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Refinancing CMBS Loans and the Hidden Hedge

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Refinancing a property can be cause for unease when borrowers think about their exposure to interest rates. Once borrowers decide to refinance, interest rates can move higher and increase the cost of the new lending to the point that it may no longer be attractive. One way to defend against rising rates is to enter into a rate lock agreement with the new lender. However, many CMBS borrowers are unaware that locking the rate on the new financing may actually increase their exposure to interest rates if the original loan needs to be defeased.

The Hidden Hedge

In a defeasance, a portfolio of securities (typically AAA rated government securities) is purchased one or two days prior to the closing. This portfolio is structured so that the coupon payments and maturities of the securities meet the remaining debt service schedule of the original loan. Additionally this portfolio serves as the replacement collateral so that the lien on the property can be released and the property refinanced or sold.

A security's yield will move in response to the overall interest rate environment. The price of each security, like all bonds, moves inversely to the yield of that security. Therefore, if interest rates increase then the cost of the defeasance collateral decreases. This creates a seesaw effect: when rates rise, the cost of new financing increases yet the cost of the defeasance decreases. Conversely, when rates decline, the cost of new financing will decrease while the defeasance cost will increase. Since these risks are based on moves in rates that are opposite to each other, they can, to a certain extent, act as a naturally off-setting hedge.

However, the seesaw is not hinged in the exact middle. For every basis point ($1/100^{th}$ of a percent) move in interest rates the change in the cost of the defeasance collateral will be different then the change in the effective cost of the new financing. This is caused by several factors such as the difference between the principal amounts of the original loan and the new financing, and the time to maturity of the original loan and the term of the new loan.

A good measure of the sensitivity of the exposure to interest rates is the dollar value per basis point change in rates, or DV01. Essentially, this is a measure of the increased interest cost, in present value terms, for a 1 basis point move in rates. If the DV01 of a new loan is $10,000, then every 1 basis point increase in interest rates costs the borrower $10,000 (again, in present value terms) over the life of the loan.

For example, a borrower has plans to refinance a property with $100mm in new debt, which happens to have a DV01 of $30,000. If the DV01 of the defeasance is

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$15,000, then the borrower has a 50% natural hedge and therefore would need to only lock in the rate of 50% of the amount of the new financing to be fully protected. If the borrower were to execute a rate lock for the full $30,000 of the new loan, then they would effectively protect themselves from rising rates only to expose themselves to falling rates and increased cost of the defeasance collateral.

Executing an Effective Hedge

Executing a partial rate lock on the new financing is one way to take advantage of the natural hedge. In other words, continuing with the example above, if the new financing is for $100 MM, only $50 MM should be rate locked. Through "DV01 matching" you can allow any fluctuation (up or down) in the value of the defeasance to offset the fluctuation in the cost of the new financing.

This approach requires a few key considerations. First, "DV01 matching" assumes that the shape of the yield curve remains unchanged, that is, interest rates at different points along the curve move in tandem. If they do not then the DV01 measure will become less effective over time – this is known as curve risk. Second, large movements in the underlying interest rate will reduce the effectiveness of the hedge. This is because the DV01 of the loan and the DV01 of the defeasance will change at a different pace due to the differences in structure between the defeased loan and the new loan – this is known as convexity risk.

While both curve risk and convexity risk reduce effectiveness, the natural hedge remains a good directional hedge. One could address the effects of the risks by adjusting the size of the hedge as rates move and the shape of the curve changes. This is generally impractical because rate locks are not flexible instruments and, if other hedge instruments are utilized, transaction costs can be a factor. In addition, the magnitude of the ineffectiveness may be insignificant.

Rate Lock Considerations

While rate locks certainly have their place, all such products are not created or negotiated equally. Rate lock terms should be reviewed so that items such as the definition of the components that make up the rate, rounding terms, and breakage calculation are fair. Without close inspection of these and other items, borrowers may be leaving money on the table.

Additional Hedging Options

Up until this point we have talked about the natural hedge that exists because of two separate and distinct risks: rising rates on the new financing and falling rates on the defeasance. What if new lenders will not allow a partial rate lock or borrowers do not want to be exposed to curve and convexity risk?

In addition to rate locks, other instruments exist that can be utilized to hedge against rising rates for new financing, including forward starting swaps and

swaptions. Probably the biggest benefit of these alternatives is that that they are portable – they need not be executed with the new lender. It is important to highlight that the following short discussion on forward starting swaps and swaptions assumes they are structured to hedge against rising rates. Borrowers can also enter into the "reverse" of these structures in order to hedge against falling rates (i.e., to hedge the cost of the defeasance portfolio).

A forward starting swap allows borrowers to lock a swap rate today for a future fixed rate financing. The forward starting swap is designed to start on the expected closing date of the new financing (or the date on which the interest rate of the new loan is locked). The swap should be terminated simultaneously with the pricing of the new debt. If interest rates rise, borrowers would receive the present value difference of the change in rates at termination and lock in the higher market rate on the new financing. Conversely, if rates fall, borrowers would pay the present value difference of the change in rates. The payment received or paid when the swap is terminated is amortized over the life of the debt such that the effective rate on the new financing is the swap rate plus the borrowing spread. Therefore a swap effectively locks in the treasury rate and the swap spread component of the new financing. Rate locks often lock in only the borrowing spread; borrowers are still exposed to changes in the credit markets. Forward swaps can also be left in place and continue to serve as a hedge if the financing is delayed.

A swaption incorporates optionality into a forward starting swap. As such, a swaption performs similarly to a forward swap if rates rise, but no payment is required if rates fall. To obtain a swaption, the borrower would pay an upfront cash premium. After the borrower pays the premium, they will never have to make an additional payment. The swaption would be set to mature at the time that the rate of the new loan is set. If the swap rate at maturity is above the swaption's strike rate (because rates have increased), then the borrower will enter into the financing at the higher rate but will receive a payment on the swaption's settlement. The borrower is thus protected in the event that interest rates rise. If the swap rate at maturity is below the swaption's strike rate (rates have decreased) then the option expires worthless, but borrower is able to close the new loan at the improved market rate.

These instruments also have their drawbacks. A forward swap requires credit, may require cash collateral and as mentioned above always result in a cash event when terminated. A swaption does not require credit but requires an upfront cash premium, as mentioned previously.

The aforementioned structures are approaches that can be used to protect against the interest exposure from the new financing; the "reverse" of these instruments could be considered to hedge defeasance costs. Additionally, defeasance costs can be locked in by forward purchasing the securities for the defeasance collateral. Typically, the securities are purchased one or two days prior to closing. But in situations where the closing is one to two months away, a borrower can lock in a price by purchasing the securities in advance. Paired with a full rate lock for the new debt, the borrowers' exposure to interest rates would be effectively minimized. The

largest hurdle to this approach is that the securities provider typically requires the borrower to post cash collateral at the time of the purchase in order to provide credit support. This is because the full cost of the securities is not paid until they are delivered at the closing of the defeasance. Since the borrower's new financing is still months away, the proceeds from the new financing cannot be tapped to provide the cash collateral.

The Perfect Hedge?

The bottom line is that each situation must be analyzed independently to determine the best course of action based on the borrower's risk tolerance. No action, in the form of not placing any additional hedges, must be recognized as a decision in itself. Implementing a partial hedge (although not perfect) is typically less risky than doing nothing or hedging only one side of the risk by locking the rate on the new debt but floating on the defeasance. With the proper analysis of the situation and knowledgeable execution of a hedging strategy, borrowers will be able focus on other matters as they move towards new financing.

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