

Leveraging Infrastructure Impact Investment with EIB and CBP3 Components

Discussion Outline

December 2019

Summary

This outline presents several aspects of the 2018 City of Atlanta Environmental Impact Bond (EIB) and the Prince George County Community-Based P3 (CBP3) with respect to improving the effectiveness of impact investing.

1. **Pricing:** The Atlanta EIB was much more costly than any of the city's straightforward comparable bond alternatives even under the Base Performance return. As such, it does not serve as a useful precedent or basis for scaled-up impact investment.
2. **Atlanta EIB Transaction Structure:** The EIB's transaction structure has several components that can provide useful precedents for future deals.
3. **How to Scale to Larger, More Efficient Transaction?** Effectively utilizing impact investment in infrastructure projects will require a leveraged structure that can utilize EIB and other precedent components.
4. **Partial Precedent: Prince George County CBP3 Transaction:** The PGC CBP3 utilizes an efficient project finance framework that accomplishes limited ESG objectives – it is a useful partial precedent.
5. **Combining the Precedents and Leveraging the Impact Investment:** Combining elements of the EIB and the CBP3 may be a useful path forward.
6. **Leveraged Impact Investment Debt Balance Profile:** A leveraged impact transaction would reflect efficient and effective utilization of different types of debt capitalization.

1. Pricing Estimates

Atlanta EIB																					
June 2019																					
	Par	Price	Dis/Prem	Net			Basic Yield														
Term Bond -- 3.5%	11,345	0.9757	(276)	11,069	Proceeds to Atl.	14,106	3.73%														
Term Bond-- 5.0%	2,675	1.1353	362	3,037	Issue Cost	606	4.84%														
Series 2018D	14,020		86	14,106	Net Proceeds	13,500															
							Weighted-Average Life	5.8													
									WAL Calc												
Term Bond -- 3.5%	3.50%	3.50%	4.02%		Term Bond -- 5.0%	5.00%	5.00%	2.88%	Series 2018D	3.85%	3.73%	4.84%									
Series	Balance	Interest	DS	Initial Yld	Series	Balance	Interest	DS	Initial Yld	Series	Balance	Interest	DS	Initial Yld	Hi-Pay	Hi-Pay Yld	Year	Pct Repav			
2018	11,345		(11,345)	(11,069)	2018	2,675		(2,675)	(3,037)	2018	14,020		(14,020)	(14,106)		(14,106)	0				
2019	1,180	10,165	397	1,577	1,577	0	2,675	134	134	134	2019	1,180	12,840	531	1,711	1,711	1,711	1	0.08		
2020	1,220	8,945	356	1,576	1,576	0	2,675	134	134	134	2020	1,220	11,620	490	1,710	1,710	1,710	2	0.17		
2021	1,265	7,680	313	1,578	1,578	0	2,675	134	134	134	2021	1,265	10,355	447	1,712	1,712	1,712	3	0.27		
2022	980	6,700	269	1,249	1,249	2022	330	2,345	134	464	464	2022	1,310	9,045	403	1,713	1,713	1,713	4	0.37	
2023	1,020	5,680	235	1,255	1,255	2023	345	2,000	117	462	462	2023	1,365	7,680	352	1,717	1,717	1,717	5	0.49	
2024	1,060	4,620	199	1,259	1,259	2024	360	1,640	100	460	460	2024	1,420	6,260	299	1,719	1,719	1,000	2,719	6	0.61
2025	1,095	3,525	162	1,257	1,257	2025	380	1,260	82	462	462	2025	1,475	4,785	244	1,719	1,719	1,719	7	0.74	
2026	1,135	2,390	123	1,258	1,258	2026	400	860	63	463	463	2026	1,535	3,250	186	1,721	1,721	1,721	8	0.88	
2027	1,175	1,215	84	1,259	1,259	2027	420	440	43	463	463	2027	1,595	1,655	127	1,722	1,722	1,722	9	1.02	
2028	1,215	0	43	1,258	1,258	2028	440	0	22	462	462	2028	1,655	0	65	1,720	1,720	1,720	10	1.18	

