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## Atlantic Yards: A Net Fiscal Benefit for the City?

### SUMMARY

LAST FEBRUARY, THE FOREST CITY RATNER COMPANIES, Empire State Development Corp., New York City Economic Development Corp., and New York City signed a Memorandum of Understanding on the proposed redevelopment of Brooklyn's Atlantic Yards area. The 21-acre development borders the neighborhoods of Prospect Heights, Fort Greene, and Park Slope.

The plan currently calls for the construction of an 18,000 seat arena to be the home of the National Basketball Association's Nets and 15 towers containing roughly 6,000 apartments, 1.2 million square feet of office space, and 180,000 square feet of retail space. In addition, the agreement presents potential contributions to the project from the city and state, including cash contributions of \$100 million each, acquisition and transfer of specific properties to assemble the development site, and low-cost construction financing and leasing for the arena.

Several elected officials asked IBO to look at the plan's fiscal implications for the city. Our analysis focuses primarily on the impact of the arena because this is where most of the direct public contribution is proposed. Although our primary focus is fiscal impacts for New York City, we also review the considerably larger impact on New York State. Because this study is a fiscal analysis, transportation, land use, and other important issues related to the project are not covered. Among IBO's findings:

- The arena would generate a modest fiscal surplus for the city. Over the 30-year financing period, the arena will produce \$28.5 million (present value, 2005 dollars) more in revenue than the project will cost the city.
- The fiscal impact of the arena would be positive largely because the Nets would be moving within the region and many of the same fans now attending games in New Jersey would instead spend their money here.
- Including the additional tax revenue flowing to the Metropolitan Transportation Authority, the combined state and local 30-year net fiscal surplus would be \$107.0 million (2005 dollars).
- When the arena opens, it would generate a projected \$7.5 million (2005 dollars) in new city tax revenues annually. More than half of the revenue would come from the sales tax.

This report focuses on the \$100 million and other benefits provided solely for the Forest City Ratner plan, most of which would be for the arena. Given the minimal special benefits flowing to the rest of the project and the methodological limitations in estimating the fiscal impacts of mixed-use developments, IBO has not done an analysis of the housing and commercial portion of the plan. We do provide a summary of the programs that would be available to any developer seeking to build on the Atlantic Yards site and a brief overview of the cost of providing city services for the Atlantic Yards development.

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## BACKGROUND

The Forest City Ratner Companies (FCRC) has proposed a major redevelopment of the area called Atlantic Yards in Brooklyn. The area is currently dominated by the open, below grade Long Island Railroad (LIRR) rail yard located northeast of the intersection of Flatbush and Atlantic Avenues. The current proposal calls for an 18,000 seat arena (850,000 square feet) to serve as home of the Nets National Basketball Association team and a large mixed-use development adjacent to the arena. The allocation between residential and commercial uses in the mixed-use development has been evolving, with much of the space originally designated for office space shifting to residential use. The current plan calls for 1.2 million square feet of office space, 5.6 million square feet of residential development (about 6,000 units), and 180,000 square feet of retail space.

On February 18, 2005, a Memorandum of Understanding (MOU) for the Atlantic Yards project was signed by the New York State Empire State Development Corporation (ESDC), the New York City Economic Development Corporation (EDC), the City of New York, and FCRC. The MOU lays out potential contributions of the city and state, including cash contributions of \$100 million each for site preparation of the arena and surrounding land, acquisition and transfer of specific properties to assemble the development site, low-cost construction financing for the arena, and low-cost leasing for the arena. Conditions to be satisfied by FCRC are also described.

A separate agreement was signed on February 24 between Forest City Ratner Companies and the Metropolitan Transportation Authority (MTA), whose LIRR subsidiary currently owns about 8.3 acres of the 21 acres of the Atlantic Yards site. The agreement with the MTA did not obligate the transportation authority to sell or lease land to FCRC. However, it did lay out the conditions that must be met by FCRC if an agreement were to be reached. The obligations included: payment to the MTA by Forest City Ratner Companies of fair market value for any sale or lease of the land; and payment by FCRC for the full cost of relocating the rail yard, construction and maintenance of a platform over the rail yard, and any additional operating costs caused by the relocation of the yard.

On May 24, the MTA issued a Request for Proposals (RFP) for the sale of some or all of the development rights over its Atlantic Yards properties, inviting any interested parties to submit bids. The RFP was consistent with the February agreement between FCRC and the MTA in terms of maintaining the operation of the rail yard during and after construction and requiring prospective developers to bear the costs and risks associated with any reconfiguration of the yard that their proposed project would require. The RFP also made it clear that the MTA would not be obligated to select a

winning bid simply on the basis of price. Bids were submitted to the MTA by both FCRC and the Extell Development Company. On July 27, 2005, the MTA announced that it would proceed with negotiations with Forest City Ratner Companies for 45 days. These negotiations are now underway.

Forest City Ratner Companies has also signed a Community Benefits Agreement with a number of community groups. The agreement, signed on June 27, lays out goals for hiring minorities and women construction workers and includes commitments to ensure that construction firms owned by minorities and women will be among the firms hired for the project. FCRC also agreed to lease a portion of the new retail space to neighborhood businesses as well as encourage local hiring and job training. In addition, the benefits agreement incorporates an earlier pact between FCRC and ACORN (formally the Association of Community Organizations for Reform Now) regarding the portion of the new housing units that will be affordable to low- and moderate-income families. The benefits agreement also promises a number of neighborhood amenities and education initiatives in the area.

IBO's analysis of the Atlantic Yards project is based on the terms of the MOU between FCRC and the city and state, as modified in the bid submitted to the MTA. Our analysis focuses on the fiscal impact of this project. There are many other aspects of any economic development project that should be considered, including its effect on traffic, public transportation, the environment, and the surrounding community. This project also raises issues related to the city's land use and planning processes and the use of state authority to override local zoning and acquire property through eminent domain. These issues are important but are outside IBO's areas of expertise, so we have left them for analysts better qualified to handle such matters.

## DESCRIPTION OF THE PROJECT

The 21-acre development site runs from the Flatbush and Atlantic Avenues intersection to Vanderbilt Avenue, between Atlantic Avenue and Pacific and Dean Streets. It is adjacent to the Atlantic Terminal transportation hub, which is served by nine subway lines and the LIRR. The existing rail yard would be relocated to the far end of the development site and a platform would be built over the new yard, creating space for much of the planned construction. Completion of the arena is planned for late 2008; completion of the entire project is expected in 2013.

