ECONOMIC AND BUDGET OUTLOOK

Fiscal Years 2020-21 to 2025-26

Independent Fiscal Office | January 2021

Independent Fiscal Office

Rachel Carson State Office Building
400 Market Street
Harrisburg, PA 17105

717-230-8293 | contact@ifo.state.pa.us | www.ifo.state.pa.us

Staff Acknowledgements

Brenda Warburton, Deputy Director
Stacey Knavel, Principal Revenue Analyst
Karen Maynard, Budget Analyst II
Lesley McLaughlin, Revenue Analyst II
Jesse Bushman, Revenue Analyst II
Joseph Shockey, Revenue Analyst II
Mathieu Taylor, Fiscal Analyst II
Kathleen Hall, Modeling & Development Analyst II
Robyn Toth, Revenue Analyst I
Rachel Flaugh, Revenue Analyst I
Michaela Bowers, Revenue Analyst I
Kara Hale, Office Manager

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INDEPENDENT FISCAL OFFICE

January 21, 2021

The Honorable Members of the Pennsylvania General Assembly:

Section 604-B (a)(2) of the Administrative Code of 1929 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 are from various sources. Economic projections for Pennsylvania are from the IFO, while projections for the U.S. are from the Congressional Budget Office or IHS Markit. Demographic projections are from the IFO based on tabulations from the 2019 Population Estimates by the U.S. Census Bureau and data supplied by the Pennsylvania Department of Health. Historical revenue and expenditure data are from the *Governor's Executive Budget*, the state accounting system 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 that assisted in the production of this report. Questions and comments can be submitted to contact@ifo.state.pa.us.

Sincerely,

Matthew J. Knittel

Dr. Matthew J. Knittel
Director

Rachel Carson State Office Building, 400 Market Street, Harrisburg PA 17105
www.ifo.state.pa.us | (717) 230-8293 | contact@ifo.state.pa.us

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Executive Summary

This report examines the demographic, economic, revenue and expenditure trends that will affect the Commonwealth's fiscal condition through fiscal year (FY) 2025-26. Based on the economic and demographic assumptions used by this report, the analysis projects a substantial surplus for FY 2020-21, but operating deficits for all future years.

For FY 2021-22, revenues contract by 4.6 percent because the prior fiscal year includes one-time transfers from special funds ($531 million) and delayed tax payments shifted into the year ($1.9 billion). The analysis also projects flat income growth for the current calendar year as various federal relief programs end and consumer spending slows. From FY 2021-22 to FY 2025-26, the forecast projects that General Fund revenues will increase at an average rate of 3.6 percent per annum. Following a two-year recovery period, the forecast assumes that the Pennsylvania economy operates at its long-term potential, energy prices and interest rates do not increase dramatically and a recession does not occur. Therefore, the forecast likely reflects an optimistic scenario.

For FY 2021-22, expenditures increase by 14.6 percent due to the use of substantial federal monies, payment delays and other one-time measures in the prior fiscal year. From FY 2021-22 to FY 2025-26, General Fund expenditures expand at an average rate of 3.1 percent per annum. When combined with available revenues, the projected operating deficit peaks in FY 2022-23 at $2.6 billion and then declines to $2.0 billion by FY 2025-26. The deficit peaks in FY 2022-23 due to a new, permanent transfer from sales and use tax revenues ($469 million) that begins that year.

General Fund Financial Statement

Fiscal Year	19-20	20-21	21-22	22-23	23-24	24-25	25-26
Beginning Balance[1]	$30	-$2,734	--	--	--	--	--
Current Year Revenues	32,276	38,437	$36,675	$37,851	$39,352	$40,828	$42,321
Less Refund Reserve	-1,150	-1,300	-1,326	-1,353	-1,380	-1,407	-1,435
Net Revenue	31,126	37,137	35,349	36,498	37,972	39,421	40,885
State Expenditures[2]	-34,090	-33,141	-37,975	-39,223	-40,586	-41,877	-42,971
Current Year Balance	-2,934	1,263	-2,626	-2,725	-2,613	-2,455	-2,086
Adjustment for Lapses[3]	200	219	125	125	125	125	125
Preliminary Ending Balance	**-2,734**	**1,481**	**-2,501**	**-2,600**	**-2,488**	**-2,330**	**-1,961**

Note: Millions of dollars.

1 Beginning balance omitted for FY 21-22 and thereafter.

2 Based on appropriations. Includes current year lapses and approved supplemental appropriations.

3 Prior year lapses and actual transfers to the Budget Stabilization Reserve Fund.

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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) 2025-26. The report examines long-term trends to facilitate an assessment of current tax and spending policies. The projections are best viewed as plausible outcomes from the application of reasonable economic assumptions and the continuation of current policies and demographic trends. Actual revenues and expenditures could deviate significantly from the projections in this report due to the uncertainty of economic outcomes and unanticipated technical factors, such as changes to federal tax laws and federal matching funds.

The economic projections displayed in this report motivate most General Fund revenues through FY 2025-26. The projections do not represent a formal economic forecast, but rather a controlled simulation. They assume that economic growth is consistent with full employment, historical labor productivity gains and inflation expectations. The economic simulation provides a neutral baseline that policymakers can use to assess fiscal sustainability, and it does not assume that a recession occurs over the five-year budget window. In this manner, the economic forecast represents an optimistic scenario.

The report designates FY 2020-21 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 2025-26. The report makes two forecasts of baseline expenditures. The first forecast represents a "cost to carry" concept and only includes increases in mandatory spending such as debt service, pension contributions and entitlement programs. The second forecast assumes that expenditures grow in a manner that is sufficient to maintain the level of real services provided to service populations in the base year. Hence, most expenditure projections include an inflationary adjustment to compensate for rising prices. Combined, the two forecasts provide a reasonable lower and upper bound for future spending.

The report projects expenditures supported by General Fund revenues, as well as other revenue sources. To that end, the report includes projections for the Lottery, Tobacco Settlement and Oil and Gas Lease Funds. Certain disbursements from those funds support General Fund programs, and the projections allow policymakers to determine if legislative or policy changes are needed so the funds can maintain their current levels of support. Projections of non-General Fund revenues are included in the Appendix.

The report starts with the demographic and economic outlooks. Those outlooks provide the foundation for the five-year projections of General Fund tax revenues and expenditures that follow. Several appendices provide further details on all forecasts contained in this report.

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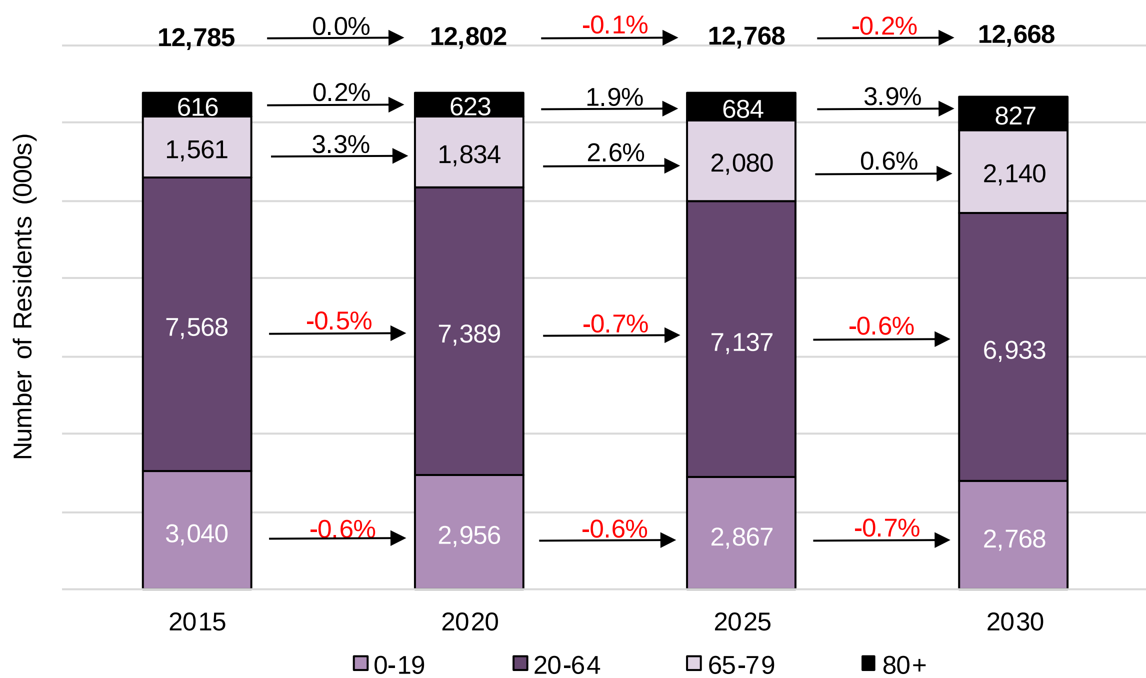
Section 2: Demographic Outlook

Demographics are a critical factor that motivate long-term economic, revenue and expenditure trends. Demographic trends determine key populations, such as the potential labor force that affects economic growth, elementary and secondary students who require educational services and elderly residents who may require long-term care. All population projections and certain descriptive text contained in this section are from the IFO report *Pennsylvania Demographic Outlook* (September 2020).[1] Some detail tables and figures from that report are included in the Appendix to this report.

Figure 2.1
PA Demographic Trends and Projections by Age Group



Note: Percents listed between bars are the average annual growth rates of the age group between years.

Figure 2.1 presents the average annual growth rates of various age cohorts for three time periods. Those periods are: 2015 to 2020 (the recent past), 2020 to 2025 (near-term projections) and 2025 to 2030 (long-term projections). As explained in the September release, it is likely that near-term projections will be similar to actual population estimates. However, long-term projections are less certain because birth, death and migration rates can vary more significantly in the long term than in the short term due to factors such as changing economic conditions, immigration policies, domestic migration incentives and health care.

[1] Page 2 of the *Pennsylvania Demographic Outlook* notes that since the COVID-19 impact on overall deaths and births remains unknown, it is not explicitly built into the demographic projections. That report used data from the U.S. Census Bureau and Pennsylvania Department of Health (DOH). For more details, see http://www.ifo.state.pa.us/releases/395/Demographic-Outlook/.

Figure 2.1 reveals the following trends:

- The **total state population** was nearly flat from 2015 to 2020 and is projected to contract slightly in the near term (-0.1 percent per annum) and long term (-0.2 percent per annum).
- The **school-age cohort** (age 0 to 19) declined 0.6 percent per annum from 2015 to 2020 and is projected to contract at the same rate in the near term but slightly more in the long term (-0.7 percent per annum).
- The **working-age cohort** (age 20 to 64) declined 0.5 percent per annum from 2015 to 2020 and is projected to contract in the near term (-0.7 percent per annum) and the long term (-0.6 percent per annum). In 2025, this group includes Generation X (born between 1965 and 1980) and Millennials (1981 to 1997) and a portion of Generation Z (1998 to 2015). If labor force participation rates do not increase, then this trend will constrain economic and revenue growth in the future.
- The **retiree cohort** (age 65 to 79) increased 3.3 percent per annum from 2015 to 2020 and is projected to expand in the near term (2.6 percent per annum) and the long term (0.6 percent per annum). In 2025, this group includes most of the Baby Boom Generation (1946 to 1964). The expansion of this age cohort and the older cohort implies strong demand for health care and long-term care services moving forward.
- The **elderly cohort** (age 80+) increased 0.2 percent per annum from 2015 to 2020 and is projected to expand in the near term (1.9 percent per annum) and the long term (3.9 percent per annum). In 2025, this group mostly includes the Silent Generation (1926 to 1945) and a small number of individuals from the Greatest Generation (1905 to 1925).

Components of Population Change

Table 2.1 deconstructs the change in state population from 2010 to 2030 to illustrate the factors that motivate low population growth rates. Three factors drive the trends during the 20-year time period:

- The forecast projects that the number of births will decline while the number of deaths will increase. From 2010 to 2015, births (706,000) outnumbered deaths (641,000) by 65,000. By 2020 to 2025, deaths are projected to outnumber births by 50,000.
- From 2010 to 2015, net migration was 9,000 and is projected to increase to 13,000 (2015 to 2020), 16,000 (2020 to 2025) and 20,000 (2025 to 2030). The overall positive net migration is due to net inflows from international migration. The most recent data also reveal a reduction in outflows from net domestic migration.
- Although not shown explicitly in the table, declining college enrollment also impacts state demographic trends. Pennsylvania typically receives a large influx of non-resident students who attend college. The temporary students are counted as residents for the purpose of the Census. While most return to their home state, some secure employment and remain in the state.

Table 2.1
Components of Pennsylvania Population Change by Time Period

	2010-15	2015-20	2020-25	2025-30
Start of Period	**12,711**	**12,785**	**12,802**	**12,768**
Natural Increase	**65**	**4**	**-50**	**-120**
Births	706	679	644	618
Deaths	-641	-675	-694	-738
Net Migration	**9**	**13**	**16**	**20**
End of Period	**12,785**	**12,802**	**12,768**	**12,668**
Total Population Gain	**74**	**17**	**-34**	**-101**

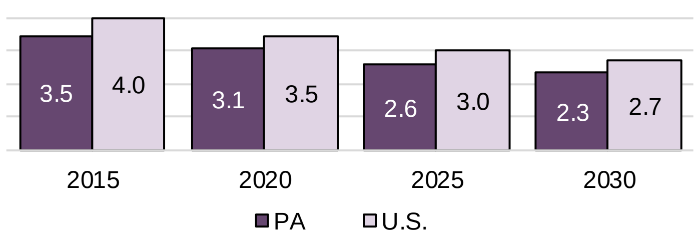
Note: Thousands of residents.

Sources: The 2010 through 2019 data are from the U.S. Census Bureau 2019 Population Estimates and Pennsylvania DOH. The 2020 through 2030 data are projections by IFO using data from the U.S. Census Bureau and Pennsylvania DOH. Calculations by IFO.

Dependency Ratios

Working-age residents remit the majority of state tax revenues that support dependents attending school and elderly residents who require dedicated healthcare services. Demographers use two metrics known as dependency ratios to illustrate the relationships between these three groups. The two ratios are the working-age (age 20-64) to youth (age <20) and working-age to retiree (65+) populations. From 2015 to 2030, the working-age to youth ratio is projected to remain stable at roughly 2.5 to 2.6 for Pennsylvania and 2.3 to 2.4 for the United States. For Pennsylvania, this implies that there are roughly 2.5 to 2.6 working-age adults per youth.

Figure 2.2
Working-Age (20-64) to Retiree (65+) Ratios



Sources: Data for 2015 are from the U.S. Census Bureau 2019 Population Estimates. The 2020, 2025 and 2030 Pennsylvania data are projections by the IFO. The 2020, 2025 and 2030 U.S. data are from the U.S. Census Bureau Population Projections 2017.

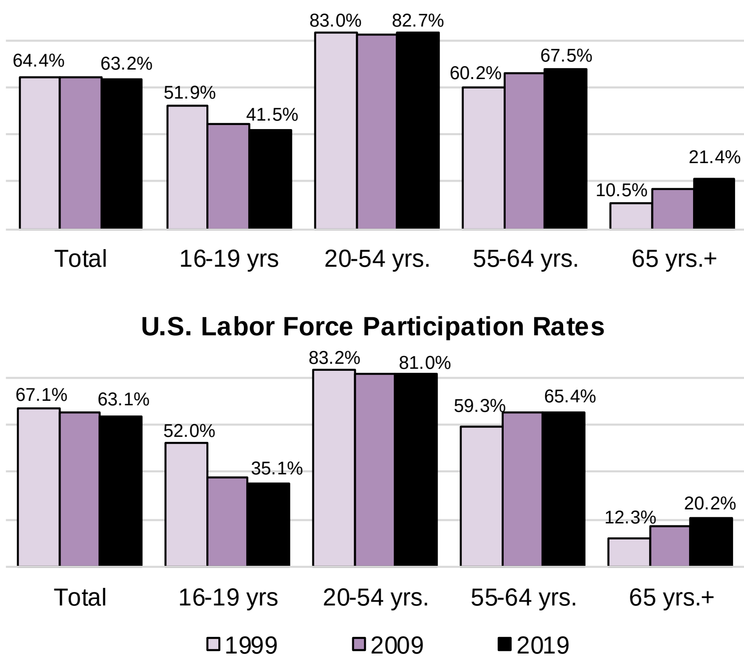
Unlike the working-age to youth ratio, the working-age to retiree ratio is trending downward for both Pennsylvania and the United States. **Figure 2.2** displays this ratio for Pennsylvania and the United States for 2015, 2020 (estimate), 2025 (projected) and 2030 (projected). In 2015, there were 3.5 working-age residents per retiree in Pennsylvania and 4.0 for the United States. Both ratios are projected to decline substantially in 2020 (3.1 for Pennsylvania, 3.5 for the United States) and continue to decline through 2030 (2.3 for Pennsylvania, 2.7 for the United States). The downward trend directly corresponds to the retirement of Baby Boomers and the contraction of the working-age population.

Labor Force Participation Rates

Labor force participation rates determine the size of the actual Pennsylvania labor force. The labor force includes all residents age 16 or older if they are employed or actively seek employment. The statewide labor force participation rate is equal to the ratio of the labor force to all non-institutionalized residents age 16 or older. Overall job growth in the Commonwealth requires that either the working-age population expands or a larger share of the working-age population participates in the labor force.

Figure 2.3 displays labor force participation rates at 10-year intervals for Pennsylvania and the U.S. for various age groups. From 1999 through 2019, the Pennsylvania labor force participation rate declined 1.2 percentage points from 64.4 to 63.2 percent while the U.S. rate declined 4.6 percentage points (67.1 to 63.1 percent). Pennsylvania's rate declined less than the U.S. rate primarily due to the Commonwealth's large senior population. Over the last 20 years, Pennsylvania residents age 65 years and older roughly doubled their labor force participation rate from 10.5 percent (1999) to 21.4 percent (2019). While the U.S. recorded a similar trend, Pennsylvania has a larger share of older residents compared to the U.S., and this population prevented Pennsylvania's labor force participation rate from declining as much as the U.S. rate did during the same time period.