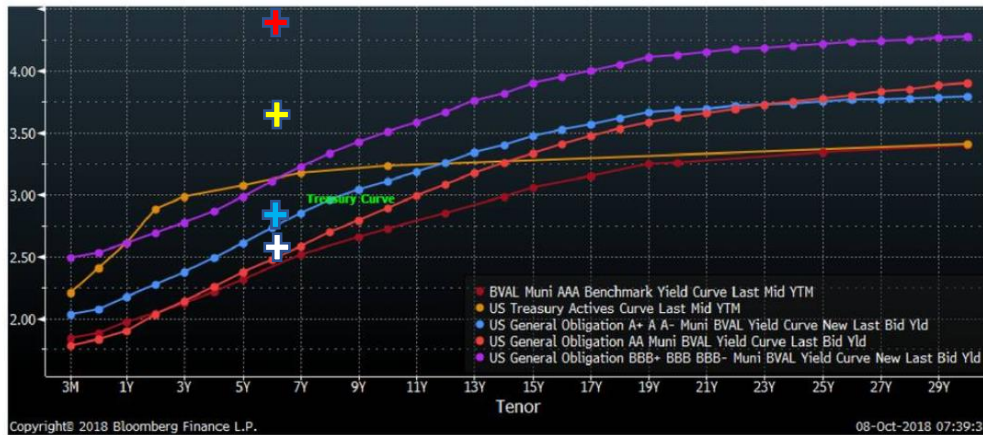
Analysis from OS and EMMA data:

- Base Yield: 3.73%
- High-Perform: 4.84%
- WAL – 5.8 years

Close to reported yield numbers from CFN 6/24/2019 article – 3.55% and 4.67% respectively