Forest City Ratner Companies would build the Nets arena and a cluster of four mixed-use buildings on the triangle bounded by Flatbush, Atlantic, and Sixth Avenues. Although the drawings and models prepared by FCRC show these five buildings closely massed and most likely connected, the MOU distinguishes the four mixed-use buildings from the arena and its adjacent on-site parking garage. The MOU designated all

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four buildings for commercial development, primarily office space, although the FCRC bid to the MTA indicates that two of these buildings would now be developed as residential condominiums.

Across Sixth Avenue, an area stretching up to Vanderbilt Avenue is largely designated for residential development with some retail space facing Sixth and Atlantic Avenues. The MOU refers to the combination of the residential and retail area east of Sixth Avenue, along with the four towers adjacent to the arena, as the mixed-use development. In presentations by FCRC and city and state officials, the arena, commercial and residential components of the Atlantic Yards project are often treated as a single project. But the MOU makes a sharp distinction between the arena and the mixed-use development, particularly regarding financing and subsidies. For our analysis, we maintain this distinction between the arena and the mixed-use development.

## **BENEFITS USED FOR ATLANTIC YARDS**

This paper is concerned with the fiscal implications of the Atlantic Yards project for New York City, particularly the arena portion of the project. In analyzing the proposed financial arrangements, we draw a distinction between special benefits that FCRC would receive under the MOU and benefits from existing programs that would be available as-of-right to other development projects.

The special benefits for this project include capital contributions, property transfers, and property and sales tax exemptions. The capital contributions would require direct outlays by the city and state. In contrast, the property transfers and tax exemptions would involve foregone new revenues rather than new outlays. These benefits are not public costs in the sense that the capital contributions are costs: they do not increase government expense budgets or reduce revenue budgets relative to the levels that would occur should the development not take place. Rather, these benefits mean that there won't be *as much* project-related revenue added to city and state (and MTA) budgets as there otherwise might be.

Another group of special benefits offered to FCRC under the terms of the MOU would generate savings for the developer with little or no city and state budget impacts—that is, neither new outlays nor foregone new revenues. These benefits include a low-cost lease, low-cost financing for arena construction made possible by the sale of tax-exempt private activity bonds, and acquisition of some property using the state's powers of eminent domain. Depending on the outcome of the negotiations between the MTA and FCRC, there may be additional benefits although these would come from the MTA rather than the state or city.

The project will also take advantage of existing tax and financing subsidies that are available to other developers as a

matter of right, provided they meet the various program criteria. These include tax exemptions for commercial and residential development and housing finance assistance available through the city's mixed-income housing development program.<sup>1</sup>

In the following sections, we first examine the special benefits proposed under the MOU, followed by a review of the various benefits from existing programs that would also be available in the mixed-use portion of the project. We then examine the expected impact of the proposed arena on city and state tax revenues and compare this impact to the expected cost of special benefits for the Atlantic Yards.

*Special Benefits for the Atlantic Yards Project.* Under the MOU, Atlantic Yards would receive several special benefits not available as-of-right to development projects: capital contributions from the city and state, low-cost financing for the arena, extra property tax savings, a low-cost lease, and property obtained using the state's power of eminent domain.

*Capital Contribution.* The city and state will each contribute \$100 million in capital funds to the project. The use of the state funds will be restricted to site preparation and public infrastructure improvements on or around the arena site, while the city funds can be used for these purposes or acquisition of property on the arena site. In the MOU, the arena site consists not only of the arena building and its associated parking lot, but the other building sites on the portion of the project lying west of Sixth Avenue.

The city funds will be raised through the sale of general obligation bonds as part of the city's capital plan, with debt service on these bonds paid out of general revenue. The \$100 million has already been incorporated in the city's Capital Commitment Plan, with \$50 million scheduled for 2006 and \$50 million scheduled for 2007. Assuming these bonds would be issued by the city with an interest rate of 6 percent, issuance costs of 1 percent, and a term of 30 years, IBO projects that the present value of the cost to the city budget of its capital contribution to the project debt service payments will be \$100.6 million (in 2005 dollars), essentially equal to the face value of the bonds.<sup>2</sup> Annual debt service will be about \$7.3 million. The source of the state's \$100 million capital contribution has not yet been identified.

*Low-Cost Financing and Property Tax Savings for the Arena.* To provide low-cost financing for construction of the arena and its parking garage, tax-exempt private activity bonds will be issued by a not-for-profit local development corporation (LDC), organized under Article 14 of the New York Not-for-Profit Corporation Law. The bonds will be an obligation of the LDC—neither the city nor the state can be held legally responsible for repayment.<sup>3</sup> Instead they will be backed by semi-annual payments-in-lieu-of-taxes (PILOTs) from Forest City Ratner Companies to the LDC. The MOU states that the

PILOTs may not exceed the property taxes that would be paid if the property was not tax exempt, although the agreement offers no indication as to what if any discount from regular property tax would be used.<sup>4</sup> In the event that the PILOT payments exceed the debt service, 10 percent will go toward maintenance and capital reserves for the arena and the rest will go to ESDC; the city will receive none of the excess. If the PILOT is too small to cover debt service on the full \$555.3 million cost of construction, taxable bonds will be sold to cover the difference and FCRC will pay the debt service on these taxable bonds.

Forest City Ratner Companies will save money from this financing arrangement in two ways: First, financing using the tax-exempt bonds will be cheaper than private financing because bondholders are willing to accept lower interest rates when interest earnings are not taxable. Using the current spread of 1.5 percentage points between interest rates for tax exempt economic development bonds and corporate bonds and assuming that the entire \$555.3 million cost of constructing the arena is debt financed over 30 years, this subsidy has a present value of \$91 million (in 2005 dollars) over the financing period. If only a portion of the \$555.3 million is financed with tax exempt bonds, then the subsidy would be smaller.<sup>5</sup> This cost would be borne primarily by federal taxpayers, with relatively little impact on New York City or State. City and state personal income tax revenues would be affected only to the extent that LDC bondholders are residents of the city or state.<sup>6</sup>

Although the city will not make an outlay in this financing arrangement, the city will give up resources. Under federal law, there is a limited allocation of tax exempt private activity bonding authority available to each state for residential and other economic development projects. Although in recent years, New York State has not exhausted its allocation, future competition for private activity bonding authority will depend on the construction timetables for alternative projects.<sup>7</sup>

There is a second source of savings for Forest City Ratner Companies from this financing arrangement. Although FCRC will make what the Memorandum of Understanding refers to as PILOT payments to the LDC, these payments are not the equivalent of city property tax payments. Instead they will cover the construction costs for the arena in the first 30 years—and some arena maintenance if the PILOTs exceed debt service. In a more conventional development model, a developer would need to make both construction financing payments and property tax payments for any property tax liability remaining after applying available abatements and exemptions. In the Atlantic Yards case, while the PILOTs are used to pay financing costs in the first 30 years, FCRC will save the cost of property taxes that would normally be due after as-of-right tax benefits expire.

