The Research Bureau

Benchmarking Municipal Finance in Worcester: Factors Affecting the City's Bond Rating

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INTRODUCTION & BACKGROUND

The City of Worcester's Five-Year Capital Improvement Plan (CIP) guides capital investment priorities related to the City's public infrastructure (streets, sidewalks, parks, school facilities, equipment, and technology).[1] As part of its financing strategy to support its CIP program, the City of Worcester recently turned to the bond market to issue short-term debt (Bond Anticipation Notes). The City requested from the three bond-rating agencies (Moody's Investors Service, Fitch Ratings, and Standard and Poor's) a short-term bond rating. The rating assigned determines the interest rate the City will pay on these short-term notes which will then be converted into long-term General Obligation bonds supported by the tax dollars paid by Worcester residents.

Municipal Bond Ratings

A municipal bond rating is a credit rating assigned by an independent third-party rating agency. These third-party ratings assess the fiscal health of a community, and thus give potential bond investors an indication of the likelihood of timely repayment of principal and interest. The higher the rating assigned by the rating agency, the less likely the community is to default on its debt payments. Moody's bond ratings rank from a high of Aaa to a low of Baa3 (see **Table 1**), and any bonds below a rank of Baa3 are considered "not investment grade," or "junk bonds," and therefore, highly speculative.

Table 1: Moody's Bond Rating Scale
(ordered from high to low)

Rating
Aaa
Aa1
Aa2
Aa3
A1
A2
A3
Baa1
Baa2
Baa3

Lower-rated bonds require higher interest rates to attract investors to assume higher risk. Higher-rated bonds have lower interest rates because there is a lower risk of default on payments. Although municipal bonds usually pay out a lower yield than other types of bonds, investors are interested in them because the interest earned is generally exempt from Federal taxation, thereby offsetting the lower yield.

Why Bond Ratings Are Important

The bond rating that a municipality receives from a rating agency is important for several reasons. First, it assesses the overall economic, operational, and financial strength of a community. Second, it has a direct impact on the cost of borrowing money to finance capital improvement projects. The money saved from having a high bond rating could be substantial given the amount of bonds issued by a community. For instance, if two communities were to request a bond sale of $90 million to construct a new high school, and one community received an Aaa rating and another a Baa rating, the difference in annual debt paid could amount to $625,000 annually, or $12.5 million over the life of a 20-year bond. Therefore, a decrease in a city's bond rating translates into the city's taxpayers having to pay more to finance the projects

[1] The report, updated annually, is available at www.ci.worcester.ma.us/reports/CapitalBudgetFY07.pdf

undertaken by the municipality. The City of Worcester is expected to begin several large capital projects (CitySquare, North High School, and the DCU Special District Financing Zone) that will require nearly $200 million in new borrowing for these three specific projects. Worcester's bond rating will determine the City's interest payments going forward, and how much it will cost taxpayers to repay this debt.

Recent Warnings

As recently acknowledged by two credit rating agencies, the City of Worcester's bond rating is in jeopardy.[2] The rating agencies are closely watching how the City addresses the decline in its fund balance, or "rainy day fund," and also whether this decline is a short-term event or will continue long term.[3] The rating agencies will also carefully monitor the City's use of its capital investment stabilization funds (funds reserved for financing debt), or other cash reserves included in its fund balance. They will want to see whether the City will approve a structurally balanced budget for FY08, that is, one where recurring revenues match recurring expenditures, or whether the City uses one-time revenues (non-recurring) to pay for its operations.

How our public officials address these extremely challenging financial and operational issues, both in the short term and over the long term, will significantly impact the ratings agencies' perceptions of Worcester's credit quality. One rating agency, Standard & Poor's, already placed Worcester on notice by changing its financial outlook of the City from "stable" to "negative" citing the above-mentioned challenges.[4] Fitch indicated that the City's current rating is too high for the City's level of reserves, and Moody's highlighted Worcester's thin reserve levels as a warning sign that Worcester's fund balance needs to increase. In all three cases, the rating agencies are signaling that action is necessary and that Worcester will need to enhance its financial position if it is to maintain its current low A bond rating. Standard and Poor's states, "If the city's financial position is not restored to a sound level within an intermediate timeframe, the rating could be lowered. However, if the city is able to achieve structural budget balance and strengthen its financial position, the outlook could be changed back to stable."[5]

Worcester's Five-Point Financial Plan

The rating agencies have been and will continue to be particularly interested in Worcester's adherence to its first-ever *Five-Point Financial Plan* (The Plan), adopted by the City Council on November 24, 2006, and effective July 1st, 2007 (see **Table 2**). In its latest report, Fitch cited the plan approvingly: "During fiscal 2007, the city took prudent steps in adopting a five-point plan to respond to fiscal pressures and to institutionalize reserve policies."[6] Standard & Poor's also cited these newly-adopted financial policies as a strength. They believe that the adoption of and

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[2] Kotsopoulos, N. 'City's rating outlook stumbles.' Telegram & Gazette, April 3, 2007.
[3] See *Indicator1: General Fund Balance* for more information.
[4] Standard & Poor's, *Worcester, Massachusetts,* April 2, 2007, http://www.standardandpoors.com
[5] *Ibid.*
[6] Fitch Ratings. *Worcester, Massachusetts,* April 27, 2007. http://www.fitchratings.com

adherence to the practices outlined in The Plan should help the City of Worcester maintain or even raise its bond rating.

