

Evaluating District of Columbia TIF Projects 2002-2019: Project Cross-Subsidization Results in Net Fiscal Gains for the City

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January 2020

ABSTRACT: Tax Increment Financing (TIF) is an economic development policy tool used by state and local governments to stimulate economic development in a targeted geographic area. Its popularity largely stems from the notion that it is a policy tool that facilitates, arguably, the “self-finance” of a designated development project. The District of Columbia implemented its inaugural TIF project in 2002, and that was followed by seven additional large TIF projects up until 2010. This study applies a standardized ex post analytical framework to the actual economic/fiscal performance of the city’s largest TIF projects. A novel feature of this analysis is the incorporation of a hypothetical counterfactual for each project as a basis of comparison. The methodology also entails analyzing the actual fiscal and economic characteristic of each project as well as their cash (tax revenue and bond service) flow analyses and ROI evaluations. This study finds that the city’s first five TIF projects were indeed “self-financed,” while the latter three were not. However, we found the net tax revenue from the first five projects are ample enough to cross-subsidize the latter three projects, thus causing the city’s TIF program, in the aggregate, to generate dedicated tax revenue in excess of all liabilities. That is, the city’s TIF program is a net fiscal gain to the city.

I. Introduction

Tax Increment Financing (TIF) is an economic development policy tool used by state and local governments to stimulate economic development in a targeted geographic area.¹ Its popularity largely stems from the notion that it is a policy tool that facilitates, arguably, the “self-finance” of a designated development project. In this context, “self-finance” entails bringing to fruition a large new development in the near term in exchange for the dedication of future property tax revenue from the project and the immediate area for 20 to 30 years of respective debt service. In effect, this means a community and jurisdiction obtains a large new publicly supported economic development project without higher property tax rates for the area’s current taxpayers.

TIF is intended to incentivize and encourage developers to make large timely investments in neighborhoods where they typically would not otherwise develop. To secure public support, developers and supporters of a proposed TIF project tend to proclaim its considerable economic, fiscal, and social benefits. And further, sponsoring governments, as a formality in some cases, conduct ex ante analyses that contend how such projects are in the public good and very likely would not take place “but for” the TIF subsidy. But after the project has delivered, there tends to be little to no interest by the sponsoring government in conducting an ex post analysis of the actualized costs and benefits of the project. This is contrary to the fact that it is in the public’s best interest for governments to track and monitor TIF use so the projects can be evaluated as to the degree they achieve their goals.²

The District of Columbia implemented its inaugural TIF project in 2002, and that was followed by seven additional large TIF projects up until 2010. Using annual property tax data since 2002 and key financial features of each respective TIF deal, this study analyzed these eight TIF projects to determine whether each project produced a positive net fiscal gain for the city. One of the unique features of this analysis is that it compares each actual TIF project to a hypothetical counterfactual economic development project of a similar type and size and wholly privately financed in the exact TIF location. This analysis considers a TIF project solvent when the actual cumulative property tax revenues for 25 years or so from each TIF project exceed both the estimated property tax revenues from the counterfactual and the actual total TIF debt service. We found that the city’s first five TIF projects were indeed “self-financed,” while the latter three were not. However, we also found the net tax revenue from the first five projects was ample enough to cross-subsidize the latter three projects, thus making the city’s TIF program, in the aggregate, solvent. That is, the city’s TIF program as a whole has been a net fiscal gain to the city. The fiscal and financial circumstances of each project will be discussed to help identify key determinants of each project’s solvency or insolvency.

¹ This tool is used in the District of Columbia and every state except for Arizona. Merriman, D. (2018). Improving Tax Increment Financing (TIF) for Economic Development. Lincoln Institute of Land Policy. Available at <https://www.lincolninst.edu/publications/policy-focus-reports/improving-tax-increment-financing-tif-economic-development>

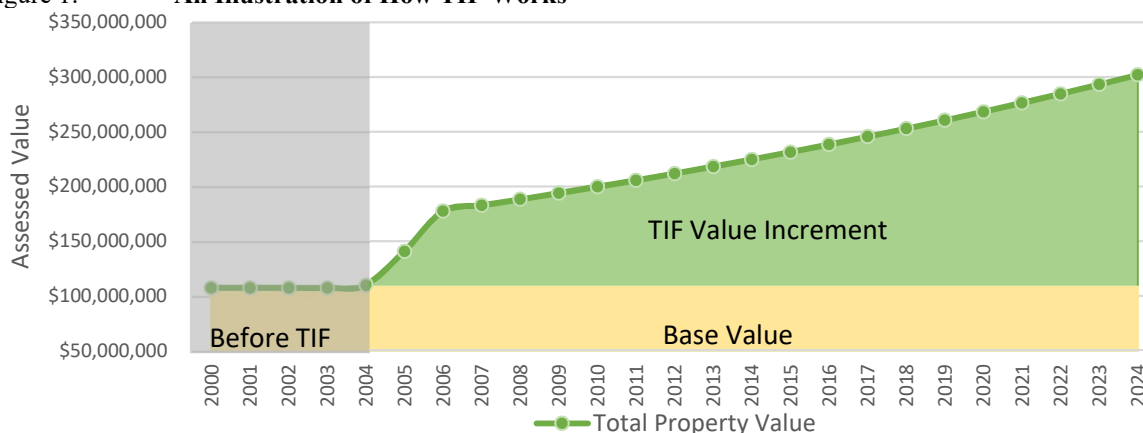
² Ibid.