If we assume that the arena would have a market value of

approximately \$100 per square foot, then the savings have a present value of \$14 million in 2005 dollars.<sup>8</sup> In the remaining 69 years, when there is no debt service, 10 percent of the PILOT payment will cover arena maintenance costs stemming from operation of the arena for the private benefit of FCRC, with the balance going to ESDC. The city would get no portion of the PILOT from the arena building.

IBO's estimate of new property tax revenue lost to the arena PILOT does not include a loss of property taxes for the MTA land that would be part of the arena building foot print. The city currently receives no tax payment from the MTA for the rail yard because the MTA, like other state entities, is exempt from local property tax. Under the MTA's Request for Proposals, any developer acquiring the development rights to the site would probably enter into a long-term lease, leaving the MTA in place as the owner. Therefore, the property would likely remain off the city's tax roll, resulting in no impact on the city budget. Indeed, the MTA has an incentive to make a deal that maintains the tax exemption in order to maximize the price it receives for the development rights.

*Low-Cost Lease for the Arena Site.* At present, the MTA, the city, and FCRC own most of the land on the arena site. According to the MOU, the remaining privately owned properties will be acquired by ESDC, possibly using eminent domain, at the expense of FCRC. Once this is done, all of the property will be transferred (or leased in the case of the MTA land) to ESDC, and FCRC will be given a 99-year ground lease for the entire arena site for \$1. Initially, FCRC will sublet the property from the LDC, which will lease it from ESDC for \$1. Once the LDC bonds financing construction of the arena have been fully repaid, FCRC will lease the site directly from ESDC. The lease will stipulate that the arena must serve as the home of at least one professional team for the first 30 years. If there is no team, the lease can be terminated. If there is more than one team, the \$1 rent will be renegotiated. The lease will also require that the space be used for sports or entertainment events for the remaining 69 years after the bonds are retired.

The city will not participate directly in the ground lease for the arena building site, but its contribution of key property will make the lease possible. According to the MOU, the city will transfer its property under the arena to ESDC for \$1. This will include the Fifth Avenue street bed between Flatbush and Atlantic Avenues and the Pacific Street street bed between Flatbush and Sixth Avenues. IBO estimates that the current value of this street property is about \$56,000.<sup>9</sup> The city would also transfer a city-owned parcel (block 1127, lot 33), which is valued at \$93,800 by the Department of Finance.<sup>10</sup> The city was not collecting tax from this city-owned land; therefore, transferring it to FCRC will not reduce property tax revenues from their current level for this land. However, had the property been used for an alternative private purpose, property taxes may have been paid. The use of a nominal lease that ignores the opportunity cost of the land for the city thus

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increases the extent of the public subsidy provided to FCRC.

*Exemption from Sales and Mortgage Recording Taxes.* According to the MOU, ESDC will “consider” using its authority to grant exemptions from city and state sales tax on construction materials and fixtures installed in the arena, as well as any mortgage recording tax related to the arena financing. The state’s economic development law gives ESDC discretionary authority to grant such exemptions for projects it sponsors.

IBO’s fiscal impact analysis assumes that these benefits will be granted. The sales tax exemption is worth about \$10.2 million in combined city, state, and MTA sales tax revenues (\$9.1 million in present value). The city portion is about \$4.9 million (\$4.4 million present value). These savings would be spread over the three-year construction period for the arena. Mortgage recording tax savings are not likely to be significant because the arena construction is being financed through PILOT-backed bonds.

*Other Benefits for the Mixed Use Portion of the Project.* The benefits that would be used in the residential and commercial portion of the Atlantic Yards Project are largely provided under existing tax and financing programs that are widely available for developments across the city. The exception is the \$100 million capital contributions from the city and the state, which according to the MOU may be used for the arena as well as for the area around the arena site which encompasses the mixed-use portion of the project. The benefits from existing programs that will yield savings for FCRC include the use of PILOTs that mimic existing economic development property tax exemptions, and other housing finance programs that are part of the city’s affordable housing initiative.

Although the MOU calls for all of the property making up the development site to be transferred to ESDC, Forest City Ratner Companies is expected to make PILOT payments to the city for the mixed-use development site that will be equivalent to what FCRC would owe if the site was subject to the regular property tax.<sup>11</sup> However, the regular property tax that would be owed on these properties would be quite low in the early years of the project. That is because additional benefits for residential and commercial development in Atlantic Yards are expected to come from existing programs that are available to any project in the city that satisfies the eligibility criteria. These programs eliminate or reduce property tax liability for many years and the PILOTs are expected to mirror those impacts.

*Land Transfers.* Land transfers for the mixed-use portion would be made at fair market value and the PILOTs would be equivalent to the regular property tax resulting in no impact on the city’s baseline budget. Complete assemblage of the mixed-use development site may involve some use of eminent domain by ESDC. Under the terms of the MOU, however, FCRC is expected to pay fair market value to property owners for these

lots through ESDC. Similarly, the city is expected to sell some land (city-owned portions of the triangle west of Sixth Avenue but outside the arena footprint, as well as the Pacific Street street bed between Carlton and Vanderbilt Avenues) to ESDC for full market value and FCRC is expected to reimburse the state development corporation for the full amount. According to the MOU maps, much of this street bed would be used for parkland between residential buildings, which would be maintained by FCRC and open to the public. When the site is assembled, FCRC will transfer any property it owns to ESDC for \$1 and then lease the entire site from ESDC for 99 years for \$1. This fiscal arrangement is quite different from the arrangement for the arena. Because the PILOTs for the mixed-use development portion will be equivalent to regular property tax (net of any of-right abatements and exemptions) and paid to the city, the city will be compensated for its foregone tax revenue on the privately owned property transferred to FCRC to the same extent as it would if any other developer were involved, assuming comparable use.

