

## How Much Is Too Much? Debt Affordability Measures for the City

### SUMMARY

OVER THE NEXT 10 YEARS, from fiscal years 2006 through 2015, New York City plans to borrow \$62.4 billion to meet capital needs such as building new schools and affordable housing; improving the water and sewer system; repairing parks and roads; and buying police, fire, and other vehicles and equipment. By 2015, the city would have \$64.5 billion in debt outstanding and have debt service payments of principal and interest projected to be \$7.2 billion annually. Despite this relatively large amount of debt and the related annual debt service costs, the city has no clear set of policy guidelines about how much debt it can afford to issue.

This report analyzes the city's borrowing plans, applying many of the standard measures used by cities, states, and municipal bond analysts in a historical trend analysis to gauge the affordability of the 10-year capital program. Among our findings:

- The city's debt burden will reach a peak in the next few years, and then begin to decline slowly toward levels more consistent with historical averages of the last 20 years.
- The city's outstanding debt that draws on the expense budget for repayment peaked at a high of 15.2 percent of personal income in 2004, and is projected to fall to under 14 percent over the 10-year plan period. The ratio of debt outstanding to the market value of taxable property is even more favorable, based on continued strength in property values.
- Debt service—principal and interest payments on outstanding debt—are projected to consume up to 17 cents of every tax dollar. Future debt service payments are probably somewhat overstated, however, because the city's projections do not include such routine practices as refundings or variable-rate debt issuance.
- The levels projected in the next few years are nonetheless historically high, and pose some risks in a budget environment that is constrained by the rise in other non-discretionary city expenditures such as pension contributions and health benefits, Medicaid, and debt service itself, which are consuming a growing share of the city's total budget.
- In the event of an economic downturn, the city would face difficult choices between further raising taxes and cutting deeper into discretionary spending.

An articulated and regularly updated debt affordability analysis, perhaps as part of the city's 10-year capital planning strategy, could help assure city bondholders and taxpayers alike that New York City is carefully managing its debt load. With the expiration in July 2008 of the state Financial Emergency Act, which for nearly 30 years has provided a framework for the city's financial management, there may be additional motivation for a regular public review of the affordability of the city's capital financing program.

---

## INTRODUCTION

In May, 2005, the Mayor presented the Ten-Year Capital Strategy, Fiscal Years 2006-2015, which envisions \$62.4 billion in investments to rehabilitate and maintain the city's existing capital stock and to expand and develop infrastructure to meet new needs. The borrowing required to support the 10-year capital strategy will significantly add to the city's debt burden, which, in absolute terms, is already the largest among local governments in the country. At the end of fiscal year 2005, the total amount of the city's outstanding long-term debt to be repaid from its general revenue base stood at almost \$48.2 billion, which is almost four times that of Chicago, the city with the next largest stock of debt outstanding.<sup>1</sup> The city's debt outstanding in 2005 was equivalent to over \$5,900 per capita and over 14 percent of city personal income.<sup>2</sup> In 2005, the city paid \$4.2 billion in debt service, which are principal and interest payments on its debt outstanding. These payments represented over 14 percent of tax revenues for the year.<sup>3</sup>

Under the financing plan for the Ten-Year Capital Strategy, New York City's debt outstanding is expected to increase at an annual rate of 3 percent, increasing to \$59.5 billion in 2010 and to \$64.5 billion in 2015. Annual debt service payments are projected to reach \$6.2 billion in 2010 and \$7.2 billion in 2015.

In a recent report, the New York State Financial Control Board, which exercises oversight over the city's finances, highlighted the escalating debt service costs as a threat to the city's structural budget balance. The control board emphasized the need to contain surging debt service costs that are consuming an increasing share of the city's operating budget.<sup>4</sup> Nonetheless, the city continues to have good access to public credit markets and maintains strong ratings among the three major credit rating agencies (A1 by Moody's Investor Service, A+ by Standard & Poor's, and A+ by Fitch Ratings).<sup>5</sup>

The issuance of long-term debt, to be repaid with interest from taxes and other revenues in future years, is the primary capital financing vehicle for municipal governments. A distinctive characteristic of capital projects is that they require a relatively substantial initial investment that then generates benefits over a long period of time. The theory behind debt financing argues that capital assets should be paid for over time by the people who benefit from them—the “pay-as-you-use” approach. By spreading out the payment of a capital asset over its useful life, debt financing assures

that the burden is shared by current and future users.<sup>6</sup> While borrowing to fund capital projects has long been established as an acceptable practice, the question of what constitutes an affordable level of debt is open to debate.

The concept of debt affordability seeks to balance a municipality's need for capital investment with its capacity and willingness to repay the debt issued to finance that investment. There are limits to every local government's debt capacity, which are the resources available to pay the debt service due on its outstanding bonds.<sup>7</sup> A careful determination must be made by each government with regard to how much of its budget should be devoted to paying debt service relative to funding public services, such as education, public safety, and social services. Debt affordability is an issue that becomes even more critical in the event of a downturn in the local economy—either cyclical or longer-term—where a government's ability to meet its debt obligations and maintain the desired level of services is challenged.

As New York City embarks on an ambitious capital program that is the largest 10-year plan proposed in its recent history, it is a good opportunity to review trends in the city's debt burden and evaluate the affordability of its capital financing program.<sup>8</sup> We will begin our analysis with a summary of the city's 10-year capital investment program to understand the scale and scope of the city's capital needs and its financing strategy. We will then review the city's existing frameworks for debt management, which include statutory limits on indebtedness and requirements for reporting on debt affordability. Next we use some common metrics for assessing debt burdens to review the city's historical and projected debt burden. We conclude with an overall assessment of the affordability of city debt and of the degree of risk associated with the proposed capital plan financing program.

## THE TEN-YEAR CAPITAL STRATEGY FOR 2006-2015

The Ten-Year Capital Strategy, Fiscal Years 2006-2015 projects \$62.4 billion in total funds to finance the city's long-term capital program.<sup>9</sup> New York City has extensive infrastructure and physical assets that require substantial capital expenditures for maintenance and rehabilitation. The 10-year strategy is a planning tool that the city uses to convey its basic allocation choices and policy objectives.

The commitments in the current strategy are to be funded by \$53.0 billion in city funds and \$9.4 billion in non-city

### Ten-Year Capital Strategy, 2006-2015

Dollars in millions

	Total	City	Non-City	% of Total	% of City
Education	\$17,923	\$11,320	\$6,603	28.7%	21.3%
Environmental Protection	15,843	15,595	248	25.4%	29.4%
Transportation	9,832	8,032	1,800	15.8%	15.1%
General Services*	6,215	6,136	79	10.0%	11.6%
Housing & Economic Development	5,541	5,047	494	8.9%	9.5%
Public Safety**	3,508	3,490	18	5.6%	6.6%
Health & Social Services	1,838	1,765	73	2.9%	3.3%
Parks & Cultural	1,710	1,645	65	2.7%	3.1%
<b>TOTAL</b>	<b>\$62,410</b>	<b>\$53,030</b>	<b>\$9,380</b>	<b>100.0%</b>	<b>100.0%</b>

SOURCES: IBO; Ten-Year Capital Strategy, Fiscal Years 2006-2015.

NOTES: \*Includes the capital programs for sanitation, public buildings and real estate, and city-wide computer equipment. \*\* Includes the capital programs for correction, police, fire, courts, and juvenile justice.

funds. The non-city funds include \$7.2 billion in state grants and \$2.2 billion in federal grants as well as a very small amount from other sources. The bulk of the non-city funding is concentrated in the education budget, which anticipates \$6.6 billion in state grants, and the transportation budget, which includes \$1.8 billion in non-city funds, the majority of which are federal grants.

The capital strategy is heavily concentrated in three categories—education, environmental protection, and transportation—that comprise \$43.6 billion in total funds, representing almost 70 percent of the entire plan.<sup>10</sup>

#### Ten-Year Capital Strategy Categories.

The Ten-Year Capital Strategy distinguishes between three different categories of capital projects. State of good repair projects provide for the reconstruction or rehabilitation of deteriorated capital assets to return these to so-called “beneficial use” and to prevent further degradation. Programmatic replacement projects are

intended to maintain a state of good repair by replacing capital assets that have reached the end of their useful lives on a regular, orderly schedule. These may include system improvements to reflect current generation technology or design upgrades. Finally, program expansion projects are investments in assets that expand existing capacity or meet new needs or mandates.

The capital strategy allocates \$27.9 billion, representing 45 percent of the total commitments, to state of good repair projects. Over three-quarters of all state of good repair commitments are for education and transportation. The capital plan also includes \$16.3 billion for programmatic replacement projects, representing 26 percent of total commitments. The majority of these commitments are devoted to environmental protection. Finally, \$18.2 billion has been allocated for programmatic expansion projects,

which constitutes 29 percent of total commitments. Environmental protection, education, and housing and economic development projects are the major components of programmatic expansion commitments.