Figure 2.3
Pennsylvania Labor Force Participation Rates



Source: U.S. Bureau of Labor Statistics. CPS data.

In addition to the 65 years and older population, the 55- to 64-year-old population also recorded solid labor force participation growth from 60.2 percent (1999) to 67.5 percent (2019) in Pennsylvania. The U.S. data show a similar trend for that age group, although at a slightly lower overall rate.

The COVID-19 pandemic had a significant impact on labor force participation rates. As of November 2020, the U.S. Bureau of Labor Statistics reported that the U.S. overall labor force participation rate declined to 61.5 percent compared to 63.2 percent in the prior year. It is expected that a portion of this reduction will reverse as COVID-19 vaccines are distributed during the first half of 2021.

Section 3: Economic Outlook

Due to the COVID-19 pandemic, calendar year (CY) 2020 was a tumultuous year for state economic growth. In March 2020, business closures related to COVID-19 and mitigation efforts caused an immediate and severe contraction of the national and state economies. In May, businesses in certain counties partially reopened and economic growth began to recover. By August, a rapid recovery had slowed notably and now proceeds at a modest, albeit halting pace. There is a general expectation that widely available vaccines will allow for an acceleration of the recovery by late spring or early summer.

Table 3.1 displays the economic forecast used for this report. The forecast assumes continued economic recovery in CY 2021 and CY 2022 (blue shading) and a reversion to steady state or typical economic growth in CY 2023 and later years (beige shading). The economic growth lost due to the pandemic is treated as a permanent loss, and the state economy does not revert to the growth path assumed prior to the pandemic.

The forecast reflects these assumptions for the current calendar year:

- Although it is likely that Congress enacts additional stimulus or extensions, the analysis does not incorporate further relief beyond the package passed at the end of CY 2020.
- All residents who desire a vaccination can receive one by mid-summer.
- Schools, restaurants and other businesses resume normal operations by mid-summer.
- Many jobs lost to the pandemic do not return. Those jobs are concentrated in the food service, accommodation, travel, retail trade, government and personal service sectors.

Table 3.1
Annual Growth Rates for Pennsylvania Economic Variables

	2019	2020	2021	2022	2023	2024	2025	2026
Real GDP	2.4%	-4.1%	3.5%	2.8%	2.4%	2.1%	2.0%	1.9%
Wages and Salaries	4.3%	-1.2%	4.8%	4.4%	4.3%	4.2%	4.1%	4.0%
Philadelphia CPI-U	2.0%	0.9%	1.6%	2.1%	2.2%	2.2%	2.2%	2.2%
Payroll Job Gains (000s)	54	-450	120	100	80	59	54	48

Note: Payroll Job Gains exclude self-employed.
Source: U.S. Bureau of Economic Analysis and U.S. Bureau of Labor Statistics. Forecast by IFO.

For CY 2023 and later years, the forecast reflects a long-run growth rate that is consistent with full employment, low inflation and normal productivity gains. For these projections, the forecast assumes that:

- The Federal Reserve achieves its target inflation rate of 2.0 percent.
- Interest rates remain relatively low. Energy prices do not increase dramatically.
- Wage earners receive raises that exceed inflation (i.e., real wages increase).
- Payroll employment does not return to its pre-pandemic level until CY 2026.

Although many factors drive economic growth, four state metrics are key to the forecast: (1) real gross domestic product (GDP, excludes inflation), (2) the Philadelphia consumer price index (CPI-U), (3) wages and salaries and (4) the annual change in payroll employment (i.e., net job gains, excludes self-employed). These variables motivate most General Fund revenue projections contained in the next section of this report. Further technical details regarding the economic forecast can be found in the Appendix.

Statewide economic growth is typically measured by the change in real GDP, which represents the value of all final goods and services produced by the state economy during a calendar year. For CY 2020, preliminary data reveal a significant economic contraction (data through 2020 Q3). After CY 2020, the economic forecast does not include a recession because the purpose of the analysis is to provide insights into the long-term fiscal position of the Commonwealth and any potential structural surplus or deficit. By definition, the determination of a structural budget surplus or deficit assumes an economy that operates at full-employment and excludes all one-time measures such as temporary borrowing, shifting of funds or payment delays.

Table 3.2
Recent Pennsylvania Economic Growth Rates or Change

	2019	2020 Q1	2020 Q2	2020 Q3	2020 Q4
Real GDP	2.4%	-5.8%	-34.0%	35.5%	--
Personal Income	3.6%	2.5%	13.1%	9.6%	--
Wages and Salaries	4.3%	3.3%	-6.6%	-2.6%	0.6%
Philadelphia CPI-U	2.0%	2.6%	0.0%	0.4%	0.9%
Unemployment Rate (level)	4.4%	5.4%	14.0%	10.4%	6.6%
Change Payroll Jobs (000s)	54	28	-849	-504	-460
Change Labor Force (000s)	68	92	-17	-134	-206
U.S. Labor Productivity	1.7%	-0.3%	10.6%	4.6%	--

Notes: Real GDP is quarterly annualized growth rate. Wage growth for 2020 Q3 and Q4 based on adjusted withholding. Change in Payroll Jobs and Labor Force is change from prior year. Labor market data are not seasonally adjusted. U.S. Labor Productivity for All Nonfarm Businesses is a quarterly annualized rate. State productivity data not published.

Sources: U.S. Bureau of Economic Analysis, U.S. Bureau of Labor Statistics.

Table 3.2 displays published state economic and U.S. labor productivity data for recent quarters. Notable trends include:

- In 2020 Q3, real GDP growth offset much of the loss from the prior quarter.
- Personal income recorded strong growth due to special unemployment compensation programs, economic impact payments and Paycheck Protection Program (PPP) loans.[2]
- For 2020 Q4, the latest data reveal year-over-year wage growth after two quarters of contraction.
- The unemployment rate continues to improve, partly due to a contraction of the labor force.

[2] The National Income and Product Accounts include PPP loans with Proprietor's Income or Personal Dividend Income, which are part of state Personal Income. Those amounts include forgiven loans received by sole proprietors and partnerships (Proprietor's Income) and S corporations (Personal Dividend Income).

- For CY 2020, preliminary data show large gains in U.S. labor productivity, which is not unusual during an economic downturn. Labor productivity often improves during recessions as businesses reduce costs, adopt labor-saving technologies and ask workers who retain employment to do more. The forecast assumes those productivity gains are not reversed.

A rapid recovery of wage growth has occurred despite the significant contraction in payroll employment that remains in 2020 Q4 (-460,000 jobs, -7.5 percent from prior year). This outcome is attributable to the fact that many unrecovered jobs share similar characteristics: low hourly wage rate, part-time and disproportionately receive unreported tip income. Many of the unrecovered jobs are in the retail trade, food service, accommodation and personal services sectors. This outcome is explored further in the subsections that follow.

Federal Relief and Stimulus

In response to the COVID-19 pandemic, numerous federal programs have injected or will inject significant funds into the state economy. **Table 3.3** displays amounts for funds that have been received (CY 2020) and estimates of additional monies that will flow to Pennsylvania residents and businesses (CY 2021), as well as state unemployment compensation payments attributable to COVID-19.

Details regarding the federal programs are as follows:

- **State and federal unemployment compensation (UC) payments** include (1) state UC payments, (2) Federal Pandemic Unemployment Compensation (FPUC) bonus payments, (3) federal Pandemic Unemployment Assistance (PUA) for part-time, gig and other normally non-qualifying workers and (4) other federal UC benefits including extended benefits, Lost Wage Assistance payments and the first week of unemployment for all affected workers.
- The Consolidated Appropriations Act, 2021 (CAA), the most recent stimulus legislation, provides FPUC bonus payments of $300 per week through the week ending March 13 (11 weeks). In CY 2020, FPUC payments were available for 16 weeks at $600 per week.
- Federal UC programs, including PUA, will end by early April. After the week ending March 13, no new claims for these programs will be accepted. State UC payments represent the entire calendar year, and exclude typical state UC payments unrelated to the pandemic.
- State UC claims peaked at 1.1 million claims in April 2020, and fell to nearly 341,000 by the end of the calendar year. The IFO estimates continued claims will fall to 178,000 by the end of CY 2021. PUA claims peaked at 3.4 million (includes weeks claimed retroactively) in July 2020, but fell to nearly 500,000 in the final week of 2020. After an initial spike, the IFO projects the level of PUA claims will return to this level by the end of 2021 Q1.
- The first round of **economic impact payments** flowed to 6.6 million residents and totaled $11.0 billion in CY 2020. The second round ($600 per adult and dependents under age 17) began in early January and the IFO projects total payments of $6.3 billion in CY 2021.
- Commonwealth firms and non-profits received $20.7 billion of forgivable **PPP loans** in CY 2020: $11.3 billion to pass through businesses (sole proprietors, partnerships, S corporations), $7.6 billion to C corporations and $1.9 billion to non-profits. For CY 2021, the IFO projects another $11.2 billion will be disbursed.

- The Commonwealth received approval from the U.S. Department of Agriculture to issue emergency allotments for **Supplemental Nutrition Assistance Program (SNAP)** recipients. This emergency funding provides all SNAP households the maximum monthly benefit based on size of household. The amount for CY 2021 ($0.6 billion) represents six months (January through June) of emergency benefits.

- **Direct state support** reflects funds allocated directly to states for general and targeted programmatic needs. For CY 2020, $3.9 billion represents general state aid that was utilized in FY 2019-20 and FY 2020-21.[3] Comparable aid was not included in the CAA. Projections for CY 2021 include targeted funding for education ($2.4 billion), health ($829 million), transportation ($416 million) and human services ($327 million).

Table 3.3
Federal Relief Extended to CY 2021

	2020	2021
Payments to Individuals		
State Unemployment Compensation	$5.2	$1.6
Federal Pandemic Unemployment Comp (FPUC)	16.2	3.6
Pandemic Unemployment Assistance (PUA)	7.0	1.2
Other Federal Assistance	3.3	0.8
SNAP Benefits	0.9	0.6
Economic Impact Payments	11.0	6.3
Total	**43.6**	**14.2**
Other Federal Programs		
Paycheck Protection Program (PPP)	$20.7	$11.2
Direct State Support	5.9	4.6
Direct Local Support	2.5	0.8
Other Support	4.7	0.8

Note: Figures in dollar billions.

- **Direct local support** reflects funds allocated directly to local governments and includes $1.0 billion in general aid and $1.0 billion in transit agency support in CY 2020. As with direct state support, no funds were included for general local aid in CY 2021. Targeted funds for public transit ($451 million) and rental assistance programs ($278 million) provided to local housing authorities compose most of the projected amount for CY 2021.

- **Other support** was authorized by the federal government for CY 2020 and CY 2021. Funds were awarded directly to healthcare providers, educational institutions, non-profits and specific industry partners. For CY 2021, Pennsylvania allocations have not all been released at this time.

[3] The state support amount does not include federal funds associated with the temporary increase in the Federal Medical Assistance Percentage (FMAP) used to reimburse states for Medicaid program costs (effective January 1, 2020 until the termination of the national public health emergency declaration).

Payroll Employment

Since the onset of the pandemic, the Pennsylvania labor market has partially recovered, but the pace has slowed in recent months. In April 2020, payroll employment contracted by 1.06 million jobs (-17.5 percent, excludes self-employed) relative to April 2019. (See **Table 3.4**. Data are not seasonally adjusted.) By August, more than half of the lost jobs had been recovered, mainly in the construction, retail trade, healthcare and food service sectors. During the next three months, another 46,000 payroll jobs (preliminary) were recovered, and the latest published data for November show a contraction in payroll employment of 455,000 (-7.4 percent) from the prior year. The data show that:

- By far, the largest sector affected is accommodations-food service with 115,000 (-24.3 percent) fewer payroll jobs.
- The education sector (excludes local school districts) has not recovered since last April. Many lost jobs were at colleges and universities.
- The government sector shows more contraction in recent months. This is mainly due to local governments (both municipal and local school districts) and federal jobs, due to the end of the Census that employed roughly 9,000 state residents, most in a part-time capacity.
- Recovery for the transportation-warehousing and financial-real estate sectors.

Table 3.4
2020 Payroll Employment Recovers Quickly, but Recently Decelerates

	YOY Number Change (000s)			YOY Percent Change		
	Apr	Aug	Nov	Apr	Aug	Nov
Total	**-1,062**	**-502**	**-455**	**-17.5%**	**-8.3%**	**-7.4%**
Construction	-104	-16	-7	-40.1	-6.0	-2.7
Manufacturing	-77	-39	-37	-13.3	-6.7	-6.5
Retail and Wholesale Trade	-155	-72	-62	-18.9	-8.7	-7.3
Transport and Warehouse	-27	-22	1	-9.1	-7.5	0.2
Financial and Real Estate	-3	0	-1	-0.9	0.0	-0.3
Professional and Technical	-21	-18	-18	-5.8	-5.0	-4.8
Admin and Waste Management	-53	-34	-36	-16.8	-10.7	-10.8
Education (excludes local SD)	-42	-12	-38	-16.1	-5.9	-14.5
Healthcare-Social Assistance	-120	-50	-34	-11.4	-4.7	-3.2
Arts-Entertainment	-58	-32	-19	-60.9	-25.5	-21.4
Accomm-Food Service	-280	-140	-115	-58.6	-28.6	-24.3
Other Services	-86	-36	-34	-32.8	-13.4	-12.9
All Government	-17	-7	-33	-2.3	-1.0	-4.5
All Other	-21	-23	-23	-8.2	-9.2	-8.9

Note: Data are not seasonally adjusted. Figures for November are preliminary. YOY is year-over-year.
Source: U.S. Bureau of Labor Statistics, CES State and Metro Area Employment.

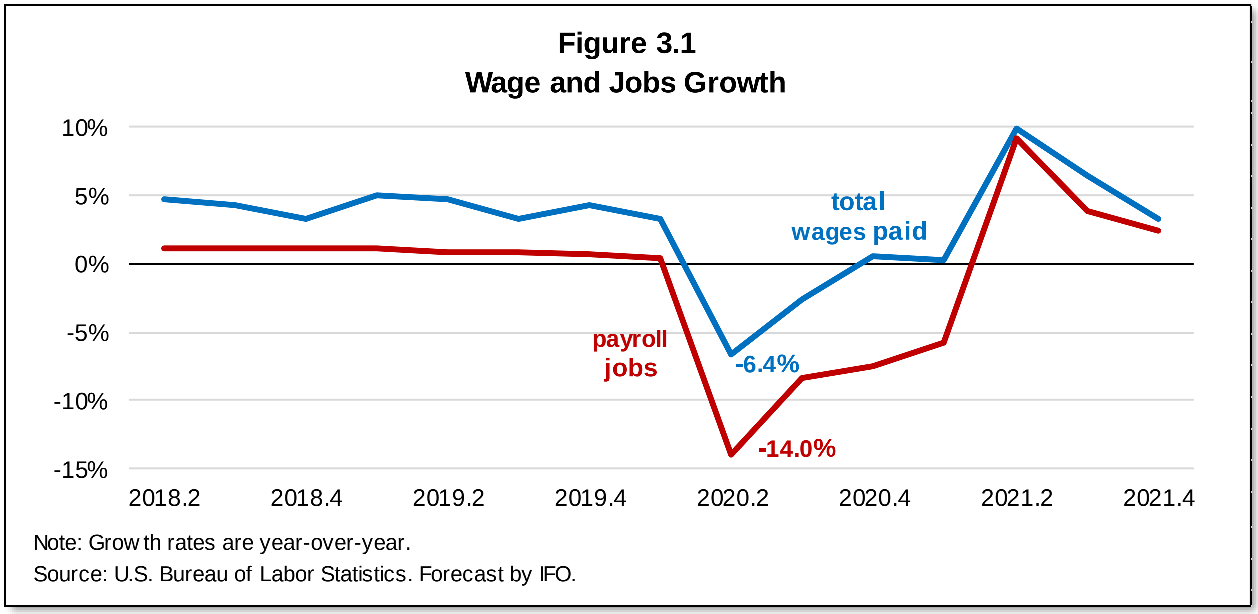
Table 3.5 provides additional employment detail for specific subsectors. Full-service (-47,900, -24.7 percent) and limited-service (-26,900, -16.6 percent) restaurants, as well as colleges and universities (-31,300, -17.1 percent) recorded the largest contractions based on the number of part- and full-time jobs. In relative or percentage terms, clothing stores (-21,700, -48.8 percent), air transportation (-5,600, -41.8 percent) and accommodations (-20,600, -35.2 percent) recorded the largest contractions. The bottom of the table displays certain subsectors that expanded during the pandemic: couriers and messengers, home health care and real estate.

