Auditor Certifies Revenue In Support of General Obligation Bonds and Obligation Refunding Bonds

April 5, 2023

A report by District Economic Group for the Office of the D.C. Auditor

Audit Team
District Economic Group

Office of the District of Columbia Auditor

Kathleen Patterson, District of Columbia Auditor
www.dcauditor.org

Introduction

On January 30, 2023, the Deputy Chief Financial Officer and Treasurer of the District of Columbia requested that the Auditor certify the issuance of up to $650 million of general obligation bonds and approximately $240 million of general obligation refunding bonds. The District's stated intention was to issue these bonds in two separate series, Series 2023A and 2023B, respectively, during the week of March 20, 2023.[1]

This report sets forth the results of the Auditor's analysis performed by the District Economics Group (DEG) of the OCFO's Fiscal Year (FY) 2023 non-dedicated local source General Fund Revenue estimate of $9,698,260,000 and based on the analysis the Auditor provided the certification on March 21, 2023.

The objectives of the analysis were to:

- Assess the reasonableness and attainability of the OCFO's FY 2023 non-dedicated local source General Fund Revenue estimate of $9,698,260,000.
- Determine if the issuance of the proposed general obligation bonds would cause the District to exceed the 17 percent revenue limitation (the "17 percent test"), as outlined in D.C. Official Code § 1-206.03(b)(1).

Changes to the economic forecast

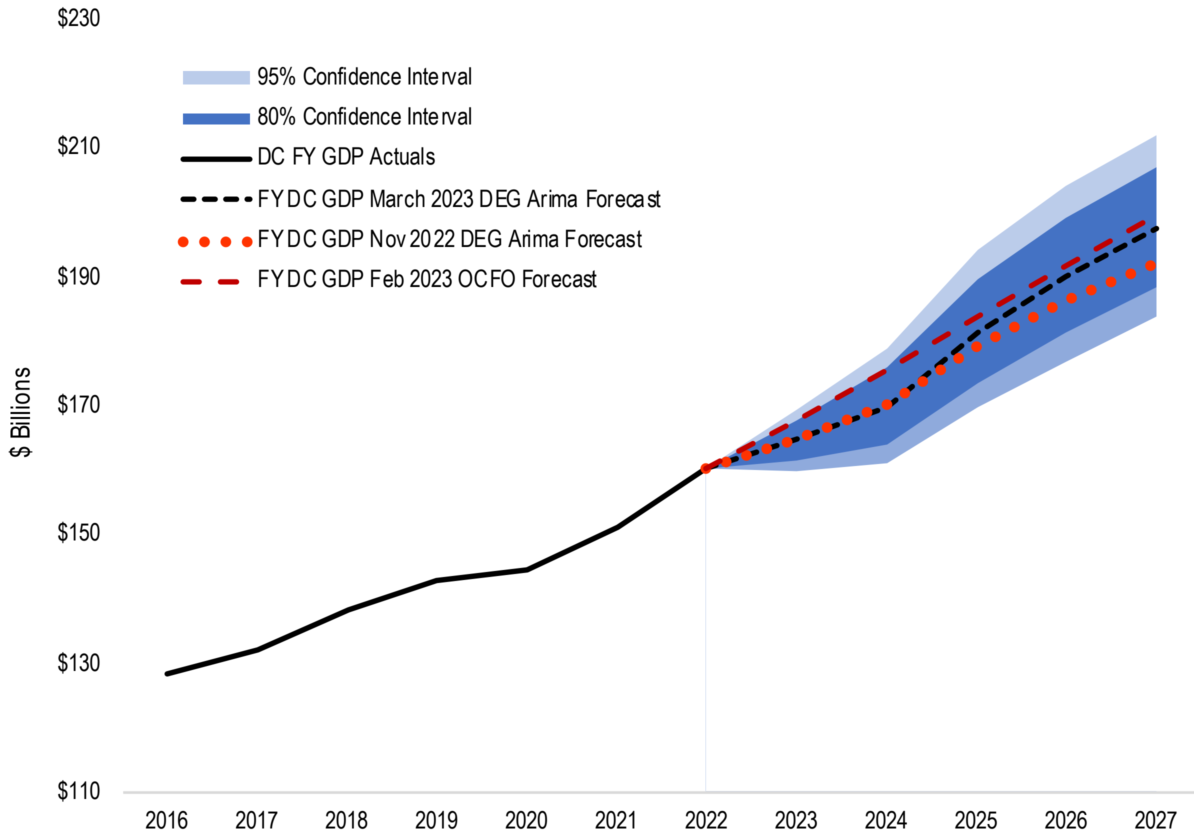
The DEG March 2023 forecast of D.C. Gross Domestic Product (GDP) for FY 2023 is $164.77 billion which is equivalent to its corresponding DEG November 2022 forecast of $164.77 billion.[2] Figure 1 shows both the March 2023 and November 2022 DEG forecasts of FY D.C. GDP through FY 2027 as well as the OCFO's February 2023 estimates for comparison.[3] DEG's March 2023 forecast of FY D.C. GDP (black dashed line) is very similar to its November 2022 forecast (red dotted line), although slightly higher from FY 2025 through the end of the forecast period. While DEG's March 2023 forecast is similar to the OCFO's February 2023 forecast (maroon dashed line) for FY 2023, the two forecasts diverge through approximately FY 2025, after which they follow similar growth paths.