The Plan calls for the creation of a Bond Rating Improvement Stabilization Fund (BRIS Fund), made up of deposits from debt service reimbursements Worcester will be receiving from the Massachusetts School Building Authority, and a new policy that places 50% of any net Free Cash (year end surpluses) generated by the City in any given year into this fund. These two actions are designed to increase the amount of City reserves available to address economic and budgetary fluctuations that the City may face over the long term. The Plan also calls for creating a North High Capital Improvement Fund that will be used to finance the construction of a new high school without relying on increasing Worcester's property taxes to finance this $72 million project. The five-year financial forecasting and monthly updates to the City Council have already had a positive impact on how long-term decisions are being made by the City. Other financial and debt plans will serve to improve Worcester's financial performance and demonstrate to the rating agencies the strengths of the City's management practices and how these new measures will — over the long term — improve the City's fiscal and operational health overall.

Table 2: Worcester's Five Point Financial Plan
(1) Five-year forecasting and long-term planning of City finances and projects
(2) Strengthening of reserves, including creation of Bond Rating Stabilization Fund
(3) Quarterly financial reporting
(4) $16.85 million cap on borrowing (can be adjusted for inflation)
(5) Capital Improvement Plan to achieve debt service stability in budget

Factors That Contribute to a Community's Bond Rating

Rating agencies consider different factors when determining municipal bond ratings. The most often cited factors in bond rating reports include: the strength of the local economy, the community's debt structure and overall position, current and future year municipal finances, and local management policies and practices. It is necessary to understand how Worcester performs in these areas to see what may cause the City's rating to change positively or negatively. Comparing the City of Worcester to similar New England cities may also shed light on the relative weights of each of these factors in determining a city's bond rating and what effect each factor may have over time. The following section examines six key indicators of financial health that influence a city's bond rating.

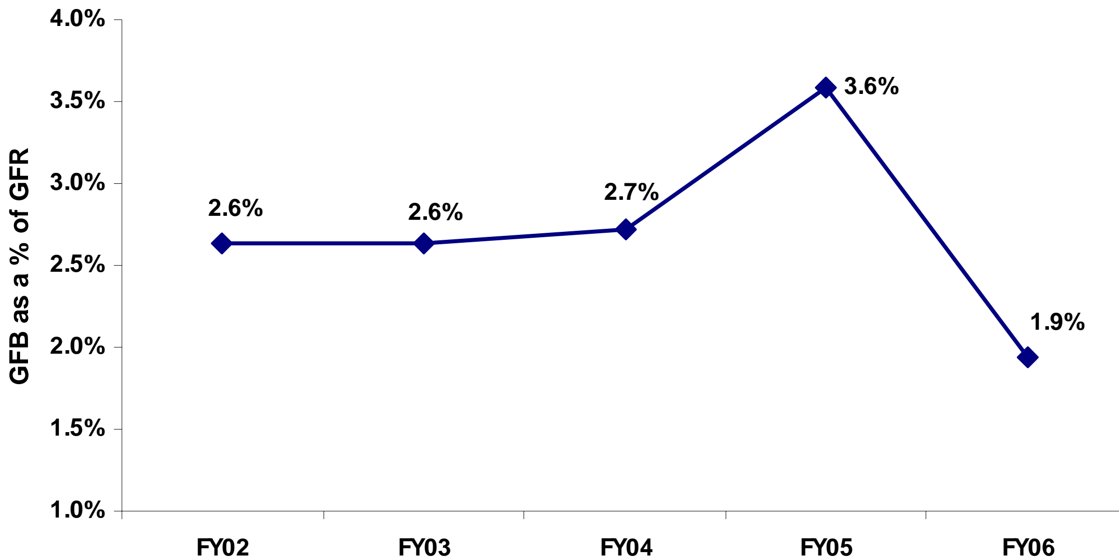
Indicator 1: General Fund Balance (GFB)

Definition: The General Fund is used to account for most of City government's financial activities. Revenues are generated primarily from local taxes, state aid, and fees and charges such as motor vehicle excise fees, interest income, parking fines, and birth certificates. General Fund expenditures constitute the major services municipal government provides including public safety, public education, public works, plus employee fringe benefits and debt service payments. The General Fund Balance is the difference between the Fund's current assets and liabilities. An increase or decrease in that balance is dependent on whether the City's revenues exceed or fall short of its expenses in any given year. For accounting purposes the General Fund Balance includes a reserved or designated portion, which has been set aside for a specific purpose, and an unreserved or undesignated portion, which is available for any expenditure necessary. When comparing with other cities, the General Fund is expressed as the end-of-fiscal-year balance as a percent of total General Fund revenue.

Significance: Sometimes referred to in municipal accounting as a "rainy day fund," the General Fund Balance can be a source of supplemental revenue during an economic downturn, or these funds may cover unexpected revenue shortfalls or unanticipated expenditures. A sizable "rainy day fund" provides a community with some degree of financial flexibility to handle these issues if they arise. From a bond rating agency's perspective, having a healthy reserve level, or GFB, reduces a community's current and future risk of defaulting on payments of bonds it issued. The strength of the "rainy day fund" is measured by the ratio of the General Fund Balance to General Fund revenues. This metric is a key indicator of the financial strength of a municipality.[7]

It must be understood that differences in General Fund reserves across municipalities may be due, in part, to accounting practices, and also to state and local policies, which may set a prescribed level of reserves. These variations are clearly analyzed by the rating agencies in determining a community's credit quality. Nevertheless, the larger the General Fund Balance as a percent of total revenues, the more flexibility a community has to address unexpected consequences of economic cycles. At the end of FY06, Worcester's ratio was 1.9% (see **Figure 1**). According to the rating agencies, a more acceptable ratio for Worcester's low A rating would be about 5%. Stabilization funds, another form of cash reserves, are also considered by the rating agencies in determining a community's bond rating.[8]