*Commercial Development.* For the office buildings, the Industrial and Commercial Incentive Program (ICIP) benefits are available as-of-right. ICIP provides exemptions, deferrals, and abatements from real property taxes for up to 25 years for new construction and modernization of industrial, commercial, and mixed-use structures that satisfy certain geographic and other eligibility criteria. The commercial development proposed for Atlantic Yards would be eligible for 16 years of full exemption of the value of improvements, followed by a nine year phase-in. Because it is in a special incentive zone, the project’s property assessments are also protected from appreciation during the first 13 years after each building is constructed.

*Residential Development.* As presented in the bid to the MTA, Forest City Ratner Companies’ current Atlantic Yards plan calls for 5.6 million square feet of residential space—about 4,500 rental units and 1,500 condominium units. In June, FCRC entered a private agreement governing the composition of rental residential development in Atlantic Yards with ACORN. Of its 4,500 rental units, FCRC has agreed to reserve 20 percent for low-income households (with at least 15 percent of these units reserved for very low-income families) and 30 percent for middle-income households. FCRC has also agreed to pursue the development of 600 to 1,000 affordable ownership units on or off the Atlantic Yards site. All remaining rental units and condominiums on the Atlantic Yards site will be market rate.

New York City, New York State, and the federal government all offer subsidies for the development of low- to middle-income housing. Some of these programs are as-of-right. Others are subject to resource constraints, so funds must be allocated among eligible projects. The MOU and other FCRC documents and presentations suggest that Forest City Ratner Companies will take advantage of such programs.

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The 50/30/20 development proposed for rental development in Atlantic Yards corresponds to the Mixed Income program developed recently by the New York City Housing Development Corporation (HDC). Under this program, HDC combines four types of subsidies: low-cost financing of first mortgages funded with proceeds from tax-exempt private activity bonds; low-cost financing of second mortgages funded with HDC reserves; federal Low Income Housing Tax Credits; and 421-a property tax exemptions. To qualify for the Mixed Income program, a development must maintain the affordability of the 30 percent middle-income and 20 percent low-income units for the longer of the effective term of the first mortgage (30 years, unless it is pre-paid) or the term of the 421-a tax exemption.

While there is no cost to the city's budget for HDC's Mixed Income program, two of the four subsidy sources in the program—private activity bonds and HDC reserves—represent limited public resources. By using these resources to build housing at Atlantic Yards, they will not be available for development elsewhere. The competition for these funds will depend on the timing of other projects, relative to Atlantic Yards. As part of its five-year 68,000 unit housing plan, the Bloomberg Administration built 700 units using the Mixed Income program in the initiative's first two years and plans to expand it. In contrast, 421-a property tax exemptions are not capped. Although they will impact the city in terms of foregone new revenue, their use for Atlantic Yards will have no effect on their availability for other projects.

There are two types of Low Income Housing Tax Credits available: competitively awarded 9 percent tax credits and as-of-right 4 percent credits. The 9 percent credits, which are worth approximately 9 percent of eligible project costs for each of 10 years, are allocated to states on the basis of population. Generally, demand for these tax credits greatly exceeds supply, and preference is given to projects with relatively deep affordability restrictions. Four percent credits, which are worth approximately 4 percent of eligible costs for each of 10 years, are available to all projects that are at least 50 percent funded with tax exempt bonds. The 4 percent credits do not count against a state's total allocation of tax credits. While the limited amount of affordable housing proposed for Atlantic Yards would probably keep the project out of the running for 9 percent credits, the project's low-income units developed under the HDC Mixed Income program would be eligible for the 4 percent tax credits. Because these 4 percent tax credits are available as-of-right, their use for Atlantic Yards would not affect their availability to other affordable housing projects in New York City or elsewhere in the state.

Other housing programs are available, some of which use dollars from the city's capital budget, but these programs generally require a greater share of low-income housing than the amount proposed for Atlantic Yards thus far. Some are also targeted at homeless families and other groups.

*Other Considerations.* The price paid for development rights over the rail yard and potential zoning bonuses could provide other benefits to the project.

*Disposition of MTA Rail Yard Property.* If the MTA sells or leases the development rights over its rail yard property to FCRC at a price substantially below other indicators of the parcel's value, the difference would constitute an additional special benefit for the project, although the cost would be borne by the MTA and its riders rather than the city budget. The February 24 agreements between FCRC and the MTA committed the former to pay fair market value for the development rights for the rail yard, although the authority's RFP, issued in May, made it clear that price would not be the sole criteria in selecting a winning bidder. In addition to soliciting bids, the MTA commissioned an appraisal of the property which estimated the value of the development rights, net of the cost of constructing a platform and relocating the train tracks, to be \$214.5 million.

Whether the MTA gets full value for its development rights will depend on the outcome of the bidding process that is still underway. When the MTA board announced on July 27 that the agency would begin a 45-day exclusive negotiating period with FCRC, the MTA Chairman indicated that he had hoped to get a higher bid from the developer. The initial FCRC bid claims to offer a purchase price of \$329.4 million. But only \$50 million of this amount is a cash payment to the MTA. The balance consists of FCRC's estimate of the value of the non-cash benefits that would accrue to the MTA if the project proceeds. These include: the cost of constructing a new rail yard under the new platform (\$182 million), which FCRC argues the MTA would need to do even if the project is not built; additional operating costs arising from the switch to the new under-platform yard (\$25.4 million); some mass transit improvements (\$29 million), environmental remediation and clean-up (\$20 million), and revenue from Atlantic Yards sales tax for the MTA (\$23 million). FCRC also points out that the MTA will retain approximately 1.1 million square feet of excess zoning rights under their plan; they estimate that the MTA could raise about \$55 million by transferring these development rights elsewhere.

A competing bid was submitted by the Extell Development Corporation, which would pay the MTA \$150 million in cash for the development rights. The Extell bid contemplates less dense development with no office buildings and fewer apartments.

*Zoning.* Under state law, ESDC is authorized to override existing local zoning and under the MOU, Forest City Ratner Companies would be allowed to develop Atlantic Yards with greater density than would be possible under current zoning for the site. This would significantly increase the value of the land for current property owners—the MTA, the city, and the private owners, of whom FCRC is already the largest. Although

### Long-Term Fiscal Impact of Proposed Atlantic Yards Nets Arena

*Dollars in millions, 2005 dollars*

	New York City	New York State	MTA	Total
Arena Construction	\$13.7	\$17.9	\$0.6	\$32.2
Arena Operations	115.4	153.1	7.3	275.9
<i>Total Revenue Impact</i>	<i>129.1</i>	<i>171.1</i>	<i>7.9</i>	<i>308.1</i>
Debt Service	-100.6	-100.6	N.A.	-201.1
<b>Net Fiscal Impact</b>	<b>\$28.5</b>	<b>\$70.5</b>	<b>\$7.9</b>	<b>\$107.0</b>

SOURCE: IBO

NOTES: Long-term impacts show as net present value through 2036. N.A. = not applicable. Columns may not add due to rounding.

government action is responsible for creating this value and there is no price extracted by the public sector for it, we do not treat this action as a fiscal subsidy for the project. Zoning changes almost always have some effect on land values. At times, the city has linked zoning changes to the provision of public benefits such as infrastructure or inclusion of affordable housing by developers taking advantage of the new zoning, thereby tapping some of the windfall to current owners. As discussed above, the Atlantic Yards plan includes a substantial affordable housing component.

