Blogs
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Release 10666 and the Problem of Swaps

In an earlier post, I noted that Release No. IC-10666 was issued before interest rate swaps were invented. This may have been unfortunate, because swaps present unique challenges to Release 10666's approach to asset segregation. I believe that difficulty with applying Release 10666 to swaps has contributed to inconsistency in the segregation requirements for different derivatives. **Swaps: The Revenge of Middle School Algebra** Suppose I borrow N dollars and invest it in Asset A. When my loan comes due, I sell the asset and repay the loan. If RA is the total return on Asset A for the term of the loan, then the sale proceeds would equal:

$(1 + RA) \times N$

If the interest rate on the loan was LIBOR for some period M (e.g., one-month LIBOR), then (ignoring compounding) the amount due on the loan would equal:

$(1 + LIBORM) \times N$

My profit (or loss, if negative) on the trade would be:
$P = ((1 + RA) \times N) - ((1 + LIBORM) \times N)$

We can simplify this as follows:
$P = N + (RA \times N) - N - (LIBORM \times N)$

$P = (N - N) + (RA \times N) - (LIBORM \times N)$

$P = (RA - LIBORM) \times N$

The simplified equation corresponds to the terms of a total return swap on Asset A, in which I pay LIBORM times a notional amount N and receive RA times N. In other words, a total return swap is the simplified equivalent of buying the underlying asset on margin. **Why Asset Segregation Might Not Work for Swaps** In another post, I explained how Release 10666 required a fund to segregate liquid assets to cover derivatives such as futures, forwards and options. If the derivative required the fund to purchase an asset, the fund had to segregate the purchase price. If the derivative required the fund to deliver an asset, the fund need to either hold the asset or to segregate the current market value of the asset. A purchase price is a known quantity, and the market value of an underlying asset might be readily determined. But the amount payable (or receivable) under a total return swap (leaving other types of swaps for later posts) is the product of two variables (RA and LIBORM) that will not be known until the termination of the swap. So how much should a fund segregate to treat total return swaps consistently with other derivatives subject to Release 10666? Although the notional amount is the common multiplier for the variables, it would only represent the amount payable under the swap in the unlikely case that RA – LIBORM = -1. So requiring funds to segregate the full notional amount is likely to be too conservative and yet (if RA is a sizable negative percentage) possibly insufficient. The current market value of the swap (if known) should represent the present value of the "expected" net payments under the swap. If swap markets are efficient, this might be considered the best guess as to the present value of what the fund will pay (or receive) under the swap. So we might require funds to segregate any negative market value for a swap in the absence of a better alternative. This would be a far cry from the segregation required by Release 10666, however. The swap market is efficient if the market value is more likely to correspond more closely to the eventual payments under the swap than any alternative value. If the alternative values range widely, the absolute probability of this correspondence may be low—much less than 50%. Consequently, segregating the negative market value may also be too conservative or permissive, albeit to a lesser extent than segregating the notional amount. The risk of insufficient segregation will be greater if the distribution of returns has a long negative tail. Thus, this approach to segregation may be more likely to be too permissive than too conservative.

Institutionalizing Inconsistency? Proposed Rule 18f-4 would address this risk by requiring segregation of a "risk-based coverage amount" in addition to any negative market value. As proposed:

> *Risk-based coverage amount* [would mean] … a reasonable estimate of the potential amount payable by the fund if the fund were to exit the derivatives transaction under stressed conditions ….

As estimates can vary among fund managers, this could result in funds segregating different amounts for the same derivative. Thus, the proposed rule would not wholly cure the inconsistent segregation requirements for derivatives.

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