1 Notice sent from OCFO's Office of Finance and Treasury to the Office of the D.C. Auditor pursuant to D.C. Official Code, Section 1-206.03(b)(1).

2 For a detailed explanation of the DEG forecast see "Modeling the D.C. Economy, Revenues, and Debt Service Obligations," Office of the District of Columbia Auditor, January 4, 2023. The estimates provided in that report were based upon estimates prepared in November of 2022.

3 The OCFO's February 2023 Revised Revenue Estimates is available at: https://cfo.dc.gov/sites/default/files/dc/sites/ocfo/publication/attachments/FEB%202023%20Revenue%20Estimate%20Letter%20FINAL.pdf

Figure 1. D.C. GDP Forecast FY 2023–2027



The DEG model of FY D.C. GDP relies on historical estimates of quarterly U.S. and D.C. GDP from the Bureau of Economic Analysis (BEA). Between DEG's November 2022 and March 2023 model revisions, the BEA updated its U.S. GDP estimates, revising its CY 2022Q3 estimate slightly upward by 0.24% and releasing its estimate for 2022Q4.[4] Comparing like quarters, the BEA's U.S. GDP estimate of $26.14 trillion for 2022Q4 is 7.38% greater than its 2021Q4 estimate of $24.35 trillion and 20.46% greater than its 2020Q1 estimate of $21.70 trillion. The BEA also updated its D.C. GDP data by releasing its estimate of $163.15 billion for 2022Q3, which is 4.98% greater than its estimate of $155.40 billion for 2021Q3.[5]

While the DEG forecasting model relies upon quarterly data, it is worth discussing the BEA's release of its Calendar Year (CY) 2021 D.C. GDP estimate as well because annual growth more accurately reflects longer-term economic trends. The BEA's D.C. GDP estimate of $153.67 billion for CY 2021 is 6.18% greater than its CY 2020 D.C. GDP estimate of $144.72 billion and 6.72% greater than its CY 2019 estimate of $143.99. D.C. GDP grew faster in 2021 than U.S. GDP growth of 5.95%. This speaks to the strength of the

4 The BEA released revised and new statistics for quarterly CY U.S. GDP on February 23, 2023. This update, which is incorporated into DEG's models, is available at: Table 1.1.5. Gross Domestic Product

5 The BEA released new estimates for quarterly D.C. GDP on December 23, 2022. This update, which is incorporated into DEG's models, is available at: SQGDP2 Gross domestic product (GDP) by state 1

District's economic recovery, directly contrasting the almost negligible 0.51% growth the District's GDP experienced between CY 2019 and CY 2020 at the onset of the pandemic. Between CY 2019 and 2020 U.S. GDP fell by 2.77%.

