Derivatives Exposure: Adjusting for Multipliers

This post continues our discussion of the calculation of "gross notional amounts" included in a fund's "derivatives exposure" under [Rule 18f-4](#). Previously, we identified the [best guidance](#) we could find on how to calculate a derivatives transaction's gross notional amount, and [three adjustments](#) to such amounts permitted by the rule's definition of derivatives exposure. In this post, we discuss another adjustment not anticipated by Rule 18f?4, but which we believe is necessary to avoid a fund that purports to be a limited derivatives user from circumventing the 10% limit on its derivatives exposure.

The Distributive Property and Swaps

A swap is essentially an equation for calculating payments. For example, if a fund enters into a swap to pay one-month LIBOR and receive 1% on a notional amount of $2,000,000, then the fund would receive (or pay if the result is negative) on an annual basis:

$2,000,000 x (1% – one-month LIBOR).

Now suppose a fund enters into a swap to pay twice one-month LIBOR and receive 2% on a notional amount of $1,000,000. The annual payments for this swap would be:

$1,000,000 x (2% – (2 x one-month LIBOR)).

Although nominally the second swap has one-half the notional amount of the first swap, they are in fact identical swaps. This is because:

$1,000,000 x (2% – (2 x one-month LIBOR)) =

$1,000,000 x 2 x (1% – one-month LIBOR) =

$2,000,000 x (1% – one-month LIBOR).

This is another application of middle school math to derivatives exposure. If a fund can use the distributive property [a x (b + c) = (a x b) + (a x c)] to divide the notional amount into two factors and then multiply the reference rate by one of the factors, then the fund could reduce the notional amount to circumvent the 10% derivatives exposure limit imposed on a limited derivative user.

Compliance Implications

Generally, when a derivatives transaction multiplies a reference price, return or rate by a coefficient, the coefficient should be factored out and applied to the nominal notional amount. So, the two swaps in our example would both have a gross notional amount of $2,000,000 after the second swap is adjusted by factoring the 2 out of the one-month LIBOR and fixed rate and multiplying it times the $1,000,000 nominal notional amount. This adjustment would be consistent with the CFTC's requirements for calculating net notional values under its [Rule 4.5](#), which exempts certain persons managing qualified entities (including an investment adviser to a registered investment company) from the definition of "commodity pool operator." The rule requires notional values to:

be calculated for each futures position by multiplying the number of contracts by the size of the contract, in contract units (taking into account any multiplier specified in the contract) …."

An exception to the foregoing mathematical principles would be when the derivatives transaction has more than one variable reference rate, and the same coefficient is not applied to all of the rates. For example, a swap of the total return on a 2-year Treasury index for the total return on a 10-year Treasury index might multiply only the 2-year return by a factor that compensates for the greater expected volatility of the 10-year return. In this example, the multiplier would be intended to affect only the rate of return and not to disguise the true notional amount of the swap.

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