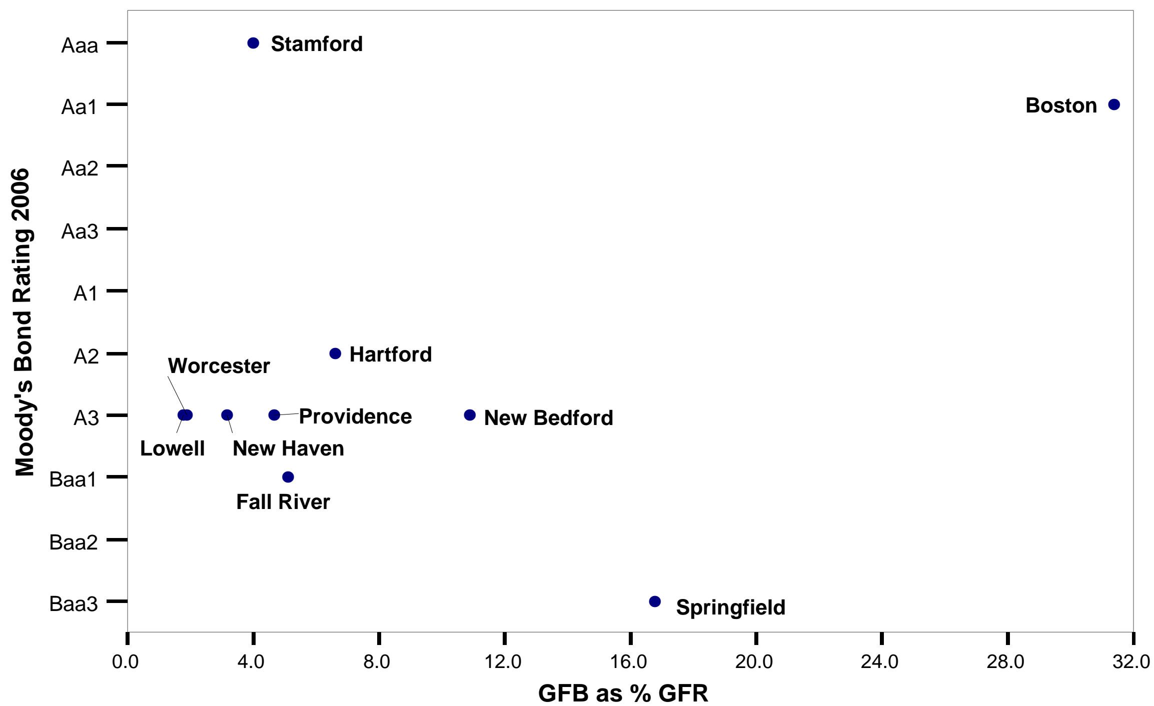
[7] Lipnick, L.; Rattner, Y.; Ebrahim, L. (1999). *The Determinants of Municipal Credit Quality.* Government Finance Review, December 1999, pp. 35-41.
[8] Stabilization funds are designed to accumulate monies for capital and other future spending purposes, and municipalities can establish one or more of these funds for different purposes.



Considerations: The rating agencies consider a 5-10% ratio as more appropriate to cover any unexpected financial situation. In other words, for Worcester to have what is considered a healthy Undesignated Fund Balance (unreserved), it would need to maintain about $25 million in its GFB. However, as of the end of FY06, the City had a balance of just $9.3 million. A shortfall of expected revenue or unexpected costs may require a community to use its reserves to balance its budget, which causes a significant drawdown on its reserves. With sufficient reserves in place, a community would be able to address these economic fluctuations. However the size of the reserves should not be so large that residents think their tax bill exceeds the level of services provided.

Findings: For the 10 cities highlighted in **Figure 2**, the GFB to General Fund revenue ratio in FY06 ranged from a low of 1.8% to a high of 31.4%. In FY06, Worcester and Lowell, both with the bond rating A3, had the lowest ratio of GFB to General Fund revenue of the cities, at slightly less than two percent. Worcester drew down $7 million of its reserves between FY05 and FY06, to pay for higher-than-anticipated costs for snow removal, police overtime, and employee retirement and health benefits. The City of Boston, with a bond rating of Aa1, had the largest reserves, with over $600 million, or more than 30% of its total General Fund revenue. The City of Springfield, with the lowest bond rating (Baa3) of the cities included, also had a high fund balance at $83 million, or almost 17% of revenue. However, this is due mainly to Springfield's access to a state trust fund that was put in place after the establishment of the Springfield Finance Control Board to try to restore financial stability in that city. In 2005, the City was given access to $52 million, which must be repaid (with no interest) by FY12.

