A PUBLIC SECTOR FINANCIAL DREAM: NEW YORK'S BATTERY PARK CITY DEVELOPMENT

by

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Submitted to the Department of Urban Studies & Planning on July 27, 1990 in partial fulfillment of the requirements of the degree Master of Science in Real Estate Development at the Massachusetts Institute of Technology

ABSTRACT

This thesis analyzes the financial aspects of the Battery Park City Development (BPC), a massive 92-acre urban complex containing the World Financial Center, over 4,000 units of residential living, and numerous public parks and open space areas. The framework for the capital structure involves a complex series of partnerships between the public and private sector as well as between the City and State of New York. The evolution of these arrangements and, in particular, the various contractual obligations and risks of the public sector, are examined to reveal how this large-scale real estate development blossomed from the early years of financial disaster to the highly successful monetary levels it has obtained today.

A financial model has been composed that simulates the current BPC flow of funds to estimate, given conservative revenue projections, the magnitude of future resources that will become available to the City and the State for uses other than the project itself. Additionally, the impact of varying economic conditions on BPC's capital structure is examined to prove the strength of the project's financial capacity to withstand significant downturns in the local economy and changing New York tax policy.

The paper concludes by answering what government entity has gotten what funds for what purpose, and who can be expected to receive the tremendous benefits the project will generate in the future. The potential risks, if any, that lay ahead for the public sector are outlined to confirm the unlikelihood financial trouble will ever invade the Battery Park City Development again.

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To my father, Edgar R. Oppenheim

A PUBLIC SECTOR FINANCIAL DREAM: NEW YORK'S BATTERY PARK CITY DEVELOPMENT

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CHAPTER ONE

INTRODUCTION

Most people view the Battery Park City development as a wonderful display of architectural beauty with prestigious commercial towers and high-rent residential living. Today, the project consists of more than 6 million square feet of "electronically smart" office space in four towers ranging in height from 33 to 51 stories, and two nine-story octagonal "gate house" buildings. Over 280,000 square feet of retail space surround an 18,500-square-foot atrium, the "Winter Garden", containing restaurants and open eating areas for everyone. This spectacular public space opens onto the North Cove harbor which has become the resting place for yachts of the rich and famous. Additionally, a 3.5-acre public plaza facing the Hudson River provides the breath of fresh air that is often not found in other Manhattan developments. The residential components of the project, currently located to the south of the World Financial Center complex, are comprised of two phases: the Gateway Plaza and Rector Place. Combined, close to 4,000 rental housing and condominium units have been sold or occupied, with future plans to provide 10,000 additional housing units in the next few years. The commercial and residential components of the project are effectively connected by a partially completed 1.2-mile riverfront esplanade and strategically located public parks

and open space. Future plans to complete the esplanade and create a 30-acre park are currently underway. Throughout the entire project, consistent architecture exudes the traditional flavor of New York and successfully connects quality and beauty into one force.

This massive extension of lower Manhattan will always be a constant reminder of how responsive city planning and urban design measures can breed a successful real estate development. What cannot be seen to the visible eye, however, are the financial arrangements that have made this "9th" wonder a reality. Certainly as important, Battery Park City (BPC)'s capital formation represents a pliable and creative structure because it has met the demands of changing economic conditions and emerging opportunities that have persisted over the twenty year history of the project. As tomorrow nears, the monetary benefits that the project promises to provide will spill over the project itself and benefit other areas of the City. In an attempt to ascertain these benefits, this paper focuses on the real hidden treasure of Battery Park City - - its financial structure.

As a professional in New York during most of the 80's, my daily commute to work took me directly past the 92-acre BPC project. My initial recollection was of a site nearly barren, the exceptions being one residential building, Gateway Plaza, and the embryonic construction stages of another. As the years progressed, however, the four structures comprising the World Financial Center and

several residential projects took full shape as they neared completion. During this six-year period, questions I often asked myself was how did such an enormous undertaking get financed? By whom? How long did it take? Who was responsible? Does it make money, and if so, for whom? As could be imagined, the answers to these nagging questions are not simple. The BPC has not always been successful, financially, and as a result the capital structure has undergone change numerous times until the project finally found itself on firm footings.

Chapter Two of this paper answers "who? and how?" the project was financed by examining in-depth the composition of the capital structure of Battery Park City. This chapter traces the events shaping the BPC's financial history, starting in 1972 when money was raised to finance the initial landfill activity up to today's most recent budget deficit bond issue. The pivotal events that took place provide insight for the project's financial failures and successes to date. Additionally, a close examination of the critical partnership arrangements between the public and private sector, and more interestingly between the State and City of New York, provides an understanding of how the monstrous goals the BPC Authority set out to achieve were accomplished. Finally, the changing risks and rewards with each form of the capital structure are outlined to reveal how a large-scale development like Battery Park City is financed.

Chapter Three answers the question of whether "the

project makes money and for whom?" by diving into the intricacies of the capital structure to determine the revenue capacity of the project. Meeting the current financial obligations of the project and other programs to which the public sector is committed is an integral part of the analysis. Additionally, this chapter examines the future resources available to the City and State flowing from the strong revenue stream thrown off by the project. With a model of simulation designed to imitate the exact flow of funds I can analyze the impact of varying economic conditions on BPC's capital structure. My objective is to demonstrate the strength of the project's financial success today and its probable success in the future.

Chapter Four pauses to examine a particularly novel financial arrangement the City, the State, and the BPCA recently agreed upon. In 1989, the BPCA committed to fund the final phase of a $1 billion housing program for rehabilitation of low-and moderate-income units in the City. The purpose of the program is not at question, but rather the way it is to be funded. The BPCA has agreed to pay cash, in specified annual installments, to meet the $600 million portion of its obligation. This chapter questions this financial decision and examines an alternative scenario - - leveraging funds to meet the same monetary objectives.

Finally, in Chapter Five I answer the "who benefits?" question by looking at what government entity has gotten what funds for what purpose, and who can be expected to

receive the benefits the project will generate in the future. In concluding, I will outline the potential risks, if any, that lay ahead for the various public and private partners involved with the project.

By the end, one should have a solid understanding of the financial inner workings of the BPC project, its current fiscal objectives and monetary expectations. One fact did become quite clear to me early in the research process: this heralded project deserves all of the acclamations it has received to date, and more. The view New Yorkers and visitors alike see daily - - an aesthetically pleasing urban complex - - is equally matched by the tremendous monetary rewards this public/private venture has seemingly achieved.

CHAPTER TWO

THE CAPITAL STRUCTURE: A PROCESS OF EVOLUTION

This chapter outlines the capital structure of the Battery Park City Project (BPC) and how it evolved over time in response to changing environments. A close examination of the integral partnerships that were formed is examined as well as the risks the public and private sectors undertook at various stages in the financial process. Chart 2.1 at the end of this chapter illustrates the key events that helped shape the capital structure of the BPC. It also outlines all financings and security sources and provides a visualization of the financial framework as it is discussed in this chapter.

The Partnership(s) Arrangement

From the earliest conceptual stages of BPC, the planners and politicians behind the project envisioned a capital structure built upon two partnerships that would create the landfill/site and act as master developer of the project: a public/public partnership between New York City (the City) and the State of New York (the State) and a public/private arrangement between a newly created state Authority and any potential private developers. The public sector was to be responsible for the creation of the land and the infrastructure while the private sector would

undertake the risk of developing the commercial and residential components of the project.

The Battery Park City Authority (BPCA) created by the New York Legislature in 1968 was the first action taken towards these goals.[1] The following year the City, as the owner/landlord of the site, entered into a 99-year ground lease with BPCA as the tenant. Under this structure, the City, as owner of the site, had significant responsibility for planning and development of the project. The State planned to provide financial support by lending its "moral" obligation on any bonds issued to finance the landfill while the project was in its non-revenue generating phase. Any bonds issued by the BPCA would not be backed by the full faith and credit of the State (and could not absent approval by a majority of voters in a state-wide election), therefore the State's promise to assure any debt repayment would be moral rather than legal.[2] As the project progressed, both the City and the State anticipated that the public sector, acting through the newly created BPCA, would enter into various partnership agreements with private sector developers who would construct the commercial and residential projects on the site in accordance with the 1969 BPC Master Plan. Residential uses predominated in this original plan while the commercial offices that were to become the core of BPC's financial success took secondary priority. Small in size and planned for non-prime location in the distant southern part of the site, the commercial zone was considered an orphan.

At this point the project's initial risks were evident. The public sector was taking all the pre-development risks associated with the creation of the land. Since the BPCA would not be developing revenue-producing uses, the future success or failure of the project hinged on its ability to enter into partnerships with the private sector. Conversely, the private sector's involvement in the project depended on the BPCA's initial financial commitment to create the enormous site. This is often a common dilemma with major developments as the upfront cost of land development for such large-scale projects is often too great for any private entity to digest. Thus, in the case of BPC, with 92-acres of new land, it was necessary for the public sector to assume the initial risk of creating the site and installing the infrastructure without any definite prospect of subsequent development.

Anticipated Lead Time

In 1972, the BPCA (the Authority) issued $200 million in tax-exempt bonds to fund landfill/foundation costs and to provide $6 million in funds to repay the State for advances made to the project from 1969 through 1972.[3] The bonds were backed by the general obligation of the Authority and a pledge of all lease payments derived from future developers. The State's moral obligation to pay debt service if revenues from the project were insufficient

in any one year, was also required to provide the necessary security demanded by investors. Although the State was not obligated to make annual budgetary appropriations for payment on the bonds, it was explicit that such monies would be made available if debt service could not be met from project revenues. Additionally, to compensate for the anticipated lack of revenues in the early years of the project, the 1972 bonds were structured with delayed principal payments and included a significant amount of capitalized interest. This technique was not unusual for municipal financings, however, it did significantly increase the size of the issue, thereby creating a greater future debt service burden. The first principal and interest obligations were due in 1980, eight years after the issuance of the bonds. Approximately $40.5 million in capitalized interest was targeted for interest payments until that time when, hopefully, revenues from the project would be sufficient to meet debt service. As a final security measure, a $14.3 million debt service reserve account was funded from bond proceeds, enough to cover one year of principal and interest. Additionally, it was expected that interest earned an all unused proceeds (i.e., capitalized interest account, reserve fund, and construction fund) would also be used for the payment of interest during the initial years.[4]

With this financial structure the State had a cushion to cover the initial development risks because the 1972 bonds could sustain an 8-to- 9 year period before

project-generating revenues were needed. Unfortunately, no one would have ever expected that it would take more than an entire decade to see the first dollars trickle in from the project.

Problems With the Initial Plan

There were several inherent problems with the initial capital structure of BPC. Much of the development was subject to onerous and lengthy zoning regulations that only delayed the approvals process. The longer it took to develop the project, the more likely revenues would not be available by 1981 to meet debt service payments on the bonds. This fact alone increased the financial risk of the State. Additionally, the initial plan emphasized residential development because the project was thought to be a natural extension of the City southward. Residential development, however, was not viewed as a significant revenue producer of real estate taxes, a key revenue source of the City, while it was well known that commercial development would produce substantial tax revenues for the City. Thus, from a fiscal perspective, the initial emphasis on residential uses was suspect as the best use of the site. Finally, in the original plan no significant tax incentives (tax abatements) were contemplated as a way to entice private sector development on the site. The reasons for this are unclear, however, without them the task of drawing residential investment downtown, to Wall Street's

well-established commercial turf, was all the more difficult.

In retrospect, these internal flaws caused dissention between the State and the City. The State with its substantial financial exposure was, in effect, at the mercy of the City's planning process. Coupled with a weak revenue-producing plan and the lack of any proper tax incentives for the private sector, the difficulty of marketing BPC to potential developers was heightened. The State desperately needed revenues by 1980, and both the City and State shared the potential political embarrassment if by that time all that existed was raw land void of any visible development. Unfortunately, this is exactly what happened over the next ten years as the persistence of a weak real estate market added to the mounting problems facing the project.

Fiscal Crisis and Reformulation

The Project is Empty: From 1974 to 1979, the City and State experienced a fiscal crisis caused by NYC's overspending and ensuing fiscal troubles, a crisis exacerbated by a national recession. Economic decline curtailed the demand for housing and office space in the City while abnormally high interest rates dashed any hopes of the private sector obtaining reasonable financing for prospective projects. As a result, no private development broke ground between 1969 and 1980. The landfill site, completed in 1976,

remained vacant and prospects for future revenues were bleak.

In 1976, with the financial problems of the State becoming more apparent, a thrashing audit conducted by State Comptroller Arthur Levitt combined with the recent 1975 default of the Urban Development Corporation (UDC)'s bond anticipation notes, led to the enactment of a statutory cap on all state agency borrowing. The capping legislation limited BPCA borrowing to the $200 million already issued for site preparation, and $85 million for construction of housing on the project area (this constituted part of a $400 million housing mortgage bond authorization that was passed in 1973 to allow the BPCA to fund the development of middle income housing without dependence on other state agencies).[5] This action officially ended future State commitments to the project in the form of moral obligation bonds as future bonding capacity of the BPCA with any form of general obligation ceased. The future of the project looked hopeless, and the 1972 bonds appeared headed for default.

"Moral" Obligation Bonds In Danger: By the late 1970s, as the first principal repayment on the 1972 bonds neared, it became evident that no income would be forthcoming to meet the $14.3 million annual debt service requirement. Default seemed likely as potential developments under consideration, such as the proposed American Stock Exchange building, could not generate sufficient revenues in a

timely fashion. Additionally, negotiations with the Housing of Urban Development (HUD) to provide insurance for bond financing of the first proposed residential phase, Gateway Plaza, were faltering which further contributed to the reality that revenues were nonexistent.

The 1972 bonds were thought to have been structured in a manner that provided ample time for the project to generate sufficient revenues to support the financing. However, by the year 1980, capitalized interest and earnings on unused proceeds would dry up. Since principal repayment was not permissible from bond proceeds, only the use of a one-year reserve fund could delay default on the bonds and then, only for one year.

By late 1979, the bonds were trading at a significant discount due to the lack of project revenues. The default problems of the State's UDC diminished the value of the State's credit as its own financial solvency became a serious issue.[6] Investor confidence was shattered, and any realistic hopes of saving the project required major restructuring. Significant decisions had to be made by the State Legislature as to whether monies should be appropriated for debt service or whether officials should allow the bonds to go into default. As no solid partnerships with the private sector had evolved to date, the likelihood of the State having to support the bonds over a several-year period was a likely scenario. A bailout plan was needed since the project was in imminent financial danger!

Restructuring and Work-Out Plan Adopted: According to the BPCA's own annual report, the future "...seemed hopeless in 1979, eleven years after the BPCA's creation." The 1980 report further stated, "There seemed little likelihood that an eventual default on the bonds could be avoided, and many felt the BPCA could not survive."[7] This dismal outlook forced all parties involved with the project to devise an alternate strategy.

The resulting reformulation of the capital structure changed the form of the public/public partnership and redefined the uses of the project. In November of 1979, the Governor of New York, the Mayor of the City, and the Executive Director of the BPCA entered into a Memorandum of Understanding (M.O.U.) which incorporated revised design, financial, and legal principles the new partnership would follow. These changes were to be the pivotal point in the history of the capital structure as ownership of the site was transferred to the State through the auspices of the soon to be revived UDC.

The M.O.U. provided the framework for the 1979 Settlement Agreement (the Agreement) which defined relations between the City and the UDC. The main initiatives of the Agreement allowed the UDC to acquire fee interest in the entire site from the City through a condemnation proceeding, and then to convey the site to its wholly owned subsidiary the Battery Park Development Corporation (BPCDC).[8] In 1982, BPCDC conveyed its fee

interest in the site to the BPCA for a nominal consideration, and BPCA became both the landlord and tenant of the property. In contemplation of the BPCA paying itself twice for revenues received, the Agreement stipulated that after the payment of debt service on the 1972 bonds, any revenues available would be split between the BPCA and the City. These amounts are analyzed in detail in Chapter 3. Finally, the Agreement gave the City the right to reacquire the site in year 2000, subject to payment of all outstanding BPCA debt.

Although the M.O.U. and Agreement provided a new legal foundation for the capital structure, the project was still financially paralyzed. The State was now primarily responsible for the development of the site as it owned the property, however, the question of repaying the bonds without any revenues still loomed. Realistically, the State had to commit to substantial monetary expenditures because a default on BPC bonds would impair its own future credit worthiness. Thus in late 1979, as part of the reformulation, the State appropriated approximately $8 million to fulfill its moral obligation on the bonds. This public demonstration of financial support bolstered investor confidence and prevented a default scenario.

The financial bailout plan called for state appropriations to continue as long as revenues were insufficient to meet debt service. At one time it was anticipated that state appropriations would reach $60 million over a five-year time period, however, once

revenues from the project reached a certain level, the BPCA was obligated to repay the State for any advances made, plus accrued interest. Reimbursement of these funds was accomplished in 1986 when the BPCA repaid the State $49,171,500 for principal amounts advanced from 1980 through 1986, plus an additional $19,901,500 in compounded monthly interest.

Two final changes occurred in 1979. First, the Master Plan was revised, and second, the City's incentive package was enhanced to include generous tax abatements. Unlike the first master plan, the 1979 Master Plan emphasized commercial development by reorganizing land uses and relocating the commercial zone from the southern tip of the site to the area directly across from the World Trade Center. Officials finally realized the importance commercial development brought to the project, in terms of revenues - - at this point, a primary objective.

Benefits of the New Capital Structure

The immediate benefits of the new restructuring plan were numerous. Most significantly the 1972 bonds did not go into default. Additionally, the Agreement stipulated that neither UDC nor BPCA was required to comply with the City's zoning resolution if certain requirements were met. This provision greatly reduced the cumbersome approvals process that hampered previous development efforts. The emphasis of commercial development assured significant

revenue streams in the future as tenant payments to the City on the commercial parcels would be significant. In particular, the largest dollars would come from payments in lieu of taxes (PILOT)(negotiated with the City) as the BPCA and the project area are exempt from all real estate taxes. The newly offered tax abatements would provide the necessary incentives to draw private developers to the site. Finally, the reformulation was done in a timely fashion that not only persuaded investors to give the project a second chance but also coincided with an improving local real estate economy.

A New Era Of Financial Health (the 1980)

Suggestions of Prosperity: Beginning in 1980 the real estate market and financial woes of the City turned around and as these external factors began to improve, so did the development progress of the project. With the BPCA at the helm, several key events occurred that shaped the future development of the project. In 1980, HUD agreed to insure approximately $193 million in housing revenue bonds allowing the developers of Gateway Plaza to begin phase 1 construction of the 1,712-unit project. This was BPC's first development. Soon to follow would be the BPCA's conditional approval of the developer for the commercial buildings, Canadian-based Olympia & York (O&Y). The selection of O&Y in 1980, and subsequent signing in 1981 of a master ground lease between the BPCA and O&Y, signified

the first bonafide public/private partnership agreement for commercial development on the site. It was the key turning point in the road to success for the BPC project.

In this public/private partnership the BPCA provided the land, through a sublease arrangement, and paid for infrastructure improvements, while O&Y financed and constructed four buildings making up the World Financial Center (WFC). This commercial complex was to be started in 1981 and completed in 1985 (in May 1981 this completion date was revised in O&Y's specific design plans to 1987).[9] O&Y would benefit from the City's tax abatements on the commercial parcels for the first ten years of occupancy. Although these incentives were attractive, O&Y as master developer for all the commercial parcels, was still exposed to significant risks by undertaking such a financially massive project within a tight six-year time table for completion. Any delays in construction or significant unforeseen cost increases would mean millions in additional interest expense for O&Y. Financing the estimated $1.5 billion development costs of the WFC required ingenuity and unusually strong financial resources from the private sector partner. The O&Y financial plan for the WFC incorporated pioneering schemes such as real estate's entry into the commercial paper market, and real estate loans that, at the time, represented the largest single mortgage transactions in American lending history. The financing strategy also had to be flexible, given the phased nature of the project and the signed lease

commitments that had been made with the BPCA and principal tenants. Over time, O&Y was able to achieve all these financing objectives primarily because preleasing commitments, which amounted to an amazing 93% of the 6 million square feet of office space, were established long before the first tenants occupied space in mid-1985.[10]

With long-term PILOT payments assured under the master lease arrangement, the BPCA, on the other hand, finally turned the corner towards financial success. These payments would commence as soon as the buildings received their certificate of occupancy (1985 at the earliest) and would escalate annually as the tax abatements decreased over the first ten years of occupancy. Additionally, immediate revenues would be realized by the BPCA as base rents were to be paid starting in 1981 at $2 million, and increasing annually to $17 million by year 2000.[11]

In 1981, construction on the WFC began and the BPCA designated six development teams for a second residential phase of the project (Rector Place). As growing revenue projections took on greater reality, many municipal experts began to rethink their opinion of the credit on the 1972 bonds. One of the early supporters was municipal bond analyst Peter Fugiel of John Nuveen & Co. Incorporated, a well-known municipal bond firm headquartered in Chicago. As early as 1982, he reported to investors that, "... the 1972 Bonds should be viewed as investment grade paper once again, equivalent to a single A rating."[12] He recognized the value the O&Y lease represented as the Canadian based

firm was a solid credit-worthy developer whose binding lease obligation with the BPCA assured a revenue stream well into the future. "By the early 1990s", he wrote, "...it appeared sufficient revenues would be available to meet debt service on the 1972 bonds with very substantial revenues (more than four times debt service coverage) anticipated for 1997. With the State of New York demonstrating its ongoing support of the project, the 1972 bonds may even warrant a higher rating in the future."

Fugiel was absolutely correct in his evaluation that the BPC was about to undergo a financial transformation. In hindsight, however, he did underestimate the quickness with which the success would come. In 1984, the first two buildings in the WFC complex were being topped off with occupancy scheduled to commence the following mid-year. Revenues began pouring into the BPCA in the form of lease payments (primarily PILOT payments). As early as August 1986, the BPCA was financially postured to pay debt service on the 1972 bonds from generated revenues, repay the State for advances made, and raise funds for the additional infrastructure needs of the project. At this point, it appeared that the BPC had left the financial morass of the 1970s and entered a new phase of success.

Leveraging Lease Revenues

In 1986, the sufficiency of projected lease revenues allowed the BPCA to issue $184,850,000 in Special

Obligation Bonds which were used to repay State advances made from 1980 through 1986 ($69,073,000) and to fund infrastructure improvements (approximately $53,520,000). Security for the bonds consisted of revenues from a specially targeted set of leases, the Existing Sublease Excess Revenues (Excess Revenues). These revenues, derived from those commercial and residential subleases signed with the BPCA prior to 1986, were the funds available after payment of debt service on the 1972 bonds and all operating and maintenance costs of the BPCA. Reference to Chart 2.1 demonstrates the financial priority of these funds. On the strength of these Excess Revenues, BPCA obtained municipal bond insurance (as additional security) which provided investors with a triple-A security and lowered the overall cost of interest on the bonds by at least 50 basis points.[13]

The 1986 Special Obligation Bonds had particular significance. This issue clearly indicated that the project had reached a self-sufficient state where revenues could support BPCA's capital needs without external financial help. In particular, the State no longer had to make the painful appropriations to meet their moral obligation on the 1972 bonds, and commercial development had reached a level that provided revenues sufficient to repay the State and fulfill certain infrastructure obligations.

Spreading The Wealth

Utilization of "Money Machine" for NonBPC Uses: In 1986 the New York State Legislature passed the New York Housing Program, a ten-year $1 billion initiative for low-and moderate-income housing in the City of New York. Through amendments to the M.O.U. and 1979 Settlement Agreement, BPCA dedicated any available revenue streams from the project to support up to $400 million net proceeds amount for the housing program. The Housing New York Corporation (HNYC) was created to issue debt to fund the initial $400 million phase as soon as revenues from the BPC project were sufficient to meet debt service on any HNYC debt. Through a series of complex public/public arrangements between the State, the City, and the BPCA, an innovative twist to the capital structure was shaped that allowed surplus revenues from the project to fund other nonBPC uses.

As before, all revenues were first directed to pay the 1972 bond obligations and operating and maintenance cost of the project. Then any remaining lease revenues were ingeniously deposited into an Excess Revenue Fund (ERF) to be used for leveraging purposes. In terms of priority, the funds were first to be used to simultaneously repay the State for advances made and any infrastructure needs of the project (this was accomplished by the 1986 Special Obligation bond issue). Second, remaining ERF monies were used as security to fund the $400 million Housing New York Program through the issuance of debt by HNYC. If ERF monies

still remained, a disbursement of the funds would be divided 80%/20% between the City and the BPCA respectively with uses of BPCA's share to be jointly decided (Joint Purpose Monies). This is described in detail in Chapter 3.

In 1987, the HNYC issued $209,995,000 in tax-exempt bonds, the first housing funds to be used for the rehabilitation of approximately 1,800 residential units in Manhattan (Harlem) and the Bronx. Revenues from the BPC project in the ERF provided the primary source of security, and, again, municipal bond insurance was obtained for certain term maturities to further enhance the credit. This bond issue marked the first funds that were used for nonBPC uses -- a historic beginning to the new era of public development wealth created by the BPC project.

