</u>	<u>1,312</u>	<u>1,361</u>	<u>1,391</u>	<u>1,407</u>	<u>1,430</u>
Total	9,130	9,463	9,773	10,116	10,462	10,799	11,143
Growth Rate	2.7%	3.7%	3.3%	3.5%	3.4%	3.2%	3.2%

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 forecast projects that corporate net income tax revenues will expand at an average rate of 0.7 percent per annum. Three factors constrain long-run revenue growth:

- Unused depreciation deductions remain to be claimed due to Pennsylvania’s treatment of federal 50 percent bonus depreciation.
- A higher net operating loss deduction threshold allows corporations to more quickly use any existing and future net operating losses.
- National profits now comprise an all-time high share of U.S. GDP (12.6 percent) and the forecast projects modest profits growth over the next five years.

Gross Receipts Tax

The gross receipts tax is primarily levied on gross receipts from sales of electricity (59 mills) and telecommunications services (50 mills) within Pennsylvania. In FY 2013-14, electricity and telecommunications comprised roughly 65 and 35 percent of the tax base, respectively.

The forecast projects flat revenue growth due to (1) modest electricity sales (0.7 percent per annum) from advances in energy efficient technologies and lower electricity prices from natural gas and (2) the continued long-term decline of the telecommunications tax base.⁶

Cigarette Tax

The cigarette tax is levied at a rate of 8 cents per cigarette or \$1.60 per pack (20 cigarettes per pack). For FY 2014-15 to FY 2019-20, the forecast projects average growth of -2.4 percent per annum. This long-term trend is consistent with the average annual decline since the last tax increase (-3.2 percent). The forecast incorporates the impact of the recent Philadelphia cigarette tax, which imposes a \$2 tax per pack in addition to the state tax. The impact of that tax increase is expected to decrease revenues by \$23 million in FY 2019-20.

Table 4.3
Corporate Net Income, Gross Receipts and Cigarette Tax Revenues
(\$ millions)

	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Corp. Net Income	\$2,502	\$2,509	\$2,544	\$2,551	\$2,556	\$2,567	\$2,598
Growth Rate	3.2%	0.3%	1.4%	0.3%	0.2%	0.4%	1.2%
Gross Receipts	\$1,279	\$1,270	\$1,288	\$1,265	\$1,269	\$1,274	\$1,278
Growth Rate	-2.1%	-0.7%	1.4%	-1.8%	0.3%	0.4%	0.3%
Cigarette	\$977	\$935	\$912	\$890	\$870	\$849	\$829
Growth Rate	-4.6%	-4.3%	-2.5%	-2.4%	-2.2%	-2.4%	-2.3%

⁶ See “Electric Power Outlook for Pennsylvania 2013-2018” at http://www.puc.state.pa.us/General/publications_reports/pdf/EPO_2014.pdf.

All Other Revenue Sources

The remaining 10 percent of General Fund revenues come from the 14 sources listed in Table 4.4. The forecast projects that revenues from these sources will decline by \$236 million through FY 2019-20, an average reduction of 1.3 percent per annum. Notable trends include the following:

- Much of the decline is due to the \$322 million of special funds transfers to the General Fund in FY 2014-15. Those amounts are included in the License, Fees and Miscellaneous category. That category also includes \$150 million from the reduction in the holding period for escheats.
- Table games tax revenues include the anticipated opening of the remaining Category 1 and Category 2 casinos at the start of FY 2018-19. The licenses and fees revenue associated with those casino open-

ings include: \$100 million in slots license fees (FY 2016-17) and \$41.2 million in table games certification fees (FY 2017-18).

- The capital stock and franchise tax is eliminated for tax years beginning on or after January 1, 2016.
- The inheritance tax forecast for FY 2014-15 includes an unusually large estimated tax payment received in October 2014.
- In FY 2013-14, \$36.8 million of bank shares tax revenues were remitted in response to an information notice issued by the Department of Revenue to clarify a recent change to tax law. The forecast does not include additional revenues from reissuance of that notice.

See Appendix C for a historical time series of General Fund revenues.

Table 4.4
Other General Fund Revenue Sources
(\$ millions)

	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Capital Stock & Fran.	\$320	\$243	\$118	\$0	\$0	\$0	\$0
Utility Property	37	40	41	43	45	47	48
Insurance Premiums	432	443	456	463	470	476	483
Financial Institutions	318	288	299	311	323	336	350
Other Selective Bus.	10	2	2	2	2	2	2
Malt Beverage	25	25	26	26	26	26	26
Liquor	321	336	349	363	378	393	408
Realty Transfer	375	402	426	457	486	510	532
Inheritance	877	955	931	956	976	994	1,015
Table Games	90	93	94	97	101	112	116
Minor and Repealed	-33	-49	-59	-60	-62	-64	-66
Liquor Store Profits	80	80	80	80	80	80	80
Lic., Fees & Misc.	358	806	363	453	428	399	416
Fines, Penalties & Int.	<u>71</u>	<u>74</u>	<u>76</u>	<u>79</u>	<u>82</u>	<u>86</u>	<u>89</u>
Total	3,282	3,736	3,203	3,269	3,333	3,397	3,500
Growth Rate	-9.5%	13.8%	-14.3%	2.1%	2.0%	1.9%	3.0%

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Section 5: Expenditure Outlook

For FY 2014-15, total General Fund appropriations are \$29.0 billion, a 1.5 percent increase over FY 2013-14. The forecast projects that General Fund expenditures will increase to \$35.5 billion by FY 2019-20, an average increase of 4.1 percent per annum. If pension contributions are excluded, then the respective figures are \$32.1 billion and 3.3 percent per annum.

The expenditure projections assume that the overall state complement remains constant, except for law enforcement agencies and Human Services. Six other factors motivate growth of General Fund expenditures:

- expanding or contracting service populations;
- employee wage compensation;
- inflationary adjustments for healthcare benefits for current and retired employees;
- growth in the pool of retirees who receive healthcare benefits;
- pension contributions for state employees and public school employees; and
- non-personnel expenditures such as utilities and office supplies.

Table 5.1 provides a summary for the five agencies that comprise more than 90 percent of total General Fund expenditures. These agencies motivate expenditure growth rates through FY 2019-20.

Table 5.1
General Fund Expenditures by Agency
(\$ millions)

	2014-15 ¹	2015-16	2016-17	2017-18	2018-19	2019-20
Dollar Amounts						
Education	\$11,548	\$12,345	\$12,893	\$13,314	\$13,704	\$14,109
Human Services	11,208	11,826	12,315	12,872	13,367	13,903
Corrections	2,060	2,151	2,248	2,306	2,350	2,400
Treasury	1,147	1,208	1,262	1,342	1,418	1,453
PHEAA ²	391	400	409	418	427	437
All Other	2,671	2,847	2,952	3,028	3,092	3,162
Total	29,027	30,777	32,079	33,280	34,358	35,464
Growth Rates						
Education	2.8%	6.9%	4.4%	3.3%	2.9%	3.0%
Human Services	1.1	5.5	4.1	4.5	3.8	4.0
Corrections	3.1	4.4	4.5	2.6	1.9	2.1
Treasury	2.7	5.3	4.5	6.3	5.7	2.5
PHEAA ²	1.3	2.3	2.3	2.2	2.2	2.3
All Other	-3.9	6.6	3.7	2.6	2.1	2.3
Total	1.5	6.0	4.2	3.7	3.2	3.2

¹ FY 2014-15 represents the amount appropriated.

² Pennsylvania Higher Education Assistance Agency.

Table 5.2 provides detail based on the type of expenditure. Broad trends include:

- PSERS contributions grow dramatically in FY 2015-16 because Tobacco Settlement Fund resources (\$225 million) were used in the prior fiscal year.
- Retiree health benefits grow by more than 5 percent per annum. The forecast assumes that the pool of retirees who qualify for health benefits expands by 2 percent per annum.

- Debt service expands at a relatively quick rate due to rising interest rates and churning debt obligations.
- The K-12 expenditures grow modestly due to the contraction of the school age population.

Table 5.2
General Fund Expenditures by Expenditure Type
(\$ millions)

	2014-15 ¹	2015-16	2016-17	2017-18	2018-19	2019-20
Expenditure Type						
Personnel						
Wages ²	\$2,323	\$2,373	\$2,425	\$2,480	\$2,539	\$2,600
Pensions–SERS	532	663	799	829	815	814
Pensions–PSERS	1,158	1,750	2,064	2,244	2,384	2,532
Retiree Health Benefits	344	361	380	400	421	443
Health & Other Benefits ³	604	621	639	659	680	701
Debt Service	1,097	1,156	1,210	1,290	1,366	1,399
K-12 Expenditures	7,285	7,456	7,631	7,812	8,000	8,193
PHEAA ⁴	391	400	409	418	427	437
All Other	<u>15,293</u>	<u>15,996</u>	<u>16,521</u>	<u>17,148</u>	<u>17,725</u>	<u>18,345</u>
Total	29,027	30,777	32,079	33,280	34,358	35,464
Growth Rates						
Personnel						
Wages ²	2.3%	2.2%	2.2%	2.3%	2.4%	2.4%
Pensions–SERS	26.1	24.6	20.5	3.8	-1.7	-0.1
Pensions–PSERS	15.0	51.1	17.9	8.7	6.2	6.2
Retiree Health Benefits	7.8	4.9	5.3	5.3	5.3	5.2
Health & Other Benefits ³	9.6	2.8	2.9	3.1	3.2	3.1
Debt Service	2.8	5.4	4.7	6.6	5.9	2.4
K-12 Expenditures	0.3	2.3	2.3	2.4	2.4	2.4
PHEAA ⁴	1.3	2.3	2.3	2.2	2.2	2.3
All Other	<u>-0.1</u>	<u>4.6</u>	<u>3.3</u>	<u>3.8</u>	<u>3.4</u>	<u>3.5</u>
Total	1.5	6.0	4.2	3.7	3.2	3.2

¹ FY 2014-15 represents the amount appropriated.

² Includes wages, salaries, bonuses and payroll taxes (Medicare and Social Security).

³ Includes all non-pension benefits such as health and life insurance and other miscellaneous benefits.

⁴ Pennsylvania Higher Education Assistance Agency.

Table 5.3 lists the economic and demographic forecasts used to extrapolate General Fund expenditures from the FY 2014-15 base year through FY 2019-20. All expenditures in the base year were disaggregated into five categories across all agencies: (1) wages, (2) pensions, (3) healthcare and other benefits, (4) retiree healthcare benefits and (5) all other expenditures (e.g., grants and subsidies, non-personnel expenses). Those categories were forecast separately for each agency using the extrapolators shown below and were then recombined at the agency level. Although certain appropriations have not changed over several years (e.g., PHEAA grants), the forecast assumes those amounts will increase based on the service population they support and inflation in order to maintain a constant level of service.