**Financing Program.** The city plans to finance the 10-year plan with long-term borrowing through the issuance of general obligation (GO) bonds and New York City Municipal Water Finance Authority (NYW) bonds. The financing plan estimates approximately \$57.4 billion in long-term borrowing, which is comprised of \$41.7 billion of GO bonds and \$15.7 billion of NYW bonds.<sup>11</sup> GO bonds are issued for general capital

### Ten-Year Capital Strategy by Type of Project

Dollars in millions

	State of Good Repair		Programmatic Replacement		Programmatic Expansion		TOTAL	
	Total	Percent	Total	Percent	Total	Percent	Total	Percent
Education	\$12,605	70%	\$85	0%	\$5,232	29%	\$17,923	100%
Environmental Protection	640	4%	8,940	56%	6,263	40%	15,843	100%
Transportation	8,717	89%	1,115	11%	-	0%	9,832	100%
General Services	2,045	33%	3,600	58%	570	9%	6,215	100%
Housing & Econ. Dev.	1,053	19%	54	1%	4,434	80%	5,541	100%
Public Safety	802	23%	1,597	45%	1,109	32%	3,508	100%
Health & Social Services	687	37%	896	49%	255	14%	1,838	100%
Parks & Cultural	1,361	80%	24	1%	325	19%	1,710	100%
<b>TOTAL</b>	<b>\$27,910</b>	<b>45%</b>	<b>\$16,310</b>	<b>26%</b>	<b>\$18,189</b>	<b>29%</b>	<b>\$62,410</b>	<b>100%</b>

SOURCES: IBO; Executive Ten-Year Capital Strategy, Fiscal Years 2006-2015.

---

purposes and are secured by the “full faith and credit” of the city. NYW bonds specifically finance the environmental protection capital program and are secured by revenues collected from water and sewer charges. As a legal matter, NYW bonds are not obligations of the city, nor is their repayment reflected in the city’s operating budget.

## **DEBT AFFORDABILITY POLICIES**

Debt management plans are written guidelines that establish general restrictions, processes, practices, and goals for debt issuance. These plans may include policies for debt planning, including the integration of the debt policies with a multiyear capital plan; debt structuring and issuance practices; debt management and disclosure practices; the use of short-term debt and derivatives; and debt affordability limits.<sup>12</sup> A formalized plan provides reassurances for bondholders that the debt burden and debt service costs will be kept within manageable levels and will not compromise the ability to meet all existing debt obligations. At the same time, these help to ensure the provision for on-going capital needs.<sup>13</sup> Hence, having a formal debt management plan is considered a sign of strong municipal financial management.

Many debt management plans include debt affordability policies, which essentially determine a maximum debt burden beyond which a municipality will not issue bonds. More specifically, debt affordability policies may include a set of targets or ranges for ratios that evaluate debt levels against various economic and financial indicators that measure a local government’s debt capacity. In theory, by setting limits to the amount of debt that can be issued relative to one or more of these measures, a municipality will be prevented from assuming more debt than it can reasonably afford. This provides a clear framework for allocating resources and helps to improve financial flexibility by limiting and adding predictability to the fixed cost burden.<sup>14</sup> As such, formal debt affordability policies are viewed favorably by credit rating agencies, which consider them an important factor in assessing credit risk, and by professional groups such as the Government Finance Officers Association.<sup>15</sup>

A comprehensive analysis of both capital needs and overall debt capacity is critical in the formulation of a debt affordability policy. Setting debt limits that unreasonably prevent critical capital investments may result in more harm than good to the community. Hence, it is important that the evaluation of debt affordability is prospective in nature and incorporates planned future borrowing. Ultimately, the challenge is to establish a policy that can be realistically

adhered to rather than an overly rigorous one that is vulnerable to being overridden or an excessively loose one that does not effectively prevent an unconstrained expansion or inappropriate use of debt.<sup>16</sup>

*Examples of Debt Affordability Policies.* Numerous local governments across the country have institutionalized debt affordability policies as elements of debt management plans. Among the larger cities that have formal debt affordability policies are Los Angeles and Boston. Key components of each city’s policy are summarized below:

- Los Angeles sets targets for the ratios of direct and overall debt to assessed value of property and direct debt per capita that are equivalent to 75 percent of the median ratio values for municipal issuers as defined by Moody’s Investor Service. The ceilings for these ratios are set as Moody’s median values. The city also sets a ceiling of 15 percent for direct debt service as a percentage of general fund revenues.
- Boston sets a ceiling of 3 percent for the ratio of net direct debt to taxable assessed value of property. The city also sets a ceiling of 7 percent for annual gross debt service as a percentage of general fund expenditures.

For both Los Angeles and Boston, these debt affordability policies are components of formal debt management plans that are publicly available. Both cities have managed their debt issues within their prescribed debt limits and this has contributed to the very strong ratings they have attained from the three major rating agencies.<sup>17</sup>

Nonetheless, the wide array of differences between municipal bond issuers in the country makes it impossible to have a common debt affordability policy or template that will apply to all municipalities.<sup>18</sup> Aside from variations in the size, robustness, and outlook of local economies, there are also vast differences among municipalities with regard to capital investment needs and specific instruments, structures, and frequencies of debt issuance. Consequently, a debt affordability policy that may work for one municipality may not be appropriate for another. This may be particularly true of New York City, which, as will be discussed in a later section, has some characteristics that make comparisons with other municipal governments difficult.

## **EXISTING STATUTORY DEBT AFFORDABILITY FRAMEWORK**

State laws establish various limits on the amount and type of debt that the city may incur, and establish certain

reporting requirements on the city's debt burden. However, these legal requirements fall short of constituting a comprehensive policy for debt management and affordability. The most relevant limits that pertain to debt affordability are discussed next.

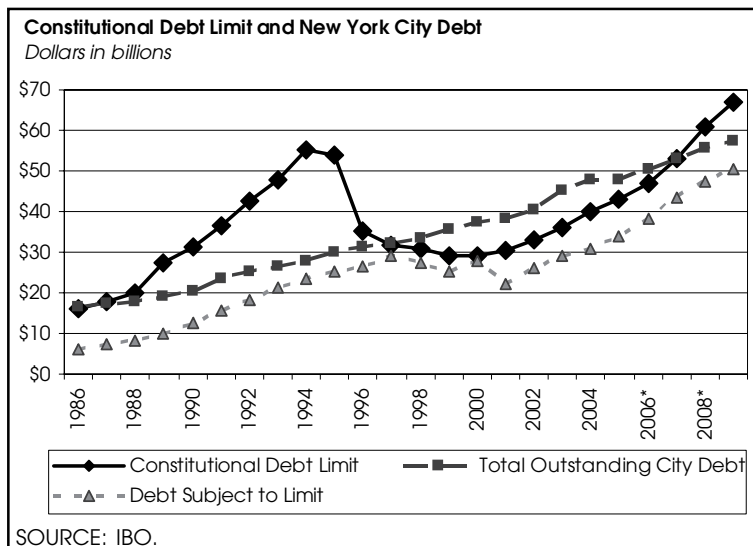
**Disclosure of Debt Information.** The city is required under state law (Chapter 16 of the Laws of 1997) to issue an annual Statement of Debt Affordability, which the city's Budget Director submits together with the Executive Budget each year. This document provides information on the city's legal debt-incurring power, sources of financing, and various measures of affordability for the four-year capital plan period. However, the statement does not specifically comment on these measures nor does it provide an assessment on the affordability of the city's debt burden.<sup>19</sup>

In addition, the city updates its four-year capital budget on an annual basis, first during the Preliminary Budget in January and then in the Executive Budget in April. These capital plan updates are accompanied by a corresponding section on the city's financing program, which includes a review of all bond issues for the fiscal year to date for each of the city's financing vehicles; discussions of planned borrowing and sources of financing; discussions of short-term debt and derivative exposure; and brief statistical tables that include projections for debt outstanding, debt service, and select debt affordability measures. Similar content is included in the bi-annual Ten-Year Capital Strategy document issued by the Mayor.

The City Comptroller also reports in December of each year on the city's total outstanding capital liabilities, and the city's debt-incurring power under the constitutional limit (see below). The report also includes a number of measures of debt affordability.

**Constitutional Limit on Outstanding Long-term Debt.**

Article 8 of the New York State Constitution sets a limit on New York City's outstanding GO debt equal to 10 percent of the average of the full value of taxable real property for the prior five years, as calculated annually by the state. Until the mid-1990s, the state's method for determining the limit relied on market values estimated from state surveys and appraisals—a process that can take several years—and used regression analysis to estimate values for the missing periods. Consequently, the statutory debt limit was highly volatile, resulting in periods where



the debt limit greatly exceeded the actual level of indebtedness and other periods where the sharp reductions in the debt limit compromised the city's capital plans.

In a particularly dramatic instance, the constitutional debt limit fell by 35 percent between 1994 and 1995 because the calculation incorporated outdated data that exaggerated the decrease in property values from the recession in the early 1990s. The steep drop in the statutory debt limit threatened to interrupt the city's capital program and necessitated the creation by state law of the New York City Transitional Finance Authority (TFA) in 1997 to bypass the limit and allow the city to continue its capital plan in the late 1990s.

In the mid-1990s, however, the state agreed to use city Department of Finance data, which are more up to date than the state's surveys. Because the regression analysis is now used to fill in fewer missing years, the constitutional debt limit has become less volatile.

Other mechanisms have also been created allowing the city to issue debt outside the statutory debt limit. In 1986, the city created a separate authority, the Municipal Water Finance Authority, to finance the water and sewer capital program, which issues debt backed by water and sewer charges to customers. The city was also one of the first state or local governments in the nation to issue bonds backed by its share of the settlement of the national lawsuit against tobacco companies. Finally, the city also issues bonds exempt from the constitutional debt limit through various public benefit corporations (PBCs) that are created by state law to finance and operate city-related projects. Typically, the city's commitments to PBCs take the form of capital lease obligations, wherein the city leases facilities constructed and/or operated by PBCs and makes periodic lease payments that

---

effectively correspond to debt service payments. The city's capital lease obligations are not secured by any defined stream of city revenues and the payments are subject to appropriation by the City Council.