The general strength of the Manhattan real estate market during much of the 1980s coinciding with the scheduled occupancy of the WFC (WFC 1 and 3 in 1985; WFC 4 in 1986; WFC 2 in 1987/88), brought new meaning to the term "revenues". Significant surpluses were realized by the BPCA as PILOT payments began flowing because tax assessments on the WFC buildings were rising in line with the City's booming real estate market. In 1989 and 1990 several additional amendments to existing public/public agreements maximized the use of these surplus revenues to support additional nonBPC uses. First in 1989 the City and BPCA amended the Settlement Agreement in a way that increased the BPCA's role in the New York Housing Program. With revenues continually increasing, the Authority

anticipated surplus revenues could fund the additional $600 million balance of the $1 billion housing initiative. After negotiations, the BPCA agreed to pay scheduled and defined cash installments to the City from Excess Revenues, (that is, after debt service on all BPCA and HNYC bonds outstanding were met). This commitment would commence in 1994 and end when the $600 million obligation had been met.

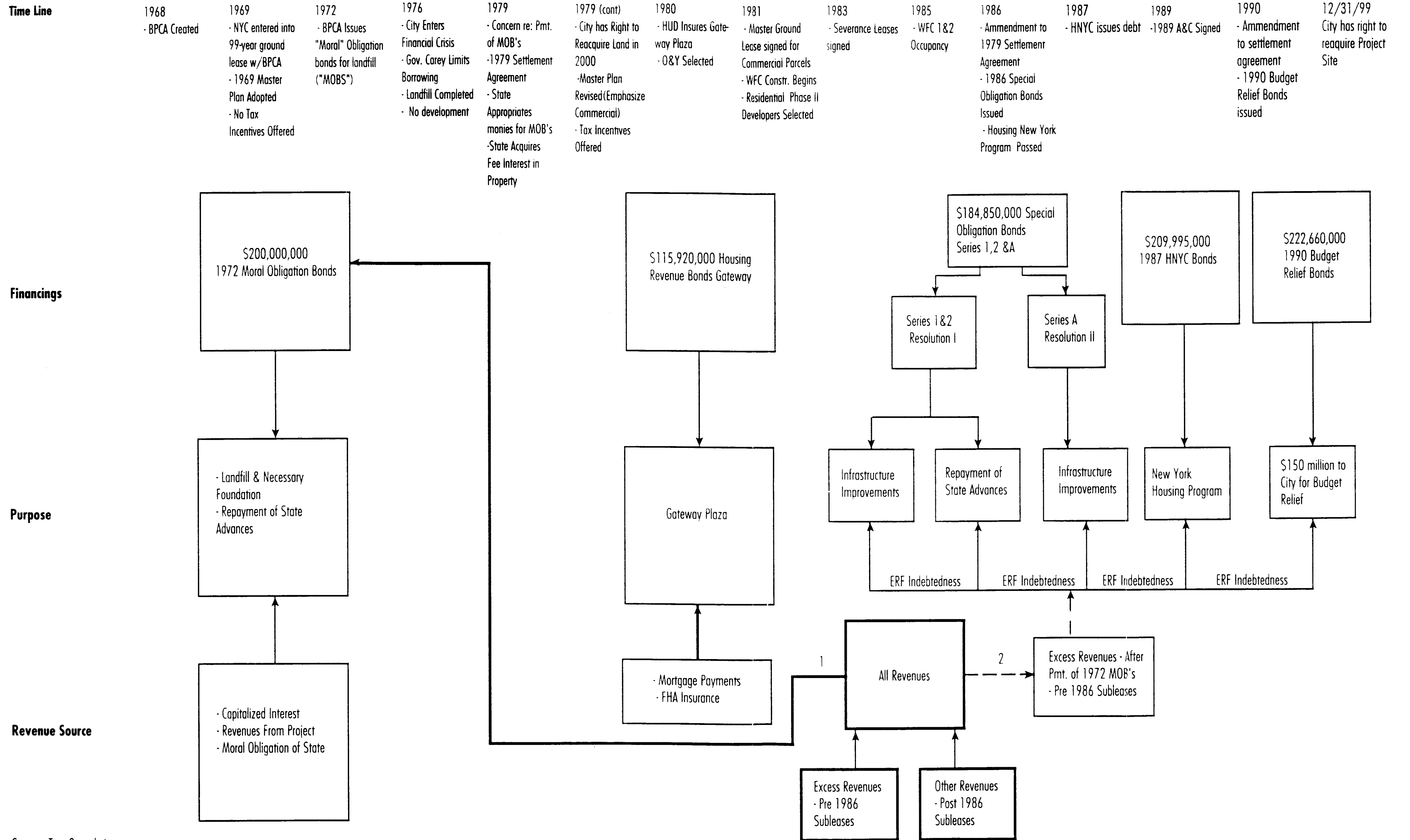
Second, in 1990, the BPCA issued $222,660,000 in Revenue Bonds for the sole purpose of providing funds to the City, a net amount of $150 million - - for budget relief. Excess Revenues sufficient to pay annual debt service on the 1990 bonds were pledged to the bondholders. The bond issue is subordinate to all other debt outstanding and does not have a lien on the Excess Revenues of the project. Only those amounts that are pledged to pay debt service on the bonds provide the security to bondholder. Remarkably, both rating agencies found the revenue stream of the project sufficient to grant an A/A- rating on the bonds. This recent example of leveraging monies for nonBPC uses accomplished several objectives. For the State, it alleviated the need to make politically difficult appropriations that would offer the City relief from its current financial problems. State monies that would have been used for budget relief where now freed for other State initiatives. Additionally, the bond issue set a precedent for additional subordinate debt to be issued in the future after all the prior obligations of BPCA and HNYC have been met.

It is painfully clear that the first ten years of the project were trying and difficult times for the BPCA, the City and the State. The turning point in the history of the project was in 1979 with the legal and financial restructuring of BPC and the redesign of the project's master plan. Commercial development became the priority and the City relinquished its ownership of the land to the State after proving its inability to develop the property in a timely fashion. The commitment from O&Y in 1980/81 to build the WFC complex brought a financially strong private sector partner to the project who constructed world famous buildings, on schedule with "quality" becoming their trademark. The core source of revenues to the BPCA, the City, and the State were now in place and realized surplus revenues would provide the nucleus for funding substantial other nonBPC public sector objectives.

With this overview of the capital formation of BPC, it is time to analyze the monetary viability of the project. A close look at the inner workings of the structure and the sensitivity of the revenue stream to fluctuating economic conditions will help ascertain what the future holds for the public entities involved in the project. Is the current success a phase that will soon pass with the growing economic difficulties of the City, or has the project, in its current form, reached a perpetual state of revenue self-sufficiency?

CAPITAL STRUCTURE OF BPCA (1968-1990)

CHART 2.1



Source: Tom Oppenheim
MIT Center For Real Estate Development

CHAPTER THREE

LEVERAGING THE BENEFITS OF PRIVATE DEVELOPMENT

Today, Battery Park City is a tremendously successful financial project with surplus revenues continually increasing every year. Although it has been an arduous struggle to reach this current financial bliss, it can safely be said that the BPC project is a "money machine" with abundant surplus monies going to fund other essential needs of the City and State. Will this "money machine" continue to produce excess dollars in the future and what extent will be the magnitude of these monies? Should public officials continue their celebration, or be worried that future economic cycles could significantly reduce the monetary benefits of the "money machine"? How will the specific policy objectives established by the public sector be funded? What, if any, are the impacts a decrease in revenues might have on these commitments?

To answer these questions, this chapter analyzes the potential leverage capacity of the BPCA over a thirty-year period given various economic scenarios affecting the revenue stream of the project. The projected leverage capacity accounts for the existing financial obligations of the BPCA and the funding patterns the public sector has earmarked for surplus monies. These commitments include the initial $400-million housing program, additional infrastructure needs of the project, and the recent cash obligation of the BPCA to fund the final $600 million phase

of the housing initiative. Given significant, primarily nonBPC, program objectives and the sensitivity of existing sublease payments to New York tax policy and the economy, the results of the analysis should reveal what monetary benefits the public sector can expect in the future.

In an attempt to accurately predict the future funding resources, the analysis will subject the revenue stream to stress tests that simulate varying economic conditions and City tax policy affecting commercial real estate. The PILOT payments will be the primary focus as these amounts represent approximately 75% to 80% of the existing sublease revenues.[1] Realistic forecasts of projected revenues under No-Growth and Decline scenarios will be analyzed and compared to BPCA's current assumption that PILOT payments will continue to grow at 4.5% per year.

Since PILOT payments are based on the tax assessment of the value of the land and building, current City tax policy is important to this analysis. This is particularly true in light of the recent downward revisions to BPCA's total revenue projections. Because each sublease tenant has the right to appeal the tax estimate for each parcel, rollbacks on tax assessments can occur annually. If the New York State court(s) decide favorably, taxes are revised to reflect the settled amount. In the above-mentioned case, Merrill Lynch contended that assessments had been made on the basis of optimistic income statements. As a result of their successful argument, assessments on WFC building 2 and 4 were rolled back .4% for the 1990-91

fiscal year. Evidently, the assessment did not account for the impact a large block of unused and vacant space had on Merrill's income stream. These adjustments reduced the revenue stream in fiscal year 1990-91 by approximately $1 million but did not adversely affect the financial integrity of the BPCA or the credit rating of the BPCA's outstanding obligations. Adjustments to PILOT payments, however, do present a risk. If future bond issues of the Authority go to market during periods when there is a drop in assessments, the rating and interest rates on these debt obligations could reflect the magnitude of the reduced PILOT payments. This would increase the cost to BPCA of borrowing funds and potentially affect the marketability of future financings.

Finally, the analysis estimates the amount of annual discretionary monies the BPCA and City can expect to have available for specified purposes, given a maximum leverage scenario. "Discretionary Amounts" are defined, in terms of existing financial obligations, as those annual amounts that are available to the City and BPCA after the payment of operating and maintenance costs, debt service on all bonds outstanding secured by existing sublease revenues, and required obligations pursuant to the 1979 Settlement Agreement. As the analysis illustrates, these amounts are a significant direct source of cash to the City and BPCA.

From Lease Revenues to Bonded Debt to City Coffers

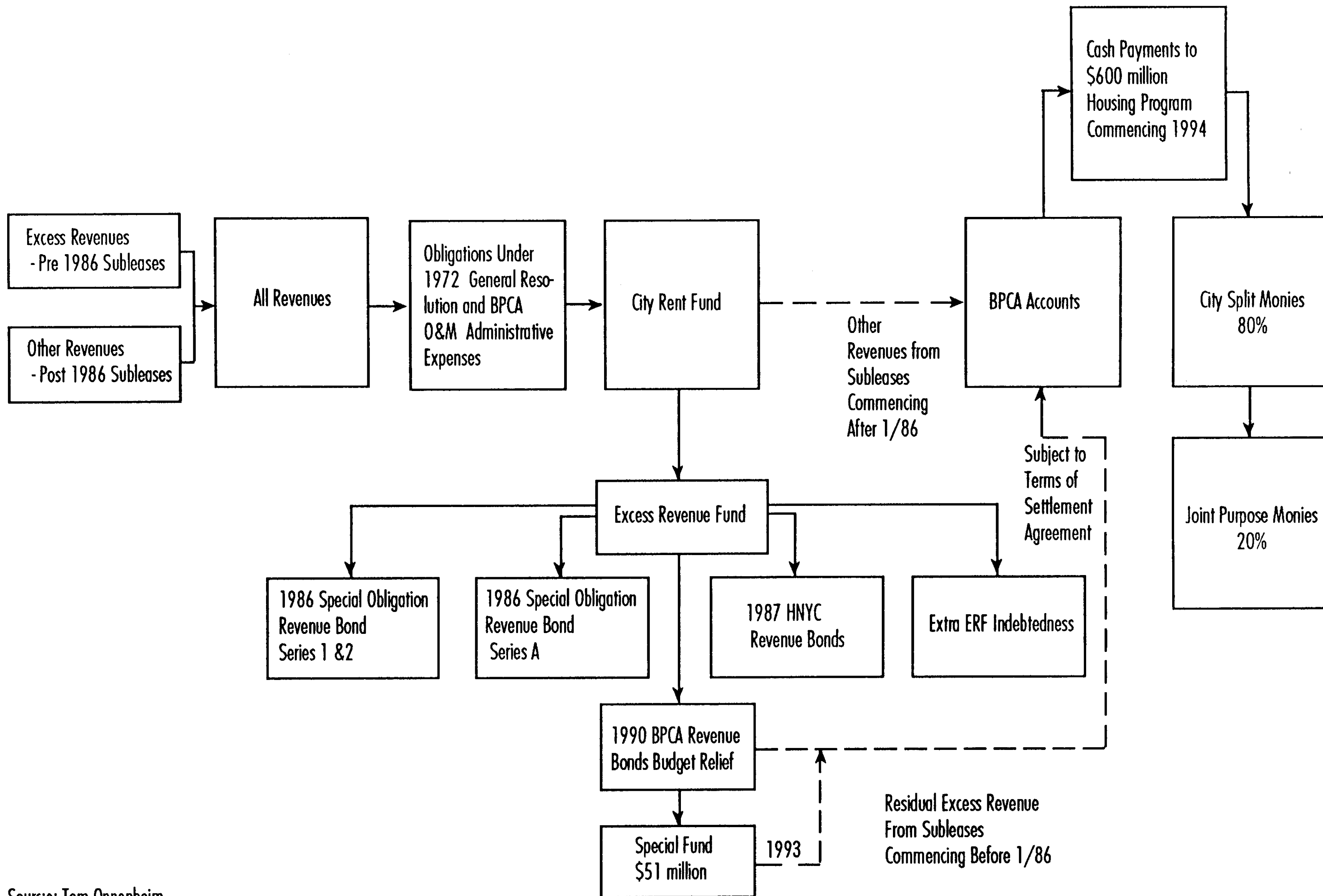
The BPC Flow of Funds: A financial "model of simulation" has been created that accurately represents the current capital structure of Battery Park City. It has been designed to track the flow of funds resulting from all the legal requirements of outstanding BPCA and HNYC bonds and the various agreements between the BPCA and City that have evolved over the past several years. Flexibility of the model allows PILOT payments to be adjusted upward or downward in ten-year increments to determine how changing economic conditions or tax policy would affect bond leverage capacity and discretionary amounts available for other nonBPC uses.

It is important to understand the intricacies and inner workings of the current capital structure in order to effectively interpret the following analyses. Existing sublease revenues are derived primarily from PILOT payments made on the commercial (World Financial Centers) parcels. As mentioned, PILOT amounts represent approximately 75%-80% of the total existing sublease revenues with the remaining commercial revenues being derived from base rent, retail rent and other rent (approximately 10% of total commercial payments). Combined lease payments on the Gateway Plaza and the Rector Place residential phases supply the balance of total existing sublease revenues and approximate 15% of total revenues. Thus the breakdown of existing sublease revenues is derived from 85% commercial lease payments and

15% residential. Annually, these total existing sublease revenues flow through a complex maze of requirements which the capital structure automatically directs for certain predetermined uses. When revenues increase or decrease, so does the direction of these monies within the capital structure to assure all outstanding obligations and program objectives are met in order of their priority. By way of analogy, visualize an armored car filled with money that annually journeys down a straight road with numerous unloading stops along the way toward its final destination. This route remains exact and predictable as long as all BPCA and HNYC bonds subject to existing sublease revenues remain outstanding. To help in the understanding of this flow of funds, a route map the armored car takes each year is provided on the following page.

The first unloading point, or more accurately stated the first priority of monies, is to pay debt service on the 1972 moral obligation bonds pursuant to the 1972 General Bond Resolution.[2] Currently this amount averages approximately $14.3 million annually. After this payment, funds go to pay the BPCA's operating/maintenance and administrative expenses. In 1990, budgeted amounts for these costs are $13.9 million, an accurate figure as the BPCA has never exceeded their budgeted amount.

All remaining revenues then flow to the City Rent Fund, established by the 1972 General Bond Resolution, for disbursement to both the City and the BPCA. The split of funds to each public entity is subject to calculations



Sourc:e: Tom Oppenheim
MIT Center For Real Estate Development

agreed upon in the 1986 Amended Settlement Agreement. It is derived by taking the amounts in the City Rent Fund and allocating them into PILOTs and Other Payments based upon the proportion of PILOTs to Other Payments. The amounts representing the PILOT proportion are remitted to the City and the balance, commonly referred to as Joint Purpose Monies, goes to the BPCA for uses that are jointly decided upon by the Mayor, City Comptroller, and the BPCA. Since the amount of PILOT payments remitted to the City approximates 75% to 80% of the revenues annually, for simplicity the disbursement of all remaining monies is often referred to as the "80%/20%" split.

There is one important caveat to this distribution pattern. In contemplation of the issuance of additional debt, the 1986 Amendment to the Settlement Agreement isolates any revenues derived from existing subleases (those leases signed prior to 1986) and protects them from the initial 80%/20% split mentioned above. Only "Other Revenues" (that is any new leases signed post 1986, lump sum payments , transaction payments, and any future revenues realized from new leases) are subject to the 80%/20% split at the City Rent Fund level after certain obligations under the 1989 Agreement and Consent (A&C) are met. This will be discussed in detail later. At this point, the journey for Other Revenues ends, however, the existing sublease revenues are loaded back into the armored car for a complex series of stops.

The 1986 Amendment to the Settlement Agreement

stipulates that all existing sublease revenues are to be used for the payment of all "Prior Claims and Agreed Upon Commitments," before they are subject to the 80%/20% split. These claims include the payment of all BPCA bond obligations being used to repay $69 million in state advances, to finance $53 million in infrastructure costs, and to secure up to $400 million (net principal amount) of HNYC bonds issued pursuant to the Housing New York Program. These obligations constitute Excess Revenue Fund (ERF) indebtedness, and follow the path of our travels to the next unloading point - - the Excess Revenue Fund (the ERF). Once there, these monies are used to pay debt service on all ERF indebtedness in the following order of priority: (i) The 1986 Special Obligation Bonds ($184.8 million), (ii) the 1987 HNYC Revenue Bonds ($209.9 million), and (iii) any additional HNYC bonds or ERF indebtedness that are issued within the limits of the ERF additional bond test, Municipal Bond Insurance Association (MBIA) requirements, and, as we will shortly see, the 1990 Resolution.

In 1990, through an amendment to the 1986 Amended Settlement Agreement, the definition of "Prior Claims" was expanded to include the 1990 Budget Relief Bonds. The amendment directs revenues to pay debt service on the 1990 bonds (Pledged Revenues) from available ERF funds after the 1986 Special Obligation and 1987 HNYC (Priority Obligations) bond payments are met. It is important to understand that, unlike the 1986 BPCA bonds and the 1987

HNYC issue, the 1990 bonds do not have a lien on the ERF and are subordinate debt secured solely by Pledged Revenues. Any dramatic fluctuations to the ERF fund balance could possibly affect the ability to meet debt service on the 1990 bonds as these funds are directed first to Priority Obligations. Thus, in order to provide assurances to investors, the 1990 Resolution sets forth certain revenue tests that must be met before any future HNYC or other ERF indebtedness is issued. Additionally, a Special Fund was established that requires $51 million of Excess Revenues to be deposited over a three-year period for payment of debt service, on these 1990 bonds, if necessary. Annual debt service on the 1990 bonds is $16 million from 1993 to 1997, and escalates to $19.7 million in 1998 when the first principal payments are due.

At this juncture, the balance of Excess Revenues are stuffed back into the armored car and drives to their last stop before their final destination. The Excess Revenues are reunited with the Other Revenues where they must fulfill the requirements of the 1989 A&C. The A&C stipulates that all revenues (both Excess and Other Revenues) are to be paid to the City in annual cash installments for the benefit of a new $600 million housing initiative. These payments, specified in the A&C, commence in 1994 and increase annually until the program has been fully funded. Total cash installments will fund the entire $600 million program, with payments starting as low as $13.2 million in 1994, increasing to a maximum of $79.2

million in 1999.

After annual cash payments have been made under the 1989 A&C, all remaining monies become "Discretionary Amounts" subject to the 80%/20% split. In essence, remaining PILOT payments are remitted to the City and the balance remain with the BPCA as Joint Purpose Monies. As can be imagined, the use of the Joint Purpose Monies is the cause for many lengthy and heated negotiations between the Mayor's office, City Comptroller and BPCA.

This ends the complicated travels of the Excess Revenues and Other Revenue sources of the BPC project. It should be noted that any future borrowing, such as any debt issued for purposes other than infrastructure costs of the project or to fulfill the $400-million housing program, would not constitute additional ERF indebtedness. This new debt would thus be further subordinate to all issues outstanding, including the 1990 Budget Relief bonds. Additionally, since the new debt would be secured solely by any Excess Revenues (before they become Discretionary Amounts), issuance would require the mutual agreement of the Mayor, City Comptroller, BPCA, and the State. Now that the flow of funds, which the financial model simulates, is understood it is time to examine the analysis.

Modelling The flow Of Funds

General Assumptions: This analysis considers only Excess Revenues generated from Existing Subleases. These monies

represent the majority of total annual projected funds and are easily quantifiable because the amount of contractual obligations that represent signed leases (prior to 1986) do not vary. Monies from Other Revenues, however, are not closely examined because these funds to date represent more recent residential subleases (post 1986) whose revenues depend, among other things, fluctuating transaction payments (those monies derived from closing costs on the individual sale of apartment units). Additionally, Other Revenues can increase with the signing of future leases - - these, of course, are not predictable. Thus, projections of these amounts would be purely speculative and extremely difficult. As derived from the 1990 revised Cushman and Wakefield Pro Forma Cash Flow Study, Excess Revenue projections constitute: (i) master lease payments, from commercial tenants of the World Financial Center's four towers, in the form of PILOTs, and Other Rent (base rent, percentage rent, retail rent, and storage/other rent), and (ii) sublease payments for two residential projects, the Gateway Plaza and Rector Place.

The model incorporates all outflows of money for existing debt service payments, the 1989 A&C obligations, and other BPCA required expenditures. In addition, debt service on $56 million planned future financings (net proceeds) for BPC's final infrastructure costs and $257.4 million (net proceeds) in final fund obligations to the $400-million housing program have been included in the model. According to the BPCA, these will be issued over

the next three years.[3] The amounts available after these obligations are fulfilled are integral; they represent the remaining leverage potential of the BPCA's current revenue stream. These monies, after passing the additional bond test of the ERF indebtedness and 1990 Bond Resolution, MBIA insurance requirements, and other bond covenants, are what will be available to secure additional subordinate debt and/or provide discretionary amounts to the City and the BPCA.

I have assumed that the specific obligations under the 1989 A&C will be met in each year with any shortfalls being funded from Other Revenue sources. Preliminary BPCA projections of these more variable revenues indicate that sufficient funds will be available to fulfill the housing obligations in each year under the 1989 A&C. All future leveraged amounts are assumed to mature in thirty-years and carry a tax-exempt rate of 8.00%, a figure which is consistent with today's interest rates. Following the pattern of existing indebtedness, interest is capitalized for three full years with the first debt service payments commencing in the fourth year the bonds remain outstanding.[4] All existing and future reserve funds assume earnings at an interest rate of 5.00%, the actual rate used by the BPCA and its financial advisors for their projections. Operating/maintenance and administrative expenses of BPCA grow annually at 5%, and finally, all new leveraged amounts must meet an onerous 2-times debt coverage ratio. This very high standard has been an

attempt to insure a credit rating of A- or better even in the event potential credit analysis by the rating agencies becomes more stringent in the future. This assumption, however, is extremely conservative, especially in light of the fact that the 1990 bonds received an A/A- rating from Moody's and Standard and Poor's under a 1.25 times coverage ratio.[5]

Following Cushman and Wakefield's assumption, which is based on an historical analysis of New York tax policy, the Base-Case financial analysis incorporates a 4.5% annual growth rate in PILOT payments. This study, covering a 20-year period from 1970 through 1989, concludes that either or both the assessment on the value of the land/building and the actual tax rate for commercial properties has increased on average 4% to 5% per year. In fact, at no time over the past two decades has the total taxes collected by the City declined in any year. For example, the 1970s were a period of serious city-wide recession, sluggish or declining real estate values, high office vacancies and foreclosures. This unfavorable climate for commercial real estate, however, did not negatively affect taxes as commercial real estate assessments rose 1.96% on an annually compounded basis while the tax rate grew at 6.08% on the same basis. Given this evidence, a PILOT growth rate of 4.5% is consistent with historical tax policy in New York.

PILOT payments do not reach full value until 1999 because specially negotiated tax abatements remain in

effect for the first ten years of each commercial parcel's sublease. The abatements include a 75% exemption for the first 2 million square feet of space which drops 7.5% per year until the eleventh year, and a 50% exemption on the remaining 4 million square footage which drops 5% per year until the eleventh year. For example, in 1989/90 land/building assessment for the 1,156,000 square foot WFC 1 was $164 million and the tax rate was $9.53 per $100 of assessment.[6] Therefore the full value of the PILOT payment owed to the BPCA was $15.6 million. However, with the tax abatement in place, the bill is only $3.9 million in the initial year. The following year, if the assessed values and tax rates remain constant, the amount due is $5.1 million because only 67.5% of the assessed value is exempt. This PILOT payment escalation continues until the eleventh year when the full $15.6 million would be owed.