Figure 2: General Fund Balance as a % of General Fund Revenues & Moody's Bond Rating, 2006



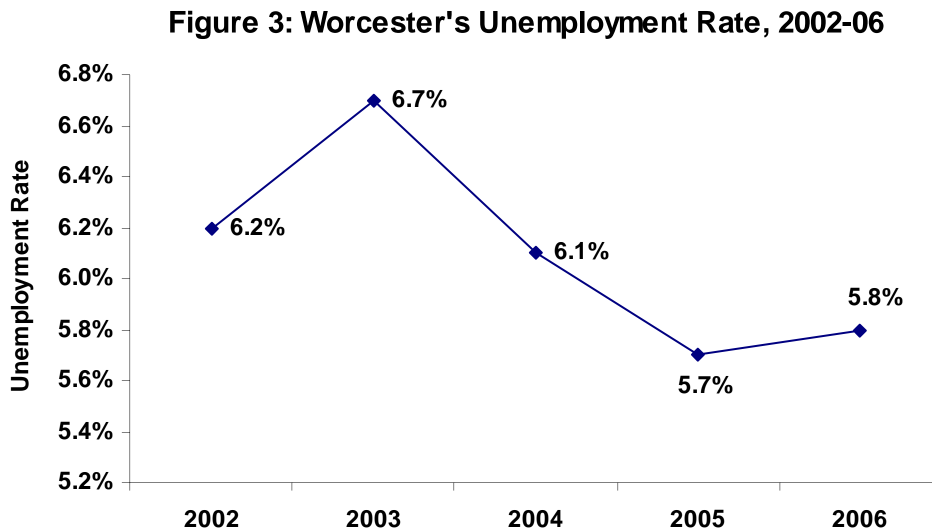
Indicator 2: Unemployment Rate

Definition: The unemployment rate represents the number of unemployed residents per 100 persons in the labor force. Unemployed individuals are those persons age 16 and older who are not employed, but are able, available, and actively seeking work.

Significance: Unemployment rates are a key indicator of the health of the local economy. Over time, the unemployment rate can reveal a city's ability to retain and expand employment opportunities and endure changes within the local or regional economy.[9] Unemployment is an indicator of a community's stability, and therefore, a measure of its ability to repay bonds. Having a stable economy and a well-diversified workforce reduces a community's exposure to economic cycles that can cause contraction and expansion of jobs, and reduces the likelihood of defaults on bonds.

Considerations: A high unemployment rate in a city may reflect fewer employment opportunities, either due to the flight of industries/businesses or the failure of the city to attract new industries and businesses. A low unemployment rate signifies a strong economic base in a city, and it is this economic base, or tax base, that in turn is responsible for paying off the bonds issued by a municipality.

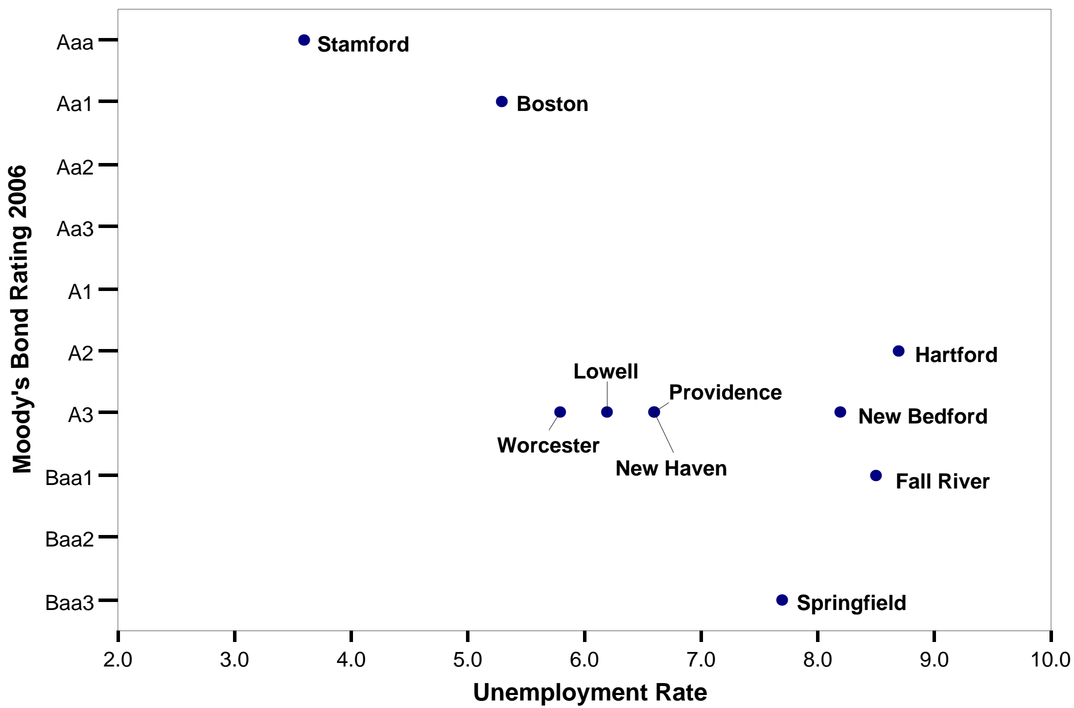
Figure 3: Worcester's Unemployment Rate, 2002-06



[9] Lipnick, L.; Rattner, Y.; Ebrahim, L. (1999). *The Determinants of Municipal Credit Quality.* Government Finance Review, December 1999, pp. 35-41.

Findings: Based on the 10 cities examined, only Boston and Stamford typically had lower unemployment rates than Worcester (see **Figures 3 & 4**). For example, in 2006, Worcester's unemployment rate was 5.8% compared to Boston (5.3%), Stamford (3.6%), Lowell (6.2%), and Hartford (8.7%). Additionally, it appears that cities with higher unemployment rates also tend to have lower municipal bond ratings. For example, the City of Stamford had both the lowest unemployment rate in 2006 (3.6%), and also the highest municipal bond rating as determined by Moody's (Aaa) while the City of Springfield had a high unemployment rate of 7.7% and a low bond rating (Baa3).