**Other Statutory Limits.** There are various legal provisions that limit the type of debt the city can issue and purpose for which the proceeds can be used, the broadest of which are defined by Article 8 of the state Constitution and Article 2 of the state's Local Finance Law. Among the key provisions of these laws are:

- Limit on the amount of variable-rate debt that the city can issue to 25 percent of the total general debt limit
- Limit on the total notional (stated principal) amount of all interest rate exchanges and similar agreements that the city can enter for up to 25 percent of the total general debt limit
- Limits on issuing long-term debt with a maturity greater than the expected useful life of the asset it is used to purchase. The Local Finance Law establishes "periods of probable usefulness" for every class of assets that may be financed by debt, and prohibits the city from issuing bonds with maturities that exceed the assigned period for each asset class
- Level or declining debt service requirements that effectively prevent delaying the retirement of the principal of bonds toward the end of the amortization schedule. As a result, the cumulative percentage of total city general obligation debt that is scheduled to be retired within 10 years is over 49 percent

Furthermore, the financial mismanagement that resulted in the fiscal crisis of the 1970s precipitated the passage of the Financial Emergency Act for the City of New York in 1975. This act added additional layers of statutory limitations, including stricter limits on short-term borrowing and the establishment of a general debt service fund, to which payments of real estate tax revenues must be deposited and retained under a statutory formula for the payment of debt service to owners of bonds. Although parts of the Financial Emergency Act are scheduled to sunset in 2008, in November 2005 city voters adopted revisions to the City Charter that mirror the act's restrictions on the use of short-term debt.

**Giuliani Debt Policy Statement.** In May 2001, Mayor Rudolph Giuliani released a debt management plan as part of the Message of the Mayor for the Executive Budget of Fiscal Year 2002.<sup>20</sup> The plan, which was entitled "Mayor's New Annual Statement of Debt Policy," was presented as the city's

first statement of debt policy and included a broad set of policies that were consistent with those espoused by the credit rating agencies and Government Finance Officers Association. These included:

- policies on affordable levels of debt burden
- guidelines on cash flow financings, variable-rate debt issuance, and interest rate swaps and other derivative instruments
- recommended changes to the Local Finance Law pertaining to debt issuance
- policy on competitive vs. negotiated bond and note sales
- policy on investment of bond proceeds and of debt service funds
- policy on pay-as-you-go capital and advance refunding
- guidelines on investor relations and disclosure

Regarding debt affordability, the plan stipulated that the city would monitor trends in its capital program such that the aggregate debt service of general obligation, capital lease, and Municipal Assistance Corporation debt would not exceed 15 percent of total city revenues and 20 percent of city tax revenues. At that time, the city had calculated that debt service represented 8.1 percent of total budgeted revenues and 14.1 percent of local tax revenues in 2001, with the ratios projected to rise to 9.6 percent and 15.8 percent, respectively, by 2005. These ratios excluded debt of the Transitional Finance Authority, repaid from city personal income tax revenues that would otherwise flow directly to the city's general fund, therefore understating the actual burden of city-funded debt on the budget.

Although the May 2001 debt policy statement promised an annual update, it was in fact the last budget submitted by Mayor Giuliani before he left office. The Bloomberg Administration has not chosen to repeat the exercise or to issue a similar policy in another form. It is unclear if the policy continues to guide the city's debt management.

## **ANALYZING NEW YORK CITY'S DEBT**

Broadly speaking, there are two approaches to analyzing debt capacity and debt burden. The first, benchmarking, makes comparisons between the municipality in question and other, similarly situated governments.<sup>21</sup> The second approach looks at a series of ratios, which taken together over time, provide insight into the future ability of the government to support planned debt issuance. These two approaches are not mutually exclusive, and in fact can be complementary.

**Benchmarking.** We compare New York City and the next

## Debt Outstanding and Annual Debt Service of Major Cities – Fiscal Year 2004

Dollars in millions

City	Debt Outstanding	Debt as Pct. of Personal Income	Annual Debt Service	Debt Service as Pct. of Tax Revenues	Bond Rating (Moody's/S&P/Fitch)
New York City	\$47,756	25.5%	\$4,258	15.4%	A1 / A+ / A+
Chicago	12,543	21.0%	620	21.1%	A1 / A+ / AA-
Philadelphia	8,266	33.5%	217	9.1%	Baa1 / BBB / BBB+
Los Angeles	6,566	8.5%	331	12.6%	Aa2 / AA / AA
Houston	6,448	16.1%	219	18.4%	Aa3 / AA- / AA
San Antonio	3,292	15.2%	127	25.4%	Aa2 / AA+ / AA+
Detroit	2,625	23.9%	140	17.1%	Baa1 / A- / A
Dallas	2,278	8.8%	128	16.8%	Aa1 / AAA / Aa1
Phoenix	1,833	6.5%	128	17.9%	AA+ / Aa1 / AA+
San Jose	1,764	7.3%	211	33.3%	AA+

SOURCES: IBO; Comprehensive Annual Financial Reports of cities for fiscal year 2004. Note that city fiscal years may differ.

nine largest U.S. cities in terms of population in the table above, and New York City and the 10 largest states in the table on the next page. The size and scope of New York's capital program, as well as of its tax revenues and spending responsibilities, justify comparison with other states.

New York City's overall debt outstanding is almost four times as large as the city with the next largest debt burden, Chicago. The city's debt outstanding, measured as a percentage of personal income (25.5 percent), is larger than all the comparison cities except for Philadelphia. (Note that the personal income measure used here differs from that used in our ratio trend analysis in order to obtain a consistent series for comparison purposes.)<sup>22</sup> The burden of debt service as a share of city tax revenues is near the bottom of the scale, however. The reasons for this disparity are discussed in more detail below.

Another measure is a simple comparison of ratings for general obligation bonds. Here, New York also falls in the lower third of the pack, with six cities enjoying better ratings, and two others (Philadelphia and Detroit) with

lower ratings. Chicago's bond ratings are roughly the same as New York's. Rating agencies, while they have upgraded the city's debt in recent years, cite structural issues that the city continues to face, including the rise in nondiscretionary costs that drive the out-year gaps in the budget. Other concerns include questions about the economy (relatively slow employment growth, volatility of a cyclical economic base, etc.) and the funding of unresolved labor agreements.

Even in comparison with state governments, the city's debt outstanding is very substantial. In fact, only two states, California and New York, carry tax-supported debt greater than New York City's. The debt outstanding per capita and debt as a percentage of personal income for the city exceed that of all the comparison states, which spread their debt burden over relatively larger population and income bases compared to cities.

Comparing debt burdens across jurisdictions poses two distinct challenges.

The first is a measurement issue; the second concerns what conclusions one can draw from comparisons, even absent any measurement problems.

*Measuring Debt Burdens.* The *debt outstanding* figures for the comparison cities are composed of two elements: net direct debt and overlapping debt. Net direct debt is made up of debt issued by each municipality, less any self-supporting and other debt that was issued but does not actually represent a burden on tax resources. Overlapping debt represents an assigned portion of the debt issued by debt-issuing authorities and other local governments that share the city's tax base. Overlapping debt is included in the calculation of debt outstanding to account for the fact that the same taxpayers share the burden of financing the combined capital programs from which they derive benefit. The combined net direct and overlapping debt is considered to be a more accurate reflection of the overall burden borne by the community.

In New York City's case, its capital program is financed almost entirely by the municipality itself, without any sharing of responsibility among several counties, school districts, and/or special districts. Hence, the city's calculation is composed of

### New York City's Debt Burden is Greater Than That of Most States

State	Total Net Tax Supported Debt (Millions of dollars)	Debt per Capita (Dollars)	Debt as a Percent of Personal Income
California	\$55,452	\$1,545	4.7%
New York State	49,864	2,593	7.2%
<b>New York City</b>	<b>47,756</b>	<b>5,899</b>	<b>14.2%</b>
Illinois	25,672	2,019	6.2%
New Jersey	25,236	2,901	7.4%
Massachusetts	21,638	3,372	8.5%
Florida	17,538	1,008	3.4%
Connecticut	12,662	3,614	8.5%
Ohio	9,923	866	2.9%
Washington	9,912	1,598	4.9%
Pennsylvania	9,052	730	2.3%
<b>State Median</b>	<b>2,785</b>	<b>703</b>	<b>2.4%</b>

SOURCES: IBO; Moody's Investor Service ("2005 State Debt Medians," Special Comment, May 2005). State data is as of the end of calendar year 2004. New York City data is as of the end of fiscal year 2005 (June 30, 2005).

the debt issued by the city and its authorities and is not subject to the assignment of overlapping debt burdens for other entities. In contrast, the assignment of overlapping debt for other municipalities is based on that municipality's share of the property tax base encompassed by the issuing authority. This may be subject to inconsistencies in formulation.

Unlike the calculation of debt outstanding, the figures for *debt service* for the comparison cities only include debt service payments on the *direct* debt of the cities, excluding debt service on overlapping debt of other entities. This method provides a cleaner comparison of the budgetary burden of debt service. However, it does not take into account the differences in tax systems and burdens among cities. In a federal system in particular, comparisons between cities in different states do not necessarily account for differing divisions of service delivery responsibilities and taxing authority between the state and local governments.

*Comparing Debt Burdens.* Assuming that measurement and comparability issues are resolved, however, the question remains of how to interpret the relative standing of one jurisdiction against others. Sharply different circumstances can make the context for interpreting comparative figures quite complex.

