

December 2017

Revenue Estimate Performance

FISCAL YEARS 2012-13 TO 2016-17



INDEPENDENT FISCAL OFFICE

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About the Independent Fiscal Office

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

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

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This document examines the performance of General Fund revenue estimates made by the Independent Fiscal Office (IFO) since its inception (September 2011) through June 2017. That time period covers five complete budget cycles. For each fiscal year, this document compares actual collections to the IFO's revenue estimates made at three specific times during the fiscal year, as required by the statute that created the office.¹ The three revenue estimates are as follows:

- **Official Estimate** This revenue estimate occurs in June of the preceding fiscal year. For example, the IFO official estimate for FY 2016-17 was released on June 15, 2016. When appropriate, the estimate is adjusted for any statutory changes that affect General Fund revenues that were not reflected in the June release. The estimate is released prior to the receipt of all revenues for the fiscal year that precedes the official estimate.
- **Mid-Year Update** This revenue estimate occurs in January of the same fiscal year. For example, the mid-year update for FY 2016-17 was released on January 25, 2017. The update is based on a revised economic forecast and revenue collections for the first half of the fiscal year.
- **May Update** This revenue estimate occurs during the first week in May of the same fiscal year. The estimate reflects actual collections for the first ten months of the fiscal year. A preliminary estimate for the following fiscal year is also released.

The text that follows discusses the performance of IFO General Fund revenue estimates for the past five fiscal years, and describes the factors that caused forecast errors. As a general rule of thumb, a total forecast error that is within one percentage point of actual revenue collections is considered a solid forecast. For Pennsylvania, a one percent error would imply a roughly \$320 million difference from actual revenues.

Fiscal Year 2012-13

The difference between actual collections and the IFO official estimate was \$137 million, or 0.5 percent of actual General Fund revenues. (See Tables 1 and 2, final columns.) While corporate net income tax (CNIT), personal income tax (PIT) and escheats (unclaimed property that is remitted to the Commonwealth, such as abandoned bank accounts, included in non-tax) revenues exceeded estimate, sales and use tax (SUT) revenues fell short of estimate. The underprediction error for CNIT was partly attributable to the reversal of federal 100 percent bonus depreciation, which was effective for tax year 2011. The underprediction error for PIT was attributable to the larger-than-expected revenue impact from changes in federal tax laws, which motivated high-income taxpayers to declare certain income (e.g., capital gains) in tax year 2012, prior to rate increases that became effective January 1, 2013. The total underprediction error shrank at the January mid-year update (\$62 million) and May update (\$67 million).

¹ Although the office also makes revenue projections each November as part of its five-year outlook, those estimates are not included in this document because they are not materially different than the official estimate released in the prior June.

Fiscal Year 2013-14

The difference between actual collections and the IFO official estimate was -\$547 million, or -1.9 percent of actual General Fund revenues. All major revenue sources except CNIT fell short of the official estimate. Although the negative impact from federal income tax law changes (higher tax rates) was included in the official estimate, the impact on PIT was larger than expected. For the entire fiscal year, General Fund tax revenues increased by only \$31 million (0.1 percent), driven by weak economic growth and unexpected year-over-year reductions in several revenue sources related to the financial sector (insurance premiums and bank shares taxes). The forecast error shrank at the January mid-year update (-\$397 million) and May update (\$60 million).

Fiscal Year 2014-15

The difference between actual collections and the IFO official estimate was \$635 million, or 2.1 percent of actual General Fund revenues. The CNIT (\$328 million) and escheats (\$242 million, included in non-tax) revenue sources comprised the majority of the underprediction error. The factors driving the CNIT error are not clear because the growth in U.S. non-financial domestic profits (5.5 percent) for 2014 was much lower than the growth in FY 2014-15 revenues (12.4 percent). The escheats error was attributable to the underestimation of the revenue impact from a statutory change that reduced the holding period for unclaimed property (mainly financial accounts) from five to three years. The IFO had assumed that the policy change would yield \$150 million of additional revenues for the fiscal year, but the actual impact appears closer to \$400 million. The inheritance tax forecast also underpredicted revenues due to an unusual payment of \$100 million attributable to a single decedent. The overall underprediction error declined at the January mid-year update (\$385 million) and May update (\$42 million).

Fiscal Year 2015-16

The difference between actual collections and the IFO official estimate was \$129 million, or 0.4 percent of actual General Fund revenues. An overprediction of PIT (-\$156 million) and SUT (-\$45 million) was more than offset by an underprediction of escheats (\$94 million), CNIT (\$53 million) and other revenues (\$175 million, largely gross receipts, realty transfer and inheritance taxes). The forecast for the January mid-year update (-\$20 million) was very close to actual revenues. An unusual and unanticipated year-over-year decline in SUT and PIT estimated payments received in June 2016 increased the total shortfall (-\$120 million) relative to the forecast from the May update.

Fiscal Year 2016-17

The difference between actual collections and the IFO official estimate was -\$841 million, or -2.7 percent of actual General Fund revenues. Nearly all revenues sources came in under forecast, with the exception of escheats. Economic growth rates were considerably lower than forecast, contributing to much of the error. Most of the PIT overprediction (-\$391 million) was attributable to weak quarterly and annual payments, which are generally motivated by business profits, capital

gains, rents, interest and dividends. The SUT overprediction (-\$236 million) was attributable to non-motor vehicle sales tax collections, and may have been impacted by (1) lack of price inflation due to internet shopping, (2) weaknesses in taxable business purchases (e.g., computers and furniture) and (3) general uncertainty regarding the outcome of the November 2016 election. The overall overprediction error declined at the January mid-year update (-\$391 million) and May update (-\$146 million). All forecast errors, including the Mary forecast, were affected by the non-receipt of an assumed \$200 million transfer from the Pennsylvania Joint Underwriter's Association (included in non-tax).