Wage compensation comprises roughly 8 percent of total General Fund expenditures. For each agency, wages were extrapolated using two factors. The first factor is an agency-specific employee longevity factor published by the Office of the Budget (not shown). For all agencies, that factor is negative due to retirements at the upper end of the pay scale that are replaced by younger workers who receive lower wages. The second factor is a general factor that reflects (1) a cost of living increase and (2) an average step increase. The forecast assumes that factor is the

same across all agencies (2.8 to 3.0 percent per annum).

The SERS pension extrapolator represents the mandatory increase in pension contributions based on statute. The extrapolator in Table 5.3 does not include projected growth in wages or personnel since those factors may be unique to each agency due to agency-specific longevity factors.

The retiree healthcare extrapolator includes an inflationary increase for healthcare costs and growth in the number of retirees who are eligible to receive benefits. Recent data from the Office of Administration suggest that eligible retirees could increase by 2.0 percent per annum.

Non-Personnel expenses include items such as computers, office supplies and utilities. The forecast assumes those expenditures expand at the same rate as the regional CPI-U. Non-personnel expenses also include grants or subsidies made to local units. Forecasts for grants and subsidies such as the basic education subsidy assume that the service population grows with demographic projections and the average cost to provide services grows with a relevant inflation measure.

The pages that follow provide additional detail for pensions, debt service and the three largest executive agencies.

**Table 5.3
General Fund Expenditure Extrapolators**

Demographics	2015-16	2016-17	2017-18	2018-19	2019-20
Age 5 to 19	-0.4%	-0.4%	-0.5%	-0.6%	-0.6%
Age 20 to 64	0.0	0.0	-0.1	-0.1	-0.1
Age 65 and Older	2.6	2.7	2.8	2.8	2.8
All Residents	0.4	0.4	0.4	0.4	0.4
Expenses					
Personnel					
Wages	2.8%	2.8%	2.9%	3.0%	3.0%
Pensions - SERS	22.0	18.0	1.4	-3.9	-2.5
Health & Other Benefits	2.9	3.0	3.1	3.2	3.2
Retiree Healthcare	5.0	5.1	5.2	5.3	5.3
Non-Personnel	1.7	1.9	2.0	2.1	2.1

Source: Demographic projections from Pennsylvania State Data Center. Other forecasts by IFO.

Pensions

Mandated employer contributions for state employee and school employee pensions will consume a growing share of General Fund appropriations through FY 2019-20. Payments to the State Employees' Retirement System (SERS) and the Public School Employees' Retirement System (PSERS) are projected to increase from \$1.7 billion, or 6 percent of appropriations, in FY 2014-15 to \$3.3 billion, or nearly 10 percent of appropriations, by FY 2019-20.

Pension contribution projections are based on (1) the underlying rate of change applied to personnel costs of the employer and (2) the ratio of the employer contribution rate in the forecast year to the rate in the preceding year. The Commonwealth reimburses school districts for a portion of their employer contributions, and the PSERS projection represents the state share (55.8 percent for FY 2014-15).

Table 5.4 displays the most recent publicly available estimates for employer contribution rates for the two pension systems. Table 5.5 displays estimates for SERS and PSERS contributions.

The SERS projections represent amounts paid from General Fund appropriations. In addition to appropriations, state agencies use augmentations, federal funds and transfers from other state funds to make employer contributions. For FY 2014-15, agencies making employer contri-

Table 5.4
Employer Contribution Rates

Fiscal Year	Employer Rate ¹		% Increase in Rate	
	SERS	PSERS	SERS	PSERS
2012-13	11.50	12.36	43.7%	42.9%
2013-14	16.00	16.93	39.1	37.0
2014-15	20.50	21.40	28.1	26.4
2015-16	25.00	25.84	22.0	20.7
2016-17	29.50	29.27	18.0	13.3
2017-18	29.92	30.25	1.4	3.3
2018-19	28.76	31.28	-3.9	3.4
2019-20	28.05	32.08	-2.5	2.6

¹ Expressed as a percentage of payroll.

Sources: Rates are from SERS and PSERS. Percentage increases calculated by the IFO.

butions from General Fund appropriations will make additional contributions of \$213 million from non-appropriated sources. By FY 2019-20, these contributions could rise to \$328 million based on projected employer contribution rates and payroll growth. It is unclear whether the growth in non-appropriated sources will be sufficient to fund the higher contributions. If it is insufficient, then General Fund appropriations will need to absorb part of the shortfall.

Table 5.5
Employer Pension Contributions – State General Fund Amounts
(\$ millions)

	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
SERS	\$422	\$532	\$663	\$799	\$829	\$815	\$814
PSERS ¹	<u>1,007</u>	<u>1,158</u>	<u>1,750</u>	<u>2,064</u>	<u>2,244</u>	<u>2,384</u>	<u>2,532</u>
Total	1,429	1,690	2,413	2,863	3,072	3,199	3,346
Growth Rate		18.3%	42.8%	18.7%	7.3%	4.1%	4.6%

¹ FY 2013-14 includes \$58 million in lapses. FY 2014-15 reduced by \$225 million for transfer of assets from the Tobacco Settlement Investment Advisory Board.

Human Services

The Department of Human Services (DHS), formerly known as the Department of Public Welfare, provides access to medical and other services to keep the Commonwealth's most vulnerable residents safe and healthy. For FY 2014-15, the department was appropriated \$11.2 billion in spending authority. Through FY 2019-20, the forecast projects that spending will increase to \$13.9 billion, an average increase of 4.4 percent per annum from the budget year.

The provision of Medicaid services is the largest expenditure for DHS. Medicaid plays a critical role in the provision of healthcare services for low-income residents. For Pennsylvania, there are two Medicaid-related programs: Medical Assistance (MA) and Healthy PA.

Medical Assistance is a joint state/federal program that provides healthcare coverage to low-income residents. Recent data reveal that aver-

age monthly MA enrollment for FY 2013-14 was 2.29 million enrollees. Data for the first three months of the current fiscal year also suggest an average monthly enrollment of 2.29 million enrollees. The MA forecast for this report uses that figure as the projection for FY 2014-15 and assumes that the number of recipients expands at the same rate as the Commonwealth's population (0.4 percent per annum). This methodology yields an average MA enrollment of 2.34 million by FY 2019-20. (See Appendix D for a historical time series of MA recipients.)

For FY 2014-15, the "big five" MA programs (Outpatient, Inpatient, Capitation, Long-Term Care and Medicare Part D) comprise 51.9 percent of the department's \$11.2 billion General Fund appropriation. The MA expenditure projection assumes that the average cost per enrollee increases with the healthcare inflation factor from Table 5.3. Based on these assumptions,

Table 5.6
Projected Total and General Fund Expenditures for Human Services
(\$ millions)

FY 2014-15 Detail	General Fund Appropriations	Other Sources		Total		
		Federal	State ¹			
Wages ²	\$335	\$527	\$21	\$883		
Pensions	104	55	1	160		
Retiree Health Benefits	61	82	0	143		
Health & Other Benefits ³	179	51	1	231		
All Other	<u>10,530</u>	<u>146</u>	<u>2,155</u>	<u>12,832</u>		
Total	11,208	862	2,178	14,249		
General Fund Expenditure Projections						
	2014-15⁴	2015-16	2016-17	2017-18	2018-19	2019-20
Wages ²	\$335	\$342	\$350	\$358	\$367	\$376
Pensions	104	130	157	163	160	160
Retiree Health Benefits	61	64	67	70	74	78
Health & Other Benefits ³	179	184	189	195	201	208
All Other	<u>10,530</u>	<u>11,107</u>	<u>11,552</u>	<u>12,085</u>	<u>12,564</u>	<u>13,081</u>
Total	11,208	11,826	12,315	12,872	13,367	13,903
Growth Rate	1.1%	5.5%	4.1%	4.5%	3.8%	4.0%

¹ Includes augmentations and revenues from funds other than the General Fund.

² Includes wages, salaries, bonuses and payroll taxes (Medicare and Social Security).

³ Includes all non-pension benefits such as health and life insurance and other miscellaneous benefits.

⁴ FY 2014-15 represents the amount appropriated.

the forecast projects MA expenditures will increase at an average rate of 3.5 percent per annum through FY 2019-20. The computed growth rate excludes the impact of the delayed managed care organization payment.

Healthy PA, the new Medicaid expansion program, received approval from the Centers for Medicare & Medicaid Services (CMS) in September 2014. Healthy PA allows the use of federal funds to provide private coverage for newly eligible adults with incomes up to 138 percent of the federal poverty level. For FY 2014-15, DHS projects that 600,000 newly eligible adults will enroll in Healthy PA. By FY 2018-19, DHS estimates over 685,000 will be enrolled in Healthy PA.

The forecast includes projected savings from the implementation of Healthy PA. The Office of the Budget projects savings of \$125 million for FY 2014-15 (partial year) and \$600 million for FY 2015-16 (full year). Beginning with calendar year 2017, the Commonwealth is responsible for 5 percent of the costs from newly eligible enrollees under Healthy PA. That share increases to 10 percent in 2020 and maintains that level in future years.

For FY 2014-15, the MA program will receive considerable funds from the Tobacco Settlement Fund (\$351 million, includes executive authorization), the Lottery Fund (\$502 million), hospital/nursing home/intermediate care facilities assessments (\$1.3 billion), the gross receipts tax on managed care organizations (\$754 million) and miscellaneous revenue from various sources (\$52 million). These revenue sources will contribute \$2.95 billion towards MA expenditures.

Based on the projected MA expenditure growth rate of 3.5 percent per annum, these revenue sources will need to generate \$3.50 billion by FY 2019-20 to supply the same share of support to MA programs as supplied in the base year.

The MA funding support provided by the Tobacco and Lottery Funds increased significantly in FY 2014-15. The forecast assumes that those funds will be unable to maintain that level of support beyond the base year. For FY 2015-16 and all future years, the forecast assumes that funding support reverts to the FY 2013-14 levels of \$244 million (Tobacco) and \$330 million (Lottery). By FY 2019-20, the assumption that those funding sources (1) revert to their prior levels and (2) supply a flat level of support in future years implies that additional funds of \$437 million must be secured to support projected MA expenditures.