II. TIF Policy in the District of Columbia: The Standard Model

Tax increment financing in the District of Columbia is largely used to help produce large development projects in specific areas of the city that otherwise, arguably, would not happen. The actual amount of a project's TIF subsidy is the principal amount of the TIF debt service, and it tends to directly finance a portion of the total development costs of the project. Theoretically, the TIF subsidy amount approximates the amount needed to address the impediment keeping a site location from achieving its highest and best use in ordinary times.³ Tax increment financing is a publicly financed cash infusion to the developer who then uses that cash to ultimately lower the developer's financial risk and reduces the amount of equity the developer brings to the project. While TIF ultimately makes the project possible, per the government's analysis, it also makes the project more financially viable, from the developer's perspective.⁴

Once a TIF project is authorized by public officials, the taxable property value of the project at that time is fixed and deemed the "base value" and remains so until the TIF bonds are fully repaid in approximately 20 to 30 years. The annual real property taxes from the "base value" continue to go to the general fund. But all increase in the actual property value from development, "the increment," is also taxed but earmarked to a special fund dedicated to servicing the debt of the project (Figure 1). Unlike many other TIF projects around the country, the District of Columbia only uses the increment from the specific TIF project location. The city does not use property taxes from a larger area encompassing the TIF project (a TIF district) to support the debt service.⁵ After the total TIF debt service of a project is paid in full, all property taxes from the development project once again go to the city's general fund.

Figure 1. **An Illustration of How TIF Works**



³ Weber, R (2012). "TIFues": An Examination of the History and Current Issues in Tax Increment Financing. *Journal of Interdisciplinary Research*, Article 201201. Available at

<https://mospace.umsystem.edu/xmlui/bitstream/handle/10355/41413/WagnerTifExaHis.pdf?sequence=3&isAllowed=y>

⁴ "TIF allows city governments to divert dedicated tax revenues to fund economic development activities. The rationale is that diverted revenues are produced by the same economic development that they fund—so these revenues would not exist "but for" the TIF that enabled that development." Merriman, D. (2018). *Improving Tax Increment Financing (TIF) for Economic Development*. Lincoln Institute of Land Policy.

⁵ This likely stems from the fact that the city's real property tax rate is relatively constant over time and annual appreciation rates tend to be relatively high since the city is a relatively small urban area with a growing population and labor force. Stating it differently, the increase in property value caused by the development of the location tends to be so large (via robust and continuous annual property value appreciation rates), "the increment" tends to be sufficient to cover the debt service of authorized TIF projects.

III. An Ex Post Analytic Framework: The Fiscal Impact of Select TIF Projects

As a policy, tax increment financing is predicated on the partnership between a developer and a local government where both parties share the risks of a TIF project. One of the justifications for local governments' direct subsidization of private enterprise is to address market failures. It is argued that certain areas of a jurisdiction would not be developed "but for" public assistance because economic conditions in those areas are so challenging that they preclude a sufficient return on investment by the private sector. Thus, tax increment financing can be considered a government intervention on the behalf of the best interests of local residents.

A recent study examined 31 empirical studies of TIF projects around the country and their economic effects on respective local areas.⁶ While there is some evidence that TIF does work in some cases, the study found that in most cases TIF has not accomplished the goal of promoting economic development.⁷ In the District of Columbia, TIF is used for different types of economic development projects (Table 1). TIF has been used to facilitate retail, residential, hotel, and other mixed-use development in the city. This analysis will not evaluate these District of Columbia projects for their economic effects.⁸ Instead, this study addresses a more fundamental question: does each project produce a positive net fiscal gain for the city?

