The Cost of New York City’s Hudson Yards Redevelopment Project

Bridget Fisher, Flávia Leite

Schwartz Center for Economic Policy Analysis (SCEPA)
Department of Economics
The New School for Social Research
6 East 16th Street, New York, NY 10003
economicpolicyresearch.org

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ABSTRACT:

Tax increment financing (TIF) has exploded in popularity on the municipal finance landscape as cities compete for scarce public resources to fund economic development. Previous studies evaluate TIF’s efficacy and ability to spark economic growth. This research expands the evaluation of TIF by questioning the widespread understanding of TIF as a “self-financing” tool through an analysis of its risks and costs to taxpayers. We present a case study of the Hudson Yards redevelopment project in New York City, the country’s largest TIF-type project. Our analysis reveals a project that, rather than being “self-financing,” cost the city $2.2 billion, largely due to tax breaks to incentivize development and standard development risks and costs. We conclude that positioning TIF and its variants as “self-financing” is incomplete and that analyzing costs and risks associated with TIF and TIF-variant projects is necessary to provide a robust cost-benefit analysis to those municipalities considering its implementation.

KEYWORDS
TIF, Hudson Yards, Municipal Fiscal Health, Costs and risks
1. INTRODUCTION

Tax increment financing (TIF) is a tool commonly used by local governments to finance economic development projects. It allows a municipality to pay for the cost of public infrastructure and/or economic development projects using the expected increase in tax revenues, most often in the form of property taxes.

TIF is based on the expectation that public investment in infrastructure and services will induce private development that, in turn, increases property values and leads to higher property tax revenues. Under the theoretical framework of land value capture, municipalities are entitled to the additional property tax revenue to pay for the investments that sparked the growth since this economic activity and revenue growth would not occur “but for” the upfront investments made by the public sector.

Since TIF offers local governments the promise of financing development with the very revenues they are expected to generate, it is described as “self-financing.” However, despite this positioning as a novel and low-cost choice, TIF carries costs and risks similar to other public financing instruments.

Previous studies focus on TIF’s efficacy as measured by resulting economic growth in general (Dardia 1998) (Swenson 2015) as well as focusing on the effects on job generation (Bryne 2009), income growth (Hicks, Dagney and Quirin 2015), home values (Man and Rosentraub 1998), property taxes (Dye and Merriman 2000) (Netzer 2003), business property values (Carroll 2008) and retail location (Ingraham, Singer and Thibodeau 2005). This approach limits the discussion of TIF use to its outputs, overlooking the need to take a step back to discuss the risks and costs of using this instrument.

In this article, we argue that positioning TIF as “self-financing” incorrectly assumes the debate over TIF’s tradeoffs as irrelevant and that analyzing its risks and costs is necessary to provide a robust cost-benefit analysis to those municipalities considering TIF implementation. We demonstrate this argument through a case study of the Hudson Yards redevelopment project on the West Side of New York City. Based on a $3.5 billion bond issuance, Hudson Yards is the largest project in the United States to use a TIF-style financing mechanism. Thirteen years after its approval by the New York City Council under the rubric it would be a “self-financed” project, it has spanned multiple stages of the business cycle, implemented shortly before the Great
Recession and extending through the recovery. As such, it provides an ideal testing ground for measuring the reality of TIF and TIF-type implementation against the promise of the self-financing label.

With TIF use increasing across the country, it is critical to fully understand the risks and costs undertaken when choosing this financing mechanism. Additionally, the visibility and size of the Hudson Yards project is used to support high-dollar TIF proposals. In New York City, a second TIF-funded subway expansion and multi-borough streetcar have since been proposed. Faced with the possibility of long-term commitments for expensive dollar projects, Hudson Yards can help municipal leaders and taxpayers understand the risks and costs that go hand in hand with TIF’s “self-financing” frame.

In this article, we first define tax increment financing, its implementation process, its use in the United States, and our research methodology. Second, we explain the use of TIF in the Hudson Yards project in the form of PILOT financing, providing a history of our case study and a summary of its specific financing structure. Third, we document the project’s full costs, including the financial and economic costs. We conclude that rather than being “self-financing,” the Hudson Yards project cost the city $2.2 billion, largely due to tax breaks to incentivize development and standard development risks and costs. Last, we discuss that positioning TIF and its variants as “self-financing” before project approval denies the public consideration of the real costs of its implementation. Our findings call for further research on governance/accountability and institutional safeguards to ensure the full breadth and depth of TIF costs are considered before project approval and implementation.

2. TAX INCREMENT FINANCING (TIF) - WHAT IS TIF?

Land value capture mechanisms are utilized in countries around the world, including France (ZACs - Joint Development Zones), Japan (Land Readjustment) and Brazil (CEPACs - Certificates of Additional Construction Potential). These mechanisms aim to fund infrastructure investments through property value increases.

In the 1950s, the United States developed its own version of land value capture to finance economic development projects known as tax increment financing (TIF). This financing tool is

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1 In February 2016, Mayor Bill de Blasio introduced the Brooklyn Queens Connector (the BQX), a TIF-funded
authorized at the state level for use by local municipalities. While its specific rules and implementation vary from state to state, the basic mechanism is meant to allow local governments to finance development projects with the revenue generated by the development itself (Cerciello 2004).

Two common preconditions set by states for the implementation of TIF are compliance with blight and “but for” requirements. The former refers to the legal requirement that an area is considered blighted to qualify for a TIF project. The blight designation is a legacy of TIF’s genesis under the federal urban renewal program targeting removal of urban blight (Briffault 2010). The latter represents the idea that a TIF should only be implemented if the subsequent development would not happen “but for” the TIF.

In general, TIF implementation begins when local officials designate a geographic area as a TIF district. The area’s property taxes are then frozen on the tax roll. This becomes the base value, and property taxes continue to be levied at the same rate on this amount and paid to all applicable local taxing authorities, including local and county governments, school districts, fire and park entities, and any special districts. While not common, TIF districts may capture other revenue streams, such as sales tax, payments in lieu of taxes (PILOTs) or fees (CDFA 2015).

Revenues resulting from applying the tax rate to any property value above the base value, the "increment," are set aside and paid to the municipality or an economic development authority operating on its behalf. For the life of the district (the timeframe is determined by the municipality), the increment is used to pay for public improvements or economic development projects within the district.

TIF payments can be made on a pay-as-you-go basis as the increment is received or, as is often done for larger TIF districts, bonds backed by the promise of the future increment are issued to pay the up-front development costs. This process is described as “self-financing” because, theoretically, the increment pays for the investment.
TIF was first used in California in 1952 to raise the local matching funds required by the federal urban renewal program. TIF was developed as a means to circumvent the need for citywide bond issues requiring voter approval, which were frequently voted down (Briffault 2010). TIF didn’t become popular until the late 1970s, when the end of the urban renewal program coincided with states’ growing backlash against taxes, embodied in California’s 1978 Proposition 13 (Ibid). During the 80s and 90s, over $20 billion in TIF bonds were issued as local municipalities increasingly found themselves on their own to finance development efforts (Kerth and Baxandall 2011). By 2010, 49 states and the District of Columbia had authorized TIF (CDFA 2015). Today, it is characterized as the “most widely used local government program for financing economic development in the United States” (Briffault 2010).