### FISCAL IMPACT OF THE ARENA

The net fiscal impact for the city and the state for a project such as Atlantic Yards can be estimated by subtracting the budgetary costs of the subsidies offered to the project from the tax revenue that is expected to be generated by the development. As described in the previous section, project benefits involving public budget costs are those that either increase government expenses or reduce government revenues relative to the levels that would occur without the development. Here this includes the debt service costs incurred by the city and state capital contributions. In addition to this, there are the benefits involving foregone new revenue, including the arena property tax exemption and the construction materials sales tax exemption; their impact is accounted for in the reduced estimation of the new revenue generated by the development.

In the case of Atlantic Yards, the fiscal impact analysis is complicated because there are three types of development contemplated—the sports arena, office buildings, and apartment buildings—and because a significant share of the special benefits being offered—the city and state capital subsidies—would benefit all three. Projecting direct and indirect tax revenue from a sports facility is fairly straightforward. However, estimating the new revenues attributable to commercial and residential development requires making many assumptions regarding demand for the new space, the rents/prices the space will command, the types of firms and households that will occupy the new space, and where those firms and households come from. Because information upon which to base such assumptions is limited, particularly in the case of housing developments, we focused

our Atlantic Yards fiscal impact analysis primarily on the arena.

For the city and state, we compare expected tax revenue generated by the arena to the costs of the capital contributions, which may be used outside the arena site itself. Structuring the analysis this way makes it more difficult to find a positive net fiscal impact for the arena. Given that sports facilities generally offer a poor fiscal return on public investments, our finding of a positive net fiscal impact for the Atlantic Yards arena makes it seem reasonable to conclude that the fiscal impact for the entire project would be positive as well.

Taking this approach, IBO projects a modest fiscal surplus for New York City from the proposed Atlantic Yards arena, if the February 18 MOU is implemented. The present value of the surplus over the 30-year financing period is projected to be \$28.5 million (2005 dollars). Because unlike the city, New York State can tax the earnings of non-residents in addition to residents, it would have a larger fiscal surplus of \$70.5 million over the 30 years. Including the additional tax revenue flowing to the MTA, IBO estimates that the combined state and local public sector net fiscal surplus would be \$107.0 million.

*Methodology.* IBO estimated the economic and revenue impact of the arena in several steps. We first used an input/output model to project both direct and indirect output, earnings, and employment impacts over the 30-year financing period, which includes three years of construction and 27 years of operation. We then used our tax forecasting models to estimate the revenues that would result from the projected economic activity.<sup>12</sup> Data on sales expected at the arena (ticket sales, concessions, advertising, and other arena operating revenue) and construction of the arena were provided by FCRC.

Due to the time-value of money (the potential returns accruing to a dollar gained today make it worth more than a dollar gained next year), cash flow dollars will diminish in real (inflation-adjusted) value over the length of a project. Net present value analysis is used to convert the cash flows projected over the life of the project into a number that accounts for the time-value of money. To find the 2005 present value, a discount rate of 6.0 percent was applied.

*Economic Impact of the Arena.* IBO does not expect the combined direct and indirect effects of the new arena to produce a major impact on the local economy. With the arena fully operational, there would be new output valued at \$174 million and the creation of about 900 jobs in the city, with about 730 going to city residents. Eating and drinking establishments would gain about 265 of these jobs (roughly 220 city residents), and amusement and recreation services would gain about 280 (230 city residents).<sup>13</sup> During the three-year construction phase (2006-2008), the output, earnings, and local

employment effects would all be higher than during the subsequent operation period. The arena project would account for nearly 1,500 jobs with somewhat higher average earnings during each year of construction.

**City Tax Revenue Impact from the Arena.** When the arena is operational, additional city tax revenues are projected to total \$7.5 million (2005 dollars) annually, with \$4.7 million coming from the sales tax. Sales taxes are collected on direct economic activities associated with the arena, such as ticket and concession sales, and from meals and drinks consumed outside the arena before and after games. Indirect economic activity spurred by the arena in the local economy also results in taxable sales, and the tax collected on this indirect activity is also included in IBO's revenue estimates. There would be \$1.1 million in additional business income tax revenue, \$0.8 million in new property tax revenue (from indirect effects) after assessment changes are fully phased in, and \$0.4 million in personal income tax revenue.<sup>14</sup> The present value of the new city tax revenues generated by arena operations through 2036 would total \$115.4 million.

During construction, annual city tax revenues would be \$5.0 million, and the mix of sources will be altered as well. With a relatively high proportion of construction workers residing in the city, new personal income tax revenue would be more than three times higher at \$1.3 million than during the operations phase. In contrast, with no arena activities yet available to tax, sales tax revenue during the construction phase is about one-fourth the level during years when the arena is operating.

The present value of the city revenue impacts over three years of construction would total \$13.7 million.

Adding together the present value of the city revenue impacts of arena construction (\$13.7 million) and arena operations (\$115.4 million) yields a total 30 year city revenue impact of \$129.1 million from the arena portion of the Atlantic Yards development. This is \$28.5 million greater than the debt service costs that the city would incur for the entire development (including the mixed-use portions of the project).

**New York State Impact.** IBO projects that the fiscal impact of the arena for New York State would be positive and larger than for the city. The estimated present value of arena construction and operations-related state revenues over 30 years would be \$171.1 million, \$70.5 million greater than the state's debt service costs. Much of the difference between the results for the city and the state is attributable to the fact that all those who earn income at the arena—Nets players, executives, coaches and other staff, and other workers—must pay New York State personal income taxes, while only New York City residents pay New York City personal income taxes. As a result, the state can expect to receive over seven times what the city gets in income tax from arena operations each year, \$3.0 million versus \$0.4 million.