Results: A financial summary of the Base-Case analysis can be found on the following page with complete financials presented in Appendix A. The summary sheet highlights the flow of Existing Sublease Revenues and identifies the prioritized uses of these monies as reflected in BPC's current structure. The analysis provides aggregate figures for the entire thirty-year period plus a breakdown of the amounts in ten-year intervals to gain a better understanding of how and when the revenues are realized and expended. The summary sheet is designed to illustrate how much Excess Revenues are available for future unplanned

Figure 3.2
Summary of Base Case Scenario - - BPCA Flow of Funds Model

BREAKDOWN OF COMPONENTS	Total (1990-2020) (Millions)	Years (1990-2000) (Millions)	Years (2001-2010) (Millions)	Years (2011-2020) (Millions)
Revenues From Existing Subleases....	$6,643.4	$1,315.4	$2,182.2	$3,145.7
Current Debt Service Obligations........	(1,906.7)	(636.9)	(709.6)	(560.3)
O&M/Adm. Costs.......................	(983.6)	(197.5)	(299.0)	(487.1)
Reserve Fund Interest...............	68.7	25.0	25.6	18.1
Excess Revenue Fund (ERF) Amounts(1)....	3,821.8	506.0	1,199.3	2,116.5
Planned Financings Debt Service......	(1,157.9)	(274.5)	(441.7)	(441.7)
Net Excess Applied to Settlement Agreement...........................	2,663.9	231.5	757.6	1,674.8
NEW HOUSING PROGRAM (@600 Million)				
Excess Revenues Applied (2).............	233.1	113.8	119.3	0.0
City Split Amounts (3)..................	66.7	66.7	0.0	0.0
Other Revenues Needed (4)................	300.2	242.6	57.6	0.0
Excess Rev. Available For Leverage(5)...	2,364.1	51.0	638.3	1,674.8
FUTURE UNPLANNED LEVERAGE CAPABILITY				
Leveraged Amounts......................	1,213.1	368.0	433.7	411.4
Net Proceed Amounts(6)................	788.5	239.2	281.9	267.4
Debt Service On New Debt................	(1,136.1)	0.0	(298.8)	(837.3)
Greatest Single Year Bonding Capacity...	368.0	368.0	60.3	131.4
(Year)	2000	2000	2009	2013
Excess Revenues Available For Split(7)..	1,228.0	51.0	339.5	837.5
DISCRETIONARY AMOUNTS				
City Split (After Housing Program)......	941.6	0.0	271.6	670.0
Joint Purpose Monies (Nominal Dollars)..	286.4	51.0	67.9	167.5
FUNDING SOURCES AVAIL. AFTER HSG. (PV @ 8.00%)				
Leveraged Amounts.......................	345.0	N/A	N/A	N/A
City Split	209.6	N/A	N/A	N/A
Joint Purpose Monies....................	76.3	N/A	N/A	N/A
TOTAL............................	631.0			

FOOTNOTES: (Please see complete financials in Appendix A)

(1) $51 million of this amount is deposited into the Special Fund from 1990-1992 and is not available for debt service in these years. In 1993, this amount becomes Joint Purpose Monies.
(2) Existing sublease excess revenues applied to new hsg. program pursuant to M.O.U and 1989 A & C.
(3) City split amounts used to fund new hsg. program in the years 1990 through 1993.
(4) These are additional revenues needed to meet the 1989 A&C hsg. obligations due to insufficient existing sublease revenues. Their source is new leases, transaction payments, and anticipated future revenues from new subleases signed post 1986.
(5) Represents Excess Revenues after payment to $600 million hsg. of $233.1 excess rev. plus $66.7 city split amts.
(6) Represents 65% of bond proceeds to account for cost of issuance, capitalized interest, and reserve fund amounts.
(7) Excess Revenues Available for Leveraged amouunts less new debt service on unplanned financings.
Source: Tom Oppenheim, M.I.T. Center For Real Estate Development

leveraging capacity and distribution amounts after all current debt and program obligations of the BPCA have been fulfilled.

The enormous amount of total existing sublease revenues realized over the next thirty years - - almost $6.7 billion - - immediately answers the question whether the project will make money or not. To put this amount into perspective, it should be understood that a majority of these monies are generated from the 6 million square feet of the WFC complex alone! There is no telling how much more revenues will be realized from future development as almost half of the 92-acres are still unoccupied. Approximately 80% of the $6.7 billion will be generated in the last twenty years (2001-2020) of the study period when PILOT payments no longer reflect any tax abatements. Before funds can be made available for additional uses, approximately $2.9 billion must be used to pay for current debt obligations and operating costs of the project. Remaining Excess Revenues servicing planned financings expected to be issued in the next three years (1990 through 1993) will consume an estimated $1.2 billion over the next thirty-years. Sufficient Excess Revenues in any year are strong enough to support all outstanding commitments. This is demonstrated by the large Net Excess amounts (line item Net Excess Applied to Settlement Agreement in figure 3.2) available in any ten-year interval, even in the weakest time period (1990-2000) when revenues still reflect tax abatements. Therefore, it is safe to conclude that all

current and planned debt service payments of the BPCA and HNYC will be easily be met for the duration they are outstanding.

The next level of priority the public sector has established is the new $600 million housing initiative. As explained earlier, this commitment will be fulfilled through annual cash payments commencing in 1994 and ending when the program has reached the entire funding level. To pay for this program, all available revenues are to be immediately directed from earmarked monies over the next thirteen years. (These funds include available Excess Revenues, City split amounts, and Other Revenues.) The 13-year time frame represents the period that it will take to cumulate revenues sufficient to meet the annual cash payments specified in the 1989 A&C. These contractual demands can be found in Appendix A in the detailed financial worksheet on the line item "Housing Program Payments per A&C."

The summary sheet delineates the different sources of revenues used to meet the $600-million housing initiative. The two largest funding sources, Excess Revenues and Other Revenues, total $233.1 million and $300 million respectively. By design, the first monies directed to the program are the maximum amount of Excess Revenues available in each year. At the outset in 1994, Excess Revenues are insufficient to meet annual payments because existing obligations digest most of these funds. As a result, BPCA must compensate for deficient amounts by tapping Other

Revenue sources that become available. These amounts are significant because they represent half of the funding source of the total housing commitment - - and such supplemental funds are necessary to fund the A&C targets in each year the program is outstanding (Please see Appendix A for annual Other Revenue amounts). The third source of revenue is the money available to the City under the 80%/20% split provision. Since the A&C agreement first directs all available revenues to the housing program, the traditional split is eliminated from 1994 until the program goal is met. Due to the delayed commencement of A&C cash payments, however, $66.7 million City split dollars are available in the years 1990 through 1993 to the fund the initiative. Although there is no contractual obligation of the City to apply these monies to the program, I have anticipated that the City will make these funds available as the program primarily benefits City residents and has become a high priority within the Administration.[7]

As the model indicates, the $600-million housing program is likely to be fully funded by the year 2003. Since this commitment represents the last contractual obligation the public sector has established to date for BPCA surplus monies, revenues from this time forward can be utilized to support leveraged amounts and provide discretionary monies to the City and the BPCA under the initial split arrangement. Over the subsequent twenty years (2001-2020), the model predicts that the BPC project will generate enough excess revenues to fund $788 million

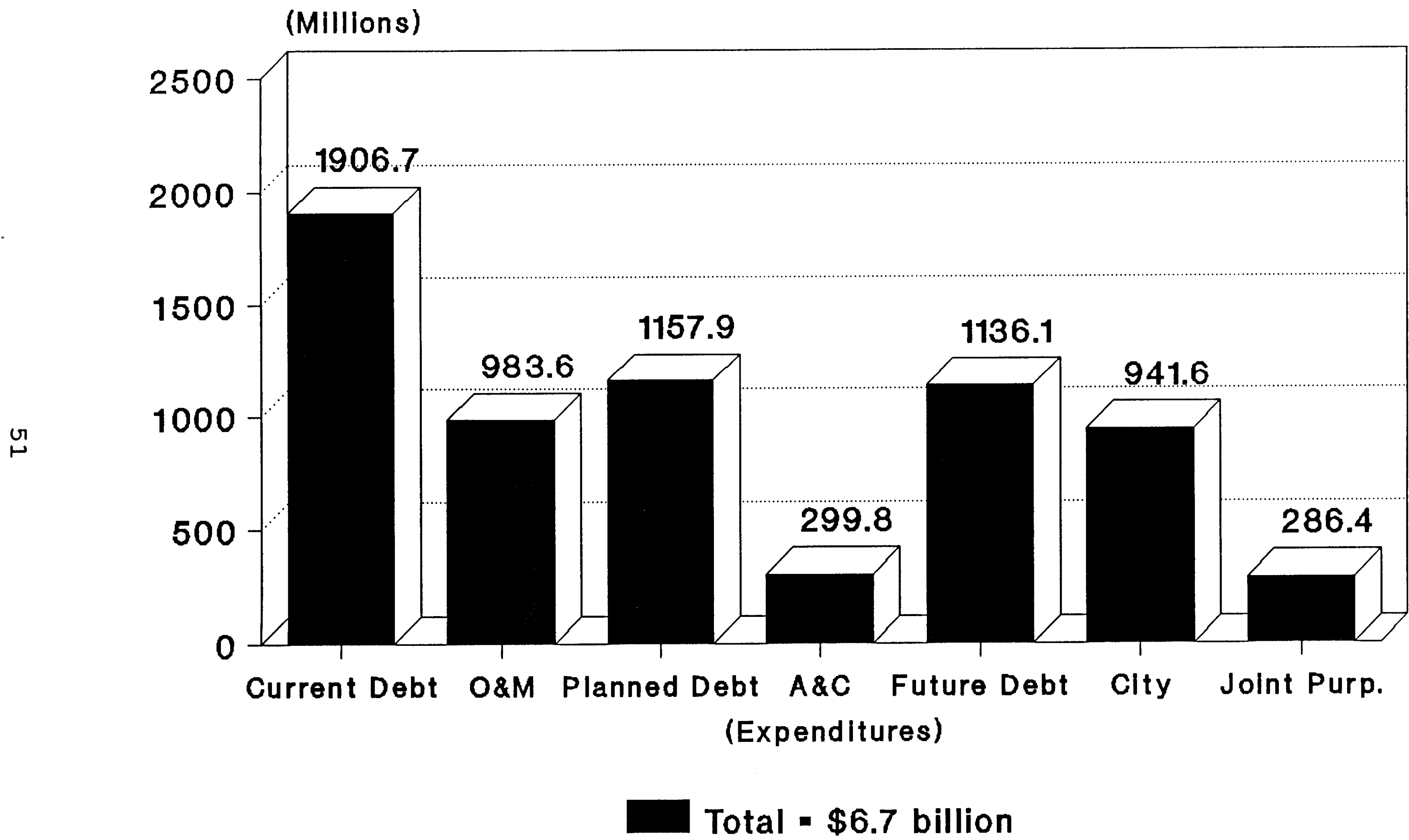
in net proceeds from municipal bond offerings, with the first feasible issuance date being as early as year 2000.

How can this happen when the new housing program has not yet been fulfilled? First, a maximum of $368 million (par amount) of bonds can be issued in 2000 due to the fact that three years of capitalized interest (calculated into the size of all unplanned leveraged amounts) permits advanced bond issuance. This means that the first debt service payment obligation on these new bonds would be in the year 2004, not 2000. Second, since the housing program goal will have been met by this date, available Excess Revenues will amount to $65 million in that year alone. Given a conservative 2-times debt coverage ratio, the amount of debt service these Excess Revenues can support approximates $32.5 million (with the remaining balance of monies going to the City and BPCA as split amounts). Because Excess Revenues will continue to grow in the remaining years absent large capital outlay programs, the amount of future leveraging capability and discretionary amounts that can be expected for other nonBPC uses is likely to reach significant proportions.

On the following page, Graph 3.3 illustrates the distribution of BPCA's $6.7 billion existing sublease revenues generated during the thirty-year period of analysis. As mentioned, total existing sublease revenues are applied in certain order of priority which the graph displays. Several noteworthy conclusions can be drawn. First, revenues are sufficient to support the initial costs

Graph 3.3-Application of Revenues

Total 1990-2020 Existing Sublease Rev.'s



Source: Tom Oppenheim, MIT CRED

of creating the land, infrastructure needs, and annual operating costs of the project. This is reflected by monies being applied first to the $1.9 billion of current debt payments and the $983.6 million in O&M costs of the project over the next thirty-years. Secondly, Excess Revenues will be available to support additional projected capital costs of the project, and additional bonds to fulfill the initial $400-million housing commitment of the BPCA. This is conveyed by the bar that represents planned debt. Existing sublease revenues that remain will then be applied to the new A&C $600-million housing initiative. Only $300 million will be available to meet this obligation: as $233 million Excess revenues and $66.7 million City split amounts are available during the period between 1990 and 2003. The remaining $300 million necessary to fulfill the program will come from Other Revenue sources. Finally, after all these obligations are met, beginning in 2004, Excess Revenues will be sufficient to provide significant leveraged amounts and Discretionary monies to the City and the BPCA. The bar labeled "Future Debt" indicates the maximum amount of debt service Excess Revenues can support given a 2-times debt coverage ratio. The $1.13 billion figure is the aggregate debt service payments on $1.2 billion par amount of bonds that can be issued in the last 20 years of this study period. These funds will provide significant additional resources for other nonBPC uses. Finally, the remaining balance of Excess Revenues in each year will result in $941.6 million

City split amounts and $286.4 million Joint Purpose Monies.

The last three bars on the graph (Future Debt, City, and Joint Purp.) illustrate the financial prowess of the existing sublease revenues in the future. It is obvious that the current status of BPC's revenue stream is sufficient to accomplish significant monetary initiatives the City, State, and BPCA wish to focus on. The Base-Case has assumed conservative growth rates to the revenue stream and has imposed onerous new financial requirements such as a 2-times debt coverage ratio. However, the New York real estate market and economy are currently undergoing difficult times. Thus, it is necessary to ask whether the "money machine" can continue to meet the optimistic goals of the public sector under difficult economic times.

Testing the Sensitivity of Revenue Flows

"No-Growth" and "Decline-Case" Assumptions: Under these scenarios, the exact same assumptions that were used for the Base-Case analysis apply. The only exception is adjustments to the growth rate of the PILOT payments.

The No-Growth scenario assumes that PILOT payments do not increase in size from the years 2000 to 2020. While the commercial parcels are subject to partial exemption, however, tax assessment of the land/building(s) remains at a 3% annual growth rate and the effective tax rate continues to increase by 1% per year. These assumptions allow, in effect, the tax abatements to be fully utilized

and the full value of the PILOT payments to be realized before subjecting them to a No-Growth hypothesis. Following Cushman and Wakefield's analysis, it is realistic to assume the City's future tax assessments on the commercial parcels during the first ten years of the study period will increase. Since PILOT payments are derived by two components, the tax assessment of the land/building and the tax rate, the City has the ability to compensate for any decrease in one component by increasing the other. In fact, the Cushman and Wakefield's historical study found such an interplay pattern between these two variables. During the 1970s, tax rates increased dramatically, while assessments remained fairly constant. During the 1980s, however, assessments not tax rates have been the prime instrument of the City's tax policy. Given this convincing evidence combined with the specially negotiated tax abatements already built into the commercial subleases, allowing the PILOT payments to reach their full value seems to be a realistic assumption, even for the No-Growth scenario.

On the other hand, the Decline scenario adjusts PILOT payments downward by 2.4% annually during the first ten years, then assumes 0% growth from 2001 to 2010, and finally resumes a reduction in PILOT payments by 2.4% annually in the final ten years of the analysis. This scenario seems highly unlikely given the historical tax policy of the City and economic cycles that persist in real estate, however, it is worth examining to see the impact

such a doomsday hypothesis would have on the BPC project revenues.

Results: The summary sheet on the following page compares the Base-Case findings with the results of the two sensitivity analyses. An initial review of the figures shows a significant reduction in the amount of leveraging capability and discretionary amounts realized by the City and BPCA resulting from reduced revenue projections. Most of the generated revenues, under these scenarios, are utilized to pay for the mandatory $400-million housing program, plus all other prior obligations of the BPCA. Additionally, less Excess Revenues are available for the $600-million housing initiative and as a result, greater dependency on Other Revenues becomes necessary. For example, in the No-Growth scenario, $33 million in Other Revenues is required, above what is necessary in the Base-Case; in the Decline-Case scenario the figure is $56 million. The conclusion is clear: a reduction in PILOT payments for any length of time shifts the burden of funding this portion of the housing initiative to the less uncertain and more variable revenues from Other Revenue sources. This is risky as Other Revenue amounts, today, represent a minor source of the total revenues available to the BPCA.

Graph 3.5 (pg.58) illustrates how fluctuating Existing Sublease Revenues will impact the program objectives of the public sector. Revisions to the revenue stream in the two sensitivity analysis still produce $4.9 billion and $4.7

Figure 3.4
Comparison of Sensitivity Anaysis - - BPCA Flow of Funds Model

BREADOWN OF COMPONENTS	BASE CASE (4.5% increase 2000 - 2020) (Millions)	NO GROWTH (0% increase 1990-2020) (Millions)	DECLINE CASE (2.4% decrease ten yr. cycles) (Millions)
Revenues From Existing Subleases....	$6,643.4	$4,950.1	$4,728.4
Current Debt Service Obligations........	(1,906.7)	(1,906.7)	(1,906.7)
O&M/Adm. Costs......................	(983.6)	(983.6)	(983.6)
Reserve Fund Interest...............	68.7	68.7	68.7
Excess Revenue Fund (ERF) Amounts(1)....	3,821.8	2,128.6	1,906.8
Planned Financings Debt Service......	(1,157.9)	(1,157.9)	(1,157.9)
Net Excess Applied to Settlement Agreement..........................	2,663.9	970.6	748.9
NEW HOUSING PROGRAM (@600 Million)			
Excess Revenues Applied (2)............	233.1	200.1	182.8
City Split Amounts (3)..................	66.7	66.7	61.1
Other Revenues Needed (4)...............	300.2	333.1	356.1
Excess Rev. Available For Leverage(5)...	2,364.1	703.8	505.0
FUTURE UNPLANNED LEVERAGE CAPABILITY			
Leveraged Amounts......................	1,213.1	200.1	43.8
Net Proceed Amounts(6)................	788.5	130.1	28.5
Debt Service On New Debt...............	(1,136.1)	(277.7)	(66.2)
Greatest Single Year Bonding Capacity...	368.0	173.8	43.8
Excess Revenues Available For Split(7)..	1,228.0	426.1	438.8
DISCRETIONARY AMOUNTS			
City Split (After Housing Program)......	941.6	300.0	310.2
Joint Purpose Monies (Nominal Dollars)..	286.4	126.0	128.6
FUNDING SOURCES AVAIL. AFTER HSG. (PV @ 8.00%)			
Leveraged Amounts......................	345.0	79.6	18.8
City Split	209.6	109.6	112.2
Joint Purpose Monies....................	76.3	51.3	53.1
TOTAL............................	631.0	240.5	184.1

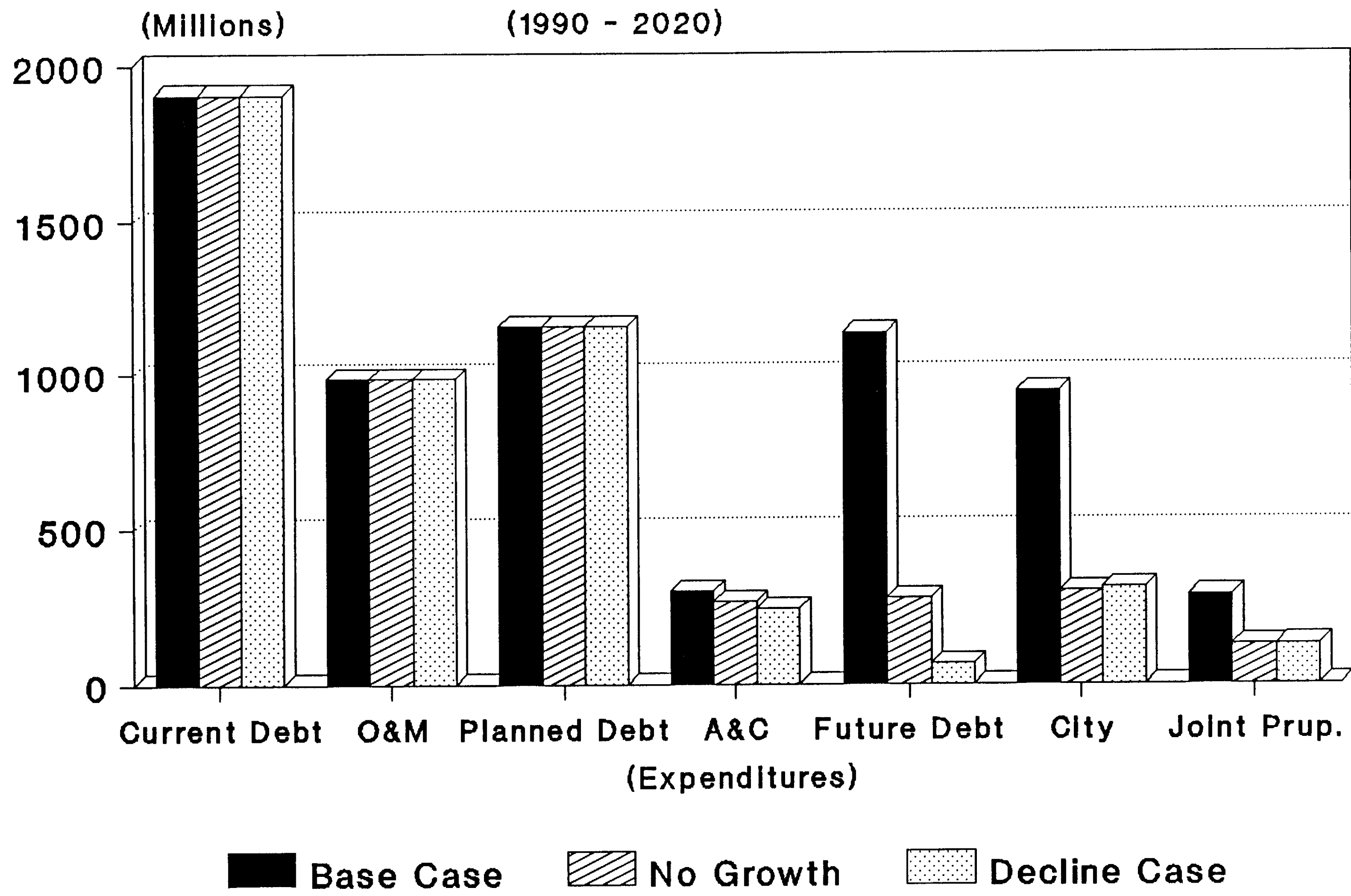
FOOTNOTES:

(1) $51 million of this amount is deposited into the Special Fund from 1990-1992 and is not available for debt service in these years. In 1993, this amount becomes Joint Purpose Monies.
(2) Existing sublease excess revenues applied to new hsg. program pursuant to M.O.U and 1989 A & C.
(3) City split amounts used to fund new hsg. program in the years 1990 through 1993.
(4) These are additional revenues needed to meet the 1989 A&C hsg. obligations due to insufficient existing sublease revenues. Their source is new leases, transaction payments, and anticipated future revenues from new subleases signed post 1986.
(5) Represents Excess Revenues after payment to $600 million hsg. of $233.1 excess rev. plus $66.7 city split amts.
(6) Represents 65% of bond proceeds to account for cost of issuance, capitalized interest, and reserve fund amounts.
(7) Excess Revenues Available for Leveraged amouunts less new debt service on unplanned financings.
Source: Tom Oppenheim, M.I.T. Center For real Estate Development

billion in total revenues. Although this represents approximately a $2 billion decline in total revenues, monies over the thirty-year period are still sufficient to meet, in a timely fashion, current debt obligations, operating costs of the project, and planned financings that are expected to be issued in the next three years. Therefore, even in the Decline scenario, revenues are still sufficient to pay for the cost of creating of the landfill, final infrastructure, and fulfilling the City's $400-million housing commitment. The real impact of the downward movement in PILOT payments is on the ability of the BPCA to fund the subsequent $600-million housing commitment and other nonBPC uses realized under the Base-Case.