TIF’s popularity can be attributed to the advantages it offers local government as a flexible and “self-financing” mechanism (Greifer 2007). First, it is rhetorically appealing to both elected officials and voters in a fiscally conservative environment. Unlike other financing mechanisms, such as business improvement districts (BIDs), TIF does not require new or higher taxes. Second, unlike general obligation bonds which are backed by a municipality’s full faith and credit, TIF debt is backed by future revenue streams. As such, TIF use does not go through a municipality’s annual budget process, does not contribute to the city’s official debt, nor require voter approval. Finally, TIF empowers local governments by allowing full local control of both the content and financing needed to shape the economic and physical development of their city.
Through the investment of public moneys in the economic development of a community, local governments demonstrate a visible commitment to it.

Despite its popularity, the understanding of the beneficial outcomes associated with TIF use depends on a thorough analysis of all benefits and costs involved in its implementation. While many articles seek to analyze TIF’s efficacy by estimating the economic growth resulting from its implementation, this article takes a step back and evaluates TIF's projected and actual implementation costs. In order to do so, the following sections analyze the country’s largest TIF-type project, New York City’s Hudson Yards.

3. METHODOLOGY

The research on the concept, implementation and efficacy of tax increment financing was culled from academic journals and studies issued by think tanks and public policy institutes. This literature spans the theoretical model of TIF as well as studies of the mechanism’s effects in specific projects and states.

The description of the Hudson Yards project was established through official public documentation and press materials. The documentation includes reports published by the Department of City Planning (DCP), the New York City Economic Development Corporation (EDC), and the New York City Department of Transportation (DOT), as well as reports from Manhattan Community Board 4, City Council reports and press materials.

The analysis of the project’s funding structure, including tax breaks, project costs, projected and actual budgets, relies on public documentation and databases from the Hudson Yards Infrastructure Corporation (HYIC), Hudson Yards Development Corporation (HYDC), city-commissioned reports from consultant Cushman & Wakefield, New York City Independent Budget Office (IBO), Department of Finance (DOF), documentation from the Office of Management and Budget (OMB) and other information obtained on the basis of New York's Freedom of Information Law (FOIL).

4. HUDSON YARDS

4.1. TIF, PILOT Financing and NEW YORK CITY
New York State’s Municipal Redevelopment Law authorized TIF use in 1984. However, prior to the approval of New York City’s Hudson Yards project in 2005, only two municipalities used TIF to fund relatively small projects, the Town of Victor ($8 million TIF project) and the city of Greenburgh ($770,000 TIF project) (Cerciello 2004).

Although commonly referred to as a TIF project, Hudson Yards is based on a TIF alternative called PILOT Financing. PILOT financing and TIF share the same basic structure. Under both mechanisms, a local government, through a redevelopment agency, issues bonds and uses the proceeds to finance public improvements intended to increase property values.

While similar, there are key differences between the two mechanisms. First, PILOT financing is not subject to the constraints of the TIF enabling law, such as district size and length and the revenues that can be used (Citizens Budget Commission 2017). Second, all properties inside a TIF district contribute to generating the increment, while under PILOT financing, a municipality can specify which properties share revenues with the district. Third, TIF revenues are determined by formula, whereas PILOT financing revenues are determined by local officials. Under TIF, landowners are charged property taxes according to the locality’s assessment rules. The base continues to go to the original taxing authority while the increment is used to pay off development costs. In contrast, PILOT financing does not capture formulaic, incremental property taxes. Rather, local officials have the discretion to designate revenues from multiple sources, including negotiated or discounted Payments in Lieu of Taxes (PILOTs) that substitute for property taxes, payments in lieu of mortgage recording taxes, designated or created fees, and sales tax, among others.

4.2. THE PROJECT

The area known as Hudson Yards encompasses 360 acres on the Far West Side of Manhattan. Hudson Yards is roughly defined by West 28th Street to the south, Seventh and Eighth Avenues to the east, West 43rd Street to the north, and the Hudson River to the west.
Figure 2 - Hudson Yards' Perimeter
Source: (Hudson Yards Development Corporation 2018)

Underdeveloped compared to neighboring communities, Hudson Yards elicited the attention of previous government officials and developers for decades. In 1969, the Lindsay administration put forward a plan to expand Manhattan’s commercial business district to the Hudson River. In 1994, the Giuliani administration planned to bring the Yankees and the 2008 Olympics to a proposed stadium on the West Side. However, the area’s redevelopment remained elusive until the Bloomberg Administration’s proposal to rezone the area for mixed-use development linked to the city’s (failed) bid to host the 2012 Olympics.

The Bloomberg Administration argued that Hudson Yards needed to be redeveloped as an office district to protect and increase the city’s share of the regional market for commercial space. This assertion was supported by a 2003 study by consultants Economics Research Associates (ERA) and Cushman & Wakefield (C&W) showing Midtown’s share of occupied office space was decreasing despite increasing demand in the New York region (Economics Research Associates and Cushman & Wakefield 2003). The cause for the drop off in market share was cited as
insufficient space for office development. Hudson Yards' proximity to Midtown offered the opportunity to capture growth in the office market by extending west the historic appeal of the city’s premier business center (Cushman & Wakefield 2006).

In 2003, Bloomberg’s Department of City Planning issued a proposed master plan for Hudson Yards, the “Preferred Direction” (NYC Department of City Planning and the NYC Economic Development Corporation 2003). The document put forward the city’s “but for” justification: without public investment to overcome the outdated zoning and poor transportation and infrastructure, the Hudson Yards district would not realize its potential as the only large, underutilized area where Midtown could expand.

Citing the need to spur private development in the district, the city launched the area’s third and last redevelopment plan based on three, interconnected interventions: (i) rezoning the area, (ii) investing in public infrastructure, and (iii) providing incentives through public dollars.

To fund this plan, the City Council, in negotiation with Mayor Bloomberg, approved two non-binding resolutions, Resolution 760, passed in January 2005 for the eastern portion of the site, and Resolution 547, passed in 2006 and covering the western rail yards. Under Mayor de Blasio, the Council passed Resolution 469 in August 2018 to fund remaining infrastructure costs and extend Hudson Boulevard and Park. These votes codified the use of a TIF-type mechanism to fund the project and the use of city dollars to support the financing.

**4.2.1. REZONING**

In 2005, the City Council approved the Hudson Yards’ rezoning, transforming the low-density manufacturing area to a high-density, mixed-use district.
Prior to rezoning, the district was home to commercial and light industrial uses, parking lots, garages, and about 12,000 residential housing units (Manhattan Community Board 4 2004). Transportation infrastructure dominated the area, including Penn Station, Port Authority bus terminal, access roads to the Lincoln Tunnel, and 26 acres of MTA rail yards. Eleventh Avenue bridges the yards, creating what has come to be known as the eastern and western yards (NYC Department of City Planning 2014). The new zoning allows for 24 msf for commercial office development, 13,500 housing units, 1 msf for retail spaces, and 2 msf for new hotels and 5.45 acres of open space (Hudson Yards Development Corporation 2014). In 2009, the western rail yards (left out of the original rezoning due to plans for a stadium under Albany’s jurisdiction) were rezoned to allow for an additional 5 msf for apartments, office, hotel, retail, cultural and parking uses.