The forecast assumes that the gross receipts tax will be maintained in some form that allows that funding source to supply the same share of funding as supplied in the base year. The forecast also assumes that payments to managed care organizations increase by \$394 million in FY 2015-16 due to a delayed payment from FY 2014-15. That amount is carried forward to all future years.

All other programs administered by DHS (e.g., Long-Term Care, Mental Health, County Youth) assume that (1) service populations expand from the base year based on the relevant demographic forecast and (2) the average cost to supply services grows with a relevant inflation factor.

Education

The Pennsylvania Department of Education (PDE) provides resources, support and oversight to the state's 500 school districts to help schools meet the needs of the Commonwealth's 1.74 million public school students and 233,000 private and non-public school students. For FY 2014-15, PDE was appropriated \$11.5 billion in spending authority. Through FY 2019-20, the forecast projects that spending will increase to \$14.1 billion, an average increase of 4.1 percent per annum from the budget year.

Over the past decade, total public, private and non-public school enrollment has contracted and demographic projections suggest that trend will continue. The demographics used for this report project that the 5-19 year age cohort will contract by 0.5 percent per annum through FY 2019-20.

Expenditures on K-12 students represent the largest PDE expenditure and include the basic education subsidy, special education, pupil transportation, non-public and charter transportation and services to non-public schools. For

FY 2014-15, appropriations for these services total \$7.3 billion. The K-12 expenditure forecast extrapolates the number of students by projected growth rates for the 5-19 age cohort and the average cost per pupil in the base year by wage growth. The product of those two series yields the K-12 expenditure forecast. The forecast grows at an average rate of 2.4 percent per annum.

The appropriation for higher education is \$1.2 billion for FY 2014-15. The forecast assumes that appropriation will expand with the increase of the 20-24 age cohort and general inflation. Through FY 2019-20, this expenditure increases at an average rate of 2.5 percent per annum.

The forecast assumes that the Ready to Learn block grant is maintained throughout the forecast period. For FY 2014-15, the grant is \$200 million. Although flat lined for recent years, the forecast also assumes growth for the Career and Technical Education (\$62.0 million) and Public Library Subsidy (\$53.5 million) appropriations.

Table 5.7
Projected General Fund Expenditures for Education
(\$ millions)

	2014-15 ¹	2015-16	2016-17	2017-18	2018-19	2019-20
Wages ²	\$16	\$17	\$17	\$18	\$18	\$18
Pensions – PSERS	1,158	1,750	2,064	2,244	2,384	2,532
Pensions – SERS	2	3	3	3	3	3
Retiree Health Benefits	2	2	2	2	2	3
Health & Other Benefits ³	3	3	3	3	3	3
K-12 Expenditures ⁴	7,285	7,456	7,631	7,812	8,000	8,193
All Other	<u>3,083</u>	<u>3,115</u>	<u>3,173</u>	<u>3,232</u>	<u>3,293</u>	<u>3,357</u>
Total	11,548	12,345	12,893	13,314	13,704	14,109
Growth Rate	2.8%	6.9%	4.4%	3.3%	2.9%	3.0%

¹ FY 2014-15 represents the amount appropriated.

² Includes wages, salaries, bonuses and payroll taxes (Medicare and Social Security).

³ Includes all non-pension benefits such as health and life insurance and other miscellaneous benefits.

⁴ Includes basic education, special education, pupil transportation, non-public and charter transportation and services to non-public schools.

Corrections

The mission of the Department of Corrections (DOC) is to protect the public, provide for the care and supervision of all offenders under their jurisdiction and assist their re-entry into society. In 2013, DOC incarcerated over 51,000 inmates and managed 1,723 individuals on active community supervision. For FY 2014-15, the DOC was appropriated \$2.1 billion in spending authority. Through FY 2019-20, the forecast projects that spending will increase to \$2.4 billion, an average increase of 3.2 percent per annum from the budget year.

From FY 2004-05 to FY 2013-14, DOC expenditures grew from \$1.3 billion to \$2.0 billion, an increase of \$668 million (50.2 percent). Much of that increase was due to the rapid growth of the inmate population. From 2004 to 2013, DOC tabulations show that the inmate population expanded from 41,000 to 51,512, an increase of 10,512 (25.6 percent) inmates. During that time period, the total population of the Common-

wealth expanded at a much slower rate (3.5 percent). (See Appendix D for a historical time series of DOC inmates, receptions and releases.)

Expenditure projections rely on inmate population projections published by the Urban Institute.⁷ For 2014 through 2018, the Urban Institute projects that the inmate population will decline by roughly 100 inmates per annum. Due to the reduction in the inmate population, the forecast assumes a minor reduction in agency complement.

Following the expiration of the current wage contract, wage compensation is assumed to grow by 2.3 percent per annum. Expenditure projections are sensitive to new wage contracts because labor compensation comprises a large portion of DOC appropriations (75.5 percent for FY 2014-15). Most DOC employees are covered by a union contract (74.9 percent for FY 2013-14) while the remainder is management (25.1 percent) and not under contract.⁸

Table 5.8
Projected General Fund Expenditures for Corrections
(\$ millions)

	2014-15 ¹	2015-16	2016-17	2017-18	2018-19	2019-20
Wages ²	\$998	\$1,018	\$1,038	\$1,060	\$1,084	\$1,108
Pensions	213	265	318	329	322	321
Retiree Health	130	137	144	151	159	168
Health & Other Benefits ³	214	220	226	233	240	247
All Other	<u>504</u>	<u>512</u>	<u>522</u>	<u>533</u>	<u>544</u>	<u>556</u>
Total	2,060	2,151	2,248	2,306	2,350	2,400
Growth Rate	3.1%	4.4%	4.5%	2.6%	1.9%	2.1%

¹ FY 2014-15 represents the amount appropriated.

² Includes wages, salaries, bonuses and payroll taxes (Medicare and Social Security).

³ Includes all non-pension benefits such as health and life insurance and other miscellaneous benefits.

⁷ See "Justice Reinvestment Initiative State Assessment Report" at <http://www.urban.org/UploadedPDF/412994-Justice-Reinvestment-Initiative-State-Assessment-Report.pdf>.

⁸ Data provided by the Department of Corrections.

Treasury

The Pennsylvania Department of Treasury is responsible for the receipt and disbursement of funds on behalf of the Commonwealth, as well as the deposit, investment and safe keeping of monies and securities belonging to the state of Pennsylvania. As of June 30, 2013, Treasury managed approximately \$98 billion in funds. Treasury invests those funds in pooled money accounts, bonds and various securities. Treasury also manages debt issuances on behalf of the Commonwealth, in order to provide funding for long-term budget projects and to meet short-term cash flow needs.

Debt Issuances

The Commonwealth may authorize debt for a variety of purposes and terms. General obligation bonds (20 year) are the largest source of debt issuance and are backed by the full faith and credit of the Commonwealth. These bonds may be financed with revenue from the General Fund or any of the various special funds (e.g., highway projects funded via the Motor License Fund and Growing Greener initiatives funded via the Environmental Stewardship Fund). The source of repayment is established by statute and generally determined based on how the bor-

rowed funds will be used. The focus of this section is on debt financed with General Fund revenue.

General obligation bonds are issued to meet cash flow needs, and are not utilized to fully fund specific projects. Each year these bonds are authorized in an amount necessary to cover that year's cash flow related to currently authorized projects. Therefore, the lag between approval of a project and the bond issue to provide funding for that project can vary greatly based on the project schedule and the agency administering the funds.

Bond Ratings

The debt service obligations created by the bond issues are the primary determinant of Treasury's budget, as approximately 96 percent of General Fund expenditures are used for this purpose. The amount of the debt service associated with each issue is a function of interest rates, and the rates assigned to the issue are based largely on the bond rating specified for that particular issue. These ratings are assigned by a rating agency prior to the issuance of any bond, and can also be updated periodically via public release.

Table 5.9
Projected Debt Service Payments
(\$ millions)

	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Projected Bond Issue ¹	n.a.	\$1,321	\$1,305	\$1,316	\$1,293	\$1,150	\$1,135
New Debt Service ²	n.a.	29	126	224	324	421	513
Existing Debt Service ³	n.a.	<u>1,067</u>	<u>1,031</u>	<u>987</u>	<u>967</u>	<u>944</u>	<u>886</u>
Total Debt Service	\$1,067	1,097	1,156	1,210	1,290	1,366	1,399
Growth Rate	0.5%	2.8%	5.5%	4.7%	6.6%	5.8%	2.5%

¹ Based on IFO projections of future bond issues. These projections include a reduction in RACP over time and a stabilization of borrowing related to buildings and structures.

² Debt service related to bond issue projections. This estimate does not include payments for debt incurred prior to FY 2014-15 and excludes debt service payments that originate from non-General Fund sources.

³ Debt service related to bonds issued prior to FY 2014-15. Excludes payments that originate from non-General Fund sources.

Table 5.10
Pennsylvania Bond Ratings

Bond Issue	Assigned Ratings		
	Moody's	S&P	Fitch
March 2009	Aa2	AA	AA
May 2009	Aa2	AA	AA
January 2010	Aa2	AA	AA
May 2010	Aa1	AA	AA+
December 2010	Aa1	No Rating	AA+
October 2011	Aa1	AA	AA+
April 2012	Aa1	AA	AA+
April 2013	Aa2	AA	AA+
October 2013	Aa2	AA	AA
April 2014	Aa2	AA	AA
Current Rating	Aa3	AA-	AA-

After repeatedly warning that Pennsylvania's lack of financial reserves and rapidly growing unfunded pension liability over the near-term could result in a lower rating, all three bond rating agencies (Standard & Poor's, Moody's and Fitch) recently lowered the rating that will be assigned to future issues of Pennsylvania general obligation bonds. (See Table 5.10 for a history of ratings assigned to recent bond issues.) At this time it is unclear how the lower rating will impact overall borrowing costs. Additional bonds have not been issued since the downgrade.

Interest Rate Sensitivity

The potential for higher interest rates and increased borrowing costs represent a clear risk over the forecast period. In order to estimate the magnitude of any possible increase in costs, a long-term forecast for the issuance of general obligation debt was developed. Beyond the five-year projections detailed in Table 5.9, this forecast assumes that debt issuances grow at a rate of 2 percent annually. The baseline interest rate scenario assumes that rates remain flat beyond FY 2019-20. The analysis focuses on the impact of rising interest rates on debt service payments due in FY 2014-15 through FY 2034-35 (base year plus 20 years).