Table 1 **TIF Projects in the District of Columbia**

Project	TIF Issued	Description
Gallery Place	2002	660,000 square foot mixed-use urban entertainment complex including residential units and office space.
Mandarin Hotel	2002	11-story luxury hotel, 400 rooms, 53 suites, 2 restaurants
Capitol Hill Towers	2004	14-story boutique hotel and residential co-operative building, 153 hotel rooms and 344 residential units
Embassy Suites	2004	14-story all-suite hotel with 384 rooms
DC USA	2006	890,000-square-foot retail development
Capper Carrollsborg	2010	23-acre mixed-income community with 1,500 residential units (market-rate townhouses and rental units and subsidized units)
Convention Center Hotel	2010	A headquarter convention center hotel with 1,175 rooms, connects to the Walter E. Washington Convention Center via underground concourse
Rhode Island Row	2010	Mixed use development with 345 residential apartment units (including over 200 units reserved/subsidized for low-income residents) and 47,000 square feet of retail

⁶ Merriman, D. (2018). Improving Tax Increment Financing (TIF) for Economic Development. Lincoln Institute of Land Policy. Available at <https://www.lincolnst.edu/publications/policy-focus-reports/improving-tax-increment-financing-tif-economic-development>

⁷ Some of the dependent variables in the 31 studies are employment, retail sales, assessed values, residential and commercial property values, private investment in the TIF district, home sales, retail establishments, and wage growth.

⁸ Also, we do not assess whether each project produced new tax revenue for the city (i.e. revenue that would not exist in the city otherwise), shifts economic activity from one part of the city to another, or shifts new development into the near term that otherwise may have happened without public support a few years out.

IV. Methodology

The methodology used in this study is designed to determine if each actual TIF project produces more total tax revenue than its total TIF debt service and a relatively comparable but totally privately financed project in that same location (a counterfactual). This methodology has three major features: 1) a hypothetical counterfactual project, 2) tax revenue sources to finance the TIF debt, and 3) a standardized debt service template that varies among projects only by the actual respective TIF subsidy amount.

The TIF Counterfactual

One of the assumptions in the standard ex ante analysis conducted by many governments is that the location site for the TIF project tends to experience major prohibitive economic circumstances prior to development. These analyses assume the economically challenged area is experiencing such a market failure that the private sector sees no possibility of a sufficient market rate of return. Thus, in this circumstance, it can be argued that public subsidization of private interests is merely the sponsoring government acting in the interest of the local residents because such public intervention is helping to create a better business climate for further private investment in the particular community.⁹

The methodology for analysis presented in this research does not make such an assumption. This analysis assumes each actual TIF location tends to face challenges to development, but the site would have been developed nevertheless with a somewhat comparable project only a few years later after the actual project opened for business. This particular assumption seems realistic given the city's real estate boom between 2002 to 2019. This analysis assumes that TIF financing helped projects, that eventually would have occurred regardless of TIF financing, to achieve their absolute highest and best use given the economic challenges of the selected site.¹⁰ This can be interpreted as TIF helping actual projects secure more reputable national brands as retailers/development partners and/or achieve some combination of a slightly larger scale, a more aesthetically appealing look, a few more premium structural features than otherwise would have happened. This analysis assumes the counterfactual project is wholly and privately financed but does not achieve the exact scale of the actual project due to site specific challenges to development. It is assumed the counterfactual project initially developed sometime between the actual TIF start date and 2019 such that the 2019 property value of the counterfactual would be 75 percent of the actual existing total TIF property value in 2019. The 75 percent assumption reflects the (considerable but not insurmountable) challenges/disadvantages of developing the site and the assumption that the privately

⁹ Weber, R (2012). "TIFues": An Examination of the History and Current Issues in Tax Increment Financing. *Journal of Interdisciplinary Research*, Article 201201. Available at <https://mospace.umsystem.edu/xmlui/bitstream/handle/10355/41413/WagnerTifExaHis.pdf?sequence=3&isAllowed=y>

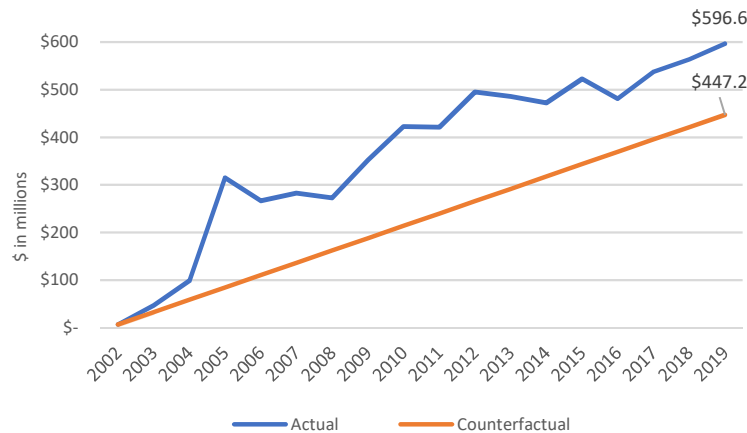
¹⁰ It is argued that many TIF projects around the nation fail to meet the "but-for" test and local governments often enact TIF in part to capture growth that would happen without TIF. El-Khattabi, A & Lester, T. (July 2019), "Does Tax Increment Financing Pass the "But-for" Test in Missouri?" *Economic Development Quarterly*, vol. 33, no. 3, p. 187, July 2019. See also, Greenbaum, R & Landers, (July 2014), "The Tiff Over TIF: A Review of the Literature Examining the Effectiveness of the Tax Increment Financing," *National Tax Journal*, vol. 67, no. 3, p. 655, July 2014.

financed counterfactual in 2019 would not have achieved the exact scale or quality of the actual TIF project.