For example, a young city like San Jose, which has one-ninth the population of New York City but is spread out over a relatively large geographic area, may not need to

provide as many public services as New York City but may have a relatively broad set of capital needs. Hence, having debt service obligations that constitute almost one-third of tax revenues may be fiscally prudent for a city like San Jose given its balance of operating and capital needs. But applying this ratio to New York City would be inappropriate because, in addition to its very heavy capital needs, it provides a very extensive set of public services that places large demands on its operating budget compared to other cities. Moreover, the relative burdens of demographics, poverty, weather, and age of the capital stock may also differ dramatically among different jurisdictions, and place different demands on the budget of each. Taking factors like this into account, an older Northeastern city with a large low-income population may face budgetary needs not felt by newer and/or wealthier jurisdictions.

To these considerations one other should be added. Benchmarking compares the subject jurisdiction with a peer group at a moment in time. Equally important, however, is the question of the change over time in key measures of debt burden. While debt outstanding as a percent of personal income, for instance, may be high relative to other jurisdictions, is this ratio rising or falling? A trend analysis addressing a rising ratio indicates growth in the debt burden that is outpacing underlying economic growth trends. In addition to comparing New York City with other jurisdictions, therefore, in the next section we also examine several key debt affordability ratios for the past 20 years and project these ratios for the next 10 years based on the city's Ten-Year Capital Strategy.

*Trend Analysis.* Debt ratios are essentially straightforward calculations in which some measure of debt burden is divided by some measure of debt capacity. The analysis uses the two most commonly used measures of debt burden for the numerator: debt outstanding and debt service. Different ratios inform various aspects of debt affordability; hence the standard approach is to calculate a broad set of ratios that are evaluated collectively to come up with a comprehensive assessment of a government's fiscal condition. (See the sidebar, "Discussion of Debt Capacity Measures," beginning on p. 10, for a more complete discussion of the measures used in this analysis.)

*Limitations of Trend Analysis.* Our analysis relies on projections of economic variables such as personal income and market value of taxable real property, as well as of budgetary variables such as tax revenues. The first several years of these series are based on IBO's economic and

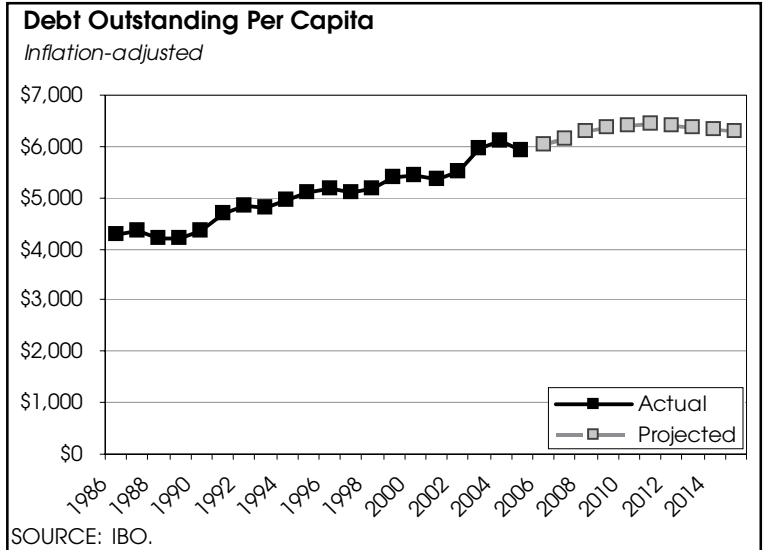


revenue forecasts; in the later years of the 10-year plan period we simply made projections based on historical growth rates, generally seeking to err on the side of conservatism. Economic forecasts are inherently subject to a degree of error and uncertainty. In particular, it is difficult, if not impossible, to predict negative shocks that could induce a sudden downturn in the economy. Similarly, new and unanticipated spending needs could arise in the future (or existing spending needs could diminish). When looking at long-term trends, any near-term perturbations in the forecast can have large effects in later years. Thus, our debt ratio projections could ultimately be understated or overstated.

**Debt Outstanding Ratios.** Traditionally, the measurement of debt outstanding, which is the total stock of debt that a government must repay, included only bonds secured by its full-faith and credit. In recent years, however, local governments throughout the country have increasingly issued debt backed by special revenues, project revenues, or general appropriation, rather than a government's full-faith and credit.<sup>23</sup> Hence, the generally accepted approach to computing debt outstanding now includes all GO debt and other bonds that draw on the general revenue base for repayment, less debt from self-supporting revenues and any amounts held in sinking funds for the retirement of long-term bonds.<sup>24</sup>

As a result, in measuring New York City's debt outstanding, we include all debt that is secured by a commitment of some form of the city's revenues. This includes GO, TFA, TSASC, and Municipal Assistance Corporation (MAC) debt.<sup>25</sup> However, capital lease obligations, which should technically be included in the calculation, are excluded from our measure because no forecasts of the outstanding value of such obligations are available. As a result, the debt outstanding measures used in this analysis are understated by approximately 3 percent to 8 percent throughout the historical and forecast series. (In contrast, forecasts of debt service on capital lease obligations are available. As discussed later, these are included in the debt service series.) Finally, we exclude NYW debt from the analysis because these are self-supporting bonds that are secured specifically by revenues collected and water sewer charges, which are revenue streams that are distinct from the city's general revenue base.

Historical debt outstanding data are derived from the



Comprehensive Annual Financial Reports (CAFR) issued by the City Comptroller while projections are IBO estimates based on forecasts from the city's Office of Management and Budget (OMB). Given this measure of the city's debt outstanding, the following ratios were calculated using several common measures of debt capacity.

**Debt Outstanding Per Capita.** This ratio has consistently grown in the past 20 years as the growth in the city's debt outstanding has outpaced the much slower growth in population. In 1986, total debt outstanding per capita stood at \$4,300 (in inflation-adjusted, 2005 dollars). In inflation-adjusted terms, the rate of growth averaged 1.7 percent annually between 1986 and 2005, and is projected to slow to a rate of just 0.6 percent during the 10-year plan period. However, as explained in the sidebar, it is important to stress that population is a limited measure of ability to pay. An increasing debt outstanding per capita by itself provides limited insight into the affordability of the city's debt.

**Debt Outstanding as a Percentage of Full Market Value of Property.** The ratio of debt outstanding to the full market value of property declined throughout the 1980s, reaching a low point of 5.3 percent at the end of the decade. Increasing property values combined with relatively slow growth in debt outstanding drove the decline in the ratio.

The recession that affected the city in the early 1990s halted the growth in property values and actually resulted in a slight decline in inflation-adjusted terms through the mid-1990s. As the city accelerated its capital investment in that period following a constrained capital program in the previous decade, debt outstanding sharply increased to 9.4 percent of full market values by 1996. The ratio leveled off at this value through the

## DISCUSSION OF DEBT CAPACITY RATIOS

There are several ratios commonly used to measure the debt capacity of a government, which have either debt outstanding or debt service in their numerator. The former is a measure of the stock of debt that must be repaid over time, while the latter measures the annual outflow necessary for repayment of debt outstanding. Another distinction is that the former has a longer-term focus—a period of time in which tax and spending policies can change—while the latter has a short-term focus, when tax and spending levels are relatively more fixed.

*Debt Capacity Measures for Debt Outstanding.* Given that debt outstanding represents the stock of debt that must be repaid, usually over a relatively lengthy period of time, the debt capacity measures to be used in debt outstanding ratios should focus on the municipality's underlying economic capacity. Credit analysts generally rely on three common measures of underlying economic capacity: population, market value of taxable real property, and personal income.<sup>26</sup> Each of these has its limitations.

- *Population* is perhaps the most limited measure of debt capacity conceptually. This measure problematically assumes that each individual has some fixed capacity to pay for debt and thus does not take into account differences in personal wealth or income. This measure also makes no adjustments for increases in the general level of prices over time (inflation), or the increase in real (inflation-adjusted) personal income. The population projections employed in this analysis are from economy.com forecasts.
- *Full market value of taxable real property* has traditionally been the most common measure of debt capacity. Property taxes have historically been the primary revenue source for local governments and for this reason, most statutory debt limits of municipalities (including New York City) are based on full or assessed market value of taxable real property. As revenue sources of local governments have diversified over the years, the role of the property tax has diminished. In fact, while it still remains the city's single largest source of tax revenues, property taxes now represent only roughly 40 percent of total local tax revenues with various income and sales taxes combining to make up an even larger share.

Nonetheless, it can be argued that the total market value of property represents a market estimate of the capitalized value of current and expected income flows from households and businesses in the city. Hence, regardless of the decline of the city's reliance on this particular tax base as a source of revenues, full market value continues to function as a conceptually important measure of the city's future economic capacity.

The market values reported in the city Department of Finance's Real Property Tax Annual Report tend to understate the market value of condominium and cooperative apartment buildings because observed sales prices are not used in valuing these residential properties. Another limitation of the finance department estimate is that it is not available prior to 1993 because the data was not compiled into annual reports before then.

- *Personal income* is the other commonly used measure of a government's ability to mobilize revenues. Personal income is an annual measure of wages and salaries, dividends, interest, rent, and unincorporated business income received by individuals in the city. It is a key determinant of consumption and affects a community's wealth. The personal income measure does not include income earned by nonresidents who work in the city. Which is not subject to city income taxes.
- A broader measure of fiscal capacity developed by IBO in a previous analysis, called city taxable resources (CTR), provides some theoretical advantages over personal income.<sup>26</sup> CTR combines city household income and city business profits or net income, with adjustments to account for federal tax and transfer impacts and to eliminate double-counting of any income. However, no historical series or projections for this measure currently exist.

