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CALIFORNIA DEBT AND INVESTMENT ADVISORY COMMISSION

SESSION ONE:

DEBT CAPACITY AND AFFORDABILITY

Danny Kim, Partner, Norton Rose Fulbright US LLP

Nikolai J. Sklaroff, Director – West Region,
Public Finance, Wells Fargo Securities

Debt Capacity and Affordability

Two Components of Debt Capacity

- Revenue Source and Predictability
- Debt Service (Inverse Relationship between Principal and Interest)

Sources of Restrictions

- Restrictions Imposed by Law
- Restrictions Imposed by Contract
- Restrictions Imposed by Policy Makers

Restrictions Imposed by Law

- Proposition 13 (1978)
- Proposition 218 (1996)
- Proposition 26 (2010)

Restrictions Imposed by Contract

- Additional Bonds Test (ABT)
- Also known as coverage requirement
- Restrictions on senior lien obligations
- Typically, no restrictions on subordinate lien obligations
- Determined by Investors, Rating Agencies, Bond Insurers

Restrictions Imposed by Policy Makers

- Reserve Policy
- Investment Policy (will determine rate of return on investments)
- Maximum Tax Level (i.e. Goals and Policies for Community Facilities District)

General Obligations Bonds

- California – Voter Approved (No Limitation on Levy Amount)
- Direct and Overlapping Debt
- Total Effective Tax Rate

Lease Revenue Bonds/COPs

- General fund obligation subject to abatement
- Surplus is needed for taking on additional obligations unless existing obligation is about to expire
- Otherwise, need additional revenue sources (i.e. sales tax measure/parcel tax)
- Asset Transfer

Revenue Bonds

- Enterprise
- Special Tax Revenues (Mello-Roos/CFD)

ABT/Coverage

- Coverage = Net Revenues divided by Maximum Annual Debt Service (MADS)
- ABT requires coverage of a certain percentage
- How do you calculate Net Revenues (customer deposits, depreciation and other non-cashflow expenses are excluded)
- How do you calculate Debt Service (variable rate debt or notes can complicate matters)

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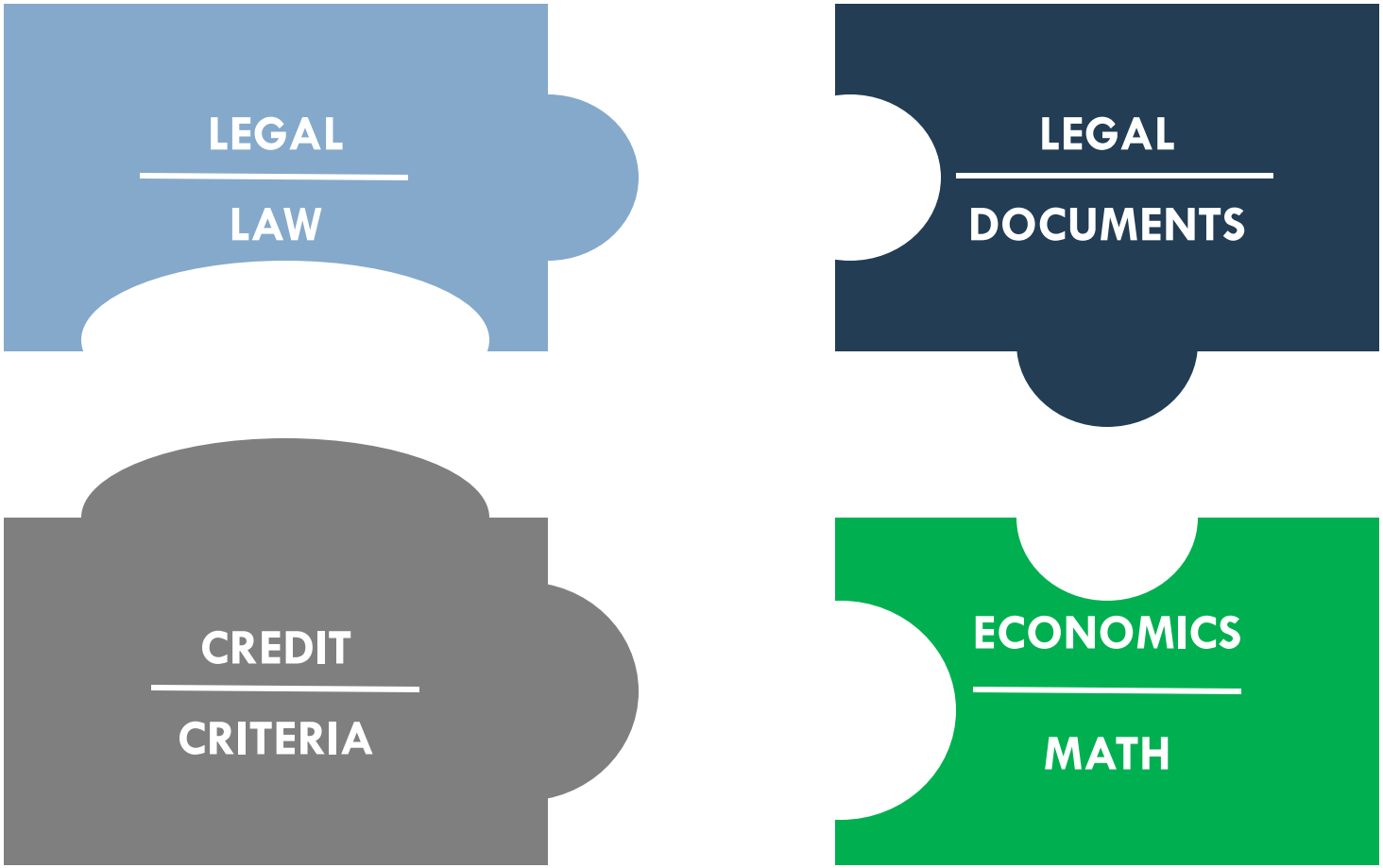
DEBT CAPACITY AND AFFORDABILITY: THE MARKET PERSPECTIVE

