

INTEREST RATE SWAPS

An innovative financial technique is one way to hedge against a mercurial interest rate dilemma.

by Milton A. Scott, Jr.

Volatile interest rates of recent years have increased the risk sensitivity of financial institutions. The prime rate soared to over 20% in 1980, fell to 11%, and surged back to over 20%.¹ Earnings and the cost of funds have become subject to wide, unpredictable swings causing institutions to develop innovative techniques to insulate their investments from the wide fluctuations in rates.²

Interest Rate Futures

Interest rate futures is one approach introduced in the 70s. While successful at coping with volatility, they are limited as hedging vehicles. Futures contracts end after 18 months and must be rolled over if they are to be extended past maturity. In using a futures hedge, there is the basis risk when rolled over³. Interest rate hedgers also have to mark the value of their futures positions daily, which causes exposure to substantial losses.

Interest Rate Swaps

Interest rate swaps, introduced in the early 80s, are more flexible than futures contracts since they can be tailored to individual circumstances. Swaps can be made for extended periods of time better matching asset maturities, whereas using futures contracts for the same time span can expose a financial institution to unwarranted risk.⁴

This technique is a contract between two institutions to exchange payment streams on a note for a set time, usually 2-12 years. It is neither an investment nor a borrowing method, and only cash flows are exchanged,

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not principal. A swap is merely a way to change the rate on an asset or liability from fixed to variable, vice versa, or from one variable rate to another.⁵

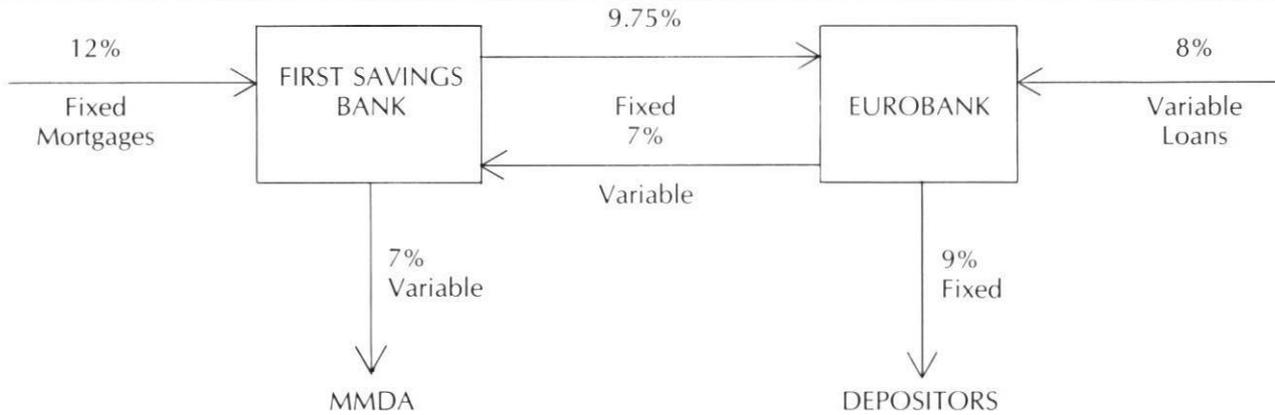
In less than four years, the interest rate swap market has ballooned from a few million dollars to over \$100 billion, with some estimates as high as \$120-\$150 billion.⁶

Classical Swap

Swaps are most commonly used to close balance sheet gaps between liabilities and assets with different maturities, eliminating interest rate exposures. Swaps also may transform floating rate funds, i.e., money market deposit accounts, and certificates of deposit into fixed rate term debt at attractive levels.⁷

A typical classical or plain vanilla swap is relatively simple. Suppose that First Savings Bank is paying interest rates on money market deposit accounts (MMDAs) tied to a three-month 7%, Treasury Bill rate. These liabilities are funding 12% fixed rate mortgages with an average life of 10 years; the spread is 500 basis points.

FIGURE 1



However, if the Treasury Bill rate rises higher than 12% over the next decade, the spread narrows and becomes negative. To avoid this, First Savings Bank enters an interest rate swap with the foreign bank (Eurobank), which usually would have excess fixed rate liabilities. Eurobank has access to long term, fixed rate funds but interest payments are tied to the London Interbank Offered Rate (LIBOR).

First Savings Bank agrees to pay 25 basis points less than the current 10-year Treasury rate of 10%, or 9.75% to Eurobank for the same time period. Eurobank agrees to pay First Savings Bank a variable rate, 100 basis points less than the three-month LIBOR. The interest paid is based on an agreed upon notional principal because there is no actual exchange of principal in an interest rate swap. Because the variable rate swap payment and the MMDA rate generally float together, a rise in payments to depositors will be offset by an increase in the payments from Eurobank.