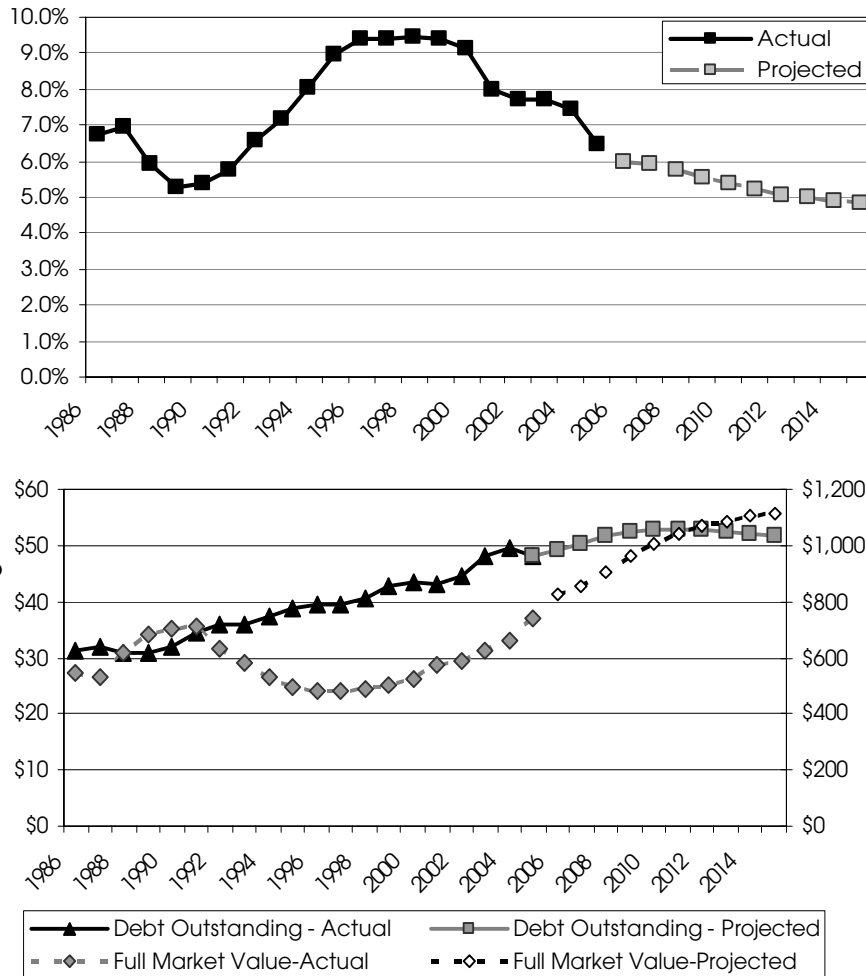
*Debt Capacity Measures for Debt Service.* Debt service obligations are payments of principal and interest on debt outstanding. These measures focus on the impact of debt service on the city's budget. Since debt service is paid out of the operating budget, the greater the share of each tax dollar devoted to it, the smaller the share that is available for delivery of other services. Growing debt service also limits financial flexibility because, either by law, statute, or bond covenant, debt service on the various New York City bonds has first call on city revenues.

- *Total tax revenues* is a measure of budgetary resources that excludes intergovernmental grants and miscellaneous non-tax revenues. This measure is used because it represents revenue inflows over which a government has the most control. Intergovernmental grants are typically restricted as to purpose—so they may not be used for debt service—and are conditional upon a city matching contribution. Moreover, the level is determined by the state and federal governments, and is beyond the city's direct control. Non-tax city revenues—such as charges for services, interest and rental income, fines, license and permit fees—are more under the city's direct control, but there are statutory limits that restrict use of fine or fee revenues, for instance, for general revenue-raising. Taxes are the largest source of city revenues, and the one over which they have the most direct control.
- Given that *personal income* represents the flow of income generated by individuals who reside in the city, it is also an appropriate measure of debt capacity for debt service.

This section draws heavily from Berne, Robert, and Richard Schramm, 1986. *The Financial Analysis of Governments* (New Jersey: Prentice-Hall) and Bahl, Roy, and William Duncombe, 1993, "State and Local Debt Burdens in the 1980s: A Study in Contrast." *Public Administration Review*, vol. 53, pp. 31-40.

### Debt Outstanding as Percent of Full Market Value

Dollars in billions, inflation-adjusted



SOURCE: IBO.

NOTE: Personal Income and Debt Outstanding in billions of inflation-adjusted 2005 dollars.

end of the 1990s as property values began to grow again concurrently with the expansion of the city's economy. The growth in the city's property values accelerated in 2000, overcoming even the recession of 2002, and achieved growth rates that exceeded that of debt outstanding, which resulted in a continuous decrease in this ratio to 6.5 percent in 2005.

The relatively sharp drop in this ratio in 2005 was also a result of flat debt outstanding growth compared to 2004. The city's MAC debt obligations were defeased in 2004 as part of a budget relief deal with the state and the responsibility for paying the remaining debt was taken over by the state. This effectively relieved the city of over \$1.7 billion in outstanding MAC debt and resulted in negligible overall growth in debt outstanding in 2005.

Going forward, we project a faster rate of growth in full

market values compared to the city's projections of net debt outstanding. As a result the ratio steadily declines to a historically low level of below 5 percent by the end of the forecast period.

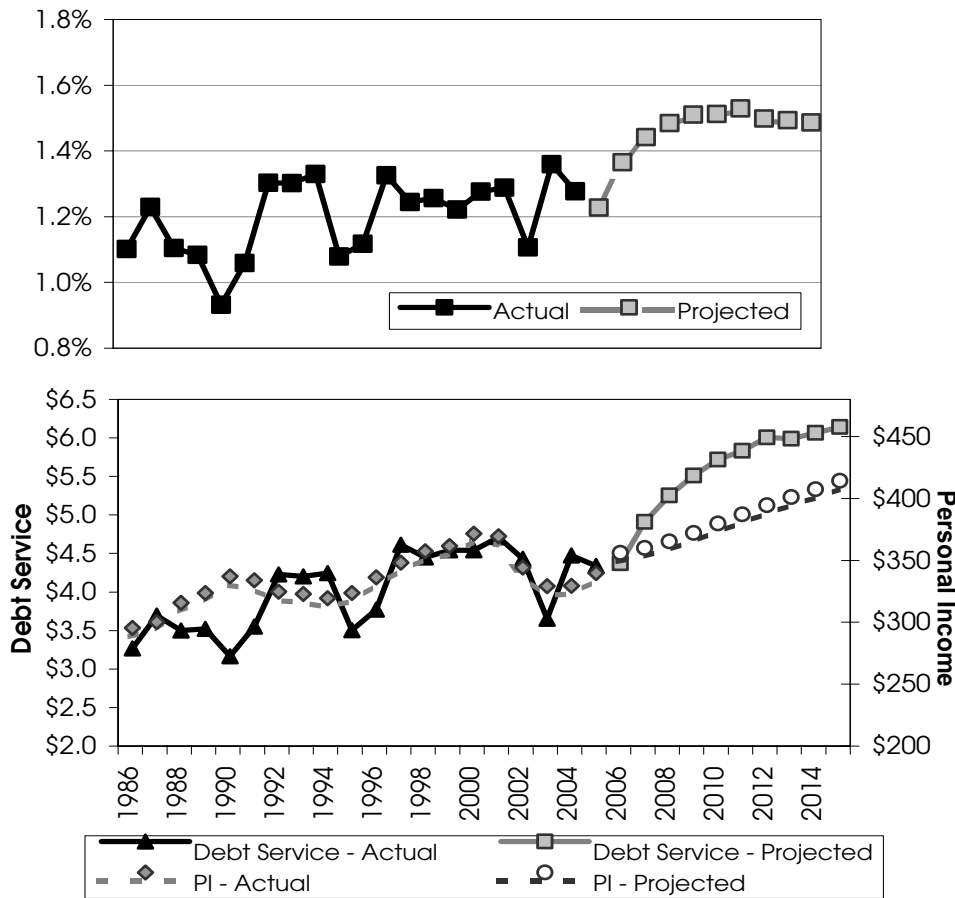
*Debt Outstanding as a Percentage of Personal Income.* This ratio declined throughout the 1980s, reaching a low of 11.5 percent at the end of the decade. The decline was due to strong growth in personal income and also the result of a capital program that was still constrained by the 1970s fiscal crisis. The national recession of the early 1990s led to a decline in the city's personal income growth in real, inflation-adjusted terms. Concurrently, the city's capital program accelerated, which led to an increase in debt outstanding to 14 percent of personal income by 1995. As the city's economy began to grow again in the mid-1990s, this ratio gradually declined in the second half of the decade and decreased to a low point of 12.7 percent in 2001. However, the recession in 2002 brought incomes sharply down without a

corresponding slowdown in capital borrowing, which resulted in a sharp increase in the ratio to over 15 percent at the end of 2004.

Given our forecast of 1.7 percent average annual growth in personal income (inflation-adjusted) over the next 10 years (compared to 0.8 percent in the preceding period), the trend for this ratio is essentially flat over the next five years as debt outstanding is expected to grow just slightly faster than personal income. Thus, debt outstanding is projected to settle at approximately 14.6 percent of personal income through 2010. Over the second half of the forecast period, the growth in debt outstanding is expected to level off, resulting in a steady decline in this ratio to 13.2 percent by 2015.