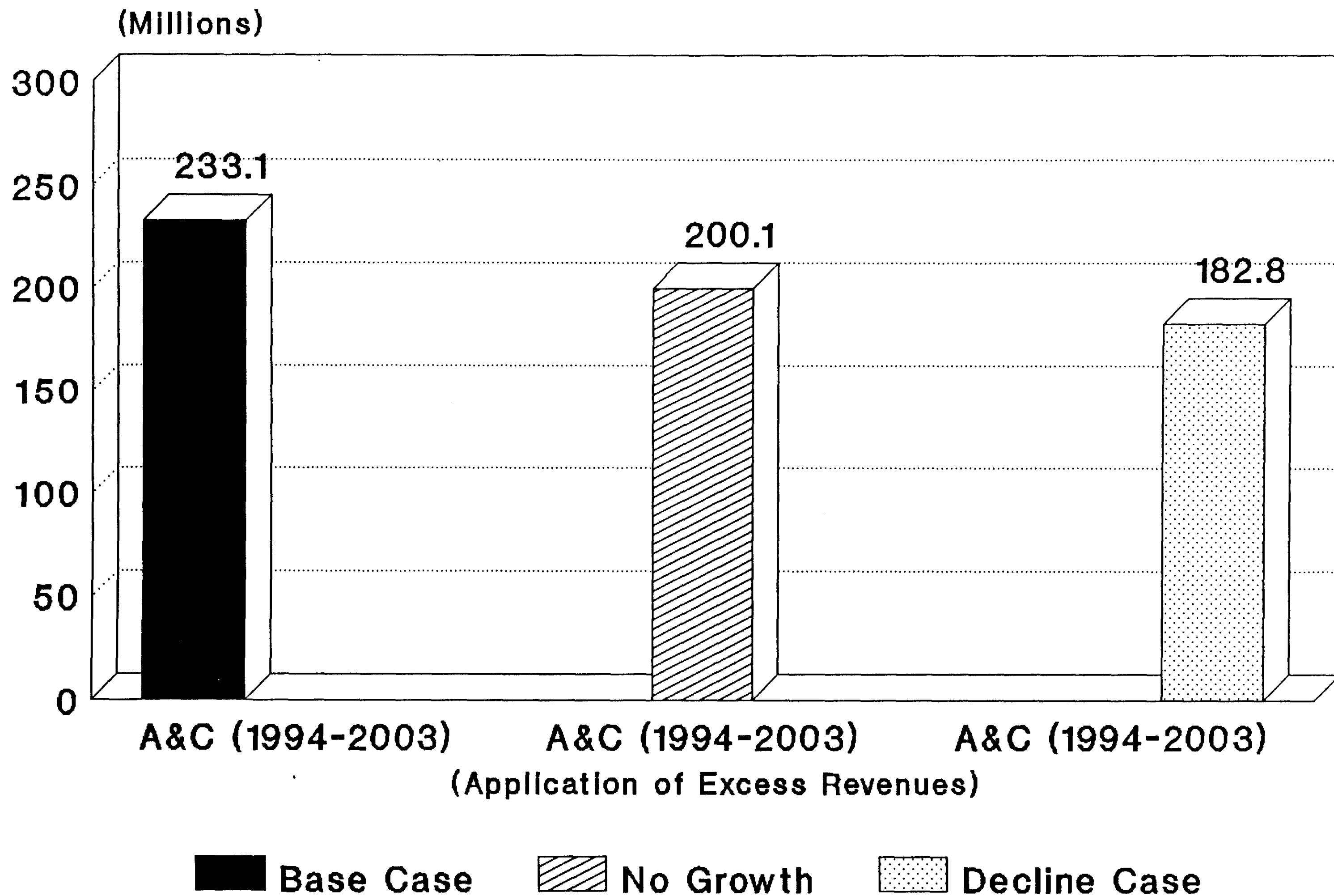
The first impact is a question of timing. As mentioned above, with less Excess Revenues available for the $600-million housing obligation, there is a greater dependency on Other Revenues. In the No-Growth scenario, Other Revenue sources represent more than 55% of the total cash commitment to the program, and in the Decline-Case close to 60% of the cash payments are derived from this revenue source. As evident in Graph 3.5, and more clearly in Graph 3.6, monies from Excess Revenues that are applied to the housing program are greatly diminished from that amount available in the Base-Case. Any greater reduction in PILOT payments could result in a delay of the housing program being fulfilled by 2003 because the generation of Other Revenues may not be sufficient to meet the increased

Graph 3.5-Sensitivity Analysis
Application of Existing Sublease Rev.'s



Source: Tom Oppenheim, MIT CRED

Graph 3.6-A&C Funding From Excess Rev.
Different Funding Amts. Betwn. Scenarios



Source: Tom Oppenheim, MIT CRED

shortfalls. Production of Other Revenues currently depends on unpredictable transaction payments to the BPCA, and those residential subleases (signed after 1986) which produce little revenues relative to existing sublease monies. To a large extent, the viability of this revenue source in the future is dependent on the pace of new development on the site. The signing of any new subleases would naturally increase funds realized by the BPCA, however, to rely on future leases to meet increasing shortfalls caused by a severe reduction in PILOT payments is not a fiscally prudent policy.

Second, although there is likely to be enough total revenues to meet the $600-million housing program under either sensitivity scenario, the leveraging capacity and discretionary amounts available to the City and the BPCA over the subsequent years would truly absorb the impact of reduced revenues. Most notable is the amount of future debt service supportable by the revenue stream in the years 2004 through 2020. In the No-Growth scenario, the amount of leveraging capability is reduced to $200 million (in par amount of bonds) and in the Decline-Case scenario only an insignificant $43 million could feasibly be issued. With less debt being issued, most of the Excess Revenues available after 2004 are directed to the traditional 80%/20% split. Approximately $426 million in discretionary amounts would be realized in the No-Growth scenario compared to $438 million in the Decline-Case example.

Why are these amounts greater in the Decline-Case when

less total revenues are generated? Simply, when less debt is issued after 2004 under the Decline-Case scenario as a result of the revenue streams' inability to meet the necessary 2-times debt service coverage ratio, more becomes available for the split. On the other hand, the No-Growth scenario can support more debt thus reducing somewhat the amount available as discretionary funds. Overall, however, with the ability to raise $200 million in debt, the No-Growth scenario's total future funding resources (leveraged amounts plus discretionary amounts) outweighs that realized under the Decline-Case scenario by $144 million in nominal dollars.

One final observation from the sensitivity analyses. When subjecting PILOT payments to decreasing growth rates in the early years (Decline-Case), the ability to meet debt service payments on the planned financings (1990 through 1993) is marginal. This is particularly so in the year 1994. To explain this phenomenon the complete financials for the Base-Case should be examined (Appendix A). In 1994, the first debt service payments (from Excess Revenues, not the capitalized interest account) are due on $225 million of HNYC bonds and $38 million of BPCA bonds to be issued in 1990 and 1991 respectively. These planned financings are to fulfill final infrastructure needs of the project and to meet the remaining obligation of the $400-million housing program. The 1994 debt service amounts on these issues equal $19.9 million and $2.98 million respectively. In this same year, the amount of

available revenues to meet these debt service payments approximates $25.6 million, leaving a balance of only $2.6 million in Excess Revenues available for other uses. When PILOT payments are reduced by 2.4% annually, the amount of available revenues to meet this debt service obligation drops nearly $2.6 million. The necessary debt payments can be met, but at best, it is tight. Any greater reduction in the revenue stream could make the BPCA and HNYC bonds issued in 1990 and 1991 vulnerable to default.

Upon further analysis, the potential default scenario (occurring in 1994) could be somewhat mitigated by delaying debt service payments on these two issues by capitalizing interest for one additional year. Surprisingly, a one-year wait allows Excess Revenues to grow to $36.9 million, thereby providing a larger cushion to meet a new $25.5 million combined debt service obligation in that year (this debt service amount increases by $2.5 million due to the additional one year of capitalized interest). Instead of only $2.6 million remaining in 1994, approximately $25.6 million would be available (due to no debt service on planned financings in that year) plus almost $11.5 million in 1995 after the payment of the delayed debt service. Thus a one-year wait in large debt amounts would give sufficient time for the revenue stream to grow to a level that could withstand large negative swings in PILOT growth rates.

Despite potential aberrations in PILOT payments, the presented analyses illustrates that the BPCA, the City, and

the State can look forward to the continuation of a financially successful project. Although a No-Growth scenario and a Decline-Case analysis demonstrate the sobering effect of a reduction in the revenue stream on the monetary benefits of the project, it is unlikely that these scenarios will ever come to fruition. Neither PILOT payments nor tax policy in New York can remain in a No-Growth or negative posture for very long. The City controls tax policy by either raising tax rates or assessments, and this fact alone acts as a partial internal hedge against real estate downturns. It therefore can realistically be envisioned that not only will the $1 billion housing initiative be met by the year 2003, but that future revenues will support an additional $788 million in net proceeds to be used for other nonhousing purposes. Furthermore, discretionary amounts to the City and BPCA will exceed $1.2 billion over thirty-years. These total benefits, present valued at 8.00%, equate to a staggering $631 million. An amount the public sector can expect with reasonable certainty and unquestionable enthusiasm as New York enters fiscally difficult times.

CHAPTER FOUR

ALTERNATIVE FUNDING FOR THE $600-MILLION HOUSING COMMITMENT

This Chapter focuses on the 1989 Agreement and Consent contract that directs all available revenues from the project to be paid in annual cash installments to the new $600-million housing commitment of the BPCA. As outlined in Chapter 3, the 1989 A&C stipulates that all revenues, both existing subleases signed pre-1986 and those subleases signed post-1986, must be used in the following manner: (i) to pay all outstanding debt service payments on both planned (those expected to be issued in the next three years) and current outstanding bond issues; (ii) to pay for the annual operating and maintenance costs of the project; and then to (iii) pay cash installments, commencing in 1994, to fund the housing program in amounts specified by the 1989 A&C. This hefty cash commitment must be funded before any monies can be used to leverage additional funds or be freed to provide amounts for the traditional 80%/20% split.

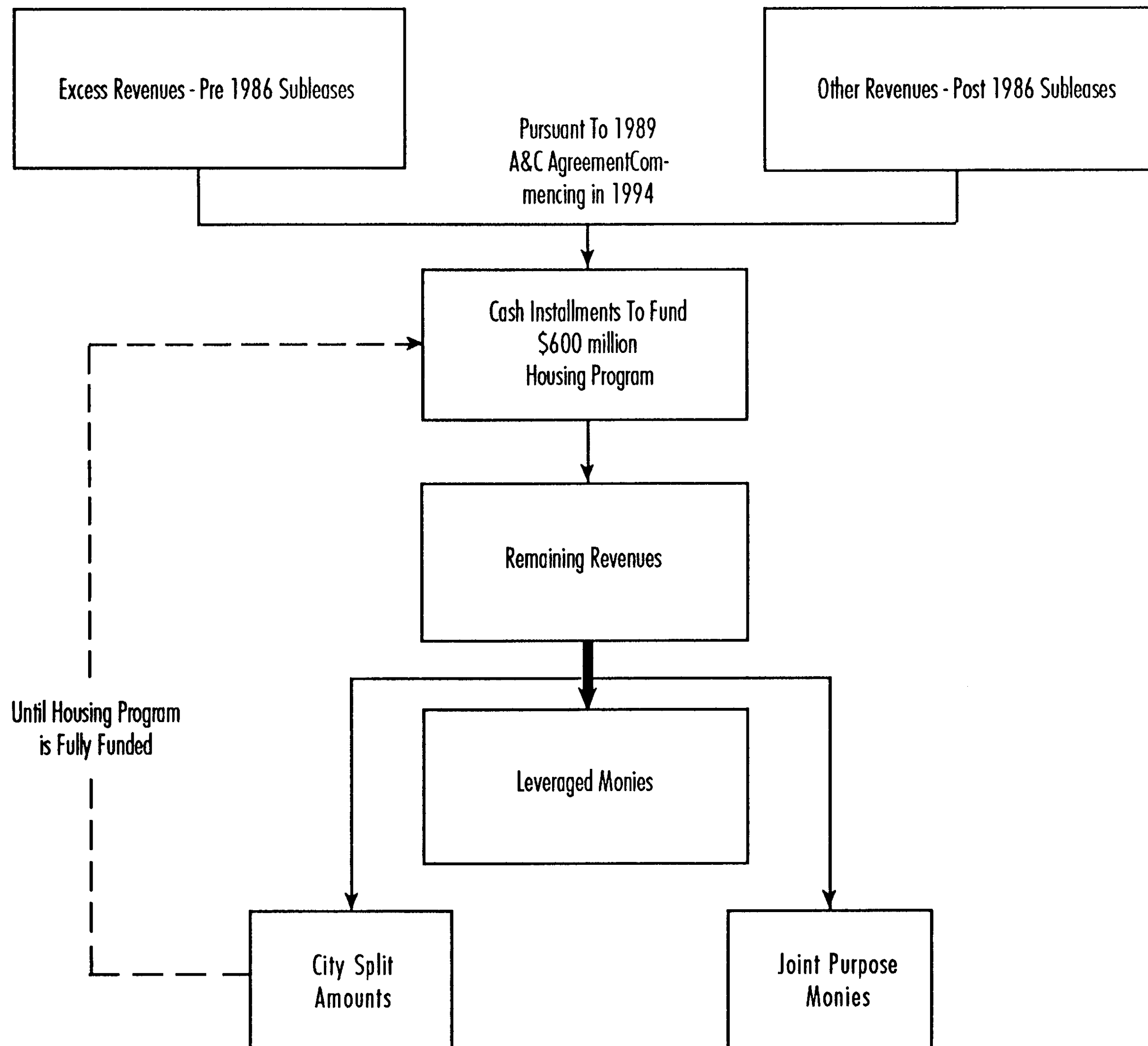
Whenever available monies are used to pay cash instead of for leveraging purposes an immediate question arises. Would utilizing revenues to borrow funds achieve the same goals, at no significant additional costs? Suppose the 1989 A&C did not exist, what level of bonds could be raised to fund the same $600-million housing objective? Would borrowing money versus paying cash prove to be a more

efficient way to fund the program? What would be the subsequent implications and benefits? These questions are analyzed by using an Alternative Leverage Scenario to determine whether the 1989 A&C is truly the best structure to fund the $600-million housing commitment of the BPCA.

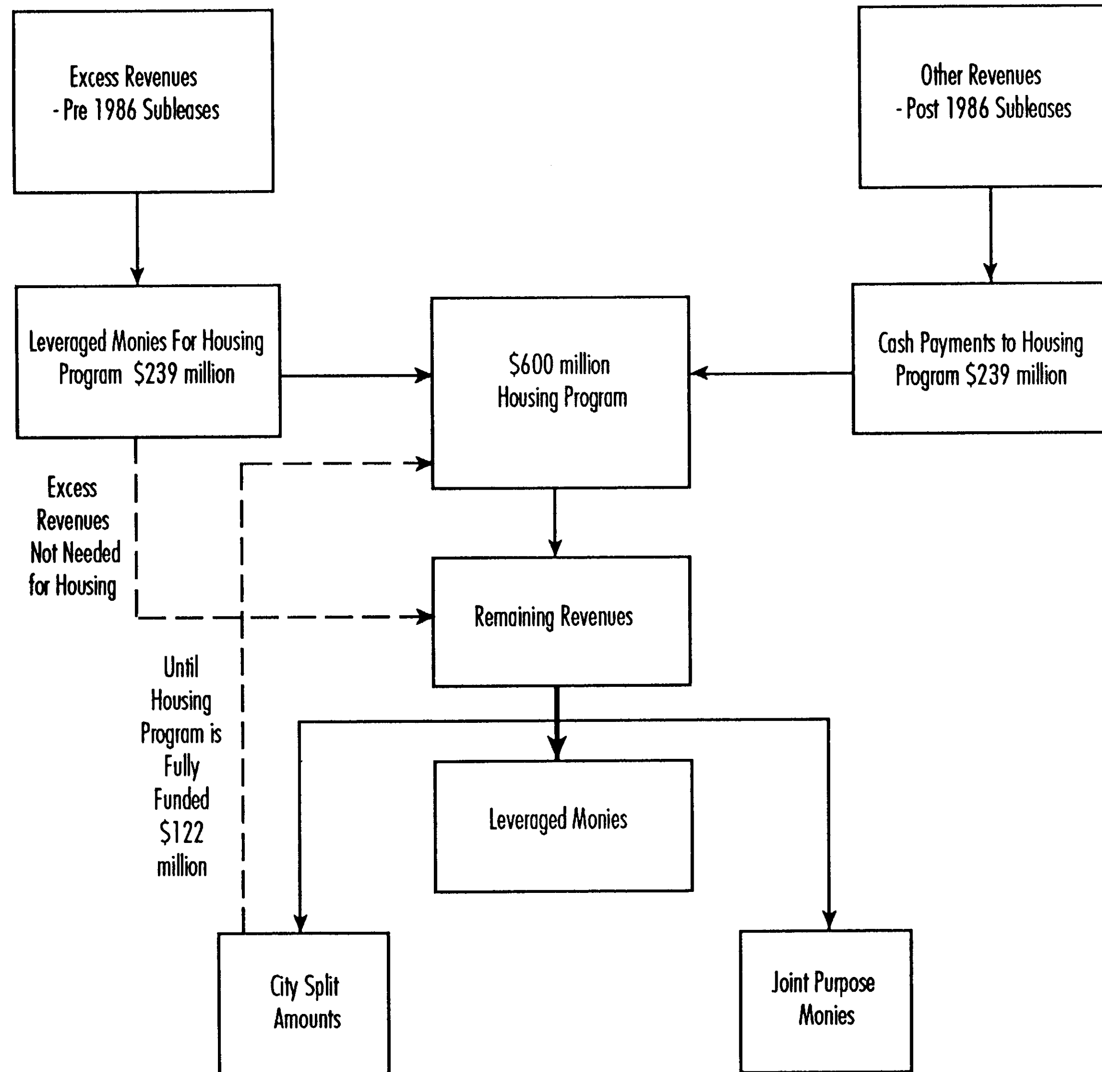
Counting on Borrowed Money

Assumptions and Results: The alternative analysis (Leverage New Housing Program) is different than the Base-Case scenario in that it utilizes different funding sources to fulfill the $600-million housing program. The Charts 4.1 and 4.2 outline the current BPC structure (Base Case) and the new Alternative Scenario. Unlike the Base Case, the Alternative Scenario calls for no cash payments under the 1989 A&C; instead Excess Revenues would be used to pay debt service on newly leveraged amounts. This is an attempt to determine whether the redirection of Excess Revenues can support bonded amounts in excess of annual cash payments from the same revenue source. If this proves to be the case, then utilization of Excess Revenues to leverage monies for funding of the housing program would seem to be a more efficient use because the program could be fully funded more rapidly and monies would be freed for other uses earlier.

Under the alternative analysis, leveraged monies become the primary source of funding for the housing program, however, two additional sources - - Other Revenues



Source: Tom Oppenheim
MIT Center For Real Estate Development



Source: Tom Oppenheim
MIT Center For Real Estate Development

and City Split monies - - are also utilized. As in the Base-Case, Other Revenues required to meet annual shortfall amounts are also used to fund the housing program. This provides an apples-to-apples comparison as the amounts required in the necessary years are exactly the same in both scenarios. City split amounts are also identical in both scenarios from 1990 through 1993 since the 1989 A&C obligations do not commence until 1994. There is, however, a significant difference after 1994 as these amounts are still available under the Alternative Scenario.

A financial summary of the comparative analysis can be found on the following page with complete financials in Appendix B. Under both examples, Net Excess Revenues available for application to the $600-million housing program are exactly the same as nothing has changed existing sublease revenues nor debt obligations on current and planned financings. Under the Base-Case, Excess Revenues in the amount of $233.1 million are directed to pay annual cash payments in years 1994 through 2003. City split monies, in the amount of $66.7 million, are also available in the years 1990 through 1993 as the traditional 80%/20% split occurs during this time period. Finally, Other Revenues in the amount of $300.2 million, fulfill the monetary shortfalls in each of the years between 1994 and 2003.

The Alternative Scenario, however, takes a different funding approach. Excess Revenues are not used to make annual cash payments but are leveraged to provide a new

Figure 4.3
COMPARITIVE ANALYSIS
WITH A&C VS. WITHOUT A&C

BREAKDOWN OF COMPONENTS	BASE SCENARIO (With A&C) Total (1990-2020) (Millions)	ALTERNATIVE SCENARIO (W/out A&C) Years 1990-2020 (Millions)
Revenues From Existing Subleases....	$6,643.4	$6,643.4
Current Debt Service Obligations............	(1,906.7)	(1,906.7)
O&M/Adm. Costs......................	(983.6)	(983.6)
Reserve Fund Interest...............	68.7	68.7
Excess Revenue Fund (ERF) Amounts (1).....	3,821.8	3,821.8
Planned Financings Debt Service......	(1,157.9)	(1,157.9)
Net Excess Applied to Settlement Agreement...........................	2,663.9	2,663.9
NEW HOUSING PROGRAM (@ $600 Million)		
Excess Revenues Applied (2).................	233.1	0.0
City Split Amounts (3).....................	66.7	122.7
Other Revenues Needed (4)....................	300.2	238.1
Leveraged Amounts.......................	0	239.2
Year Hsg. Program Achieved.................	2003	2000
FREED MONIES DUE TO ALTERNATIVE SCENARIO		
Excess Revenues (2000-2003) (5)............	n/a	18.5
City Split Amounts (2000-2003) (6)..........	n/a	31.4
Other Revenues (2000-2003) (7)..............	n/a	62.1
Joint Purpose Monies (1994-2003)............	n/a	21.0
Total Freed Monies	0	133.0
Freed Monies (PV @ 8.00%)..................	0	56.7
Excess Rev. Available for New Leverage (8)..	2,364.1	2,541.2
FUTURE UNPLANNED LEVERAGE CAPABILITY		
Leveraged Amounts......................	1,213.1	1,213.1
Net Proceed Amounts(9)................	788.5	788.5
Debt Service on New Debt (10)..............	(1,136.1)	(1,259.9)
Greatest Single Year Bonding Capacity.......	368.0	131.4
(Year)	2000	2013
Excess Revenues Available For Split........	1,228.0	1,281.3
Discretionary Amounts		
City Split (After Housing Contribution).....	941.6	973.0
Joint Purpose Monies (Nominal Dollars)......	286.4	308.3

FOOTNOTES (please see next page)

Source: Tom Oppenheim, M.I.T. Center For Real Estate Development

FOOTNOTES

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(1) $51 million of this amount is deposited into the Special Fund from 1990-1992 and is not available for debt service in these years. In 1993, this amount becomes Joint Purpose Monies.

(2) Net excess revenues applied to the 1989 Agreement and Consent ("A&C") for new hsg. program. In the case of leveraged scenerio no excess revenues are paid to A&C and go for the purpose of leveraging monies and city split amounts.

(3) City split amounts used to fund new hsg. program. These amounts are approximately $56 million more under leveraged scenario as result of their availability from 1994-2003.

(4) These are additional revenues needed to meet the A&C hsg. obligations due to insufficient existing sublease revenues. Their source is new leases, transaction payments, and anticipated future revenues from subleases signed post 1986. The Leveraged scenario amount applies the same amount of Other Revenues per year as the Base Case. The difference is a result of the earlier fulfillment of the hsg. program by 3 years under the Alternative Leverage Scenario.

(5) Excess Revenues are directed to provide security for new leveraged amounts and remaining monies go as city split monies to the housing program. As a result of early fulfillment of housing program under leveraged scenario, 18.5 million are freed for other non-BPC purposes in the year 2003.

(6) This amount represents those City split amounts that are freed for other uses in the years 2001 and 2002. For these two years the freed amount is approximately $40 million, however, $8.9 million is netted out to represent the amount of greater City split amounts under the Base Case in the year 2003.

(7) Other Revenues freed from the period of 2000 through 2003.

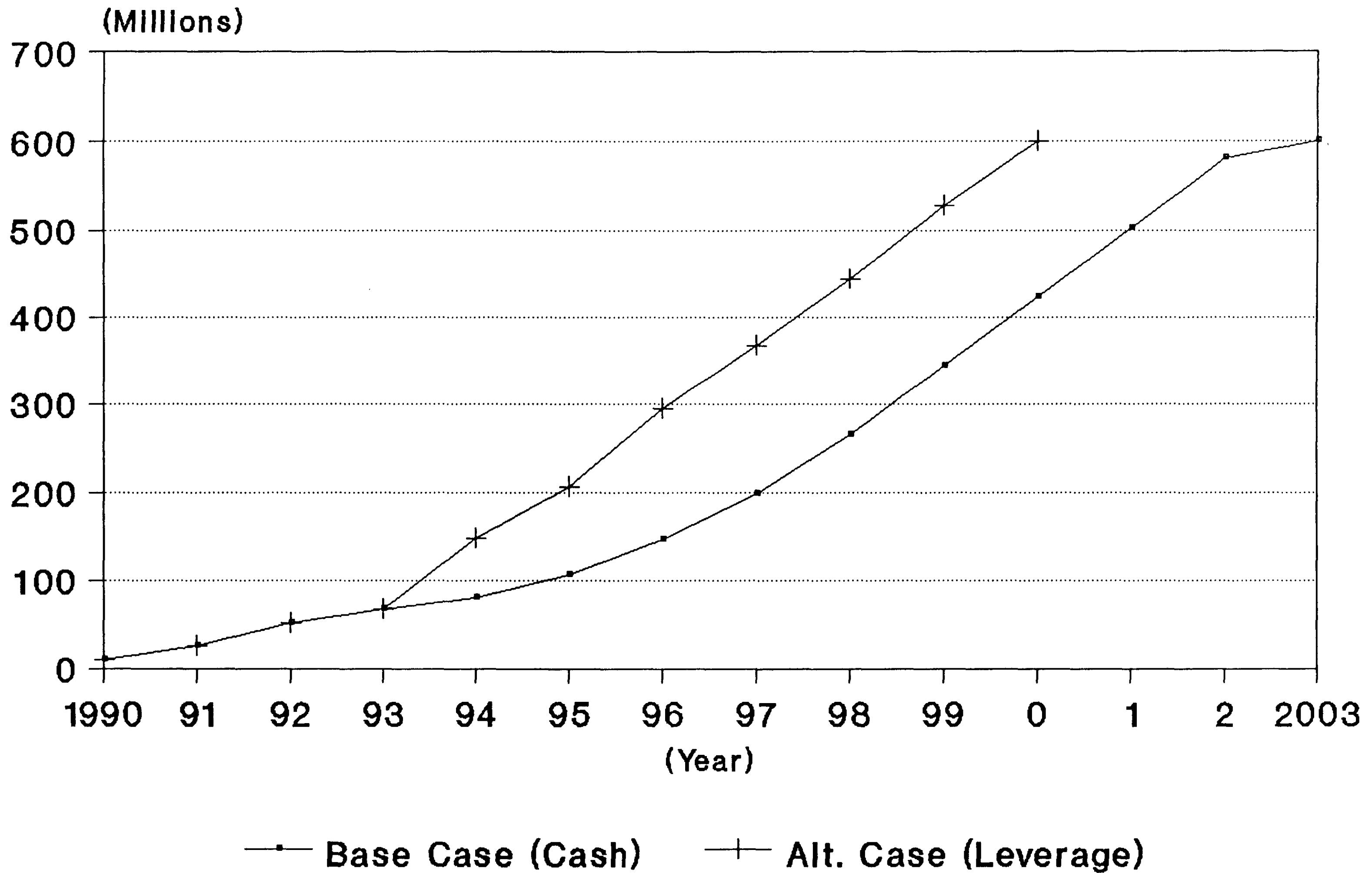
(8) Represents Excess Revenues available for future unplanned leveraged amounts. Figure derived from taking Excess Revenues applied to the Settlement Agreement less those amounts applied to the new housing program (City split amounts plus Excess Revenues).