Nikolai J. Sklaroff
Public Finance Investment Banker
Wells Fargo Securities

Debt 2: Accessing the Market

March 18, 2015
Riverside, California

What is Debt Capacity and Affordability?



Capacity/Affordability Differs by Types of Debt

- In California, we have a diverse mix of bond security types

Credit	Security
General Obligation/Voter Approved Bonds	"Unlimited" power to raise property tax
Community Facilities District (Mello Roos) and Assessment Bonds	Special Tax/Assessment
Lease Financings (Certificates of Participation + Lease Revenue Bonds)	Budgeted out of general fund/potential contributing revenues
Enterprise Revenue Bonds	
Water, Sewer, and other Enterprises	Pledge to collect user revenues
Sales Tax Revenue Bonds	Passive voter approved tax on sales
Tax Increment Bonds	Passive property tax increment

General Obligation Bonds

- Voters may approve a General Obligation Bond up to a specified par amount
- Voters may be 'promised' tax impact
- Difference between
  - Legal Limit
  - Debt Capacity
  - Affordability

A General Obligation Bond Example

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- San Francisco's last G.O. Bond was for Earthquake Safety and Emergency Response
  - 2/3 of voters authorized $412.3 million in 2010
  - Bonds actually issued in 2010, 2012, 2013, and 2014
  - 2/3 of voters authorized another $400 million in 2014
- The San Francisco Charter limits G.O. Bonds to 3% of A.V.
  - On that basis the Legal Limit is $5.45 billion
  - City actually had $1.94 billion out (or 1.07%)
  - And had $940.72 million of voter approved but unissued debt so could actually issue up to $2.88 billion
- But those are types of "legal limits"
- Will discuss how 'The Market' evaluates capacity/affordability

Real World: Market Considerations

The Credit Implications

- Rating agencies now have explicit criteria and scorecards
- Specific debt factors:
  - Part of Moody's G.O. rating criteria (20%)
  - Part of S&P"s G.O. rating criteria (10%)

The Math Implications

- In our San Francisco example:
  - City's tax rate was 1.188% in 2014
  - 2014 Median Housing price of $1,000,000
  - $11,880 tax bill
- Assessing the impact of that additional debt service on the tax rate

Source: Moody's Investors Service, US Local Government General Obligation Debt, January 14, 2014; Standard & Poor's, US Local Government General Obligation Ratings: Methodology, September 12, 2013