Table 3.5
Permanent Job Loss Likely for Many Sub-Sectors, but a Few Gain

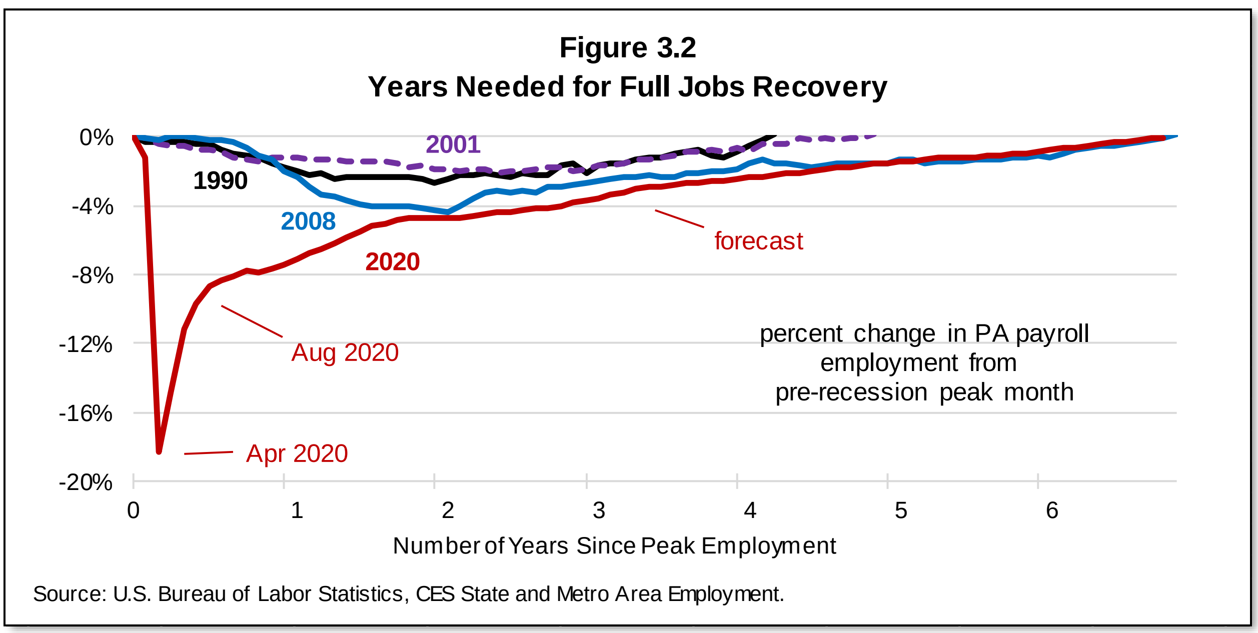
	Number (000s)		Change	
	Nov 2019	Nov 2020	Number	Percent
Full-Service Restaurant	193.9	146.0	-47.9	-24.7%
Colleges, Universities, Professional	183.2	151.9	-31.3	-17.1
Limited-Service Restaurant	161.7	134.8	-26.9	-16.6
Employment Services (Temps)	128.3	104.4	-23.9	-18.6
Personal Care-Dry Cleaning	72.7	50.0	-22.7	-31.2
Local Government	465.0	443.1	-21.9	-4.7
Retail - Clothing Stores	44.5	22.8	-21.7	-48.8
Accommodations	58.5	37.9	-20.6	-35.2
Nursing and Residential Care	201.8	189.3	-12.5	-6.2
State Government-Education	63.4	54.3	-9.1	-14.4
Air Transportation	13.4	7.8	-5.6	-41.8
Courier and Messengers	41.7	48.6	6.9	16.5
Home Health Care	69.3	71.9	2.6	3.8
Real Estate	45.0	47.5	2.5	5.6

Source: U.S. Bureau of Labor Statistics, CES State and Metro Area Employment.

The latest data show average payroll employment was 460,000 lower (-7.5 percent) than the prior year in 2020 Q4. Despite that contraction, total wages paid to all payroll employees now exceed the prior year. As shown by **Figure 3.1**, total wages paid to all payroll employees expanded by four to five percent in the quarters prior to the pandemic, while payroll jobs expanded by roughly one percent. The differential between these two series represents the growth of the average wage paid to all workers. Prior to the pandemic, that differential or rate generally ranged from three to four percent. For 2020 Q4, the differential is large (roughly 8 percentage points) because the pandemic disproportionately impacted lower-wage and part-time workers in the food service, retail and personal service industries. The large increase in the average wage paid was due to the employment contraction, rather than higher wages for workers who retained employment. As the recovery continues, the differential will close as workers regain employment.



After CY 2021, payroll employment continues to recover, but the analysis assumes that it will not fully recover until CY 2026 due to the severity of the COVID-19 recession. **Figure 3.2** displays the decline in payroll employment relative to the pre-recession peak for the three prior recessions and the COVID-19 recession. In terms of employment, the data show that the 1990 and 2001 recessions were relatively mild, as payroll employment contracted by roughly 2 percent. The housing and financial crisis of 2008 was more severe as payroll employment contracted by more than 4 percent and required six years to revert to the pre-recession peak. At the start of the COVID-19 recession, Pennsylvania payroll employment contracted immediately by 1.1 million jobs and the analysis assumes that payroll employment will also require six years to revert to the pre-recession level.



Labor Force Trends

Table 3.6 displays selected metrics for the Pennsylvania labor market. The top part of the table displays data and trends for 2010, 2015 and 2020 (preliminary). These data points show that:

- In CY 2020, average **payroll employment** will be roughly the same as CY 2010.
- The **labor force** is the number of residents age 16 or older who work or seek employment. That metric increased over the past decade, driven by (1) a larger share of residents age 20 to 64 who work and (2) a much higher share of residents age 65 to 74 who work (not shown in table).
- The **labor force participation rate** is the share of residents age 16 or older who work or seek employment. Over the past decade, that ratio declined by 1.0 percentage point and nearly all of the reduction occurred in CY 2020 due to the COVID-19 pandemic. (Value was 63.2 for CY 2019.)

Due to the contraction of working-age residents (see Demographic Outlook section), overall labor force participation rates must increase to allow the number and supply of workers to grow in the Commonwealth. For state residents age 65 and older, labor force participation rates increased dramatically from 2010 (16.5 percent) to 2015 (18.8 percent) and 2019 (21.4 percent, 2020 data not published). Currently, it is unknown how the COVID-19 pandemic has affected job prospects and employment levels for residents age 65 or older. Anecdotal news stories suggest that older workers near retirement may have departed the labor force earlier than intended due in part to the pandemic.

The bottom portion of Table 3.6 shows recent data for three quarters and the change from the prior year. These data points show that:

- Payroll employment increased by 41,000 jobs in 2019 Q4 and the unemployment rate was low (4.4 percent). However, that low rate was still higher than the prior year (3.7 percent) and the rate increased due to a large influx of residents into the labor force seeking employment (107,000).
- Compared to the prior year, 2020 Q2 recorded a severe contraction of 849,000 payroll jobs, an average unemployment rate of 14.0 percent and modest change in the labor force and labor force participation rate.
- Compared to the prior year, 2020 Q4 recorded a dramatic contraction in payroll employment (-460,000), labor force (-206,000) and labor force participation rate (-1.9 percentage points). These data are preliminary and will be revised.

These last two trends can impact future economic growth in various ways. If workers permanently exit the labor force, it could create labor supply constraints. It could also be the case that former two-earner households decide that a spouse or partner will remain at home to school children and/or provide care for elderly parents who prefer not to reside in nursing homes. In general, that outcome would translate to lower economic growth as those family units reduce consumption in response to the lower income stream.

Table 3.6
Pennsylvania Employment and Labor Force Trends

	Annual Average			Change		
	2010	2015	2020	2010-15	2015-20	2010-20
Payroll Employment (000s)	5,622	5,835	5,618	213	-217	-4
Labor Force (000s)	6,381	6,413	6,425	32	12	44
Labor Force Participation Rate (%)	63.5	62.8	62.5	-0.7	-0.3	-1.0
	Quarterly Average			**Change from Prior Year**		
	2019.4	**2020.2**	**2020.4**	**2019.4**	**2020.2**	**2020.4**
Payroll Employment (000s)	6,135	5,230	5,675	41	-849	-460
Labor Force (000s)	6,535	6,437	6,329	107	-17	-206
Labor Force Participation Rate (%)	63.5	62.5	61.6	0.9	-0.3	-1.9
Unemployment Rate (%)	4.4	14.0	6.4	0.7	10.1	2.0

Source: U.S. Bureau of Labor Statistics.

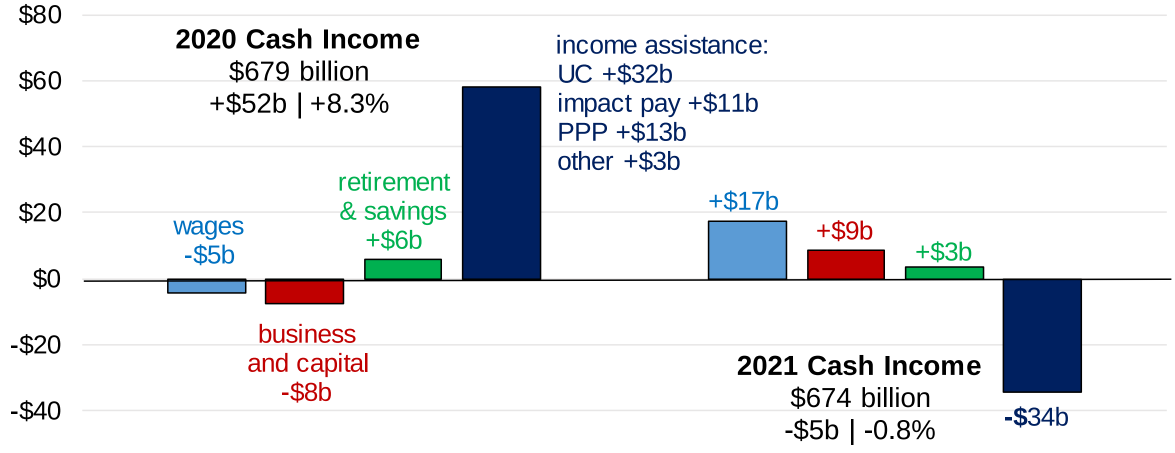
Income Trends

The COVID-19 pandemic had significant implications for the amount and type of income received by state residents. For the purpose of the economic and revenue forecast, the IFO constructs an income concept called Pennsylvania Cash Income that includes all types of income received by state residents that can be spent or saved such as wages, business income, capital income (capital gains, interest, dividends and rent), retirement income (e.g., Social Security, pensions received, IRA disbursements) and income assistance (SSI, veterans benefits, unemployment compensation, SNAP, refundable tax credits).[4] Unlike state Personal Income published by the U.S. Bureau of Economic Analysis, it does not include imputed dividend, rent and interest income, but does include capital gains.

Preliminary data for CY 2020 suggest that federal programs more than backfilled wage, business or capital income that was lost through business closures and layoffs. (See **Figure 3.3**.) It should be noted that amounts for income assistance, retirement and wage income are largely known, but figures for business and capital income are estimates based on limited data. Final data for CY 2020 will not be available until tax returns are filed and tabulated in mid-2022.

[4] Due to lack of reliable data, Cash Income does not include unreported tip income, and that income source likely declined precipitously in CY 2020. Cash Income does include estimates for other income that is not reported on tax returns based on IRS Tax Gap studies. See https://www.irs.gov/pub/irs-pdf/p1415.pdf for the latest IRS study used by the IFO to impute unreported income by source.

Figure 3.3
Pennsylvania Cash Income



Source: Cash Income uses data published by various federal and state agencies. For a description, see the *IFO Official Revenue Estimate Methodology* released July 2020 and posted to the IFO website.

Recent trends in Cash Income include:

- In CY 2020, wage income fell by $5 billion and the forecast assumes that business-capital income fell by an estimated $8 billion. Unreported tip income is not included in these figures and forgivable PPP loans are included with income assistance and not business income.
- Retirement and savings income increased by $6 billion. Income assistance increased by $59 billion.[5]
- Overall Cash Income increased to $679 billion, a net gain of $52 billion (8.3 percent). This represents the strongest Cash Income growth since CY 1998 and is the primary factor that motivates the 2.6 percent increase (adjusted for shifts and one-time transfers) in General Fund revenues for the first six months of the fiscal year.
- For CY 2021, the analysis projects a reduction in Cash Income (-$5 billion, -0.8 percent) due to the phase-out of federal programs. As noted, that outcome assumes that further federal stimulus is not enacted.

[5] For CY 2020, income assistance includes PPP loans to pass through entities ($11.3 billion) and non-profits ($1.9 billion) only (excludes C corporations). For published figures in the U.S. Bureau of Economic Analysis' National Income and Product Accounts (NIPA), those amounts will be included in Proprietor's Income (sole proprietors and partnerships) or corporate profits (S corporations). The analysis assumes that all loans are forgiven for CY 2020 and CY 2021.

Financial Trends

The economics section concludes with financial and consumer debt data. Overall, CY 2020 was a solid year for equity and housing markets. **Table 3.7** shows year-over-year growth rates for the latest four quarters and the CY 2020 annual average. Notable results include:

- The S&P 500 Index increased in all four quarters and was up 8.8 percent for the year (annual average based on month-end values).
- Preliminary dividend data for the S&P 500 was down in third and fourth quarters but flat for all of CY 2020.
- The Pennsylvania Home Price Index published by the Federal Housing Finance Agency (purchase transactions only) showed very strong gains for 2020 Q3 (8.0 percent) relative to the prior year.
- Per capita consumer debt data from the New York Federal Reserve Board reveal unexpected reductions in credit card and home equity line of credit debt for Pennsylvania consumers.
- Mortgage debt more than 90 days delinquent declined due to the entry of distressed homeowners into the federal mortgage forbearance program. Those mortgages are not considered delinquent.

Part of the recent reduction in home equity line of credit (open-ended) debt is attributable to the pandemic as lenders are less willing to make those loans in downturns or times of economic uncertainty. However, even before the onset of the pandemic, that category of debt had been contracting.

Overall, these data suggest solid fundamentals for most consumers that own homes. Less reliable data are available for renters. One of the risks to the near-term economic forecast is the expiration of the renter eviction moratorium, and how missed payments impact landlords and the long-term rental market.

Table 3.7
Financial and Consumer Data

	Year-Over-Year Growth				
	2020.1	2020.2	2020.3	2020.4	2020
S&P 500 Index	10.9%	0.3%	11.9%	12.0%	8.8%
S&P 500 Dividends	6.8%	0.0%	-6.5%	-0.8%	-0.2%
PA Home Price Index	5.1%	4.5%	8.0%	n.a.	5.9%
PA Per Capita Consumer Debt					
Auto Loan	6.1%	-1.7%	1.9%	n.a.	n.a.
Credit Card	1.3%	-8.2%	-8.9%	n.a.	n.a.
Primary Mortgage	4.7%	2.1%	0.2%	n.a.	n.a.
Home Equity Line of Credit	-8.0%	-10.7%	-11.9%	n.a.	n.a.
Student Loan	3.9%	3.3%	0.9%	n.a.	n.a.
% Mortgage Debt Delinquent	1.07	0.87	0.78	n.a.	n.a.

Note: Average gain in Home Price Index for 2020 based on first three quarters of year. Primary mortgage includes closed-end home equity loans. Delinquent mortgage debt is more than 90 days late.

Source: Wall Street Journal, Yardeni.com, Federal Housing Finance Agency and Federal Reserve Board of New York.

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Section 4: Revenue Outlook

General Fund revenues of $32.28 billion in FY 2019-20 were dramatically impacted by the COVID-19 pandemic and related mitigation factors. (See **Table 4.1**.) Fiscal year collections declined $2.58 billion from the prior year, with roughly $1.4 billion lost due to reduced economic activity and $1.9 billion delayed to FY 2020-21 under extended tax due dates. For FY 2020-21, all major revenue sources are outperforming expectations compared to projections made in the early months of the pandemic. Including statutory changes enacted with the state budget in November, the updated forecast used by this report reflects an increase of $2.56 billion over the IFO's Official Revenue Estimate released in June 2020.[6]

Table 4.1
General Fund Revenues

Fiscal Year	19-20	20-21	21-22	22-23	23-24	24-25	25-26
Personal Income	$12,835	$15,807	$15,034	$15,758	$16,438	$17,141	$17,867
Sales and Use	10,818	12,327	12,424	12,368	12,758	13,160	13,588
Corporate Income	2,827	3,775	3,248	3,648	3,989	4,233	4,466
Gross Receipts	1,104	1,002	1,060	1,075	1,084	1,096	1,106
Inheritance Tax	1,082	1,196	1,140	1,158	1,188	1,222	1,256
All Other	3,610	4,331	3,769	3,844	3,896	3,976	4,037
Total	**32,276**	**38,437**	**36,675**	**37,851**	**39,352**	**40,828**	**42,321**
Growth Rate	-7.4%	19.1%	-4.6%	3.2%	4.0%	3.8%	3.7%

Note: Millions of dollars.

Revenues for FY 2020-21 are projected to increase at a rate of 19.1 percent, boosted by revenues shifted from the prior fiscal year, pent-up consumer demand from temporary business closures early in the pandemic and the spending of federal stimulus monies. Revenues then decline 4.6 percent in FY 2021-22 and grow at an average rate of 3.6 percent per annum for FY 2022-23 to FY 2025-26. In the near-term, notable factors that impact revenues include:

- The FY 2020-21 personal income tax (PIT) forecast includes the impact of increased tax liabilities related to PPP loan forgiveness (+$100 million) and a one-time transfer of $200 million to the Property Tax Relief Fund (PTRF).
- In response to the COVID-19 pandemic, consumer purchases shifted abruptly from brick and mortar to online stores and from services to goods. This impact is expected to partially reverse as the pandemic subsides and consumers return to historical spending patterns.

[6] See *Official Revenue Estimate FY 2020-21* for more information: http://www.ifo.state.pa.us/download.cfm?file=Resources/Documents/Official-Revenue-Estimate-2020-06.pdf.

- A new transfer from sales and use tax (SUT) to the Public Transportation Trust Fund (PTTF) begins in FY 2022-23. For that year, the forecast projects a transfer of $469 million and that increases to $515 million in FY 2025-26.
- Corporate net income tax (CNIT) revenues are significantly impacted by the federal tax treatment of certain provisions enacted under the CARES Act (i.e., deductibility of expenses paid with PPP loans and the ability to defer certain 2020 employer payroll taxes).