4.2.2. PUBLIC INFRASTRUCTURE INVESTMENTS

The second element of the Hudson Yards redevelopment plan was a $3.5 billion dollar investment in public infrastructure.
The largest portion of this expenditure, originally estimated at $2.1 billion, was for the extension of the No. 7 subway line from its terminus in Midtown to a newly created station on 34th Street between 10th and 11th Avenues. Historically, the state picks up almost all of the cost of subway expansions. Usual practice is that the state-administered MTA pays 80 percent of the costs, the state 15 percent, and the city 5 percent (Kiernan 2007). In the case of Hudson Yards, the MTA and the state refused the city’s request to make the 7 line extension a capital funding priority (Kiernan 2007), leading the city to take the unusual step of picking up the entire tab.

Funds were also allocated for the creation of Hudson Boulevard, a new street spotted with both public and privately owned public parks running between Tenth and Eleventh Streets from 33rd to 42nd Streets. The cost of public amenities, property acquisition and creation of Hudson Boulevard were estimated at $700 million. In August 2018, the City Council approved an additional $500 million in bonds for a 3-block extension of Hudson Boulevard Park (Barnett, 2018).

An additional $200 million was used to purchase a 50 percent interest in the transferable development rights of the space above the rail yards, owned by the MTA. These rights would be sold to developers to increase the allowable densities on specific sites in the district outside the rail yards.

<table>
<thead>
<tr>
<th>Project</th>
<th>Estimated Investment Cost</th>
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<tr>
<td>Extension of No. 7 Subway &amp; 2 stations</td>
<td>$2.1 billion</td>
</tr>
<tr>
<td>1st Phase of Property Acquisition and Public Amenities</td>
<td>$1.2 billion</td>
</tr>
<tr>
<td>MTA’s Transferable Development Rights</td>
<td>$200 million</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$3.5 billion</td>
</tr>
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</table>

Table 1 - HYIC Use of Bond Proceeds
Source: (Hudson Yards Infrastructure Corporation 2007)
4.2.3. BONDS BACKED BY PUBLIC DOLLARS

To manage and fund the project, in 2005 the city created two local development corporations. The planning, design and implementation would be the purview of the Hudson Yards Development Corporation (HYDC). The Hudson Yards Infrastructure Corporation (HYIC) was created to finance the project’s property acquisition and infrastructure work.

HYIC is authorized to issue $3.5 billion in bonds to pay for the upfront development costs discussed above. The first offering in 2007 was for $2 billion, followed by a $1 billion offering in 2012. The third offering, approved only recently in August of 2018, has yet to be issued. The bonds are backed by designed revenues generated by the new development in the project area, and include (i) recurring revenues through property taxes, (ii) one-time revenues, and (iii) city appropriations.

The diagram below illustrates HYIC's costs and revenue sources, detailed in the following paragraphs.

Figure 4 - HYIC’s Revenue Sources and Costs
Source: Infographic by the Authors
4.2.3.1. RECURRING REVENUES: PROPERTY TAXES

Property taxes from commercial and residential developments comprise HYIC’s largest revenue streams. New commercial developments within the Hudson Yards financing district make payments in lieu of taxes (PILOTs) directly to HYIC rather than paying property tax to the city. Owners of new residential properties, hotels, and other development not covered by PILOT agreements pay normal property taxes to the city, which then forwards the revenue to HYIC in the form of Tax Equivalency Payments (TEPs).

i. PILOTS for Commercial Property Taxes

The 2005 resolution passed by the New York City Council established that developers of new commercial properties would pay PILOTS to HYIC rather than paying regular property tax. These payments are expected to account for over half of the project’s revenue (NYEDC 2006).

PILOTs are property tax discounts for new, privately-owned, commercial developments in the project area. The amount of the PILOTs to be paid by the new developers was established by the New York City Industrial Development Agency (IDA) through the Uniform Tax Exemption Policy (UTEP). Discounts can reach up to 40 percent of property taxes (Hudson Yards Infrastructure Corporation 2007).

The amount of an individual developer’s PILOT is determined by two factors. First, projects that are further west and therefore more difficult to develop receive steeper discounts. Second, to reward pioneering developers who act early, discounts decrease after every 5 million square feet of land is “consumed” (Hudson Yards Infrastructure Corporation 2007).

Discounted PILOT payments extend for a 15-year period following construction and then phase-out to the equivalent of full property taxes over a five-year period. On the 20th year, owners pay full property taxes that continue to go to HYIC for the life of each agreement, which is expected to be 35 years. The annual increase in PILOT payments is capped at 3 percent (Hudson Yards Infrastructure Corporation 2007).

The decision to discount PILOTs to developers in Hudson Yards is a key aspect to understanding the costs and risks of the project. By decreasing HYIC’s revenue, discounted PILOTs increase the costs to the city, which pays HYIC’s debt service while its revenues are insufficient (detailed in City Appropriations below). The effects of discounted PILOTs were deepened in 2013 when
the IDA expanded the incentive to qualifying retail developments (NYC Independent Budget Office 2013).

The need to include incentives in the form of property tax breaks was integral to the city’s decision to choose PILOT financing to back HYIC bonds rather than other financing mechanisms, including TIF or general obligation debt (Kiernan 2007). This decision was based on the IDA’s assertion that developers would not build without tax abatements (Cushman & Wakefield 2006). According to IDA Chairman Joshua J. Sirefman, the commercial property tax break was created to provide "financial assistance to overcome the high cost barrier to development that will enable the city to capture demand for new Class A office space and will fuel the continued growth of the city’s economy" (NYC Independent Budget Office 2013).

The decision to discount PILOTs to developers in the Hudson Yards project area added a second layer of incentives to the overall project. Not only would developers would be enticed by the new public infrastructure in the district, but also by tax breaks.

**ii. Tax Equivalency Payments (TEP)**

Property taxes collected by the city from hotels and residential developments in Hudson Yards are forwarded to HYIC as Tax Equivalency Payments, or TEPs, subject to annual appropriation through the city budget.

While these properties do not receive a discount on their property taxes due to their location in the Hudson Yards district, their payments can be discounted through other property tax abatement programs available to non-commercial properties. Residential properties in the project area can participate in the 421-a tax exemption program, detailed in section 5.

**4.2.3.2. ONE-TIME REVENUES**

One-time revenues, albeit smaller streams, were designed to provide HYIC revenue during the pre-construction period.

**i. Density Bonuses**

Additional development rights serve the bottom line of both developers and HYIC. First, because property has more value if built out to its highest potential, density bonuses attract private
developers by increasing the buildable area and making their projects more financially attractive. Second, by selling increased development space, HYIC facilitates its goal of repaying its bondholders.

HYIC receives one-time revenues by selling two types of density bonuses to developers, both of which allow for an increase in development space through higher floor area ratios (FAR). These include district improvement fund bonuses (DIBs) and transferable development rights (TDRs).

As of right, properties in the project area have a FAR of 6.5 for residential developments and 10 for commercial developments. By making DIB payments to HYIC, developers can increase their FAR to a level set by the Project Area Zoning Regulations. After the maximum DIB FAR has been reached, owners within designated receiving sites\(^2\) in the Hudson Yards district can purchase transferable development rights from HYIC that originated in the Eastern Rail Yard (Cushman & Wakefield 2006).