DEG's modeling also relies on projections from the Congressional Budget Office (CBO) for future U.S. GDP to forecast future values of D.C. GDP. DEG's November 2022 modeling incorporated the CBO's May 2022 projections whereas its March 2023 modeling incorporates the CBO's February 2023 projections.[6] Between the two publications, the CBO remained consistent in its forecasts of FY 2023 and FY 2024 U.S. GDP, decreasing its forecasts only by 0.01% and 0.09% to $26.24 trillion and $27.27 trillion, respectively. Additionally, it increased its forecast of U.S. GDP for FY 2025 to $28.61 trillion (1.2% growth), its forecast for FY 2026 to $29.93 trillion (2.27% growth), and its forecasts for FY 2027 to $31.25 trillion (3.03% growth).

Figure 2 displays the DEG March 2023 D.C. GDP and gross revenue forecasts for FY 2023-2027 alongside the D.C. OCFO's forecasts from its February 2023 Revised Revenue Estimates. DEG's estimates of D.C. GDP are lower than the OCFO's for each forecasted fiscal year, with the smallest difference being $1.76 billion for FY 2026 and the largest being $5.61 billion for FY 2024.

The OCFO's model anticipates steadily declining levels of annual growth in future fiscal years. For example, the OCFO forecasts 4.77% growth between FY 2023 and FY 2024, 4.73% growth between FY 2024 and FY 2025, 4.30% growth between FY 2025 and FY 2026, and 4.07% growth between FY 2026 and FY 2027, whereas DEG's March 2023 model forecasts those annual growth rates at 3.17%, then increasing to 6.77%, before steadily declining to 4.71%, and 3.94% rates, respectively. Despite this divergence in D.C. GDP growth rates, the DEG and OCFO gross revenue forecasts are similar in each fiscal year with DEG's estimates predominantly smaller.

6 The CBO's economic projections are available at: https://www.cbo.gov/data/budget-economic-data#4. The Quarterly GDP forecasts are within the "10-Year Economic Projections" files.

Figure 2. Comparison of DEG March 2023 and OCFO February 2023 forecasts for Fiscal Year D.C. GDP and Gross Revenues

Fiscal Year	DEG D.C. GDP Forecast ($ Billions)	OCFO D.C. GDP Forecast ($ Billions)	DEG Gross Revenues Forecast ($ Thousands)	OCFO Gross Revenues Forecast ($ Thousands)
2023	$164.77	$167.60	$10,480,150	$10,512,385
2024	$169.99	$175.60	$10,319,074	$10,520,182
2025	$181.50	$183.90	$10,406,784	$10,734,795
2026	$190.04	$191.80	$10,884,361	$11,069,972
2027	$197.52	$199.60	$11,523,621	$11,406,793

Changes to the revenue forecast

In November 2022, DEG updated its revenue modeling methodology by modifying the types of D.C. commercial, retail, and multifamily data that it incorporated from CoStar's real estate platform and incorporating capital gains tax receipts and unemployment data from the CBO. The latter change allows DEG to capture underlying macroeconomic trends that may not be reflected in localized commercial real estate activity.

Figure 3 highlights the changes in DEG's revenue stream estimates between its March 2023 (orange shaded columns) and its November 2022 (gray shaded columns) forecasts. The white columns show the changes within each revenue stream between the two model revisions. The forecasted gross revenue streams on this table are estimates before dedicated revenues are netted out.

In contrast with its November 2022 model estimates, DEG's March 2023 estimates show predominantly lower income tax and other tax revenues through the forecast window. However, DEG's March 2023 estimates also show consistently higher gross receipts and nontax and lottery revenues. Notably, DEG's model of income tax revenue incorporates CoStar's data on office vacancy rates which are indicative of business activity in the District and can capture some of the effects of remote work as well as business activity, such as businesses opening and closing. Office vacancy rates are also correlated with the corporate franchise component of income tax revenue. Additionally, DEG's income tax model includes CBO data on FY U.S. capital gains tax receipts to capture some of the volatility reflected in the District's income tax revenue collections. These two indicators produce a mixed effect in DEG's forecast of income tax revenue through FY 2027, as businesses have continued to rebound since the pandemic, but the recent Federal Reserve interest rate increases included in the CBO data serve to suppress business investment and income tax collections.