Relative Value by Rating

Figure 5 – Muni Index Yield Curve by Credit Rating – Data Source: Bloomberg

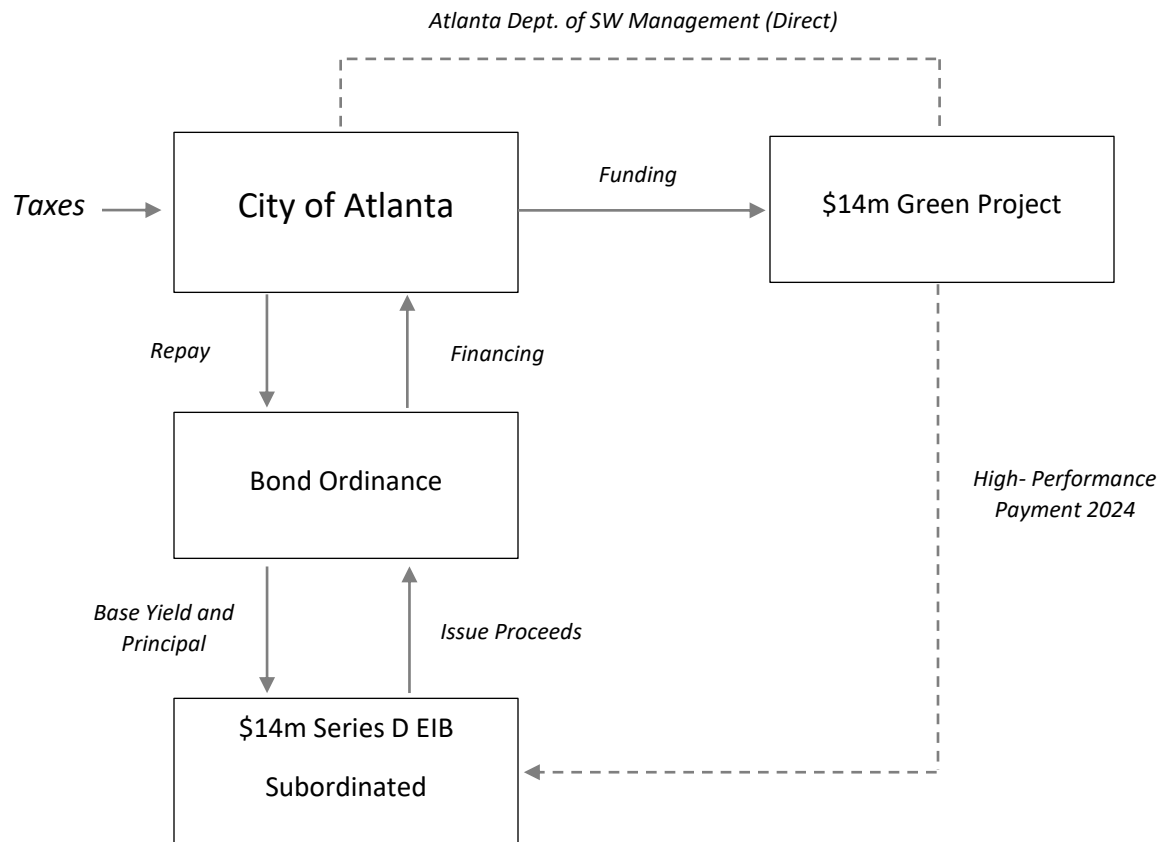


Pricing context – tax-exempt market yield curve October 2018

- ⊕ Series 2018 C (due 2026) Aa2/AA- 2.66%
- ⊕ Estimated Series C Sub Aa3/A+ 2.90%
- ⊕ Series D 2018 EIB Aa3/A+ 3.55%
- ⊕ High-Perform EIB 4.67%

Additional cost? 0.65% to 1.77%

2. Atlanta EIB Transaction Structure



Strengths

- Utilized existing funding base and framework to accelerate required project
- Awarded development grants
- Subordinated debt (helps re fiscal constraints)
- Impact upside performance metric could (in theory) result in lower yield at issue
- Positive publicity, consensus building

Weaknesses

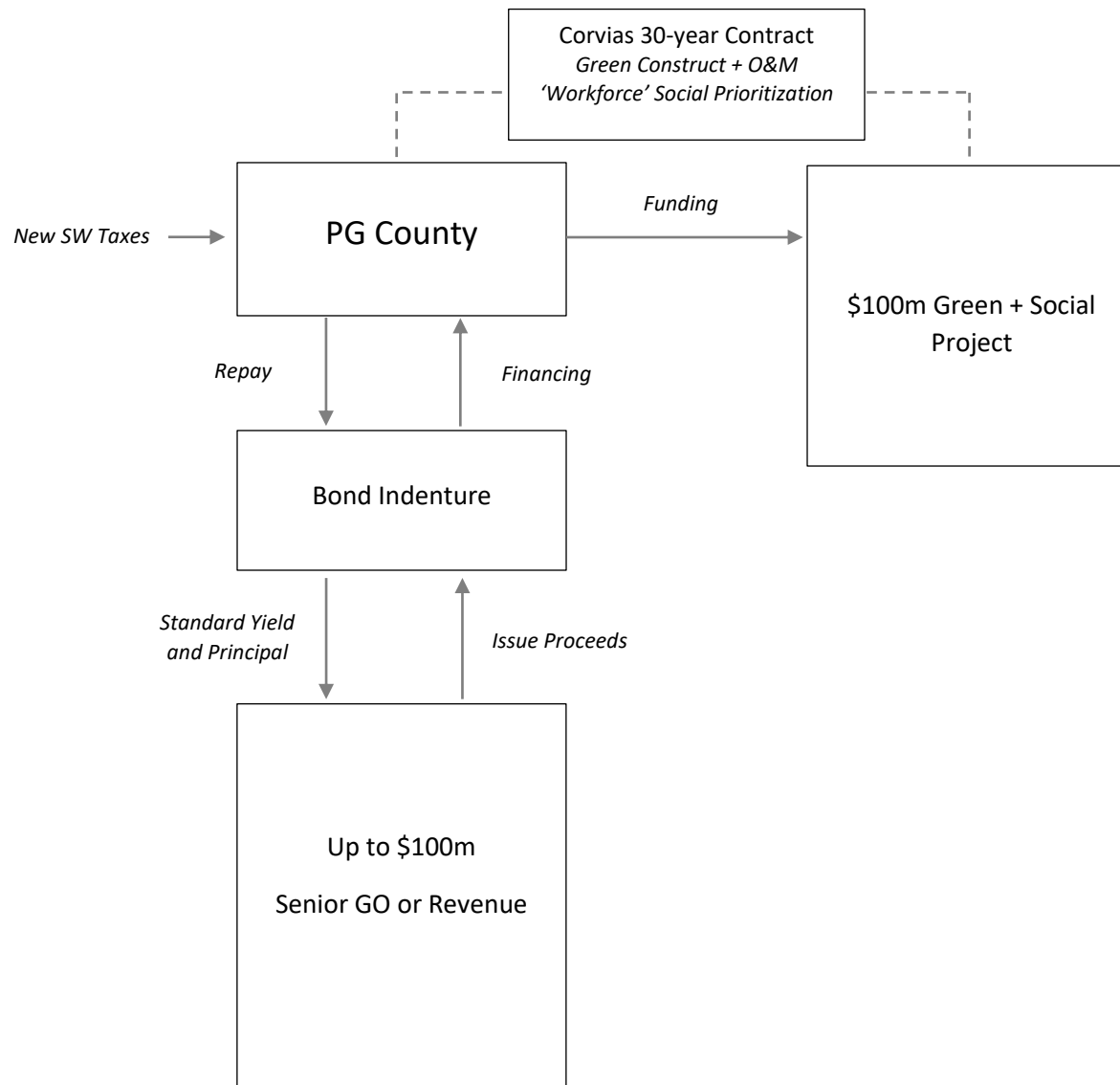
- Actual cost was high – upside was apparently completely discounted
- Too small for subordination to have meaningful fiscal constraint effect
- No connection between impact investors and project design
- Unclear path to scale up or replication