Under these conditions, the analysis estimates that an interest rate that is 0.5 percentage points higher beginning with bonds issued in FY 2014-15 (see Table 5.9) increases borrowing costs by nearly \$1 billion through FY 2034-35. Initially the annual increase is very small (\$25.2 million for FY 2019-20), as most of the debt service in the current fiscal year is associated with debt issued in prior years (roughly 97 percent) and at lower rates. Over time, a larger share of the debt service originates from new debt under the higher rate and the impact ultimately grows to almost \$100 million annually. The impact of any increase is linear, so that an additional premium of

Table 5.11
Projected General Fund Expenditures for Treasury
(\$ millions)

	2014-15 ¹	2015-16	2016-17	2017-18	2018-19	2019-20
Wages ²	\$14	\$14	\$14	\$15	\$15	\$15
Pensions	4	5	6	6	6	6
Retiree Health	3	3	3	3	3	3
Health & Other Benefits ³	4	4	5	5	5	5
Debt Service	1,097	1,156	1,210	1,290	1,366	1,399
All Other	<u>26</u>	<u>26</u>	<u>24</u>	<u>23</u>	<u>24</u>	<u>24</u>
Total	1,147	1,208	1,262	1,342	1,418	1,453
Growth Rate	2.7%	5.4%	4.4%	6.3%	5.7%	2.5%

¹ FY 2014-15 represents the amount appropriated.

² Includes wages, salaries, bonuses and payroll taxes (Medicare and Social Security).

³ Includes all non-pension benefits such as health and life insurance and other miscellaneous benefits.

1 percentage point applied to the interest rate increases costs by nearly \$2 billion over the next 20 years, or twice the impact of a 0.5 percentage point increase.

Forecast

The baseline debt service projections detailed in Table 5.9 maintain current levels of capital project funding for the buildings and structures category, and reflect a continued reduction in borrowing related to the Redevelopment Assistance Capital Projects program. The forecast also in-

corporates rising interest rates over the forecast horizon. This increase is related to an anticipated rise in interest rates generally, and does not include the potential for additional increases related to the Commonwealth's lower debt rating.

For FY 2014-15, the Treasury was appropriated \$1.1 billion in spending authority. (See Table 5.11.) Through FY 2019-20, the forecast projects that spending will increase to \$1.5 billion, an average increase of 4.8 percent per annum from the current fiscal year.

All Other Agencies

The forecasts for all other executive agencies use the extrapolators from Table 5.3. Most forecasts increase by 2.5 to 3.5 percent per annum over the forecast window. Notable assumptions across agencies include:

- The Department of Revenue made a \$45 million transfer to the Philadelphia School District in FY 2013-14. That transfer is not included in any future years.
- The forecast assumes the \$65.1 million of appropriations for the Legislature vetoed by the Governor for the current fiscal year will be reinstated for all future fiscal years.
- Most expenditures made by the State Police (76.4 percent for FY 2014-15) are supplied by other funds, such as the Motor License Fund. If those funds cannot provide the revenues necessary to support projected expenditures, then additional demands may fall on the General Fund.
- The forecast assumes that certain Children's Health Insurance Program enrollees do not migrate to Medical Assistance. That outcome has not yet been determined.

Table 5.12
General Fund Expenditures - All Other Agencies
(\$ millions)

Agency	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Judiciary	\$317	\$335	\$353	\$363	\$370	\$378
Legislature	263	342	357	367	375	384
State Police	221	234	249	256	262	268
Comm. & Economic Development	204	208	213	217	221	226
Health	199	205	211	216	220	225
Revenue	177	184	183	187	191	196
Executive Offices	174	180	186	190	194	198
Probation & Parole	156	167	177	183	188	194
Environmental Protection	139	146	153	157	160	164
Agriculture	127	130	133	136	139	142
General Services	120	125	129	132	135	138
Military & Veterans Affairs	120	125	129	133	136	139
Insurance	118	121	124	127	130	133
All Others	<u>334</u>	<u>345</u>	<u>357</u>	<u>364</u>	<u>370</u>	<u>377</u>
Total	2,671	2,845	2,952	3,028	3,091	3,163
Growth Rate	-3.9%	6.5%	3.8%	2.6%	2.1%	2.3%

Section 6: Pennsylvania's Fiscal Condition

The data and analysis presented in this report facilitate an assessment of the Commonwealth's fiscal condition over the next five fiscal years. Previous sections discussed demographic and economic trends that are relevant to the outlook. The report uses those trends to make projections of revenue and expenditures on the basis of current law and policy. This section combines those projections to provide policymakers with an assessment of the long-term budget outlook.

Although demographic trends have long-term impacts, the 2008-09 recession and the tepid recovery play a major role in the Commonwealth's current budget challenges. The contraction in tax revenues during previous recessions (-1.6 percent for FY 1991-92, -2.6 percent for FY 2000-01) were much less severe than the 7.3 percent reduction experienced in FY 2008-09. Moreover, robust recoveries followed those

earlier recessions, while the current recovery has been mild and inconsistent.

The impact of the recession on Commonwealth finances can be seen in Table 6.1, which provides a simplified version of the General Fund balance sheet for FY 2008-09 through FY 2013-14:

- A \$2.0 billion deficit at the end of FY 2008-09 was addressed through a combination of federal stimulus funds (\$7.0 billion over three years), reserve funds, revenue increases and expenditure reductions. Those factors produced a \$1.1 billion surplus by the end of FY 2010-11.
- Federal stimulus funds expired and were not available for FY 2011-12 and beyond. State funds were used to backfill some of the expenditures previously financed with federal stimulus funds.

Table 6.1
General Fund Balance Sheet
(\$ millions)

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Beginning Balance (incl. adjustments)	\$585	-\$2,025	-\$294	\$1,093	\$673	\$547
Current Year Revenues	25,530	26,893	27,497	27,678	28,647	28,607
Less Refund Reserve	<u>-1,225</u>	<u>-1,125</u>	<u>-1,150</u>	<u>-1,275</u>	<u>-1,250</u>	<u>-1,105</u>
Net Revenues	24,305	25,768	26,347	26,403	27,397	27,502
State Expenditures ¹	-27,555	-25,138	-25,281	-27,166	-27,665	-28,423
Current Year Balance	-3,250	630	1,067	-763	-268	-921
Lapses and Supplementals ²	634	1,101	300	329	137	455
Ending Balance	-2,030	-294	1,073	659	541	81

¹ Based on appropriations and executive authorizations. Current year lapses and supplemental appropriations are included below as adjustments. Excludes expenditures supported by federal funds provided under the American Recovery and Reinvestment Act of 2009.

² Current year lapses plus prior year lapses, minus supplemental appropriations. Includes \$755 million transfer from the Budget Stabilization Reserve Fund for FY 2009-10.

Sources: Various Governor's Executive Budgets, General Fund Financial Statement, C1.5. FY 2013-14 as of June 30, 2014.

- Post-recession, the rate of revenue growth has been weak, and numerous one-time measures were used to fund modest expenditure growth. Mandatory expenditures such as pension contributions, Medical Assistance and debt service absorbed most revenue growth.
- The FY 2010-11 ending balance, carried forward through successive years, played a key role in recent budgets. Appropriated expenditures exceeded net revenues in FY 2011-12 and the two subsequent fiscal years while the fund balance was drawn down to make up much of the difference. That fund balance has been exhausted.

The dual challenges of sluggish revenue growth and mandatory cost drivers were further exacerbated in FY 2013-14 by a \$509 million revenue shortfall relative to the certified estimate. Table 6.2 lists some of the measures used to balance and enact the FY 2014-15 budget. The table itemizes \$1.55 billion of measures that are considered nonrecurring and unavailable for use in future years.⁹ Those measures must be replaced by other one-time measures, permanent funds or expenditure reductions. The reliance on fund balances and nonrecurring measures has allowed policymakers to defer solutions to the long-term structural imbalance identified by this analysis.

Table 6.2
Revenues, Savings and Funding Shifts Impacting FY 2014-15
(\$ millions)

	FY 2014-15 Amount	FY 2015-16 and subsequent fiscal years
<u>Revenues</u>		
Transfers from special funds	\$322	No impact; single-year impact only
Escheats; holding period	150	Minor revenue impact all years
Casino license fees	125	None in FY 2015-16; impact in later years
<u>Expenditure Savings</u>		
Delay managed care payments	394	Reverts to historical payment schedule
PSERS; tobacco settlement investment	225	No impact; single-year impact only
<u>Shifts to General Fund</u>		
Tobacco Settlement Fund ¹	144	Return to FY 2013-14 levels
Lottery Fund	172	Return to FY 2013-14 levels
Oil and Gas Lease Fund	16	Return to FY 2013-14 levels
Total	1,548	

¹ Appropriated funds only.

⁹ In addition to these measures, other non-recurring measures were used to balance the FY 2013-14 budget. The tax refund reserve amount carried on the balance sheet was \$95 million less than the amount reported by the Department of Revenue. Prior year lapses increased by \$238 million compared to the prior year.

Five-Year Outlook

The revenue and expenditure projections for FY 2014-15 through FY 2019-20 reveal the following trends:

- Net revenues increase at an average rate of 2.7 percent per annum, and expenditures increase at an average rate of 4.1 percent per annum.
- The structural imbalance increases dramatically in FY 2015-16 as the temporary measures used in the prior fiscal year are not repeated.
- The imbalance continues to widen in FY 2016-17 and FY 2017-18 as mandatory pension contributions drive expenditure growth, but revenue growth remains subdued.

- By FY 2019-20, the imbalance grows modestly as revenue and expenditure growth rates are roughly the same (3.2 percent).

Table 6.3 displays the potential disparity between revenues and expenditures that grows from -\$1.7 billion in FY 2015-16 to -\$2.6 billion by FY 2019-20. The disparity is termed “potential” due to the Commonwealth’s balanced budget requirement. Each year, state officials consider changes in law or policy to bring the budget into balance. The projected disparity reflects the difficult choices that policymakers will confront in future budgets.

