
Revenue Estimate Performance

Fiscal Years 2012-13 to 2015-16

This document examines the performance of General Fund revenue estimates made by the Independent Fiscal Office (IFO) since its inception (September 2011) through June 2016. That time period covers four complete budget cycles. For each fiscal year, this document compares the IFO's revenue estimates to actual collections for three different estimates that are made at 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 2015-16 was released on June 15, 2015. 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 2015-16 was released on January 26, 2016. 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 known 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 four fiscal years, and describes the factors that contributed to 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 \$300 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) 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 overall 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) revenue sources accounted for the great majority of the underprediction error. The factors driving the CNIT error are not clear since final tax return data are not yet available, and 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, while 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 (\$41 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 (\$54 million) and other revenues (\$183 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. The decline in those two revenue sources was highly unusual as the pattern for the first five months of the calendar year revealed 3 (PIT estimated) to 5 (SUT) percent annual growth.

Summary

For two of the four 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 the other two 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. The sizable shortfall for FY 2013-14 was affected by a strong behavioral response to higher federal tax rates on high-income taxpayers, and most states experienced revenue shortfalls due to the underestimation of that behavioral response. The sizable revenue gain for FY 2014-15 was affected by the very large revenue impact from the change in the escheats holding period. The impact also spilled over into FY 2015-16.

In addition to the relative size of forecast errors, it is also useful to track the types of error (i.e., under or overprediction). Forecasts that continually under or overpredict may not be efficient, and may signal underlying issues with the models and methodologies used to make projections. Three of the past four forecasts have underpredicted revenues, and the IFO will monitor that trend going forward. Projections should represent an unbiased forecast that has an equal chance of under or overprediction. Forecasts that do not alternate between those types of errors within several years should be examined to address that issue.

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

<u>Fiscal Year</u>	<u>Projection Made</u>	<u>Dollar Difference (millions)</u>					
		<u>CNIT</u>	<u>PIT</u>	<u>SUT</u>	<u>Escheat</u>	<u>Other</u>	<u>Total</u>
2012-13	June 2012 (Official Estimate)	\$166	\$151	-\$285	\$87	\$17	\$137
	January 2013 (Mid-Year Update)	\$16	\$51	-\$85	\$67	\$12	\$62
	May 2013 (May Update)	\$23	-\$19	\$27	\$4	\$32	\$67
2013-14	June 2013 (Official Estimate)	\$42	-\$283	-\$109	-\$33	-\$164	-\$547
	January 2014 (Mid-Year Update)	\$42	-\$223	-\$39	-\$13	-\$164	-\$397
	May 2014 (May Update)	\$31	-\$5	-\$10	\$24	\$20	\$60
2014-15	June 2014 (Official Estimate)	\$328	\$81	\$30	\$242	-\$45	\$635
	January 2015 (Mid-Year Update)	\$98	\$136	-\$130	\$262	\$20	\$385
	May 2015 (May Update)	-\$6	\$43	-\$63	\$22	\$46	\$41
2015-16	June 2015 (Official Estimate)	\$54	-\$156	-\$45	\$94	\$183	\$129
	January 2016 (Mid-Year Update)	\$104	-\$266	-\$35	\$54	\$124	-\$20
	May 2016 (May Update)	\$6	-\$95	-\$44	-\$23	\$36	-\$120

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 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: Actual Revenues Less Estimates

<u>Fiscal Year</u>	<u>Projection Made</u>	<u>Percentage Deviation</u>					
		<u>CNIT</u>	<u>PIT</u>	<u>SUT</u>	<u>Escheat</u>	<u>Other</u>	<u>Total</u>
2012-13	June 2012 (Official Estimate)	6.8%	1.3%	-3.2%	44.5%	0.3%	0.5%
	January 2013 (Mid-Year Update)	0.7%	0.4%	-1.0%	34.3%	0.2%	0.2%
	May 2013 (May Update)	1.0%	-0.2%	0.3%	1.8%	0.6%	0.2%
2013-14	June 2013 (Official Estimate)	1.7%	-2.5%	-1.2%	-22.0%	-3.0%	-1.9%
	January 2014 (Mid-Year Update)	1.7%	-1.9%	-0.4%	-8.7%	-3.0%	-1.4%
	May 2014 (May Update)	1.2%	0.0%	-0.1%	15.9%	0.4%	0.2%
2014-15	June 2014 (Official Estimate)	11.7%	0.7%	0.3%	44.4%	-0.8%	2.1%
	January 2015 (Mid-Year Update)	3.5%	1.1%	-1.4%	48.1%	0.4%	1.3%
	May 2015 (May Update)	-0.2%	0.4%	-0.7%	4.0%	0.8%	0.1%
2015-16	June 2015 (Official Estimate)	1.9%	-1.2%	-0.5%	37.3%	3.3%	0.4%
	January 2016 (Mid-Year Update)	3.6%	-2.1%	-0.4%	21.4%	2.2%	-0.1%
	May 2016 (May Update)	0.2%	-0.8%	-0.5%	-9.1%	0.7%	-0.4%

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 tax or fiscal codes.
FY 2015-16 comparison adjusts for \$51 million in transfers to General Fund approved in December 2015.