LIFE WITHOUT ADVANCE REFUNDING

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How Did Advance Refunding Work?

For Not-Yet-Callable Issue With Above-Market Coupon

1. Sell replacement issue
2. Buy escrow of Treasury bonds with proceeds to defease outstanding issue to call date

   *Outstanding issue redeemed on call date*

Example:

- **Outstanding issue**: 5% coupon, 25 years to maturity, 5 years to call
- **Current 25 year rate**: 4%, **Yield of 5-year T escrow**: 3%
- **Cost of leaving issue outstanding to maturity**: 115.71 (based on 4% current rate)
- **Cost of escrow**: 109.22 (based on 3% Treasury yield)
- **Savings**: 6.49% of par (115.71 – 109.22)

Advance refunding resulted in proliferation of tax-exempt bonds — **two** issues supporting the same project until the call date
The Way We Were

- Dominant bond structure: 5% NC-10 at par
  - *Sold at significant premiums over par*

- 5% coupon minimized likelihood of price falling below par
  - *When rates rise, discounts underperform premiums (the so-called de minimis effect)*

- 5% NC-10 at par tailor-made for advance refunding
  - *Issuers: substantial savings appealed to constituents*
  - *Investors: benefited from premature option exercise and resulting AAA rating*
  - *Primary market infrastructure: churning produced revenue stream*
Tax at Maturity Depresses Prices of Discount Munis

10-year Bonds of Various Coupons

Ignoring Tax Effect

Market Price

10-Yr Rate 3%
5% NC-10 Yield Curve Became the Benchmark

Source: MBIS May 29, 2018
The Advance Refunding Feature Provided Value

- **Free option** to the issuer
  - *Investors charge only for the call option (lower price/higher coupon)*

- Worth roughly 1% of the proceeds

- Reduced the cost of long-term borrowing by roughly 3 bps
  - *Assuming optimal refunding*

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*Without advance refunding the cost of long-term municipal debt will be higher, possibly by as much as 3 bps*

*Value lost can’t be restored by proposed alternatives, such as forward swaps, forward delivery bonds, Cinderella bonds*
Life Without Advance Refunding

- Call protection less than 10 years
  - *Primary market infrastructure wants action*
  - *Issuers desire flexibility*
Life Without Advance Refunding (continued)

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- Coupon below 5%
  - *5% bonds with short calls are effectively short bullets*
Life Without Advance Refunding (continued)

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- New yield curves
  - 5% NC-10 will not suffice
The Shape of Things to Come

[Graph showing the yield (in %) for different maturities (in yrs) for various interest rates and notches (NC). The graph includes four lines:
- Blue line: 5% NC-10
- Red line: 4.5% NC-8
- Green line: 4% NC-6]
The Shape of Things to Come (Part 2)
Life Without Advance Refunding (continued)

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- Option-based analytics critical for debt management
  - Why continue to be the laggard of the fixed income markets?
  - “Munis are different” is a poor excuse
Calling It Right: Refunding Efficiency
Used for Corporate Bonds Since 1976

\[ \text{Refunding Efficiency} = \frac{\text{Cashflow Savings}}{\text{Net Loss of Option Value}} \]

Act at or near 100% (maximum)
Muni Advisors Will Feel the Heat

- Must use option-based analysis
  - Rules of thumb to trigger refundings not adequate — they never were

- Relying on TIC to choose best deal not acceptable — it never was
  - To compare bonds with different coupons and call protection periods, use option-adjusted TIC

- Series 50 syllabus should be updated to include option-based analysis — long overdue