The income tax model also includes DEG's forecast of FY D.C. GDP. In contrast, DEG's model of nontax and lottery revenues does not incorporate FY D.C. GDP and only includes D.C. office vacancy rates, indicating that CoStar's higher forecasts of office vacancy for FY 2023-2027 lead to slightly higher nontax and lottery revenue estimates in DEG's March 2023 model.

Figure 3. Revised Gross Fiscal Year Revenue Stream Forecasts for March 2023 (in blue) and November 2022 (in grey) ($ Thousands)

Fiscal Year	Income tax revenue			Property tax revenue			Sales and excise tax revenue		
	DEG Nov 2022	DEG March 2023	Difference	DEG Nov 2022	DEG March 2023	Difference	DEG Nov 2022	DEG March 2023	Difference
2023	$4,138,876	$4,240,861	$101,985	$2,803,320	$2,831,001	$27,681	$1,946,863	$1,898,697	-$48,166
2024	$4,064,653	$4,060,728	-$3,925	$2,829,153	$2,846,915	$17,762	$1,995,234	$1,912,360	-$82,873
2025	$4,176,276	$3,897,709	-$278,567	$2,878,897	$2,866,778	-$12,119	$2,057,522	$2,093,115	$35,593
2026	$4,245,626	$4,140,719	-$104,907	$3,020,746	$2,993,285	-$27,461	$2,125,782	$2,227,875	$102,093
2027	-	$4,458,192	-	-	$3,188,326	-	-	$2,339,587	-

Fiscal Year	Other tax revenue			Gross receipts tax revenue			Nontax and lottery revenue		
	DEG Nov 2022	DEG March 2023	Difference	DEG Nov 2022	DEG March 2023	Difference	DEG Nov 2022	DEG March 2023	Difference
2023	$558,899	$577,703	$18,804	$377,723	$389,307	$11,585	$533,273	$542,580	$9,307
2024	$591,582	$560,799	-$30,782	$380,432	$396,052	$15,620	$532,321	$542,219	$9,898
2025	$631,546	$612,732	-$18,814	$379,226	$393,066	$13,840	$534,981	$543,384	$8,403
2026	$610,532	$583,808	-$26,724	$379,763	$394,388	$14,625	$537,254	$544,286	$7,032
2027	-	$599,246	-	-	$393,803	-	-	$544,467	-

Using the revised revenue stream forecasts in Figure 3 and netting out any dedicated revenues from the gross amounts, an updated version of the D.C. Auditor Certification Table is shown below in Figure 4.[7] DEG's March 2023 estimate of the District's Total Local Source, General Fund Revenue for FY 2023 is $9.67 billion, which is $99.24 million or 1.04% greater than DEG's November 2022 estimate of $9.57 billion.

7 DEG nets out the District's dedicated revenues for FY 2023 which are detailed in Table 1 of the OCFO's February 2023 Revised Revenue Estimates: under each individual revenue source, any dedicated revenues are titled as "Dedicated to other funds."

Figure 4. FY 2023 Total Local Source, General Fund Revenue Estimate (Net of Dedicated Taxes) ($ Thousands)

Revenue Source	DEG's FY 2023 Total Local Source, General Fund Revenue Estimate (Net of Dedicated Taxes)
Income Taxes	$4,240,861
Property Taxes	$2,785,148
Sales and Excise Taxes	$1,343,826
Gross Receipts Taxes	$239,554
Other Taxes	$514,055
Total Taxes	$9,123,445
Total Nontax and Lottery Revenues	$542,580
Total Local Source, General Fund Revenue Estimate	**$9,666,025**

Figure 5 details the District's potential debt service for FY 2023 on general obligation (GO) and income tax secured (ITS) bonds, incorporating into the District's current outstanding principal and interest payments its plans to issue the Series 2023A and Series 2023B general obligation bonds the week of March 20, 2023. As shown in Figure 5, DEG's estimate of the 17 percent test statistic - the ratio of the District's FY 2023 principal and interest payments on GO and ITS bonds, including the planned Series 2023A and 2023B GO bonds, to DEG's FY 2023 General Fund Revenue Estimate – is 9.72%.