**Comparison with Other Studies.** IBO's finding of a positive fiscal impact for the public sector may seem at odds with the economics literature. Essentially all economic research on professional sports facilities arrives at the same conclusion: communities should not expect a positive fiscal impact from public investments in new sports facilities.<sup>15</sup> Some of the reasons for the limited impact are now familiar. First, sports teams are not large businesses; average revenue for National Basketball Association teams was \$85 million in 2002-2003.<sup>16</sup> Second, because households generally have limited resources

<b>New York City Industry Impacts of Proposed Atlantic Yards Nets Arena</b>						
<i>(Dollars in millions, expressed in 2005 dollars)</i>						
<b>Industry</b>	Total industry output	Value added <sup>1</sup>	Earnings <sup>2</sup>	Employment	Resident earnings	Resident employment
Construction	\$1.1	\$0.5	\$0.4	7	\$0.2	5
Food and kindred products and tobacco products	1.2	0.4	0.1	3	0.1	2
Apparel and other textile products	0.4	0.1	0.1	3	0.1	2
Printing and publishing	1.6	1.0	0.5	8	0.3	6
Chemicals and allied products and petroleum and coal products	0.7	0.3	0.1	1	0.0	1
Transportation	6.7	3.9	2.5	42	1.5	29
Communication	3.2	1.6	0.6	7	0.3	5
Electric, gas, and sanitary services	1.3	0.7	0.1	2	0.1	1
Wholesale trade	2.9	1.9	0.8	13	0.6	10
Retail trade	5.9	3.9	2.3	72	1.6	60
Depository and nondepository institutions and security and commodity brokers	6.6	3.7	1.6	7	0.9	5
Insurance	2.9	1.2	0.7	7	0.4	5
Real estate	18.5	13.9	0.5	8	0.3	6
Hotels and other lodging places, amusement and recreation services	85.8	50.6	24.6	278	-0.5	228
Personal services	0.6	0.3	0.2	9	0.1	7
Business services	8.9	6.0	4.0	53	2.9	43
Eating and drinking places	15.5	8.0	5.4	266	3.9	218
Health services	5.5	3.4	2.4	59	1.7	48
Miscellaneous services	4.0	2.2	1.2	46	0.8	38
Other	0.7	0.3	0.3	10	0.2	8
<b>TOTAL</b>	<b>\$173.9</b>	<b>\$103.9</b>	<b>\$48.2</b>	<b>899</b>	<b>\$15.5</b>	<b>728</b>

SOURCE: IBO.  
NOTES:  
1. Total industry output less intermediary inputs. Corresponds in aggregate to gross product.  
2. Earnings include wages and salaries, proprietors' income, directors' fees, and employer contributions for health insurance less personal contributions for social insurance.



## Annual Operating and Construction Impacts of the Proposed Atlantic Yards Nets Arena

(Except employment, all amounts in millions expressed in 2005 dollars)

	City	IBO Baseline		Total
		State	MTA	
<b>Annual Operating Impacts (Fiscal Years 2009-2036)</b>				
<b>Economic Impact</b>				
Employment	899	989	-	-
Output	\$173.9	\$191.8	-	-
Value added <sup>1</sup>	\$103.9	\$114.9	-	-
Earnings	\$48.2	\$52.6	-	-
<b>Fiscal Impact</b>				
General sales tax <sup>1</sup>	\$4.7	\$5.2	\$0.3	\$10.2
Real property tax <sup>2</sup>	0.8	-	-	0.8
Personal income tax	0.4	3.0	-	3.5
Business income taxes	1.1	0.8	0.1	2.1
Hotel tax	0.0	-	-	0.0
All other taxes	0.4	1.0	0.0	1.4
<b>Total Taxes</b>	<b>\$7.5</b>	<b>\$10.0</b>	<b>\$0.5</b>	<b>\$17.9</b>
<b>Annualized Construction Impacts (Fiscal Years 2006-2008)</b>				
<b>Economic Impact</b>				
Employment	1,487	1,921	-	-
Output	\$261.0	\$341.9	-	-
Value added <sup>3</sup>	\$131.4	\$180.3	-	-
Earnings	\$80.0	\$103.3	-	-
<b>Fiscal Impact</b>				
General sales tax	\$0.7	\$1.0	\$0.0	\$1.7
Real property tax <sup>2</sup>	1.5	-	-	1.5
Personal income tax	1.3	4.4	-	5.7
Business income taxes	1.0	1.0	0.2	2.2
Hotel tax	0.1	-	-	0.1
All other taxes	0.4	0.2	0.0	0.6
<b>Total Taxes</b>	<b>\$5.0</b>	<b>\$6.5</b>	<b>\$0.2</b>	<b>\$11.8</b>
SOURCE: IBO				
NOTES:				
1. Reported general sales tax revenue is net of sales tax exemption for materials and furnishings of the Nets arena				
2. Reported property tax revenue is net of foregone property tax on private property under the arena footprint. Property tax impact when lagged real property assessment changes are fully phased in.				
3. Total industry output less intermediary inputs. Corresponds in aggregate to gross product.				

available to spend on leisure and entertainment, spending at a new sports facility will typically substitute for spending on other local entertainment. This is referred to as the substitution effect. Third, the fraction of arena revenue that gets spent outside of the local economy is usually larger than the fraction of money spent at other entertainment venues. This is because a large share of team revenue is paid to players and team executives who pay substantial federal tax bills, save significant amounts of what they earn, and typically reside (and therefore spend and pay local taxes) outside their team's home arena city.

However, the economics of the proposed Atlantic Yards arena are different from most cases in one important way: The proposed arena would serve as the new home for the Nets after their relocation within the region from northern New Jersey. Given the short distance between the old and new arenas and the excellent public transportation to Atlantic Yards, it seems reasonable to assume that a significant proportion of the fans now attending Nets games in New Jersey will also attend games at the Atlantic Yards arena. In particular, continued attendance of fans from New York City and its nearby suburbs seems likely. For New York City and New York State, the spending

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by these relocated fans at the arena represents economic activity that is new to the local economy. It follows that the substitution effect of the Nets' arena on the New York City economy will be substantially smaller than it would be if the facility were to be used by a team new to the region.