**ii. PILOTS for Mortgage Recording Taxes**

Payments in lieu of mortgage recording taxes (PILOT MRT) are one-time payments equivalent to the full amount of the mortgage recording tax and paid by commercial developers in the district making PILOT payments. These PILOTS are the equivalent of the tax, which is 2.8 percent for mortgages on commercial properties exceeding 500,000 square feet. These funds are diverted from the city, which would receive 1.75 percent, and the state, which receives the remaining 1.05 percent.\(^3\)

**iii. City Appropriations**

Interest support payments (ISPs) are a key incentive provided by the city for the redevelopment of Hudson Yards. Given the expected lag between the start of infrastructure construction and revenue materialization, the city agreed to cover HYIC’s annual interest payments until it secured sufficient development-reliant revenues.

The project’s legislative history reveals ISPs were the linchpin for the project’s approval. The Bloomberg administration originally presented the City Council with a financing plan that proposed the use of short-term commercial paper to pay for the interest on the bonds while HYIC

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\(^2\) The eight blocks north of West 33rd Street between Tenth and Eleventh Avenues within the Project Area.

\(^3\) For properties belonging to the MTA, HYIC share of the PILOT MRT is 91 percent (Cushman & Wakefield 2006).
waited for development-reliant revenues to materialize (New York City Independent Budget Office 2004). However, the Council objected to the expense and risk associated with the plan, agreeing instead to commit city funds to cover HYIC’s interest costs in the form of ISPs until it secured sufficient revenues. ISPs are subject to annual appropriation by the city and the availability of city moneys for such payments. The city reiterated this agreement in the 2018 resolution approving the latest $500 million bond offer.

TIF bonds sold without a municipality’s guarantee would carry more risk for the investor, meaning higher returns for the investor and higher interest rates paid by the city. In the case of Hudson Yards, the city's decision to guarantee interest payments allowed HYIC to borrow at rates comparable to what the city pays on its general obligation debt, a low-risk debt backed by the full faith and credit of New York City (Citizens Budget Commission 2017). As affirmed by the ratings agency Fitch in its HYIC Bond analysis, "The 'A' rating is primarily supported by New York City's obligation, subject to appropriation, to pay interest on the bonds if project revenues are insufficient for this purpose. Fitch rates the city's general obligation (GO) bonds 'AA' with a Stable Outlook" (Fitch Ratings - NYC 2013).

In addition to the direct costs added by ISPs, their inclusion in the Hudson Yards project is significant for two reasons. First, the payments to HYIC are not refunded. Within the “self-financing” frame used under value capture models, the project is no longer self-financing. The theoretical model promises a closed loop, where the bonds issued are repaid with the project’s own designated revenues, as opposed to any and all revenues the project reaps for the city over time. However, ISPs, which come from the city’s general revenues, represent direct taxpayer support. Second, ISPs have a direct but inverse relationship to the discounted PILOTs built into the project’s revenues. Discounted PILOT payments translate into lower property tax revenue going to HYIC, which, in turn, decreases HYIC’s ability to pay its interest payments and increases the city’s costs in the form of ISPs.

5. WHAT NEW YORK CITY PAID FOR HUDSON YARDS

4 The Support and Development Agreement and the city’s obligation to make such payments do not constitute debt of the city under or within the meaning of the State Constitution or the Local Finance Law of the State. The City is not legally required to make annual appropriations for such payments (Hudson Yards Infrastructure Corporation 2007).
The sections below detail Hudson Yards’ financial and economic costs to the city. The financial analysis provides a thorough description of the project's impact on public finances. The economic analysis provides a description of the impacts of the project from the view of the taxpayers and city as a whole.

5.1. FINANCIAL COSTS
Hudson Yards’ financing plan was based on projections from a November 2006 study commissioned by HYIC from Cushman & Wakefield, a private real-estate firm hired by the city to forecast revenues stemming from the Hudson Yards development. As the next sections describe, the project's actual figures considerably differ from Cushman & Wakefield projections. Revenue shortfalls, cost overruns and spillovers, and tax breaks jeopardized the project’s financial feasibility, required additional public subsidies, and left the city paying $2.2 billion in direct and indirect costs in addition to the $3.5 billion in bonds.

5.1.1. HUDSON YARDS’ REVENUE SHORTFALLS

Between 2006 and 2018, only one of HYIC’s multiple revenue streams matched its projected performance. The rest came in significantly lower than anticipated. In 2006, C&W projected HYIC revenues would be $1.9 billion by FY 2018 (Cushman & Wakefield 2006), but actual revenues came in at only $1.3 million. This left HYIC $556 million short, or 30 percent less than projected.

TEPS, or tax equivalency payments, were HYIC’s only revenue source to match or exceed the original forecast. By the end of the FY2018, HYIC collected $415 million in TEPs from the city, $6 million more than C&W’s 2006 projection of $409 million. The increase was driven by an unexpectedly high demand for non-commercial space. In particular, there was outsize demand for hotels. Between 2005 and 2011, 12 new hotels comprising approximately 2,900 rooms and approximately 1.13 msf were completed.

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5 In 2006, HYIC hired C&W to analyze the real estate market impact of economic scenarios, including a base case and cyclical recession (modest downside) scenarios. In a 2011 update, C&W analyzed a cyclical scenario. The comparisons in this article are based on the 2006 base scenario.
## REVENUES: 2006 to 2018 (Amounts in $ million)

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<th>Actual Revenue by 2018</th>
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<td><strong>TOTAL REVENUE SHORTFALL</strong></td>
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<td>1,189.5</td>
<td>-555.7</td>
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</table>

Table 2 - HYIC’s Shortfall in Revenues to Pay Back Bondholders

Source: (HYIC n.d.) and (Cushman & Wakefield 2006)

Much of HYIC’s revenue shortfall is due to a lack of PILOT payments, which were expected to bring in $467 million between FY2006 and FY2018, the majority of HYIC’s projected revenue. Instead, total PILOT revenue was only $52 million, 9 times less than expected.

This drop off was largely due to the Great Recession. Hitting in 2008, the financial crisis delayed the pace of office development citywide. In Hudson Yards, construction delays moved the first PILOT payments back from the target date of 2012 to 2015. Another factor feeding the revenue shortfall was the IDA’s decision to extend PILOTs to retail development projects. With PILOTs were originally designated only for commercial developments, the extension of the tax break for retail development was not included in C&W’s 2006 revenue projections (NYC Independent Budget Office 2013).  

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PILOTs are only one of four revenue categories to fall short. Proceeds from district improvement bonuses (DIBs), payments in lieu of mortgage recording taxes (PILOTs MRT), and transferred development rights (TDR) were also significantly lower than expected. Between 2006 and 2018, DIBs fell short by more than $86 million, PILOT MRTs by $32 million, and TDRs by $28 million. Overall, these three revenue sources were $146 million less than projected.