Figure 4: Unemployment Rate & Moody's Bond Rating, 2006



Indicator 3: Per Capita Income

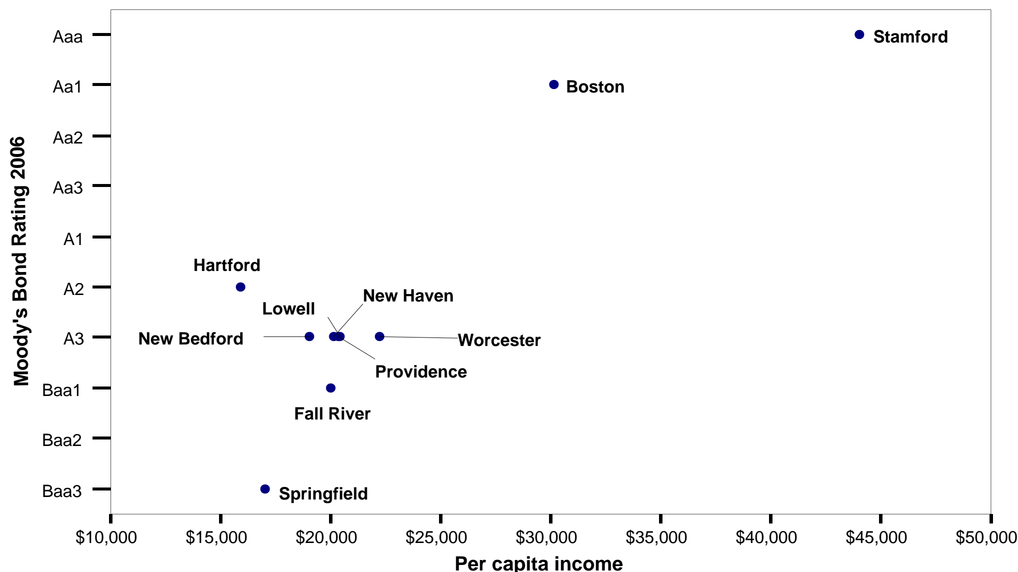
Definition: Per capita income is the total personal income of a group of people, divided by the total population of that group.

Significance: Per capita income is a measure of a city's wealth and economic well-being. It can be used to compare wealth among other groups, or in this case, among cities. A city's wealth is important because it is an indicator of a city's ability to pay for municipal services and support the repayment of the bonds a community issued.

Considerations: Declining or lower per capita income can signal weakening economic opportunity and business vitality, factors which are directly related to economic growth. A decline in economic growth can negatively affect a municipality's tax base, and therefore reduce its ability to support municipal debt.

Findings: When examining the 10 New England cities shown in **Figure 5**, it appears that per capita income is an important factor when rating municipal bonds. The two cities with the highest bond ratings, Stamford and Boston, also had the highest per capita incomes, at $44,040 and $30,167, respectively. The cities of Worcester, Providence, New Bedford, and New Haven all had bond ratings of A3 in 2006, and their respective per capita incomes were similar, ranging from $19,039 to $22,244. The City of Springfield, with the lowest bond rating of Baa3, had the second lowest per capita income of the cities included ($17,023).

Figure 5: Per Capita Income 2005 & Moody's Bond Rating 2006



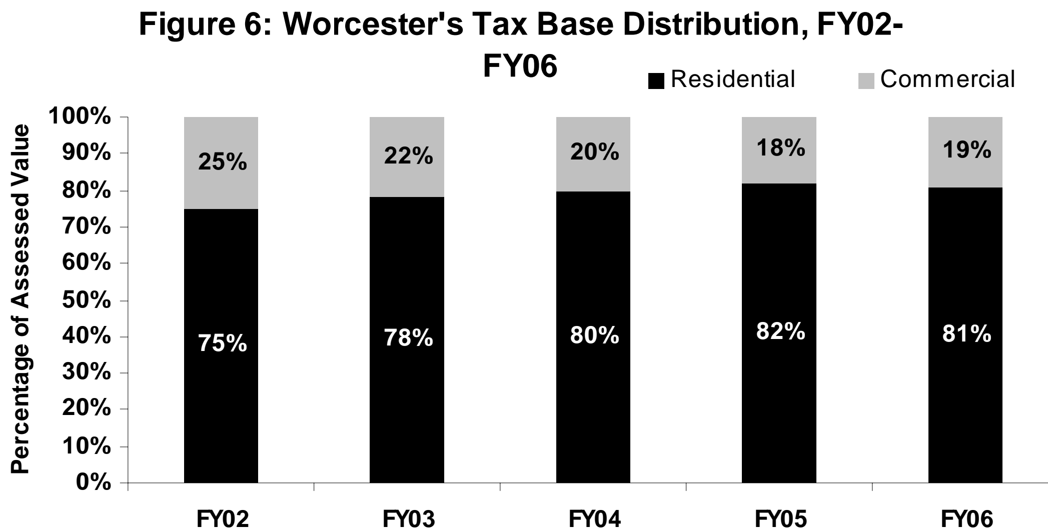
Indicator 4: Tax Base

Definition: The tax base is the total assessed value of property within a city that is subject to local taxation. The tax base changes from year-to-year due to changes in value of existing properties and also because of new construction. The distribution of the tax base can also be evaluated, that is, the percentage of total assessed property that is residential versus commercial/industrial.