Figure 5. FY 2023 Debt Service Applicable to the 17% Test, Comprised of Principal and Interest Payments on the District's Current and Planned GO and ITS Bond Obligations, as of March 20, 2023 ($ Dollars)

Principal and Interest From:	FY 2023 Principal and Interest Payments Including Series 2023 A&B General Obligation Bond Debt Service	FY 2023 Payments as Percent of General Fund Revenue Estimate
General Obligation (GO) bonds	$520,625,745	5.39%
Income Tax Secured (ITS) bonds	$418,947,815	4.33%
Total	**$939,573,560**	**9.72%**

Source: DEG estimates of revenues, OCFO estimates of dedicated revenues by revenue stream, and debt service obligation data provided by the ODCA and the OCFO, all for FY 2023.

Issues with forecast revision

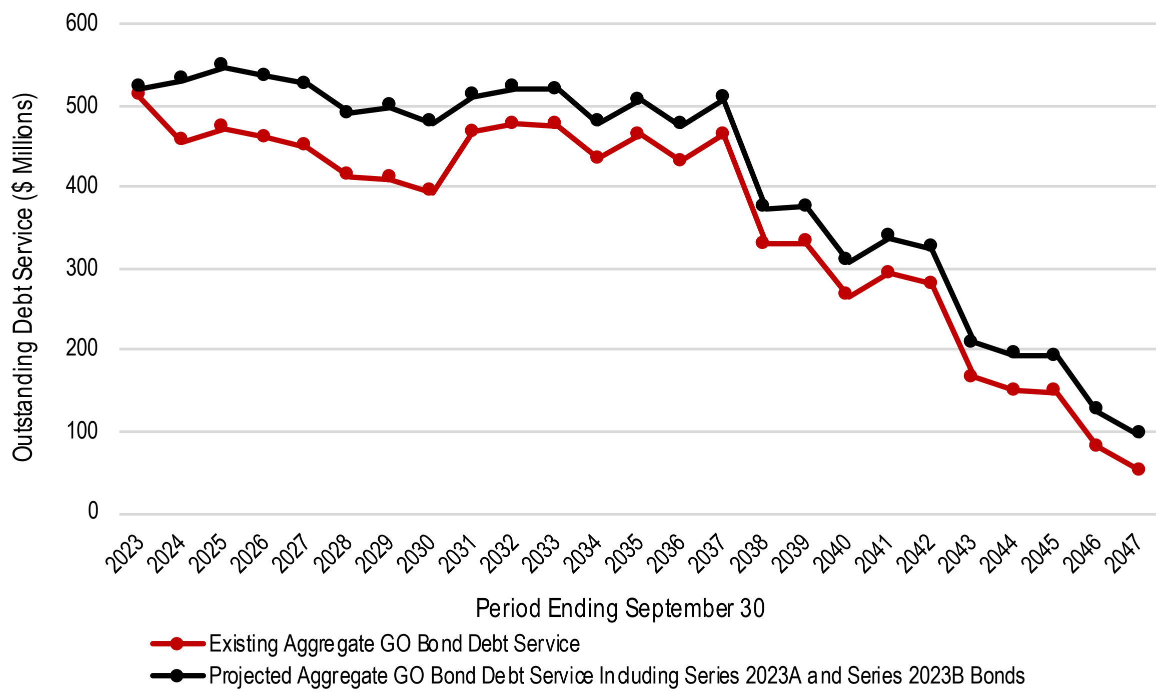
DEG's March 2023 forecasts were prepared using revenue collections data from the OCFO's February 2023 Revised Revenue Estimates whereas its November 2022 forecasts were prepared using data from the OCFO's September 2022 Revised Revenue Estimates. As the OCFO notes, the District's economy continues to develop in light of an increasingly pessimistic economic outlook attributable to interest rate increases from the Federal Reserve. Despite data showing resilience in the economy via strong employment and GDP numbers, the outlook for District tax revenues is largely seen to be negative in light of new interest rate policies. Specifically, the OCFO identifies risks in revenue generation among income and property tax as higher interest rates stifle business investment.[8] Additionally, continuing uncertainty around the extent to which companies and employees return to the office rather than working remotely will continue to impact the demand for office space and therefore property tax revenues. This uncertainty also impacts other revenue streams such as parking tickets which may be dependent on worker traffic as well as enforcement levels. By incorporating CoStar market data and CBO data on both unemployment and capital gains tax receipts, DEG continues to add sensitivity to its revenue forecasts, providing greater nuance in capturing these divergent revenue paths induced by the pandemic recovery and interest rate policy.