5.1.2. HUDSON YARDS’ FINANCING COSTS

Since the city agreed to cover HYIC’s annual interest payments until it secured sufficient development-reliant revenues, the failure of HYIC revenue projections discussed above directly increased the city’s payments covering the project’s debt costs. In 2007, HYIC’s bond’s statement projected that interest support payments would cost the city $7.4 million through 2015. Instead, the city ended up spending $359 million - over 40 times more than expected.6

The city’s commitment to pay the interest on HYIC bonds was meant to compensate for a temporary mismatch between revenue materialization and debt payment. Having fallen prey to significant but common project risks, this short-term fix turned into long-term compensation through FY2015.

5.1.3. PROPERTY TAX BREAKS

i. Commercial and Retail Development Tax Breaks

As previously described, the IDA established the amount of PILOTs paid by new developers. The agency’s decision to provide tax breaks for qualifying developers goes through a cost benefit analysis. According to the IDA, the cost to the city of the PILOT benefit, or the value of the foregone property taxes, of seven current commercial buildings in the project area is over $1 billion over a 25-year period (see table below). This is the difference between the property tax liability in the absence of PILOT benefits and the estimated PILOT. This figure is likely to increase if and when new commercial and retail buildings are developed in the project area.7

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6 See HYIC Annual Reports (HYIC n.d.)
7 The magnitude of the Hudson Yards’ tax breaks briefly became a news topic in October 2014 when JPMorgan Chase publicly considered constructing a new headquarters in the Hudson Yards district and sought an additional subsidy of $1 billion. In rebuffing the bank’s request, the de Blasio administration pointed out that the bank would receive $600 million in tax breaks under the as-of-right program established under Mayor Bloomberg. See: Charles
<table>
<thead>
<tr>
<th>#</th>
<th>Address</th>
<th>Building Name</th>
<th>Developer</th>
<th>NPV of Tax Break&lt;sup&gt;8&lt;/sup&gt; (amounts in $ million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>503, 507-511 W 33rd Street</td>
<td>50 Hudson Yards</td>
<td>Related</td>
<td>176.7</td>
</tr>
<tr>
<td>2</td>
<td>351 Tenth Avenue</td>
<td>30 Hudson Yards</td>
<td>Related</td>
<td>327.8</td>
</tr>
<tr>
<td>3</td>
<td>501-551 West 30 Street</td>
<td>10 Hudson Yards</td>
<td>Related</td>
<td>106.2</td>
</tr>
<tr>
<td>4</td>
<td>380 Eleventh Avenue</td>
<td>55 Hudson Yards</td>
<td>Related</td>
<td>76.5</td>
</tr>
<tr>
<td>5</td>
<td>509 and 527 W 34th Street</td>
<td>The Spiral</td>
<td>Tishman Speyer</td>
<td>170.0</td>
</tr>
<tr>
<td>6</td>
<td>400 11th Avenue</td>
<td>3 Hudson Boulevard</td>
<td>Moinian</td>
<td>64.8</td>
</tr>
<tr>
<td>7</td>
<td>401 9th Avenue</td>
<td>One Manhattan West</td>
<td>Brookfield Properties</td>
<td>115.1</td>
</tr>
<tr>
<td></td>
<td><strong>TOTAL</strong></td>
<td></td>
<td></td>
<td><strong>1,037.2</strong></td>
</tr>
</tbody>
</table>

Table 3 - Tax Breaks for Commercial Office Developers  
Source: NYCIDA Projects Cost/Benefit Analysis (FOIL Request)

**ii. Residential Development Tax Breaks**


<sup>8</sup> Net Present Value (NPV) calculated by NYC IDA and based on a 25 year-period and a 6.25% discount rate.
The Hudson Yards financial plan did not include specific incentives for residential developments. However, they already existed in the form of 421-a. This is a state program that pre-dates the Hudson Yards project and provides city tax breaks for residential developers. Although the tax benefit is a state program, it played an important role in the development of Hudson Yards at significant cost to the city.

The 421-a has been part of New York City’s development policy since the early 1970’s, albeit in different forms. In 2017, it was renewed under the name the Affordable New York Housing Program. Despite the changes, the program maintained its basic structure as a tax break for developers of new multi-family residential projects. It also maintained the same function, which seeks to promote construction of affordable housing and to increase the financial appeal and viability of residential development. In the Hudson Yards project area, 421-a (both before and after 2017) requires the creation of a specific number of affordable units for a development to become eligible for the tax break.\(^9\)

Residential tax breaks for development in the Hudson Yards area between 2009 and 2018 cost the city an estimated $367 million in lost property tax revenue. To note, this number does not include data for the project’s early years (2005-2008) due to database limitations. Nor does it include the cost of tax breaks that continue past 2018 (buildings can receive the tax break for 10-or 20-years post-construction).\(^10\)

\(^9\) The previous version of the 421-a program implemented Geographic Exclusion Areas (GEAs) such as the Hudson Yards project where construction of affordable units was mandatory. Under this previous version of the program, there were areas where the creation of affordable units was not an eligibility requirement. However, under the newest version of the program, the Affordable New York Housing Program, which expires in 2022, the construction of affordable units is required despite a development's location. Under the Affordable New York program, developers of new residential rental projects with 300 units or more in certain areas of Manhattan (including the Hudson Yards project area), Brooklyn, and Queens that create a specific number of rental units that will remain affordable for 40 years and pay construction workers average wages and benefits above a certain threshold, would be eligible for a 35-year full property tax exemption on the improvements to the property (Hudson Yards Infrastructure Corporation 2017).

\(^10\) The estimate was based on the annual assessment rolls of Hudson Yards Residential Properties available in New York City’s Department of Finance’s Real Property Assessment Database (RPAD). To estimate the value of the 421-a benefit, the authors calculated the actual taxes owed for each property in the project area, or the assessed value times the tax rate. The value of the benefit is the difference between what a property owner would pay with and without the 421-a exemption. We consider the historical property tax rate for each year for each tax class. The estimate goes back to the latest year of available data, which is 2009. Projections of future benefits were not considered.
Because the city forwards all property taxes in the Hudson Yards area (with the exception of those under PILOTs) to HYIC, revenue lost to the 421-a program is also revenue lost to HYIC. Similar to discounted PILOTs, revenue lost to these tax breaks has the effect of decreasing HYIC’s ability to pay its debt expenses, increasing the direct costs to the city in the form of increased interest support payments.

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>421-a Benefit ($ million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>12.18</td>
</tr>
<tr>
<td>2010</td>
<td>18.59</td>
</tr>
<tr>
<td>2011</td>
<td>18.98</td>
</tr>
<tr>
<td>2012</td>
<td>24.40</td>
</tr>
<tr>
<td>2013</td>
<td>28.08</td>
</tr>
<tr>
<td>2014</td>
<td>42.12</td>
</tr>
<tr>
<td>2015</td>
<td>52.38</td>
</tr>
<tr>
<td>2016</td>
<td>56.17</td>
</tr>
<tr>
<td>2017</td>
<td>60.36</td>
</tr>
<tr>
<td>2018</td>
<td>53.49</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$366.8</td>
</tr>
</tbody>
</table>

Table 4 - 421-a Tax Breaks for Residential Developers in Hudson Yards
Source: Authors’ estimate based on New York City’s Department of Finance’s Real Property Assessment Database (RPAD) database (2009 to 2018)
5.1.4. HUDSON YARDS’ COSTS OVERRUNS AND SPILLOVERS

i. Cost Overruns
Hudson Yards also fell victim to the common development risks of cost overruns and project spillovers for a total cost to the city of $400 million. This includes $218 million in overruns ($65 million spent between FY2005 and FY2017 and $153 million in spending planned for FY2018 to FY2022) and $182 million, at a minimum, for identified spillovers.

