A Recent Innovation: Creating High-Yielding Synthetic Commercial Mortgage-Backed Floating Rate Bonds Through Interest Rate Swaps

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Introduction

The market for commercial real estate securities has been conducive to the creation of synthetic floating-rate bonds through the use of interest rate swaps. Because the market for these securities is new, and the information-gathering process is in its infancy, commercial mortgage-backed yields in the past have been high relative to alternative investments. Synthetic floating-rate cash flows can be created from the simultaneous purchase of a fixed-rate commercial mortgage security and an interest rate swap, resulting in a floating-rate yield to the investor. Furthermore, as long as the commercial mortgage-backed security is noncallable or has yield-maintenance features, the synthetic floating-rate instrument created by the simultaneous purchase of a swap also has no prepayment risk. Even if the security can be called prior to maturity, the investor can structure a puttable swap to avoid paying a fee to unwind the swap in the event the security is called. Using this technique, the investor pays either an up-front fee or a higher coupon to its swap counterparty to effect a put of the swap if the issuer calls the security.

The value of commercial and multifamily real estate is estimated at


Housing Finance Review 6, 73–77 (1987)
$2.4 trillion. Of this amount, over $700 billion is mortgaged (see Figure 1). Until 1983, a single lender system was the norm, and buyers of commercial mortgages typically held them until maturity. The recent emergence of a secondary market for these instruments allows issuers for the first time to tap new sources of funds by selling securities backed by the cash flows on individual properties or pools of loans. The secondary market for commercial mortgage securities (both rated and unrated) has grown rapidly, with approximately $21 billion outstanding as of September 1986.

The Commercial Mortgage and Mortgage-Backed Security Market

The secondary market for commercial real estate debt consists of three types of instruments: securities backed by pools of mortgages, securities backed by a single mortgage, and whole loans. Institutional lenders seeking liquidity and portfolio flexibility may package seasoned loans and sell participations in the pool to investors. These real estate securities can be structured either as pass-throughs, which pay interest and principal as the mortgagors pay, or as fixed-pay bonds, with more certain maturities. The pass-throughs have typically been AAA rated, based in part on the credit of the issuer, and issued in the private domestic market, whereas fixed-pay bonds have been both rated and unrated and issued in the Euromarket. Life insurance companies have been the predominant players in this market for both types of securitized pools of existing mortgages.

Figure 1. Commercial and multifamily mortgage debt outstanding, 1980–1986 (dollars in billions). Source: Board of Governors of the Federal Reserve.
Specifically, issues in 1986 by Mutual Benefit Overseas of almost $900 million and in 1985 by Prudential Life Insurance of over $1.2 billion have helped to create an over $3 billion Euromarket for the fixed-pay bonds backed by commercial mortgages. Pass-through issuances, while not as large as those of fixed-pay bonds, have resulted in almost a $2 billion domestic market.

The next type of commercial real estate securities are property-specific bonds, backed by a single mortgage on a specific property or group of properties. These bonds provide an alternative to the traditional non-amortized commercial mortgage loan. High occupancy and long leases to strong tenants characterize the bonds written on single properties. Property-specific bonds have been offered, rated and unrated, in both the private domestic market and the Euromarket, and like mortgage pools they also may carry credit supports to enhance the debt service capabilities of the underlying projects. In addition, the call protection features on the mortgages underlying the bonds provide protection against prepayment until late in the term. The market for bonds backed by a single mortgage on a group of properties includes the Olympia & York $970 million issue on three New York properties in January 1984. Olympia & York and Fisher Brothers have been active issuers of property-specific bonds, with more than $500 million offered in 1986 on New York properties. Total issues of property-specific bonds and pooled property financings exceeded $5 billion through 1986.

Whole loans are also traded in a secondary market. With whole loan transactions an investor purchases the cash flow stream of a loan on a single property or a package of properties. Sometimes the seller retains servicing and/or provides a guarantee against default or prepayment on the loans. Otherwise, the prepayment protection is that carried by the underlying loan. These transactions typically are private trades between thrift institutions, and as a result the size of the market is virtually impossible to determine.