*Debt Service Ratios.* The second measure of debt burden that will be analyzed is debt service. This is typically calculated by summing up all principal and interest payments on the long-

### Debt Service as Percent of Personal Income



SOURCE: IBO.

NOTE: Personal Income and Debt Outstanding in billions of inflation-adjusted 2005 dollars.

term debt included in the measure of debt outstanding. In calculating the city's debt service, we include the principal and interest payments on all GO, TFA, TSASC, and MAC debt. In addition, we also include payments on capital lease obligations given that these are appropriations made out of the city's general expense budget. As mentioned, this represents debt service owed by the city on bonds issued by state public benefit corporations on behalf of the city to finance projects including hospitals, court facilities, and City University of New York facilities. (The single largest component of projected lease-purchase payments during most of the next 10 years is appropriated payments for Hudson Yards Infrastructure Corporation-issued bonds.)

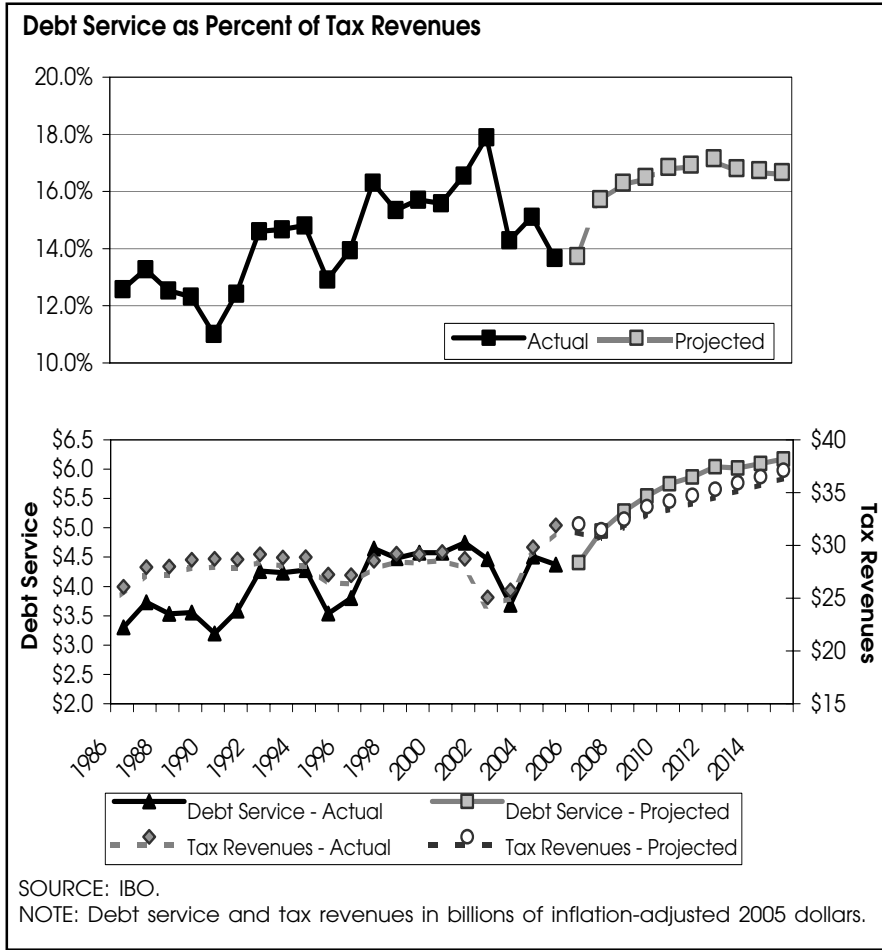
The city regularly uses any year-end budgetary surplus to prepay debt service due in the following year. Our calculations make the appropriate adjustments for GO and TFA prepayments, which are attributed to the year in which the payments were due.

*Debt Service as a Percentage of Tax Revenues.* As with the

debt outstanding ratios discussed earlier, debt service decreased as a percentage of tax revenues in the late 1980s, reaching a low of 11 percent in 1990. The city's capital program accelerated at the beginning of the 1990s, coinciding with a recession that stunted tax revenue growth in that period. In addition, the city's GO bond rating was downgraded in 1991, which further contributed to increased debt service costs. As a result, this ratio quickly increased to almost 15 percent of total tax revenues by 1992. The ratio hovered close to this level throughout the rest of the decade except for a three-year stretch from 1995 to 1997 when a major refunding of MAC debt produced short-term savings that, despite tax policy changes reducing tax revenues in real, inflation-adjusted terms over the same period, resulted in a sharply lower ratio.

The terror attacks of September 11, 2001 and the recession that followed had a major impact on the city's tax revenues, leading to a sharp increase in the ratio of almost 2.5 percentage points to 18 percent in 2002. The following year, tax initiatives that led to steep increases in tax revenues (7.7 percent and 21.4 percent in 2003 and 2004, respectively) were enacted to help close large budget gaps. Further, the city took advantage of federal legislation allowing it to refund \$2.7 billion in outstanding debt, leading to substantial debt service savings in 2003.<sup>28</sup> An additional \$3.4 billion and \$2.8 billion in refundings took place in 2004 and 2005 resulting in further savings from 2004 through 2006.<sup>29</sup> As a result, debt service fell sharply to under 14 percent of tax revenues in 2005.

Under current projections, debt service as a share of tax revenues is expected to rise sharply beginning in 2007. This increase can be attributed to a forecast slowdown in tax revenue growth in the next few years, particularly as property transfer and mortgage recording taxes are projected to drop from recent peaks. In addition, the city's debt service obligations resume their upward trend in 2007, reflecting an



until 1994. After a sharp decrease in this ratio in the following two years, primarily due to a refinancing of MAC bonds, debt service fluctuated between 1.2 and 1.3 percent of personal income from 1997 to 2002. The ratio exhibited somewhat more volatility in the next three years as a result of large refundings and the recession.

Debt service is projected to grow at a faster rate from 2007 to 2009, which, combined with our forecast of steady personal income growth throughout the forecast period, results in an increase in this ratio to a high of 1.5 percent by 2010. This ratio is expected to level off at this point before beginning a slight decline in 2013. The out-year trend for this ratio is again influenced by the front-loaded financing plan of the Ten-Year Capital Strategy.

*Debt Service Projections Biased Upwards.*

The review of debt ratios in the previous section offers a complex and seemingly somewhat contradictory picture of the affordability of New York City's capital

acceleration of debt issuance and the end of the major annual savings realized from the refundings of the last three years.

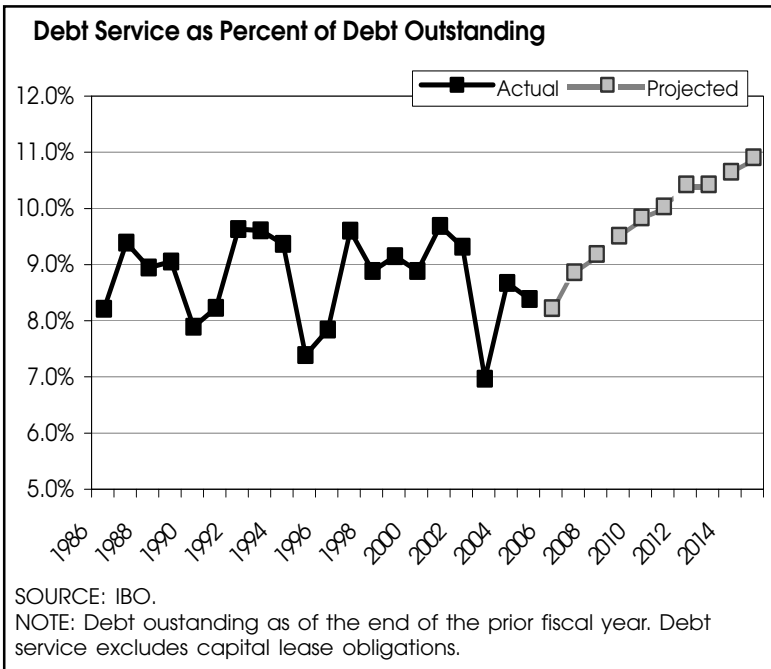
Given IBO's forecast of consistent tax revenue growth, this ratio is expected to slowly increase to approximately 17 percent by 2010. For the final five years of the plan, the ratio is expected to stay generally flat, with a slight decrease in the final years to just under 17 percent in 2015, based on a projection of tax revenue growth at the average of the forecast period 2005 through 2009.

*Debt Service as a Percentage of Personal Income.* The trend for this ratio generally follows that of debt service as a percentage of total tax revenues. This ratio decreased through the end of the 1980s, reaching a low point of 0.9 percent in 1990, as the city's personal income grew while debt service remained relatively flat. The city accelerated its capital investment in the early 1990s, which coincided with a recession that led to a decrease in personal income in real, inflation-adjusted terms through the middle of the decade. As a result, debt service sharply increased to 1.3 percent as a share of personal income in 1992 and stayed at this level

program. Ratios of debt outstanding to full market value and personal income indicate a strengthening in the underlying capacity of the city to use revenues to support its debt burden. In contrast, ratios of debt service to tax revenues and personal income rises to higher levels than they have generally reached over the past 20 years.

In fact, the city's debt service projections are likely somewhat overstated. They do not take into account several factors that will likely result in lower future debt service payments, notably refundings, and the use of variable-rate debt to lower long-term borrowing costs.

