

Derivatives Exposure: Adjusting Notional Amounts

Our [previous post](#) gave the best account we could of what the SEC staff has said about calculating the "gross notional amount" of derivatives transactions. In this post, we examine three adjustments that a fund may (but is not required to) make when calculating its "derivatives exposure." Specifically, a fund may:

- exclude any closed-out positions;
- delta adjust the notional amounts of options contracts; and
- convert the notional amount of interest rate derivatives to 10-year bond equivalents.

We anticipate that a fund seeking to qualify as a "[limited derivatives user](#)" would make these adjustments to lower its derivatives exposure.

Closed-Out Positions

The definition of derivatives exposure provides that a closed-out position must:

- be closed out with the same counterparty; and
- result in no credit or market exposure to the fund.

For example, if a fund sold a Globex Euro FX futures contract for delivery in July 2021 and subsequently purchased the identical futures contract, it could exclude both contracts because they are centrally cleared through CME and thereby have the same counterparty. On the other hand, the fund could not offset the July 2021 contract by purchasing the August 2021 contract, because, although both contracts have the CME as their counterparty, the fund would still be exposed to differences in changes in the price of the July 2021 contract as compared to the August 2021 contract. A fund also could not offset a fixed-to-floating rate swap with one dealer against a floating-to-fixed rate swap with another dealer, even if the swaps had identical notional amounts and reference rates, because the counterparties would not be the same. In these cases, the fund would have to include the notional amounts of both futures contracts or both swaps in its derivatives exposure.

Delta Adjustment

The release adopting Rule 18f-4 explains adjusting the notional amount of an option for its delta as follows:

[Delta refers to the ratio of change in the value of an option to the change in value of the asset into which the option is convertible. A fund would delta adjust an option by multiplying the option's unadjusted notional amount by the option's delta.](#)"

For example, if a fund writes an option for shares with a notional amount of \$1 million, and the option has a delta of 0.25, the fund would include a notional amount of \$250,000 in its derivatives exposure. As we previously explained, an option's [delta increases as the market value of the underlying asset approaches the option's strike price](#), so the delta for each option must be recalculated and the notional amount readjusted each time a fund calculates its derivatives exposure.

10-Year Bond Equivalent

In contrast to delta, the adopting release does not explain how to calculate the 10-year bond equivalent of an interest rate derivatives transaction. Some of the comment letters on the originally proposed Rule 18f-4 (the release with Table 1 showing how to calculate notional amounts) provided the following example:

[T]he adjusted notional exposure for a 3-month Eurodollar contract with a \$1,000,000 notional value would be determined by dividing the contract duration in months by the 10-year duration in months and multiplying that quotient by the contract notional amount, as follows: $\$1,000,000 * (3/120) = \$25,000$. The result would be an adjusted notional exposure of \$25,000, as opposed to \$1,000,000. An alternative approach is to adjust these contracts to 10-year equivalents using the actual duration of each contract traded (as opposed to the nominal duration in the example above)."

The alternative approach may be more complicated, as the actual duration would need to be recalculated whenever a Fund's derivatives exposure is determined to account for changes in market yields. The adopting release does not consider the possibility of an interest rate derivative that is an option. If the relationship of the option to the underlying security or reference rate (its delta) differs from the relationship of the duration (whether nominal or actual) to a referenced 10-year bond, then we think that the option should be both adjusted for its delta and translated to a 10-year bond equivalent. Our next post will consider an adjustment not considered in the release, namely the need to adjust for multiplied reference rates.

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