For example, the actual total property value of the Gallery Place location grew from \$6.9 million in 2002 to \$596.6 million in 2019. As is typical of development projects, the large spike in total property assessment in the first years of the project came from the value of the new construction upon delivery of the project to the marketplace. In 2006, the property value was \$266.5 million, 38.6 times the initial value in 2002. We do not assume an exact construction start date for the counterfactual. But we assume the property value of the counterfactual grows along a smoothed average trend such that it reaches 75 percent of the actual value (\$447.2 million) in 2019.

Figure 2

Annual Property Assessment Value of the Gallery Place TIF Project



Tax Revenue Sources

Currently, the annual debt service for each TIF project is paid for by only the real property tax increment from each TIF project site and sales taxes, if generated on site. Again, the city does not use property taxes from a larger area encompassing the TIF project (a TIF district) to support the debt service. However, three projects (Gallery Place, DC USA (Target) and Rhode Island Row) include commercial retail sales activity, and four projects (the Mandarin, Capitol Hill Towers, Embassy Suites, and Convention Center Hotels) include hotel sales activity. The Capper Carrollsburg is the only project that does not include retail sales activity. For the seven projects that generate sales tax revenue, sales tax revenue finances approximately half of the total annual debt payment and real property taxes account for the remaining half. Essentially, the current approach dedicates all tax revenue generated at each TIF site to the debt service of each respective site.

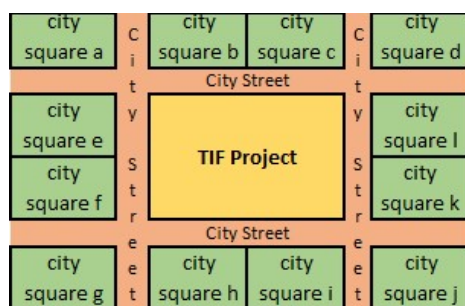
One premise of this analysis is that to estimate the net fiscal effect of each project, we need to compare actual TIF tax revenue from the existing development to the estimated TIF tax revenue that would have been raised from a counterfactual development at the exact TIF location that is assumed to have been wholly and privately financed. In an effort to do so, we identify three sources of net tax revenue to be dedicated to debt service. The first source of net tax revenue stems from the TIF project site itself. Equation 1 states that the Net TIF Real Property (RP) Taxes for a project are equal to the actual real property taxes from a TIF site minus the estimated amount of property tax revenue from the

counterfactual project. This analysis subtracts the estimated real property taxes of the counterfactual from the total actual real property taxes from the site, whereas in practice the city simply subtracts the real property taxes from the site's base value (see Figure 1) from the actualized total real property taxes.

$$\text{Actual TIF RP Taxes}_{it} - \text{Counterfactual Project RP Taxes}_{it} = \text{Net TIF RP Taxes}_{it} \quad \text{Eq.(1)}$$

The second source of net tax revenue stems from the taxable properties that are closest to the TIF project site itself. The District of Columbia does not use a real property tax increment from a TIF district to service the TIF debt service.¹¹ However, this analysis does include a small TIF area that helps service the debt. This analysis assumes the owners of residential and commercial properties that immediately border TIF projects (notwithstanding roads, streets, alleys or sidewalks that abut the TIF property) are major economic beneficiaries of the project. Therefore, using the increased tax revenue generated from these properties is deemed justified in helping to support the TIF debt service of the bordering TIF project. For example, if a TIF project exists on one or more entire city squares (i.e. city blocks), the tax increment from the taxable contiguous squares (on the opposite side of any street, roads, alleys or sidewalks on all sides of the TIF project) would be earmarked for the TIF debt service of the bordering TIF project (Figure 3). And if a TIF project exists only on a portion of a square, the tax increment for the rest of the table square plus the taxable contiguous squares would be earmarked for the TIF debt service of the bordering TIF project. In Figure 3, the 12 taxable squares (a through l) are the TIF project's contiguous squares.

Figure 3 **A TIF Area as a Real Property Tax Funding Source for Debt Service**



To estimate the impact of the actual TIF project on the contiguous squares, we compare the actual real property taxes from the squares to the estimated real property taxes from the square under the counterfactual scenario. Under the counterfactual scenario, it is also assumed that the total 2019 total

¹¹ There are two reasons for this. First, the city's real property tax rate is relatively constant over time and annual appreciation rates tend to be relatively high. Therefore, the increase in property value caused by the development of the TIF site itself tends to be so large that "the increment" tends to be sufficient to cover the debt service of authorized TIF projects. Second, city officials tend to be of the mindset that such a district would ultimately lead to an excess amount of property tax revenue diverted from the general fund, and to overly subsidized projects.