The primary determinant of revenue growth for FY 2020-21 is the rate of economic recovery after COVID-related temporary business closures in the spring of 2020. **Table 4.2** contains a comparison of year-over-year growth rates for the first and last six months of CY 2020. Delayed tax due dates implemented to mitigate the impact of the pandemic on Pennsylvania taxpayers shifted significant amounts of revenue to the second half of the calendar year ($1.9 billion). For purposes of this comparison, growth rates are adjusted to reverse the shift, as well as to exclude the impact of one-time transfers or extra due dates (i.e., Wednesdays for employer withholding).

Table 4.2
CY 2020 General Fund Revenue Growth

	Jan-June	July-Dec
PIT - Withholding	-1.1%	-1.0%
PIT - Other	-5.6	-6.4
Sales - Non-Motor	-2.4	3.8
Sales - Motor Vehicle	-21.5	16.6
Corporate Net Income	-11.6	12.2
Inheritance	10.9	-3.4
Realty Transfer	-15.7	12.8
All Other Tax	-10.3	2.5
All Non-Tax	-9.6	-11.7
Total	**-5.2**	**2.6**

Note: Growth rates adjusted to reverse the shift of revenues to FY 2020-21, as well as the impact of one-time transfers or extra due dates (i.e., Wednesdays for employer withholding).

The table illustrates the dramatic contraction of revenue during the first six months of CY 2020. (Note: Year-over-year inheritance tax growth of 28 percent for January to March 2020 was more than sufficient to offset the decline in revenues during the three following months, yielding a growth rate of roughly 11 percent for the period.) The revenue declines were most notable in the motor vehicle SUT, CNIT and realty transfer taxes, with subsequent recovery in the second half of CY 2020. The recovery in motor vehicle SUT and realty transfer taxes was primarily driven by pent-up demand resulting from the cessation of most sales of vehicles and housing in the spring.

The text that follows provides a brief discussion of revenue trends and the outlook for three of the largest General Fund revenue sources. The final subsection provides an overview of other revenue sources. Historical data for General Fund revenues can be found in the Appendix.

Personal Income Tax

Projected PIT revenues of $15.81 billion for FY 2020-21 are $428 million higher than the IFO's Official Estimate and are expected to increase at a rate of 23.2 percent over the prior fiscal year. (See **Table 4.3**.) The increase is due largely to $1.34 billion in quarterly and annual payments ($440 million and $895 million, respectively) that were shifted from the prior year. In addition, FY 2020-21 reflects increased tax liabilities related to PPP loan forgiveness (+$100 million to annuals) and a transfer to the PTRF (-$200 million to withholding) in accordance with Act 114 of 2020.

The PIT forecast normalizes (declines 4.9 percent) in FY 2021-22, followed by average growth of 4.4 percent per annum for FY 2022-23 to FY 2025-26. Wages and withholding tax revenues are expected to increase by 2.8 percent for FY 2020-21, and at an average rate of 4.0 percent per annum for FY 2022-23 to FY 2025-26. Non-withholding revenues expand at a faster pace (5.7 percent per annum) over the same period.

Table 4.3
Personal Income Tax Revenue

Fiscal Year	19-20	20-21	21-22	22-23	23-24	24-25	25-26
Withholding	$10,543	$10,837	$11,313	$11,785	$12,248	$12,725	$13,221
Quarterly	1,529	2,289	2,099	2,230	2,351	2,476	2,603
Annuals	764	2,681	1,622	1,744	1,839	1,940	2,043
Total Revenue	**12,835**	**15,807**	**15,034**	**15,758**	**16,438**	**17,141**	**17,867**
Growth Rate	-8.9%	23.2%	-4.9%	4.8%	4.3%	4.3%	4.2%

Note: Millions of dollars.

Sales and Use Tax

The FY 2020-21 SUT estimate reflects an increase of $875 million from the IFO's official projection due to strength in both non-motor and motor vehicle collections. (See **Table 4.4**.) Particularly in the early months of the fiscal year, consumer spending was boosted by the first round of economic impact payments, FPUC bonus payments and pent-up demand resulting from temporary business closures. The pandemic also produced a sudden shift in behavior as consumers purchased more goods online (as opposed to brick and mortar stores) and fewer services. The forecast assumes that consumers partially return to historical spending patterns in the short term, but online sales continue to increase over time. For motor SUT, the response to the impact of the COVID-19 pandemic caused an overall decline in the number of U.S. car sales (approximately -15 percent year-over-year) in CY 2020, but car sales are expected to recover in CY 2021. The average price of vehicles is expected to increase at a rate of 2.1 percent per annum from CY 2020 to CY 2025.

For FY 2022-23 to FY 2025-26, the forecast projects that SUT will expand at an average rate of 2.3 percent per annum, which is restrained due to a new transfer to the PTTF. The new transfer begins in FY 2022-23 and is estimated to be $469 million for that fiscal year and increase to $515 million in FY 2025-26.[7] The forecast projects that non-motor vehicle revenues will expand at a rate of 2.4 percent per annum for the same period. If the new PTTF transfer is excluded, then the average growth rate increases to 3.4 percent per annum. For motor vehicles, revenues expand at an average rate of 1.1 percent per annum for FY 2022-23 to FY 2025-26.

[7] The transfer is equal to the greater of (1) the ratio of $450 million to FY 2020-21 sales tax receipts multiplied by current year sales tax receipts or (2) $450 million.

Table 4.4
Sales and Use Tax Revenue

Fiscal Year	19-20	20-21	21-22	22-23	23-24	24-25	25-26
Non-Motor	$9,453	$10,640	$10,799	$10,771	$11,127	$11,496	$11,890
Motor	1,365	1,687	1,626	1,598	1,631	1,664	1,698
Total Revenue	**10,818**	**12,327**	**12,424**	**12,368**	**12,758**	**13,160**	**13,588**
Growth Rate	-2.5%	13.9%	0.8%	-0.5%	3.2%	3.2%	3.2%

Note: Millions of dollars.

Corporate Net Income Tax

The forecast projects that CNIT revenues grow 33.5 percent to $3,775 million in FY 2020-21, an increase of $586 million from the IFO's Official Estimate. After declining 13.9 percent in FY 2021-22, revenues are projected to expand at an average growth rate of 8.3 percent per annum for the remainder of the forecast period. (See **Table 4.5**.)

Revenues over the forecast horizon are influenced by corporate profits growth and tax provisions enacted in response to the COVID-19 pandemic designed to soften negative shocks to business activity. In the short term (FY 2020-21 to FY 2023-24), revenues fluctuate as a result of tax provisions including:

- The extension of the due date for most tax year 2019 final payments to August 14, 2020, which shifted an estimated $375 million in CNIT collections from FY 2019-20 to FY 2020-21.
- A law change in the CAA allowing for deduction of expenses paid with forgiven PPP loans. This recent change may have resulted in overpayments to the extent that firms had assumed that these expenses were not deductible when making tax year 2020 estimated payments.
- The ability to defer certain 2020 employer payroll taxes to December 2021 and December 2022.
- The increased limit on business interest expense deductions.
- Several other minor provisions that reduce short-term tax liability for impacted businesses.

Long-term revenue growth (FY 2024-25 to FY 2025-26), is influenced by economic trends and is consistent with long-term profits growth for non-recessionary periods.

Table 4.5
Corporate Net Income Tax Revenue

Fiscal Year	19-20	20-21	21-22	22-23	23-24	24-25	25-26
Total Revenue	**$2,827**	**$3,775**	**$3,248**	**$3,648**	**$3,989**	**$4,233**	**$4,466**
Growth Rate	-16.8%	33.5%	-13.9%	12.3%	9.3%	6.1%	5.5%

Note: Millions of dollars.

Other Revenue Sources

Other notable trends that affect General Fund revenues include the following:

- Cigarette tax revenues are assumed to be reduced by $115 million annually for debt service related to the Tobacco Settlement Bonds.
- The gaming estimate assumes that the second Philadelphia category 2 facility will open in February 2021 and will increase table game revenues by $2 million in FY 2020-21.
- The licenses and fees estimate for FY 2020-21 includes the impact of sports betting ($30 million), iGaming ($10 million) and two category 4 table game fees ($5 million).
- Other miscellaneous collections for FY 2020-21 include one-time transfers from special funds ($431 million) and the Budget Stabilization Fund ($100 million) authorized under Act 114 of 2020.
- The estimates assume that $185 million will be available annually for transfer from the State Stores Fund to the General Fund.

Table 4.6
Other General Fund Revenue Sources

Fiscal Year	19-20	20-21	21-22	22-23	23-24	24-25	25-26
Accelerated Deposits	$4	$0	$0	$0	$0	$0	$0
Utility Property	38	38	39	39	39	40	40
Insurance Premiums	474	424	456	464	468	503	508
Financial Institutions	393	382	402	419	438	457	477
Cigarette	924	936	863	826	789	754	720
Other Tobacco Products	127	130	134	137	140	143	146
Malt Beverage	23	23	24	24	24	24	24
Liquor	366	412	429	446	464	482	501
Realty Transfer	498	585	594	613	633	654	682
Gaming	143	223	262	290	297	307	321
Minor and Repealed	-44	-44	-58	-60	-62	-65	-69
Liquor Store Profits	185	185	185	185	185	185	185
Licenses, Fees & Misc.	412	966	370	389	408	416	425
Fines, Penalties & Int.	68	69	71	73	74	76	76
Total Revenue	**3,610**	**4,331**	**3,769**	**3,844**	**3,896**	**3,976**	**4,037**
Growth Rate	-19.4%	20.0%	-13.0%	2.0%	1.4%	2.1%	1.5%

Note: Millions of dollars.

Section 5: Expenditure Outlook

For FY 2020-21, total General Fund appropriations are $33.14 billion, a $949 million decrease (-2.8 percent) over FY 2019-20.[8] However, the FY 2020-21 budget utilizes $1.33 billion from the Coronavirus Aid, Relief, and Economic Security (CARES) Act Coronavirus Relief Fund (CRF) to temporarily reduce state General Fund expenditures in the Department of Criminal Justice (DCJ, $1.06 billion), Pennsylvania State Police (PSP, $226 million), Department of Human Services (DHS, $30 million) and Department of Health (DOH, $14 million). These amounts are in addition to $2.07 billion in federal matching funds provided to DHS for Medical Assistance programs in FY 2020-21.

The projections throughout most of this section represent General Fund appropriations required to maintain the same level of services provided in the FY 2020-21 base year. Unless otherwise noted, the analysis assumes that FY 2020-21 expenditures supported by funds such as federal funds and other state funds or user fees (sometimes referred to as augmentations) continue to receive support from those sources. An exception occurs when it is clear that the funding source will be unable to provide the same level of relative support in future years. A primary example of this type of funding source is the CARES Act CRF and other federal stimulus dollars. These funds are currently not assumed to be available in FY 2021-22 for General Fund use, and as a result, it is assumed that General Fund state dollars will be used to replace these funds. Other instances of funding sources not able to maintain the same level of support are described in greater detail in the relevant subsections that follow, as well as the Other Funds subsection in the Appendix.

From FY 2020-21 to FY 2021-22, General Fund expenditures are expected to increase by $4.83 billion (14.6 percent). In addition to $3.4 billion in federal stimulus funds (e.g., CARES Act CRF and enhanced federal matching rate for Medical Assistance), other significant factors include:

- The use of one-time funding and other measures to reduce DHS expenditures in FY 2020-21 that will not be available in FY 2021-22, including a transfer from the Pennsylvania Professional Liability Joint Underwriting Association ($200 million) and a short-term managed care payment shift ($480 million).
- A temporary reduction in agency payments to the Pennsylvania Employees Benefit Trust Fund (PEBTF) for the Retirement Employee Health Program (REHP) ends in FY 2020-21.

For FY 2022-23 to FY 2025-26, General Fund expenditures are projected to increase at an average rate of 3.1 percent per annum. The overall trends in the out years are driven by the DHS and the Department of Education (PDE), as those two agencies comprise approximately 80 percent of total General Fund expenditures. Three factors motivate the trends in total expenditures:

- Service populations that expand or contract (e.g., school-age children).
- The growth of employee wages, pensions and employee and retiree healthcare.
- Various inflation adjustments that maintain the purchasing power of funds appropriated in the base year for all future years.

[8] The text in this section uses the terms appropriation and expenditure interchangeably. However, the spending authority granted to a particular department or agency (i.e., the appropriation) need not equal actual expenditures for that year. Unused spending authority is reflected as a lapse that reduces budget shortfalls or increases budget surpluses.

Table 5.1
General Fund Expenditures by Agency

Fiscal Year	19-20	20-21	21-22	22-23	23-24	24-25	25-26
Amount							
Education[1]	$14,378	$14,433	$14,753	$15,154	$15,732	$16,104	$16,523
Human Services	12,593	12,683	15,677	16,254	16,808	17,384	17,953
Criminal Justice[2]	2,616	1,612	2,694	2,788	2,852	2,908	2,976
Treasury	1,197	1,235	1,283	1,321	1,387	1,417	1,514
All Other	3,306	3,177	3,568	3,706	3,807	4,063	4,005
Total Expenditures	**34,090**	**33,141**	**37,975**	**39,223**	**40,586**	**41,877**	**42,971**
Growth Rates							
Education[1]	4.6%	0.4%	2.2%	2.7%	3.8%	2.4%	2.6%
Human Services	-1.6	0.7	23.6	3.7	3.4	3.4	3.3
Criminal Justice[2]	2.1	-38.4	67.1	3.5	2.3	2.0	2.3
Treasury	2.8	3.2	3.9	2.9	5.0	2.2	6.9
All Other	5.8	-3.9	12.3	3.9	2.7	6.7	-1.4
Total Expenditures	**2.1**	**-2.8**	**14.6**	**3.3**	**3.5**	**3.2**	**2.6**

Note: Millions of dollars.
1 Includes the State System of Higher Education and Thaddeus Stevens College of Technology.
2 Includes the Department of Corrections and the Board of Probation and Parole.

Tables 5.1 and **5.2** provide detail based on department and expenditure category. Notable factors not mentioned above include:

- The State Employee Retirement System (SERS) and Pennsylvania School Employee Retirement System (PSERS) contribution growth rates continue to moderate after many years of significant growth. For FY 2022-23 to FY 2025-26, the average growth rate of SERS contributions is estimated to grow modestly at 0.8 percent per annum while PSERS per annum growth rate is 5.1 percent. The increase in FY 2021-22 is due to the use of temporary federal funds to pick up the costs of certain state personnel expenses, including pension costs.
- Pre-K to Grade 12 expenditures grow modestly due to contraction of the school-age population. The uptick in growth for FY 2023-24 (3.7 percent) is due to the return of the authority rentals and sinking fund requirements (commonly known as PlanCon reimbursements, discussed further in the education subsection).
- The strong growth rate in the All Other line item in FY 2024-25 followed by a decline in the growth rate in FY 2025-26 is due to a FY 2024-25 repayment of a $165 million transfer originally from the Workers' Compensation Security Fund to the General Fund in May 2017.

The Appendix provides more details on the general methodology for the various extrapolators used to project future years. The remainder of this section details (1) the differences between the current service versus cost-to-carry baselines, (2) general fund pensions, (3) general fund debt service, (4) more details on DHS, PDE and DCJ and (5) a brief discussion of other agencies.

Table 5.2
General Fund Expenditures by Category

Fiscal Year	19-20	20-21	21-22	22-23	23-24	24-25	25-26
Expenditure Type							
Wages[1]	$2,579	$1,948	$2,781	$2,889	$2,966	$3,044	$3,125
Pensions (SERS/PSERS)	3,505	3,352	3,747	3,962	4,114	4,235	4,404
Healthcare/Benefits[2]	952	631	989	1,040	1,091	1,144	1,200
Pre-K-12 Education[3]	10,239	10,223	10,402	10,607	11,003	11,201	11,418
Medical Assistance	3,785	3,934	5,132	5,339	5,544	5,772	5,996
Long-Term Living	3,307	3,330	4,472	4,648	4,825	5,001	5,166
Intellectual Disability	1,997	1,962	2,312	2,381	2,452	2,526	2,602
Other Human Services	2,843	2,880	3,145	3,243	3,329	3,415	3,502
Debt Service	1,144	1,182	1,227	1,263	1,328	1,356	1,452
All Other	3,741	3,698	3,768	3,850	3,934	4,184	4,106
Total Expenditures	**34,090**	**33,141**	**37,975**	**39,223**	**40,586**	**41,877**	**42,971**
Growth Rates							
Wages[1]		-24.4%	42.7%	3.9%	2.7%	2.6%	2.6%
Pensions (SERS/PSERS)		-4.4	11.8	5.7	3.8	3.0	4.0
Healthcare/Benefits[2]		-33.8	56.9	5.1	4.9	4.9	5.0
Pre-K-12 Education[3]		-0.2	1.8	2.0	3.7	1.8	1.9
Medical Assistance		3.9	30.4	4.1	3.8	4.1	3.9
Long-Term Living		0.7	34.3	3.9	3.8	3.6	3.3
Intellectual Disability		-1.7	17.8	3.0	3.0	3.0	3.0
Other Human Services		1.3	9.2	3.1	2.6	2.6	2.5
Debt Service		3.4	3.8	2.9	5.2	2.2	7.0
All Other		-1.1	1.9	2.2	2.2	6.4	-1.8
Total Expenditures		**-2.8**	**14.6**	**3.3**	**3.5**	**3.2**	**2.6**

Note: Millions of dollars.

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

2 Includes all non-pension benefits such as health and life insurance and other miscellaneous benefits for retirees and employees.