IBO used Forest City Ratner Companies' assumption that about half of those attending Nets games at the Atlantic Yards arena will be from the ranks of those attending now, based on data on recent attendance levels at Nets games.<sup>16</sup> Assuming that 20 percent of the spending by the other half of the fans attending the Nets games will be new to New York City, IBO estimates that nearly 60 percent of Nets' games sales revenue will be new to the city's economy. In addition to the Nets' 41 regular season games, preseason games and potential playoff games, FCRC expects that more than 150 other general admission events would be held at the new arena, including 40 concerts, 35 other sports events such as high school basketball games, and about 80 family-style entertainment shows. For events other than professional basketball games, we assume that spending that is new to the local economy will be 20 percent, considerably lower than for the Nets games.<sup>17</sup>

IBO's fiscal impact figures for the arena differ somewhat from the estimates in other studies of the Atlantic Yards project. These other studies were concerned with the fiscal impact of the entire project, not just the arena. However, each provides some detail on the arena component, allowing comparison to IBO's figures.

Andrew Zimbalist, serving as a consultant for FCRC, estimates that annual sales tax plus income tax revenues from arena operations over 30 years have a present value of \$258 million. In contrast, IBO's estimate of total tax revenue attributable to arena operations—exclusive of construction impacts—from all city, state, and MTA tax sources, as well as tax revenues indirectly attributable to arena operations, is \$275.9 million. The primary reason for the difference is that IBO's estimate of revenues attributable to arena operations includes income from signage, advertising in the arena, and luxury box rent, while Zimbalist's does not. Another significant difference is that roughly a quarter of IBO's estimate of arena tax revenues comes from property, business, and other taxes that are not included in Zimbalist's analysis.<sup>18</sup>

Yung Kim and Gustav Peebles have published a critical analysis of Zimbalist's paper, which reaches a much different conclusion regarding the fiscal impact of the entire project.<sup>19</sup> Their re-estimates of arena revenues are fairly modest, however, reducing the present value of Zimbalist's sales tax and income tax revenue estimates by about \$15 million.<sup>20</sup> Their adjustments result from small changes regarding the effective income tax rate, the number of New Jersey residents who would follow the team to Brooklyn, and the number of non-basketball events the new arena would attract.

The city's Economic Development Corporation also has completed a fiscal impact study of the project.<sup>21</sup> Using a methodology similar to IBO's, EDC finds that arena construction and operations would produce new city tax revenue with a 30-year present value of \$150.3 million. This is slightly higher than IBO's estimate of \$129.1 million.

## **COST OF MUNICIPAL SERVICES**

The addition of an arena, 6,000 residential units, 1.2 million square feet of office space, 180,000 square feet of retail space, and seven acres of public open space should raise municipal service needs for the area. For projects that go through the city's regular Uniform Land Use Review Procedure, such additional service needs are identified in the required Environmental Impact Statement. Because Atlantic Yards is being developed using the authority of the state's ESDC, it is exempt from the city's land-use review process and there is no local Environmental Impact Statement.

In the following paragraphs we discuss some rough estimates by IBO of the most significant service needs and their likely costs. Although IBO expects that there would be little requirement for new spending on fire services, we estimate that the cost of delivering new education, sanitation, and police services that would be necessary if the Atlantic Yards project proceeds would exceed \$42 million annually by 2013. The present value of IBO's estimate of new education, sanitation, and police spending over 30 years is \$530 million. Since most of these costs would result from the housing portion of the project, they are not part of the equation estimating the fiscal impacts of the arena.

*Education:* Department of Education data indicate that new construction of schools would probably not be necessary to accommodate the residents of the proposed development in Atlantic Yards. As of October 31, 2003, elementary and middle schools in District 13 were at 67.8 percent of capacity and high schools were at 79.4 percent of capacity, leaving ample room to accommodate the new residents even at high student/household ratios. Furthermore, the Department of Education projects a decline in enrollment in the district over the next decade.

Adding new students to existing classrooms would raise annual operating costs, however. To estimate the incremental cost we used the following assumptions: all 6,000 units would be filled with people who would not otherwise be New York City residents, that the average household size would be 2.75, that 13 percent of these units would be built each year for eight years, and that the percentage of the new residents enrolled in K-12 would be the same as the percentage of current city residents enrolled (13.4 percent). These assumptions give us an estimate of 276 new students enrolling each year for eight years, reaching a total of 2,208 in the eighth year. Using the current average cost per student of \$14,650 for this year and

assuming this cost will rise by 2 percent annually in subsequent years, the nominal cost would be \$4.0 million in the first year and rise to \$37.2 million in the eighth year. Because the cost of adding a single new student is usually less than the average cost per student and the schools in the Atlantic Yards area currently have excess capacity, this estimate might best be viewed as an upper limit for the amount of K-12 education spending that would be necessary as a result of the new development. Also, the city shares the cost of education with the state and federal governments; the city's share is about 45 percent of the average cost per student.

*Sanitation:* There will be new municipal sanitation expenses for the new residential development in Atlantic Yards. (Solid waste disposal resulting from the arena and the commercial space is the responsibility of the building owner and not a cost to the city.) IBO estimates that these costs will be \$146,850 in the first year and rise to \$1.7 million in the eighth year, assuming that the number of new residents will be 2,063 each year for eight years, reaching a total of 16,500, and sanitation costs per capita (including trash collection and export and street cleaning) will be \$89 per person in the first year and then rise 2 percent per year thereafter.

*Police:* Although existing police resources are probably sufficient to cover the needs of new residents and businesses in Atlantic Yards, costs to the city for policing the new Nets arena could be significant. Assuming that NYPD police protection costs for 45 home games per season consists on average of 100 police-officer overtime tours (at about \$385 per tour), annual overtime costs would total \$1.7 million.

Information from FCRC indicates that an additional 150 events open to the public could be held at the arena each year (bringing the total number to about 200 per year). These additional events would raise this cost, although the security needs and therefore the policing costs would vary widely depending on the types of events. In at least some cases, the arena's private security personnel might handle all duties without the need for city police.

*Fire:* Assuming that a new firehouse would not be necessary, IBO estimates that the additional cost of providing fire protection for Atlantic Yards would be relatively low. It may be necessary to acquire some new equipment to increase the capacity of Brooklyn fire companies to operate in high-rise buildings, but this would not raise annual operating costs. The cost of any necessary capital investment could be spread out over time.

*Other Estimates.* In his analysis of the Atlantic Yards proposal, Andrew Zimbalist provides a present value estimate of \$321.4 million for the combined costs for sanitation and education services over 30 years. (Zimbalist assumes that the new police and fire expenses would be negligible.) IBO's present value estimate for these costs is \$475 million. Part of the discrepancy

is due to different numbers of housing units; he uses 5,850 in his basic analysis and we use 6,000. Zimbalist also uses lower service-cost estimates per housing unit.