(9) Represents 65% of bond proceeds to account for cost of issuance, capitalized interest, and reserve fund amounts.

(10) Debt service amount greater for leverage scenario due to amounts issued to fund housing program.

funding source of $239.2 million in debt. These bonded amounts represent the maximum level Excess Revenues can support and act as the substitute for cash payments made to the housing program under the Base-Case. City split amounts are also paid to the program on an annual basis when they are available. There is a marked increase of $56 million ($122 million available under the Alternative Scenario minus $66.7 million applied under the Base-Case) as a direct result of utilizing Excess Revenues for leveraging purposes. Unlike the Base-Case, commencing in 1994 Excess Revenues remain available for the traditional 80%/20% split. Since only half of the available Excess Revenues are required in each year to meet a 2-times debt coverage ratio on the new debt, Excess Revenues still provide City split amounts in the years 1994 and henceforth. The final funding source utilized is $238.1 million in Other Revenues. These amounts represent the exact annual cash disbursements required under the Base-Case, however the total amount is reduced due to early fulfillment of the housing program under the Alternative Scenario. Thus less aggregate monies are needed from this revenue source.

Overall, the Alternative Scenario proves to be a much more efficient method of funding the new housing program as the $600-million commitment is met in the year 2000. Graph 4.4 shows the cumulative funding pattern of the housing program under each scenario. As illustrated, the Alternative Scenario achieves the new housing program three

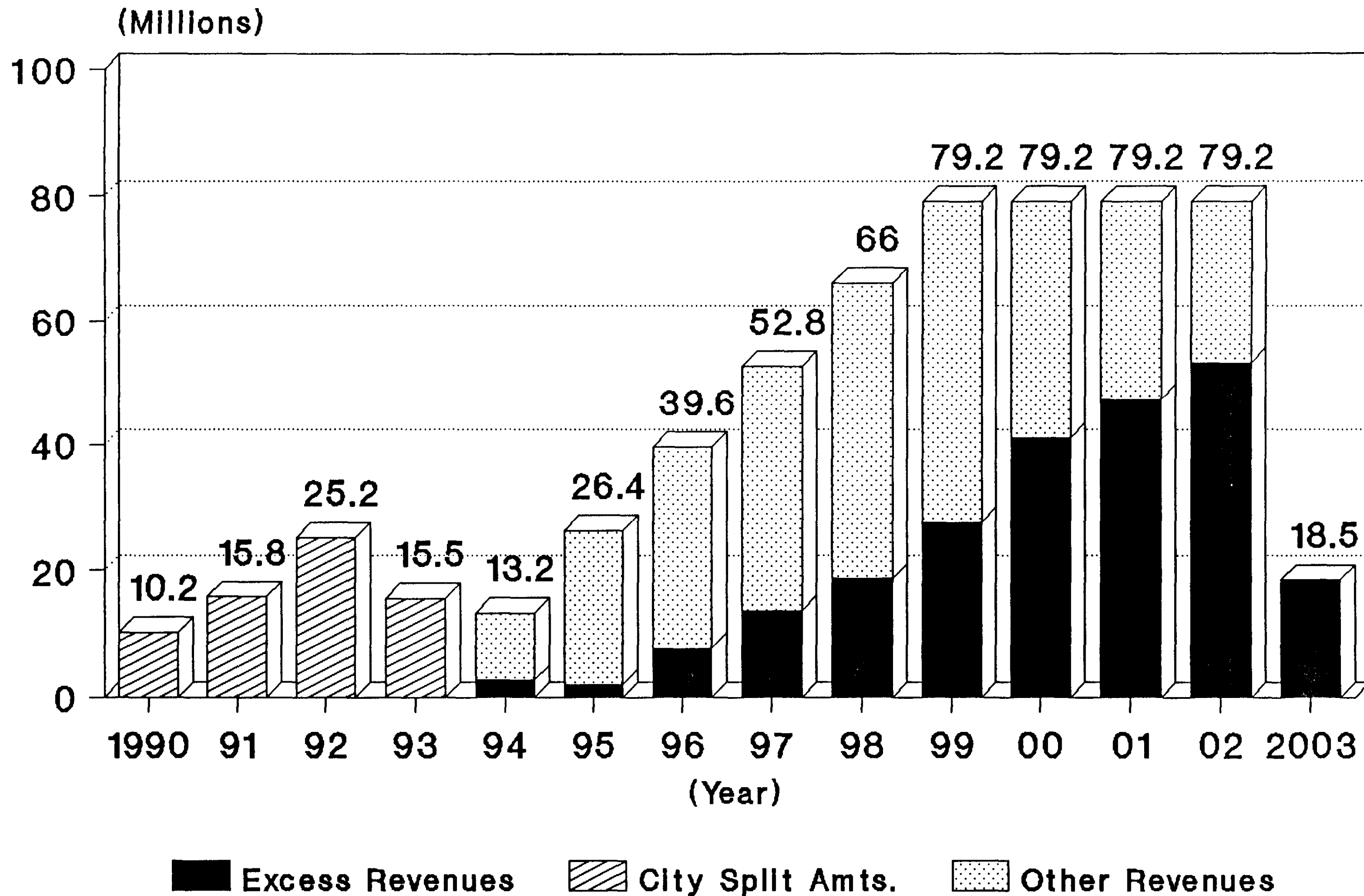


Source: Tom Oppenheim, MIT CRED

years earlier in an expedited fashion. The two scenarios provide the same amount of funding to the program in the years 1990 through 1993 as City split amounts are identical. The difference is the rapid fashion the Alternative Scenario funds the program from 1994 through 2000. This can be attributed to Excess Revenues being utilized to leverage $239 million of new debt plus the availability of greater City split amounts in those years.

The bar chart in Graph 4.5 illustrates the breakdown of the funding sources under the Base Case. As demonstrated in the graph, the housing program is funded with City split amounts in the first three years ($66.7 million) and in the subsequent years depends solely on Excess Revenues and Other Revenues. The total amounts applied to the housing program in the years 1994 through 2003 reflect the exact amounts specified in the 1989 A&C agreement. Heavy dependency on Other Revenues is necessary as Excess Revenues are insufficient to meet the large cash requirements in each year. This is especially evident in the years 1994 through 1999 as the amount of available Excess Revenues are almost entirely depleted in meeting debt service payments on all outstanding planned and current bond obligations. As existing sublease payments become stronger each year with growing PILOT payments, more Excess Revenues become available to fund the program. By 2003, only $18.5 million is needed to meet the $600-million housing commitment and this can be funded solely by Excess Revenues.

Graph 4.5-Base Case Scenario
Paying Cash to Fund Housing Program

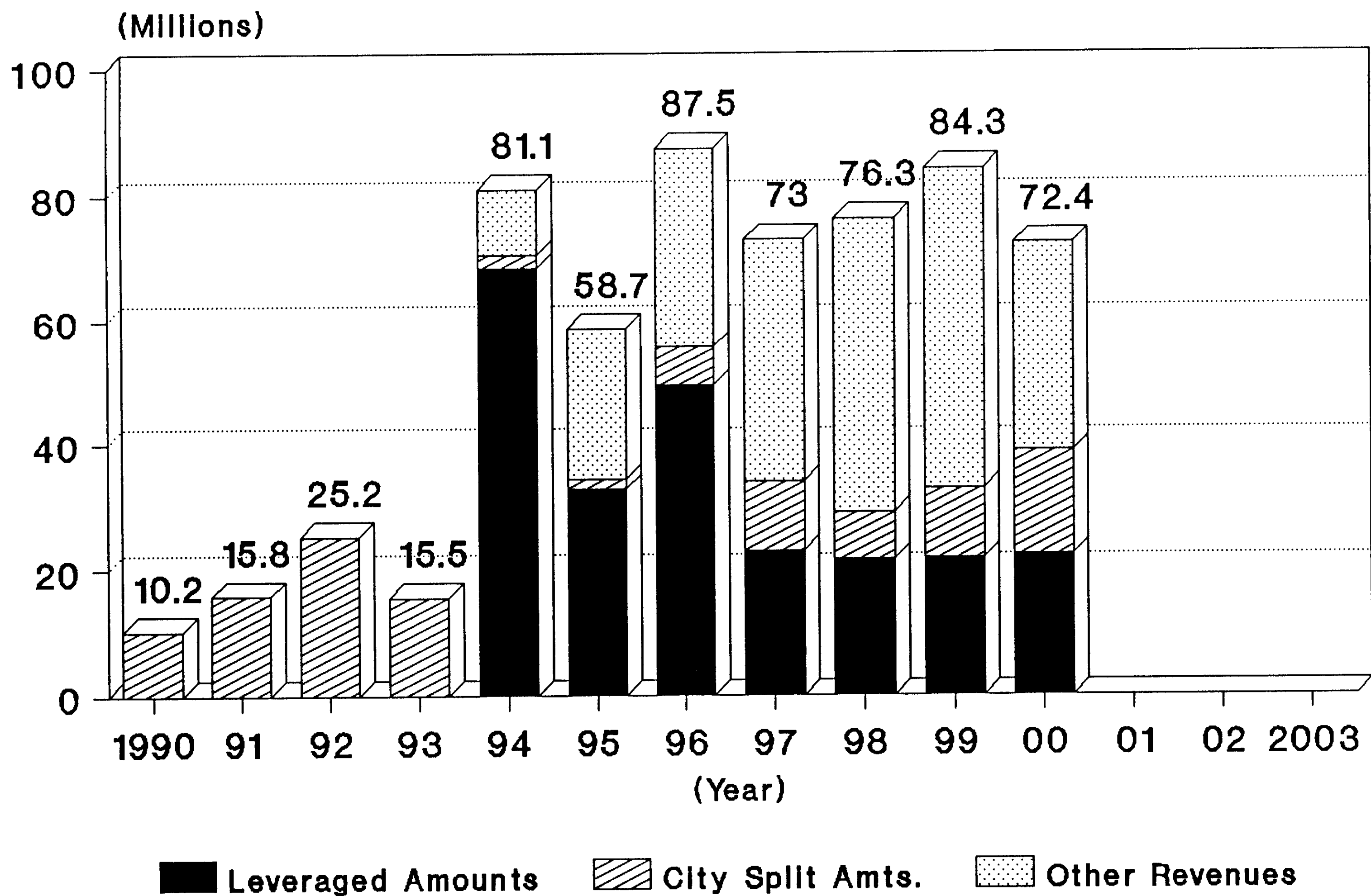


Source: Tom Oppenheim, MIT CRED

The Alternative Scenario shown in Graph 4.6 directs the same $66.7 million in City split amounts to the housing program in first three years. In 1994, however, the picture dramatically changes. In this year, as in the remaining years, the amount of Other Revenue sources applied are exactly the same as in the Base-Case. The new funding sources available under this scenario, leveraged amounts and City split monies, provide the nucleus for the rapid timing for funding the program. In 1994, Excess Revenues will support new debt in the net principal amount of approximately $68 million for the program. Thus a total of $81.1 million can be directed to the housing initiative compared to only $13.2 million in the same year under the Base-Case. Greater annual amounts of funding available under the Alternative Scenario persist for the entire period the housing commitment remains outstanding. It is clear that new debt amounts exceed the amount of cash payments that are available from Excess Revenues. It is not until 1999 that Excess Revenues, in the form of available cash, exceed those amounts that can support new debt. This is more than compensated, however, by City split amounts that are available under the Alternative Scenario plus the same amount of Other Revenues in that year (total funds equal $84.3 million vs. $79.2 million in 1999).

As a result of fulfilling the housing program by 2000, significant monies are "freed" (after the payment of debt service on the new housing bonds) for other nonBPC purposes

Graph 4.6-Alternative Scenario
Leveraging Monies To Fund Hsg. Program

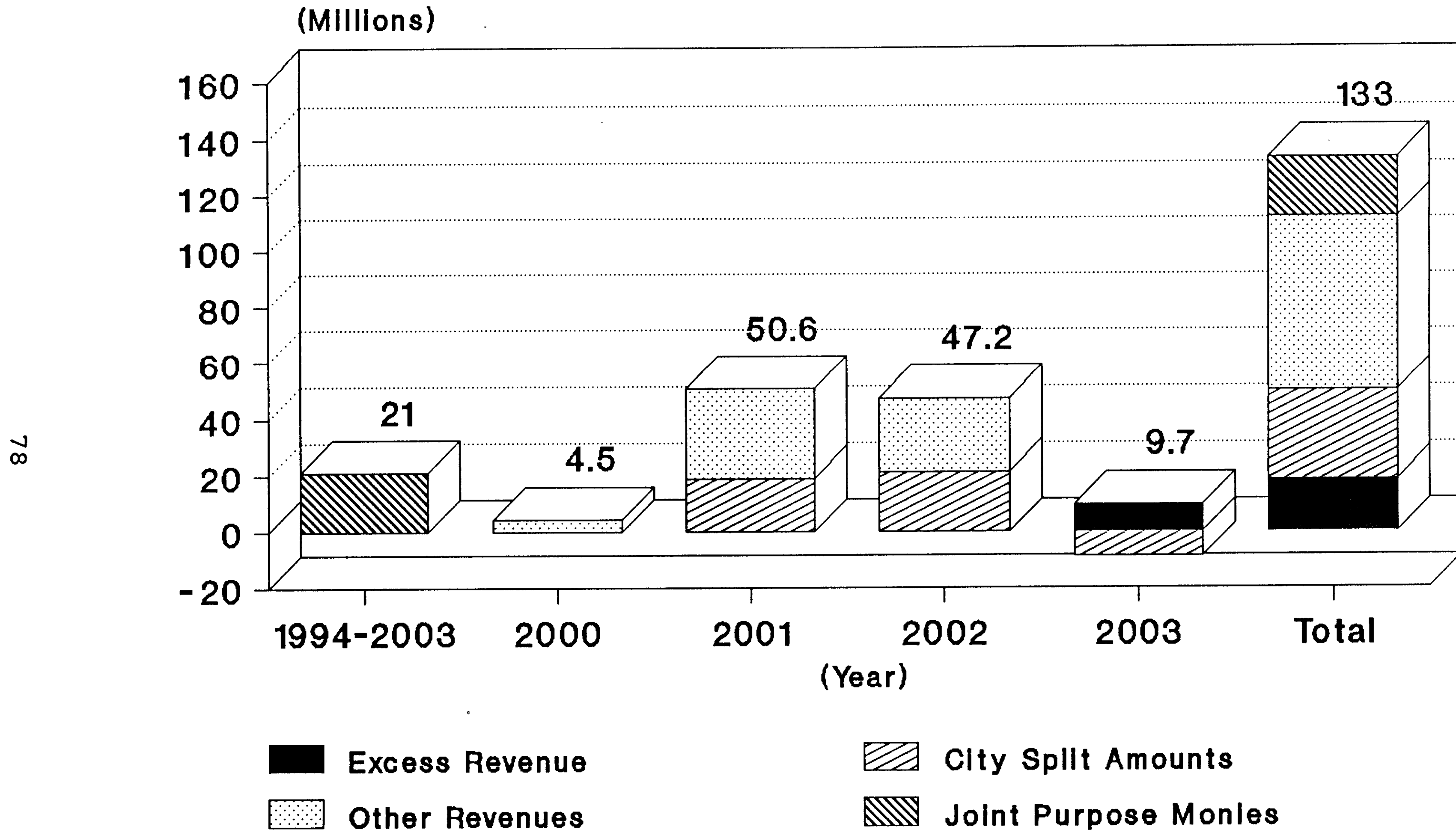


Source: Tom Oppenheim, MIT CRED

sooner. Graph 4.7 illustrates the amount of freed monies in the years 2000 through 2003 as a result of early fulfillment of the program. Additionally, Joint Purpose monies that are realized from 1994 through 2003 are presented. In the year 2000, $4.5 million fewer Other Revenue dollars are needed in the Alternative Scenario. This amount, plus Joint Purpose Monies realized from 1994 through 2003, represent the first "freed" monies for other uses. From 2001 through 2003, because housing obligations have already been fulfilled, freed monies represent those amounts that are still necessary to meet the program in the remaining three years under the Base-Case. In 2001, this amount is equal to approximately $31.7 million in Other Revenues applied under the Base-Case plus an additional $18.9 million in City split amounts that become available from the traditional 80%/20% split under the Alternative Scenario. The same phenomenon occurs in 2002 as additional City split amounts and Other Revenues are freed for other purposes in the amount of $47.2 million. In 2003, however, the final $18.5 million in Excess Revenues applied under the Base-Case can not be viewed as the aggregate amount that is freed for other nonBPC purposes. This amount is reduced by $8.9 million because fewer City split amounts are available in that year under the Alternative Scenario (i.e., $32.6 million City split amounts in 2003 for Base-Case versus $23.7 under the Alternative Scenario); this is the result of debt service payments due on the new debt that was incurred to fund the housing program. Since

Graph 4.7-Freed Monies Due To Leveraging

From Year 1994 to 2003



Source: Tom Oppenheim, MIT CRED

no new bonds were issued to fund the program under the Base-Case, City split amounts are greater in 2003.

Additionally, Joint Purpose Monies of $21 million are realized under the Alternative Scenario from 1994 through 2003 that are not available under the Base Case. This again is the result of Excess Revenues not going directly to pay cash to the housing initiative but rather to support new debt. This allows monies on an annual basis to be split between the City and the BPCA under the original terms of the Settlement Agreement.

Conclusions and Recommendations

The benefits of leveraging Excess Revenues to provide a new funding source for the housing program are convincing. Issuance of debt early and the availability of City split monies can be utilized to rapidly meet the requirements of the $600-million housing program. Excess Revenues, City split amounts, Other Revenues, and Joint Purpose Monies are maximized to free monies earlier ($133 million) for other uses the public sector wishes to address. Although the timing of the program being fully funded by 2000 is subject to fluctuating PILOT payments, the reduced cash payments on an annual basis under the Alternative Scenario puts less pressure on the revenue flow of the project. This will help mitigate any negative impact variations to the revenue stream will have on the funding of the housing program.

The benefits are so numerous that one has to wonder

why the City insists on all available revenues going to pay cash to the new housing program. The most obvious reasons are political. By assuring cash payments through the 1989 A&C, the City has immunized itself from other cash hungry participants in the state striving to get a share of the benefits from the "money machine". From a political standpoint this is reasonable, however, protecting future revenues is stretching the payment of money for housing purposes over a longer period of time. In other terms, the value, in 1990 dollars of the freed revenues is $56.7 million (present value at 8.00% of all freed monies represented in graph 4.7) that could be used for other nonhousing purposes earlier. The question becomes whether protection of revenues is worth delaying significant amounts for other public purpose objectives?

The following recommendation achieves early fulfillment of the housing program, frees significant monies, and protects future revenue streams from other public entities in the State. An amendment to the 1989 A&C should be drafted to require a reduced schedule of annual payments required under the new housing program from revenue flows of the BPCA. The new schedule should equal those amounts that reflect the Other Revenue sources necessary to fulfill the housing program under the Alternative Leverage Scenario. The schedule on the following page delineates the new payment schedule and compares them to the existing obligations under the 1989 A&C:[1]

Year	Recommended Schedule	Current Schedule
1994	$10,545,415	$13,200,000
1995	24,283,108	26,400,000
1996	31,836,021	39,600,000
1997	39,101,167	52,800,000
1998	47,285,074	66,000,000
1999	51,545,892	79,200,000
2000	33,494,619	79,200,000
2001	0	79,200,000
2002	0	79,200,000
2003	0	18,487,185

The freed Excess Revenues can then be utilized to issue debt under the HNYC. The amended A&C Agreement would stipulate that the State Legislature must pass additional bonding authority to HNYC in the net proceeds amount of $239 million. This amount represents the maximum leverage capacity that Excess Revenues can support with a 2-times debt coverage ratio in the years 1994 through 2000. Additionally, the amended A&C would direct all available City split monies to fund the new housing program as long as the cumulative balance was less than $600 million.

This recommended structure accomplishes all of the

desired goals of the City by assuring the dedication of revenues for the new housing program. The way the program is funded, however, is different. Inefficient annual cash payments are reduced to a minimum and leveraging monies becomes the new source of capital. Protection of monies to fund the program are assured by the new A&C, and tremendous amounts of money are thus relinquished early for other nonhousing uses to the public sector. I recommend that the BPCA, the City, and the State strongly consider this alternative structure to fund the new $600-million housing initiative.

CHAPTER FIVE

CONCLUSIONS AND SPECULATION

Unlike many large-scale real estate developments today, one problem the BPC project does not have is insufficient cash flow. Revenues from the commercial and residential subleases channel a healthy flow of monies to the BPCA, the City, and the State on an annual basis. Although this has not always been the case, recent activities funded by the "Excess Revenues" give new meaning to that term: in addition to financing the infrastructure and public amenities of the project, excess revenues have underwritten city-wide policy initiatives established by the Authority and the Mayor's office.

In the early stages of the project, financial support from the State was necessary to create the initial 92-acre landfill. When the project stalled and hit serious financial snags, the State was forced to honor its moral obligation to keep the Authority from defaulting on the original 1972 bonds. In 1979 several events recast BPC's financial future. BPCA switched the emphasis of the project from residential to commercial use, the City rewrote its deal with the Authority and provided much-needed incentives to attract private developers to the income-producing commercial sites, and, fortuitously, conditions in Manhattan's real estate market improved dramatically. Monies finally started to flow to the BPCA

as development matured and, by 1986, they had reached levels sufficient for the BPCA to repay its debt to the State and raise additional capital to fund infrastructure development. By the late 1980s, with all four World Financial Centers open for occupancy, public officials realized that surplus monies could be harnessed to fund nonBPC purposes, in particular, the City's ten-year $1 billion housing initiative and City budget relief.

The ability to leverage funds from their long-term subleases has been the cornerstone of the BPC's capital structure. How these funds have been used and who has benefitted from them is reflected by today's existing commitments between the Authority and the City. What happens with the new revenues sure to materialize in the future is an open question. Determining how these anticipated funds will be used and who will benefit over the next 30 years from the project's financial bonanza is pure speculation. BPC's success as a public developer, however, puts the City in the enviable position of having the revenues with which to make such choices.

Who Benefits

A summary of the sources and uses of funds that have occurred to date is presented in Figure 5.1. Municipal bond financings have been the primary source of capital starting with the 1972-moral obligation bonds and ending most recently with the 1990-budget relief transaction.

Figure 5.1
Sources and Uses Of Bonds Issued By BPCA/HNYC 1972-1990
(Millions)

SOURCES:	BOND PROCEEDS	PERCENT
1972 Moral Oblig. Bds.	$200.0	24.46%
1986 Special Oblig. Bds.		
Series 1	103.9	12.71%
Series 2	46.7	5.71%
Series A	34.3	4.20%
1987 HNYC Revenue Bds.	210.0	25.69%
1990 BPCA Rev. Bds.	222.7	27.24%
TOTAL:	817.5	100.00%

USES:	COSTS OF ISSUANCE	BPCA PROJECT COSTS	REPAYMENT OF STATE ADVANCES	$400 MILLION HOUSING PROGRAM	OTHER NON BPCA USES	TOTAL
1972 Moral Oblig. Bds.						
Net Proceeds	-	$135.8	$6.0	-	-	$200.0
Capitalized Interest	40.6	-	-	-	-	-
Debt Service Reserve	14.3	-	-	-	-	-
Fees	3.3	-	-	-	-	-
1986 Special Oblig. Bds.						
Net Proceeds	-	53.5	69.1	-	-	184.9
Capitalized Interest	35.1	-	-	-	-	-
Debt Service Reserve	15.8	-	-	-	-	-
Insurance Premium	7.9	-	-	-	-	-
Fees	3.5	-	-	-	-	-
1987 HNYC Revenue Bonds						
Net Proceeds	-	-	-	142.6	-	210.0
Capitalized Interest	41.1	-	-	-	-	-
Debt Service Reserve	21.1	-	-	-	-	-
Insurance Premium	0.8	-	-	-	-	-
Fees	3.0	-	-	-	-	-
Original Issue Discoun	0.2					
Other Costs	1.2	-	-	-	-	-
1990 BPCA Revenue Bds.						
Net Proceeds	-	-	-	-	150.0	222.7
Capitalized Interest	37.0	-	-	-	-	-
Debt Service Reserve	20.0	-	-	-	-	-
Fees	2.2	-	-	-	-	-
Original Issue Discoun	12.7	-	-	-	-	-
Other Costs	0.8	-	-	-	-	-
TOTAL:	260.5	189.4	75.1	142.6	150.0	817.5
PERCENT:	31.86%	23.16%	9.18%	17.44%	18.35%	100.00%

Footnote: Figures derived from all BPCA and HNYC Official Statements from 1972 through 1990.