Real World: Practical Considerations

The Practical Implications

- Realities of property tax rate changes affected by
  - Layering in each series of new debt for each program of G.O. bonds
  - Term and rate of debt
  - Assumed tax base growth
  - Old debt rolling off or being refunded

Moody's General Obligation Scorecard

EXHIBIT 1

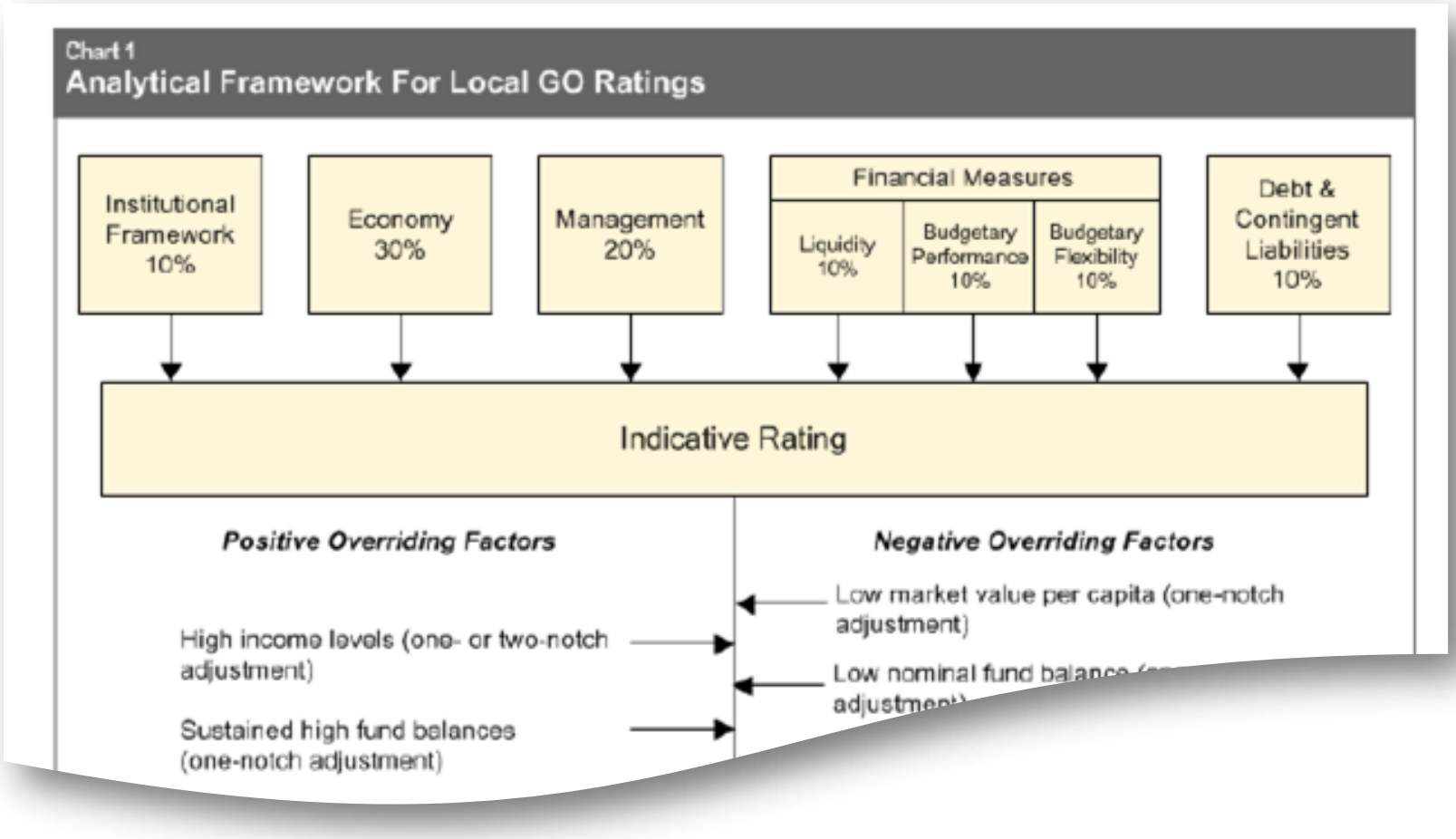
Scorecard Factors and Weights

Local Governments

Broad Rating Factors	Factor Weighting	Rating Subfactors	Subfactor 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 Investors Service, US Local Government General Obligation Debt, January 14, 2014