3 Excludes department personnel expenses and the state share of PSERS funding.

Current Services Versus Cost-to-Carry Baselines

Expenditures can be forecast using various methods. A "current services" concept is reflected in Tables 5.1 and 5.2 and used throughout this section. The current services method applies inflationary or demographic adjustments to maintain the level of real services provided to residents of the Commonwealth in the base year. Another method to project expenditures is the cost-to-carry approach. The cost-to-carry concept only increases funding for programs or line items that must be funded due to state or federal law, debt or pension obligations or the care of individuals under the jurisdiction of a state agency. For the purpose of the cost-to-carry concept, the following items increase at the same rate as the current services approach:

- Programs administered by DHS, DCJ and PSP;
- State employee personnel costs including wages, retiree healthcare and current employee healthcare and other benefits;
- General obligation debt service funded by the General Fund;
- Pension contributions funded by the General Fund including reimbursements to school districts for school employee pensions (PSERS) and state employee pensions (SERS);
- Payments to school districts for partial reimbursement of school employee Social Security employer costs; and
- PlanCon reimbursements and repayment of the $165 million transfer from the Workers' Compensation Security Fund to the General Fund in May 2017.

All other programs or line items (referred to as discretionary spending) are held flat at FY 2020-21 funding levels. Those items include the basic and special education subsidies, as well as funds for non-personnel expenses such as office supplies, rent, utilities, furniture, computers and travel.[9]

Table 5.3 provides details on the cost-to-carry concept and a comparison to the current services concept at the bottom of the table. The difference between the current services and cost-to-carry forecasts increases from $239 million in FY 2021-22 to $1.19 billion in FY 2025-26. The cost-to-carry forecast grows at an average rate of 4.7 percent per annum while the current services forecast grows by 5.3 percent per annum. There is strong growth in both concepts from FY 2020-21 into FY 2021-22 due to the state General Fund replacing expenses that were paid for by various federal funds in FY 2020-21. Excluding the growth into FY 2021-22 from the calculations, the cost-to-carry forecast grows at an average rate of 2.6 percent per annum while the current services forecast grows by 3.1 percent per annum in the out years. The subsections that follow use the current services approach.

[9] Within the basic education subsidy, the school employee Social Security portion is allowed to grow.

Table 5.3
Cost-to-Carry Versus Current Services

Fiscal Year	20-21	21-22	22-23	23-24	24-25	25-26
Human Services[1]	$12,107	$15,060	$15,612	$16,151	$16,713	$17,265
Criminal Justice[1,2]	593	611	631	652	674	696
State Police[1,3]	37	41	45	49	52	56
General Obligation Debt[4]	1,182	1,227	1,263	1,328	1,356	1,452
School Employee Pensions[4]	2,702	2,816	2,980	3,130	3,273	3,442
School Employee Social Security[4,5]	624	613	636	659	680	703
PlanCon[6]	11	11	11	203	203	225
WCSF Transfer[7]	0	0	0	0	165	0
Wages/Salaries	1,948	2,781	2,889	2,966	3,044	3,125
State Employee Pensions	650	931	982	984	962	962
Retiree Healthcare	117	298	320	342	366	391
Employee Healthcare[8]	514	691	720	748	778	809
All Other (Discretionary)	12,657	12,657	12,657	12,657	12,657	12,657
Cost-to-Carry Expenditures	**33,141**	**37,736**	**38,745**	**39,867**	**40,922**	**41,783**
Current Services Expenditures	**33,141**	**37,975**	**39,223**	**40,586**	**41,877**	**42,971**
Difference	**0**	**239**	**478**	**718**	**955**	**1,188**

Note: Millions of dollars.

1 Excludes personnel expenditures.

2 Includes the Department of Corrections and the Board of Probation and Parole.

3 Includes the shift in expenditures from the MLF to the General Fund as a result of Act 85 of 2016.

4 Only includes state General Fund share.

5 Includes amounts within the basic education funding line item.

6 Also called the "authority rentals and sinking fund."

7 Repayment of a $165 million transfer from the Workers Compensation Security Fund (WCSF).

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

General Fund Pensions

Combined payments to SERS and PSERS from General Fund appropriations are projected to be $3.35 billion in FY 2020-21 and $4.40 billion by FY 2025-26. Pension contribution projections are based on (1) the growth of employer payrolls and (2) the growth in the employer contribution rate. The Commonwealth reimburses school districts for a portion of their employer contributions, and the PSERS projection represents the state share (generally between 55 and 57 percent).

In July 2020, the State Employees' Retirement Board reduced the long-term assumed rate of investment return from 7.125 percent to 7.00 percent. The change in assumed rate of return became official at the end of CY 2020 (to coincide with SERS' actuarial valuation period), and the change is reflected in the projections below. No changes were made to the long-term assumed return rate for PSERS, which remains 7.25 percent. **Table 5.4** reflects the most recent estimates for employer contribution rates from the two pension systems.

Table 5.4
Employer Contribution Rates

	Employer Rate[1]		% Change in Rate	
Fiscal Year	SERS	PSERS	SERS	PSERS
2017-18	33.22%	32.57%	12.6%	8.5%
2018-19	32.90	33.43	-1.0	2.6
2019-20	33.53	34.29	1.9	2.6
2020-21	33.45	34.51	-0.2	0.6
2021-22	33.38	34.95	-0.2	1.3
2022-23	33.85	35.62	1.4	1.9
2023-24	33.02	36.12	-2.5	1.4
2024-25	31.47	36.60	-4.7	1.3
2025-26	30.65	37.23	-2.6	1.7

1 Expressed as a percentage of payroll.
Source: Rates are from information transmitted to the IFO by SERS and PSERS.

The SERS projections in **Table 5.5** represent only the amounts estimated to be paid from General Fund appropriations. In addition to these appropriations, state agencies make employer contributions from other sources such as augmentations, federal funds and other state funds. In the current fiscal year personnel expenditures have been shifted away from the General Fund in order to utilize federal dollars available through the CARES Act CRF. These expenditure shifts reduce the share of pension funds paid by the General Fund in FY 2020-21. This forecast assumes the return of these expenditures to the General Fund in FY 2021-22, leading to an above average growth rate.

Table 5.5
Employer Pension Contributions - State General Fund Share

Fiscal Year	19-20	20-21	21-22	22-23	23-24	24-25	25-26
SERS	$877	$650	$931	$982	$984	$962	$962
PSERS	2,628	2,702	2,816	2,980	3,130	3,273	3,442
Total	**3,505**	**3,352**	**3,747**	**3,962**	**4,114**	**4,235**	**4,404**
Growth Rate	4.8%	-4.4%	11.8%	5.7%	3.8%	3.0%	4.0%

Note: Millions of dollars.

General Fund Debt Service

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). The source of repayment is established by statute and generally determined based on how the borrowed funds will be used. **Table 5.6** displays existing General Fund debt service obligations and the projected amount of new debt that will be issued over the forecast period.

Table 5.6
General Fund Debt Service Payments

Fiscal Year	19-20	20-21	21-22	22-23	23-24	24-25	25-26
Projected Bond Issues	--	$1,026	$1,010	$1,010	$1,010	$1,010	$1,010
New Debt Service	--	--	76	171	266	360	454
Existing Debt Service	$1,144	1,182	1,151	1,092	1,062	997	998
Total Debt Service	**1,144**	**1,182**	**1,227**	**1,263**	**1,328**	**1,357**	**1,452**
Growth Rate	2.3%	3.4%	3.8%	2.9%	5.2%	2.2%	7.0%

Note: Millions of dollars. Projections do not include future refundings of prior bond issuances.

General obligation bonds are issued to meet cash flow needs, and are dedicated for 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 that provides funding can vary greatly based on the project schedule and the agency that administers the funds.

Human Services

For FY 2020-21, General Fund appropriations for the Department of Human Services (DHS) total $12.68 billion. State special funds, augmenting revenues and federal funds provide additional support. While General Fund appropriations are the primary focus of the analysis, those appropriations will fluctuate in response to the availability of funds from other sources. For example, the General Fund may pick up the difference if a special fund, such as the Lottery Fund or the Tobacco Settlement Fund, cannot maintain its current level of support.

For FY 2020-21, base year appropriations for DHS are $90 million higher than the prior fiscal year. (See **Table 5.7**.) This funding level does not reflect all actual program costs due to the use of nearly $2.64 billion in one-time sources to manage current year appropriations. For example, FY 2020-21 expenditures are offset by the temporary increase in the Federal Medical Assistance Percentage (FMAP) used to reimburse states for Medicaid program costs. FY 2021-22 expenditures are expected to increase by 23.6 percent as a result of the elimination of one-time funding sources and the long-term growth trend. By FY 2025-26, the forecast projects that General Fund expenditures will be $17.95 billion, an average increase of 3.4 percent per annum after FY 2020-21.

Table 5.7
General Fund Expenditures - Department of Human Services

Fiscal Year	19-20	20-21	21-22	22-23	23-24	24-25	25-26
Wages[1]	$328	$243	$251	$260	$266	$273	$280
Pensions	133	133	137	144	144	141	141
Retiree Healthcare	72	24	47	49	52	55	58
Employee Healthcare[2]	129	177	182	189	196	202	210
All Other							
Medical Assistance	3,785	3,934	5,132	5,339	5,544	5,772	5,996
Long-Term Living	3,307	3,330	4,472	4,648	4,825	5,001	5,166
Intellectual Disabilities	1,997	1,962	2,312	2,381	2,452	2,526	2,602
Human Services Programs	1,353	1,262	1,441	1,501	1,548	1,595	1,643
Mental Health	669	708	749	771	794	818	843
Child Development	467	477	497	503	509	514	519
Income Maintenance	195	232	236	241	246	251	256
Human Services Support	128	132	134	137	140	143	146
Children's Health Insurance	31	69	87	90	92	94	96
Total	**12,593**	**12,683**	**15,677**	**16,254**	**16,808**	**17,384**	**17,953**
Growth Rate	-1.6%	0.7%	23.6%	3.7%	3.4%	3.4%	3.3%

Note: Millions of dollars.

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

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

The provision of Medicaid services comprises the largest share of expenditures for DHS. Medicaid is a joint state/federal program that plays an important role in the provision of (1) physical and behavioral healthcare services to eligible low-income individuals and families and (2) home and community-based and long-term care services to eligible residents who have physical or cognitive disabilities. Medicaid services are provided through various programs grouped under the Medical Assistance (MA), Long-Term Living (LTL) and Intellectual Disabilities (ID) categories. These program categories comprise roughly three-quarters of DHS General Fund expenditures, and the forecast projects that they will increase at an average rate of 3.7 percent per annum for FY 2022-23 to FY 2025-26.

The basic components of the forecast are identified in the following bullets. Additional factors that affect expenditure projections for FY 2020-21 and beyond are discussed in the paragraphs that follow.

- The projections assume costs per enrollee for MA will increase by 3.0 percent per annum and LTL will increase by 3.3 percent per annum. These rates are motivated by inflation.
- Increases in the service population track the growth in the age 60 or older population (1.4 percent per annum) for LTL programs while the service populations essentially remain flat for the MA and ID programs.

Appropriations from the Lottery Fund and the Tobacco Settlement Fund supplement General Fund expenditures for the MA and LTL program groups. The Lottery Fund is projected to supply $388 million for DHS expenditures in FY 2021-22 and remain at that level through FY 2025-26. The Tobacco Settlement Fund is projected to supply $245 million in FY 2020-21. The forecast assumes a reduction to $237 million for FY 2021-22 and future years based on annual Tobacco Settlement Fund revenues available for MA and LTL programs. In the forecast, the General Fund absorbs any reduction in support from these special funds. See the Appendix for additional information regarding the relevant special fund forecasts.

The analysis includes the impact of Medicaid expansion on General Fund appropriations. Beginning in calendar year 2017, the Commonwealth is responsible for a portion of the costs from enrollees eligible under Medicaid expansion. The state share began at 5 percent for 2017 and increases to 10 percent by 2020 and thereafter. The MA forecast includes the projected impact on General Fund appropriations from a phase down of the enhanced federal matching rate for Medicaid expansion.

Support for MA and LTL programs is derived from augmenting revenues from various assessments (e.g., MCOs, hospitals and nursing homes). These assessments expire at various points prior to the end of the forecast period in this report (June 2025), but the analysis assumes that they are extended. The forecast further assumes that the augmenting facility assessments, along with the corresponding federal matching revenues, supply the same share of funding for total DHS expenditures as supplied in the base year.

The following bullets list significant factors that affect DHS expenditures for the current fiscal year and forecast period:

- Use of one-time funds to pay current fiscal year expenses. This method of temporarily reducing current year appropriations (e.g., MA capitation and MA Community HealthChoices) creates a significant increase in appropriation levels the following year unless additional funds become available. For example, the enacted budget for FY 2020-21 relies on a $200 million transfer from the Pennsylvania Professional Joint Liability Underwriting Association (JUA) as a one-time funding mechanism to offset DHS program costs. Other one-time measures to reduce expenditures in FY 2020-21 include the use of a short-term managed care payment shift ($480 million) and the delay of county child welfare costs until FY 2021-22 ($75 million).
- Use of a temporarily-enhanced federal matching rate. Due to the COVID-19 pandemic, the federal government allows a higher matching rate to state funds, providing $2.07 billion in additional federal funds for FY 2020-21. The forecast assumes that the enhanced federal matching rate continues through 2021 Q2 and assumes that these funds will need to be replaced with additional state funds unless the enhanced federal match is extended.
- Use of federal CARES Act CRF funds ($30 million) for Youth Development Centers and Forestry Camps. This funding will need to be replaced in FY 2021-22 and beyond.
- The shift of expenditures between fiscal years. FY 2020-21 includes $917 million of prior year expenditures that will not carry forward into FY 2021-22. However, enrollment and long-term growth trends suggest supplemental funds may be needed in FY 2020-21 that would push up spending levels in FY 2021-22.

Education

The Pennsylvania Department of Education (PDE) provides resources, support and oversight to the state's 500 school districts and grants and subsidies to post-secondary institutions including: 14 universities within the Pennsylvania State System of Higher Education (PASSHE), 14 community colleges and 4 state-related universities. PDE appropriations can be separated into three broad categories: (1) pre-kindergarten through grade 12 (Pre-K-12), (2) post-secondary and (3) other. The text that follows provides brief descriptions of these categories.

Pre-K to Grade 12

Most PDE appropriations (nearly 90 percent) are dedicated to Pre-K-12 purposes. For FY 2020-21, Pre-K-12 appropriations are $12.93 billion, $58 million (0.5 percent) higher than FY 2019-20 appropriations. (See **Table 5.8**.) These amounts include the basic education and special education subsidies, the state share of school employees' retirement contributions, pupil transportation, school employees' Social Security, early intervention, Ready to Learn Block Grant and other miscellaneous expenditures.

Demographic projections show that the 5- to 17-year age cohort will contract by 0.6 percent per annum through FY 2025-26. Despite this contraction, Pre-K to grade 12 expenditures expand at a faster pace (2.8 percent per annum) to $14.87 billion, due primarily to solid growth in state reimbursements for school district retirement contributions (5.0 percent per annum) and the authority rentals and sinking fund appropriation. The authority rentals and sinking fund appropriation, also known as PlanCon, provides funds to reimburse school districts for school construction costs. The appropriation also supports roughly $10.5 million in annual charter school lease reimbursements. IFO projections build in another two years of the use of bond proceeds until the authorization cap of $2.5 billion is reached. The line item projection then increases to $203 million in FY 2023-24 and FY 2024-25 and increases further to $225 million FY 2025-26. The basic education and special education subsidies expand at a rate of 1.9 percent per annum to maintain a current level of service.

Post-Secondary

For FY 2020-21, PDE's post-secondary appropriations are $1.40 billion, level-funding from FY 2019-20 appropriations. These amounts comprise slightly less than 10 percent of total expenditures by PDE and include state-owned and state-related universities, community colleges and Thaddeus Stevens College of Technology. While the number of students attending post-secondary institutions has declined, appropriations for recent years suggest that policymakers desire to provide a level of funding that grows at roughly the same rate as inflation. Therefore, the forecast assumes that all post-secondary line items grow with general inflation (2.0 percent per annum) to $1.54 billion in FY 2025-26.

Other and Summary

PDE also receives appropriations to provide subsidies to libraries and to fund personnel costs. For FY 2020-21, those amounts are $105 million and increase to $117 million by FY 2025-26 (2.2 percent per annum). For FY 2020-21, PDE's total appropriation is $14.43 billion, a $55 million (0.4 percent) increase from the prior fiscal year. The forecast projects that expenditures will increase to $16.52 billion (2.7 percent per annum) by FY 2025-26.

Table 5.8
General Fund Expenditures - Department of Education

Fiscal Year	19-20	20-21	21-22	22-23	23-24	24-25	25-26
Pre-K through Grade 12							
Basic Education Subsidy[1]	$6,255	$6,255	$6,384	$6,511	$6,639	$6,763	$6,883
School Employees' Retirement	2,628	2,702	2,816	2,980	3,130	3,273	3,442
Special Education Subsidy	1,187	1,187	1,211	1,235	1,260	1,283	1,306
Pupil Transportation	706	606	620	629	639	647	656
School Employees' Social Sec.[1]	552	624	613	636	659	680	703
Early Intervention	315	326	328	331	334	338	342
Ready To Learn Block Grant	268	268	272	276	280	283	287
Authority Rentals and Sinking Fund	11	11	11	11	203	203	225
All Other[2]	950	951	970	983	997	1,010	1,023
Total Pre-K through Grade 12	**12,871**	**12,929**	**13,223**	**13,592**	**14,139**	**14,479**	**14,866**
Post-Secondary							
State-Related Universities	597	597	608	620	632	645	658
Community Colleges[3]	302	302	307	313	320	326	332
PASSHE-State Universities	477	477	486	496	505	516	526
Thaddeus Stevens Coll. of Tech.	19	19	19	19	20	20	21
Other Post-Secondary	3	3	3	4	4	4	4
Total Post-Secondary	**1,398**	**1,398**	**1,423**	**1,451**	**1,480**	**1,510**	**1,540**
General Government Operations	28	25	26	27	28	28	29
Libraries[4]	80	80	81	83	85	86	88
Grand Total	**14,378**	**14,433**	**14,753**	**15,154**	**15,732**	**16,104**	**16,523**
Growth Rate	4.6%	0.4%	2.2%	2.7%	3.8%	2.4%	2.6%

Note: Millions of dollars.

