

GUEST COLUMN

Taking The Friction Out Of Saving Interest

Refunding Volume at All-Time High

Interest rates have been trending downwards during the past several years (Exhibit 1), recently dropping to levels not seen since the mid '50s. The lower rates have generated an enormous volume of bond refundings—agencies, municipals, and some corporates. MBS's have also been prepaying at an unprecedented pace as residential mortgages are also refinanced, often multiple times a year.

Refundings and refinancings are inevitably accompanied by transaction costs, which can take a large chunk out of the borrower's savings. Investors also incur transaction costs as they reinvest their proceeds. The aggregate cost of the recent refunding/reinvestment activity to borrowers and investors is in the billions of dollars. In the bond world the beneficiaries of this bonanza are the underwriters and their support service providers, such as securities law firms and financial printing houses. In the mortgage market, brokers, lawyers, title firms, and the related infrastructure are riding the refinancing wave.

How TVA Achieved Zero-Cost Refunding

In May 1998, the Tennessee Valley Authority sold a

\$575 million 6¾% 30-year issue of “putable automatic rate-reset securities” (PARRS). The coupon of this innovative structure is periodically reset by a formula—the prevailing 30-year constant maturity Treasury yield plus 94 basis points—provided that the sum is below the current coupon; otherwise the coupon is left unchanged. The initial reset was scheduled for June 1, 2003, with annual resets thereafter (see BW/7/13/98 “Everything You Always Wanted To Know About Ratchet Bonds...”).

The 30-year CMT rate for the purpose of coupon calculation, one month prior to the June 1 reset date, was 5.012%. The coupon was ratcheted down to 5.952% because, as determined by the reset formula (5.012% + 0.94%), it was lower than the then current coupon of 6.75%.

In the process TVA essentially accomplished a traditional refunding, but *without incurring any transaction cost*¹. Moreover, because the coupon has the potential of being ratcheted down further should interest rates decline in the future, TVA continues to possess a valuable embedded option. Exhibit 2 displays the value of this option in percent of par as of June 1, 2003, over a range of interest rate

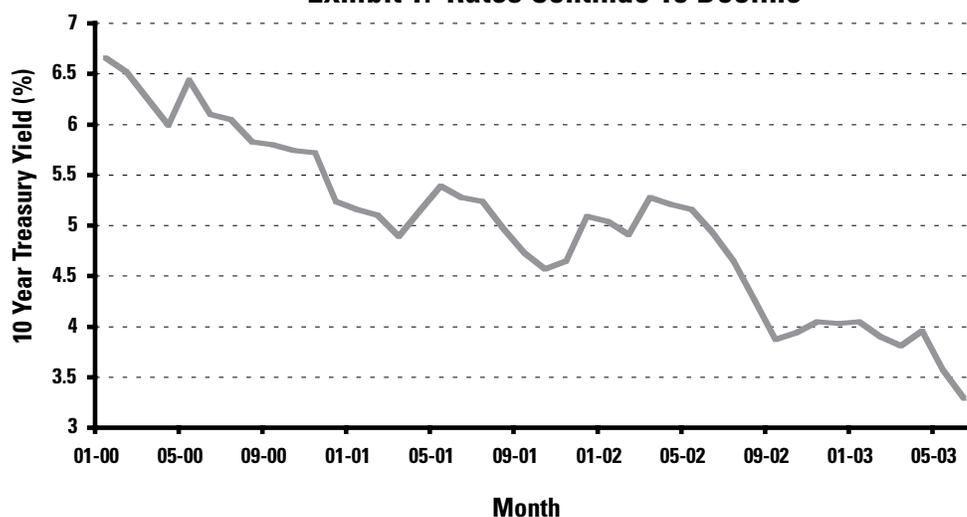
volatilities. At a 16% short-term volatility, which is currently rather conservative, the value of the ratchet feature was roughly 7.35 points, or 40.5 million dollars when applied to the \$552 million outstanding.

The Contingent Put Feature

Why only \$552 million? What happened to the remaining \$23 million of the original \$575 million issued?

The answer lies in the fact that some holders exercised a “contingent put” feature of the

Exhibit 1: Rates Continue To Decline



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PARRS. This feature allows investors to redeem the securities at par in the event that the coupon is ratcheted down, thus providing them with protection against widening credit spreads. Unlike a regular put option, it does not protect the investor against rising interest rates.

TVA's current long-term spread is roughly 48 basis points, marginally wider than what it was when the PARRS were issued in 1998. How should an investor determine whether or not to put the bonds? On first blush, the complexity of the structure — a CMT floater with a zero period cap valued using TVA's credit curve — argues for sophisticated option-based analytics.

In fact, little analysis is needed because the PARRS trade on the NYSE. On May 1, 2003, the deadline for exercising the put, they were changing hands at slightly over par (see Exhibit 3). Therefore the put should have been exercised only if both the transaction cost of selling on the NYSE was significant and that of reinvesting was negligible. It is a safe bet that the impetus behind the \$23 million put came from commission-hungry retail brokers rather than careful financial analysis.