## CONCLUSION

If Atlantic Yards is developed as proposed by Forest City Ratner Companies, the mix of arena, office towers, and residential buildings would be the largest economic development project undertaken to date in Brooklyn. Although FCRC would use private financing for much of the project, the city and state have pledged to make significant cash contributions to the project and give FCRC access to special benefits not available on an as-of-right basis to other developers. Beyond these contributions, the project also will be eligible for a set of benefits that are more broadly available.

IBO's analysis of the fiscal impact for the city has focused on the arena, where much of the cash contribution and other special benefits will flow. Despite the generally poor return for public investments in sporting facilities, IBO finds that the Atlantic Yards Nets arena is likely to generate a modest net positive fiscal surplus for the city, state, and MTA, measured in present values discounted over the 30-year financing term.

*Written by George Sweeting, with Theresa Devine, David Belkin, and Molly Wasow Park*

## END NOTES

<sup>1</sup> These as-of-right benefits also involve foregone new tax revenues, but no more so than if the Atlantic Yards site were comparably developed without any special public subsidies.

<sup>2</sup> In this report, present values are computed with a 6 percent discount rate over a term of 30 years.

<sup>3</sup> Despite the legal limit on city and state liability, if the LDC encountered difficulty meeting its debt service obligations, it is possible that the city and/or the state would intervene by arranging new financing for the bonds.

<sup>4</sup> Under IRS regulations, there are a number of tests concerning the use of revenue from sports facilities to back private activity bonds. Essentially, in order to qualify for tax-exempt status, debt service can be paid from arena-generated revenue only if it is collected as payment of an existing tax or tax-equivalent (that is, a PILOT). This seems to imply that the PILOT payments cannot be significantly discounted or increased from the regular property tax amount or they will not pass the IRS test.

<sup>5</sup> Because the PILOT payments that will be used for the tax-exempt bonds must be comparable with the regular tax that would apply if the arena were subject to property tax, it appears that the arena PILOT would be too small to cover annual debt service on \$555.3 million. The MOU indicates that if the LDC issues taxable bonds, FCRC will pay a rent equal to the debt service on such bonds.

<sup>6</sup> Estimating those costs would require knowing how many purchasers of the bonds reside in the city and state.

<sup>7</sup> The recently announced plans to build baseball stadiums for the Yankees and Mets both anticipate using private activity bonds, making access to this scarce resource that much more competitive.

<sup>8</sup> A market value of \$100 per foot is a discount from the approximately \$125 per foot value for Madison Square Garden recorded in Department of Finance data. Savings were estimated by calculating tax payments that would be due over the 30 years net of the benefits of the city's Industrial Commercial Incentive Program, which grants a full exemption for the first 16 years of a project, and then phases in over the next nine years. In years 26-30 there would be full taxes under ICIP.

<sup>9</sup> Department of Finance estimates of full market value for adjacent land for the current fiscal year show a value of \$20.00 per square foot. IBO estimates that the

area of the street beds is approximately 2,820 square feet. Together, these estimates imply a value of \$56,400 for the street beds to be transferred from the city to ESDC.

<sup>10</sup> Another city-owned parcel (block 1118, lot 6) is in the arena site, but appears from the MOU maps to be outside the arena building footprint. According to the MOU, city land outside the arena building site will be sold by the city to ESDC for fair market value and FCRC will reimburse ESDC for this expense.

<sup>11</sup> The language in the MOU, section 10, is unclear about the recipient of the PILOT payments. IBO obtained clarification from FCRC in a telephone conversation.

<sup>12</sup> For more information on IBO's methodology see "The Long-Term Costs and Benefits of the New York Sports and Convention Center," February 2005 ([http://www.ibo.nyc.ny.us/iboreports/nyscc\\_bpfeb2005.pdf](http://www.ibo.nyc.ny.us/iboreports/nyscc_bpfeb2005.pdf)) and "Estimating the Economic and Fiscal Impacts of the New York Sports and Convention Center," July 2004 (<http://www.ibo.nyc.ny.us/iboreports/StadiumBP.pdf>).

<sup>13</sup> The estimate of jobs gained in amusement and recreation services results from roughly 640 jobs added at the arena less about 360 jobs lost to the substitution effect at other amusement and recreation establishments. These losses reflect the Nets' estimate that 43 percent of gross arena revenues would constitute spending redistributed away from existing recreation and amusement activities in New York City rather than new spending in the economy.

<sup>14</sup> As already discussed, this property tax revenue impact does not include any property taxes on the arena site itself, since these are to be eliminated either by as-of-right ICIP exemptions or special exemptions related to the FCRC PILOTS. Moreover, IBO's annual and long-term property tax impact estimate subtracts the value of the current property tax revenue from the private properties within the

site (\$90,277 in the current fiscal year, \$1.6 million over 30 years), as this revenue stream would be given up when these properties are transferred to the developer. To obtain this present value estimate, IBO assumes that property values will appreciate by roughly 2.5 percent per year and uses a discount rate of 6 percent.

<sup>15</sup> A survey of the economics literature is presented by John Siegfried and Andrew Zimbalist in "The Economics of Sports Facilities and Their Communities," *The Journal of Economic Perspectives*, Volume 14, Number 3, Summer 2000, 95-114. Additional critiques are presented by John L. Crompton, "Economic Impact Analysis of Sports Facilities and Events: Eleven Sources of Misapplication," *Journal of Sports Management*, Volume 9, 1995, 14-35 and J.G. Long, "Full Count: The Real Cost of Public Funding for Major League Sports Facilities," *Journal of Sports Economics*, May 2005, 119-143.

<sup>16</sup> Andrew Zimbalist, "Estimated Fiscal Impact of the Atlantic Yards Project on the New York City and New York State Treasuries," unpublished manuscript, Smith College, May 1, 2004, p. 1.

<sup>17</sup> Zimbalist, pp. 9-14.

<sup>18</sup> IBO's inclusion of more arena revenues and estimation of more tax impacts more than offset the higher inflation forecasts and lower discount rate (5.5 percent versus IBO's 6.0 percent) used in Zimbalist's analysis.

<sup>19</sup> Yung Kim and Gustav Peebles, "Estimated Fiscal Impact of Forest City Ratner's Brooklyn Arena and 17 High Rise Development on NYC and NYS Treasuries," June 2004, available at: <http://www.developdontdestroy.com/public/KimPeebles.pdf>.

<sup>20</sup> Kim and Peebles, pp. 5-7, 56

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