The cost overruns stem from project items intended to be fully funded by HYIC’s bond proceeds. Cost overruns are a common feature of development projects both large and small. Often, these are attributed to the occurrence of optimism bias or misrepresentation during the formation of a project’s budget (Flyvbjerg 2008). However, because Hudson Yards’ financing plan did not account for a method to pay cost overruns, the city ended up picking up the tab.

Subway Extension: HYIC’s bond proceeds covered the estimated cost for the subway extension, which was $2.1 billion in FY2006. Of this total, $100 million was marked for costs overruns. However, bids for the excavation of the line were higher than expected, forcing the city to cut one of the two planned stations to save $450 million (NYC Independent Budget Office 2013). But despite scaling back the plans, the cost still went over the estimate by $267 million, for a total of $2.367 billion.

Out of the $267 million in additional subway costs, HYDC and the city’s OMB absorbed $235 million through cost savings and other contingencies within the project budget (Hudson Yards Infrastructure Corporation 2012). The remaining $32 million of the subway cost overrun was funded by the city.

However, the subway continued to cost the city additional funds. Between FY2005 and FY2017, the city spent an additional $50.9 million on the subway, outside of the $2.1 billion included in the bonds. Between now and FY2022, the city plans to spend an additional $4.5 million, bringing the city-absorbed cost overruns for the subway to $55.4 million.

The subway extension was also delayed by two years, coming online in 2015 rather than 2013. In 2006, C&W acknowledged that any delay in the subway would likely delay office development,
which would subsequently delay HYIC’s resulting PILOT payments (Cushman & Wakefield 2006). As specified above, actual PILOT revenue was 9 times less than projected.

Property Acquisition and Public Amenities: HYIC’s bond proceeds were meant to cover the first stage of the construction of Hudson Boulevard Park, including a new street and open space between 10th and 11th Avenues, estimated to cost $1.2 billion. However, the project is costing the city an additional $150.3 million on top of the expenses paid by the bond proceeds. These costs include the construction of Hudson Boulevard and Cross Streets ($101.7 million), the reconstruction of water infrastructure and sewers ($48.3 million) and street reconstruction ($0.3 million).

Additionally, the city spent $12 million from its expense budget on demolition of buildings in the area (NYC Independent Budget Office 2013)
<table>
<thead>
<tr>
<th>CITY SPENDING ($ Millions)</th>
<th>ACTUAL Expenses (FY05-17)</th>
<th>PLANNED Expenses (FY18-22)</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CAPITAL SPENDING</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subway Extension</td>
<td>50.9</td>
<td>4.5</td>
<td>55.4</td>
</tr>
<tr>
<td>Property Acquisition and Public Amenities</td>
<td>2.0</td>
<td>148.3</td>
<td>150.3</td>
</tr>
<tr>
<td><em>Hudson Boulevard and Cross Streets</em></td>
<td>1.7</td>
<td>100</td>
<td>101.7</td>
</tr>
<tr>
<td><em>Reconstruction of West 33rd Street, 11th Av.</em></td>
<td>0.3</td>
<td>0</td>
<td>0.3</td>
</tr>
<tr>
<td><em>Reconstruction of Water and Sewers</em></td>
<td>0</td>
<td>48.3</td>
<td>48.3</td>
</tr>
<tr>
<td><strong>TOTAL CAPITAL SPENDING</strong></td>
<td>52.9</td>
<td>152.8</td>
<td>205.7</td>
</tr>
<tr>
<td><strong>EXPENSE SPENDING</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Building Demolition</td>
<td>12</td>
<td></td>
<td>12</td>
</tr>
<tr>
<td><strong>TOTAL EXPENSE SPENDING</strong></td>
<td>12</td>
<td></td>
<td>12</td>
</tr>
<tr>
<td><strong>TOTAL CITY SPENDING ON OVERRUNS</strong></td>
<td>64.9</td>
<td>152.8</td>
<td>217.7</td>
</tr>
</tbody>
</table>

Table 5 - City Spending on Hudson Yards’ Cost Overruns
Source: (NYC Independent Budget Office 2013)

This trend - the city absorbing additional costs necessary to complete the project - continues. For the costs of property acquisition and public amenities described above, the bulk of the city’s committed capital funds ($152.8 million) is future spending between Fiscal Years 2017 and 2022. Additionally, in FY2017, HYIC stated it did not have the funds to cover $96 million in expenses over the next two years for infrastructure costs. These cost overruns are for the subway extension ($32 million) and the construction of the Hudson Park & Boulevard ($64 million) (NYC Independent Budget Office 2017). In 2017, HYIC named three potential funding sources. First, the city could authorize HYIC to issue additional bonds backed by the city’s payment of
interest. Second, HYIC could sell bonds that are not supported by the city’s interest payments. Third, the city could cover the cost through its capital budget, increasing its capital costs for the subway and public amenities from the current $205.7 million to almost $301.7 million.

As mentioned earlier, the city authorized HYIC to sell an additional $500 million in August 2018. The legislation approving the bonds states the funds will be used for a second stage of construction for Hudson Park, extending it from its current terminus at 36th Street to 39th Street. However, the city estimates the cost of the park extension to be $374 million (Anuta 2018), which opens the possibility that the remaining bond proceeds could be used to cover HYIC’s $96 million shortfall.

### ii. Cost Spillovers
The city is not only paying for the cost overruns on the infrastructure costs associated with the subway and park, but is also paying for new needs within the project area. As an area develops, it attracts new residents, workers, and visitors, who, in their turn, require additional public services and infrastructure investment. The cost of these impacts is known as cost spillovers.

While spillovers are a normal part of a development project, the size of Hudson Yards makes these additional costs significant. For example, the added residents in the area require the city to build a new school, budgeted at $106 million (New York City School Construction Authority 2015). A new firehouse and daycare center are also needed, but as of yet not budgeted (New York City Planning Commission and the Metropolitan Transportation Authority, 2005). Anticipated but not budgeted as part of the overall project, the city must now backfill these funds out of its capital budget, raising the overall cost of the redevelopment project for taxpayers.

While some of the cost spillovers due to the needed city services are yet to be determined, the city spent $76 million to support the construction of the Culture Shed, a multidisciplinary art hub built in the project area.

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11 The 2005 legislation creating HYIC allotted a total of $3.5 billion in bonds to support Hudson Yards infrastructure. However, the last $500 million required the city to pass a second bill authorizing the remaining bonds, which passed the Council on August 8, 2018.