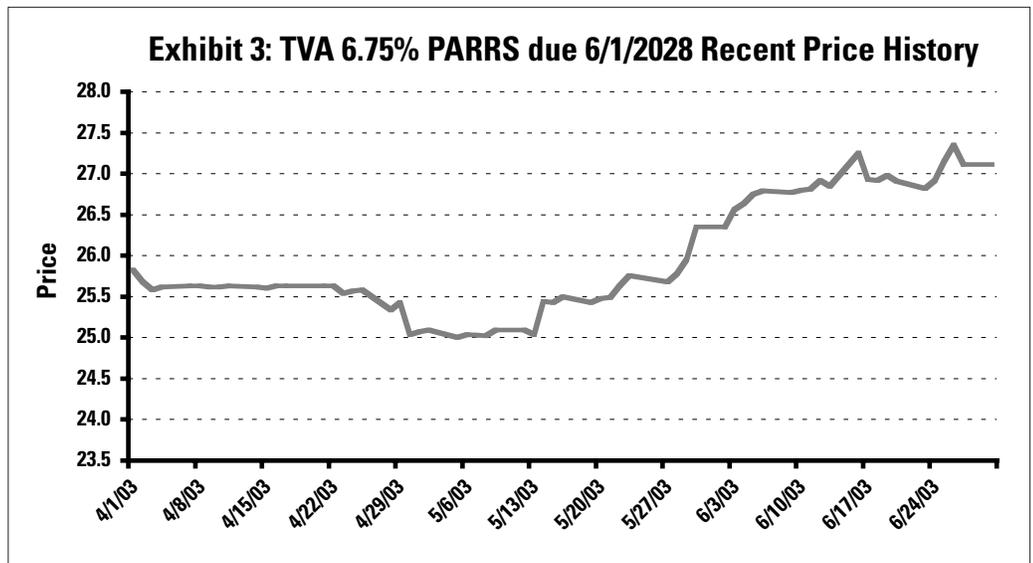
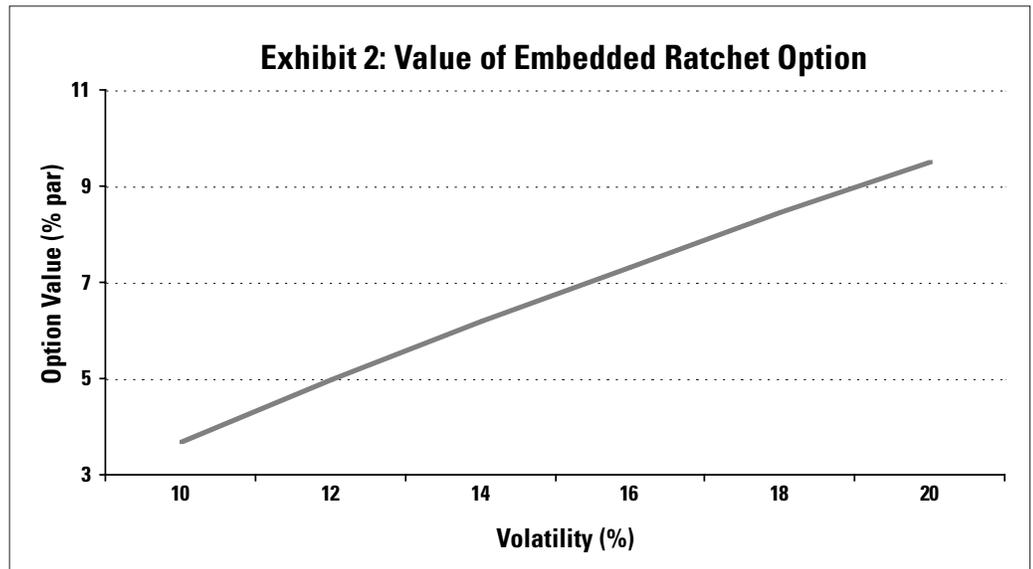
How to Manage Callable Debt Without Really Trying

Transaction costs put a damper on the savings generated from conventional refundings. This should be considered at the time a callable bond is issued, rather than when it is being refunded. Unfortunately, few issuers pay any mind to this.

The ratchet structure is a convenient, cost-effective surrogate for a callable bond, which achieves interest savings from declining interest rates without ongoing transaction cost. In addition, the

“refunding” process is on autopilot and needs no active management by treasury staff. The ratchet concept is applicable not only to bonds, but also to residential mortgages. Make sure to ask for it when you acquire your next mortgage*.

This guest column was written by Andrew Kalotay, president of Andrew Kalotay Associates, a debt management advisory firm in New York. He originally proposed the concept of a ratchet bond to TVA and worked with the agency to structure the PARRS security.



* The ratchet mortgage (patent pending) is a related AKA invention.

¹ “Ratchet Bonds: Maximum Refunding Efficiency at Minimum Transaction Cost,” by Andrew Kalotay and Leslie Abreo in the *Journal of Applied Corporate Finance* (Spring 1999) www.kalotay.com/research.