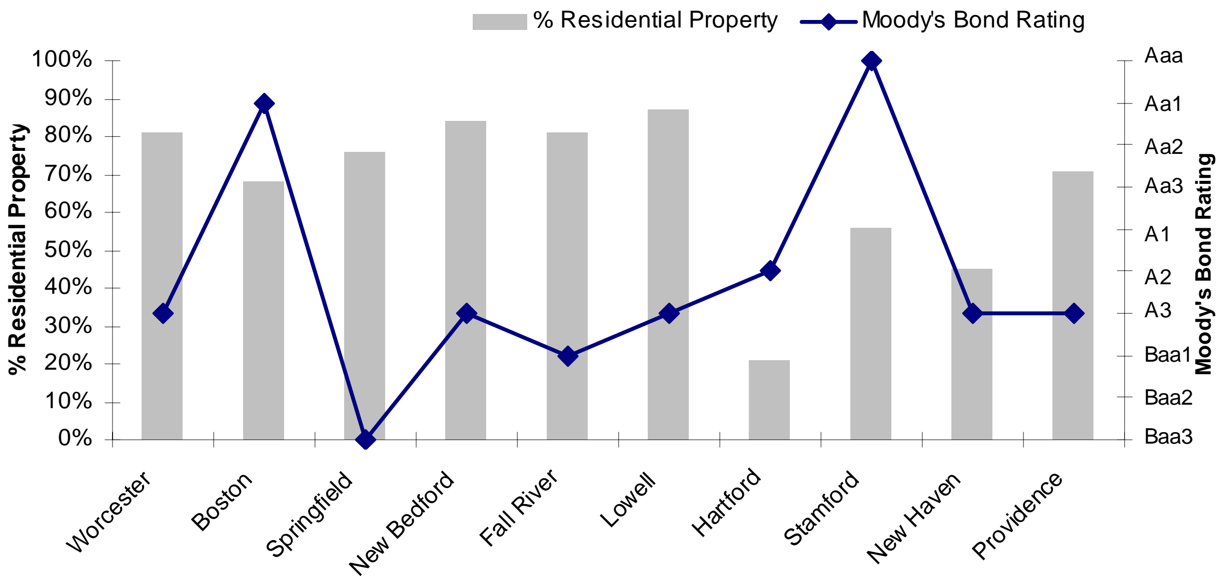
Significance: Local governments are highly reliant on the real estate tax base for revenue used to develop budgets that fund municipal services and programs. Funds for the repayment of municipal bonds issued to invest in its infrastructure must also be included in the budget.

Considerations: Changes in the composition of property may be disruptive to a city; if over time, the percentage of property that is commercial/industrial decreases, residential property owners will bear more of the burden of local taxation, and may see increasing tax bills. Also, a declining commercial and industrial tax base may mean a decrease in the number of jobs available in a city. A tax base that is made up primarily of one property type causes the community to be somewhat vulnerable to any changes that may occur in that specific property type. Given the cyclical nature of the economy, over reliance on one type of property or business cluster will challenge the ability of municipal government to provide services to its community while meeting its obligations to repay its bond holders.

Figure 6: Worcester's Tax Base Distribution, FY02-FY06



Findings: Worcester saw large gains in its total assessed value over the past five-year period, from $6.7 billion to $11.6 billion, (a 73% increase). Cities reviewed in Connecticut, however, experienced less growth in their overall tax base during this same period. Also, when excluding the three cities in Connecticut, the percentage of residential property as a total of assessed property in the other communities increased over the five-year period, while the percentage of commercial/ industrial property declined (see **Figures 6 & 7**). A strong commercial and industrial sector in a city is clearly a sign of both employment and tax base strength, both of which should improve a community's standing with the rating agencies. Conversely, with an over-concentration of one industry, or one employer, the risk profile of a community is greater. The tax base profile is weighed heavily by bond rating agencies.



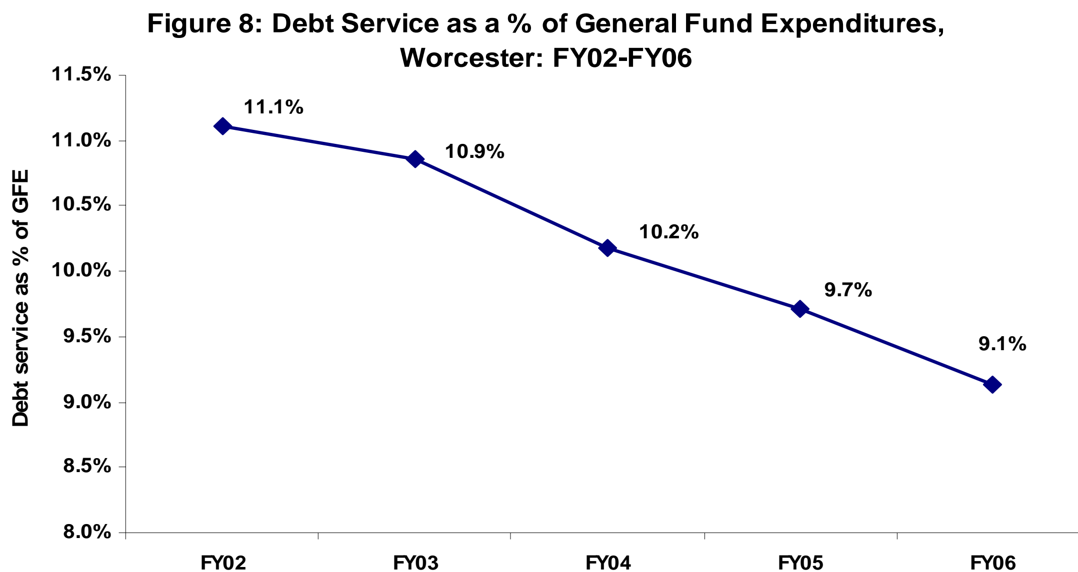
Indicator 5: Debt Service

Definition: Municipalities incur debt when they borrow money to pay for capital projects. Debt service, or the repayment on these loans, is paid over the short-term (less than five years), or long-term (from five to twenty years). Debt service is usually stated in annual terms and based on a specific repayment schedule which includes the principal and interest that needs to be paid on any bonds issued by the municipality.