For example, "in California, entire municipalities can be legally placed inside a TIF district. And in Chicago, about 30 percent of the city's land was inside TIF districts by the end of Mayor Richard Daley's tenure in 2011." Kerth, R. & Baxandall, P. (2011). Tax Increment Financing: The Need for Increased Transparency and Accountability in Local Economic Development Subsidies. U.S. PIRG Education Fund. Fall 2011. Available at <https://uspirgedfund.org/tifreport>

property value of all the contiguous square would be 75 percent of the actual 2019 total property value. Again, the 75 percent assumption reflects how the privately financed counterfactual was not able to achieve the exact scale and/or quality of the (subsidized) actual TIF project. Even though we think property owners of the contiguous squares are the greatest direct beneficiaries beyond the TIF signatories, we assume the total increase (from a base level prior to development) in their property values are not entirely attributable to the development project. Instead, we assume only 25 percent of the increase on average is directly attributable to the TIF project. Hence, equation 2 shows that the net impact of the TIF project is the difference between the actual and counterfactual contiguous squares (ConSqs) at a given time period and that only one-fourth of the net difference should help finance the debt service of the TIF project.

$$(\text{Actual ConSqs RP Taxes}_{it} - \text{Counterfactual ConSqs RP Taxes}_{it}) * 0.25 = \text{Net ConSqs RP Taxes}_{it} \quad \text{Eq. (2)}$$

In this analysis, the third source of tax revenue to support the TIF bonds is the same as current practice. All sales tax revenue from the TIF project should be earmarked to support the debt service. Three projects (Gallery Place, DC USA (Target) and Rhode Island Row) include commercial retail sales activity, and four projects (the Mandarin, Capitol Hill Towers, Embassy Suites and Convention Center Hotels) include hotel sales activity. Equations 3 and 4 indicate how all sales taxes are revenue sources to service the debt and contribute to the net fiscal impact of the TIF project.

$$\text{Retail Sales Taxes}_{it} + \text{Hotel Sales Taxes}_{it} = \text{Total Sales Taxes}_{it} \quad \text{Eq. (3)}$$

$$\text{Equation (1)} + \text{Equation (2)} + \text{Equation (3)} = \text{Net Tax Revenue}_i \quad \text{Eq. (4)}$$

Total Cost of TIF Debt

Each TIF project under analysis is unique and governed by different bond and debt repayment terms. Each has a different interest rate and repayment schedule. In fact, the debt service for a few of the TIF projects has been or will soon be retired ahead of the agreed upon repayment schedule. However, this analysis seeks to apply a standardized debt rubric to each project so each can be more appropriately compared and analyzed. Therefore, we take the actual TIF subsidy amount for each project but assume a 25-year debt repayment schedule and a six percent rate of interest. With these three factors, we calculate the annual debt for each project. Equation 5 below presents the formula to calculate the total cost (principal and interest) of the TIF debt. In the formula, p is the principal. We assume 25 debt payments with a six percent interest rate applied to each TIF project. The estimated annual debt service for each project is considered the annual expense for each project.

$$\text{Debt Total Cost} = \frac{(6\%)(p)(25)}{1 - [(1 + 6\%)^{-25}]} \quad \text{Eq. (5)}$$

Net Fiscal Impact

To estimate the net fiscal impact for each project, we compare equation 4 to equation 5. When the cumulative net tax revenue for a project over the life of the estimated 25-year bond exceeds the total principal and interest (equation 6), we consider the project solvent and thus having a net positive fiscal impact on the city. Conversely, when the total net tax revenue for a project is less than the sum of the principal and interest, the project is deemed insolvent and has a negative fiscal impact on the city.

Solvency Condition:

$$\sum_{i,t=1}^{t=25} \text{Total Net Tax Revenue} > \sum_{i,t=1}^{t=25} \text{Total Debt} \quad \text{Eq. (6)}$$

Equations 1-6 are the basis of the financial model and are applied to each TIF project separately. Actual annual property values, property tax collections, and actual sales tax collections for the TIF location and the contiguous squares up to year 2019 are used in the analysis. Annual real property assessments, real property taxes, and sales taxes for each year beyond 2019 are projections based on the economic and tax revenue forecasts provided by the District of Columbia Office of Revenue Analysis. The model produces annual outputs for each TIF project beginning the year the TIF bonds were issued until at least 25 years thereafter.

Net Fiscal Impact: An Illustration

Figure 4 illustrates the key variables for the Gallery Place TIF project. The Gallery Place is a \$240 million mixed-use project in downtown Washington DC. In 2002, the city issued a \$74 million bond for the TIF project. The project includes approximately 200 residential units, about 400,000 square feet of retail and office spaces, as well as a 2,400-seat cinema. Gallery Place has since become a catalyst for the revitalization of the eastern downtown by attracting more than 6 million annual visitors to the Chinatown area.¹² The project generates about \$10 million in new sales and property tax revenues per year.