S&P General Obligation Scorecard



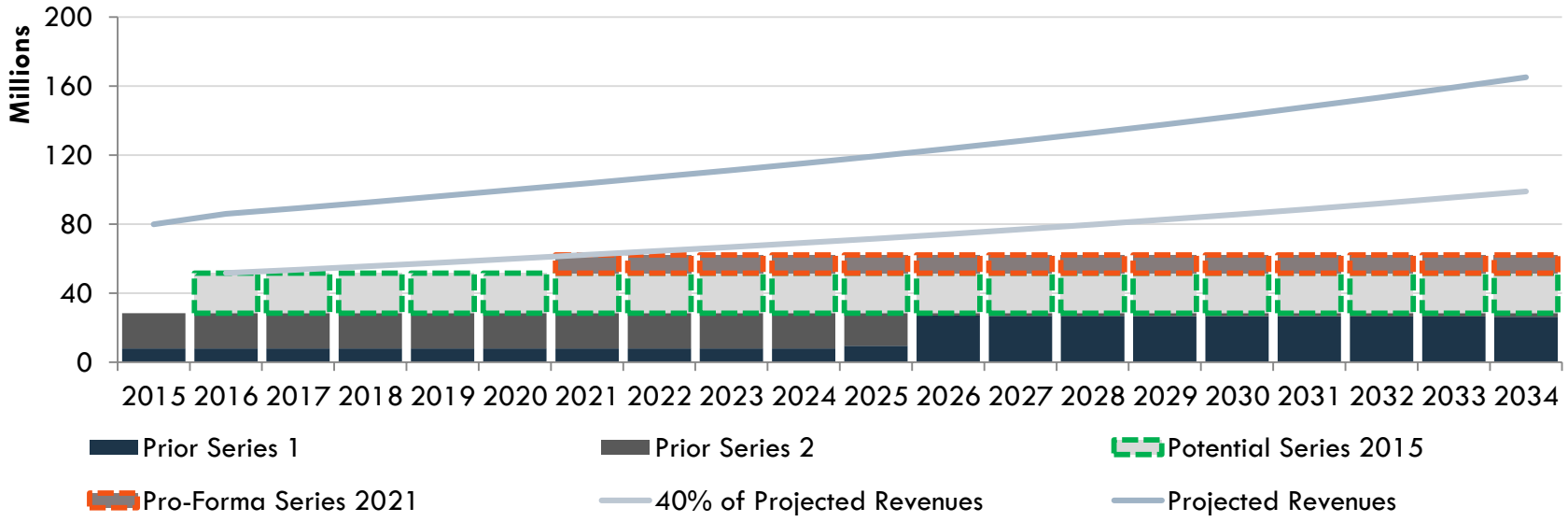
Source: Standard & Poor's, US Local Government General Obligation Ratings: Methodology, September 12, 2013

Lease Revenue Obligations

- Unlike tax backed obligations or utility backed obligations, lease obligation may not come with another revenue stream ("zero sum")
  - With multiple leases, there may be the same layering of obligations, except now the spikes and dips impact the governmental budget, not the users budget
- If other revenue streams exist, what are the dynamics of that stream (secure?, variability?)
- Do costs need to be allocated to other departments?
- "Lease Burden" relative to General Fund Revenues
- Unique aspects of lease financings affecting capacity
  - Useful life of asset
  - Limited to paying rent with 'beneficial use and occupancy' of the asset
  - Potential need for Capitalized Interest, Reserves, Insurance

