September 2024

Mind the Gap: Measuring the Accuracy of Spending Projections

In a June 2024 publication, PICA shared that Philadelphia performed better than most of its peer cities when it comes to predicting its annual revenues. But what about the City's annual expenditures?

As it turns out, Philadelphia is even better at accurately predicting its annual General Fund expenditures than its revenues and is the second most accurate of its peer cities! Over the past 20 fiscal years, Philadelphia's actual spending was, on average, within +/- 2.0 percent of its adopted budget. This is better than the mean amongst peer cities of +/- 5.0 percent of adopted budgets.

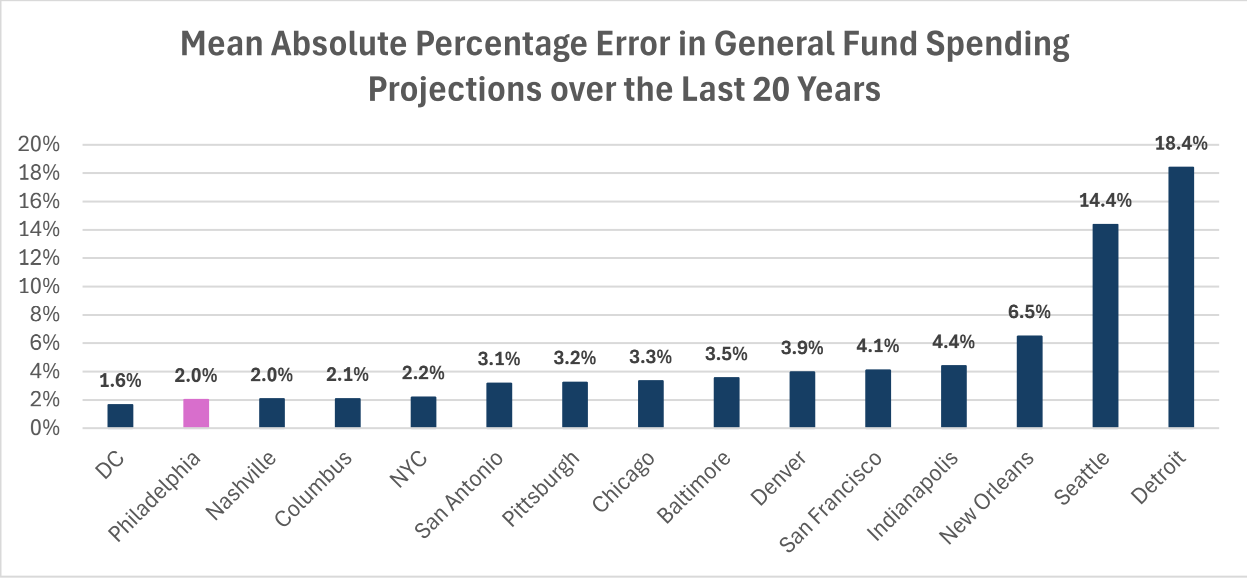
How is predicting spending different?

Projecting spending works differently than projecting revenues for two key reasons. First, the City has more control over expenditures. While some parts of the General Fund budget are fixed—like debt service, court-mandated payments, and the City's formula-driven contributions to the Budget Stabilization Reserve and Housing Trust Fund— other parts are discretionary. The discretionary portion includes things like graffiti abatement, how many swimming pools to open, and exempt employee salaries; these items are important and essential to the City's operations and service delivery, but the City has more flexibility in whether to expend funds appropriated in the annual budget and when. If the City forecasts financial trouble, it can adjust its discretionary spending to stay on target. It doesn't have this same level of control over revenues, which are significantly influenced by external factors like real estate activity, consumer spending, and the state and federal government.

In addition to having the flexibility to dial back on spending, appropriations must be legislatively approved, creating a ceiling for what the City is authorized to spend. Every year, the mayor's operating budget must be approved by City Council before it can take effect, and the City's Five-Year Financial Plan must meet the criteria for PICA approval. As the fiscal year progresses, any amendments to the budget also must first pass in City Council and any impacts on the Five-Year Plan must be reported to PICA. Significant deviations from the original approved budget may represent operational challenges and result in community needs being unmet in the case of underspends. Spending above originally approved levels may also reflect community or fiscal distress if driven by urgent new needs or unplanned rising costs. Alternatively, upward adjustments in appropriations and spending over the course of the year may reflect improved fiscal conditions that enable more or better service delivery. For further discussion of making amendments to increase spending during the fiscal year, check out PICA's issue brief, *Making MidYear Moves.*