12 In 2018, the City Council is considering legislation to require an analysis of needed emergency services resulting from proposed development projects. In support, Council Member Joseph Borelli, chair of the Committee on Fire and Emergency Management, cited the Hudson Yards development as an example of a large development project passed without including plans for additional emergency services for an additional 60,000 to 70,000 people in the area. See: http://thechiefleader.com/news/news_of_the_week/council-bills-eye-impact-of-development-on-fdny/article_4417f244-f40c-11e8-a43b-9f2e60682638.html
<table>
<thead>
<tr>
<th>CITY SPENDING ($ Millions)</th>
<th>ACTUAL Expenses (FY05-17)</th>
<th>PLANNED Expenses (FY18-22)</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public School</td>
<td>106.0</td>
<td></td>
<td>106.0</td>
</tr>
<tr>
<td>Culture Shed</td>
<td>75.5</td>
<td>0.5</td>
<td>76.0</td>
</tr>
<tr>
<td>TOTAL CITY SPILLOVER COSTS</td>
<td>181.5</td>
<td>0.5</td>
<td>182.0</td>
</tr>
</tbody>
</table>

Table 6 - City Spending on Hudson Yards’ Spillovers
Source: (NYC Independent Budget Office 2017)

5.1.5. TOTAL FINANCIAL COST OF HUDSON YARDS TO NEW YORK CITY

Given the municipal support itemized in the preceding sections, the total financial cost to the city for the Hudson Yards project is $2.2 billion (Table 7). This figure includes direct support from the city in the form of interest support payments and payment for cost overruns and cost spillovers, as well as indirect support from the city in the form of tax breaks to attract development to the area. Although the $3.5 billion cost will eventually be paid back using designated revenues from the Hudson Yards project, the city is paying an additional 60% of this amount ($2.2 billion) out of the city’s general revenues for expenses directly related to the project.
### Table 7 - The Actual Cost to the City of the Hudson Yards Project

<table>
<thead>
<tr>
<th>COST TO THE CITY</th>
<th>AMOUNT ($ Million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTEREST SUPPORT PAYMENTS</td>
<td>359</td>
</tr>
<tr>
<td>TAX BREAKS(^{13})</td>
<td>1.404</td>
</tr>
<tr>
<td>COST OVERRUNS and SPILLOVERS</td>
<td>400</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>2.163</strong></td>
</tr>
</tbody>
</table>

Source: Authors’ estimates

### 5.2. ECONOMIC COSTS

In addition to the financial costs directly impacting the city’s budget, the Hudson Yards development has ripple effects on the city’s economy as a whole. First, the city’s outlay of $2.2 billion to support the project creates equally large opportunity costs, or a loss to the city of the additional services and/or investments that could be provided for such a large sum. Second, the project may be shifting the city’s economic activity rather than adding to the city’s overall share of the region’s commercial office market.

#### 5.2.1. OPPORTUNITY COST

Gerald Frug of Harvard Law School identifies the danger of opportunity costs associated with TIF-type development policies, “Tax increment financing thus allocates limited city resources to the development rather than to other city priorities” (Frug 2017). In the case of Hudson Yards, this goes beyond the $3.5 billion in revenue diverted to pay back bondholders rather than adding to general city revenues. It also includes $2.2 billion in unforeseen costs that, even in a budget as large as New York City’s, represents 2.3 percent of the city’s entire FY2019 budget. This total represents almost 50 percent of the city’s subsidy for Mayor de Blasio’s affordable housing.

\(^{13}\) As previously described, the estimate of tax breaks only includes the discounted PILOTs for commercial and retail properties and the 421-a tax breaks for residential developments. Other tax breaks, such as the ICAP program for hotels and sales tax breaks, were not included in this article’s estimate. Office developments entering into PILOT agreements may also receive an exemption of up to 100% of sales taxes due on construction materials and tenant improvement materials.
program, or Housing New York, which since 2014 has financed 109,767 homes in New York City.\textsuperscript{14}

**5.2.2. SHIFTING ECONOMIC ACTIVITY**

The Bloomberg Administration’s central argument for the development of Hudson Yards was the need to build office stock to reverse New York City’s dwindling share of the region’s growing demand for commercial office space (Economics Research Associates and Cushman & Wakefield 2003). However, rather than ensuring new net growth for the city as promised, there is evidence the project is shifting the city’s existing economic activity to Hudson Yards from other neighborhoods without creating new net economic growth.

A 2003 report commissioned by the city stated that the number of commercial tenants looking for a home was growing, and New York’s lack of development sites meant losing out to surrounding regions (Economics Research Associates and Cushman & Wakefield 2003). Expanding the commercial office district from Midtown to the Hudson River would capture the increased demand anticipated in the region. Based on these premises, C&W’s 2006 development study projected Midtown would capture a 51.8 percent share of the city’s demand and that Hudson Yards would take a 48.2 percent share over the projection period, boosting the city's overall economic activity.

However, these projections may be optimistic. The new supply of commercial space added in Hudson Yards hasn’t attracted significant new demand to the city. Rather, the development has attracted tenants from other commercial districts within New York City. In 2017, real estate investment firm JLL estimated 90 percent of Hudson Yards’ new office tenants relocated from Midtown (Commercial Observer 2017), as illustrated by Figure 4.

\textsuperscript{14} To date, the city has spent $4.375 billion in city subsidies, which includes city capital, HDC Corporate Reserves, and Reso-A. See: https://www1.nyc.gov/site/housing/news/mayor-de-blasio-announces-largest-year-for-affordable-housing-production.page
Meanwhile, vacancy rates in Midtown increased from 2016 through the second quarter of 2017 to 9.6 percent (Persichetti 2017). In a comparison of Midtown submarkets by Commercial Observer, the marquee Madison Ave/Fifth Avenue corridor vacancy was 12.6 percent compared to a low of 7.1 percent in the Penn Station submarket that includes Hudson Yards. It is important to note that by the third quarter of 2018, Midtown vacancy rates deflated to 7.3 percent, but they remain higher than vacancy rates in the Hudson Yards area (6.3 percent) (JLL 2018). A JLL report on the 1st quarter of 2018 predicts this trend will continue, "As occupiers that have relocated and consolidated to comparatively efficient properties will begin to impact the market in the coming years, likely putting upward pressure on Midtown vacancy rates as a result" (JLL 2018).  

This process is likely just beginning. According to C&W, 12.6 million square feet of office space will be added to the market in the next two years, which represents the largest increase in supply since the mid-80s. In five years, 22 million square feet of supply will be added (Mashayekhi 2018).

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15 Asking rents have also taken a hit. In the first quarter of 2018, Manhattan’s overall asking price decreased in 14 out of 20 Midtown submarkets, not including the Penn Station district home to Hudson Yard, which was up 3 percent (Persichetti 2017).
This effect on economic activity is not an uncommon result among areas where a TIF has been implemented. Studies have shown the use of TIF can result in cannibalization, or the attraction of economic activity from a non-TIF area to a TIF district (Bland and Overton 2016). This is especially true for retail, which is included in the discounted PILOTs paid in Hudson Yards, due to the finite consumer buying power in an area (Ingraham, Singer and Thibodeau 2005).

This shift undermines the results of a 2016 Appleseed report commissioned by Hudson Yards’ primary developer, The Related Companies, titled, “An Investment that’s Paying Off” (AppleSeed 2016). The report estimates the Hudson Yards development will increase the city’s GDP by $18.9 billion annually (in 2018 dollars) when fully built. However, the methodology used assumes the development is filled to capacity with new growth, including jobs, tenants, and residents that are all new to the city. Because the report’s conclusion does not account for the shift of existing jobs, tenants and residents from Midtown and other areas of Manhattan, its estimated economic impact for Hudson Yards is likely significantly lower.