Revenue Bonds: Passive Revenue Stream

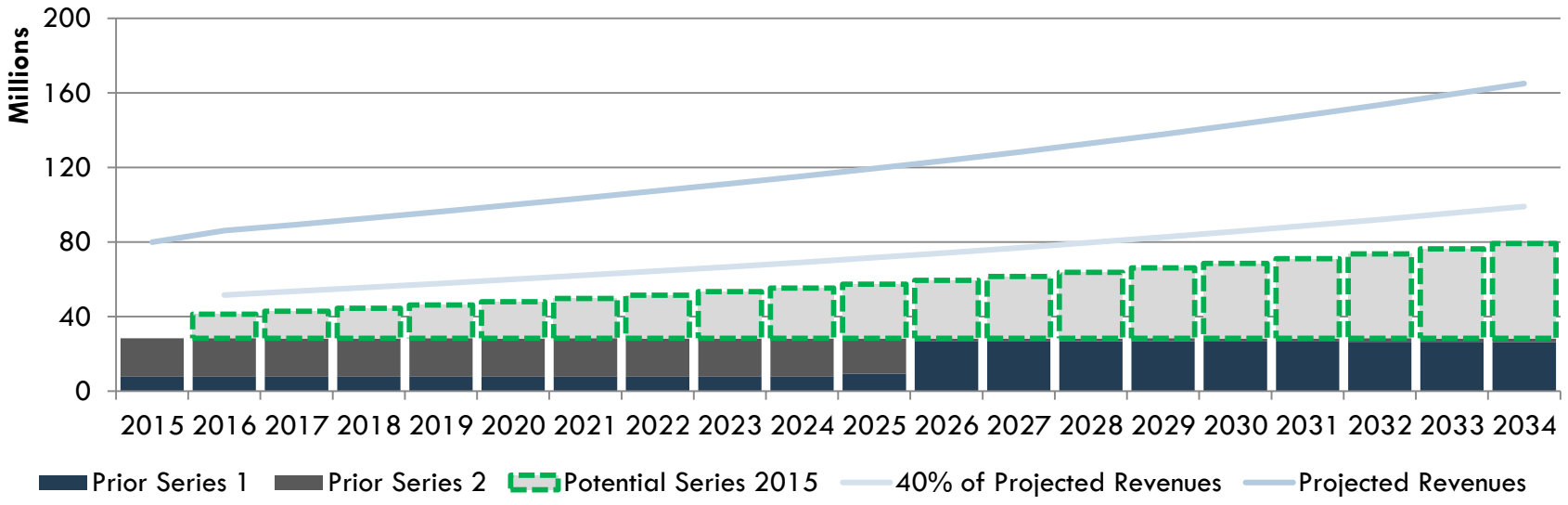
- Examples of leveraging passive revenues: Sales Tax, Tax Increment
- Capacity and affordability really a function of the Additional Bonds Test (ABT) and growth in the revenue stream
- Term affects capacity; may be constrained by sunset of the tax
- Maybe further affected by policy decisions, like policy allocations (i.e. dedicated 40% of the revenues to operations vs. facilities)



Assumptions: 6/1/2015 Dated/Delivery Date; 30-year debt at "AAA" MMD; projected revenues grow 6% per year; 1.25x ABT

Revenue Bonds: Active Revenue Stream

- Water, Sewer and other enterprises can actively manage the revenue stream
- Promises to raise rates in the future often allow for more flexible ABT because there is also a Rate Covenant
- While passive streams typically look to historical revenues, active streams can have ABTs that may look to the future too.



Assumptions: 6/1/2015 Dated/Delivery Date; 30-year debt at "AAA" MMD; projected revenues grow 6% per year; 1.25x ABT

Market View: Water and Sewer Utility Bonds

- Moody's doesn't specifically have a broad debt factor for utility bonds, but has debt factors within other factors

EXHIBIT 5

Municipal Utility Scorecard Factors

Broad Scorecard Factors	Factor Weighting	Scorecard Subfactor	Subfactor Weighting
System Characteristics	30%	Asset Condition (Remaining Useful Life)	10%
		Service Area Wealth (Median Family Income)	12.5%
		System Size (O&M)	7.5%
Financial Strength	40%	**Annual Debt Service Coverage**	**15%**
		Days Cash on Hand	15%
		Debt to Operating Revenues	**10%**
Management	20%	Rate Management	10%
		Regulatory Compliance and Capital Planning	10%
Legal Provisions	10%	**Rate Covenant**	**5%**
		Debt Service Reserve Requirement	**5%**
Total	100%	Total	100%