The swap allows First Savings Bank to preserve a 225-basis point spread over 10 years between its 12% mortgages and 9.75% liability cost. Eurobank's floating rate debt is at the three-month LIBOR, less 100 basis points, or initially 7%. Eurobank pays First Savings Bank 7%, receives 9.75%, and pays its depositors 9% for an initial spread of 175 basis points. (See Figure 1).

Another financial institution normally acts as an intermediary arranging the transaction. To reduce the exposure, an intermediary locates institutions with opposite

exposure to interest risk and gets them together. The intermediary would receive a fee up front for arranging the swap based on the size and complexity of the transaction.⁸ The intermediary also may act as settlement agent collecting and paying the net difference to the appropriate party at agreed upon intervals.⁹

Swap users include thrifts and commercial banks, sovereign governments and their agencies, insurance companies, and industrial corporations.¹⁰

Other Swaps

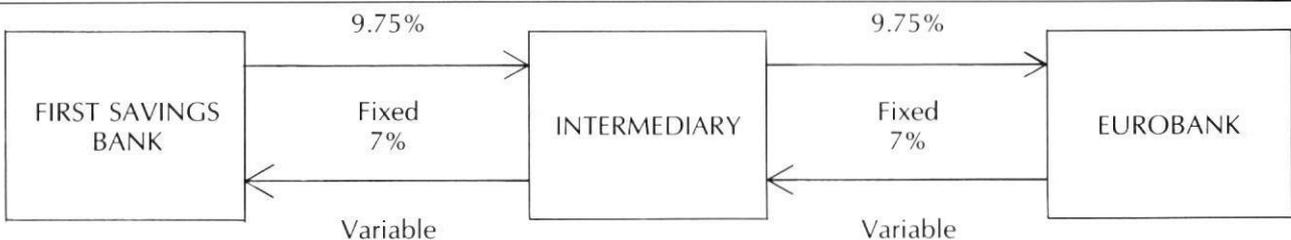
While the straightforward, plain vanilla, interest rate swap still comprises 90% of the market, reversals and swaps of one floating rate for another are two new popular techniques.¹¹

Reversals

Inevitably, a bank may find that its circumstances have changed several years after doing a swap and wish to undo it. It can do this by executing another swap in the opposite direction.¹² Suppose a bank made a 10 year fixed rate loan to a major customer. The bank entered into an interest rate swap to minimize its interest rate exposure agreeing to pay a fixed rate at the six month Treasury Bill rate. Four years later, the customer wishes to repay the loan. This leaves the bank exposed and wishing to end its interest rate swap.

If the original fixed rate payment was 12%, four years later the six year money costs 13%. The bank enters into

FIGURE 2



a reversal six year swap by which it agrees to receive a 13% fixed rate in exchange for the six month Treasury Bill rate, and settlement dates for both are made to coincide. Thus, the Treasury Bill payments cancel out each other and the bank has a contract to receive 13% and another to pay 12% for six years. This results in a 1% annual profit for the bank. However, if interest rates moved the other way, the bank could as easily have locked up a 1% annual loss. All reverse swaps create a profit or loss, depending on whether fixed rates for the counterbalancing swap are higher or lower than those at the time of the original swap.¹³

Floating-to-Floating Swap

A financial institution often can better manage the basis risk or transform its assets and liabilities from one to another more attractive index through a floating-to-floating swap. Participants each pay a floating interest rate based on a different indice.¹⁴

The first floating-to-floating swap occurred in 1983 between a U.S. regional and a foreign bank. The U.S. bank successfully attracted deposits for the new money market accounts and needed a high yielding outlet for these funds. Since the future of money markets was uncertain, the bank was unwilling to put this money into prime related loans. Yet, it still wished to receive a prime rate. The bank was willing to pay LIBOR because of other LIBOR-based lending. Meanwhile, the foreign bank had good access to the LIBOR market but no natural access to U.S. money markets. The foreign bank was willing to receive the LIBOR in exchange for paying a rate tied to prime. The effect of the swap was that the foreign bank locked up its profit margin on the prime related loans, and the U.S. bank received prime related rates without having to lend at prime, thus, the prime-LIBOR swap.¹⁵

Although the most popular transactions in the floating-to-floating swap market involve such swaps, it is possible to structure them involving any two floating rate indices — certificates of deposit, commercial paper, Treasury Bill rates, and federal fund rates.¹⁶

Fees And Expenses

A financial institution serving as intermediary to an interest rate swap may act as broker, settlement agent, or guarantor. As broker, the intermediary brings participants together to transact a swap. Arrangement fees paid up front vary according to the size and complexity of the transaction. Previously banks earned more than 50 basis points on even the most straightforward deal. Now, increased competition has drastically reduced fees to 1/8-1/4% of the notional amount.¹⁷

As settlement agent, the intermediary collects and pays the net difference to each party at agreed upon intervals. The intermediary is not obligated to remit payments not received unless it also serves as guarantor. Settlement and guarantor fees may be paid periodically or built into the rates paid by swap participants. Such fees typically are less than .25% of the notional amount but vary

depending on the credit risk of those involved.¹⁸

Each party also is responsible for paying legal counsel for preparation, negotiation, execution, and delivery of an agreement, usually a short document consisting of standardized terms.