1 The school district Social Security subsidy is excluded from the basic education subsidy line and included in the school employees' Social Security line.

2 Includes Pre-K Counts, special education-approved private schools, services to nonpublic schools, nonpublic and charter school pupil transportation and other line items.

3 Includes community colleges, transfer to Community College Capital Fund, Northern PA Regional College and regional community colleges.

4 Includes library services for the disabled, public library subsidy, library access and state library.

Criminal Justice

The Department of Criminal Justice (DCJ) includes the Department of Corrections (DOC) and the Pennsylvania Board of Probation and Parole (PBPP). The Department of Criminal Justice (1) provides for the care and supervision of all offenders under its jurisdiction and (2) ensures citizen safety through careful selection of offenders who qualify for parole and their re-entry into society. Although still legally separate, the agencies operate under a memorandum of understanding that combined certain offices and yielded cost savings through the elimination of administrative redundancies.

Table 5.9 displays a time series of inmates and parolees under the jurisdiction of DCJ. From CY 2013 to CY 2019, the inmate population decreased at a rate of 1.9 percent per annum, while the parolee population expanded at a rate of 1.5 percent per annum. These trends were motivated by structural and data-driven changes implemented by the Justice Reinvestment Initiative, which diverted technical parole violators (TPVs) from state prisons to contracted county jails and community corrections centers. There were 39,493 inmates at the end of CY 2020, a decrease of 6,382 inmates (-13.9 percent) from the end of CY 2019. This represents a larger decline than the last six years combined. This temporary reduction is the result of various factors related to the COVID-19 pandemic, including court closures and increased diversion of offenders from prison.

Table 5.9
Populations - Department of Criminal Justice

	2013	2014	2015	2016	2017	2018	2019	2020
Inmate Population	51,512	50,756	49,914	49,301	48,438	47,370	45,875	39,493
Annual Change	328	-756	-842	-613	-863	-1,068	-1,495	-6,382
Percent Change	0.6%	-0.8%	-1.7%	-1.2%	-1.8%	-2.2%	-3.2%	-13.9%
Parolee Population	37,971	39,726	41,226	41,500	42,069	41,305	41,459	41,962
Annual Change	1,989	1,755	1,500	274	569	-764	154	503
Percent Change	5.5%	10.4%	3.8%	0.7%	1.4%	-1.8%	0.4%	1.2%

Note: Parolee population is reported on a fiscal year basis.

Source: Pennsylvania Department of Corrections, Annual Statistical Report (various years). Pennsylvania Board of Probation and Parole, Monthly Statistics (various years).

For FY 2020-21, total General Fund appropriations for DCJ are $1.61 billion, $1.00 billion (-38.4 percent) less than FY 2019-20 appropriations. Most of the reduction is attributable to state correctional institutions (-$914 million) and inmate medical care (-$72 million, includes personnel costs). These reductions correspond to federal funding from the CRF, which includes $967 million for state correctional institutions and $95 million for inmate medical care. Also included in the FY 2020-21 appropriations are estimated carryover costs (or costs from previous years) of $105 million in inmate medical care and state correctional institutions. With CRF funding included and the carryovers removed, FY 2020-21 expenditures are $2.57 billion.

Table 5.10 displays the expenditures for DCJ. The forecast assumes that, beginning in FY 2021-22, the expenditures replaced by the CRF in FY 2020-21 will return to General Fund support and no carryover costs will be needed in FY 2021-22. It is projected that DCJ expenditures will grow by 2.5 percent per annum during the forecast period.

Table 5.10
General Fund Expenditures - Department of Criminal Justice

Fiscal Year	19-20	20-21	21-22	22-23	23-24	24-25	25-26
Wages[1]	$1,231	$696	$1,329	$1,371	$1,400	$1,429	$1,460
Pensions	397	192	394	413	411	400	398
Retiree Healthcare	98	7	101	106	112	119	125
Employee Healthcare[2]	261	124	258	267	277	287	297
Inmate Medical Care[3]	192	205	216	228	241	255	269
All Other	436	388	395	403	411	419	427
Total	**2,616**	**1,612**	**2,694**	**2,788**	**2,852**	**2,908**	**2,976**
Growth Rate	2.1%	-38.4%	67.1%	3.5%	2.3%	2.0%	2.3%

Note: Millions of dollars.

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

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

3 Excludes personnel costs.

All Other Expenditures

The forecasts for all other agencies use the extrapolators shown in the Appendix. As **Table 5.11** details, total General Fund expenditures for these agencies are projected to have a strong annual growth rate at 12.3 percent in FY 2021-22. A large portion of that growth rate is due to technical factors within PSP and DOH that are explained in more detail in the bullets below. Another factor is that many smaller state agency budgets have a larger share of their budgets going towards personnel expenses, including employee retiree health benefits. Agency contributions for these benefits were temporarily reduced in the FY 2020-21 budget and are projected to return to normal levels in FY 2021-22. For FY 2022-23 to FY 2025-26, most of the agencies listed in Table 5.11 have a projected per annum growth rate between 2.2 and 3.0 percent.

Notable assumptions across these agencies include:

- The State Police General Fund FY 2021-22 budget is projected to grow by $268 million (128.5 percent) over FY 2020-21 primarily due to nearly $226 million in CARES Act CRF dollars used in the FY 2020-21 budget to replace General Fund state dollars. State Police's strong per annum growth rate of 6.2 percent for FY 2022-23 to FY 2025-26 is primarily due to the continued shift away from the use of Motor License Fund dollars to supplement the State Police's budget as a result of Act 85 of 2016.
- The Department of Health General Fund FY 2021-22 budget is projected to grow $19 million (10.6 percent) from FY 2020-21 expenditures. In FY 2020-21, the department received $14 million in CARES Act CRF dollars, which were used to offset personnel services and general operating expenditures. These funds are assumed to be replaced with General Fund support in FY 2021-22. Budget growth moderates in the out years, growing at an average annual growth rate of 2.3 percent for FY 2022-23 to FY 2025-26.

- The Pennsylvania Higher Education Assistance Agency (PHEAA) has a low per annum growth rate (0.8 percent) from FY 2020-21 to FY 2025-26 because the projected growth rate is equal to the product of inflation (2.0 percent per annum) and decline in total student population at colleges and universities within the state over the last 10 years (-1.1 percent per annum).
- Budgeted Department of Environmental Protection expenditures for FY 2020-21 represent an increase of $22 million (16.5 percent) from the prior year. This is largely due to a return to full General Fund support for various line items that were funded by the Environmental Stewardship and Recycling Funds in FY 2019-20.
- Department of Conservation and Natural Resources expenditures are projected to increase by $24 million (17.4 percent) in FY 2021-22 due to reduced support from the Oil and Gas Lease Fund (OGLF). Due to diminished royalty revenues resulting from low natural gas prices, the OGLF will not be able to support DCNR expenditures at historical levels and maintain the $35 million annual transfer to the Marcellus Legacy Fund.
- The strong growth in FY 2024-25 is due to the scheduled repayment of the $165 million transfer from the Workers' Compensation Security Fund to the General Fund.[10]

Table 5.11
General Fund Expenditures - All Other Agencies

Fiscal Year	19-20	20-21	21-22	22-23	23-24	24-25	25-26
State Police	$369	$209	$478	$523	$552	$577	$609
Legislature[1]	421	420	435	452	465	476	490
PHEAA	369	369	372	375	378	381	384
Judiciary	356	356	369	384	394	403	414
Revenue	194	189	196	202	207	211	216
Health	201	183	202	208	213	217	222
Community & Economic Dev.	179	182	186	191	195	199	203
Agriculture	171	170	174	178	182	185	189
Military & Veterans Affairs	157	157	164	169	173	177	181
Environmental Protection	134	156	164	170	175	179	183
Executive Offices	140	150	157	162	166	170	174
Cons. & Natural Resources	117	135	158	164	168	171	175
All Others[2]	497	501	513	529	541	717	565
Total	**3,306**	**3,177**	**3,568**	**3,706**	**3,807**	**4,063**	**4,005**
Growth Rate	5.8%	-3.9%	12.3%	3.9%	2.7%	6.7%	-1.4%

Note: Millions of dollars.
1 Includes government support agencies.
2 Includes all other agencies not listed above with the exception of PDE, DHS, DCJ and Treasury.

[10] Transfer occurred in May 2017. Act 20 of 2019 amends the Fiscal Code to require repayment by July 1, 2024. The analysis assumes that repayment occurs in FY 2024-25.

Section 6: Fiscal Outlook

This report provides an assessment of the Commonwealth's fiscal outlook based on demographic and economic trends. To facilitate that assessment, **Table 6.1** combines the revenue and expenditure projections from previous sections to identify any potential long-term structural imbalance over the forecast period.[11] In November 2019, the IFO released its previous long-term assessment and identified an approximate $1.0 billion structural deficit by the end of that five-year forecast window (FY 2024-25). For this update, the long-term structural deficit increases by another $1.0 billion from (1) lower revenues due to lost economic growth from the COVID-19 recession and (2) higher expenditures largely attributable to programs administered by the Department of Human Services (DHS).

Table 6.1
General Fund Financial Statement

Fiscal Year	19-20	20-21	21-22	22-23	23-24	24-25	25-26
Beginning Balance[1]	$30	-$2,734	--	--	--	--	--
Current Year Revenues	32,276	38,437	$36,675	$37,851	$39,352	$40,828	$42,321
Less Refund Reserve	-1,150	-1,300	-1,326	-1,353	-1,380	-1,407	-1,435
Net Revenue	31,126	37,137	35,349	36,498	37,972	39,421	40,885
State Expenditures[2]	-34,090	-33,141	-37,975	-39,223	-40,586	-41,877	-42,971
	--------	--------	--------	--------	--------	--------	--------
Current Year Balance	-2,934	1,263	-2,626	-2,725	-2,613	-2,455	-2,086
Adjustment for Lapses[3]	200	219	125	125	125	125	125
Preliminary Ending Balance	**-2,734**	**1,481**	**-2,501**	**-2,600**	**-2,488**	**-2,330**	**-1,961**

Note: Millions of dollars.
1 Beginning balance omitted for FY 21-22 and thereafter.
2 Based on appropriations. Includes current year lapses and approved supplemental appropriations.
3 Prior year lapses and actual transfers to the Budget Stabilization Reserve Fund.

Similar to previous budgets, the enacted budget for FY 2020-21 relies on various one-time revenues:

- Special fund transfers of $431 million.
- A $100 million transfer from the Budget Stabilization Fund authorized under Act 114 of 2020.
- A $200 million transfer from the Pennsylvania Professional Liability Joint Underwriting Association (JUA) to offset DHS program costs. The transfer has been challenged in federal court and it is uncertain whether these funds will be received in the current fiscal year.

[11] A long-term structural imbalance is an imbalance that remains after unusual economic conditions or other factors (e.g., one-time revenue transfers) are no longer relevant or available.

The enacted FY 2020-21 budget also includes $1.06 billion in expenses from FY 2019-20 that have been rolled forward. While these expenditures are not expected to recur in FY 2021-22, certain DHS programs may require supplemental appropriations in FY 2020-21 if the JUA transfer does not occur and/or DHS and other program costs exceed enacted funding levels. For the current fiscal year, the revenue outlook has improved since the budget was enacted and the projected ending balance for FY 2020-21 would enable these costs to be covered with a supplemental appropriation. Any enacted supplementals would directly reduce the projected ending balance for the current fiscal year.

For FY 2021-22, the major factors that drive expenditure growth include:

- The use of $1.33 billion in federal CARES Act CRF funds to offset General Fund costs in FY 2020-21 for the Department of Criminal Justice ($1.06 billion), the Pennsylvania State Police ($226 million), the Department of Human Services ($30 million) and the Department of Health ($14 million).
- Federal funds associated with the temporary FMAP increase used to reimburse states for Medicaid program costs provide $2.07 billion in state support in FY 2020-21. The enhanced FMAP expires following the termination of the national public health emergency declaration related to COVID-19.
- Two one-time measures reduce DHS expenditures in FY 2020-21: (1) a short-term managed care payment shift ($480 million) and (2) the delay of county child welfare costs until FY 2021-22 ($75 million).
- The temporary reduction in agency contributions for retiree healthcare in FY 2020-21 that is not expected to continue in FY 2021-22.

For FY 2022-23, the projected deficit peaks at $2.6 billion due to the new SUT transfer to the Public Transportation Trust Fund ($469 million). For FY 2022-23 to FY 2025-26, average revenue growth (3.6 percent) exceeds average expenditure growth (3.1 percent) and the deficit contracts. The moderate expenditure growth is motivated, in part, by the assumed low growth of the basic education subsidy (1.9 percent per annum) as the forecast incorporates the contraction of the school-age population. As noted, these trends assume the absence of a recession, low interest rates and moderate inflation, and therefore likely represent a scenario that leans optimistic.[12]

[12] Excluding the new transfer from SUT to the Public Transportation Trust Fund ($515 million in FY 2025-26), the average net revenue growth is 4.0 percent per annum.

Appendix

Demographics

The tables that follow are from a previously released IFO report titled *Pennsylvania Demographic Outlook* (September 2020). That report used data from the U.S. Census Bureau and Pennsylvania Department of Health (DOH). However, all demographic projections are by the IFO.

Table A.1
Pennsylvania Historical Population 2010 to 2019

Age	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
0-4	729	726	721	715	715	714	711	709	705	698
5-9	752	749	749	747	742	737	733	729	726	726
10-14	790	785	778	772	768	760	754	755	755	750
15-19	902	886	867	851	837	829	822	814	809	804
20-24	877	888	893	891	881	862	844	826	812	799
25-29	785	800	811	826	844	858	865	870	869	861
30-34	734	753	769	782	790	796	806	816	830	848
35-39	758	729	717	717	725	738	754	769	782	792
40-44	849	844	831	811	785	756	726	714	715	722
45-49	952	927	903	878	854	839	832	817	798	774
50-54	985	987	975	960	948	930	903	879	854	831
55-59	885	904	924	939	947	950	949	937	922	910
60-64	752	790	787	800	818	839	856	874	888	895
65-69	555	565	613	635	664	696	730	727	738	755
70-74	428	435	449	473	488	499	507	551	572	599
75-79	360	356	354	358	364	366	373	385	407	420
80-84	311	307	302	293	287	282	280	279	283	288
85-89	202	204	206	206	206	205	204	202	199	196
90-94	82	86	91	94	97	98	100	100	100	100
95-99	21	22	23	24	25	26	28	30	31	32
100+	3	3	3	4	4	4	4	5	5	5
Total	**12,711**	**12,746**	**12,767**	**12,776**	**12,788**	**12,785**	**12,782**	**12,788**	**12,801**	**12,802**

Note: Thousands of residents.

Source: Data are from the U.S. Census Bureau 2019 Population Projections. Age groups 85-89, 90-94, 95-99 and 100+ are estimations by IFO.

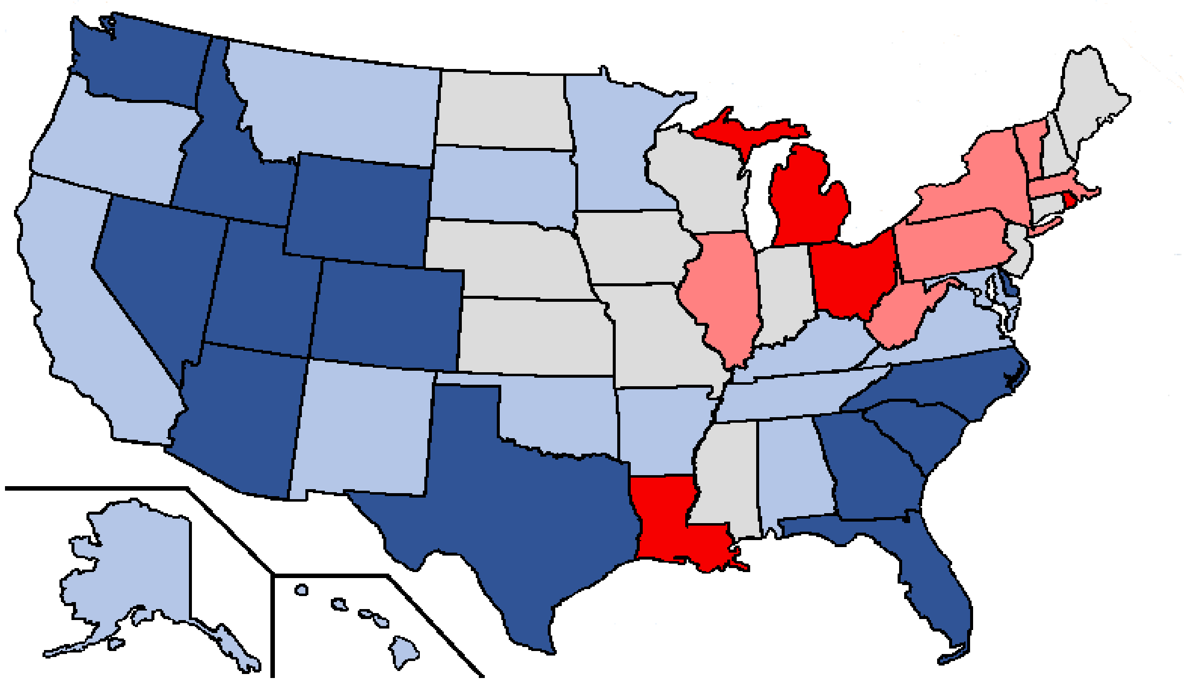
Table A.2
Pennsylvania Population Projections 2020 to 2030