Source: Tom Oppenheim, M.I.T. Center For Real Estate Development

Since 1972, bonds issued by the BPCA and HNYC have exceeded over $817 million. In line with a prioritized agenda formulated by the City, the State, and the BPCA over the past several years, these funds have been used for several purposes. Initially, the bond proceeds went solely to pay for the pre-development costs of the project. Not until 1986 were sufficient revenues available for the BPCA to issue additional bonds, $185.8 million, which were used to repay the State for its bailout assistance and to fund additional infrastructure costs of the project. That trip to the capital market signified an important turning point of the BPC project. With the "basics" under control, subsequent financings could be used to fund other nonBPC purposes.

Housing was the first item on the list of nonBPC public wants. In 1986 the Authority agreed to guarantee up to $400 million (net proceeds) for city-wide housing, and in 1986 the newly formed HNYC issued $209 million in housing revenue bonds on the strength of BPC's existing revenues. The second item on the list -- City budget relief -- was a unique, though unanticipated, demand on BPC's revenues. Hoping to avoid the need to call on Albany for funds, the City negotiated with the BPCA, and in 1990 $223 million in revenue bonds were issued to provide $150 million in net funds to the City. Although these bonds did not represent a new layer of priority or an ongoing commitment of the BPCA, it demonstrated the flexibility of BPC's capital structure. In this case,

State and City officials agreed that the financial perils of the City (hopefully temporary) should take priority over other nonBPC public initiatives, and thus Excess Revenues were temporarily redirected from the $400-million housing program to fund this one time budget need of the City.

One striking measure of the project's overall financial success is the large amount of money raised to date beyond the small amount necessary to fund the project itself. Out of the $817 million in bond proceeds, only $189 million, or 23 percent, has been used for actual project costs; an additional $75 million (9 percent) can be considered project costs since these monies were used to repay the State for advances made to fund the initial landfill and infrastructure work plus to pay debt service on the 1972 bonds. A majority of the monies, however, have gone to fund nonBPC uses (36 percent) or to cover the costs of issuance (32 percent). Monies used for the benefit of the City's housing initiative and budget relief total $292 million compared to $264 million ($189 million plus $75 million) for total project costs. It has cost a lot to issue all these bonds - - $260 million - - because the long lead time before projects would start generating PILOTs meant large amounts of capitalized interest were necessary to fund debt service during the nonrevenue phase of the project.

In Chapter 3, the Base-Case analysis illustrates the project's capacity to support significant capital

expenditures in the future. Figure 5.2 summarizes the sources and uses of funds that can be expected over the next thirty years. The BPCA's immediate financing plans over the next three years include approximately $511 million in bond proceeds ($417 million HNYC debt and $93 million BPCA debt); in terms of net amounts, $257 million will go towards fulfilling the BPCA's $400-million housing obligation to the City and $56 million will pay for the remaining infrastructure needs of the project.

As revenues from the project continue to mount over time, three sources of funds - - Excess Revenues, Other Revenues, and Unplanned Financings - - will become the primary funding source of all future policy goals. Excess Revenues, around $1.5 billion, will be utilized several ways. First, pursuant to the 1989 A&C, they will fund annual cash installments for BPCA's $600-million commitment to the New York Housing Program. These payments commencing in 1994 and continuing until the new housing obligation has been fulfilled in 2003, total over $299.8 million. Other Revenues, those monies available from subleases signed post-1986 and transaction payments, totalling $300 million will provide the additional funding for the housing program over the next 10 to 13 years. Once all project costs have been met and the total $1-billion housing program fulfilled, Excess Revenues can then be used for two purposes: (i) to provide security for additional unplanned leveraged amounts, and (ii) for the 80%/20% split between the City and the BPCA. Unplanned

Figure 5.2
Future Sources and Uses Of Funds, BPCA, 1990-2020
(Millions)

SOURCES:	BOND PROCEEDS	CASH	TOTAL	PERCENT
Planned HNYC Debt				
1990 Issue	$227.1	-	$417.6	11.76%
1991 Issue	84.4	-	-	-
1992 Issue	59.2	-	-	-
1993 Issue	46.9	-	-	-
Planned BPCA Debt				
1991 Issue	37.6	-	93.5	2.63%
1992 Issue	55.9	-	-	-
Excess Revenues (1) (1990-2020)	-	1,527.8	1,527.8	43.01%
Other Revenues (2) (1994-2003)	-	300.2	300.2	8.45%
Unplanned Bonding Potential Max Leveraging (3)	1,213.1	-	1,213.1	34.15%
TOTAL:	1,724.2	1,828.0	3,552.2	100.00%

USES:	ASSUMED COSTS OF ISSUANCE	BPCA PROJECT COSTS	$400 MILLION HOUSING PROGRAM	$600 MILLION HOUSING PROGRAM	OTHER NON BPCA USES	CITY SPLIT MONIES	JOINT PURPOSE MONIES	TOTAL
Planned HNYC Debt								
1990 Issue	$87.1	-	$140.0	-	-	-	-	$417.6
1991 Issue	32.4	-	52.0	-	-	-	-	-
1992 Issue	22.7	-	36.5	-	-	-	-	-
1993 Issue	18.0	-	28.9	-	-	-	-	-
Planned BPCA Debt								
1991 Issue	15.1	22.5	-	-	-	-	-	93.5
1992 Issue	22.4	33.5	-	-	-	-	-	-
Excess Revenues (4)	-	-	-	299.8	-	941.6	286.4	1,527.8
(1990-2020)	-	-	-	-	-	-	-	-
Other Revenues	-	-	-	300.2	-	-	-	300.2
(1994-2003)	-	-	-	-	-	-	-	-
Unplanned Financings	-	-	-	-	-	-	-	1,213.1
Max Leveraging	424.6	-	-	-	788.5	-	-	-
TOTALS:	622.3	56.0	257.4	600.0	788.5	941.6	286.4	3,552.2
PERCENT:	17.52%	1.58%	7.25%	16.89%	22.20%	26.51%	8.06%	100.00%

(Footnotes on following page)

Source: Tom Oppenheim, M.I.T. Center For Real Estate Development

FOOTNOTES
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(1) Revenues available from pre-1986 subleases after debt service on planned and unplanned financings and annual operating/maintenance costs.

(2) Revenues from post-1986 leases that are necessary to fulfill $600 million housing program. from 1994 through 2002.

(3) Financings after the $600 million housing program is fulfilled. Leveraged proceeds available for non-BPCA uses.

(4) Includes $233.1 million in excess revenues and $66.7 million in City split amounts that are used to fund $600 million housing program in the years 1990 through 2003.

(5) All information is derived from Appendix A, Base Case Scenario - - Complete Financials.

financings could yield $788 million in net proceeds over the next thirty years for any use the City and State agree upon. Direct cash to the City and the BPCA could approximate $1.3 billion as City split amounts will reach $941 million and Joint Purpose monies, $286 million.

The magnitude of these figures indicates the strength of the "money machine". As Figure 5.3 shows, the revenues from the project have been, and will continue to be, a solid nucleus for leveraging monies and providing cash for not only the project but also other public-sector goals. From the start of the project in 1968 until 2020, total net funding resources will have totalled a staggering $4.4 billion. With the exception of the $300 million in Other Revenues needed to fund the housing initiative, most of these monies will come from the existing commercial and residential sublease revenues. Furthermore, if future development on the site proves successful, the total resources will grow exponentially as new sublease revenues would add significant leveraging capability and a marked increase in cash disbursements (Discretionary Amounts) to the City and the BPCA.

Who benefits from this enormous funding source the BPC project has become? It appears that the City has been and will continue to be the main recipient of funds for the next several years. Graph 5.4, indicates who benefits from the funding patterns to date and in the future. As illustrated, the City has received $150 million for budget

Figure 5.3

Combined Current and Future Sources and Uses of BPCA Funds, 1972-2020
(Millions)

SOURCES:	PROCEEDS	CASH	TOTAL	PERCENT
BPCA Outstanding Debt	$607.5	-	$607.5	13.90%
HNYC Outstanding Debt	210.0	-	210.0	4.81%
Planned HNYC Debt	417.6	-	417.6	9.56%
Planned BPCA Debt	93.5	-	93.5	2.14%
Excess Revenues (2) (1990-2020)	-	1,527.8	1,527.8	34.96%
Other Revenues (3) (1994-2003)	-	300.2	300.2	6.87%
Unplanned Bonding Potential (4)	1,213.1	-	1,213.1	27.76%
TOTAL:	2,541.7	1,828.0	4,369.7	100.00%

USES:	COSTS OF ISSUANCE	BPCA PROJECT COSTS	REPAYMENT OF STATE ADVANCES	$400 MILLION HOUSING PROGRAM	$600 MILLION HOUSING PROGRAM	OTHER NON BPCA USES	CITY SPLIT MONIES	JOINT PURPOSE MONIES	TOTAL
BPCA Outstanding Debt	$193.1	$189.4	$75.1	-	-	$150.0	-	-	$607.5
HNYC Outstanding Debt	67.4	-	-	142.6	-	-	-	-	210.0
Planned HNYC Debt	160.2	-	-	257.4	-	-	-	-	417.6
Planned BPCA Debt	37.5	56.0	-	-	-	-	-	-	93.5
Excess Revenues (5) (1990-2020)	-	-	-	-	299.8	-	941.6	286.4	1,527.8
Other Revenues (1994-2003)	-	-	-	-	300.2	-	-	-	300.2
Unplanned Financings	424.6	-	-	-	-	788.5	-	-	1,213.1
TOTAL:	882.8	245.4	75.1	400.0	600.0	938.5	941.6	286.4	4,369.7
PERCENT:	20.20%	5.61%	1.72%	9.15%	13.73%	21.48%	21.55%	6.55%	100.00%

(Footnotes on following page)

Source: Tom Oppenheim, MIT Center for Real Estate Development

FOOTNOTES
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(1) These include the 1972, 1986, and 1990 BPCA bond issues.

(2) Revenues available from Pre 1986 subleases after debt service on Planned and Unplanned financings plus annual operating/maintenance costs.

(3) Revenues from Post 1986 leases that are necessary to fulfill $600 million housing program. from 1994 through 2002.

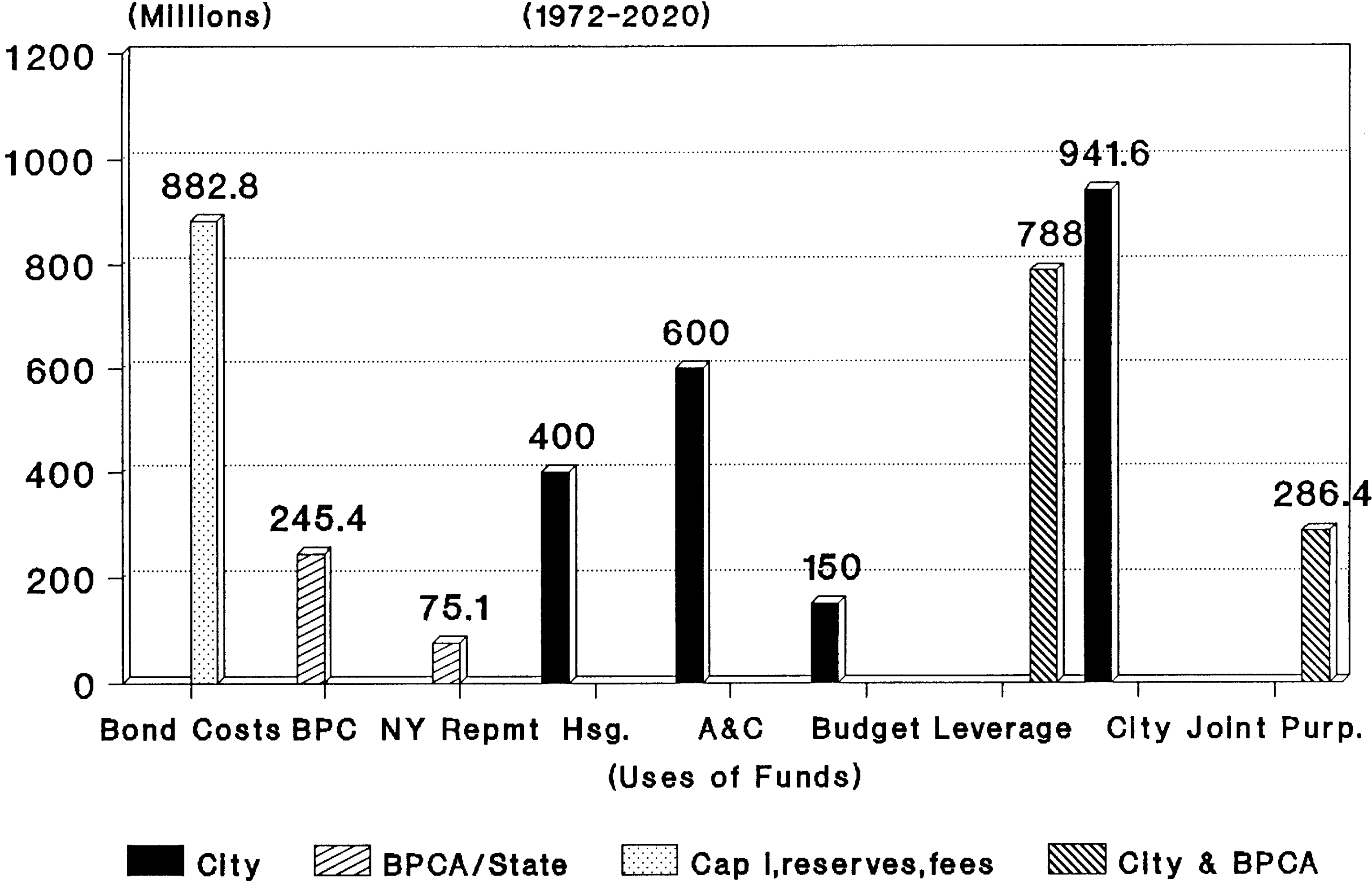
(4) Financings after the $600 million housing program is fulfilled. Proceeds available for non-BPCA uses.

(5) Includes $233.1 million in excess revenues and $66.7 million in City split amounts that are used to fund $600 million housing program in the years 1990 through 2003.

(6) All information is derived from Figure 5.1 and Figure 5.2.

Graph 5.4-Who Benefits From BPC Funds?

Total Allocation: Current and Future



Source: Tom Oppenheim, MIT CRED

relief and by 1993, the City's $400-million housing program will have been funded from bond proceeds. Furthermore, by 2003 BPCA will have funded the remaining $600-million housing commitment in cash from revenues of the project. Once the $1-billion New York Housing Program has been fully funded, Excess Revenues will continue to provide cash on an annual basis to the City from 2003 to 2020, in round numbers, about $941 million. Joint Purpose Monies should approximate $286 million, another benefit to the City since their use is subject to negotiations between the City and BPCA. If the past is any indication, a majority of these funds will go to the City, especially as Battery Park City gets built out and its monetary expenditures decline. Finally, it is speculative to guess who will benefit from the $788 million in unplanned leveraged amounts. The year 2000 is the earliest the BPCA will be able to issue bonds other than those planned to meet the immediate infrastructure needs of the project and the housing program. The purpose of these funds, likely be decided jointly between the City and State, will reflect the major policy objectives of the public sector at that time. Hopefully, by then, monies will not be necessary to fund a City budget deficit.

Interestingly, in terms of dollar flows (only), the entity that least benefits from the tremendous availability of funds is the real estate project itself. By 1993 when the last anticipated capital expenditures are dedicated to the project, only 7.3% (project costs including state

repayments) of the total funding resources will have been dedicated to developing BPC. This amount will increase somewhat as a portion of Joint Purpose monies and unplanned leveraged amounts flow to the project over time. These additional amounts, however, will still remain relatively small in proportion to the amount of total funding resources available.

Ironically, the fact that the bricks-and-mortar portion of the project receives the least money from the financial success of the development captures the true essence of the BPC capital structure. Why? In simplified terms - - the capital structure turned out to be ingenious and the use of money efficient. First, the public sector undertook the risk of creating new land and infrastructure and enticing private development to the site. Second, the land was leased, not sold, to private interests, developers. In pricing the lease BPCA negotiators structured payments (PILOTs) to reflect the value of increasing assessments, with an eye toward boosting public coffers as the project development matured. Once revenues reached sufficient levels, monies would be used to fund additional infrastructure needs of the project and to repay any cash disbursement expended to date. As the project gets built out, its capital needs diminish and the surpluses, after the payment of all outstanding debt and project costs, are parlayed into other uses. The project - - now a "money machine" - - funds other essential needs of the public sector in the future. With the benefit of a

long-term perspective, this type of public development minimizes expenditures made to the actual project relative to the significant funding used for other, nonproject objectives. This indeed is a brilliant scheme with phenomenal financial benefits realized by the public sector!

Risks Ahead

What, if any, are the risks ahead for the BPCA? As demonstrated in Chapter Three, the Authority's revenue stream from existing sublease payments, at a conservative annual 4.5% growth rate, will produce close to $6.7 billion over a 30-year period, easily supporting current and planned BPCA and HNYC debt obligations. Furthermore, these revenues will provide tremendous benefits to the public sector beyond the bricks and mortar, open spaces, and amenities on the project site. The risk, therefore, does not seem to be the stability of the existing revenue stream, but rather the future plans of the project.

What the Authority is planning for the future is ambitious, reasonably so given its track record. The City, has agreed to provide funds necessary to cover the cost of construction, approximately $141 million, for the Stuyvesant High School to be located in the northeastern-most corner of the BPC site. Additional residential development to the north and south of the World Financial Center, is progressing rapidly; one

building has been recently completed and construction of two other units are underway. Developers of two more residential projects have been selected and construction is scheduled to begin soon. The BPCA has publicly announced plans to create nearly $100 million worth of elaborate public parks covering close to 30 acres, in an effort to make BPC a recreational center for all New Yorkers.[1]

The potential risk is that these new plans are overly ambitious, especially given Manhattan's current weak real estate market. If this is the case, revenues from existing subleases could be affected. Not the dollar amount generated, but rather how they get allocated. The Authority, for example, might have to redirect existing sublease revenues to support new developments having difficulty with leasing and consequently meeting their immediate obligations. Redirecting existing sublease monies in this way could potentially delay funding the $600-million housing program and reduce the leverage capability and discretionary amounts available to the City and the BPCA in the future. A significant, though intangible additional effect of weak revenue-producing development, could reduce investor confidence in the BPCA outstanding debt if redirection of revenues is perceived as a threat to the financial integrity of the bonds. This would be detrimental in several ways: (i) the BPCA's cost of borrowing for future financings might be higher, thereby reducing leverage capability; (ii) all bonds outstanding (with the possible exception of the insured

bonds) might trade at significant discounts; and (iii) potential review of all bonds outstanding by the rating agencies could result in a possible downgrading.

BPCA's final risk lies with the stability of the commercial tenants themselves since they provide the core source of income for existing sublease payments. Currently O&Y and American Express are the main leasees of the commercial parcels, with subtenants consisting primarily of financially oriented firms. Both American Express and O&Y are credit-worthy tenants and represent excellent risks, however, it is not unreasonable to assume that the subtenants represent a potential credit problem in today's economic environment. What are the potential implications of an increase in vacancy on the commercial parcels to the public sector?

For practical purposes, even if significant space in the WFC becomes vacant due to continued cutbacks on Wall Street, it is highly unlikely that either O&Y or American Express would default on their lease obligations to the BPCA. Although revenues to O&Y and American Express would shrink, infringing on the profitability from their investment, a default on lease obligations would indicate that the companies themselves were probably on the road to bankruptcy, unable to find alternative funds to meet scheduled lease payments. Default would never be in the best interest of the current leasees. However, if this doomsday scenario were to happen, the BPCA would still face minimal risk; the leasehold mortgage lenders behind

O&Y and American Express would foreclose on the properties and most likely assume the lease payment obligations. The BPCA can take comfort in knowing the lenders on the commercial development phase are some of the most financially solvent institutions in the world today (Sanwa, Sumitomo, Manufactures Hanover Trust and others).[2] Finally, if the lenders for some unknown reason decided not to meet these unsubordinated lease payment obligations, the project would revert to the BPCA, and the State would now own an asset worth approximately $3 to $5 billion. The risk would be reduced to asset management of the property.

For the public sector, the probability of the BPC project entering financially difficult times seems remote. Currently operating projects provide revenues sufficient to fund current obligations and, more importantly, other significant policy objectives established by the City and the State. Chapter Three demonstrated that significant reductions to PILOT payments would have to occur (greater than 2.4% annually) for a long period of time before the BPCA would falter in meeting any of its current financial obligations. A sustained reduction in PILOTs of this magnitude, for a long period of time, seems difficult to imagine given the duration of past real estate cycles in New York and the historical increase in tax collections over the past 20 years. From this perspective, therefore, all existing and planned financings of the BPCA and HNYC are excellent credits backed by ample revenues to meet debt service payments on

these bonds. The real risk to the public sector is that over ambitious development plans might reduce the total benefit package it can expect to realize over a thirty-year period. The $600-million housing program could be delayed if Excess Revenues have to be redirected for any reason.

The future should prove to be prosperous for the project. Unlike the 1970s, the greatest issue in the 1990s and 2000s will not be how to generate revenues, but rather how to allocate the financial benefits the "money machine" is likely to produce. It is somewhat unusual for a public/private partnership to develop a massive project, from scratch, that can be cheered by design experts, public policy makers, financial minds, architects, and, most of all, the average person. Battery Park City merits this respect and more. The early vision and continuing faith both the State and the City provided to the project in its infancy has produced a magnificent financial resource the public sector can tap for many years to come. From the days of vacant land and no revenues to a time of bustling development and generous cash flow, Battery Park City has become a public-sector financial dream, worthy of emulation by all major cities across our nation.

NOTES

I acknowledge with gratitude the time and help that both Robert Serpico, Vice President Finance/Treasurer of the Battery Park City Authority, and Roger J. Bagley, Partner of Hawkins, Delafield and Wood, gave to me throughout the thesis process. Their availability and willingness to provide information on a timely basis helped tremendously with my understanding of the project and is continually relied upon in the thesis.

CHAPTER TWO

1. Battery Park City Authority, "Battery Park City Fact Sheet," (1989).

2. Frederick O'R. Hayes, "Battery Park City Development History," Working Draft, Frederick O'R. Hayes Associates, July 1, 1986, p.27.

3. Battery Park City Authority, Series A, 1972 Official Statement, May 22, 1972, pp.18

4. Ibid.

5. Hayes, "Battery Park City Development History," pp.61.

6. "Less Secure State Bonds", New York Times, September 11, 1979, Section D, pp.8.

7. Battery Park City Authority, 1980 Annual Report, pp.1

8. The balance of Chapter Two continually relies on the following sources of information, unless otherwise noted:

   (i) "Attempt To Revive Battery Park Plan Is Readied Carey", New York Times, October 28, 1979, Section I, p.1.

   (ii) Battery Park City Authority Agreements with the City of New York, Memorandum of Understanding, December 30, 1979.

   (iii) Battery Park City Authority Agreements with the City of New York, Settlement Agreement, June 6, 1980.

   (iv) Battery Park City Authority Agreements with the City of New York, Amendment to Settlement Agreement, August 15, 1986.

   (v) Battery Park City Authority, Series 1,2 & A, 1986 Official Statement, August 22, 1986.

(vi) Housing New York Corporation, Series A, 1987 Official Statement, October 1, 1987.

(vii) Battery Park City Authority Agreements with the City of New York, Agreement and Consent, December 30, 1989.

(viii) Telephone Interview with Peter J.Fugiel, Vice President, John Nuveen & Co., (Chicago), May 25, 1990.

(ix) Interview with Roger J. Bagley, Partner, Hawkins Delafield and Wood, New York City, May 24, 1990 and June 18, 1990.

(xi) Battery Park City Authority, Series 1990, 1990 Official Statement, May 31, 1990.

(xii) Interview with Robert M. Serpico, Vice President Finance/Treasurer, Battery Park City Authority, New York City, June 18, 1990.

9. Hayes, "Battery Park City DevelopmentHistory," pp.73-74.

10. S.L. Fordsham, "World Financial Center; Olympia & York Sets Financial and Leasing Milestones in New York City," Urban Land, Volume 44 (No. 9), September 1985, p.22.

11. Hayes, "Battery Park City Development History," pp.73-75.

12. Peter J. Fugiel, "Battery Park City Authority, 1972 Series A Bonds", Nuveen Research, John Nuveen & Co. Incorporated, February 1, 1982.