Table 6.3
General Fund Balance Sheet
(\$ millions)

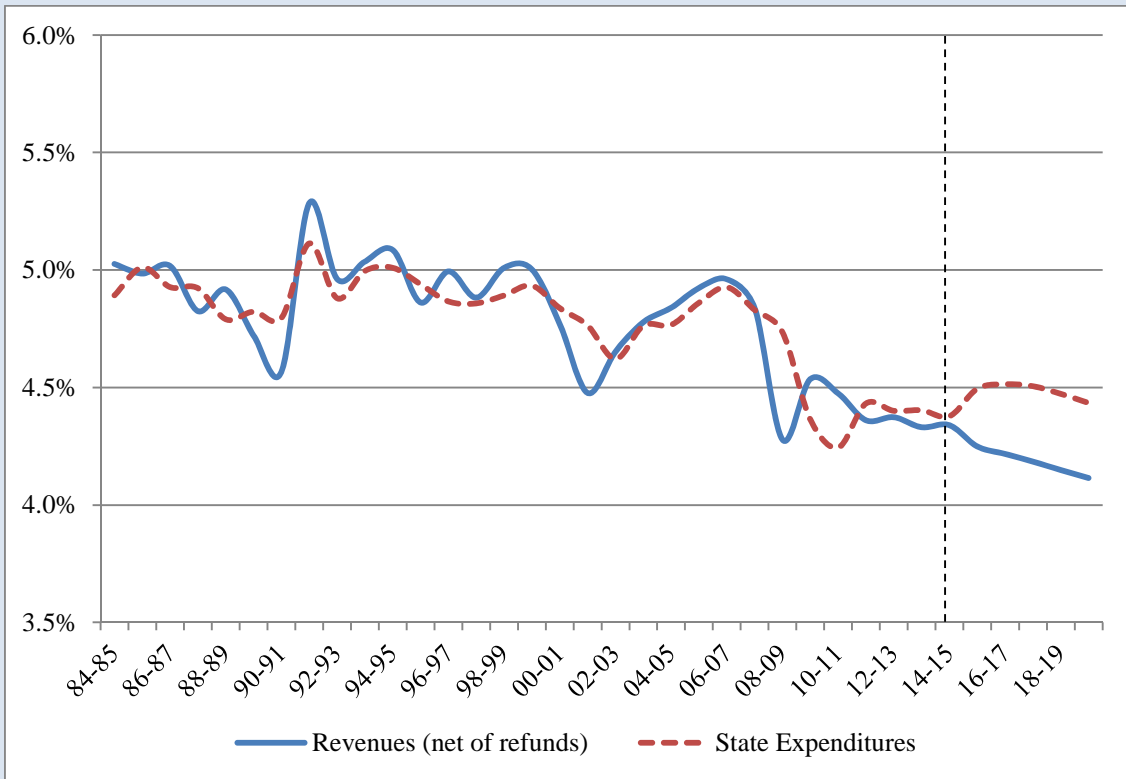
	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Beginning Balance ¹	\$81	--	--	--	--	--
Current Year Revenues	29,940	\$30,283	\$31,187	\$32,166	\$33,164	\$34,245
Less Refund Reserve	-1,240	-1,260	-1,290	-1,330	-1,370	-1,410
Net Revenues	<u>28,700</u>	<u>29,023</u>	<u>29,897</u>	<u>30,836</u>	<u>31,794</u>	<u>32,835</u>
State Expenditures ²	-29,027	-30,777	-32,079	-33,280	-34,358	-35,464
	-----	-----	-----	-----	-----	-----
Current Year Balance	-327	-1,754	-2,182	-2,444	-2,564	-2,629
Lapses and Supplementals ³	75	75	75	75	75	75
Ending Balance	-171	-1,679	-2,107	-2,369	-2,489	-2,554

¹ Beginning balance omitted for FY 2015-16 and thereafter.

² Based on appropriations and executive authorizations.

³ Current year lapses plus prior year lapses, minus supplemental appropriations.

Figure 6.1
General Fund Revenues and Expenditures as a Share of State GDP



A useful convention to depict very long-term trends is to display General Fund revenues and expenditures relative to the total size of the Pennsylvania economy. Figure 6.1 displays actual and projected revenues and expenditures as a share of the state economy (nominal gross domestic product) from FY 1984-85 to FY 2019-20. The share for both revenues and expenditures declined dramatically with the 2008-09 recession, and they have not returned to their previous share of the economy. The five-year outlook projects a continuation of this long-term decline, motivated by policy choices and demographic trends.

Appendix A: Demographics

The demographics appendix contains six tables.

Table A.1 displays annual population projections by age group.

Table A.2 displays the share of Pennsylvanians who are married or have never been married by age group for 2006, 2009 and 2012. The data reveal a sharp increase in the share of residents who have never been married for the 25 to 34 age group (6.5 percentage point increase) and 35 to 44 age group (3.4 percentage points). The tabulations are based on a U.S. Census Bureau survey started in 2005.

Table A.3 displays homeownership status by age

group for the same years. The data reveal an increase in renters for those under age 45 (6.7 percentage point increase) and those age 45 to 64 (2.5 percentage points).

Table A.4 displays the share of workers for three age groups across 20 industries. From 2007 to 2013, the share of workers age 55 or older has increased by 4.2 percentage points.

Table A.5 displays the location of origin for Pennsylvanians who moved during the past year.

Table A.6 displays the place of birth for Pennsylvania residents born overseas. Most foreign-born residents are from Asia and Latin America.

Table A.1
Population Projections 2010 to 2020
(thousands of residents)

Age	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
0-4	728.5	721.4	716.1	712.6	711.0	711.2	713.2	717.1	722.8	730.3	739.7
5-9	752.1	748.7	745.3	741.8	738.5	735.1	731.7	728.4	725.1	721.8	718.5
10-14	790.5	782.3	774.8	768.0	762.0	756.6	751.9	748.0	744.7	742.2	740.3
15-19	901.9	911.0	917.8	922.5	924.9	925.2	923.2	919.0	912.6	904.0	893.1
20-24	878.1	889.6	900.0	909.4	917.7	925.0	931.2	936.4	940.5	943.5	945.5
25-29	782.9	785.5	788.9	793.3	798.4	804.5	811.4	819.2	827.9	837.4	847.9
30-34	733.4	748.9	762.8	775.2	786.0	795.2	802.9	809.0	813.5	816.5	817.9
35-39	758.7	747.7	740.1	735.9	735.0	737.4	743.3	752.4	765.0	780.8	800.1
40-44	850.8	826.5	805.2	786.7	771.0	758.3	748.5	741.6	737.5	736.3	738.1
45-49	951.2	928.0	905.6	883.9	862.9	842.6	823.0	804.2	786.0	768.6	751.9
50-54	985.9	979.9	971.8	961.5	949.0	934.4	917.6	898.7	877.6	854.3	828.9
55-59	884.1	909.6	930.1	945.5	955.9	961.3	961.6	956.9	947.3	932.5	912.8
60-64	750.3	772.3	793.3	813.4	832.5	850.7	868.0	884.3	899.6	914.0	927.5
65-69	555.1	589.5	621.7	651.8	679.8	705.6	729.4	751.0	770.5	787.9	803.2
70-74	427.8	438.7	451.9	467.7	485.9	506.6	529.7	555.3	583.4	613.9	647.0
75-79	361.1	358.0	357.4	359.3	363.6	370.4	379.7	391.4	405.6	422.2	441.4
80-84	311.5	303.8	297.4	292.5	288.9	286.7	285.9	286.5	288.5	291.8	296.6
85+	307.4	316.3	324.3	331.3	337.3	342.2	346.2	349.2	351.2	352.2	352.2
Total	12,711	12,758	12,805	12,852	12,900	12,949	12,999	13,049	13,099	13,151	13,203

Source: 2010 data from the U.S. Census Bureau, 2010 Census Summary File 1, Table PCT12. Projections from Penn State Data Center.

Table A.2
Pennsylvania Marital Status by Age
(thousands of households)

Age Category/ Marital Status	2006			2009			2012		
	house- holds	+/- ¹	share of total	house- holds	+/- ¹	share of total	house- holds	+/- ¹	share of total
Age 16-24									
Married ³	72.0	7.1	4.6%	70.7	5.6	4.5%	57.1	5.9	3.5%
Never Married	1,465.3	21.6	94.6	1,478.6	12.3	94.9	1,546.3	12.6	96.0
Other ^{2,3}	<u>12.4</u>	<u>2.5</u>	<u>0.8</u>	<u>8.6</u>	<u>2.2</u>	<u>0.5</u>	<u>7.0</u>	<u>1.8</u>	<u>0.4</u>
Total	1,549.7	21.6	100.0	1,557.9	11.1	100.0	1,610.4	12.3	100.0
Age 25-34									
Married	659.3	19.2	46.4	661.6	17.9	43.0	638.3	16.9	40.8
Never Married	654.9	17.0	46.1	764.6	18.1	49.7	821.8	15.6	52.6
Other ²	<u>107.8</u>	<u>7.0</u>	<u>7.6</u>	<u>112.7</u>	<u>8.1</u>	<u>7.3</u>	<u>102.9</u>	<u>7.0</u>	<u>6.6</u>
Total	1,422.0	20.3	100.0	1,538.9	9.1	100.0	1,563.0	11.8	100.0
Age 35-44									
Married	1,132.5	19.6	63.2	1,035.4	14.9	62.5	958.0	16.3	61.2
Never Married	366.2	13.2	20.4	363.1	13.5	21.9	372.9	13.6	23.8
Other ²	<u>292.1</u>	<u>12.3</u>	<u>16.3</u>	<u>258.4</u>	<u>10.4</u>	<u>15.6</u>	<u>235.1</u>	<u>11.3</u>	<u>15.0</u>
Total	1,790.8	20.0	100.0	1,656.9	9.1	100.0	1,566.0	10.2	100.0
Age 45-54									
Married	1,269.5	17.8	66.4	1,269.9	15.9	65.6	1,194.0	15.0	63.8
Never Married	250.9	9.2	13.1	278.1	12.3	14.4	280.6	10.3	15.0
Other ²	<u>390.4</u>	<u>15.1</u>	<u>20.4</u>	<u>388.4</u>	<u>13.1</u>	<u>20.1</u>	<u>396.6</u>	<u>12.3</u>	<u>21.2</u>
Total	1,910.9	19.3	100.0	1,936.4	7.1	100.0	1,871.3	8.5	100.0
Age 55-64									
Married	943.5	17.9	66.6	1,056.5	10.4	68.3	1,136.3	12.5	66.2
Never Married	124.2	7.0	8.8	147.5	8.0	9.5	174.2	7.8	10.2
Other ²	<u>349.2</u>	<u>10.1</u>	<u>24.6</u>	<u>342.2</u>	<u>9.9</u>	<u>22.1</u>	<u>404.9</u>	<u>10.3</u>	<u>23.6</u>
Total	1,417.0	18.8	100.0	1,546.2	4.6	100.0	1,715.3	5.6	100.0
Age 65+									
Married	974.5	18.8	51.8	1,009.9	13.0	52.0	1,091.2	12.2	53.4
Never Married	119.0	6.4	6.3	122.7	7.8	6.3	130.1	7.4	6.4
Other ²	<u>789.2</u>	<u>13.4</u>	<u>41.9</u>	<u>808.0</u>	<u>13.2</u>	<u>41.6</u>	<u>824.1</u>	<u>12.3</u>	<u>40.3</u>
Total	1,882.7	17.7	100.0	1,940.6	3.9	100.0	2,045.4	6.0	100.0
Total									
Married	5,051.2	33.2	50.6	5,104.0	31.9	50.2	5,075.0	36.9	48.9
Never Married	2,980.6	29.6	29.9	3,154.6	26.3	31.0	3,325.9	31.8	32.1
Other ²	<u>1,941.2</u>	<u>23.0</u>	<u>19.5</u>	<u>1,918.3</u>	<u>24.5</u>	<u>18.8</u>	<u>1,970.5</u>	<u>26.1</u>	<u>19.0</u>
Total	9,973.0	21.8	100.0	10,176.9	8.1	100.0	10,371.4	9.5	100.0

¹ Represents the 90 percent confidence interval.