Age	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
0-4	690	682	675	668	662	657	651	646	641	635	630
5-9	726	724	721	716	709	701	693	686	679	673	667
10-14	745	742	737	732	732	732	730	727	723	716	707
15-19	796	790	789	788	782	778	774	769	764	764	763
20-24	792	786	778	772	767	759	754	754	752	747	743
25-29	845	829	811	796	783	776	770	762	757	752	744
30-34	864	873	880	878	871	854	838	820	805	792	785
35-39	798	808	818	831	849	865	874	881	880	872	856
40-44	736	753	768	781	790	796	807	816	829	847	863
45-49	746	717	705	706	713	728	744	759	771	780	787
50-54	816	811	798	779	756	729	701	689	690	698	712
55-59	893	868	845	821	798	785	781	768	749	727	701
60-64	898	899	887	872	861	845	821	800	777	755	743
65-69	775	792	809	822	828	831	831	819	806	796	781
70-74	628	660	655	667	684	702	716	732	744	749	751
75-79	430	438	479	496	521	546	574	564	578	592	609
80-84	291	297	308	328	337	345	351	391	399	422	442
85-89	194	195	196	200	204	205	211	220	236	241	246
90-94	100	99	97	96	94	94	95	96	99	100	99
95-99	33	33	33	33	32	33	32	31	31	30	32
100+	6	6	6	7	7	7	7	7	7	7	8
Total	**12,802**	**12,800**	**12,796**	**12,789**	**12,780**	**12,768**	**12,754**	**12,737**	**12,718**	**12,695**	**12,668**

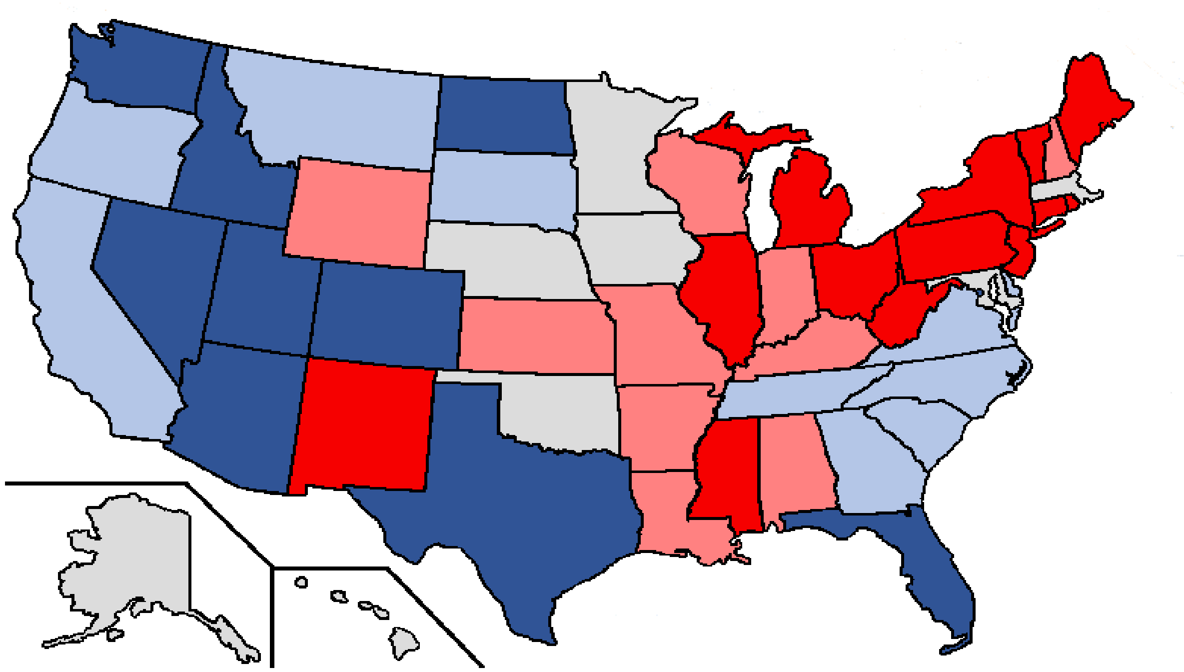
Note: Thousands of residents.
Source: Data are projections by IFO using data from the U.S. Census Bureau and PA Department of Health.

Figure A.1

Average Annual Population Growth 2000 to 2010



Average Annual Population Growth 2010 to 2019



>1.30%

0.70% - 1.29%

0.40% - 0.69%

0.20% - 0.39%

<0.2%

Source: U.S. Census Bureau. 2019 Population Estimates.

Economics

The economic forecast used for this report follows the general methodology used by the U.S. Congressional Budget Office (CBO). The approach is a simplified "growth accounting" framework, where real economic output or Gross Domestic Product (GDP) is equal to the product of (1) growth in employment and (2) growth in average worker output, also known as labor productivity. For example, if the number of individuals employed grows by 1.0 percentage point and the average productivity of all workers grows by 0.5 percentage points, then real economic growth would equal (1.01) * (1.005) - 1.0, or 1.5 percent. Hence, an increase (decrease) in employment growth or labor productivity will translate into higher (lower) economic growth.

The state economic forecast is built upon four basic assumptions. They are as follows:

- The Federal Reserve achieves its target inflation rate of 2.0 percent, as measured by the personal consumption expenditures price index. Based on historical trends, the more widely-used consumer price index (CPI-U) would increase at a slightly faster pace, and the analysis assumes that rate is 2.2 percent.
- The Philadelphia CPI-U grows at the same rate as the U.S. CPI-U.
- Statewide labor productivity reverts to a historical average and is consistent with U.S. projections.
- The average worker's wage grows by inflation plus a modest premium that is consistent with historical trends for the U.S. and Pennsylvania.

The economic forecast is somewhat different than forecasts typically issued by government entities or private firms. The forecast assumes that certain economic variables revert to historical rates of growth that are consistent with (1) forecasts for the U.S. economy and (2) demographic projections by the IFO. The main purpose of the forecast is to serve as a neutral benchmark against which policymakers could assess the sustainability of fiscal policies over a five-year time horizon. Therefore, the economic forecast employs a simple methodology and does not attempt to capture the many intricacies of the Pennsylvania economy that may ultimately drive economic growth.

The model first establishes the real growth rate of the Pennsylvania economy, which is a function of employment growth and labor productivity. Prior to 2020, the Pennsylvania economy generated an average of 50,000 to 60,000 net jobs per year. The forecast assumes a moderate reduction in that trend through 2026. This assumption yields an upward trend in the employment to population ratio, which is consistent with recent historical data. (See **Table A.3**.) This trend is also consistent with the assumption of higher labor force participation rates. The middle of Table A.3 displays the average output per worker, and the growth in that metric, which may also generally be viewed as labor productivity. For 2019, the average worker produced $119,800 of real output or production. The forecast assumes that labor productivity greatly accelerates in 2020 and reverts to a historical rate of growth of roughly 1.1 percent per annum. The employment and worker productivity forecasts yield real economic growth of roughly 2.0 percent per annum.

The bottom of Table A.3 displays the forecast for the Philadelphia CPI-U. As noted, the forecast assumes that the regional inflation measure follows the level and trends of the national inflation forecast. The CBO forecast assumes that the national CPI-U will increase at an average rate of 2.4 percent per annum from 2020 to 2026. The average regional rate used by this report is slightly lower (2.2 percent).

The final primary economic variable is total wages and salaries paid to workers. The Pennsylvania forecast assumes that wages for the average worker will increase by the rate of inflation, plus a modest premium so that the purchasing power of those wages increases over time. For this analysis, that premium ranges from 1.0 to 1.1 percent per annum. The CBO forecast also includes a premium for U.S. workers, and the premium generally ranges from 1.3 to 1.4 percent per annum. The Pennsylvania premium is consistent with historical state trends.

Given these assumptions, the average wage for all workers increases by roughly 3.0 percent per annum. If employment expands by 1.0 percent per annum, then total wages paid to all workers will increase by the product of those growth rates, or roughly 4.0 percent per annum. Similar to the other forecasts, Pennsylvania wages and salaries expand at a somewhat slower pace than the CBO national forecast (4.2 percent) of total wages.

Table A3
Pennsylvania Economic Variables

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Payroll Employment[1]	5,726	5,741	5,789	5,835	5,883	5,941	6,010	6,064	5,614	5,734	5,834	5,914	5,973	6,027	6,075
Change	40.2	14.5	48.0	46.8	47.5	58.4	68.4	54.0	-450.0	120.0	100.0	80.0	59.1	53.8	48.2
Growth Rate	0.7%	0.3%	0.8%	0.8%	0.8%	1.0%	1.2%	0.9%	-7.4%	2.1%	1.7%	1.4%	1.0%	0.9%	0.8%
Residents: Age 20 to 69[1]	8,673	8,712	8,745	8,763	8,772	8,780	8,781	8,785	8,793	8,796	8,754	8,726	8,700	8,670	8,638
Employ / Population	0.660	0.659	0.662	0.666	0.671	0.677	0.684	0.690	0.638	0.652	0.666	0.678	0.687	0.695	0.703
Avg. Output per Worker[1]	$111.9	$113.4	$115.1	$117.0	$117.5	$117.1	$118.0	$119.8	$124.1	$125.7	$126.9	$128.2	$129.6	$131.0	$132.5
Growth Rate	0.8%	1.3%	1.6%	1.6%	0.5%	-0.4%	0.8%	1.5%	3.6%	1.3%	1.0%	1.0%	1.1%	1.1%	1.1%
Real GDP[2]	$640.7	$650.8	$666.6	$682.5	$691.3	$695.6	$708.9	$726.2	$696.5	$720.6	$740.5	$758.2	$774.2	$789.8	$804.8
Growth Rate	1.5%	1.6%	2.4%	2.4%	1.3%	0.6%	1.9%	2.4%	-4.1%	3.5%	2.8%	2.4%	2.1%	2.0%	1.9%
Philadelphia CPI-U	238.1	240.9	244.1	243.9	245.3	248.4	251.6	256.6	258.7	262.6	267.8	273.2	278.6	284.2	289.9
Growth Rate	1.8%	1.2%	1.3%	-0.1%	0.6%	1.3%	1.3%	2.0%	0.9%	1.6%	2.1%	2.2%	2.2%	2.2%	2.2%
Wages-Salaries[2]	$280.0	$285.2	$296.4	$308.4	$312.7	$325.3	$339.2	$353.8	$349.6	$366.4	$382.4	$398.6	$415.1	$432.0	$449.0
Average Wage[1]	$48.9	$49.7	$51.2	$52.8	$53.1	$54.7	$56.4	$58.4	$62.3	$63.9	$65.6	$67.4	$69.5	$71.7	$73.9
Growth Rate	3.1%	1.6%	3.0%	3.2%	0.6%	3.0%	3.1%	3.4%	6.7%	2.6%	2.6%	2.8%	3.1%	3.1%	3.1%

1 Thousands of units or dollars.

2 Billions of dollars.

Revenues

Table A.4
General Fund Revenues

	Amounts ($ millions)						Regional	State
FY Ending	Corporate Net	Other Corporate	Sales and Use	Personal Income	All Other	General Fund	CPI-U (levels)	GDP ($ billions)
2000	$1,860	$2,333	$7,018	$7,066	$1,980	$20,257	174.1	$399.4
2001	1,603	2,260	7,204	7,492	2,003	20,562	178.9	416.5
2002	1,419	2,183	7,293	7,139	2,027	20,060	183.2	430.6
2003	1,397	2,354	7,520	7,106	2,938	21,315	187.0	445.5
2004	1,678	2,673	7,729	7,734	3,015	22,828	192.7	467.7
2005	1,921	2,830	8,000	8,747	2,810	24,309	200.4	492.8
2006	2,302	2,888	8,334	9,524	2,806	25,854	208.2	515.3
2007	2,493	2,984	8,591	10,262	3,121	27,449	214.4	542.4
2008	2,418	3,040	8,497	10,908	3,066	27,928	220.4	570.3
2009	1,980	2,854	8,136	10,199	2,361	25,530	223.7	579.2
2010	1,791	2,788	8,029	9,969	5,071	27,648	225.5	588.0
2011	2,132	2,761	8,590	10,436	3,579	27,497	230.8	608.8
2012	2,022	2,941	8,772	10,801	3,141	27,678	236.0	629.6
2013	2,423	2,766	8,894	11,371	3,192	28,647	239.5	652.0
2014	2,502	2,397	9,130	11,437	3,142	28,607	242.5	677.3
2015	2,811	2,305	9,493	12,107	3,875	30,593	244.0	701.5
2016	2,842	2,295	9,795	12,506	3,463	30,902	244.6	719.3
2017	2,751	2,030	10,004	12,664	4,219	31,669	246.9	736.0
2018	2,879	2,010	10,381	13,399	5,898	34,567	250.0	761.8
2019	3,398	2,113	11,100	14,096	4,152	34,858	254.1	793.6
2020	2,827	2,012	10,818	12,835	3,784	32,276	257.7	793.4
2021	3,775	1,846	12,327	15,807	4,683	38,437	260.7	797.6
2022	3,248	1,956	12,424	15,034	4,013	36,675	265.2	835.2
2023	3,648	1,997	12,368	15,758	4,080	37,851	270.5	871.6
2024	3,989	2,029	12,758	16,438	4,138	39,352	275.9	907.6
2025	4,233	2,096	13,160	17,141	4,198	40,828	281.4	944.3
2026	4,466	2,131	13,588	17,867	4,268	42,321	287.0	983.0
Average Annual Growth Rates								
2000 to 2010	-0.4%	1.8%	1.4%	3.5%	9.9%	3.2%	2.6%	3.9%
2010 to 2020	4.7%	-3.2%	3.0%	2.6%	-2.9%	1.6%	1.3%	3.0%
2020 to 2026	7.9%	1.0%	3.9%	5.7%	2.0%	4.6%	1.8%	3.6%

Source: Executive Budget, various years. Projections by IFO.

Expenditures

Table A.5 lists the economic and demographic forecasts used to extrapolate General Fund expenditures from the FY 2020-21 base year through FY 2025-26. Projected expenditures are a function of (1) service populations, (2) inflation and (3) various technical factors (e.g., the increasing state share under Medicaid expansion or a shift in expenditures between funding sources).

When possible, base year expenditures were disaggregated into five categories across all agencies: (1) wages, (2) pensions, (3) employee healthcare and other benefits, (4) retiree healthcare and (5) other expenditures (e.g., grants and subsidies, non-personnel expenses). Those categories were forecast separately for each agency using the extrapolators displayed in Table A.5 and then recombined at the agency level.

Table A.5
General Fund Expenditure Extrapolators

Fiscal Year	21-22	22-23	23-24	24-25	25-26
Demographic Groups					
Age 5 to 17	-0.4%	-0.5%	-0.5%	-0.6%	-0.7%
Age 65 and Older	2.6	2.5	2.4	2.2	2.0
All Residents	0.0	0.0	-0.1	-0.1	-0.1
Personnel Expenses					
Wages[1]	4.0	4.1	3.0	3.0	3.0
Pensions - SERS[2]	-0.2	1.4	-2.5	-4.7	-2.6
Retiree Healthcare[3]	91.7	5.6	5.6	5.6	5.6
Employee Healthcare[3]	3.3	3.5	3.5	3.5	3.5
Non-Personnel Expenses	1.8	2.0	2.0	2.0	2.0

1 Reflects an average employee turnover factor. Turnover factors vary by department.

2 Growth in employer contribution rates only.

3 The growth rate in FY 21-22 is higher than typical due to the temporary reduction of REHP payments to the PEBTF in FY 20-21 within executive agencies and row offices. Separate extrapolators are used for Pennsylvania State Police troopers, Legislature and Judiciary (not shown).

Source: Forecasts by IFO.

Wage compensation comprises roughly seven percent of total General Fund expenditures. For each agency, wages were extrapolated using two factors. The first factor is an agency-specific employee turnover rate based on data compiled by the Office of Administration (not shown). For most 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 adjustment that reflects (1) a cost of living increase and (2) a general step increase. The forecast assumes that factor is the same across most agencies (4.1 percent per annum). When combined, the two factors yield a growth rate of roughly three to four percent per annum. (See Table A.5.)

The State Employees' Retirement System (SERS) pension extrapolator represents the change in pension contributions based on projected employer contribution rates. The SERS extrapolator in Table A.5 does not reflect the projected growth in wages or personnel. Hence, the total growth in pension contributions would equal the product of the growth rates for SERS contribution rates, wages and any assumed growth or decline in the state complement.

The forecast assumes that payments for active employee healthcare increases at an average rate of 3.5 percent per annum after FY 2021-22. That rate is equal to general consumer inflation plus a 1.5 percentage point premium for healthcare costs. It is also roughly equivalent to the increase in the per capita active employee healthcare premiums for the past six fiscal years. The retiree healthcare extrapolator assumes that the employer contribution rate will dramatically increase in FY 2020-21 to return the rate to normal rate after the temporary rate reduction in FY 2020-21. The extrapolator rate then returns to 5.6 percent per annum. The projected growth rates are based on the latest projection of employer benefit payments published by the actuary for the REHP.

Non-personnel expenses include items such as computers, office supplies and utilities. The forecast assumes those expenditures grow at the same rate as the regional CPI-U. Non-personnel expenses also include grants or subsidies made to local units and institutions. Forecasts for grants and subsidies generally assume that the relevant service population grows with demographic projections, and the average cost to provide services grows with inflation. Two exceptions are the basic and special education subsidies. For those amounts, the relevant extrapolator (roughly 1.9 percent per annum) reflects an average pay increase (3.5 percent per annum), a general turnover factor (-1.0 percent) and a demographic component (-0.7 to -0.4 percent).

Table A.6 provides both historical and future projections on General Fund expenditures by the largest departments and overall and compares that to the Regional CPI-U levels and Nominal State GDP. The bottom half of the table provide average annual growth rates.