13. Calculated by amortizing the insurance premiums over thirty years and estimating the minimum interest rate differential necessary to equate the two costs. The BPCA would not pay for insurance unless reduction in annual debt service payments surpassed the insurance costs.

CHAPTER THREE

1. Information regarding PILOT payments, growth rates, historical New York tax policy, and tax abatements are derived from Battery Park City Authority, Series 1990, 1990 Official Statement, "Cushman and Wakefield Pro Forma Cash Flow Study", Appendix C, May 31, 1990, pp.1a-43.

2. Information regarding the flow of funds comes from the following sources:

(i) Battery Park City Authority Agreements with the City of New York, Amendment to Settlement

Agreement, August 15, 1986.

(ii) Battery Park City Authority, Series 1,2 & A, 1986 Official Statement, August 22, 1986.

(iii) Housing New York Corporation, Series A, 1987 Official Statement, October 1, 1987.

(iv) Battery Park City Authority Agreements with the City of New York, Agreement and Consent, December 30, 1989.

(v) Battery Park City Authority, Series 1990, 1990 Official Statement, May 31, 1990.

(vi) Interview with Robert M. Serpico, Vice President Finance/Treasurer, Battery Park City Authority, New York City, June 18, 1990.

(vii) Interview with Roger J. Bagley, Partner, Hawkins Delafield and Wood, New York City, May 24, 1990 and June 18, 1990.

3. Battery Park City Authority Agreements with the City of New York, Amendment To Agreement As To Certain Excess Revenues Of the Battery Park City Authority, Estimated Schedule, May 18, 1990.

4. This assumption is based on the review of the previous debt issuances of the BPCA and HNYC which, on average, capitalized interest for three to five years.

5. Interview with Bagley.

6. Real property assessment policy in New York changed in 1983 to target 45 percent of market value of all commercial and residential income-producing properties. A 6 to 7 percent annual assessment increase on nontransacted buildings was presumably to bring all commercial and multi-family properties to tax parity. New commercial construction is assessed based on its state of completion as of each January 5th and has no fixed phase-in period. On stabilization, assessments are phased-in over 4 to 5 years. Information derived from Cushman and Wakefield Pro Forma Cash Flow Study.

7. The 1989 Agreement and Consent stipulates that the BPCA pay $50 million from monies received, net of Prior Claims, to the City (Remittance to City) before the new $600 million housing program scheduled payments commence in 1994. I have assumed that this $50 million remittance to the City will be applied to the housing program. This amount ($50 million) is represented as City split amounts and is fulfilled in the year 1992. It should be understood that the City might have previously earmarked these monies for other uses,

which would impact the timing of the housing program being fully funded.

CHAPTER FOUR

1. Amounts for the scheduled payments pursuant to the 1989 A&C are derived from Battery Park City Authority Agreements with the City of New York, Agreement and Consent, December 30, 1989, pp. 8.

CHAPTER FIVE

1. Battery Park City Authority, Series 1990, 1990 Official Statement, May 31, 1990, pp. 5-6.

2. Battery Park City Authority, "Presentation to Investors," (1990).

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APPENDIX A

APPENDIX A

BASE CASE SCENARIO - - COMPLETE FINANCIALS

	1990	1991	1992	1993	1994	1995
EXISTING SUBLEASE REVENUES:(1)						
Pilot	47,678,092	54,317,728	62,224,294	70,188,600	78,754,237	87,959,412
Base Rent/Other	6,797,374	7,895,530	8,927,555	9,951,377	10,975,198	12,394,134
Residential	12,547,006	13,843,345	15,035,896	16,147,148	17,485,304	19,033,111
TOTAL:	$67,022,472	$76,056,603	$86,187,745	$96,287,125	$107,214,739	$119,386,657
1972 Debt Service	(14,285,000)	(14,285,000)	(14,285,000)	(14,285,000)	(14,285,000)	(14,285,000)
O & M/Administrative (2)	(13,900,000)	(14,595,000)	(15,324,750)	(16,090,988)	(16,895,537)	(17,740,314)
1972 Reserve Income (3)	715,000	715,000	715,000	715,000	715,000	715,000
EXCESS REVENUE FUND ("ERF") AMTS:	39,552,472	47,891,603	57,292,995	66,626,138	76,749,202	88,076,343
1986 Bonds Debt Service	(13,108,000)	(15,895,000)	(15,895,000)	(15,895,000)	(15,895,000)	(15,895,000)
1987 HNYC Debt Service (4)	0	0	0	(21,075,000)	(21,075,000)	(21,075,000)
1986 Reserve Income	790,990	790,990	790,990	790,990	790,990	790,990
1987 Reserve Income	0	0	0	1,053,647	1,053,647	1,053,647
AVAILABLE AMOUNTS:	27,235,462	32,787,593	42,188,985	31,500,775	41,623,840	52,950,981
Special Fund Deposit (5)	(17,000,000)	(17,000,000)	(17,000,000)	0	0	0
Pledged Rev.for 1990 Debt Service	0	0	0	(16,000,000)	(16,000,000)	(16,000,000)
DCR on 1990 Bonds	0.00	0.00	0.00	1.97	2.60	3.31
2cnd TIER "ERF" AMOUNTS:	10,235,462	15,787,593	25,188,985	15,500,775	25,623,840	36,950,981
Prjt.Rev.Bds. Pmts (1991-1993) (6)	0	0	0	0	(2,983,011)	(7,424,382)
HNYC Debt Srv. (1990-1993) (7)	0	0	0	0	(19,986,244)	(27,409,706)
NET EXCESS APPLIED TO SETTLEMENT AGREEMENT :	10,235,462	15,787,593	25,188,985	15,500,775	2,654,585	2,116,892
Hsg. Program Pmts. per A&C (8)	0	0	0	0	(13,200,000)	(26,400,000)
Other Revenues Needed (9)	0	0	0	0	10,545,415	24,283,108
NET EXCESS AVAILABLE FOR SPLIT:	10,235,462	15,787,593	25,188,985	15,500,775	0	0
City Split Used For Hsg.(80%) (10)	10,235,462	15,787,593	25,188,985	15,500,775	0	0
(Cummulative New Housing Program Plus City Split)	10,235,462	26,023,055	51,212,040	66,712,815	79,912,815	106,312,815
Max. Avail. for Debt Service (11)	0	0	0	0	0	0
Leverage Capability (12)	0	0	0	0	0	0
New Bond Debt Service	0	0	0	0	0	0
AVAILABLE AMOUNTS W/ LEVERAGE:	0	0	0	0	0	0
Total City Split Monies (13)	10,235,462	15,787,593	25,188,985	15,500,775	0	0
Total Joint Purpose Monies W/ Leverage	0	0	0	51,000,000	0	0

FOOTNOTES: (See on last Page)

Source: Tom Oppenheim, M.I.T. CRED

APPENDIX A

BASE CASE SCENARIO - - COMPLETE FINANCIALS

	1996	1997	1998	1999	2000	2001	2002
EXISTING SUBLEASE REVENUES:(1)							
Pilot	97,098,348	105,322,128	112,476,224	118,383,099	123,710,338	129,277,304	135,094,782
Base Rent/Other	13,394,453	14,394,949	15,760,650	19,149,408	27,716,780	28,757,535	29,117,602
Residential	20,638,658	22,406,334	23,580,565	24,250,945	24,976,523	25,758,504	26,655,552
TOTAL:	$131,131,459	$142,123,411	$151,817,439	$161,783,452	$176,403,641	$183,793,343	$190,867,936
1972 Debt Service	(14,285,000)	(14,285,000)	(14,285,000)	(14,285,000)	(14,285,000)	(14,285,000)	(14,285,000)
O & M/Administrative (2)	(18,627,329)	(19,558,696)	(20,536,631)	(21,563,462)	(22,641,635)	(23,773,717)	(24,962,403)
1972 Reserve Income (3)	715,000	715,000	715,000	715,000	715,000	715,000	715,000
EXCESS REVENUE FUND ("ERF") AMTS:	98,934,130	108,994,715	117,710,808	126,649,990	140,192,006	146,449,626	152,335,533
1986 Bonds Debt Service	(15,895,000)	(15,895,000)	(15,895,000)	(15,895,000)	(15,895,000)	(15,895,000)	(15,895,000)
1987 HNYC Debt Service (4)	(21,075,000)	(21,075,000)	(21,075,000)	(21,075,000)	(21,075,000)	(21,075,000)	(21,075,000)
1986 Reserve Income	790,990	790,990	790,990	790,990	790,990	790,990	790,990
1987 Reserve Income	1,053,647	1,053,647	1,053,647	1,053,647	1,053,647	1,053,647	1,053,647
AVAILABLE AMOUNTS:	63,808,767	73,869,353	82,585,446	91,524,627	105,066,643	111,324,263	117,210,171
Special Fund Deposit (5)	0	0	0	0	0	0	0
Pledged Rev.for 1990 Debt Service	(16,000,000)	(16,000,000)	(19,700,000)	(19,700,000)	(19,700,000)	(19,700,000)	(19,700,000)
DCR on 1990 Bonds	3.99	4.62	4.19	4.65	5.33	5.65	5.95
2cnd TIER "ERF" AMOUNTS:	47,808,767	57,869,353	62,885,446	71,824,627	85,366,643	91,624,263	97,510,171
Prjt.Rev.Bds. Pmts (1991-1993) (6)	(7,424,382)	(7,424,382)	(7,424,382)	(7,424,382)	(7,424,382)	(7,424,382)	(7,424,382)
HNYC Debt Srv. (1990-1993) (7)	(32,620,405)	(36,746,137)	(36,746,137)	(36,746,137)	(36,746,137)	(36,746,137)	(36,746,137)
NET EXCESS APPLIED TO SETTLEMENT AGREEMENT :	7,763,979	13,698,833	18,714,926	27,654,108	41,196,124	47,453,744	53,339,651
Hsg. Program Pmts. per A&C (8)	(39,600,000)	(52,800,000)	(66,000,000)	(79,200,000)	(79,200,000)	(79,200,000)	(79,200,000)
Other Revenues Needed (9)	31,836,021	39,101,167	47,285,074	51,545,892	38,003,876	31,746,256	25,860,349
NET EXCESS AVAILABLE FOR SPLIT:	0	0	0	0	0	0	0
City Split Used For Hsg.(80%) (10)	0	0	0	0	0	0	0
(Cummulative New Housing Program Plus City Split)	145,912,815	198,712,815	264,712,815	343,912,815	423,112,815	502,312,815	581,512,815
Max. Avail. for Debt Service (11)	0	0	0	0	0	0	0
Leverage Capability (12)	0	0	0	0	367,972,913	35,871,483	37,192,03[illegible]
New Bond Debt Service	0	0	0	0	0	0	0
AVAILABLE AMOUNTS W/ LEVERAGE:	0	0	0	0	0	0	0
Total City Split Monies (13)	0	0	0	0	0	0	0
Total Joint Purpose Monies W/ Leverage	0	0	0	0	0	0	0

FOOTNOTES: (See on last Page)

Source: Tom Oppenheim, M.I.T. CRED

APPENDIX A

BASE CASE SCENARIO - - COMPLETE FINANCIALS

	2003	2004	2005	2006	2007	2008	2009
EXISTING SUBLEASE REVENUES:(1)							
Pilot	141,174,048	147,526,880	154,165,589	161,103,041	168,352,678	175,928,548	183,845,333
Base Rent/Other	29,399,439	29,615,998	29,824,365	30,023,703	30,197,704	30,510,162	30,263,743
Residential	27,470,298	28,316,232	29,217,952	30,133,363	31,091,427	32,080,338	33,120,125
TOTAL:	$198,043,785	$205,459,110	$213,207,906	$221,260,107	$229,641,809	$238,519,048	$247,229,201
1972 Debt Service	(14,285,000)	(14,285,000)	(14,285,000)	(14,285,000)	(14,285,000)	(14,285,000)	(14,285,000)
O & M/Administrative (2)	(26,210,523)	(27,521,049)	(28,897,102)	(30,341,957)	(31,859,055)	(33,452,007)	(35,124,608)
1972 Reserve Income (3)	715,000	715,000	715,000	715,000	715,000	715,000	715,000
EXCESS REVENUE FUND ("ERF") AMTS:	158,263,262	164,368,061	170,740,804	177,348,150	184,212,754	191,497,041	198,534,593
1986 Bonds Debt Service	(15,895,000)	(15,895,000)	(15,895,000)	(15,895,000)	(15,895,000)	(15,895,000)	(15,895,000)
1987 HNYC Debt Service (4)	(21,075,000)	(21,075,000)	(21,075,000)	(21,075,000)	(21,075,000)	(21,075,000)	(21,075,000)
1986 Reserve Income	790,990	790,990	790,990	790,990	790,990	790,990	790,990
1987 Reserve Income	1,053,647	1,053,647	1,053,647	1,053,647	1,053,647	1,053,647	1,053,647
AVAILABLE AMOUNTS:	123,137,899	129,242,698	135,615,442	142,222,788	149,087,392	156,371,678	163,409,231
Special Fund Deposit (5)	0	0	0	0	0	0	0
Pledged Rev.for 1990 Debt Service	(19,700,000)	(19,700,000)	(19,700,000)	(19,700,000)	(19,700,000)	(19,700,000)	(19,700,000)
DCR on 1990 Bonds	6.25	6.56	6.88	7.22	7.57	7.94	8.2[illegible]
2cnd TIER "ERF" AMOUNTS:	103,437,899	109,542,698	115,915,442	122,522,788	129,387,392	136,671,678	143,709,23[illegible]
Prjt.Rev.Bds. Pmts (1991-1993) (6)	(7,424,382)	(7,424,382)	(7,424,382)	(7,424,382)	(7,424,382)	(7,424,382)	(7,424,382)
HNYC Debt Srv. (1990-1993) (7)	(36,746,137)	(36,746,137)	(36,746,137)	(36,746,137)	(36,746,137)	(36,746,137)	(36,746,137)
NET EXCESS APPLIED TO SETTLEMENT AGREEMENT :	59,267,380	65,372,179	71,744,922	78,352,268	85,216,872	92,501,159	99,538,711
Hsg. Program Pmts. per A&C (8)	(18,487,185)	0	0	0	0	0	0
Other Revenues Needed (9)	0	0	0	0	0	0	0
NET EXCESS AVAILABLE FOR SPLIT:	40,780,195	65,372,179	71,744,922	78,352,268	85,216,872	92,501,159	99,538,711
City Split Used For Hsg.(80%) (10)	0	0	0	0	0	0	0
(Cummulative New Housing Program Plus City Split)	600,000,000	0	0	0	0	0	0
Max. Avail. for Debt Service (11)	0	32,686,089	35,872,461	39,176,134	42,608,436	46,250,579	49,769,356
Leverage Capability (12)	38,640,113	41,002,458	39,613,621	29,479,950	47,754,825	58,024,231	60,321,060
New Bond Debt Service	0	(32,686,089)	(35,872,461)	(39,176,134)	(42,608,436)	(46,250,579)	(49,769,356)
AVAILABLE AMOUNTS W/ LEVERAGE:	0	32,686,089	35,872,461	39,176,134	42,608,436	46,250,579	49,769,356
Total City Split Monies (13)	32,624,156	26,148,872	28,697,969	31,340,907	34,086,749	37,000,463	39,815,485
Total Joint Purpose Monies W/ Leverage	8,156,039	6,537,218	7,174,492	7,835,227	8,521,687	9,250,116	9,953,871

FOOTNOTES: (See on last Page)

Source: Tom Oppenheim, M.I.T. CRED

APPENDIX A

BASE CASE SCENARIO - - COMPLETE FINANCIALS

	2010	2011	2012	2013	2014	2015	2016
EXISTING SUBLEASE REVENUES:(1)							
Pilot	192,118,373	200,763,700	209,798,066	219,238,979	229,104,733	239,414,446	250,188,096
Base Rent/Other	27,878,024	28,123,689	28,228,605	28,338,600	27,527,425	23,014,176	23,112,087
Residential	34,226,291	35,663,218	38,768,467	41,966,945	43,185,173	44,452,130	45,769,760
TOTAL:	$254,222,688	$264,550,607	$276,795,138	$289,544,524	$299,817,331	$306,880,752	$319,069,943
1972 Debt Service	(14,285,000)	(14,285,000)	(14,285,000)	(14,285,000)	(14,285,000)		
O & M/Administrative (2)	(36,880,838)	(38,724,880)	(40,661,124)	(42,694,180)	(44,828,889)	(47,070,334)	(49,423,850)
1972 Reserve Income (3)	715,000	715,000	715,000	715,000	715,000	0	0
EXCESS REVENUE FUND ("ERF") AMTS:	203,771,850	212,255,727	222,564,014	233,280,344	241,418,442	259,810,418	269,646,093
1986 Bonds Debt Service	(15,895,000)	(15,895,000)	(15,895,000)	(15,895,000)	(15,895,000)	(15,895,000)	(15,895,000)
1987 HNYC Debt Service (4)	(21,075,000)	(21,075,000)	(21,075,000)	(21,075,000)	(21,075,000)	(21,075,000)	(21,075,000)
1986 Reserve Income	790,990	790,990	790,990	790,990	790,990	790,990	790,990
1987 Reserve Income	1,053,647	1,053,647	1,053,647	1,053,647	1,053,647	1,053,647	1,053,647
AVAILABLE AMOUNTS:	168,646,487	177,130,365	187,438,652	198,154,981	206,293,079	224,685,056	234,520,730
Special Fund Deposit (5)	0	0	0	0	0	0	0
Pledged Rev.for 1990 Debt Service	(19,700,000)	(19,700,000)	(19,700,000)	(19,700,000)	(19,700,000)	(19,700,000)	(19,700,000)
DCR on 1990 Bonds	8.56	8.99	9.51	10.06	10.47	11.41	11.90
2cnd TIER "ERF" AMOUNTS:	148,946,487	157,430,365	167,738,652	178,454,981	186,593,079	204,985,056	214,820,730
Prjt.Rev.Bds. Pmts (1991-1993) (6)	(7,424,382)	(7,424,382)	(7,424,382)	(7,424,382)	(7,424,382)	(7,424,382)	(7,424,382)
HNYC Debt Srv. (1990-1993) (7)	(36,746,137)	(36,746,137)	(36,746,137)	(36,746,137)	(36,746,137)	(36,746,137)	(36,746,137)
NET EXCESS APPLIED TO SETTLEMENT AGREEMENT :	104,775,968	113,259,845	123,568,132	134,284,462	142,422,560	160,814,536	170,650,211
Hsg. Program Pmts. per A&C (8)	0	0	0	0	0	0	0
Other Revenues Needed (9)	0	0	0	0	0	0	0
NET EXCESS AVAILABLE FOR SPLIT:	104,775,968	113,259,845	123,568,132	134,284,462	142,422,560	160,814,536	170,650,211
City Split Used For Hsg.(80%) (10)	0	0	0	0	0	0	0
(Cummulative New Housing Program Plus City Split)	0	0	0	0	0	0	0
Max. Avail. for Debt Service (11)	52,387,984	56,629,923	61,784,066	67,142,231	71,211,280	80,407,268	85,325,105
Leverage Capability (12)	45,808,472	103,526,444	55,363,945	131,359,460	59,836,187	61,357,953	0
New Bond Debt Service	(52,387,984)	(56,629,923)	(61,784,066)	(67,142,231)	(71,211,280)	(80,407,268)	(85,325,105)
AVAILABLE AMOUNTS W/ LEVERAGE:	52,387,984	56,629,923	61,784,066	67,142,231	71,211,280	80,407,268	85,325,105
Total City Split Monies (13)	41,910,387	45,303,938	49,427,253	53,713,785	56,969,024	64,325,815	68,260,084
Total Joint Purpose Monies W/ Leverage	10,477,597	11,325,985	12,356,813	13,428,446	14,242,256	16,081,454	17,065,021

FOOTNOTES: (See on last Page)

Source: Tom Oppenheim, M.I.T. CRED

APPENDIX A

BASE CASE SCENARIO - - COMPLETE FINANCIALS

	2017	2018	2019	2020
EXISTING SUBLEASE REVENUES:(1)				
Pilot	261,446,560	273,211,656	285,506,180	298,353,958
Base Rent/Other	21,187,106	21,221,797	21,258,572	9,541,630
Residential	47,140,107	48,565,262	50,047,422	51,588,870
TOTAL:	$329,773,773	$342,998,715	$356,812,174	$359,484,458
1972 Debt Service				
O & M/Administrative (2)	(51,895,043)	(54,489,795)	(57,214,285)	(60,074,999)
1972 Reserve Income (3)	0	0	0	0
EXCESS REVENUE FUND ("ERF") AMTS:	277,878,730	288,508,920	299,597,889	299,409,459
1986 Bonds Debt Service	0	0	0	0
1987 HNYC Debt Service (4)	(21,075,000)	(21,075,000)	(21,075,000)	(21,075,000)
1986 Reserve Income	0	0	0	0
1987 Reserve Income	1,053,647	1,053,647	1,053,647	1,053,647
AVAILABLE AMOUNTS:	257,857,378	268,487,567	279,576,537	279,388,106
Special Fund Deposit (5)	0	0	0	0
Pledged Rev.for 1990 Debt Service	(19,700,000)	(19,700,000)	(19,700,000)	(19,700,000)
DCR on 1990 Bonds	13.09	13.63	14.19	14.18
2cnd TIER "ERF" AMOUNTS:	238,157,378	248,787,567	259,876,537	259,688,106
Prjt.Rev.Bds. Pmts (1991-1993) (6)	(7,424,382)	(7,424,382)	(7,424,382)	(7,424,382)
HNYC Debt Srv. (1990-1993) (7)	(36,746,137)	(36,746,137)	(36,746,137)	(36,746,137)
NET EXCESS APPLIED TO SETTLEMENT AGREEMENT :	193,986,858	204,617,048	215,706,017	215,517,587
Hsg. Program Pmts. per A&C (8)	0	0	0	0
Other Revenues Needed (9)	0	0	0	0
NET EXCESS AVAILABLE FOR SPLIT:	193,986,858	204,617,048	215,706,017	215,517,587
City Split Used For Hsg.(80%) (10)	0	0	0	0
(Cummulative New Housing Program Plus City Split)	0	0	0	0
Max. Avail. for Debt Service (11)	96,993,429	102,308,524	107,853,009	107,758,793
Leverage Capability (12)	0	0	0	0
New Bond Debt Service	(96,993,429)	(102,308,524)	(107,758,793)	(107,758,793)
AVAILABLE AMOUNTS W/ LEVERAGE:	96,993,429	102,308,524	107,947,224	107,758,793
Total City Split Monies (13)	77,594,743	81,846,819	86,357,779	86,207,035
Total Joint Purpose Monies W/ Leverage	19,398,686	20,461,705	21,589,445	21,551,759

FOOTNOTES: (See on last Page)

Source: Tom Oppenheim, M.I.T. CRED

FOOTNOTES:

(1) Derived from 1990 Cushman & Wakefield, Inc. BPCA Pro Forma Cash Flow Study. These figures reflect only those revenues derived from Existing Sublease Revenues and do not include Post-1986 Leases, Transaction payments , New Leases, Lump Sum Payments or Future Revenues. Assumed growth rate is 4.5% per year.

(2) The 1990 O&M/Administrative budgeted amounts is $13,900,000 with a 5% growth rate for the remaining years.

(3) Reserve Fund Deposit amount is $14,300,000 which approximates the original deposit to the reserve fund. The deposits for the 1986 and 1987 reserve funds are $15,819,802 and $21,072,949 respectively. These amounts also represent original deposit amounts and all reserve funds assume an investment earnings rate of 5%.

(4) Pursuant to the Ammendment to First Dedication Instrument dated 9/15/1987, capitalized interest was extended to cover interest through 1992 on the 1987 HNYC bonds. Assume first principal and interest payment to occur in 1993.

(5) Pursuant to the 1990 Revenue Bond Resolution, excess revenue funds available are to deposited into a Special Fund so that the amount is not in excess of $17 million in 1990, $34 million in 1991, and $51 million in 1992. The purpose is to provide additional coverage for the 1990 bonds in case of insufficient revenues. The monies are available for any purpose the City and Authority jointly decide after 1992. The anlaysis assumes that the monies are deposited in the Fund for three years and then are released as Joint Purpose Monies in 1993 as reflected by the $51 million in Joint Purpose monies in 1993 plus the traditional split that occurs from Available Amounts. During the years 1990-1992 the analysis assumes that all remaining Available Amounts, after deposit to Special Fund, go to the City as split amounts and are used to fund the obligations under the 1989 A&C.

(6) Assumes BPCA anticipated future infrastructure financings of $22.5 million and $33.5 million net proceeds in 1991 and 1992 respectively. Net Proceeds account for 67% of bonds issued to account for three years of capitalized interest, costs of issuance, and reserve fund deposits. Figures derived from 1990 Amendment to Agreement as to Certain Excess Revenues of BPCA, 5/18/90 estimated schedule.

(7) Assumes HNYC anticipated future financings for the Housing New York Program of $140 million, $52 million, $36.5 million, and $28.9 million in net proceeds for the consecutive years commencing in 1990 and ending in 1993. Net Proceeds account for 62.22% of bonds issued to account for 4 years of capitalized interest, costs of issuance, reserve fund deposits.

