City of Berkeley

GFOA Debt Capacity Study

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Government Finance Officers Association

GFOA is a 501(c)3 non-profit membership association that exists to advance excellence in government finance. We represent approximately 21,000 individuals and 10,000 governments to provide education, research, and leadership on issues related to local government finance.

GFOA's **Research and Consulting Center** is nationally recognized for its analytical and advisory services and specific expertise on state and local government issues.

GFOA and Risk Analysis

Questions We've Addressed

Size of Rainy Day Funds:
How Much is Enough?

User Fees:
What is the chance our fees cover our costs?

Debt Affordability:
What are the chance we can afford our debt issuance plan?

Cyber Insurance:
How do we weigh commercial insurance vs. self-insurance vs. investing in security controls?

The Premise

How affordable is the City's long-term debt plan?

The future is fundamentally uncertain, but looking 30 years ahead is really uncertain!

How do we approach this problem?

We are taking a “risk-aware” approach

We used computer simulation to address “affordability”

We can simulate outcomes for key variables and see how affordable the City’s debt is under different circumstances. Key variables include:

- Amount of debt to issue
- Interest rates
- Rate of return on pension investments

What is Affordable Debt?

What is “Affordable” Debt?

- The City is considering “general obligation (GO) debt”.
  - GO debt is paid for by a dedicated property tax levy.
  - Thus, the City does not pay for this debt out of its existing revenue streams.
  - GO debt will not have a **direct** impact on the City’s operating budget.

- There is indirect impact…
  - Higher tax bills may sour voters on future ballot measures.
  - Businesses or residents may be persuaded to move because of higher taxes.
  - More debt might require the City to offer higher interest rates to attract new investors.

- Our focus is primarily on the City government and the chances that the City government might need to pay a higher interest rate. This is practical to measure within the time, scope and serves as a useful proxy for other indirect concerns (for example, taxpayer burden impacts interest rates).

Bond Ratings Determine Interest Rates

Moody's Rating Scale	
The best->	Aaa
	Aa
	A
	Baa
	Ba
The worst->	B or below

City's Current Rating

What's the Impact of Ratings Downgrade?

- Historically, the difference between the interest rate of Aa and A has ranged from 1.05 to 0.08 percentages points, with an average of 0.26 percentage points.

- Example: a $100 million 30-year bond sold at 2.26% interest rather than 2.00% interest would translate to $5 million more in total interest cost over the life of the bond.

Key Indicators and Assumptions

Broad Scorecard Factors	Factor Weighting	Sub-factors	Sub-factor Weighting
Economy/Tax Base	30%	Tax Base Size (full value)	10%
		Full Value Per Capita	10%
		Wealth (median family income)	10%
Finances	30%	Fund Balance (% of revenues)	10%
		Fund Balance Trend (5-year change)	5%
		Cash Balance (% of revenues)	10%
		Cash Balance Trend (5-year change)	5%
Management	20%	Institutional Framework	10%
		Operating History	10%
Debt/Pensions	20%	Debt to Full Value	5%
		Debt to Revenue	5%
		Moody's-adjusted Net Pension Liability (3-year average) to Full Value	5%
		Moody's-adjusted Net Pension Liability (3-year average) to Revenue	5%

Source: Moody's Investor Service

Key Assumptions about Debt & Pension

- Model assumes all current repayment schedules
- Model includes new debt for…
  - Previously authorized, but unissued debt
  - Debt to support Vision 2050
  - Debt issued by future Councils
- Interest rates simulated, modeled on real-life interest rates behaviors since 1977
- User can reduce assumed pension discount rate by 1 percentage point

Results and Recommendations

The City has Important Strengths

- Characteristics that support borrowing include:
  - Tax base
  - Fund balances
  - History of balanced budgets

- Let’s see some numbers!

But First a Warning!

- The financial indicators are not the final word on what a local government's bond rating will be.

- Human judgment is a factor as well.

Simulated Results on Scorecard Under Baseline Assumptions

Rating	Score for Each Rating Min	Score for Each Rating Max	City's Current Score	Average Score at end of 30 years	Optimistic Score at end of 30 years	Pessimistic Score at end of 30 years
Aaa	0.05	1.5				
Aa	1.5	2.5	**1.65**	**2.14**	**2.00**	**2.30**
A	2.5	3.5				
Baa	3.5	4.5				
Ba	4.5	5.5				
B or below	5.5	6.5				

Equivalent to Strong AA. The score includes all Moody's Scorecard factors: economy/tax base; finances; management; debt/pensions.

When we simulate financial conditions in the City over a 30 year period we see score gets worse. This is due mainly to pensions and debt. The score still is within the AA range but is no longer strong.

Simulated Results on Scorecard Under Less Favorable Assumptions

	Score for Each Rating		City's Current Score	Average Score at end of 30 years	Optimistic Score at end of 30 years	Pessimistic Score at end of 30 years
Rating	Min	Max				
Aaa	0.05	1.5				
Aa	1.5	2.5	1.65	2.39	2.30	
A	2.5	3.5				2.50
Baa	3.5	4.5				
Ba	4.5	5.5				
B or below	5.5	6.5				

Still Equivalent to Strong AA

We can change the assumptions of the simulation to be less favorable, e.g. pension returns are worse by 1 percentage point or the interest rate environment is less favorable. The good news is that the simulation shows the City in the AA range most of the time

Falling of AA range is plausible and we should recall the role of human judgment in ratings

How Can the City Support a Good Bond Rating?

- Make a positive impression on the ratings analyst. City Management has continuously done that according to the rating analysis
- Better define locally appropriate debt affordability policy. Current policy follows state statute, but state statute is equivalent to Ba score.
- Use the risk model to stress test borrowing strategies. For example, it could be used to test a high interest rate environment and/or a declining housing market.
- Consider how the City's land use planning could be used to improve the revenue productivity of the land uses in the City's jurisdiction.
- The City's pension liabilities are a drag on the City and its capacity to borrow. This emphasizes the need for the City to find ways to adequately manage its pension debt.

How Can the City Support a Good Bond Rating?

- Adopt strong financial policies. Opportunities include:
  - Reserve or adequate fund balance policies for non general fund
  - Structurally balanced budget policy

- Develop insight into direct impact on taxpayers (e.g., average homeowner burden). The GFOA Risk Model proves much of the data necessary.

- Be mindful of staff capacity to issue debt and manage capital projects.

- By following a prudent borrowing strategy, managing pensions, and following other GFOA recommendations, the City should have a good chance of making a positive impression on bond ratings analysts and maintaining its ratings, all while preserving some additional capacity for the City to borrow.