BB&T Capital Markets

An Advance Refunding Case Study

By John Franklin, Managing Director, Head of Senior Living Finance team

A QUICK REFRESHER

An "advance refunding" occurs when debt is refinanced before its stated optional redemption date ("call date"). The biggest cost associated with an advance refunding is often "negative arbitrage." Negative arbitrage is created because the refunding escrow needs to pay interest on the refunded issue ("old bonds") to the call date of the old bonds, but the refunding escrow earns a much lower rate of return during that period. ***This is why executing an advance refunding can significantly increase the amount of debt on a borrower's balance sheet.***

THE ANALYSIS YOU WILL SEE

Advance refundings are often analyzed purely from a Net Present Value Savings ("NPV Savings") perspective. The NPV approach has become the industry standard for quickly measuring the effectiveness of a refunding. However, it is not a perfect or all-encompassing analysis, nor is it the only way to analyze whether or not a borrower should pursue an advance refunding. One major assumption under the NPV method is that the new bonds will be outstanding to maturity, which history has proven almost never happens. Please refer to BB&T Capital Markets' *A Primer on Advance Refundings* for an in-depth discussion.

THE ANALYSIS YOU MAY NOT SEE

Another way to measure the effectiveness of an advance refunding is referred to as the "Payback Analysis," which seeks to account for some of the deficiencies in the NPV approach. The Payback Analysis acknowledges the benefit of the NPV savings, but also introduces probability.

Think of your home mortgage. Refinancing a home mortgage often leads to a larger mortgage due to the associated refinancing costs. If you plan to keep the house for the length of the mortgage, you come out ahead financially because you have locked in a lower payment through the life of the loan, which will more than offset the additional debt incurred. But what if you sell the house? Or refinance again? Because of that uncertainty, most people estimate how long they are going to stay in the house to determine whether the cost (additional debt) that is required to complete the refinancing is recaptured with lower monthly payments. The time it takes to recapture that cost is referred to as the "payback period" and the date all costs are recaptured is the "payback date."

The payback date represents a point in the life of the new mortgage where you could sell or refinance and feel comfortable that you made the right decision to refinance. Consider a situation where your mortgage was $300,000 prior to refinancing and due to the refinancing, it becomes $320,000, a difference of $20,000. Let's assume you save $2,000 annually. Five years forward from the refinancing date, you will have accumulated $10,000 savings from your lower mortgage payments. Let's also assume that due to the lower rate, the new loan is being paid down more quickly so the original $20,000 difference is now $18,000. Therefore, if you sell the house and pay the mortgage off after five years, you are theoretically $8,000 worse off than if you had not refinanced ($18,000 larger mortgage less $10,000 in accumulated savings from lower payment). ***The key takeaway here is that it behooves you to consider the likelihood that you might refinance or otherwise pay off the debt early and its relationship with the payback date.***

THE TRANSACTION IN QUESTION (ACTUAL CASE STUDY)

In late 2016, with interest rates at near all-time lows, a Life Plan Community in Texas was approached by an investment bank to refinance approximately $54 million of debt that had been issued three years earlier. As a result, the organization hired a municipal advisor to provide additional advice and under the supervision of both the investment banker and municipal advisor, decided to pursue an advance refunding.

The old debt carried high interest rates (up to 7%) with the new debt carrying interest rates below 5%. Therefore, on the surface, the refinancing appeared as if it had huge potential for savings. However, the debt being refinanced had been issued three years prior (2013) and was more than six years from its stated call date of 2023, at which time it could be paid off. Therefore, the only way to lock in the lower rates was to pursue an advance refunding. Therefore, approximately $67 million of bonds were issued to advance refund approximately $54 million of debt. A fair question is why would an organization put an additional $13 million of debt on the balance sheet to effect a refinancing?

Let's recreate the analysis that was performed and the analysis that probably was not performed. Total cash flow savings during the life of the loan totaled almost $5 million (approximately $160,000 per year) and the net present value savings was approximately $3.3 million, which was just over 6% as a percentage of the refunded bonds. As we indicate in our article, *A Primer on Advance Refundings*, we advocate at least a 5% NPV savings as a percentage of the debt being refinanced before an advance refunding should be pursued. Although the transaction meets the minimum threshold, the annual savings are fairly modest.

Let's revisit negative arbitrage and its impact on the amount of debt that needs to be incurred to complete the transaction. Because the existing bonds cannot be paid off until 2023, a six-year escrow is required to pay debt service on the old bonds until 2023. Remember that the interest rate on that old debt is 7%, but the escrow earns less than 1.5%, ***creating more than $19 million in negative arbitrage during that six-year period, which has to be funded with new debt.*** Add to the negative arbitrage an additional $1.2 million in financing fees for industry professionals, and you have a refunding "cost" of more than $20 million (on an original $54 million issue). Because the new bonds were issued as premium bonds, the net amount of debt added to the balance sheet gets reduced to $13 million. ***However, that is an increase of almost 25% in additional debt on the balance sheet.*** In summary, this borrower used its IRS restricted "one-time free pass" to execute an advance refunding of a bond issue that added $13 million of debt to its balance sheet to achieve modest annual savings.