Over the past 20 years, debt service has fluctuated between a minimum of 7.3 percent and a maximum of 10.0 percent of debt outstanding, as indicated in the chart showing the historical and forecast relationship between debt service and debt outstanding. (The debt service measure used here excludes capital lease obligations, which are not included in the debt outstanding measures.) There have been periodic episodes where the ratio dropped substantially (specifically during 1990-91, 1995-96, and 2003). These isolated periods generally coincide with cases of major refinancing of GO and/or MAC debt, which resulted in significant debt service



savings for a short-term period. The low point in the chart was in 2003 after the major series of advance refundings reduced debt service payments immediately following the September 11 attacks. Excluding these periods, the ratio averaged 9.6 percent for the historical period.

Under our projections, the ratio would steadily climb to over 11 percent over the next ten years. The reasons behind the steady, upward trend in this forecast mainly have to do with the debt service assumptions that the city uses in its projections. While the debt outstanding projections are a fairly straightforward product of the city’s capital investment plan that has been translated into an actual financing plan, the debt service forecast includes several assumptions that may tend to overstate it.

First, the city assumes an increase in the fixed interest rates it pays on its GO bonds in the next two years, leveling off in the second half of 2008 at a conservative par rate of 7 percent as a steady state for the balance of the forecast period. While assuming conservative interest rates in the forecast is a prudent approach, debt service costs will be less if actual interest rates on the city’s GO bonds are lower than the city’s assumptions. The city’s bonds are generally considered by the bond market to be of high quality, and often sell at a premium—that is, the effective interest rate is below the par amount.

Second, as discussed, the city periodically refinances its outstanding debt to achieve interest cost savings. The city’s forecast of its financing program, however, does not include any debt refundings. The fact that the debt service forecast

excludes these could result in an overestimate of what actual debt service will be.

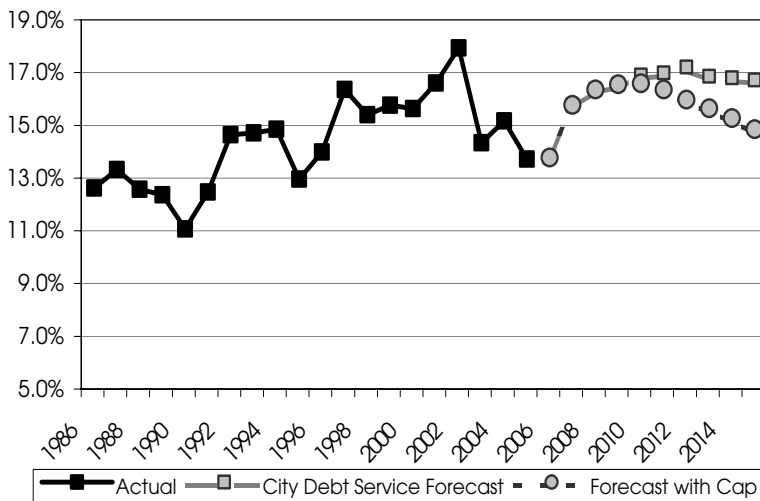
On the other hand, opportunities for refundings may become scarcer in the coming years if interest rates continue to increase, as expected by most economic forecasters (including the city). In addition, the city has already refunded an unusually large amount of debt outstanding in recent years as a result of the very low interest rate environment and post-9/11 federal legislation authorizing substantial additional advance refundings.

Finally, the city’s debt service forecast assumes that all future GO borrowing will be in the form of fixed-rate bonds. However, it has become common practice for the city to issue variable-rate bonds, which achieve interest rate savings by allowing the issuer to pay lower short-term interest rates, and to enter into derivative transactions, which refer to a variety of financial products that an issuer can use to lower interest rate costs by taking advantage of variable rates. While variable-rate debt and derivatives introduce added layers of risk to the city’s debt portfolio, they have been very effective tools in lowering borrowing costs. Almost 17 percent of the city’s GO debt outstanding at the end of 2005 was variable rate.<sup>30</sup> The absence of a variable-rate component for future debt issuance further contributes to an overstated debt service projection.

In short, there is ample reason to believe that actual debt service over the course of the 10-year capital program may be less than forecast. By how much might the projections be overstated? A simple approach to adjusting the city’s existing forecast would be to assume that the future ratio of debt service (excluding capital lease obligations, for which there is no corresponding “debt outstanding” figure) to debt outstanding would not exceed the highest points achieved in the last 20 years. Since 1986, this ratio has reached the peak of 9.6 percent three times (in 1993, 1997, and 2001).

The following charts below show the result of assuming this 9.6 percent cap on debt service as a percentage of debt outstanding to derive a forecast of debt service, and the effect on the two debt service ratios: debt service as a percentage of tax revenues and personal income. Instead of a generally flat trend at relatively high levels for the out-year forecasts of the ratios, the ratios show declining out-year trends for debt service as a share of the tax revenues collected and personal income generated within the city. The annual burden of debt service on the city’s budget would increase to a peak of

**Debt Service as Percent of Tax Revenues**



SOURCE: IBO.

16.5 percent in 2010, but would begin to steadily decline afterwards. Similarly, debt service would consume a peak level of just under 1.5 percent of personal income before declining steadily toward 1.3 percent. While these are historically high levels for both ratios, the pattern suggests that the debt burden would begin to decline to more typical levels by the last half of the plan period. These patterns are consistent with those of the debt outstanding measures.

*Economic Forecast Sensitivity and Budget Constraints.* The projected decline in debt outstanding relative to personal income is due largely to a forecast of continued steady growth in personal income. As is clear from the historical data, however, personal income is sensitive to fluctuations in the business cycle. A decline in personal income in 2009, consistent with a recession like that of the early 1990s, absent any changes in tax policy, would bring the ratio of debt outstanding to personal income close to 16 percent—a level not reached since 1980, when the city was still recovering from the 1975 fiscal crisis. Similarly, an economic downturn in the later years of this decade could push the burden of debt service to 18 percent of tax revenues, or higher.

Aside from increasing debt service costs, several other significant non-agency costs are projected to continue to rise in the near term. These include contributions to the pension systems, public employee healthcare costs, Medicaid, and legal judgments and settlements against the city. Combined with debt service, these costs, over which the city has limited short-term control, are projected in the city’s current Financial Plan to

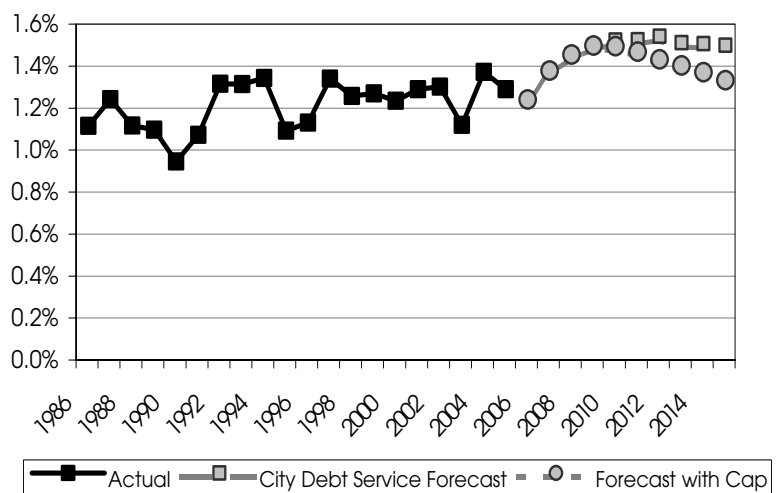
increase to nearly half of city-funded spending by 2010.

The overall budgetary pressure from escalating nondiscretionary costs would magnify the difficulties that the city would face if it were to undergo an economic downturn in the near future. In the past, New York City has managed recessions through a combination of tax increases and spending cuts. While there are diverse opinions about how high the city’s tax burden is and how much capacity remains for further tax increases to alleviate future budget deficits,<sup>31</sup> there is little argument that the increasing share of nondiscretionary costs—of which debt service is a major component—will put pressure on operational spending for city services in the event of future economic difficulties.

**CONCLUSION**

This assessment of New York City’s debt affordability indicates that, given a fairly positive outlook for the economy, the economic base from which the city ultimately repays its debt will expand at a faster rate than the overall growth in its stock of outstanding debt. The analysis also points out that the principal and interest obligations resulting from the growing debt burden are expected to increase at a faster pace relative to the city’s tax revenues and personal income in the next four years before beginning to steadily decline afterwards toward levels that are close to average over the past 20 years—and that there is reason to believe that, for a given amount of new debt issuance, actual debt service

**Debt Service as Percent of Personal Income**



SOURCE: IBO.

could be lower than under current projections. Overall, these debt ratio trends signal a generally positive outlook for the city's debt affordability given the financing plan for the current Ten-Year Capital Strategy.

Nonetheless, the debt service levels projected over the next few years are historically high, and occur in the context of a budgetary environment that is somewhat more constrained than in the recent past, particularly with nondiscretionary spending consuming a larger share of city spending. An economic downturn in the next few years could mean difficult choices between further tax increases and cuts in those areas of spending over which the city has the most short-term control—namely, delivery of agency services.

A regularly updated debt policy statement, including analysis of the affordability of projected debt, would help to clarify the city's debt policy objectives and how these relate to its capital investment strategy, and could contribute to alleviating continuing concerns about the city's debt burden.

Given the long-term nature of debt issuance, it would be appropriate for the analysis to have a longer time horizon than the current four-year horizon. An update of an affordability analysis and other components of debt policy could, for example, coincide with the biennial Ten-Year Capital Strategy, and extend over the same period.