3. How to Scale to Larger, More Efficient Transaction?

- Relatively high yield of Series D EIB (compared to estimate of subordinated version of Series C) was apparently mainly result of small size and boutique underwriter, not fundamental bonds terms. Small size and new underwriter would increase per-dollar buyer costs and limit post-issue trading liquidity.
- In a larger scale and with more standard underwriter, a similarly structured EIB might approach or equal cost of a typical subordinated issue from this indenture. In effect, this is how 'green bonds' operate.
- But to be a substantive EIB (vs. a subordinated green bond), the upside performance payment should result in a *lower* cost at issue than the equivalent sub or senior bond without upside – at least through the subordinated spread and ideally through the senior spread too – to demonstrate savings.
- The relative scale of the Series D upside payment appeared big enough to achieve this – at 30% probability, in theory buyers should have been willing to accept 2.55% yield (slightly below senior) if the bond was otherwise priced as a straight subordinated issue at 2.90%.
- But there are two intrinsic problems with this in context of a scaled-up deal: (1) until the value of an upside payment becomes an accepted metric among a critical mass of secondary buyers, an initial buyer will still face higher evaluation costs and lower secondary liquidity. This will limit (perhaps severely) the potential for initial buyers accepting a lower yield.
- Problem (2) would arise for the issuer in a scale-up deal: the absolute size of the upside performance payment could become a significant contingent budget item. For example, in a \$100m deal, the Series D equivalent upside would be \$7.1m.

Conclusion: a straight scale-up of the Series D EIB faces intrinsic limitations related to the impact investment. The path forward should seek to minimize these limitations by (1) leveraging the impact investment while (2) utilizing useful precedent elements from this completed transactions and others.

