

# Commentary Are taxable advance refundings leaving money on the table?

By Andy Kalotay  
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The 5% non-callable-10 structure, which has been the standard for municipal bonds, was tailor-made for advance refunding. Prior to 2018, borrowers could demonstrate substantial savings by advance refunding them immediately after issuance (See [The Allure of 5%Bonds: Coupon Levitation Creates Magical Savings](#)). Not surprisingly, most 5% NC-10 bonds were advance refunded well before they were actually called in Year 10.

With the elimination of advance refunding, the churning came to a brief halt — today only a single tax-exempt issue can support a qualifying project. However, there is still a huge amount of high-coupon not-yet-callable bonds outstanding. In fact, 5% NC-10s continue to be issued almost daily. With interest rates being at historical lows, there is an opportunity to realize savings by advance refunding high-coupon tax-exempts with taxable bonds.

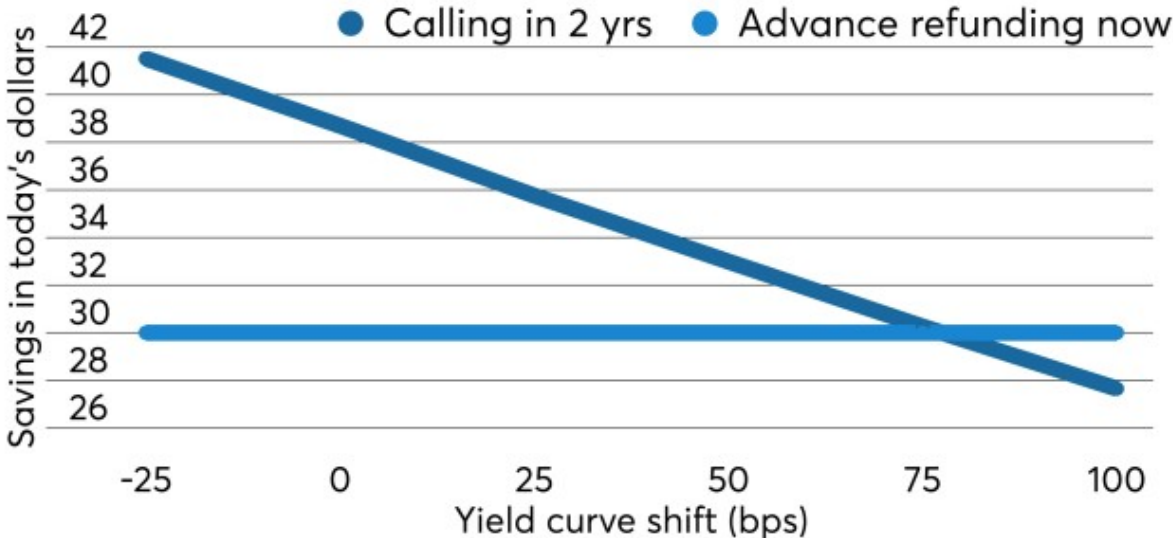
Let's take a closer look at the economics of advance refunding a \$100 million 5% muni with 22 years to maturity and two years to call, with a 22-year 2.80% taxable bond sold at par. The proceeds of the refunding issue are invested in an escrow portfolio of Treasuries yielding 1.5%, structured to pay the debt service of the refunded bond through the call date.

The reported savings are impressive — assuming a 1% issuance cost, they amount to \$29.8 million in present value terms over 22 years. Of course, nobody expects 5% bonds to remain outstanding beyond the call date, and our analysis should incorporate this. By advance refunding today, the issuer forfeits the valuable option to call the bond in the future. But how valuable is this option?

The value of the option of the outstanding bond, based on the issuer’s current tax-exempt 5% NC-10 yields — 1.60% for 10 years, 2.10% for 20 years, etc., is \$36 million. Thus the efficiency of the taxable advance refunding is only 83% (\$29.8 million/\$36 million). Looking at this from a different angle, \$6.2 million of the option value has been wasted, at the expense of the municipality’s constituents. We leave it to the readers to figure out who was the beneficiary of the lost option value.

Let’s discuss the practical ramifications of this result. A refunding efficiency below 100% signals that waiting is preferable to acting now. The alternative to refunding today with a taxable 2.80% bond is to wait for two years, and then call and refund with a tax-exempt bond. For a specified shift of the borrower’s yield curve, we can determine the savings from calling, in today’s dollars. As can be seen in the figure below, to break even with today’s \$29.8MM savings, the yield curve would have to increase 75 basis points. In that case, the yield of a 5% 20-year 5% NC-10 bond would rise from its current level of 2.10% to 2.85%. As long as the yield curve does not rise more than 75 basis points, waiting would be preferable to taxable advance refunding today.

# Economics of taxable advance refundings



Source: Kalotay Associates

Direct comparison of a 5% NC-10 muni to an essentially non-callable taxable bond is complicated. For an apples-to-apples comparison, we have to estimate the issuer's non-callable 20-year par rate. Today, when the 20-year 5% NC-10 yield is 2.10%, the rate of a 20-year muni bullet is roughly 2.49%. If the 5% NC-10 yield curve increases by 75 basis points to the break-even point, the bullet rate rises 42 basis points, to 2.91%. Callable yields and optionless rates don't move in tandem — the former are yields to the 10-year call, the latter are yields-to-maturity.

Although finance theory cannot predict where the muni yield curve will be two years from now, it can help you play the odds. By advance refunding with taxable bonds, you are making a bet that within two years the tax-exempt curve will rise more than 75 basis points.

It is interesting to contemplate what the possibilities are when advance refunded bonds are redeemed on their call date. Could the borrower economically refund the taxable bonds, at the make-whole price, with the proceeds of a new tax-exempt issue? A topic for another day.

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