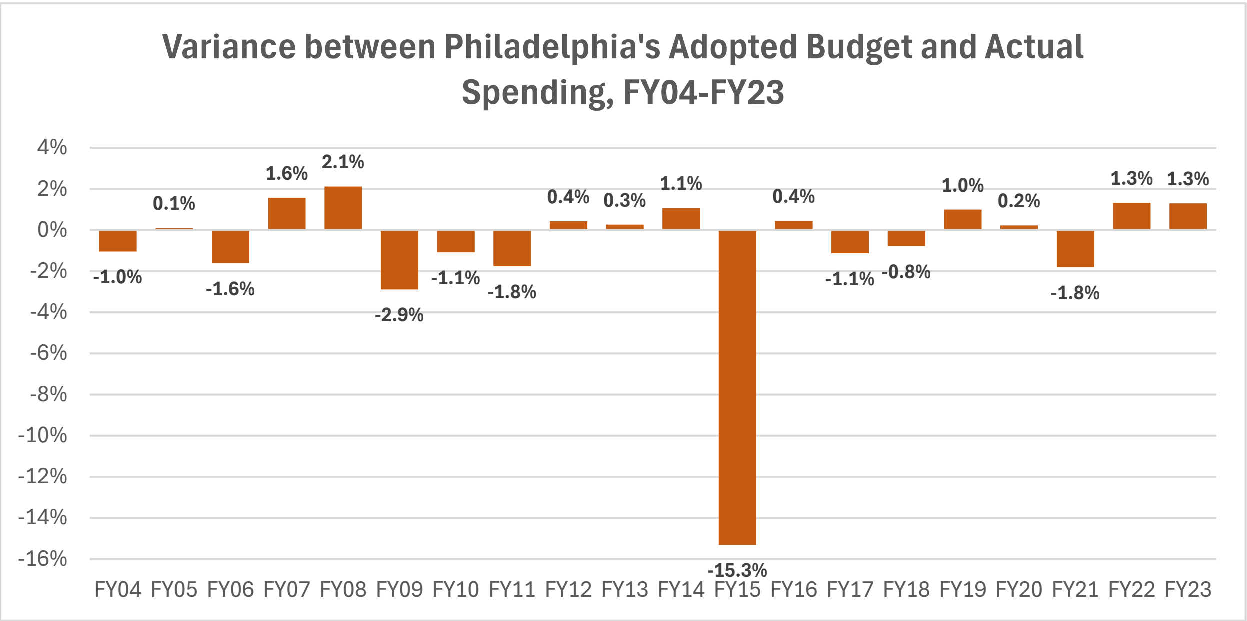
How Philadelphia Measures Up

Philadelphia is the second most accurate city at projecting its annual spending based on a comparison of the last 20 fiscal years of data with 14 of its peer cities. Its mean absolute percentage error (MAPE), a measure for assessing forecasting accuracy, was +/- 2.0 percent. Only Washington DC performed better at predicting its annual spending, with actual spending, on average, within +/- 1.6 percent of its original budget. The average MAPE amongst the 15 cities studied was +/- 5.0 percent.



The MAPE is an absolute value, so it doesn't differentiate between coming in under or over budget. For most of the 15 cities, actual spending was below adopted budgets in most of the fiscal years studied. While Philadelphia's amount of difference, on average, between the original budget and actual spending was lower than average, it more frequently spent more than originally budgeted compared to the peer cities. Philadelphia's actual spending exceeded its original adopted budget more often than most cities, with actual spending higher in 11 of 20 fiscal years, whereas the average among peer cities was in 7 out of 20 years.

Looking at how actual spending varied from Philadelphia's adopted budget over the past 20 fiscal years, FY15 stands out as an outlier. Actual spending was nearly $700 million less than the adopted budget in FY15 because the City planned to sell Philadelphia Gas Works and allocate revenues from this sale to pension costs. Because the sale did not occur, neither did the extra pension contributions. The FY15 underspend contributes to the higher MAPE for Philadelphia (if we exclude FY15, Philadelphia would be the most accurate and most consistent of the 15 cities). Other than FY15, the only other fiscal year with spending more than two percent lower than the adopted budget was FY09, the year of the Great Recession.



Spending Projection Accuracy & PICA Five-Year Plan Analysis

As part of PICA's annual review of the City's Five-Year Financial Plan, PICA staff evaluate the reasonableness of the City's spending projections and the consistency of the methods used to arrive at these projections. Having an analysis of the City's performance that is both historical and comparative (like this one) helps to bolster confidence in the City's forecasting methods. It demonstrates a track record of budgetary precision and sound financial management. When the City's Annual Financial Report is published this fall, we'll be able to see whether FY24 actual spending follows this accuracy trend.

About the Peer Cities

Peer cities studied in this analysis were chosen based on similarities to Philadelphia, including population size, budget size, socioeconomic factors, governmental structure, whether it provides city and county functions, and geographic location.

Here's how the peer cities compare:

- Cities Nearby: Washington DC, NYC, Pittsburgh, Baltimore, Columbus
- Cities with County/Parish functions: New Orleans, Nashville, Washington DC, San Francisco, Indianapolis, NYC, Denver
- Top 15 Cities by Population: NYC, Chicago, San Antonio, Columbus
- Size of Budget: San Francisco, Chicago
- Socioeconomic indicators: Baltimore, Detroit, New Orleans
- Similar governmental structure: Seattle, Denver, New Orleans, San Francisco, Chicago, Detroit

About the Data Analysis

The analysis utilized original budgets and actual spending data for the General Fund from the 20 most recent Annual Comprehensive Financial Reports (ACFRs) for each city in the study. ACFRs were obtained from the websites of each city or via email from their Finance/Controller's Offices. Although apples to apples comparison of budget and financial data is not possible, the standardization of the ACFR is the most consistent data source across cities and over time.

The absolute percentage error between the original budget and actual spending was calculated for each year and then the mean of those absolute percentage errors for 20 years was calculated for each city to determine the overall projection accuracy.

About the Report

This report was written by Suzanne Staherski, with guidance and editing support from Marisa Waxman, and graphic support from ChatGPT's DALL-E feature.