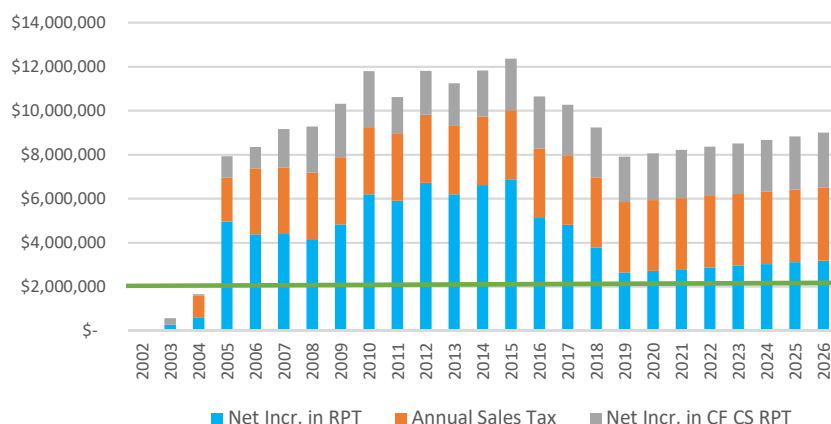
The blue bars in Figure 4 represent the annual real property tax increments (actual total annual real property tax amounts minus the estimated real property taxes from the counterfactual). For years 2004 to 2019, the orange bars represent the actual annual sales taxes generated at the TIF location. For years 2020 to 2026, the orange bars represent the estimated annual sales taxes expected to be generated at the location. The grey bars represent property tax increments from the continuous squares. The green horizontal line represents the annual debt service. In the model, annual debt payments of \$2 million reflects the actual \$74 million principal for this TIF project as well as the standardized 6 percent interest

¹² Amira Alghumgham (November 2017). Do Publicly- Subsidized Economic Development Projects Increase the Economic Growth in their Neighborhoods? Office of Revenue Analysis, District of Columbia Office of the Chief Financial Officer. Available at <https://cfo.dc.gov/sites/default/files/dc/sites/ocfo/publication/attachments/Economic%20Development%20Projects%20and%20Economic%20Growth%20in%20their%20Neighborhoods.pdf>

rate and a 25-year debt applied to all TIF projects in this analysis. In the model, all dollar amounts (e.g. property values, tax revenue, debt payments, etc.) are adjusted for inflation and put in 2019 dollars.

Figure 4 shows that during the first three years, annual tax increments were not sufficient to cover annual debt service payments. This is reasonable as the construction phase for a substantial project usually lasts 2-3 years, during which period there is little new property tax and no sales generated.¹³ Construction of the Gallery Place project was finished in 2004. In 2005, tax increments for real property tax, sales tax and real property tax from continuous squares are estimated to be about \$5 million, \$2 million and close to \$1 million, respectively. The sum of the three sources of tax increments (about \$8 million) exceeded the annual debt payment amount of \$2.0 million beginning in 2005.

Figure 4 **Estimated Annual Debt and Tax Revenue for Gallery Place, Years 2002 to 2026**



V. Results: Did Each Project Produce a Net Positive Fiscal Rate of Return?

The model is applied to each TIF project individually, and the results are presented in Table 2. The table shows that the Gallery Place project achieved a positive cash flow in year 4 of the 25-year debt service schedule and reached its breakeven point in year 8.¹⁴ The table also shows that when we divide total cumulative net tax revenue by the TIF bond amount (in 2019 dollars), the city achieved a 67 percent return on investment (ROI) in year 25 of the debt payment schedule (on the amount borrowed in 2002 and adjusted for inflation). The table also shows that in year 25, the project is estimated to generate \$71 million in tax revenue in excess of the counterfactual and the debt service. Five years after the project was delivered to the market, the TIF bond amount was 21 percent of the project site's total property value.

¹³ To guarantee sufficient debt coverage, TIF debt financing is usually structured to allow interest only payments for the first few years.

¹⁴ A positive cash flow is the situation when a TIF project experiences an inflow of dedicated tax revenue that exceeds cash outflows (annual debt service payments). While a positive cash flow is a positive situation for an enterprise, it does not necessarily indicate that profits have been made by the enterprise. The breakeven point occurs when total revenues for an enterprise equal total expense. Past this financial point, when revenue exceeds expenses, an enterprise become profitable.

The model estimates that the city's first five TIF projects produced a net positive fiscal gain for the city. Each of the five projects produced a positive return on investment and achieved a positive cash flow within four years. However, the Capper Carrollsburg project generated a negative return on investment and has (and will) not achieved a positive cash flow. The Convention Center Hotel and Rhode Island Row both generated a negative return on investment. These latter two projects achieve a positive cash flow just before the total debt is scheduled to be paid and a breakeven point only after the total debt is paid.