Summary

For two of the five fiscal years, the IFO official estimate has been within one-half percentage point of actual revenues. In both cases, revenues were slightly higher than projected. For two other years, the forecast error was roughly +/-2.0 percent of actual General Fund revenues, with one underprediction and one overprediction error. Both years were affected by significant policy changes at the federal or state levels. For FY 2016-17, the overprediction error was -2.7 percent, as total General Fund revenues, excluding enacted tax law changes and one-time revenue sources, were flat compared to FY 2015-16.

In addition to the relative size of forecast errors, it is useful to track the types of error (i.e., under or overprediction). Forecasts that continually under or overpredict may not be efficient, and may suggest underlying issues with the models and methodologies used to make projections. Three of the past five estimates underpredicted actual revenues, while two overpredicted revenues. Projections should represent an unbiased forecast that has an equal chance of under or overprediction. The prediction errors from the past five budget cycles appear to alternate sufficiently between those two outcomes.

Table 1
IFO General Fund Revenue Estimate Error: Actual Revenues Less Estimates

Fiscal Year	Projection Made	Tax Sources					Total Tax	Non-Tax	Grand Total
		CNIT	PIT	SUT	Other				
2012-13	June 2012 (Official Estimate)	\$166	\$151	-\$285	\$33	\$65	\$72	\$137	
	January 2013 (Mid-Year Update)	16	51	-85	7	-11	73	62	
	May 2013 (May Update)	23	-19	27	41	72	-5	67	
2013-14	June 2013 (Official Estimate)	42	-283	-109	-196	-546	-2	-547	
	January 2014 (Mid-Year Update)	42	-223	-39	-196	-416	18	-397	
	May 2014 (May Update)	31	-5	-10	35	50	10	60	
2014-15	June 2014 (Official Estimate)	328	81	30	131	569	66	635	
	January 2015 (Mid-Year Update)	98	136	-130	56	159	226	385	
	May 2015 (May Update)	-7	43	-64	47	20	21	42	
2015-16	June 2015 (Official Estimate)	53	-156	-45	175	28	101	129	
	January 2016 (Mid-Year Update)	103	-266	-35	101	-96	76	-20	
	May 2016 (May Update)	5	-95	-45	32	-102	-18	-120	
2016-17	June 2016 (Official Estimate)	-194	-391	-236	-102	-923	81	-841	
	January 2017 (Mid-Year Update)	-94	-257	18	-105	-437	46	-391	
	May 2017 (May Update)	-35	-33	54	-10	-23	-123	-146	

Notes: Figures in dollar millions. CNIT is corporate net income tax, PIT is personal income tax and SUT is sales and use tax. Forecasts made in June are adjusted for any statutory changes made to the tax or fiscal codes. FY 2015-16 comparison adjusts for \$51 million in transfers to General Fund approved in December 2015.

Table 2
IFO General Fund Revenue Estimate Error: Actual Revenues Less Estimates (Percentage Deviation)

Fiscal Year	Projection Made	Tax Sources					Total Tax	Non-Tax	Grand Total
		CNIT	PIT	SUT	Other				
2012-13	June 2012 (Official Estimate)	6.9%	1.3%	-3.2%	0.6%	0.2%	12.4%	0.5%	
	January 2013 (Mid-Year Update)	0.7%	0.4%	-1.0%	0.1%	0.0%	12.6%	0.2%	
	May 2013 (May Update)	1.0%	-0.2%	0.3%	0.8%	0.3%	-0.9%	0.2%	
2013-14	June 2013 (Official Estimate)	1.7%	-2.5%	-1.2%	-3.9%	-1.9%	-0.3%	-1.9%	
	January 2014 (Mid-Year Update)	1.7%	-1.9%	-0.4%	-3.9%	-1.5%	3.6%	-1.4%	
	May 2014 (May Update)	1.2%	0.0%	-0.1%	0.7%	0.2%	2.0%	0.2%	
2014-15	June 2014 (Official Estimate)	11.7%	0.7%	0.3%	2.6%	1.9%	6.0%	2.1%	
	January 2015 (Mid-Year Update)	3.5%	1.1%	-1.4%	1.1%	0.5%	20.5%	1.3%	
	May 2015 (May Update)	-0.2%	0.4%	-0.7%	0.9%	0.1%	1.9%	0.1%	
2015-16	June 2015 (Official Estimate)	1.9%	-1.2%	-0.5%	3.4%	0.1%	15.7%	0.4%	
	January 2016 (Mid-Year Update)	3.6%	-2.1%	-0.4%	2.0%	-0.3%	11.8%	-0.1%	
	May 2016 (May Update)	0.2%	-0.8%	-0.5%	0.6%	-0.3%	-2.8%	-0.4%	
2016-17	June 2016 (Official Estimate)	-7.0%	-3.1%	-2.4%	-1.9%	-3.0%	8.9%	-2.7%	
	January 2017 (Mid-Year Update)	-3.4%	-2.0%	0.2%	-2.0%	-1.4%	5.0%	-1.2%	
	May 2017 (May Update)	-1.3%	-0.3%	0.5%	-0.2%	-0.1%	-13.5%	-0.5%	

Notes: CNIT is corporate net income tax, PIT is personal income tax and SUT is sales and use tax. Forecasts made in June are adjusted for any statutory changes made to the tax or fiscal codes. FY 2015-16 comparison adjusts for \$51 million in transfers to General Fund approved in December 2015.