Significance: The ratio of annual debt service payments to General Fund expenditures measures the debt obligations of the city and is an indicator of the degree of flexibility that a city has with other expenditures.[10] Furthermore, a community's debt burden profile provides insight into whether the community is overextended and is unable to finance future capital needs, or is under-investing in the maintenance and upkeep of the community's infrastructure.

Considerations: According to the rating agencies, an appropriate guideline for the ratio of debt service to total expenditures is around 5-10% over a consistent period of time. If this metric is higher it suggests that future discretionary revenues are being consumed by debt payments and less money is available for city services such as public education and public safety. Alternatively, a declining debt service ratio may indicate that the community is managing its capital investments wisely and can use discretionary dollars to improve services, increase its reserve, or lower its tax bill.

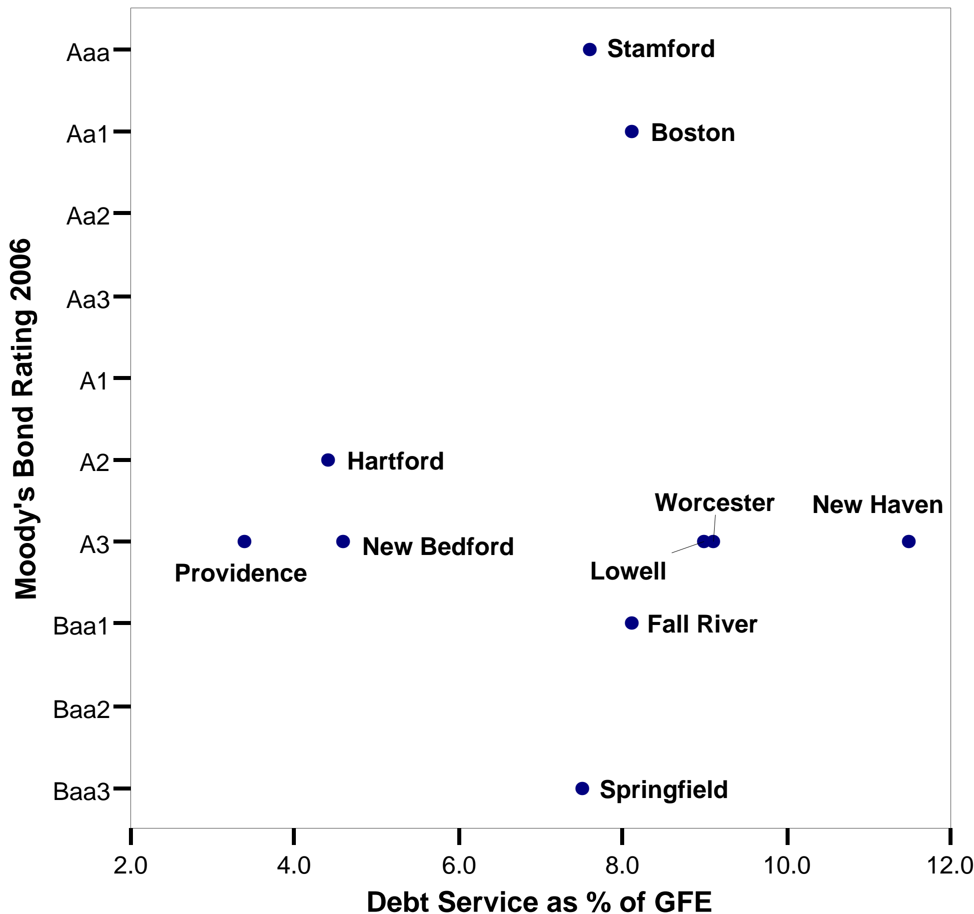
Figure 8: Debt Service as a % of General Fund Expenditures, Worcester: FY02-FY06



[10] Galgano, T. (2001). *Financial management/ Improving municipal debt efficiency*. American City & County, August 2001. http://www.americancityandcounty.com

Findings: As shown in **Figure 8**, during the past five-year period, the proportion of debt service to expenditures in the City of Worcester declined, from about 11% in FY02 to around 9% in FY06. As shown in **Figure 9**, in FY06, the City of New Haven (similarly rated to Worcester at A3) was the only other city in the group that had a larger proportion of its budget spent on debt service (11.5%). The city with the smallest proportion of its budget spent on debt service was Providence (3.4%, also rated at A3). Worcester's declining debt service ratio is a product of the tax levy bonding caps the City Administration and City Council approved during this period. These measures have had a positive impact on the City's debt service expenditures. With the new caps in place under the Five-Point Financial Plan, the City expects to continue to live within its financial means.

Figure 9: Debt Service as a Percentage of Total General Fund Expenditures, & Moody's Bond Rating, 2006



Indicator 6: Employee Pension Payments

Definition: The City of Worcester offers a contributory defined benefit pension plan, which provides qualified employees with a certain benefit upon retirement. (The benefit amount is based on an employee's age at retirement, years of service, and highest salary earned.) Employers guarantee the size of the pension benefit, and must make sure that the funding is available to make the promised payments once they are due.