EXHIBIT 7

Financial Strength (40%)	Aaa	Aa	A	Baa	Ba	B and Below
Annual Debt Service Coverage (15%)	> 2.00x	2.00x ≥ n > 1.70x	1.70x ≥ n > 1.25x	1.25x ≥ n > 1.00x	1.00x ≥ n > 0.70x	≤ 0.70x
Days Cash on Hand (15%)	> 250 Days	250 Days ≥ n > 150 Days	150 Days ≥ n > 35 Days	35 Days ≥ n > 15 Days	15 Days ≥ n > 7 Days	≤ 7 Days
Debt to Operating Revenues (10%)	< 2.00x	2.00x < n ≤ 4.00x	4.00x < n ≤ 7.00x	7.00x < n ≤ 8.00x	8.00x < n ≤ 9.00x	≥ 9.00x

Source: Moody's Investors Service, US Municipal Utility Debt, December 15, 2014

Market View: S&P Analysis

- S&P's Utility analysis is layered, scoring individual factors

Table 15

Assessment Of Coverage Metrics

Initial assessment	All-In coverage
1	1.60x or above
2	1.40x to 1.60x
3	1.20x to 1.40x
4	1.10x to 1.20x
5	1.00x to 1.10x
6	Below 1.00x

Qualitative Factors Positively Affecting The Initial Assessment

A significant portion of operating revenues with a high degree of certainty, such as from wholesale sales with take-or-pay minimums, even if those wholesale sales serve to depress total debt service coverage due to cost-of-service rates (see paragraph 91)

Planned, but infrequent, use of a rate stabilization fund indicates the absence of a weakness, all other things being equal, as opposed the presence of a credit-positive characteristic. Still, it could explain poor coverage that has otherwise been consistently better (see paragraph 92).

Qualitative Factors Negatively Affecting The Initial Assessment

A debt service schedule that makes it extremely likely the utility will need significant growth or large rate increases to meet future requirements, such as a deferral of principal repayment into the far future

Debt service coverage that is reliant on new customer fees or nonrecurring nonoperating cash inflows just to achieve a ratio of at least 1.0 times (see paragraph 93)

Exposure to interest-rate sensitivity via variable-rate debt is enough to make a difference between two of the above cut points (see paragraph 94)

Each applicable qualitative factor would change the initial assessment by one point, but the net total of all adjustments would never improve or worsen the initial assessment by more than two points

Source: Standard & Poor's, U.S. Public Finance Waterworks, Sanitary Sewer, And Drainage Utility Systems: Methodology And Assumptions; December 10, 2014

More S&P Factors

- S&P's Utility analysis is layered, scoring individual factors

Table 19

Assessment Of Debt And Liabilities

Initial Assessment	Debt to Capitalization
1	Under 20%
2	20% to 35%
3	35% to 50%
4	50% to 65%
5	65% to 80%
6	Greater than 80%

Qualitative Factors Positively Affecting The Initial Assessment

A relatively rapid roll-off of the long-term debt, with 65% or more coming due in 10 years or less, assuming there are no bullet maturities within that schedule that would realistically need to be refinanced. Total debt is not reduced by the presence of a debt service reserve fund.

Qualitative Factors Negatively Affecting The Initial Assessment

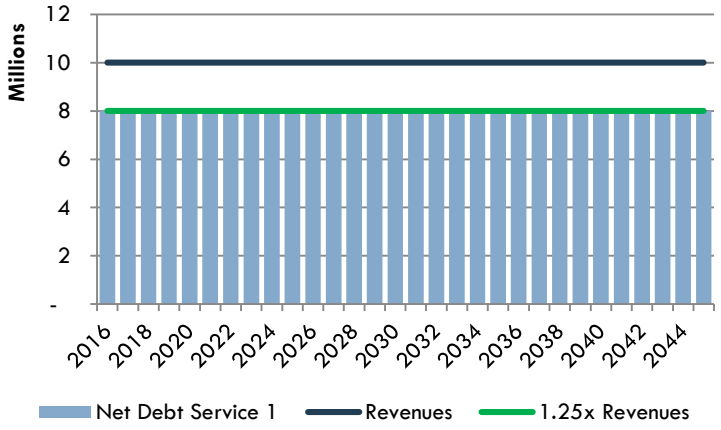
Concerns about pension funding, which could be evidenced by a funded ratio of less than 80%, an actuarial study that is more than three years old, or a trend of not fully funding the annual required contribution for the pension and/or other postemployment benefits (see paragraph 108).