² Other includes widowed, divorced or separated.

³ Due to the large confidence interval, caution should be used when using these data.

Source: U.S. Census Bureau. American Community Survey One-Year Public Use Microdata Sample, various years.

Table A.3
Pennsylvania Households by Age of Householder or Spouse and Ownership Category¹
(thousands of households)

Householder and Spouse Age ³ / Ownership Category	2006			2009			2012		
	households	+/- ²	share of total	households	+/- ²	share of total	households	+/- ²	share of total
<u>Less Than 45 Years Old</u>									
Owned (no Mortgage)	113.1	7.8	6.6%	98.1	5.7	5.9%	94.3	6.8	6.0%
Owned (with Mortgage)	867.8	14.8	50.9	799.7	15.9	48.2	707.3	13.5	44.8
Rented ⁴	<u>725.4</u>	<u>16.9</u>	<u>42.5</u>	<u>761.2</u>	<u>17.3</u>	<u>45.9</u>	<u>775.6</u>	<u>14.8</u>	<u>49.2</u>
Total	1,706.2	20.1	100.0	1,659.0	14.8	100.0	1,577.1	14.2	100.0
<u>Age 45-64 Years Old</u>									
Owned (no Mortgage)	466.2	11.8	24.1	466.5	10.3	23.2	479.0	10.1	23.3
Owned (with Mortgage)	1,087.7	16.7	56.2	1,132.2	13.5	56.4	1,117.9	14.7	54.4
Rented ⁴	<u>382.8</u>	<u>12.6</u>	<u>19.8</u>	<u>409.7</u>	<u>11.6</u>	<u>20.4</u>	<u>458.4</u>	<u>13.4</u>	<u>22.3</u>
Total	1,936.8	19.2	100.0	2,008.4	10.8	100.0	2,055.3	14.9	100.0
<u>Age 65+ Years Old</u>									
Owned (no Mortgage)	717.0	13.7	59.6	707.0	12.0	56.6	719.9	10.8	54.3
Owned (with Mortgage)	223.5	9.4	18.6	266.6	8.3	21.3	308.0	9.1	23.2
Rented ⁴	<u>262.1</u>	<u>8.9</u>	<u>21.8</u>	<u>275.9</u>	<u>8.5</u>	<u>22.1</u>	<u>297.9</u>	<u>10.1</u>	<u>22.5</u>
Total	1,202.6	12.8	100.0	1,249.5	10.1	100.0	1,325.9	10.2	100.0
<u>All Households</u>									
Owned (no Mortgage)	1,296.3	20.1	26.8	1,271.6	17.0	25.9	1,293.2	16.3	26.1
Owned (with Mortgage)	2,178.9	21.7	45.0	2,198.5	23.1	44.7	2,133.2	19.4	43.0
Rented ⁴	<u>1,370.3</u>	<u>19.7</u>	<u>28.3</u>	<u>1,446.7</u>	<u>22.9</u>	<u>29.4</u>	<u>1,531.9</u>	<u>17.7</u>	<u>30.9</u>
Total	4,845.6	12.5	100.0	4,916.9	14.7	100.0	4,958.3	11.5	100.0

¹ Excludes households living in institutional and non-institutional group quarters as well as vacant homes.

² Represents the 90 percent confidence interval.

³ The age used is the oldest age of the householder (primary household member) or his or her spouse.

⁴ Households staying in a home that they do not own rent-free are included in the "rented" category.

Source: U.S. Census Bureau. American Community Survey One-Year Public Use Microdata Sample, various years.

**Table A.4
Pennsylvania Age of Workforce by Industry**

Industry	2007 Q4			2013 Q4			Share of 2013 Workforce
	14-34	35-54	55+	14-34	35-54	55+	
Health Care and Social Assistance	30.8%	49.8%	19.5%	31.9%	44.0%	24.1%	17.1%
Retail Trade	45.0	36.5	18.4	46.3	32.1	21.5	11.7
Manufacturing	23.9	55.3	20.8	23.6	48.9	27.5	10.3
Educational Services	23.9	50.5	25.5	23.9	47.9	28.2	9.1
Accommodation and Food Services	61.4	29.1	9.5	61.3	27.3	11.4	7.4
Professional, Scientific, and Technical Services	33.0	49.7	17.3	30.9	47.1	22.0	6.1
Administrative Support & Other	38.7	44.3	17.0	39.5	40.8	19.7	5.5
Finance and Insurance	28.7	53.0	18.3	27.5	49.9	22.6	5.0
Transportation and Warehousing	25.6	52.2	22.2	25.3	46.3	28.4	4.2
Wholesale Trade	25.6	53.1	21.4	24.3	48.9	26.8	4.1
Construction	33.0	52.1	14.9	30.4	48.9	20.7	4.1
Other Services (except Public Administration)	34.0	44.7	21.3	33.9	40.8	25.3	3.4
Public Administration	22.2	55.2	22.7	21.4	51.0	27.6	3.3
Management of Companies and Enterprises	27.7	52.8	19.4	28.6	47.3	24.1	2.6
Information	33.1	49.3	17.6	28.6	48.4	23.0	1.8
Arts, Entertainment, and Recreation	47.5	33.7	18.8	48.6	30.1	21.3	1.6
Real Estate and Rental and Leasing	32.3	45.3	22.3	29.4	43.1	27.6	1.1
Mining, Quarrying, and Oil and Gas Extraction	28.3	50.9	20.8	38.7	42.5	18.8	0.6
Utilities	14.3	61.7	24.0	19.1	49.5	31.4	0.6
Agriculture, Forestry, Fishing and Hunting	<u>37.0</u>	<u>41.2</u>	<u>21.8</u>	<u>37.3</u>	<u>37.2</u>	<u>25.6</u>	<u>0.4</u>
All NAICS Sectors	33.4	47.4	19.2	33.5	43.1	23.4	100.0

Source: U.S. Census Bureau. Quarterly Workforce Indicators Data. "Longitudinal-Employer Household Dynamics Program." <http://ledextract.ces.census.gov/>. Data extracted October 8, 2014. Data represent workers employed at the beginning of the quarter.

Table A.5
Moved in the Past Year by Age Cohort, 2008-2012¹
(thousands of residents)

Age Cohort	Location Moved From						Share of Age Cohort				
	Did Not Move	Same County	Within PA	Different State	From Abroad	Total	Did Not Move	Same County	Within PA	Different State	From Abroad
1-17	2,334.6	215.3	47.8	38.7	10.8	2,647.2	88.2%	8.1%	1.8%	1.5%	0.4%
18-29	1,461.2	306.8	154.7	103.1	19.2	2,045.0	71.5	15.0	7.6	5.0	0.9
30-39	1,271.4	139.1	44.5	36.1	8.6	1,499.8	84.8	9.3	3.0	2.4	0.6
40-49	1,637.9	99.4	29.8	21.9	5.8	1,794.8	91.3	5.5	1.7	1.2	0.3
50-59	1,748.1	70.1	22.0	15.2	4.2	1,859.6	94.0	3.8	1.2	0.8	0.2
60-69	1,248.6	37.3	10.4	9.3	2.6	1,308.1	95.4	2.9	0.8	0.7	0.2
70+	1,334.9	51.6	13.3	7.6	1.9	1,409.4	94.7	3.7	0.9	0.5	0.1
Total	11,036.7	919.6	322.5	231.9	53.1	12,563.9	87.8	7.3	2.6	1.8	0.4

¹ Figures are average annual levels from 2008 to 2012. They do not represent cumulative amounts.

Source: Pennsylvania State Data Center tabulations of the American Community Survey 2008-2012, U.S. Census Bureau.

Table A.6
Place of Birth for the Foreign-Born Population in Pennsylvania¹

Region/County	Estimate	Percent	Region/County	Estimate	Percent
Asia	279,728	37.9%	Europe	174,582	23.7%
Eastern Asia	87,832	31.4	Northern Europe	29,991	17.2
South Central Asia	96,698	34.6	Western Europe	30,932	17.7
South Eastern Asia	73,268	26.2	Southern Europe	32,315	18.5
Western Asia	20,758	7.4	Eastern Europe	80,923	46.4
Asia, n.e.c.	1,172	0.4	Europe, n.e.c.	421	0.2
Americas	229,908	31.1	Africa	50,950	6.9
Latin America	213,378	92.8	Eastern Africa	9,590	18.8
Caribbean	85,661	40.1	Middle Africa	2,181	4.3
Central America	80,524	37.7	Northern Africa	9,960	19.5
South America	47,193	22.1	Southern Africa	2,190	4.3
Northern America	16,530	7.2	Western Africa	22,740	44.6
Canada	16,148	97.7	Africa, n.e.c.	4,289	8.4
Other Northern America	382	2.3			
			Total	738,178	100.0
Oceania	3,010	0.4			
Australia and New Zealand Subregion	2,673	88.8			
Fiji	125	4.2			
Oceania, n.e.c.	212	7.0			

¹ Excludes population born at sea. Figures are average annual levels from 2008 to 2012. They do not represent cumulative amounts.

Source: Pennsylvania State Data Center tabulations of the American Community Survey 2008-2012, U.S. Census Bureau.

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Appendix B: Economics

Table B.1 displays select housing data for Pennsylvania compiled from various sources (see table footnotes) for the last three years. The data reveal a recent slowdown in new building permits, completed home sales and median home prices. Housing data from CoreLogic show that the share of mortgages with negative equity (i.e., the value of the home is less than the remaining mortgage) continues to fall, as does the share of mortgages in foreclosure. Over the next five years, analysts anticipate a recovery for the

Pennsylvania housing market, but the recovery will be less robust than forecasts had assumed for recent years.