The popular narrative on why Hudson Yards is successful in drawing tenants from its city competitors, especially Midtown, is the “old” vs “new” paradigm. David Berkey, an executive vice president and director of leasing for L&L Holding Company, is quoted in Commercial Observer stating, “One thing that’s clear and evident, and Hudson Yards bears it out, is that tenants want new” (Mashayekhi 2018). In this context, the demand in the commercial office market is less for more office development than for new office development. For commercial office buildings, new buildings include floor plans that offer light, air, and open space and are located in areas that offer amenities appealing to the millennial workforce.

According to the popular theory of filtering (Lowry 1960), new building stock should allow older stock to “filter down” for use by less affluent tenants. With the average age of Midtown’s commercial building stock at 57 years old (Li 2010), the competition from Hudson Yards should result in a decrease in Midtown’s market rents. And while there are some reports of landlord giveaways on the market, commercial stakeholders in Midtown have undertaken significant efforts to rezone and rebuild rather than filter.16

Midtown’s response to more commercial supply in the city supports research by Rachel Weber on the Chicago market. Weber found that new supply did not follow the market expectation that

16 In the summer of 2017, despite opposition from its residential community, the city rezoned East Midtown to allow for higher densities, allowing for the open floor plans common to Hudson Yards. Since then, significant renovation plans have been announced or are underway. For example, following the rezoning, J.P. Morgan Chase announced it would tear down and rebuild its headquarters on Park Avenue.
prices would fall, but instead led to a renewed effort by the city’s growth machine to call for city support for new production in competing areas using tools such as rezoning and TIF districts (Molotch 1993) (Weber 2015).

While it’s possible that the modern buildings coming online in Hudson Yards are serving to retain tenants that otherwise would have left the city, early evidence suggests that generating new economic activity is not a certain outcome for either Hudson Yards or TIF and TIF-type financing.

6. DISCUSSION

6.1. HUDSON YARDS FALLS PREY TO STANDARD DEVELOPMENT RISKS

The cost overruns and revenue shortfalls of the Hudson Yards project stem from the realization of financial and economic risks common to large development projects. While well known in multi-faceted development projects, the cost of these risks were not included in the project’s budget, leaving the city to bear the responsibility if and when they materialized.

The Hudson Yards' official bond statements warn potential bondholders of the following risks: (i) no revenue materialization; (ii) need for additional funds; (iii) unpredictable cost of property acquisition; (iv) recession; among others. Yet, with the exception of the $100 million included in the bonds to cover subway cost overruns, responsibility for the costs associated with these risks - paying bondholders in the case of low revenues and additional costs - were left unassigned and ambiguous.

The city’s Independent Budget Office (IBO), the city’s nonpartisan budget watchdog, twice cautioned that the city was likely to end up paying the project’s cost overruns. In 2006, IBO testified that HYIC’s financial plan left open the question of what entity would pay for likely subway cost overruns and highlighted the possibility that the need for additional funds would divert cost from other funding priorities (New York City's Independent Budget Office 2006). In 2017, IBO published a report titled, “Need for Nearly $100 Million in Additional Funding Emerges as Costs Continue to Exceed Plan,” warning that new costs were likely to be paid by the city (NYC Independent Budget Office 2017).

17 See "Risk Factors" section of HYIC's Official Bonds reports
As detailed in Section 5, IBO’s prediction that the city would end up carrying the risks was accurate. As these risks unfolded over the project’s 13 years of implementation thus far, the city has, with little public attention, used its expense and capital budgets to cover the $2.2 billion in consequences, effectively nullifying the portrayal of Hudson Yards as a “self-financed” TIF-type private development.

6.2. FAILURE OF SELF-FINANCING MODEL COSTS NEW YORK BILLIONS

The development of a commercial office district on the city’s Far West Side - Hudson Yards - was sold to city residents as a “self-financed” TIF-type project. This description was used to assure residents that the project would pay for itself, implying that taxpayers would not bear the cost of the project.

However, by definition, Hudson Yards is not “self-financing.” A “self-financing” organization/business earns all the money it needs to pay its own costs.18 In the case of Hudson Yards, the project is only capable of funding its infrastructure investment and paying its bondholders with the city’s support. Taxpayer dollars are covering the project’s loss of revenue due to tax breaks, the project’s overall revenue shortfalls, and cost overruns and cost spillovers. As documented above, this totaled $2.2 billion in taxpayer support for Hudson Yards.

TIF supporters argue that developments such as Hudson Yards would not occur ‘but for’ the establishment of a TIF district. In this case, if the city did not invest in improving the area’s infrastructure by extending the subway and building Hudson Boulevard Park, the surrounding development would not exist, nor would the new revenues it has generated. While a counterfactual analysis (‘but for’ analysis) could possibly demonstrate that private funds are insufficient and development could not be realized without a $3.5 billion TIF, it would be insufficient to justify the need of $2.2 billion in taxpayer support.

This study seeks to add to the literature on TIF and its variants through an analysis of the model versus the reality. The conclusion of whether a TIF project is worthwhile or not goes beyond the ‘but for’ analysis or the assessment of economic benefits (jobs, income, services, etc), and involves the analysis of the actual costs of providing public services in the TIF district, giving

18 See definition in MacMillan Dictionary.
subsidies to attract new developments, and covering possible cost overruns and/or revenue shortfalls, among others. What is at stake here are the consequences of advertising TIF and TIF-type financing as a "self-financing" tool, eliminating the public debate over the additional $2.2 billion of costs directly borne by the city.

Describing TIF as “self-financing” creates the appearance of a benign instrument for urban economic development. The often false description allows local elected officials to promise development and economic growth while simultaneously maintaining an image of fiscal discipline. However, TIF and TIF-type projects carry risk. By design, TIF projects experience a lag between upfront capital investments and revenue materialization, which implies that projects take time to come online (Citizens Budget Commission 2017). During this period, as the Hudson Yards project showed, projects may face many obstacles like cost overruns, revenue shortfalls, cost spillovers, and economic downturns. By design, TIF cannot “self-finance” these standard development risks, which leave these expenses unpaid, the project uncompleted, or the municipality must foot the bill.

Pulling back the curtain of the “self-financing” mantra reveals the public policy trade-offs inherent in Hudson Yards. Ultimately, reliance on the budget and economic size of New York City is what allows the city to bear the risks and successfully support completion of a project of this magnitude. However, this may not be the case for other municipalities that struggle with tight budgets and infrastructure needs.

7. CONCLUSION

New York City’s experiment with value capture financing in the Hudson Yards project is 10 times larger than any other TIF-type project on record (Manhattan Community Board 4 2004). As such, it offers an opportunity to measure the effects of large-scale implementation of the financing mechanism and offers lessons for officials poised to embrace, reject or modify its use in their own localities. In a context of increased political pressure to deliver economic growth without additional upfront tax hikes, local officials are likely to embrace TIF and TIF-type projects.

In that spirit, documenting and sharing the true costs of the Hudson Yards project is vital to help future elected officials and voters make the best decision regarding the use of their development dollars. These findings illuminate the need for further lines of research on transparency,
accountability and governance to ensure the full breadth and depth of TIF costs are considered before project approval and implementation.

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