Source: Standard & Poor's, U.S. Public Finance Waterworks, Sanitary Sewer, And Drainage Utility Systems: Methodology And Assumptions; December 10, 2014

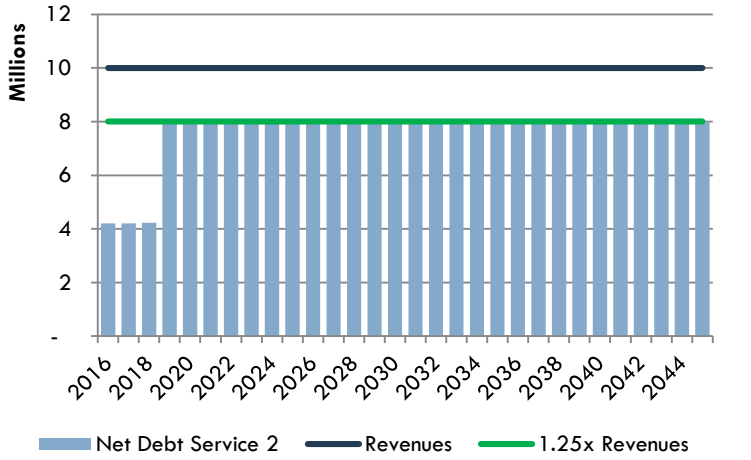
Issues that can Affect Capacity

- Certain types of projects depend on project completion to generate revenues
- Amortization of bonds is delayed; bonds pay "capitalized interest"
- $10 million a year of revenues with 125% rate covenant supports $164.4 million bond at current 30-year "AAA" rates
- The same $10 million/ year only supports $153.0 million if the plant first needs to be built over three years and the bond has to pay "capitalized interest"
- Other constraints, like phased rate increases or phased operating ramp up

Without Capitalized Interest



With Capitalized Interest



Assumptions: 6/1/2015 Dated/Delivery Date; 30-year debt at "AAA" MMD; three years of capitalized interest

Trends affecting Capacity/Affordability

- Debt Service Reserve Funds
  - Historically about 10% of most bonds, other than G.O.s, was dedicated to a "Debt Service Reserve Fund"
  - Legal Limit: Lesser of 10%, Maximum Annual Debt Service, or 125% of average annual debt service
  - To the extent the market is not requiring reserve funds for highly rated utility, sales tax ,and even some lease financings, that frees up ~10% of proceeds for projects
- New approaches
  - Reassessing necessity on highly-rated utilities, sales tax bonds with strong coverage, even strong general fund leases
  - Surety substitutes

Other Trends affecting Capacity/Affordability

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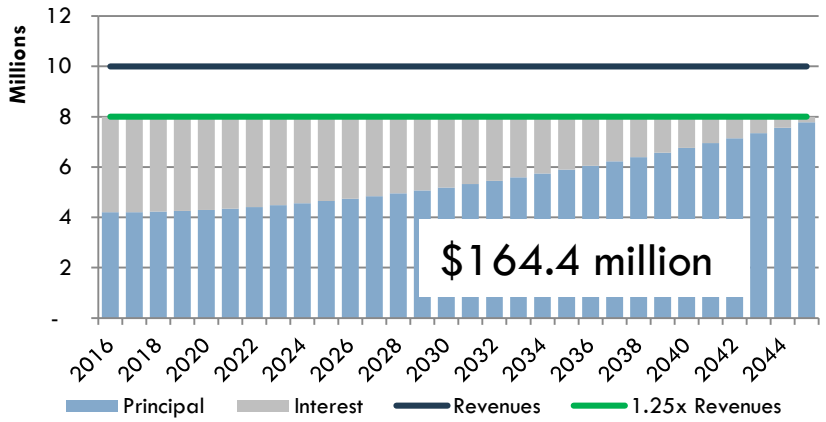
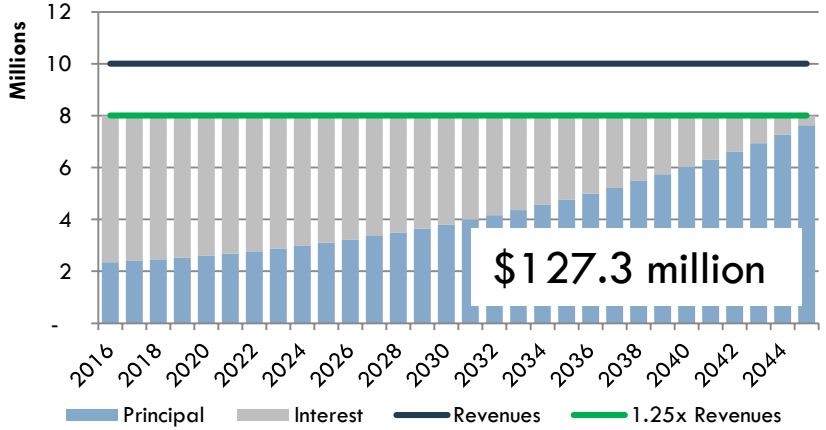
- Historically low rates have dramatically increased capacity and affordability
  - $10 million a year of revenues can support a $164.4 million 30 year revenue bond with 1.25x coverage at today's 30-year rate for Aaa bonds
  - The same $10 million/year supports only $127.3 million revenue bonds if the rate is 2% higher
- In certain sectors, investors have been willing to move beyond traditional 20-30 year bonds, creating opportunities to amortize debt longer