4. Partial Precedent: Prince George County 'CBP3' Transaction



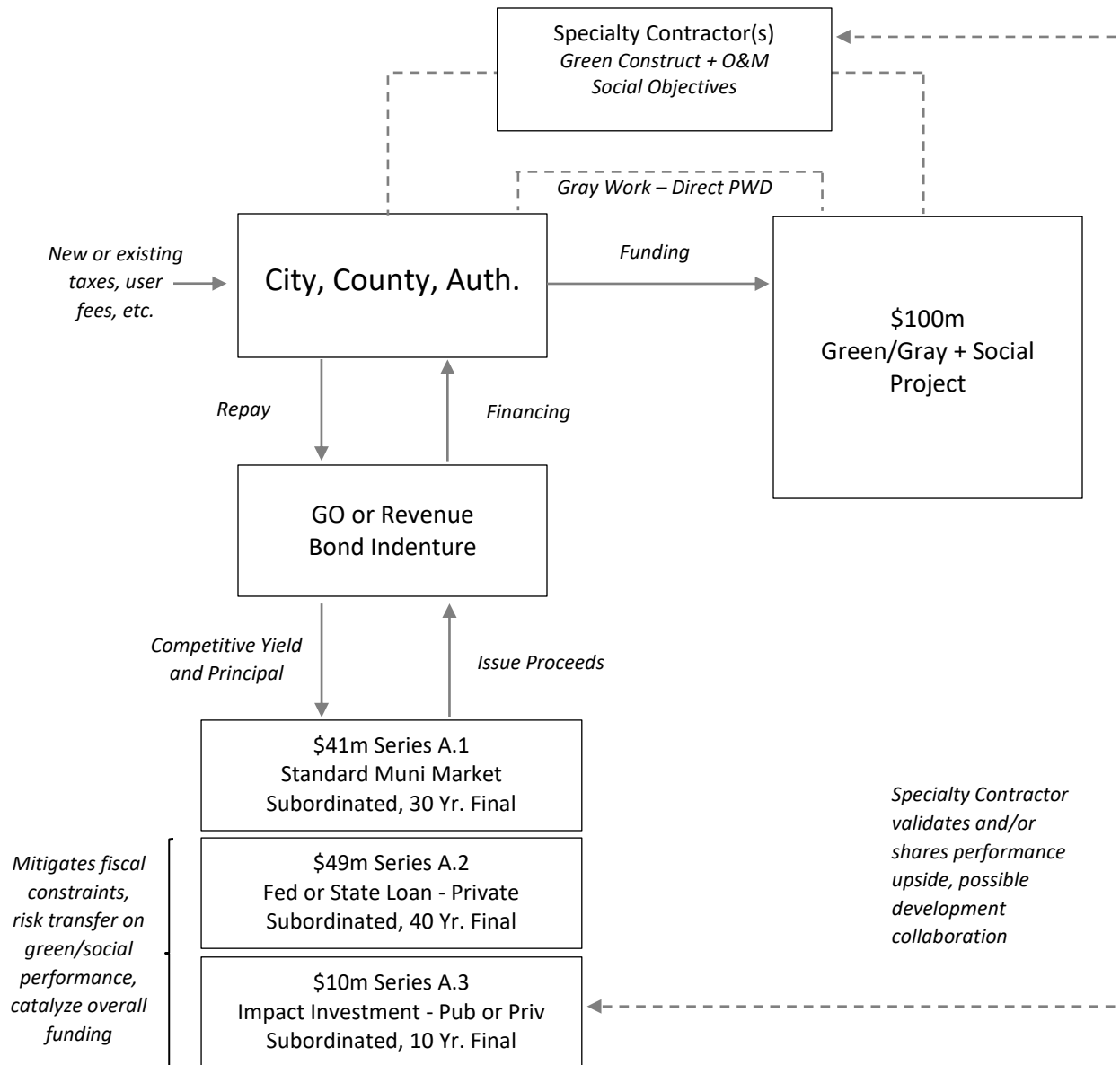
Strengths

- Utilized broad-based tax funding to accelerate a required project.
- Relatively simple structure – long-term outsource contract with proven firm, some social metric included
- The 'CBP3' story – green, social and innovative-seeming contract – was very effective publicity

Weaknesses

- Financing (PGC cash and bonds) was simple and efficient but did not mitigate fiscal constraints.
- The 'social' aspect was rudimentary construction hiring targets, not true workforce development (Corvias not a specialist in this area)
- Catalytic effect of impact investing not included – possible lost opportunities for more innovative green tech and substantive social aspects