Table B.2 displays energy prices for Pennsylvania consumers and businesses. Figure B.2 illustrates the reduction in the real price of natural gas over the previous decade for residential consumers. By contrast, electricity prices have kept pace with inflation, while the price of gasoline has more than doubled.

Table B.1
Select Housing Statistics for Pennsylvania

Calendar Quarter	Building Permits ¹	Completed Home Sales ²	Median Sales Price ²	Housing Price Index ³	Negative Equity ⁴	Foreclosure Inventory ⁴
2011 Q3	3,294	32,031	\$165,000	-1.0%	9.4%	2.6%
2011 Q4	2,959	27,083	155,000	-2.5	10.0	2.7
2012 Q1	2,945	23,908	151,000	0.4	9.4	2.9
2012 Q2	4,122	35,471	169,000	-0.1	9.4	3.1
2012 Q3	3,679	35,907	170,000	0.1	9.6	3.2
2012 Q4	3,337	31,393	160,000	2.4	11.0	2.9
2013 Q1	3,233	26,144	154,900	2.4	10.3	2.8
2013 Q2	4,877	40,172	174,900	3.9	7.3	2.7
2013 Q3	4,526	41,852	175,000	4.8	6.8	2.7
2013 Q4	3,859	34,027	164,000	3.4	7.4	2.5
2014 Q1	2,829	25,014	155,000	2.3	7.4	2.3
2014 Q2	4,358	39,352	170,000	2.4	6.1	2.1
2014 Q3	3,812	41,371	176,000	n.a.	n.a.	2.0
Growth						
2011 Q3-2012 Q3	11.7%	12.1%	3.0%	0.1%	n.a.	n.a.
2012 Q3-2013 Q3	23.0	16.6	2.9	4.8	n.a.	n.a.
2013 Q3-2014 Q3	-15.8	-1.1	0.6	n.a.	n.a.	n.a.

¹ 1-unit single-family homes, U.S. Census Bureau.

² Single-family properties, townhomes and condominiums. Source: Pennsylvania Association of Realtors.

³ Year-over-year growth rates for seasonally adjusted purchase-only index. Source: Federal Housing Finance Agency.

⁴ Share of total mortgages with negative equity or in foreclosure. Source: CoreLogic.

Table B.2
Pennsylvania Energy Prices

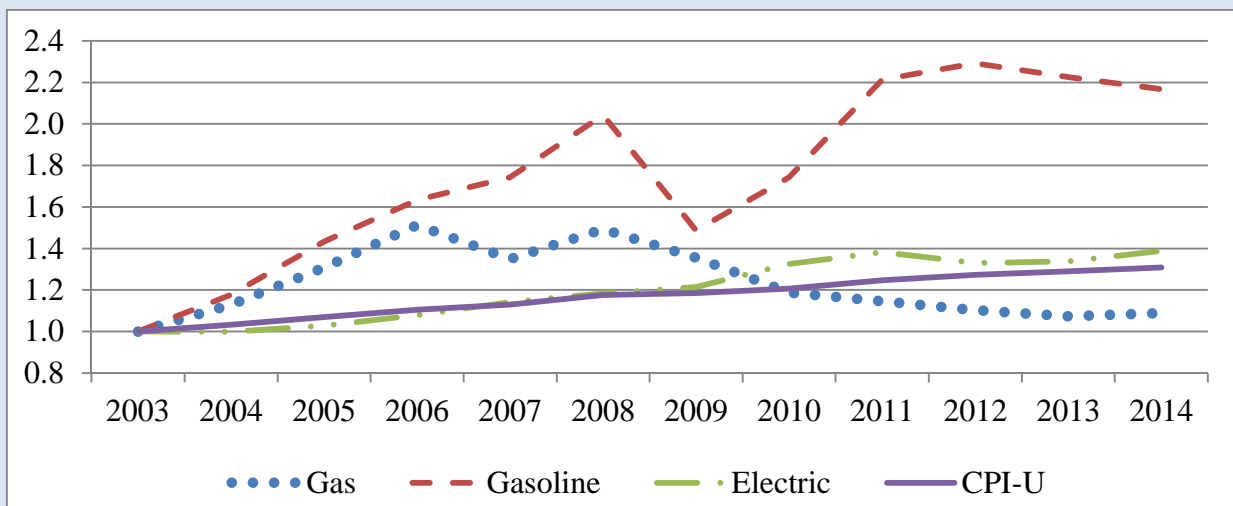
Calendar Year	Natural Gas (\$/mcf)			Gasoline (\$/gallon)	Electricity Price (c/KWh)		
	Residential	Commercial	Industrial	Avg. Price ¹	Residential	Commercial	Industrial
1997	8.33	7.35	4.61	1.30	9.89	8.41	5.88
1998	8.45	7.43	4.15	1.10	9.87	8.24	5.60
1999	8.30	7.29	3.99	1.19	9.12	7.68	4.93
2000	8.49	7.72	5.12	1.56	9.53	7.71	5.63
2001	11.51	10.67	7.18	1.49	9.68	8.62	5.76
2002	9.46	7.70	6.29	1.41	9.74	8.50	5.83
2003	10.87	9.26	8.12	1.64	9.59	8.62	5.80
2004	12.27	10.60	8.97	1.93	9.58	8.51	5.87
2005	14.21	13.04	11.25	2.35	9.86	8.50	6.29
2006	16.45	14.30	12.30	2.68	10.35	8.94	6.63
2007	14.66	12.77	10.64	2.86	10.95	9.20	6.87
2008	16.22	14.29	12.09	3.35	11.35	9.39	7.03
2009	14.74	11.83	9.19	2.44	11.65	9.55	7.21
2010	12.90	10.47	8.23	2.86	12.70	10.10	7.66
2011	12.46	10.42	9.86	3.63	13.26	10.03	7.73
2012	11.99	10.24	9.58	3.76	12.75	9.44	7.23
2013	11.67	10.09	9.21	3.65	12.82	9.26	7.00
2014 ²	11.84	10.26	9.38	3.55	13.31	9.81	7.75
Average Annual Growth Rate							
2003-2008	8.3%	9.1%	8.3%	15.4%	3.4%	1.7%	3.9%
2008-2014	-5.1	-5.4	-4.1	1.0	2.7	0.7	1.6
2003-2014	0.8	0.9	1.3	7.3	3.0	1.2	2.7

¹ Average annual price for Central Atlantic Region. Latest value for October 2014 is \$3.13.

² Values estimated based on partial-year data.

Source: U.S. Energy Information Administration.

Figure B.1
Cumulative Growth in Residential Energy Prices
(calendar year)



Source: U.S. Energy Information Administration. Calculations by the IFO.

Appendix C: Revenues

Table C.1
Historical General Fund Revenue Table

FY Ending	Amount (\$ millions)						Regional CPI-U (levels)	Nominal State GDP (\$ billions)
	Corporate Net Income	Other Corporate	Sales and Use Tax	Personal Income Tax	All Other	General Fund		
1994	\$1,554	\$2,125	\$5,125	\$4,873	\$1,510	\$15,186	152.3	\$305.9
1995	1,906	2,172	5,527	5,083	1,537	16,225	156.9	320.1
1996	1,626	2,113	5,682	5,374	1,543	16,339	160.7	332.8
1997	1,697	2,212	6,037	5,746	1,629	17,321	165.0	346.5
1998	1,703	2,295	6,152	6,236	1,736	18,123	167.2	364.0
1999	1,725	2,363	6,606	6,684	1,850	19,227	169.8	382.2
2000	1,860	2,333	7,018	7,066	1,980	20,257	174.4	400.9
2001	1,603	2,260	7,204	7,492	2,003	20,562	179.1	419.7
2002	1,419	2,183	7,293	7,139	2,027	20,060	182.7	435.1
2003	1,397	2,354	7,520	7,106	2,938	21,315	187.0	450.5
2004	1,678	2,673	7,729	7,734	3,015	22,828	192.1	471.6
2005	1,921	2,830	8,000	8,747	2,810	24,309	200.6	495.6
2006	2,302	2,888	8,334	9,524	2,806	25,854	208.5	520.6
2007	2,493	2,984	8,591	10,262	3,121	27,449	214.1	546.1
2008	2,418	3,040	8,497	10,908	3,066	27,928	221.1	565.1
2009	1,980	2,854	8,136	10,199	2,361	25,530	223.1	571.7
2010	1,791	2,788	8,029	9,969	5,071	27,648	226.1	581.2
2011	2,132	2,761	8,590	10,436	3,579	27,497	230.3	600.4
2012	2,022	2,941	8,772	10,801	3,141	27,678	236.0	619.9
2013	2,423	2,766	8,894	11,371	3,192	28,647	239.9	637.4
2014	2,502	2,397	9,130	11,437	3,142	28,607	242.5	654.0
2015	2,509	2,286	9,463	12,027	3,655	29,940	246.2	673.9
2016	2,544	2,205	9,773	12,563	3,197	30,283	250.4	697.8
2017	2,551	2,084	10,116	13,097	3,340	31,187	255.0	724.7
2018	2,556	2,109	10,462	13,677	3,363	32,166	260.0	753.4
2019	2,567	2,135	10,799	14,279	3,385	33,164	265.3	784.0
2020	2,598	2,162	11,143	14,897	3,446	34,245	270.9	816.2
Average Annual Growth Rates								
1994 to 2004	0.8%	2.3%	4.2%	4.7%	7.2%	4.2%	2.3%	4.4%
2004 to 2014	4.1	-1.1	1.7	4.0	0.4	2.3	2.4	3.3
2014 to 2020	0.6	-1.7	3.4	4.5	1.6	3.0	1.9	3.8

Source: Governor's Executive Budget, various years. Projections by IFO.