Current Rates



Current Rates + 2%



Assumptions: 6/1/2015 Dated/Delivery Date; 30-year debt at "AAA" MMD

Factors in Finding More Debt Capacity

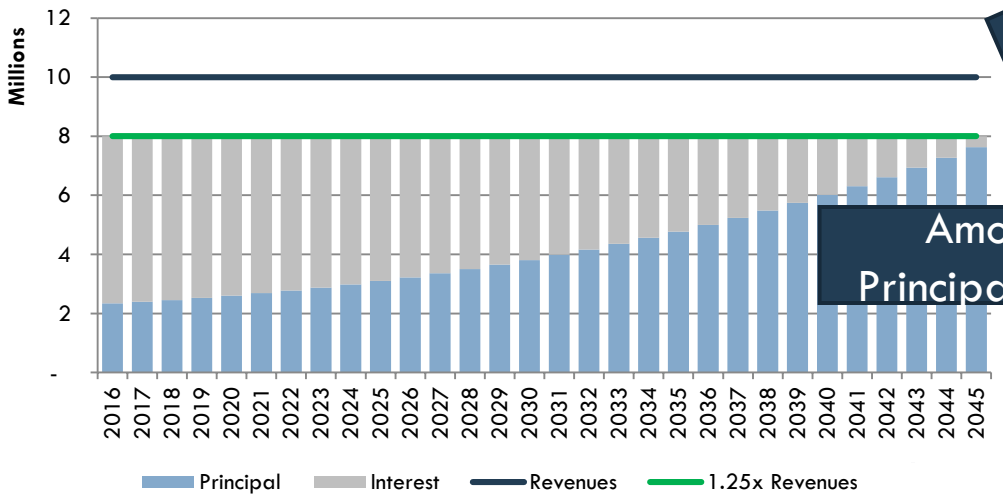
- Other than the obvious – but difficult - solution of raising more revenues, how else do we find more debt capacity based on the same revenues

Reduce Coverage

Tension

Reduce Interest Costs

$10 million Revenues Leveraged at 1.25x



Increase Slope

Amortize Principal Longer

Reduce Share of Proceeds for Non Project Needs (DSRF etc)

Assumptions: 6/1/2015 Dated/Delivery Date; 30-year debt at "AAA" MMD

Big Points

- Market is focused not just on how revenues relate to the debt, but also how those revenues relate to the sources of revenue and the ability of the sources to sustain those revenues (i.e. credit)
- Is repayment dependent on assumptions and how those assumptions can be changed?
- It is important to understand limits in State law, local Charters and Ordinances, but that is not "affordability" or "capacity"
- Credit dictates affordability and capacity and that will be reflected in:
  - The transaction's individual legal structure
  - How rating agencies rate the bonds
  - How bond insurers or credit enhancers price their enhancement
  - And ultimately how investors evaluate/price the debt

Questions and Follow Up

Nikolai J. Sklaroff
Public Finance Investment Banker

Wells Fargo Securities
333 Market Street, Suit 1500
MAC A0109-154
San Francisco, CA 94105
415-371-2648 Direct
nikolai.j.sklaroff@wellsfargo.com

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