Table 2 **An Analysis of the District of Columbia's TIF Projects**

	TIF Bond Amount (in millions)	Year of Initial Positive Cash Flow	Year of Breakeven	ROI in Year 25	Excess Revenue in Year 25 (in millions)	Bond to Project Value Ratio, 5 Years After Delivery
Gallery Place (2002) (Res, retail & office)	\$74.3	Year 4	Year 8	66.9%	\$70.95	21.1%
Mandarin Hotel (2002) (Hotel)	\$46.0	Year 2	Year 2	289.4%	\$189.92	8.0%
Capitol Hill Towers (2004) (Res, Hotel Retail)	\$10.0	Year 3	Year 4	435.8%	\$58.42	8.3%
Embassy Suites (2004) (Hotel)	\$11.0	Year 3	Year 3	1278.3%	\$188.47	4.1%
DC USA (2006) (Res, Retail)	\$42.0	Year 3	Year 6	160.8%	\$84.95	16.6%
Capper Carrollsburg (2010) (Mixed housing)	\$30.0	<i>NA</i>	<i>NA</i>	-150.3%	-\$51.69	47.2%
Convention Center Hotel (2010) (Hotel)	\$249.2	Year 24	Year 31	-35.7%	-\$101.89	59.2%
Rhode Island Row (2010) (Mixed use)	\$7.2	Year 21	Year 30	-39.2%	-\$3.24	8.0%

It appears that the first five TIF projects achieved good financial standing and an early breakeven point primarily because the total debt for each project was relatively low and the tax revenue generated at each site was relatively high. While the estimated annual debt service payments ranged from \$773,000 for Capitol Hill Towers to \$5.7 million for Gallery Place, the estimated 2019 net tax revenue generated at each site (minus the respective counterfactual) ranged from \$3.1 million to \$7.9 million, respectively.

In the model, Capper Carrollsburg was responsible for an annual debt payment of \$2.3 million, but the annual tax generated (minus the respective counterfactual) was only \$200,000 in 2019. This mixed residential project contained a significant number of affordable and subsidized housing units. While the project provides important social and economic benefits to the city, it is in an undeveloped section of the

city far away from developing areas causing it to have very low land values and thus generating little real property taxes.

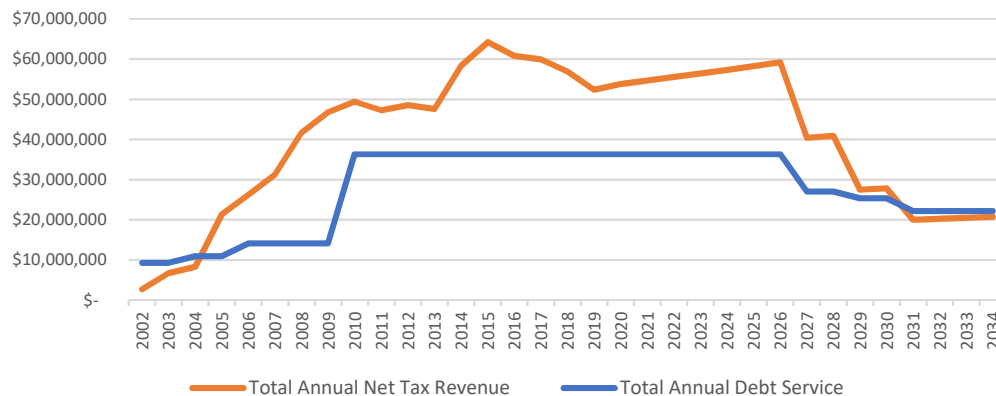
The Convention Center Hotel generated \$17 million in real property and hotel sales taxes (minus the counterfactual) in 2019, but the annual debt payment was estimated to be \$19.3 million. This project also serves a very important role because it provides the city with a large convention hotel across the street from the city's convention center. While, the convention center may be able to book more conventions with the amenity of plentiful hotel rooms nearby, the project appears to be highly leveraged. This TIF bond amount was 59 percent of the property's value five years after delivery.

Rhode Island Row is home to a mixed-use development that provides affordable housing for the city's workforce. Built on a former commuter parking lot adjacent to Metrorail's Rhode Island Avenue–Brentwood Station, the development features 274 apartments and 70,000 square feet of commercial space. It reserves 55 of its units for very low-income households earning 50 percent of the area median income (AMI) and 219 targeted for workforce households earning between 80 and 120 percent of AMI. Even though, the model estimates that the annual debt service is only \$557,000, property and sales taxes generated at the site in 2019 (minus the counterfactual) were \$353,000.¹⁵

VI. The TIF Program as a Whole

When we aggregate all eight TIF projects between the date of the first TIF bond issuance and when the model estimates that the last debt service payment is due (2034), we can calculate the annual total debt service and the total annual net tax generated at each TIF site (minus the respective counterfactual). Figure 5 shows that beginning in 2005, the cumulative TIF program's revenue exceeded its estimated debt service up to year 2031. This indicates that for these years the program was fiscally solvent because the excess revenues from the first 5 projects cross-subsidized the three insolvent TIF projects.