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Appendix D: Expenditures

Table D.1
Historical General Fund Expenditure Table

FY Ending	Amount (\$ millions)						Regional CPI-U (levels)	Nominal State GDP (\$ billions)
	Education	Human Services	Corrections	Treasury	All Other	General Fund		
1994	\$6,436	\$4,990	\$595	\$531	\$2,382	\$14,935	152.3	\$305.9
1995	6,670	5,221	721	547	2,516	15,675	156.9	320.1
1996	6,963	5,319	827	472	2,582	16,163	160.7	332.8
1997	7,027	5,363	894	586	2,596	16,467	165.0	346.5
1998	7,214	5,553	977	649	2,838	17,230	167.2	364.0
1999	7,511	5,853	1,042	788	3,069	18,263	169.8	382.2
2000	7,640	6,189	1,130	656	3,680	19,295	174.4	400.9
2001	8,041	6,480	1,161	414	3,766	19,862	179.1	419.7
2002	8,277	6,669	1,151	586	3,747	20,429	182.7	435.1
2003	8,509	6,530	1,247	393	3,721	20,400	187.0	450.5
2004	8,754	7,440	1,299	713	3,680	21,885	192.1	471.6
2005	9,407	7,886	1,331	450	3,980	23,054	200.6	495.6
2006	9,687	8,918	1,358	769	3,933	24,665	208.5	520.6
2007	10,461	9,304	1,420	900	4,212	26,298	214.1	546.1
2008	11,060	8,617	1,600	923	4,768	26,968	221.1	565.1
2009 ²	11,273	8,590	1,606	955	4,660	27,084	223.1	571.7
2010 ²	10,588	8,577	1,593	976	3,209	24,942	226.1	581.2
2011 ²	10,455	8,780	1,663	1,023	3,146	25,067	230.3	600.4
2012	10,491	10,495	1,856	1,090	3,097	27,031	236.0	619.9
2013	10,971	10,623	1,867	1,139	3,119	27,719	239.9	637.4
2014	11,230	11,085	1,999	1,117	3,166	28,597	242.5	654.0
2015	11,548	11,208	2,060	1,147	3,063	29,027	246.2	673.9
2016	12,345	11,826	2,151	1,208	3,245	30,777	250.4	697.8
2017	12,893	12,315	2,248	1,262	3,361	32,079	255.0	724.7
2018	13,314	12,872	2,306	1,342	3,447	33,280	260.0	753.4
2019	13,704	13,367	2,350	1,418	3,519	34,358	265.3	784.0
2020	14,109	13,903	2,400	1,453	3,600	35,464	270.9	816.2
Average Annual Growth Rates								
1994 to 2004	3.1%	4.1%	8.1%	3.0%	4.4%	3.9%	2.3%	4.4%
2004 to 2014	2.5	4.1	4.4	4.6	-1.5	2.7	2.4	3.3
2014 to 2020	3.9	3.8	3.1	4.5	2.2	3.7	1.9	3.8

¹ FY 2014-15 represents the amount appropriated.

² Excludes expenditures supported by federal funds provided under the American Recovery and Reinvestment Act of 2009 (ARRA). The excluded ARRA amounts are: \$1.24 billion in FY 2008-09, \$2.7 billion in FY 2009-10 and \$3.07 billion in FY 2010-11.

Source: Pennsylvania Department of Revenue. The Statistical Supplement for the Pennsylvania Tax Compendium, various years. Projections by the IFO.

Table D.2
DHS Service Populations Receiving Benefits
(thousands of recipients)

	Fiscal Year Ending										Change 2005-14	
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Number	AAGR ¹
Medical Assistance ²	1,747.6	1,833.8	1,883.2	1,907.4	1,972.6	2,072.5	2,135.5	2,225.0	2,279.6	2,289.6	542.0	3.0%
CHIP ^{2,3}	134.4	138.7	152.2	167.6	183.6	196.5	193.3	194.4	189.7	192.7	58.3	4.1
Long-Term Care ²	81.1	80.2	81.1	81.5	82.4	82.9	77.4	59.9	56.3	56.9	-24.2	-3.9
Cash Assistance ²	278.5	278.9	250.7	225.8	221.7	240.7	284.2	248.3	180.2	166.7	-111.8	-5.5
Mental Health Services	398.6	418.7	517.4	526.0	525.1	530.4	649.4	655.6	720.1	731.5	332.9	7.0
Substance Abuse Services	87.7	91.5	100.3	113.6	113.7	112.6	147.5	125.5	159.9	162.3	74.6	7.1
State Mental Hospitals	3.9	3.6	3.6	3.5	3.0	2.8	2.7	2.8	2.4	2.4	-1.5	-5.3
Intellectual Disabilities	72.5	49.5	54.2	55.3	57.3	57.4	57.5	57.6	53.6	54.7	-17.8	-3.1
Youth Development Centers	1.7	1.6	1.6	1.5	1.4	1.2	1.1	1.0	0.8	0.8	-0.9	-8.0

¹ Average annual growth rate.

² Represents average monthly enrollments.

³ CHIP is administered by the Department of Insurance.

Source: Governor's Executive Budget (various years).

**Table D.3
Department of Corrections**

	Calendar Year										Change 2004-13	
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Number	AAGR ¹
Total Institutional Population	41,000	42,486	44,450	46,028	49,307	51,487	51,321	51,638	51,184	51,512	10,512	2.6%
State Correctional Institutions	40,185	41,780	42,927	44,469	47,968	49,954	46,646	48,041	48,774	49,789	9,604	2.4%
Community Correction Centers	768	655	1,426	1,548	1,330	1,523	1,875	2,063	1,912	858	90	1.2%
Federal/County Facilities	12	11	12	11	9	10	2,800	1,534	498	865	853	n.a.
Receptions	14,432	15,534	16,160	16,004	16,907	17,052	16,448	17,875	18,099	19,769	5,337	3.6%
From Court System	8,435	8,830	9,578	10,222	10,783	10,798	10,781	10,969	10,810	11,520	3,085	3.5%
Parole Violators	5,808	6,505	6,517	5,753	6,101	6,167	5,623	6,900	7,278	8,237	2,429	4.0%
County Transfer	189	199	65	29	23	87	44	6	11	12	-177	n.a.
Releases	14,785	15,517	16,087	16,829	15,776	16,651	18,417	19,364	20,439	21,815	7,030	4.4%
Unconditional	3,204	3,122	3,119	3,160	3,472	3,941	4,210	4,103	3,936	3,583	379	1.2%
Conditional (parole)	10,675	10,790	10,759	11,195	9,380	9,775	12,566	13,546	14,811	16,025	5,350	4.6%
Other	906	1,605	2,209	2,474	2,924	2,935	1,641	1,715	1,692	2,207	1,301	10.4%
Recidivism Rates ²												
6 Month	12.7	13.8	13.2	13.9	14.2	14.5	12.3	13.5	14.8	n.a.	n.a.	n.a.
1 Year	23.6	25.1	25.1	25.9	25.9	25.4	23.7	24.2	26.5	n.a.	n.a.	n.a.
3 Year	49.1	51.1	50.6	50.4	50.7	49.2	48.6	n.a.	n.a.	n.a.	n.a.	n.a.

¹ Average annual growth rate.

² Recidivism rates are calculated using the first arrest after the offender's release date from prison within the given time frame.

Source: Pennsylvania Department of Corrections, Annual Statistical Report (various years). Recidivism rates from the 2013 Recidivism Report.

**Table D.4
Total State Complement**

	Fiscal Year Ending										Change from 2004 to 2013	
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Number	AAGR ¹
Human Services	20,536	20,536	19,958	18,871	18,599	18,620	18,197	17,858	17,048	16,898	-3,638	-2.1%
Corrections	15,324	15,324	15,324	15,750	15,866	15,866	16,215	16,180	16,157	15,965	641	0.5
Transportation	12,272	12,270	12,259	12,011	12,011	12,011	11,876	11,876	11,876	11,876	-396	-0.4
State Police	6,025	6,038	6,161	6,413	6,430	6,385	6,359	6,359	6,378	6,514	489	0.9
Labor & Industry	5,856	5,856	5,842	5,570	5,576	5,581	5,790	5,764	5,948	5,916	60	0.1
Liquor Control Board	3,102	3,102	3,258	3,258	3,258	3,258	3,276	3,276	3,276	3,276	174	0.6
Environmental Protection	3,094	3,122	3,132	3,079	3,127	3,018	2,835	2,839	2,770	2,770	-324	-1.2
Military & Veterans Affairs	2,469	2,469	2,475	2,474	2,483	2,483	2,336	2,312	2,236	2,218	-251	-1.2
Revenue	2,237	2,237	2,270	2,373	2,385	2,385	2,128	2,128	2,128	2,012	-225	-1.2
Executive Offices	2,361	2,363	2,341	2,321	2,369	2,421	2,106	2,066	2,042	1,887	-474	-2.5
Health	1,557	1,575	1,589	1,610	1,635	1,636	1,582	1,529	1,495	1,395	-162	-1.2
Conservation & Natural Resources	1,395	1,395	1,407	1,407	1,408	1,408	1,362	1,389	1,389	1,383	-12	-0.1
Probation and Parole Board	1,048	1,048	1,039	1,117	1,175	1,175	1,173	1,173	1,228	1,244	196	1.9
General Services	1,333	1,373	1,419	1,335	1,392	1,392	1,246	1,138	1,061	999	-334	-3.2
Game Commission	732	732	732	707	707	707	698	698	708	708	-24	-0.4
Agriculture	629	638	659	690	710	710	612	604	596	594	-35	-0.6
Education	784	784	766	756	758	760	603	590	544	551	-233	-3.8
Public Utility Commission	533	533	523	509	519	519	519	519	532	520	-13	-0.3
State	506	506	527	533	532	532	531	523	506	499	-7	-0.2
Fish & Boat Commission	431	431	431	432	432	432	432	432	432	432	1	0.0
PSERS	290	290	290	306	310	310	310	310	310	314	24	0.9
Insurance	408	408	410	403	403	388	334	317	309	289	-119	-3.8
Comm. & Economic Develop.	358	359	362	364	375	376	343	320	294	315	-43	-1.4
Historical & Museum Com.	333	333	329	323	307	300	212	200	218	210	-123	-5.0
All Others ²	<u>1,158</u>	<u>1,157</u>	<u>1,165</u>	<u>1,158</u>	<u>1,213</u>	<u>1,214</u>	<u>1,108</u>	<u>1,073</u>	<u>1,102</u>	<u>1,135</u>	<u>-23</u>	<u>-0.2</u>
Total	84,771	84,879	84,668	83,770	83,980	83,887	82,183	81,473	80,583	79,920	-4,851	-0.7
Total PA Employment (000s) ³	5,620	5,677	5,734	5,781	5,814	5,718	5,593	5,661	5,711	5,731	111	0.2
State Complement Share	1.51%	1.50%	1.48%	1.45%	1.44%	1.47%	1.47%	1.44%	1.41%	1.41%	n.a.	n.a.

¹ Average annual growth rate.

² All Other includes: Banking and Securities, Emergency Management Agency, Civil Service Commission, Department of Aging, Securities Commission, Gov. Office, Milk Marketing Board, Municipal Employees' Retirement, Infrastructure Investment Authority, Tax Equalization Board, Environmental Hearing Board, Lt. Gov. Office, Drug & Alcohol Program, and Public Television Network.

³ Total Pennsylvania employment is the average over each FY.

Source: Governor's Executive Budget (various years) and U.S. Bureau of Labor Statistics.