Table A.6
General Fund Expenditures

FY Ending	Amount ($ millions) PDE[1]	DHS	Criminal Justice[2]	Treasury	All Other	General Fund	Regional CPI-U (levels)	Nominal State GDP ($ billions)
2000	$7,640	$6,189	$1,130	$656	$3,680	$19,295	174.1	$399.4
2001	8,041	6,480	1,161	414	3,766	19,862	178.9	416.5
2002	8,277	6,669	1,151	586	3,746	20,429	183.2	430.6
2003	8,509	6,530	1,247	393	3,721	20,400	187.0	445.5
2004	8,754	7,440	1,299	713	3,679	21,885	192.7	467.7
2005	9,407	7,886	1,331	450	3,980	23,054	200.4	492.8
2006	9,687	8,918	1,358	769	3,933	24,665	208.2	515.3
2007	10,461	9,304	1,420	900	4,213	26,298	214.4	542.4
2008	11,060	8,617	1,600	923	4,768	26,968	220.4	570.3
2009[3]	11,273	8,590	1,606	955	4,660	27,084	223.7	579.2
2010[3]	10,588	8,577	1,593	976	3,208	24,942	225.5	588.0
2011[3]	10,455	8,780	1,663	1,023	3,146	25,067	230.8	608.8
2012	10,491	10,495	1,856	1,090	3,099	27,031	236.0	629.6
2013	10,967	10,623	1,867	1,139	3,121	27,717	239.5	652.0
2014	11,114	11,045	1,998	1,117	3,121	28,395	242.5	677.3
2015	11,564	11,362	2,134	1,144	2,949	29,153	244.0	701.5
2016	12,103	11,517	2,402	1,177	2,927	30,127	244.6	719.3
2017	12,801	12,380	2,564	1,171	3,027	31,942	246.9	736.0
2018	13,243	12,151	2,438	1,121	2,995	31,948	250.0	761.8
2019	13,748	12,802	2,562	1,165	3,125	33,402	254.1	793.6
2020[3]	14,378	12,593	2,616	1,197	3,306	34,090	257.7	793.4
2021[3]	14,433	12,683	1,612	1,235	3,177	33,141	260.7	797.6
2022	14,753	15,677	2,694	1,283	3,568	37,975	265.2	835.2
2023	15,154	16,254	2,788	1,321	3,706	39,223	270.5	871.6
2024	15,732	16,808	2,852	1,387	3,807	40,586	275.9	907.6
2025	16,104	17,384	2,908	1,417	4,063	41,877	281.4	944.3
2026	16,523	17,953	2,976	1,514	4,005	42,971	287.0	983.0
Average Annual Growth Rates								
2000 to 2010	3.3%	3.3%	3.5%	4.1%	-1.4%	2.6%	2.6%	3.9%
2010 to 2020	3.1%	3.9%	5.1%	2.1%	0.3%	3.2%	1.3%	3.0%
2020 to 2026	2.3%	6.1%	2.2%	4.0%	3.2%	3.9%	1.8%	3.6%

1 Includes State System of Higher Education and Thaddeus Stevens College of Technology.

2 Prior to FYE 2017, Criminal Justice excludes the Board of Probation and Parole.

3 Excludes expenditures supported by funds provided under the American Recovery and Reinvestment Act of 2009 (ARRA), the Family First Coronavirus Response Act of 2020 and the Coronavirus Aid, Relief, and Economic Security Act of 2020 (CARES Act).

Source: Executive Budget, various years. Projections by IFO.

Other Funds

In addition to the General Fund, the Commonwealth maintains numerous special funds dedicated to specific purposes. In general, this report does not address those funds; however, three special funds have unique implications for General Fund expenditures. For recent fiscal years, General Fund appropriations for the Departments of Human Services and Conservation and Natural Resources have been supplemented by the Lottery Fund (Human Services), the Tobacco Settlement Fund (Human Services) and the Oil and Gas Lease Fund (Conservation and Natural Resources). **Table A.7** displays a history and forecast for special funds that augment General Fund expenditures.

Table A.7
Other Fund Disbursements to Offset General Fund Expenditures

Fiscal Year	Lottery[1]	Tobacco[2]	Oil & Gas[3]	Total
2008-09	$301	$248	$12	$561
2009-10	178	263	19	460
2010-11	178	228	24	430
2011-12	178	290	60	528
2012-13	309	255	68	632
2013-14	330	256	102	688
2014-15	477	326	132	935
2015-16	310	284	86	680
2016-17	308	297	50	655
2017-18	253	303	58	614
2018-19	372	291	48	710
2019-20	338	290	70	698
2020-21	352	299	53	704
2021-22	388	264	29	681
2022-23	388	264	29	681
2023-24	388	264	29	681
2024-25	388	264	29	681
2025-26	388	264	29	681

Note: Millions of dollars.

1 Includes MA Long-Term Care, Home and Community-Based Services, Community HealthChoices and MA Transportation.

2 Includes MA for Workers with Disabilities, Long-Term Care, Home and Community-Based Services, Community HealthChoices and Uncompensated Care.

3 Includes General Government, State Parks and State Forests.

Due to the interrelation between these special funds and certain General Fund appropriations, this Appendix projects revenues and expenditures for the Lottery Fund, Tobacco Settlement Fund and Oil and Gas Lease Fund for FY 2020-21 to FY 2025-26. These forecasts inform the projection of General Fund appropriations found in the main body of the report. Unless otherwise noted, if special funds cannot sustain the same level of funding provided in prior years, the analysis assumes that future General Fund appropriations will increase to make up the difference.

Lottery Fund

The majority of Lottery Fund revenues support programs that address the needs of a growing elderly population in Pennsylvania. The Departments of Human Services, Revenue and Transportation receive General Fund and Lottery Fund appropriations. Lottery monies fund most of the budget for the Department of Aging, and that agency does not receive any General Fund appropriations.

For FY 2019-20, Lottery Fund expenditures ($2.08 billion) exceeded funds available ($1.96 billion) resulting in a $120 million negative ending balance. (See **Table A.8**.) The forecast assumes that (1) the Lottery Fund will absorb $352 million of DHS program costs in FY 2020-21 and $388 million in FY 2021-22, and (2) programs administered by the Department of Transportation will be flat funded for all future years. Combined with higher revenues, these assumptions allow the Lottery Fund to generate a $120 million ending balance in FY 2020-21 and maintain a positive ending balance in future fiscal years.

Gross ticket sales are projected to grow at an average rate of 1.8 percent per annum from FY 2020-21 to FY 2025-26:

- Instant ticket sales grow by 2.3 percent per annum, as the model projects very strong growth for FY 2020-21 (10.3 percent), followed by flat growth in FY 2021-22 as casinos, restaurants and entertainment establishments fully reopen.
- Multi-state Lottery sales are primarily driven by large jackpots and grow at an average rate of 1.2 percent per annum.
- Other traditional game (in-state lottery, numbers and raffle) sales decline by 0.8 percent per annum. Numbers games are projected to decline by 2.4 percent per annum, while in-state lottery sales are projected to increase by 2.7 percent per annum.
- Sales for iLottery are projected to total $884 million in FY 2020-21 and were likely impacted by the closure of casinos in response to the COVID-19 pandemic, as consumption shifted to online platforms. Sales in future fiscal years grow at an anticipated rate of 2.9 percent per annum.

The forecast projects that net revenues (gross ticket sales less prizes, commissions, transfers and other amounts) grow at an average rate of 1.8 percent per annum from FY 2020-21 to FY 2025-26 while total expenditures increase by 4.4 percent per annum. The department details are as follows:

- Department of Aging appropriations grow by 2.8 percent per annum. Those revenues are earmarked for general operations, PENNCARE, Pre-Admission Assessment, Caregiver Support, Alzheimer's Outreach, Pharmaceutical Assistance Fund and Grants to Senior Centers. PENNCARE appropriations for FY 2020-21 decline due to program cost shifts to the Community HealthChoices appropriation in DHS and grow at a rate of 4.3 percent per annum thereafter. The Pharmaceutical Assistance Fund forecast assumes flat funded appropriations in all years as the program's income thresholds limit the growth in the eligible population. Other programs are projected based on trends for the 65 or older age cohort or the total population and the CPI-U.

- Projections for DHS appropriations (primarily MA Community HealthChoices) assume the Lottery Fund will absorb $352 million of program costs in FY 2020-21 and $388 million in FY 2021-22. This level of DHS support allows the Lottery Fund to maintain a positive balance in future fiscal years. Annual budget shortfalls in FY 2021-22 and subsequent years are offset by the $120 million projected ending balance in FY 2020-21.
- Department of Revenue (DOR) appropriations grow by 36.1 percent in FY 2021-22 and by 1.4 percent per annum thereafter. Approximately two-thirds of appropriations are used for administrative and advertising expenses, vendor commissions and the payment of prize monies. A transfer to the Lottery Fund for the Property Tax Rent Rebate (PTRR) program that would have occurred in FY 2020-21 was shifted into FY 2019-20. For FY 2021-22 and future years, the transfer reverts to a normal level and that reversion drives the high growth rate in FY 2021-22. The PTRR forecast declines over the forecast period due to the program's statutorily set rebate amounts and income eligibility thresholds. As incomes rise over time, more households will exceed the income limits.
- Department of Transportation appropriations are held flat through the forecast period. The revenues are earmarked for the Older Pennsylvanians Shared Ride program and a transfer to the Public Transportation Trust Fund.

Table A.8
Lottery Fund Financial Statement

Fiscal Year	19-20	20-21	21-22	22-23	23-24	24-25	25-26
Beginning Balance	**$4**	**-$120**	**--**	**--**	**--**	**--**	**--**
Gross Ticket Sales	5,201	5,860	$5,824	$5,942	$6,091	$6,244	$6,403
Less Field Paid Prizes & Comm.	-3,525	-4,012	-3,992	-4,073	-4,176	-4,283	-4,393
Transfers, Earnings and Lapses	279	82	117	113	109	105	101
Net Revenue	**1,955**	**1,930**	**1,949**	**1,982**	**2,024**	**2,066**	**2,111**
Funds Available	**1,959**	**1,810**	**1,949**	**1,982**	**2,024**	**2,066**	**2,111**
Aging	465	474	487	501	515	530	544
Human Services	338	352	388	388	388	388	388
Revenue	1,106	693	943	953	967	981	995
Transportation	171	171	171	171	171	171	171
Total Expenditures	**2,079**	**1,690**	**1,989**	**2,013**	**2,041**	**2,070**	**2,098**
Ending Balance	**-120**	**120**	**-40**	**-31**	**-17**	**-4**	**13**

Note: Figures are in dollar millions. Beginning balance omitted for FY 21-22 and thereafter.

Tobacco Settlement Fund

The Tobacco Settlement Fund receives monies paid to the Commonwealth under the Tobacco Master Settlement Agreement. The agreement ended litigation between certain large tobacco companies and state attorneys general regarding the advertising, marketing and promotion of tobacco products, as well as the costs incurred by state Medicaid programs to treat smoking-related illnesses. The revenues received by the fund generally are used for health-related programs.

For FY 2019-20, receipts ($348 million) were less than expenditures ($354 million), which decreased the fund balance from $113 million at the beginning of the fiscal year to an estimated $106 million at the end of the year (excludes federal funds). Tobacco Settlement Fund revenue projections for FY 2020-21 to FY 2025-26 are based on the schedule of annual payments to Pennsylvania included in the Master Settlement Agreement.

Table A.9
Tobacco Settlement Fund Financial Statement

Fiscal Year	19-20	20-21	21-22	22-23	23-24	24-25	25-26
Beginning Balance[1]	**$113**	**$106**	**$18**	**--**	**--**	**--**	**--**
Gross Settlements	346	326	326	$326	$326	$326	$326
Transfer to Tobacco Revenue Bond Debt Service	-115	-115	-115	-115	-115	-115	-115
Transfer from Cigarette Tax	115	115	115	115	115	115	115
Interest and Other	2	2	0	0	0	0	0
Total Revenues	**348**	**328**	**326**	**326**	**326**	**326**	**326**
Funds Available	**461**	**434**	**344**	**326**	**326**	**326**	**326**
Community & Economic Development[2]	3	3	3	3	3	3	3
Health[2]	61	114	59	59	59	59	59
Human Services[2]	291	299	264	264	264	264	264
Total Expenditures	**355**	**416**	**326**	**326**	**326**	**326**	**326**
Ending Balance	**106**	**18**	**18**	**--**	**--**	**--**	**--**

Note: Millions of dollars. Excludes federal funds.

1 Beginning balance omitted for FY 22-23 and thereafter.

2 FY 19-20 expenditures are presented on a cash basis. FY 20-21 expenditures may reflect prior year spending authority in addition to current year appropriations.

As permitted by Act 43 of 2017, the Commonwealth Financing Authority issued thirty-year bonds with a principal amount of $1.5 billion backed by proceeds from the Master Settlement Agreement. Annual principal and interest payments totaling $115 million began in FY 2019-20. Funds to make the principal and interest payments will be transferred to the Commonwealth Financing Authority. Act 23 of 2020 mandates a transfer of cigarette tax revenues into the Tobacco Settlement Fund in the amount of the required debt service for FY 2020-21. As a result, the fund is held harmless in the current fiscal year. The forecast assumes that General Fund revenues will continue to be transferred into the fund to cover the annual debt service payments.

The expenditure forecast reflects the following assumptions:

- The Department of Health expenditures are based on the FY 2020-21 percentage allocations of receipts for the Tobacco Use, Prevention and Cessation and the Health Research line items. These allocations are used for all years of the forecast.

- The Department of Human Services appropriations for MA – Workers with Disabilities and Uncompensated Care are based on the FY 2020-21 allocation percentages for these line items. The Community HealthChoices appropriation is projected at $140 million in FY 2021-22 and remains level through FY 2025-26.

Oil and Gas Lease Fund

The Oil and Gas Lease Fund (OGLF) receives monies from the leasing of state lands for oil and gas drilling, in the form of rents, royalties, bonus payments and interest. The OGLF revenues support programs related to environmental conservation. Expenditures from the fund are made to the Department of Conservation and Natural Resources (DCNR), with priority given to state park and state forest programs and the Marcellus Legacy Fund, which supports other conservation-related programs.

Table A.10
Oil and Gas Lease Fund Financial Statement

Fiscal Year	19-20	20-21	21-22	22-23	23-24	24-25	25-26
Beginning Balance[1]	**$16**	**$8**	**--**	**--**	**--**	**--**	**--**
Royalties	65	52	$56	$56	$56	$56	$56
Rents, Interest and Other	12	9	9	9	9	9	9
Total Revenues	**77**	**61**	**64**	**65**	**65**	**65**	**65**
Funds Available	**93**	**69**	**64**	**65**	**65**	**65**	**65**
Cons. and Natural Resources[2]	70	53	29	29	29	29	29
Transfers to Other Funds	15	15	35	35	35	35	35
Total Expenditures	**85**	**68**	**64**	**64**	**64**	**64**	**64**
Ending Balance	**8**	**1**	**--**	**--**	**--**	**--**	**--**

Note: Millions of dollars.

1 Beginning balance omitted for FY 21-22 and thereafter.

2 FY 19-20 expenditures are presented on a cash basis. FY 20-21 expenditures may reflect prior year spending authority in addition to current year appropriations.

For FY 2019-20, revenues ($77 million) were less than expenditures ($85 million), and the ending balance for the fund was $8 million. For FY 2020-21, appropriations from the OGLF include $34 million to state park and state forest programs, $19 million for DCNR's general government operations and a $15 million transfer to the Marcellus Legacy Fund. Based on revenues of $61 million, the fund balance is projected to be less than $1 million at the end of the fiscal year. **Table A.10** displays the financial statement for the OGLF.

The forecast projects that royalty revenues will decline in FY 2020-21 due to the collapse of natural gas prices in CY 2020. Regional prices declined by approximately 29 percent during CY 2020 due to reduced demand resulting from mild weather in the winter, which reduced demand for heating. That decline was somewhat offset by the impact of COVID-19 mitigation efforts, which increased residential demand for indoor air conditioning over the summer. The weak demand and record-low prices also led to a slowdown in production growth in Pennsylvania. Data from the Department of Environmental Protection show that statewide production through November 2020 grew by just 3.4 percent from the prior year, a significant deceleration from annual growth rates of 14.1 percent in CY 2018 and 12.1 percent in CY 2019.

There are several factors that could lead to price recovery in the out-years. For early CY 2021, there should be more demand for residential electricity due to increased telecommuting during the winter months. Natural gas accounts for 41 percent of electricity generation nationwide, the largest share among all generation sources. The slowdown in CY 2020 production growth could also contribute to price recovery at the beginning of the forecast period. Regional prices are projected to grow by 77 percent in CY 2021. Prices are then forecast to stabilize in the rest of the forecast period, settling at a level similar to CY 2019. Pennsylvania production is projected to increase at a rate of 3.9 percent per annum during the forecast period.[13] Recent data show that production on state lands has not increased with statewide production. Therefore, the OGLF royalty revenues are largely dependent on natural gas prices. The revenue projection uses a combination of data provided by DCNR, the Department of Environmental Protection and Bentek Energy. Royalties are forecasted using expected trends in price and production through the forecast horizon, with adjustments to reflect actual prices received from sales of the gas extracted from state lands. Rentals and bonus payments are projected to remain flat.

The forecast reflects the following assumptions:

- Expenditures from the fund represent statutory provisions for (1) an appropriation of up to $50 million annually for DCNR and (2) a $35 million transfer to the Marcellus Legacy Fund for distribution to the Environmental Stewardship Fund ($20 million for FY 2017-18 and thereafter) and the Hazardous Sites Cleanup Fund ($15 million for FY 2017-18 and thereafter). This transfer was reduced to $15 million for FY 2019-20 and FY 2020-21, but the forecast assumes that it returns to $35 million in the out-years.
- Under current law, at least $85 million of available funds are needed each fiscal year to meet the statutory obligations of the OGLF. The current revenue forecast projects that the fund can support $29 million in annual appropriations for DCNR operations and the $35 million transfer to the Marcellus Legacy Fund.

[13] Price and production projections are from Bentek Energy.