



Compliance

interpretation bulletin

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TO: All Chief Financial Officers, IDA Member Firms
Panel Auditors, IDA Jurisdiction Firms

January 6, 1997
C-110

INTEREST RATE SWAPS

The purpose of this interpretation bulletin is to provide guidance in determining margin requirements for interest rate equity swaps held in inventory and client accounts. The margin requirements explained in this bulletin are based on IDA Regulations 100.2(j) and 100.4F.

1. What is an interest rate swap?

An interest rate swap is a derivatives transaction. It is a contract in which two counterparties commit to exchange, over an agreed period of time, two streams of interest payments, with the interest payments based on the same notional amount but calculated with reference to different interest rate benchmarks. There is no exchange of principal, only an exchange of cash flows associated with the interest payments.

The most common interest rate swap is the fixed rate versus floating rate swap. In this type of interest rate swap the formula underlying the payment of monies from one counterparty to the other may represent the difference between the benchmark for **floating rates** such as the 6 month London Interbank Offered Rate (LIBOR) or the rate for Canadian Bankers Acceptances and an agreed on **fixed rate**.

2. What are the specific uses of interest rate swaps?

The following are some examples of the investor demand or use of interest rate swaps:

- i) A company that has financed its operations with floating rate notes and fears an increase in short term rates would want to buy a swap. The company could negate the interest rate risk by entering into an interest rate swap whereby it pays fixed and receives floating. In this way, the company essentially converts the floating rate borrowings into fixed rate debt and locks in the current level of interest rates. The opposite of this transaction would be done if the company expects interest rates to fall.
- ii) Interest rate swaps are a highly leveraged way to extend or reduce the duration of a portfolio. Buying a swap, paying fixed/receiving floating, shortens the duration of a portfolio. Selling a swap, receiving fixed/paying floating, lengthens the duration of a portfolio.
- iii) Interest rate swaps can be used to create synthetic securities. Synthetics are created by combining a security with a derivative product, such as an interest rate

swap. The combination, or synthetic security, has properties that are currently unavailable in a single security or available only at a higher price. For example, suppose an investor wanted to buy seven year fixed rate Citibank notes. At the time he wanted to purchase them, there were none available. There was, however, a Citibank seven year floating rate note trading at an attractive spread off a six month LOBOR. The investor could purchase the floating rate-note, enter into a swap whereby he receives seven-year fixed and pays six month LIBOR floating, and create a synthetic Citibank seven year fixed rate note. The synthetic has the same risk characteristics as would the seven year fixed rate notes. The investor has the credit exposure to Citibank that he desired, as well as the cash flows.

- iv) Swaps have the advantage over futures in that they are being traded in all sectors of the yield curve.

Generally, a Member firm that enter into interest rate swap transactions between clients does so as principal or intermediary. In so doing, the Member firm assumes credit risk exposure and principal interest rate exposure to the extent it does not enter into an offsetting swap transaction with equivalent swap terms, or hedges its exposure with offsetting inventory debt positions with similar interest payment characteristics.

3. What are the risk characteristics of interest rate swaps ?

Each counterparty in an interest rate swap is committed to pay the other counterparty a stream of interest, in exchange for receiving a different stream of interest. The two interest streams being swapped differ in terms of being calculated using different rate indexes. Different indexes are likely to behave differently over time. Therefore, each counterparty to a swap is exposed to the risk that, during the life of the swap, the differential between the two indexes will change such that the floating interest paid through the swap will increase or the floating interest rate received will decrease or (in the case of basis swaps) both, the net effect of which will be to reduce the overall profitability of the swap, or create or increase a loss. In other words, an interest rate swap creates an exposure to interest rate risk.

This bulletin deals with the simplest type of interest rate swaps known as generic or “plain vanilla” versions. Specifically, a generic interest rate swap has the following characteristics:

- a constant notional principal amount;
- an exchange of fixed-against floating interest;
- a constant fixed interest rate;
- a flat floating interest rate (i.e no margin over the index);
- regular (but not necessarily simultaneous) payment of fixed and floating interest;
- an immediate (or spot) start;
- no special risk features (i.e a combination with an option).

There are more complex types of interest rate swaps which can be constructed from the generic instrument, by combining generic swaps in complicated structures or by adding other derivatives like futures and options. Both the IDA Regulation and margin examples

in this interpretation bulletin deal with generic interest rate swaps.

Given the nature and complexity of the transaction, standard form agreements have been developed by the International Swap Dealers Association ("ISDA") to facilitate the transactions in the marketplace.

4. How is a Member's principal position in an interest rate swap margined?

Inventory margin is required on both the floating rate and fixed rate payments for any principal position in an interest rate swap. The applicable margin rate is the rate that would apply to securities prescribed in IDA Regulation 100.2(j) (i.e. Government of Canada bond of the same maturity categories). There is an additional premium on the fixed rate payments of 25% of the margin that would otherwise apply. The floating interest rate must be reset at least every 90 days. In effect, the Member provides an aggregate margin on the fixed and floating rate payments (refer to Attachment I for example).

5. Are offsets allowed for interest rate swaps?

New Regulation 100.4F allows for Swap Position Offsets. An offset is allowed for an interest rate swap with a matching notional amount of principal and margin rate category, but with a cash flow exchange opposite to the original swap.

A Member may offset the cash flows from a short (or long) position such as a Government of Canada bond against the receipt (or payment) of **fixed rate** cash flows, provided the Government of Canada bond has the same principal amount and margin rate category as the swap. Similarly, a floating rate offset is available whereby the Member can offset the cash flows from a short (or long) position in a Government of Canada bond or domestic bank paper with less than one year to maturity against the receipt (or payment) of **floating rate** cash flows. The offset may also be applied to United States dollar payments and security positions denominated in the same currency.

6. How is a Member's client position in an interest rate swap margined?

The counterparty to the swap is considered the Member's customer. No margin is required in respect of an interest rate swap entered into by a customer which is an "Acceptable Institution" as defined in Form #1. For "Acceptable Institutions" as defined in Form #1, the margin requirement is based on the market deficiency calculated in respect of the transaction on an item by item basis. For example, margin equal to the difference in market value between a Government of Canada bond and Government of Canada Treasury bill is required in a case where the parties exchanged the cash flows resulting from this transaction.

7. What is the market value deficiency?

The market value deficiency or "mark to market" of an interest rate swap involves comparing the present values of the fixed rate and floating rate notional principals at interim time periods. As interest rates for equivalent term swaps change over time, the "value" of any swap will change. If this value is a loss to the Client, they are required to provide the deficiency as margin.

8. How is the market value deficiency calculated?

The market value deficiency, referred to as the "mark to market" (MTM) is calculated as the present value of the difference between fixed rate payments at the agreed interest rate

and fixed rate payments at the current market rate. The interest rate used to present value this difference is the rate for equivalent term swaps. Additionally, an adjustment must be made to reflect any interest accrued up to this mark to market date (see Attachment I for example).

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