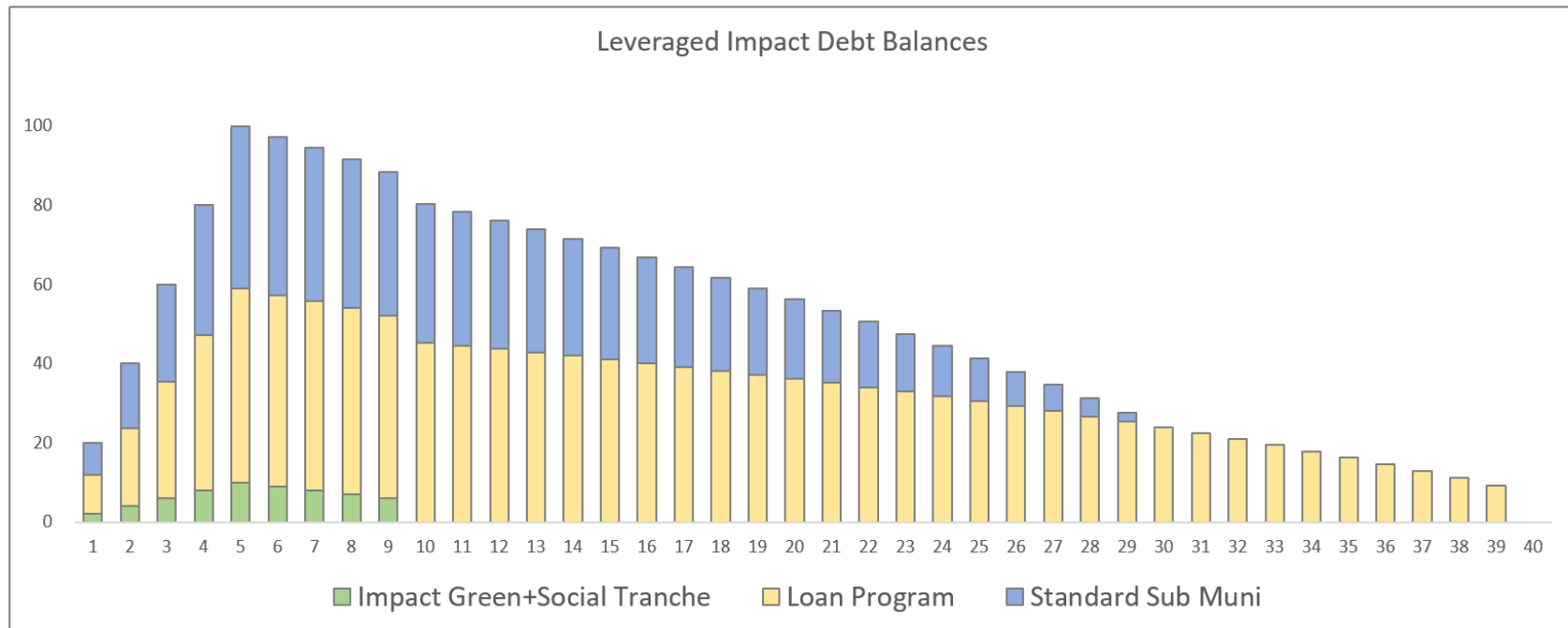
5. Combining the Precedents and Leveraging the Impact Investment



Leveraged Impact Objectives

- Catalyze overall funding – help build community consensus to fund and accelerate required project
- Catalyze federal/state loan program selection – programs are competitive, impact tranche will improve story
- Catalyze Specialty Contractors on green and social elements to develop substantive enhancements and significant upside – gray work can stay with standard source (e.g. PWD)
- Small size of impact tranche does not limit catalytic or expertise impact on whole project – but does reduce absolute effect of higher base or upside yield, if required
- Overall catalytic impact should result in demonstrable savings compared to ‘Traditional’ alternative (a ‘Value for Money’ analysis)

6. Leveraged Impact Investment Debt Balance Profile



- Impact aspects are most significant in early stage of project. Social programs likely to have 10-year or less horizon. Green infrastructure is long-lived, but performance should be demonstrated by 10-year point.
- Federal and state loan programs can offer fiscal-friendly long-tenors and customized features to the extent credit quality and project useful life metrics permit. Pricing will likely be comparable to subordinated public bond (e.g. about T-flat).
- Working with the other tranches, the public subordinated bond tranche can be structured as highly standardized (30-year final, standard indenture terms) for efficient pricing and placement.