Documentation

An interest rate swap transaction normally is arranged over the telephone and begins to accrue immediately. The parties sign the necessary papers governing the exchange of cash flows at a later date.¹⁹

Documentation for an interest rate swap is straightforward and generally specifies the notional amount, the fixed rate to be used and the mechanics of setting the variable rate, settlement procedures, fee arrangements, assignment privileges, compensation paid in the event of default, the extent of the settlement agent's liability, and any other arrangements. A typical swap agreement contains 6-8 pages and may be completed quickly.²⁰

Accounting Considerations

Since the underlying principal does not change hands, an interest rate swap is not disclosed in financial statements unless the notional amount, disclosed in a footnote to the balance sheet, is deemed material.²¹ The net interest differential is treated as an adjustment-to-interest expense. Thus, swap payments flow through other income/other expense categories on the income statement.²²

Brokerage or origination fees paid by a swap participant are treated as an adjustment-to-recorded-interest differences over the life of the agreement. Intermediary fees should be recognized as services are performed, while fees for issuing guarantees, i.e., standby letters of credit should be deferred and amortized over the commitment period.²³

Risks

The primary risk in an interest rate swap is if one party defaults leaving the other with its original position. Because no principal is exchanged, the credit risk is limited to the payments each will receive from the other according to the agreement. If one defaults, the other stops payment. An intermediary, letter of credit, collateral, or any other form of guarantee can provide additional protection against credit risk. Most swap agreements specify penalties for defaulting.²⁴

The direction of movement of interest rates also carries risk. If rates move unfavorably and the counterparty does not default, there is no problem. If the counterparty defaults when interest rates move favorably, the nondefaulting party may profit. A problem arises when the counterparty defaults and interest rates are unfavorable; the nondefaulting party then must find a new partner at less favorable terms.

As with any hedging strategy, participants must be willing to forego a more favorable move in interest rates. Once a swap has been executed, the party receiving

variable-rate payment should be unaffected by rate changes, however, as rates decline significantly, borrowers may refinance at more favorable rates. If that party funds those loans with liabilities whose cost is affected by a swap, the result could be negative.²⁶

Another risk associated with interest rate swaps is basis risk. If the floating reference index on the underlying source of funds is different from the reference index on the swap, the rates will not float exactly the same. This risk is eliminated by matching the reference indices.²⁷

The risks of misjudging rates or credit worthiness can have an adverse effect. An interest rate swap can have substantial benefits when properly structured.²⁸

Benefits

A bank benefits from an interest rate swap by altering interest rate sensitivity thereby reducing asset/liability mismatch.²⁹

- An interest rate swap consists of only an agreement to exchange future interest, not principal. The amount at risk only is the interest, not the nominal amount of the principal upon which a deal is based.³⁰
- If matching floating rate indices are used, sensitivity to interest rates is eliminated.³¹
- The transaction is not a lending, therefore, it is possible to keep documentation reasonable.³²
- It does not create a contingent liability, accordingly, the deal can be kept private.³³
- As a hedging device, swaps are more flexible than futures contracts because their terms are longer and daily margin calls are not required.³⁴
- The obvious benefit for intermediaries are the fees earned from the transaction.³⁵

Secondary Market

Major investment and commercial banks have formed the International Swap Dealers Association to standardize swap documentation. As more dealers adopt these standards, swaps will become generic like U.S. government securities and open the way for the next generation of the swap market—secondary trading.³⁶

Secondary trading of interest rate swaps originated when market conditions changed and some swap participants decided they wanted out.³⁷ As the swap market grew, more participants found themselves in this situation. Now, a participant also may sell a swap contract in the secondary market. The market values a seasonal swap contract as it values a fixed-income security; as rates rise or fall, the contract gains or loses value relative to the level at which new contracts are executed.³⁸

Summary

The interest rate swap market continues to develop rapidly. Swaps are effective at managing a bank's net

interest margin, are private transactions which can be negotiated quickly, and can be tailored to meet specific needs.

Standardization of terminology and legal contracts already is taking place among swap market makers, brokers, and market participants. Greater standardization will create greater liquidity; and interest rate swaps eventually may be quoted and traded on an exchange like futures contracts. All evidence within the market indicates that interest rate swaps are here to stay.

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