Selecting the optimal time to refund tax-exempt bonds can significantly enhance a healthcare organization’s economics, but is dependent on both market factors and timing.

Unlike in the taxable world, where bonds are generally non-callable to maturity or include a make-whole call where there is no economic benefit to refunding, most tax-exempt fixed-rate bonds can be redeemed after 10 years at par. This difference gives hospitals significant flexibility to replace bonds with lower-cost debt at any time between the redemption date and final maturity if rates decline. For example, many bonds issued in the aftermath of the credit crisis bear significantly higher yields than current market levels, creating the potential for significant savings.

As the call dates (generally 2018-21) for these bonds approach, many hospitals have the additional option of refunding their bonds in advance by issuing new bonds to fund an escrow that pays off the old bonds on the redemption date. However, there is often a significant difference between the cost to fund the escrow and the cost to redeem the bonds in the future, because yields on investments eligible to fund the escrow are significantly lower than the cost of the existing debt. Thus, to take advantage of today’s lower rates, hospitals are required to “pay” the additional cost of this “negative arbitrage.”

Determining whether to lock in savings today or wait to refund on the bond redemption date to avoid negative arbitrage—while taking the risk that interest rates will rise—requires significant analysis, given that U.S. Treasury Department regulations generally allow hospitals to undertake only one advance refunding per bond series. Traditionally, health systems have used two steps to decide whether to execute a potential refunding: review the cash flow savings of the new bonds discounted to today’s dollars, and determine a threshold where it makes sense to execute. A more fully informed decision requires a few additional steps.

### Refunding with Variable-Rate Debt

Before reviewing the methodology for a fixed-rate refunding, hospitals should consider whether to refund their bonds with variable-rate debt. (See Sahrbeck, J., “The Value of Variable Rates in a World of Low Rates,” hfm, January 2015.) Most hospitals have significantly more fixed-rate debt than they need, given their other balance sheet components. Thus, many should wait for the redemption date and refund with variable-rate debt, which will cost the same regardless of whether it is refunded on an advance or current basis.

### Refunding with Fixed-Rate Debt

If the decision is made to refund with fixed-rate debt, hospitals should use the following framework to evaluate the refunding opportunity.

**Basic methodology.** The simplest methodology to determine the viability of a refunding is to calculate the present-value savings, or the difference between the old debt service and the new debt service discounted to present using a predetermined factor. If the savings are greater than an established threshold, the bonds are refunded. If not, the bonds are left outstanding.
However, each advance refunding includes potentially significant negative arbitrage, which necessitates additional steps in the decision-making process.

**Efficiency ratio.** The efficiency ratio is an important concept to assess the viability of an advance refunding. To determine the ratio, one divides the current present-value savings by the potential savings (present-value savings plus negative arbitrage). By assessing the efficiency of the refunding, a hospital is able to determine how much of the value of the current low-rate environment it is capturing and how much it is losing to others in the market. In addition, the ratio can indicate whether interest rates could rise significantly before the redemption date without causing the hospital to lose out on savings. Given that all of the effort and cost is being borne by the hospital, setting an efficiency ratio threshold of 50 to 75 percent will ensure the hospital is getting the most value from refunding.

**Break-even interest rate level.** The one flaw in the efficiency ratio is that it calculates optimal savings based on current interest rates. It is also important to determine the interest rates at which savings decline or disappear. To do so, one calculates the interest rate levels at the redemption date that would generate the same present-value savings as if the refunding took place in the current market. For example, interest rates could increase by 100 to 150 basis points from current levels—which would bring them merely to historically average levels—before savings declined. If this is the case for a hospital’s advance refunding, it argues for waiting until the redemption date to execute a current refunding, depending on other factors.

**Intangibles.** Although savings should be the key component of the decision-making process, other factors are essential to consider when reviewing the viability of an advance refunding. These factors include the discount rate used to determine savings, Treasury regulations, the value of the call option, and release of a debt service reserve fund (for both determining savings and improving the balance sheet).

Despite a range of general market expectations, interest rate history has taught us that predictions are not reliable. That is why a reasoned decision requires the use of all relevant information to ensure it is not solely based on a “market call” (i.e., “I think rates are low”).

**Bringing It All Together**

Optimizing the decision-making process for an advance refunding requires reviewing present-value savings, the efficiency ratio, and the break-even interest rate level. Hospitals also should consider intangible factors to ensure decisions are based on all relevant issues. Then, they will know their decisions were driven not by a fear that rates are increasing but by an evaluation of pertinent empirical evidence.

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