All of these securities follow in the tradition of residential mortgage securities to the extent that they securitize existing mortgages, although their structure has been altered to accommodate the variations in underlying cash flow and call protection features of commercial mortgages. While residential mortgages experience high prepayment rates when interest rates drop, thus reducing the maturity of outstanding residential mortgage-backed securities, mortgages underlying commercial real estate securities are generally call protected until late in their terms. With the exception of seasoned discount mortgages, most include a substantial lockout period or requirements for yield maintenance upon prepayment. In some cases, the prepayment penalty is a lump sum that is based on the Treasury yield, or some other index, at time of the prepayment. In other cases, the penalty is a series of payments for the remainder of the maturity, also based on some index. For these reasons,
commercial mortgage loans are amenable to interest rate swaps, where an investor trades, for example, fixed interest payments earned on a mortgage for floating-rate interest payments. Compared to residential mortgages, the investor need not be as concerned about a discontinuance of the cash flow received from the asset prior to maturity, in effect discontinuing the source of payment for the interest rate swap.

Interest Rate Swap Market

Commercial mortgage-backed securities can be combined with interest rate swaps to provide an attractive floating-rate yield with better prepayment protection than that available from other securities of comparable credit quality. The attractiveness of the synthetic security created by this combination depends on the extent to which the yield earned on the mortgage-backed security exceeds the fixed-rate payable on the swap. Although interest rate swap spreads widened in the first quarter of 1986, because the commercial mortgage-backed security market did not rally during this period as strongly as the market for U.S. Treasury securities, widening spreads created the opportunity for investors to earn a substantial spread over the floating rate received on swap transactions (see Table 1).

As of late 1986, levels in the new issue market for AA-rated commercial real estate securities indicated that a LIBOR plus 30–40 basis points yield could be earned from simultaneously investing in a "noncall life" property-specific bond and swapping fixed-rate coupons for floating-rate receipts. The result of this investment is an asset that is call protected and earns an attractive yield relative to floating-rated yields available in other markets.

If the underlying mortgage is callable prior to maturity, the investors can simultaneously purchase a commercial mortgage-backed security and a puttable interest rate swap. Figure 2 demonstrates the structure of this arrangement. In this example, the investor purchases a 10-year, unrated note backed by a pool of mortgages on geographically

| Table 1. Representative Yield Spreads to Comparable Treasuries, January 1986 Versus October 1986 |
|---------------------------------|-------------------------------|-------------------------------|
| Type                           | January 86 (b.p.) | October 86 (b.p.) |
| Commercial mortgage pass-through, 7-year average life | 120 | 165 |
| AA-rated property-specific (new issue), 10-year maturity, noncall life | 120 | 160–165 |
| Bullet mortgage loan (new issue) | 185 | 215 |
| Seasoned fixed-rate whole loan packages | 200 | 250 |
Figure 2. Example of swap transaction to create synthetic commercial mortgage-backed floating-rate note. The payments include 0.40% for the put and 8.63% for the swap.*

diverse hotel properties. New issues of this type that are noncallable for 8 years yielded 10.3–10.5% at the end of 1986. We use 10.3% for the example.

Simultaneous with the note purchase, the investor enters into a 10-year interest rate swap, in which a fixed rate of 8.63% is exchanged for LIBOR payments. The swap coupon is composed of a 7.43% Treasury yield plus a 120 basis point swap spread. In addition, the investor purchases a put option on the swap to protect against the cost of unwinding the swap if the mortgage is called after the 8-year lockout period. If the underlying security is called without the put option on the swap, the investor is obliged to continue making the fixed-rate payments to his or her swap counterparty, as agreed in the original contract. The investor can reinvest the proceeds in another fixed-paying instrument, but faces the risk that interest rates will change substantially. Another option is to find a party to unwind the swap: that is, to swap the floating rate received on the original transaction in exchange for some fixed payment that will be direct toward the original swap obligation. Again, however, the investor faces reinvestment risk without the protection offered by a put option on the swap. In our example, we assume a put option cost of 40 basis points over the life of the swap, and this we add to the fixed coupon payable on the swap, for a total fixed-rate cost of 9.03%.

The net result of this transaction is a synthetic floating-rate note that yields 127 basis points above LIBOR, while protecting against prepayment. If the security is called after 8 years, the investor exercises the option to put the swap, thus terminating any swap obligations and permitting unrestricted investment of the proceeds.