Existing and projected outstanding GO bond debt service

Figure 6 shows the maximum increase in general obligation (GO) bond debt service that the District plans to issue with the Series 2023A and Series 2023B GO bonds. The maroon line depicts the District's aggregate GO bond debt service requirements *at present*, broken out for each fiscal year from 2023-2047, whereas the black line depicts the same, *plus* the projected debt service undertaken by issuing the Series 2023A and 2023B GO bonds. Overall, there will be an additional $1.31 billion in GO bond debt service for FY 2023-2047, increasing the District's aggregate from $8.88 billion to $10.18 billion for that time period.

8 See the OCFO's February 2023 Revised Revenue Estimates, page 2.

Figure 6. Existing Aggregate GO Bond Debt Service (Maroon) and Projected Aggregate GO Bond Debt Service After Inclusion of Series 2023A and 2023B GO Bonds (Black) as of March 20, 2023



Source: Debt service obligation data provided by the ODCA and the OCFO for FY 2023-2047.

Conclusion

DEG's estimate for the District's FY 2023 non-dedicated Local Fund Revenue is $9,666,025,000 or 99.67% of the OCFO's estimate of $9,698,260,000. Given the similarity, DEG finds the OCFO's estimate to be both reasonable and attainable.

Based on the analysis performed by DEG, the Auditor can certify that after issuance of the Series 2023A and Series 2023B general obligation bonds, the District will comply with statutory debt limitations.

The Auditor only certifies that the revenue estimate, *at the time of certification*, appears sufficiently supported and achievable. As the OCFO frequently revises projections throughout the fiscal year after gathering additional information, we stress that our report is based on the information available at the time of our review.

District Economics Group

Michael Udell
Managing Member, District Economics Group, LLC
Cell: (408) 562 6479
michael.udell@districteconomics.com

Danielle Sockin
Senior Analyst, District Economics Group, LLC
Cell: (845) 709 5361
danielle.sockin@districteconomics.com

Karl Nichols
Analyst, District Economics Group, LLC
Cell: (203) 216 6168
lori.stuntz@districteconomics.com

District Economics Group
www.districteconomics.com

About ODCA

The mission of the Office of the District of Columbia Auditor (ODCA) is to support the Council of the District of Columbia by making sound recommendations that improve the effectiveness, efficiency, and accountability of the District government.

To fulfill our mission, we conduct performance audits, non-audit reviews, and revenue certifications. The residents of the District of Columbia are one of our primary customers and we strive to keep the residents of the District of Columbia informed on how their government is operating and how their tax money is being spent.

Office of the District of Columbia Auditor
1331 Pennsylvania Avenue, N.W.
Suite 800 South
Washington, DC 20004

Call us: 202-727-3600
Email us: odca.mail@dc.gov
Follow us: @ODCA_DC
Visit us: www.dcauditor.org

Office of the District of Columbia Auditor

Information presented here is the intellectual property of the Office of the District of Columbia Auditor and is copyright protected. We invite the sharing of this report, but ask that you credit ODCA with authorship when any information, findings, or recommendations are used. Thank you.