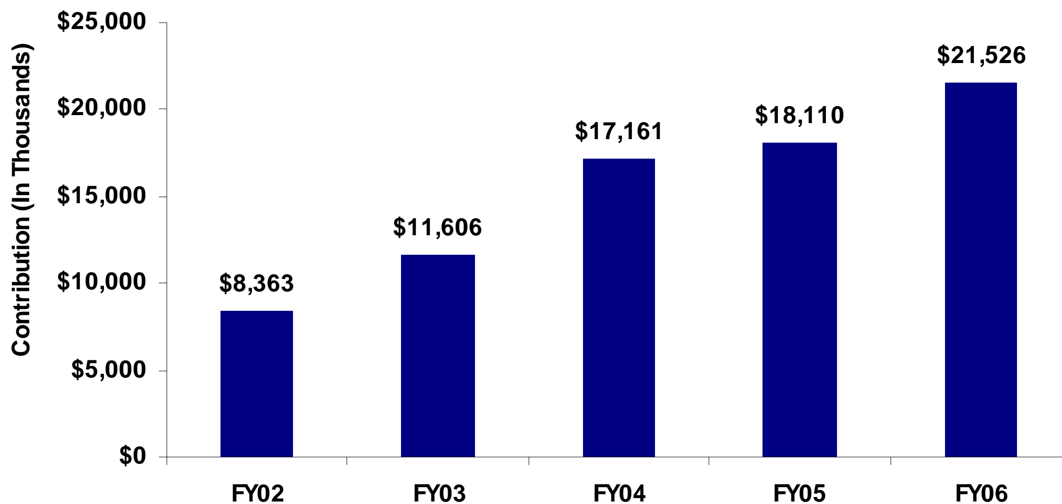
Historically, retirement contributions to public pension systems were made on a pay-as-you-go basis, paying only what was necessary to provide for the current year's retiree costs. However, this method of payment did not "fund" the system (accumulating assets to pay for each member's benefits during active service). To address this issue, MGL Chapter 32 was amended (Chapter 697 of the Acts of 1987) requiring each public retirement system to provide for its normal cost and to eliminate the unfunded pension liability by 2028.[11]

Significance: Municipalities have an obligation to properly fund their pension systems to match the retirement plans' obligations with plan assets that can be invested long term to meet both its current and future obligations to retirees and active employees. In the event that the pension system is not properly funded, communities may have to use a significant amount of their discretionary resources to maintain their pension system. A pension system that is largely unfunded, or does not have good earnings in investments over the long term to meet its long term benchmarks, will negatively impact the bond rating. Conversely, if the pension system is over-funded, those balances could be used for reserves to address unexpected financial consequences a community may experience.

Considerations: A city that manages its retirement system well will have, over time, a fully-funded retirement system, where its plan assets meet its plan liabilities. In most cases municipal governments grapple with largely unfunded pension systems requiring periodic contributions that quickly absorb any discretionary revenues available to the community. These obligations are borne by the taxpayer, who ultimately is paying for this municipal employee benefit. The size of the payments and their duration is dependent upon the amount by which the system is unfunded (determined in most cases by retirement actuaries). Payments into the pension system by the community can be viewed as fixed costs, or another form of a "soft" debt obligation that erodes a community's ability to provide quality municipal services while still making its payments to its bond holders.

[11] Additional information can be found on the Massachusetts Department of Revenue's website, through http://www.mass.gov

Findings: As shown in **Figure 10**, in FY06, Worcester contributed more than $21 million to its pension system. This was a large increase from FY02 when the City put about $8 million towards pensions. Since FY02, Worcester has managed to contribute 100% of its required contribution each year. As of January 2007, Worcester's pension fund was about 86% funded, an increase from 2006 when 80% was funded.

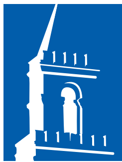


CONCLUSIONS

Rating agencies evaluate many factors when determining a municipality's bond rating, including the local economy, stability of the community's workforce, diversification or concentration of a community's tax base, local finances and debt management, and fiscal management policies and practices. Based on the analysis performed by the independent, third-party bond rating agencies, Worcester's thin reserve levels pose an immediate threat to its current A3 bond rating. However, with strict adherence to Worcester's new Five-Point Financial Plan as adopted by the Worcester City Council, the rating agencies have indicated that the City is poised to maintain its fiscal health, and therefore, maintain, or even raise, its bond rating in the long term.

Bond rating agencies expect the City to maintain the current level of the City's fund balance, and to balance the FY08 budget by matching recurring revenues with recurring annual costs. If the City successfully achieves these objectives, then the rating agencies have indicated that the City's low A bond rating will be preserved. If the City's fund balance were depleted, and the FY08 budget were balanced using one-time revenues that put further financial pressure on the City, and ultimately on the backs of the taxpayer, then the rating agencies would have little choice but to take action on their clear warnings and lower the City's bond rating. A lower bond rating will cost Worcester taxpayers more money in the long term because it will increase the cost of borrowing money, it may deter private businesses from investing in the City because of the long-term financial uncertainty of their investment, and it will require more discretionary funds be put into future annual debt payments. These negative consequences are avoidable if the City Council and Administration adhere to the City's Five-Point Financial Plan both in the short term and long term. These actions should be viewed as long-term investments in Worcester's future.

Mission Statement:
The Research Bureau serves the public interest of the Greater Worcester region by conducting independent, non-partisan research and analysis of public policy issues to promote informed public debate and decision-making.



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