It is also worth noting that city bondholders are scheduled to lose one of the implicit protections on their bonds when the power of the Financial Control Board to impose a state takeover of city finances terminates on July 1, 2008.<sup>32</sup> The city could provide valuable additional assurance to its bondholders by periodically issuing formal and articulated debt management plans that include debt affordability policies.

*Written by Lawrence Tang and Preston Niblack.*

## END NOTES

<sup>1</sup> Comptroller of the City of Chicago, 2003. "Comprehensive Annual Financial Report." December 31. (Chicago's net direct and overlapping long-term debt outstanding totaled \$11.9 billion as of December 31, 2003.) New York City's debt outstanding projections are IBO estimates based on New York City Office of Management and Budget (OMB) forecasts. The calculation of debt outstanding includes general obligation (GO) bonds, Municipal Assistance Corporation (MAC) bonds, Transitional Finance Authority (TFA) bonds, and TSASC bonds; and excludes New York Municipal Water Finance Authority (NYW) bonds and conduit debt.

<sup>2</sup> All population and personal income estimates are based on IBO forecasts.

<sup>3</sup> Debt service projections are based on OMB forecasts. Debt service includes principal and interest payments on GO, lease purchase, MAC, and TFA debt and has been adjusted for GO and TFA prepayments. Actual tax revenues have been adjusted to include personal income tax revenues for TFA debt service and Water Board payments for debt service on GO debt issued for water and sewer purposes prior to the creation of NYW and exclude the state's Sales Tax Relief reimbursements.

<sup>4</sup> New York State Financial Control Board, 2005. "Staff Report: Budgetary Pressure from Fast Growing Expenses." March 22.

<sup>5</sup> These are the strongest credit ratings that New York City has achieved since the 1975 fiscal crisis.

<sup>6</sup> Fisher, Ronald C., 1996. *State and Local Public Finance*. Chicago: Irwin.

<sup>7</sup> Bahl, Roy, and William Duncombe, 1993. "State and Local Debt Burdens in the 1980s: A Study in Contrast." *Public Administration Review*, vol. 53, pp. 31-40.

<sup>8</sup> It should be noted that a more holistic assessment of capital investment would include an evaluation of the social values and costs of capital spending that incorporates debt affordability to determine the actual net value to the city. However, this analysis is outside the scope of this paper, which will focus specifically on the affordability of the debt burden given the proposed 10-year capital spending plan.

<sup>9</sup> City of New York, Ten-Year Capital Strategy, Fiscal Years 2006-2015 (May 2005). The city's 10-year capital plan is formally updated every other year. The city updates its four-year capital plan three times a year, most recently with the Capital Commitment Plan, released in January 2006. The broad outlines of the longer run plan remain largely the same.

<sup>10</sup> The capital strategy is front-loaded on the first four years of the plan, when over 55 percent of total commitments and 49 percent of city commitments are scheduled—although in practice, the actual pattern of commitments and spending is likely to be smoother.

<sup>11</sup> It is worth noting that concurrent with the issuance of new debt to finance the Ten-Year Capital Strategy, a substantial portion of the city's existing debt is scheduled to be retired over the next 10 years. Over 49 percent of the city's outstanding GO debt as of 2005 is scheduled to be retired within the next 10 years.

<sup>12</sup> Government Finance Officers Association, 2003. *Debt Management Policy, GFOA Recommended Practice*.

<sup>13</sup> Moody's Investors Service, 2004. "The Six Critical Components of Strong Municipal Management: Managerial Methods to Promote Credit Enhancement." Moody's Investor Service, March 2004.

<sup>14</sup> Laskey, Amy R., et al, 2005. "To Bond or Not To Bond: Debt Affordability Guidelines and Their Impact on Credit," Fitch Ratings, June 21, 2005.

<sup>15</sup> Rizzo, Frank, et al, 2002. "The 12 Habits of Highly Successful Finance Officers: Management's and Disclosure's Impact on Municipal Credit Ratings." Fitch Ratings, November 21. Government Finance Officers Association, 2003. *Debt Management Policy, GFOA Recommended Practice*.

<sup>16</sup> It is important to note that strong debt affordability policies may also include guidelines on pay-as-you-go funding and policies on the use and management of variable-rate debt and derivative products. However, this paper will focus specifically on long-term debt affordability.

<sup>17</sup> Both Los Angeles and Boston are currently rated AA by Standard & Poors and AA by Fitch Ratings. Los Angeles is rated AA2 while Boston is rated AA1 by Moody's Investor Service. See also Laskey, Amy R., et al, 2005. "To Bond or Not To Bond: Debt Affordability Guidelines and Their Impact on Credit," Fitch Ratings, June 21, 2005.

<sup>18</sup> Government Finance Officers Association, 2003. *Debt Management Policy, GFOA Recommended Practice*.

<sup>19</sup> Office of Management and Budget, City of New York, 2005. "Statement of Debt Affordability," May 5.

<sup>20</sup> City of New York, 2001. "Message of the Mayor," Executive Budget, Fiscal



Year 2002. April 25, 2001.

<sup>21</sup> Berne, Robert, and Richard Schramm, 1986. *The Financial Analysis of Governments*. New Jersey: Prentice-Hall.

<sup>22</sup> The personal income data used in this table is from the 2000-2004 American Community Survey (ACS), which asks respondents to answer questionnaires that report their income for the past 12 months, because it provides data at the city level. For all other analyses of New York City's debt affordability in this report, the personal income data is derived from the Commerce Department's Bureau of Economic Analysis (BEA), which publishes annual data on aggregate income received by the population of states, metropolitan areas, and selected counties. BEA data is not available at the city level so it cannot be directly used to produce personal income data for the other comparison cities. However, since it is composed of five separate counties, it is possible to use BEA personal income data for New York City. Personal income estimates from ACS data are understated compared to BEA data because the ACS income series is derived from household surveys while the BEA income series is estimated from data from administrative records of business and government sources. In addition, there are slight differences in the definition of income between ACS and BEA.

<sup>23</sup> Bahl, Roy, and William Duncombe, 1993. "State and Local Debt Burdens in the 1980s: A Study in Contrast." *Public Administration Review*, vol. 53, pp. 31-40.

<sup>24</sup> Berne, Robert, and Richard Schramm, 1986. *The Financial Analysis of Governments*. New Jersey: Prentice-Hall.

<sup>25</sup> Municipal Assistance Corporation (MAC) bonds were issued on the city's behalf in the late 1970s to provide the city with access to credit markets at a time when the markets refused to purchase the city's debt because of severe financial mismanagement. The city had been paying down MAC debt for almost 30 years and in 2003, New York State decided to provide debt relief to the city by taking over the remaining \$2.5 billion dollars in MAC bonds. The city refinanced this amount and the state has assumed responsibility for the debt going forward. MAC debt outstanding and debt service disappears from the city's budget beginning in 2006.

<sup>26</sup> Alternative measures of debt burden attempt to measure "fiscal capacity" of a state or local government. A noted example is the fiscal capacity measures developed by the Advisory Commission on Intergovernmental Relations (ACIR). Using a reference group of state and local governments, ACIR computed the average tax rates for the group and then applied these rates to the tax bases of specific state and local governments. To arrive at the fiscal capacity of a government using ACIR, the average tax rates are applied to the appropriate tax bases of that government. (Berne, Robert, and Richard Schramm, 1986. *The Financial Analysis of Governments*. New Jersey:

Prentice-Hall). A conceptually similar approach is laid out by Charles Brecher, Kurt Richwerger, and Marcia Van Wagner in: "An Approach to Measuring the Affordability of State Debt," *Public Budgeting and Finance* 23, no.4 (Winter 2003). More recently, economists have worked to develop econometric estimates of the effects of local taxation on local economic activities. This model explores the relationship of tax rates and tax revenues (popularly known as the Laffer Curve) and estimates a government's peak tax rate beyond which tax revenues can be expected to fall as a result of changes in economic activity. Recent work on "local revenue hills" has explored this question for New York City. (Haughwout, Andrew, Robert Inman, Steven Craig, and Thomas Luce, 2003. "Local Revenue Hills: Evidence from Four U.S. Cities." *Review of Economics and Statistics*, vol. 86 (May), pp. 570-585.

<sup>27</sup> A detailed discussion of City Taxable Resources can be found in the IBO report "Taxing Metropolis: Tax Effort and Tax Capacity in Large U.S. Cities [Appendix]." New York City Independent Budget Office, February 2000. [www.ibo.nyc.ny.us/iboreports/taxcapacityappendix.pdf](http://www.ibo.nyc.ny.us/iboreports/taxcapacityappendix.pdf).)

<sup>28</sup> Comptroller of the City of New York, 2004. "Comprehensive Annual Financial Report." June 30.

<sup>29</sup> Ibid.

<sup>30</sup> Ibid.

<sup>31</sup> An IBO report from 2000 compared the local tax effort of ten major cities in 1997 and found that New York City had the highest local tax effort. This analysis preceded the various tax increases enacted in 2003. ("Taxing Metropolis: Tax Effort and Tax Capacity in Large U.S. Cities.") Other recent research has highlighted the potential detrimental economic effects of increasing tax rates in New York City. (Haughwout, Andrew, Robert Inman, Steven Craig, and Thomas Luce, 2003. "Local Revenue Hills: Evidence from Four U.S. Cities." *Review of Economics and Statistics*, vol. 86 (May), pp.570-585.)

<sup>32</sup> At present, the board may reimpose a control period on the city if, among other events, the city's ability to pay the principal and/or interest on its bonds is impaired. The imposition of a control period effectively allows the board to control the city's debt issuance and ensure the payment of debt service obligations.