(8) Amounts given in the 1989 A&C commencing in 1994 and ending when hsg. program fulfilled. Amounts to be paid excess revenues, prior to traditional 80%/20% split, and other revenues available. See next footnote.

(9) Necessary revenues from sources other than existing subleases (i.e., new leases, transaction payments etc) to pay for commitment under the A&C housing obligations.

(10) Amounts available for City split that go to fund the A&C obligations. I have assume that the $50 remittance to the City obligation under the 1989 A&C will go to fund the new housing program. Therefore, this amount ($50 million) is shown as City split amounts and is fulfilled by 1992.

(11) Assumes a conservative 2 times debt coverage ratio.

(12) Assumes the first year leveraged amounts could be issued would be 2000, and assumes 3 full years of capitalized interest.

(13) City split amounts are not available from 1994 until 2003 because excess revenues before the split is being used to fund $600 million housing obligation.

* All figures are derived from the 1986 and 1990 Battery Park City Authority Official Statements, as well as the 1987 Housing New York Corporation Official Statement. A&C annual payments are derived from the 1989 Agreement and Consent document.

APPENDIX B

APPENDIX B

ALTERNATIVE SCENARIO - - COMPLETE FINANCIALS

	1990	1991	1992	1993	1994	1995
EXISTING SUBLEASE REVENUES:(1)						
Pilot	47,678,092	54,317,728	62,224,294	70,188,600	78,754,237	87,959,412
Base Rent/Other	6,797,374	7,895,530	8,927,555	9,951,377	10,975,198	12,394,134
Residential	12,547,006	13,843,345	15,035,896	16,147,148	17,485,304	19,033,111
TOTAL:	$67,022,472	$76,056,603	$86,187,745	$96,287,125	$107,214,739	$119,386,657
1972 Debt Service	(14,285,000)	(14,285,000)	(14,285,000)	(14,285,000)	(14,285,000)	(14,285,000)
O & M/Administrative (2)	(13,900,000)	(14,595,000)	(15,324,750)	(16,090,988)	(16,895,537)	(17,740,314)
1972 Reserve Income (3)	715,000	715,000	715,000	715,000	715,000	715,000
EXCESS REVENUE FUND ("ERF") AMTS:	39,552,472	47,891,603	57,292,995	66,626,138	76,749,202	88,076,343
1986 Bonds Debt Service	(13,108,000)	(15,895,000)	(15,895,000)	(15,895,000)	(15,895,000)	(15,895,000)
1987 HNYC Debt Service (4)	0	0	0	(21,075,000)	(21,075,000)	(21,075,000)
1986 Reserve Income	790,990	790,990	790,990	790,990	790,990	790,990
1987 Reserve Income	0	0	0	1,053,647	1,053,647	1,053,647
AVAILABLE AMOUNTS:	27,235,462	32,787,593	42,188,985	31,500,775	41,623,840	52,950,981
Special Fund Deposit (5)	(17,000,000)	(17,000,000)	(17,000,000)	0	0	0
Pledged Rev.for 1990 Debt Service	0	0	0	(16,000,000)	(16,000,000)	(16,000,000)
DCR on 1990 Bonds	0.00	0.00	0.00	1.97	2.60	3.31
2cnd TIER "ERF" AMOUNTS:	10,235,462	15,787,593	25,188,985	15,500,775	25,623,840	36,950,981
Prjt.Rev.Bds. Pmts (1991-1993) (6)	0	0	0	0	(2,983,011)	(7,424,382)
HNYC Debt Srv. (1990-1993) (7)	0	0	0	0	(19,986,244)	(27,409,706)
NET EXCESS APPLIED TO LEVERAGE	10,235,462	15,787,593	25,188,985	15,500,775	2,654,585	2,116,892
Max. Avail. for Debt Service (8)	0	0	0	0	1,327,292	1,058,446
Leverage Capability (9)	0	0	0	0	105,344,293	50,317,684
New Bond Debt Service	0	0	0	0	0	0
NET AVAILABLE AMOUNTS	10,235,462	15,787,593	25,188,985	15,500,775	2,654,585	2,116,892
City Split (80%)	10,235,462	15,787,593	25,188,985	15,500,775	2,123,668	1,693,514
Joint Purpose Monies (20%)	0	0	0	51,000,000	530,917	423,378
NEW HOUSING PROGRAM:						
City Split Monies (10)	10,235,462	15,787,593	25,188,985	15,500,775	2,123,668	1,693,514
Other Revenues (11)	0	0	0	0	10,545,415	24,283,108
Leveraged Amounts	0	0	0	0	68,473,791	32,706,495
Cummulative Housing Balance	10,235,462	26,023,055	51,212,040	66,712,815	147,855,689	206,538,806
Extra Monies Paid per A&C (12)	0	0	0	0	0	0
City Split Benefit (13)	0	0	0	0	0	0
Savings (Freed Monies) (14)	112,003,201	-	-	-	-	-
Savings (PV @ 8.00%)	42,700,000	-	-	-	-	-

FOOTNOTES: (See last page)

Source: Tom Oppenheim, M.I.T. CRED

APPENDIX B

ALTERNATIVE SCENARIO - - COMPLETE FINANCIALS

	1996	1997	1998	1999	2000	2001	2002
EXISTING SUBLEASE REVENUES:(1)							
Pilot	97,098,348	105,322,128	112,476,224	118,383,099	123,710,338	129,277,304	135,094,782
Base Rent/Other	13,394,453	14,394,949	15,760,650	19,149,408	27,716,780	28,757,535	29,117,602
Residential	20,638,658	22,406,334	23,580,565	24,250,945	24,976,523	25,758,504	26,655,552
TOTAL:	$131,131,459	$142,123,411	$151,817,439	$161,783,452	$176,403,641	$183,793,343	$190,867,936
1972 Debt Service	(14,285,000)	(14,285,000)	(14,285,000)	(14,285,000)	(14,285,000)	(14,285,000)	(14,285,000)
O & M/Administrative (2)	(18,627,329)	(19,558,696)	(20,536,631)	(21,563,462)	(22,641,635)	(23,773,717)	(24,962,403)
1972 Reserve Income (3)	715,000	715,000	715,000	715,000	715,000	715,000	715,000
EXCESS REVENUE FUND ("ERF") AMTS:	98,934,130	108,994,715	117,710,808	126,649,990	140,192,006	146,449,626	152,335,533
1986 Bonds Debt Service	(15,895,000)	(15,895,000)	(15,895,000)	(15,895,000)	(15,895,000)	(15,895,000)	(15,895,000)
1987 HNYC Debt Service (4)	(21,075,000)	(21,075,000)	(21,075,000)	(21,075,000)	(21,075,000)	(21,075,000)	(21,075,000)
1986 Reserve Income	790,990	790,990	790,990	790,990	790,990	790,990	790,990
1987 Reserve Income	1,053,647	1,053,647	1,053,647	1,053,647	1,053,647	1,053,647	1,053,647
AVAILABLE AMOUNTS:	63,808,767	73,869,353	82,585,446	91,524,627	105,066,643	111,324,263	117,210,171
Special Fund Deposit (5)	0	0	0	0	0	0	0
Pledged Rev. for 1990 Debt Service	(16,000,000)	(16,000,000)	(19,700,000)	(19,700,000)	(19,700,000)	(19,700,000)	(19,700,000)
DCR on 1990 Bonds	3.99	4.62	4.19	4.65	5.33	5.65	5.95
2cnd TIER "ERF" AMOUNTS:	47,808,767	57,869,353	62,885,446	71,824,627	85,366,643	91,624,263	97,510,171
Prjt.Rev.Bds. Pmts (1991-1993) (6)	(7,424,382)	(7,424,382)	(7,424,382)	(7,424,382)	(7,424,382)	(7,424,382)	(7,424,382)
HNYC Debt Srv. (1990-1993) (7)	(32,620,405)	(36,746,137)	(36,746,137)	(36,746,137)	(36,746,137)	(36,746,137)	(36,746,137)
NET EXCESS APPLIED TO LEVERAGE	7,763,979	13,698,833	18,714,926	27,654,108	41,196,124	47,453,744	53,339,651
Max. Avail. for Debt Service (8)	3,881,990	6,849,417	9,357,463	13,827,054	20,598,062	23,726,872	26,669,826
Leverage Capability (9)	76,226,540	35,223,466	33,131,134	33,366,544	34,363,251	35,871,483	37,192,034
New Bond Debt Service	0	0	(9,357,463)	(13,827,054)	(20,598,062)	(23,726,872)	(26,669,826)
NET AVAILABLE AMOUNTS	7,763,979	13,698,833	9,357,463	13,827,054	20,598,062	23,726,872	26,669,826
City Split (80%)	6,211,184	10,959,067	7,485,971	11,061,643	16,478,450	18,981,498	21,335,860
Joint Purpose Monies (20%)	1,552,796	2,739,767	1,871,493	2,765,411	4,119,612	4,745,374	5,333,965
NEW HOUSING PROGRAM:							
City Split Monies (10)	6,211,184	10,959,067	7,485,971	11,061,643	16,478,450	-	-
Other Revenues (11)	31,836,021	39,101,167	47,285,074	51,545,892	38,003,876	31,746,256	25,860,349
Leveraged Amounts	49,547,251	22,895,253	21,535,237	21,688,253	22,336,113	-	-
Cummulative Housing Balance	294,133,261	367,088,748	443,395,030	527,690,818	604,509,257	-	-
Extra Monies Paid per A&C (12)	0	0	0	0	4,509,257	31,746,256	25,860,349
City Split Benefit (13)	0	0	0	0	0	18,981,498	21,335,860
Savings (Freed Monies) (14)	-	-	-	-	-	-	-
Savings (PV @ 8.00%)	-	-	-	-	-	-	-

FOOTNOTES: (See last page)

Source: Tom Oppenheim, M.I.T. CRED

APPENDIX B

ALTERNATIVE SCENARIO - - COMPLETE FINANCIALS

	2003	2004	2005	2006	2007	2008	2009
EXISTING SUBLEASE REVENUES:(1)							
Pilot	141,174,048	147,526,880	154,165,589	161,103,041	168,352,678	175,928,548	183,845,333
Base Rent/Other	29,399,439	29,615,998	29,824,365	30,023,703	30,197,704	30,510,162	30,263,743
Residential	27,470,298	28,316,232	29,217,952	30,133,363	31,091,427	32,080,338	33,120,125
TOTAL:	$198,043,785	$205,459,110	$213,207,906	$221,260,107	$229,641,809	$238,519,048	$247,229,201
1972 Debt Service	(14,285,000)	(14,285,000)	(14,285,000)	(14,285,000)	(14,285,000)	(14,285,000)	(14,285,000)
O & M/Administrative (2)	(26,210,523)	(27,521,049)	(28,897,102)	(30,341,957)	(31,859,055)	(33,452,007)	(35,124,608)
1972 Reserve Income (3)	715,000	715,000	715,000	715,000	715,000	715,000	715,000
EXCESS REVENUE FUND ("ERF") AMTS:	158,263,262	164,368,061	170,740,804	177,348,150	184,212,754	191,497,041	198,534,593
1986 Bonds Debt Service	(15,895,000)	(15,895,000)	(15,895,000)	(15,895,000)	(15,895,000)	(15,895,000)	(15,895,000)
1987 HNYC Debt Service (4)	(21,075,000)	(21,075,000)	(21,075,000)	(21,075,000)	(21,075,000)	(21,075,000)	(21,075,000)
1986 Reserve Income	790,990	790,990	790,990	790,990	790,990	790,990	790,990
1987 Reserve Income	1,053,647	1,053,647	1,053,647	1,053,647	1,053,647	1,053,647	1,053,647
AVAILABLE AMOUNTS:	123,137,899	129,242,698	135,615,442	142,222,788	149,087,392	156,371,678	163,409,231
Special Fund Deposit (5)	0	0	0	0	0	0	0
Pledged Rev.for 1990 Debt Service	(19,700,000)	(19,700,000)	(19,700,000)	(19,700,000)	(19,700,000)	(19,700,000)	(19,700,000)
DCR on 1990 Bonds	6.25	6.56	6.88	7.22	7.57	7.94	8.29
2cnd TIER "ERF" AMOUNTS:	103,437,899	109,542,698	115,915,442	122,522,788	129,387,392	136,671,678	143,709,231
Prjt.Rev.Bds. Pmts (1991-1993) (6)	(7,424,382)	(7,424,382)	(7,424,382)	(7,424,382)	(7,424,382)	(7,424,382)	(7,424,382)
HNYC Debt Srv. (1990-1993) (7)	(36,746,137)	(36,746,137)	(36,746,137)	(36,746,137)	(36,746,137)	(36,746,137)	(36,746,137)
NET EXCESS APPLIED TO LEVERAGE	59,267,380	65,372,179	71,744,922	78,352,268	85,216,872	92,501,159	99,538,711
Max. Avail. for Debt Service (8)	29,633,690	32,686,089	35,872,461	39,176,134	42,608,436	46,250,579	49,769,356
Leverage Capability (9)	38,640,113	41,002,458	39,613,621	29,479,950	47,754,825	58,024,231	60,321,060
New Bond Debt Service	(29,633,690)	(32,686,089)	(35,872,461)	(39,176,134)	(42,608,436)	(46,250,579)	(49,769,356)
NET AVAILABLE AMOUNTS	29,633,690	32,686,089	35,872,461	39,176,134	42,608,436	46,250,579	49,769,356
City Split (80%)	23,706,952	26,148,872	28,697,969	31,340,907	34,086,749	37,000,463	39,815,485
Joint Purpose Monies (20%)	5,926,738	6,537,218	7,174,492	7,835,227	8,521,687	9,250,116	9,953,871
NEW HOUSING PROGRAM:							
City Split Monies (10)	-	-	-	-	-	-	-
Other Revenues (11)	18,487,185						
Leveraged Amounts	-	-	-	-	-	-	-
Cummulative Housing Balance	-	-	-	-	-	-	-
Extra Monies Paid per A&C (12)	18,487,185	-	-	-	-	-	-
City Split Benefit (13)	(8,917,204)	-	-	-	-	-	-
Savings (Freed Monies) (14)	-	-	-	-	-	-	-
Savings (PV @ 8.00%)	-	-	-	-	-	-	-

FOOTNOTES: (See last page)

Source: Tom Oppenheim, M.I.T. CRED

APPENDIX B

ALTERNATIVE SCENARIO - - COMPLETE FINANCIALS

	2010	2011	2012	2013	2014	2015	2016
EXISTING SUBLEASE REVENUES:(1)							
Pilot	192,118,373	200,763,700	209,798,066	219,238,979	229,104,733	239,414,446	250,188,096
Base Rent/Other	27,878,024	28,123,689	28,228,605	28,338,600	27,527,425	23,014,176	23,112,081
Residential	34,226,291	35,663,218	38,768,467	41,966,945	43,185,173	44,452,130	45,769,766
TOTAL:	$254,222,688	$264,550,607	$276,795,138	$289,544,524	$299,817,331	$306,880,752	$319,069,943
1972 Debt Service	(14,285,000)	(14,285,000)	(14,285,000)	(14,285,000)	(14,285,000)		
O & M/Administrative (2)	(36,880,838)	(38,724,880)	(40,661,124)	(42,694,180)	(44,828,889)	(47,070,334)	(49,423,850)
1972 Reserve Income (3)	715,000	715,000	715,000	715,000	715,000	0	0
EXCESS REVENUE FUND ("ERF") AMTS:	203,771,850	212,255,727	222,564,014	233,280,344	241,418,442	259,810,418	269,646,093
1986 Bonds Debt Service	(15,895,000)	(15,895,000)	(15,895,000)	(15,895,000)	(15,895,000)	(15,895,000)	(15,895,000)
1987 HNYC Debt Service (4)	(21,075,000)	(21,075,000)	(21,075,000)	(21,075,000)	(21,075,000)	(21,075,000)	(21,075,000)
1986 Reserve Income	790,990	790,990	790,990	790,990	790,990	790,990	790,990
1987 Reserve Income	1,053,647	1,053,647	1,053,647	1,053,647	1,053,647	1,053,647	1,053,647
AVAILABLE AMOUNTS:	168,646,487	177,130,365	187,438,652	198,154,981	206,293,079	224,685,056	234,520,730
Special Fund Deposit (5)	0	0	0	0	0	0	0
Pledged Rev.for 1990 Debt Service	(19,700,000)	(19,700,000)	(19,700,000)	(19,700,000)	(19,700,000)	(19,700,000)	(19,700,000)
DCR on 1990 Bonds	8.56	8.99	9.51	10.06	10.47	11.41	11.90
2cnd TIER "ERF" AMOUNTS:	148,946,487	157,430,365	167,738,652	178,454,981	186,593,079	204,985,056	214,820,730
Prjt.Rev.Bds. Pmts (1991-1993) (6)	(7,424,382)	(7,424,382)	(7,424,382)	(7,424,382)	(7,424,382)	(7,424,382)	(7,424,382)
HNYC Debt Srv. (1990-1993) (7)	(36,746,137)	(36,746,137)	(36,746,137)	(36,746,137)	(36,746,137)	(36,746,137)	(36,746,137)
NET EXCESS APPLIED TO LEVERAGE	104,775,968	113,259,845	123,568,132	134,284,462	142,422,560	160,814,536	170,650,211
Max. Avail. for Debt Service (8)	52,387,984	56,629,923	61,784,066	67,142,231	71,211,280	80,407,268	85,325,105
Leverage Capability (9)	45,808,472	103,526,444	55,363,945	131,359,460	59,836,187	61,357,953	0
New Bond Debt Service	(52,387,984)	(56,629,923)	(61,784,066)	(67,142,231)	(71,211,280)	(80,407,268)	(85,325,105)
NET AVAILABLE AMOUNTS	52,387,984	56,629,923	61,784,066	67,142,231	71,211,280	80,407,268	85,325,105
City Split (80%)	41,910,387	45,303,938	49,427,253	53,713,785	56,969,024	64,325,815	68,260,084
Joint Purpose Monies (20%)	10,477,597	11,325,985	12,356,813	13,428,446	14,242,256	16,081,454	17,065,021
NEW HOUSING PROGRAM:							
City Split Monies (10)	-	-	-	-	-	-	-
Other Revenues (11)							
Leveraged Amounts	-	-	-	-	-	-	-
Cummulative Housing Balance	-	-	-	-	-	-	-
Extra Monies Paid per A&C (12)	-	-	-	-	-	-	-
City Split Benefit (13)	-	-	-	-	-	-	-
Savings (Freed Monies) (14)	-	-	-	-	-	-	-
Savings (PV @ 8.00%)	-	-	-	-	-	-	-

FOOTNOTES: (See last page)

Source: Tom Oppenheim, M.I.T. CRED

APPENDIX B

ALTERNATIVE SCENARIO - - COMPLETE FINANCIALS

	2017	2018	2019	2020
EXISTING SUBLEASE REVENUES:(1)				
Pilot	261,446,560	273,211,656	285,506,180	298,353,958
Base Rent/Other	21,187,106	21,221,797	21,258,572	9,541,630
Residential	47,140,107	48,565,262	50,047,422	51,588,870
TOTAL:	$329,773,773	$342,998,715	$356,812,174	$359,484,458
1972 Debt Service				
O & M/Administrative (2)	(51,895,043)	(54,489,795)	(57,214,285)	(60,074,999)
1972 Reserve Income (3)	0	0	0	0
EXCESS REVENUE FUND ("ERF") AMTS:	277,878,730	288,508,920	299,597,889	299,409,459
1986 Bonds Debt Service	0	0	0	0
1987 HNYC Debt Service (4)	(21,075,000)	(21,075,000)	(21,075,000)	(21,075,000)
1986 Reserve Income	0	0	0	0
1987 Reserve Income	1,053,647	1,053,647	1,053,647	1,053,647
AVAILABLE AMOUNTS:	257,857,378	268,487,567	279,576,537	279,388,106
Special Fund Deposit (5)	0	0	0	0
Pledged Rev.for 1990 Debt Service	(19,700,000)	(19,700,000)	(19,700,000)	(19,700,000)
DCR on 1990 Bonds	13.09	13.63	14.19	14.18
2cnd TIER "ERF" AMOUNTS:	238,157,378	248,787,567	259,876,537	259,688,106
Prjt.Rev.Bds. Pmts (1991-1993) (6)	(7,424,382)	(7,424,382)	(7,424,382)	(7,424,382)
HNYC Debt Srv. (1990-1993) (7)	(36,746,137)	(36,746,137)	(36,746,137)	(36,746,137)
NET EXCESS APPLIED TO LEVERAGE	193,986,858	204,617,048	215,706,017	215,517,587
Max. Avail. for Debt Service (8)	96,993,429	102,308,524	107,853,009	107,758,793
Leverage Capability (9)	0	0	0	0
New Bond Debt Service	(96,993,429)	(102,308,524)	(107,758,793)	(107,758,793)
NET AVAILABLE AMOUNTS	96,993,429	102,308,524	107,947,224	107,758,793
City Split (80%)	77,594,743	81,846,819	86,357,779	86,207,035
Joint Purpose Monies (20%)	19,398,686	20,461,705	21,589,445	21,551,759
NEW HOUSING PROGRAM:				
City Split Monies (10)	-	-	-	-
Other Revenues (11)				
Leveraged Amounts	-	-	-	-
Cummulative Housing Balance	-	-	-	-
Extra Monies Paid per A&C (12)	-	-	-	-
City Split Benefit (13)	-	-	-	-
Savings (Freed Monies) (14)	-	-	-	-
Savings (PV @ 8.00%)	-	-	-	-

FOOTNOTES: (See last page)

Source: Tom Oppenheim, M.I.T. CRED

FOOTNOTES:
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(1) Derived from 1990 Cushman & Wakefield, Inc. BPCA Pro Forma Cash Flow Study. These figures reflect only those revenues derived from Existing Sublease Revenues and do not include Post-1986 leases, Transaction payments, New leases, Lump Sum Payments or Future Revenues. Assumed growth rate is 4.5% per year from 2000-2020.

(2) The 1990 O&M/Administrative budgeted amounts is $13,900,000 with a 5% growth rate for the remaining years. Source: 1990 Official Statement.

(3) Reserve Fund Deposit amount is $14,300,000 which approximates the original deposit to the reserve fund. The deposits for the 1986 and 1987 reserve funds are $15,819,802 and $21,072,949 respectively. These amounts also represent original deposit amounts and all reserve funds assume an investment earning rate of 5%.

(4) Pursuant to the Ammendment to First Dedication Instrument dated 9/15/1987, capitalized interest was extended to cover interest through 1992 on the 1987 HNYC bonds. Assume first principal and interest payment to occur in 1993.

(5) Pursuant to the 1990 Revenue Bond Resolution, excess revenue funds available are to deposited into a Special Fund so that the amount is not in excess of $17 million in 1990, $34 million in 1991, and $51 million in 1992. The purpose is to provide additional coverage in case of insufficient revenues and the monies are available for any purpose the City and Authority jointly decide. The anlysis assumes that the monies are deposited in the Fund for three years and then are released as Joint Purpose Monies in 1993 as reflected by the $51 million in Joint Purpose Monies in 1993 plus the traditional split that occurs from Available Amounts. During the years 1990-1992 the analysis assumes that remaining Available Amounts go to the City as the deposit to the Special Fund represents the use that the BPCA and the City decide for Joint Purpose Monies.

(6) Assumes BPCA anticipated future infrastructure financings of $22.5 million and $33.5 million net proceeds in 1991 and 1992 respectively. Net Proceeds account for 67% of bonds issued to account for three years of capitalized interest, costs of issuance, and reserve fund deposits.

(7) Assumes HNYC anticipated future financings for the Housing New York Program of $140 million, $52 million, $36.5 million, and $28.9 million in net proceeds for the consecutive years commencing in 1990 and ending in 1993. Net Proceeds account for 62.22% of bonds issued to account for four years of capitalized interest, costs of issuance, reserve fund deposits.

(8) Assumes a conservative 2 times debt coverage ratio.

(9) Assumes the first year leveraged amounts could be issued would be 1994 after anticipated future financings are complete. Assumes 3 years of capitalized interes thus coverage begins in 2004.

(10) Remaining city split monies are applied until 2000 for the new hsg. program. Additionally, the $50 million remittance to the City obligation under the 1989 A&C is assumed to be paid to the new housing program. The $50 million is fulfilled in the year 1992 and is shown as City split amounts.

(11) These are the same amounts of extra revenues needed under the Base Case scenario that are applied to the new hsg. program. Note that after 2000 these monies are no longer necessary and represent the amount of freed monies under this scenario.

(12) These represent the additional amounts that were paid from other revenue sources under the Base Case scenario in years 2000, 2001, 2002, and 2003 that were not required under the alternative leverage scenerio.

(13) These amounts are city split benefits that are available to the city in the years 2001 and 2002 as a result of early fulfillment of hsg. program. The $8.9 million represents the greater city split amounts that are realized in year 2003 under the M.O.U. scenario as a result of no debt service requirements.

(14) These are the monies that are freed early (net city benefits and the other revenues)for other non housing uses under the leveraged scenario due to early fulfillment of housing program in 2000.

* All figures derived from 1986 and 1990 Battery Park City Authority Official Statements, as well as the 1987 Housing New York Corporation Official Statement. A&C annual cash payments are derived from the 1989 Agreement and Consent Document.