Because of the modest annual savings, it is important to do a payback analysis. We stress to our clients that the payback date should occur on or before the first call date on the new debt. The reasoning is that it is very possible that this new debt may be refinanced on its call date or slightly after that date. Therefore, just like the home mortgage example, you want to make sure you recapture the cost to do the deal before the possibility or likelihood of paying off or refinancing the new debt. (On certain transactions, we have pursued advance refundings where the payback period is slightly longer than the call date on the new bonds if the NPV savings is well above 5%.)

In this particular transaction, the payback date on the advance refunding does not occur until year **20** (of a 32-year bond issue). ***The payback analysis shows that on the first call date (year 9) of the new debt, the borrower would have recaptured only $6 million of the $13 million of the additional debt that was incurred to do the deal!*** Please refer to the table below for the payback calculation. Based on the payback analysis, we would not have recommended moving forward with this deal because it would have taken too long to recapture the costs of the transaction.

Because there is a strong possibility that the new debt (2016 bonds) could be refinanced well before 2036, the "payback date," the borrower should not have completed this transaction. We believe that if the payback analysis had been shared with the borrower's finance committee, the transaction would not have been pursued. This transaction demonstrates the need for clear communication and transparency when explaining all of the advantages and disadvantages of advance refundings, even when a municipal advisor is involved.

In Thousands		A	B	A - B = C	D	E	F	E - F = G	D + G
	Date	Existing Debt Service	New Debt Service	Annual Savings	Cumulative Annual Savings	Existing Net Debt Outstanding	New Net Debt Outstanding	Difference In Debt Outstanding	Total Savings
0						51,149	64,010	-12,861	-12,861
1	1/1/2017	1,911	276	1,635	1,635	51,149	64,010	-12,861	-11,226
2	1/1/2018	3,823	3,636	187	1,822	51,149	63,690	-12,541	-10,719
3	1/1/2019	3,823	3,634	188	2,010	51,149	63,365	-12,216	-10,206
4	1/1/2020	3,823	3,633	190	2,200	51,149	63,035	-11,886	-9,686
5	1/1/2021	3,823	3,635	187	2,388	51,149	62,695	-11,546	-9,159
6	1/1/2022	3,823	3,633	190	2,578	51,149	62,350	-11,201	-8,624
7	1/1/2023	3,823	3,624	198	2,776	51,149	62,005	-10,856	-8,080
8	1/1/2024	3,823	3,622	200	2,977	51,149	61,645	-10,496	-7,520
9	1/1/2025	3,823	3,624	198	3,175	51,149	61,265	-10,116	-6,941
10	1/1/2026	3,823	3,620	202	3,378	51,149	60,870	-9,721	-6,344
11	1/1/2027	3,823	3,620	202	3,580	51,149	60,455	-9,306	-5,727
12	1/1/2028	3,823	3,610	213	3,793	51,149	60,030	-8,881	-5,089
13	1/1/2029	3,823	3,608	215	4,008	51,149	59,590	-8,441	-4,434
14	1/1/2030	3,823	3,610	213	4,220	51,149	59,130	-7,981	-3,761
15	1/1/2031	3,823	3,612	211	4,431	51,149	58,650	-7,501	-3,070
16	1/1/2032	3,823	3,608	215	4,647	51,149	58,155	-7,006	-2,360
17	1/1/2033	3,823	3,598	225	4,872	51,149	57,645	-6,496	-1,625
18	1/1/2034	5,728	5,502	225	5,097	49,244	55,205	-5,961	-864
19	1/1/2035	5,729	5,505	224	5,321	47,204	52,640	-5,436	-115
20	1/1/2036	5,732	5,507	225	5,546	45,019	49,945	-4,926	619
21	1/1/2037	5,729	5,502	226	5,772	42,684	47,120	-4,436	1,336
22	1/1/2038	5,730	5,491	239	6,011	40,184	44,165	-3,981	2,030
23	1/1/2039	5,730	5,493	237	6,248	37,509	41,060	-3,551	2,697
24	1/1/2040	5,733	5,493	240	6,488	34,644	37,800	-3,156	3,332
25	1/1/2041	5,727	5,690	37	6,525	31,584	34,180	-2,596	3,929
26	1/1/2042	5,728	5,709	19	6,544	28,309	30,360	-2,051	4,493
27	1/1/2043	5,729	5,708	21	6,565	24,804	26,350	-1,546	5,019
28	1/1/2044	5,729	5,708	21	6,586	21,054	22,140	-1,086	5,500
29	1/1/2045	5,726	5,707	19	6,605	17,044	17,720	-676	5,929
30	1/1/2046	5,730	5,711	19	6,625	12,749	13,075	-326	6,298
31	1/1/2047	5,725	5,709	16	6,641	8,159	8,200	-41	6,599
32	1/1/2048	12,433	12,390	43	6,684	-3,461	-3,600	139	6,823
		155,712	149,028	6,684					