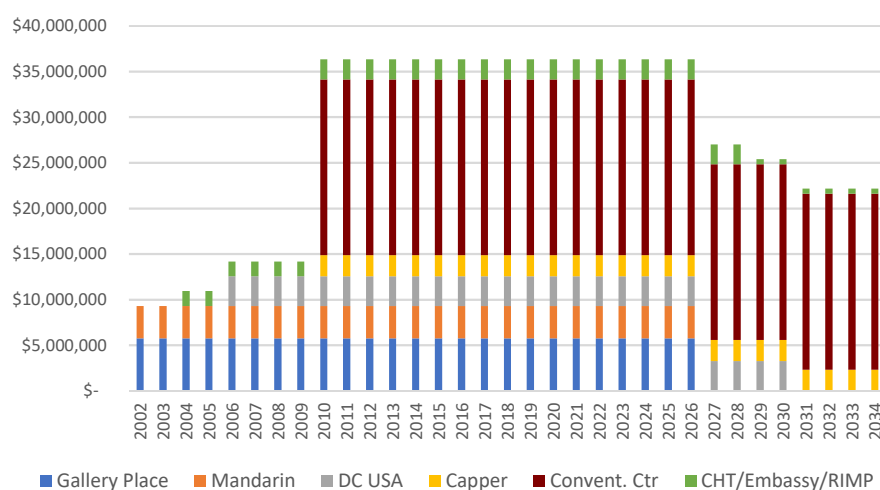
Figure 5 **The Program's Total Annual Revenues and Annual Debt service, Years 2002 to 2034**



¹⁵ U.S. Department of Housing and Urban Development's (HUD's) Office of Policy Development and Research (PD&R), "Washington, D.C.: Affordable Housing at Rhode Island Row". Available at https://www.huduser.gov/portal/casestudies/study_04072014_1.html

While the program as a whole produced sufficient tax revenues for most years under analysis, the TIF project with the largest debt payment has been the convention center. Figure 6 shows the Convention Center Hotel accounts for 53 percent of the program’s total debt for years 2010 to 2026, offering further evidence that the convention center appears to be overleveraged. And, when the estimated total debt service for the Gallery Place and Mandarin Hotel projects are satisfied in 2026 and the subsequent total tax revenues of these two projects are redirected back to the general fund and not the special TIF funds, we see (in Figure 6) the program’s excess revenue begins to falter. Hence, it appears that the Gallery Place and Mandarin Hotel projects are the primary sources of excess net tax revenue for the program and are the source of cross subsidizing the insolvent projects of Capper Carrollsburg, Convention Center Hotel, and Rhode Island Row.

Figure 6 **Total Annual TIF Debt Service by Project, Years 2002 to 2034**



VII. Conclusions

This analysis applies a standardized ex post analytical framework to the actual economic/fiscal performance of the city’s largest TIF projects. In addition to analyzing the fiscal and economic characteristic of each project, the methodology also entails a cash (tax revenue and bond service) flow analysis and ROI evaluations. A novel feature of this analysis is the incorporation of a counterfactual for each project. While the incorporation of a counterfactual in the analysis significantly lowers the estimated net fiscal gain benefit of TIF projects, we contend this approach is appropriate when attempting to estimate the net fiscal impact of any TIF project. We assume the best large developable location sites in the city tend to develop first. And if the city’s actual TIF projects were not developed via public subsidy, the exact same sites would have been developed regardless, at least to some degree at some point during the city’s real estate boom years of 2002 to 2019.

Of the eight TIF projects analyzed, we conclude that the first five were “self-financed” and each reached their breakeven points within eight years. These five projects had relatively low debt ratios and existed in high property appreciation growth areas (the CBD & gentrifying neighborhoods). The Convention Center

Hotel is a flourishing cornerstone of both the city's convention industry and the convention center neighborhood. But, it was found to have generated a negative ROI largely because it appears to be appreciably over-leveraged. The Capper Carrollsburg and the Rhode Island Row are celebrated residential projects for the city. They contain a significant number of affordable and subsidized housing units (i.e. constrained net operating income) and are in up-and-coming neighborhoods. Veritably, however, they are in low-income areas of the city and have very low land values that generate comparatively modest real property taxes which precludes the full financing of the related debt service. Accordingly, these two projects also are estimated to have generated negative ROIs. However, we also found the net tax revenue from the first five projects are ample enough to cross-subsidize the latter three projects, thus causing the city's TIF program, in the aggregate, to generate dedicated tax revenue in excess of its liabilities. That is, the city's TIF program, as a whole, is a net fiscal gain to the city.