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CFA Institute
Global Investment Performance Standards
915 East High Street
Charlottesville, VA 22902

Re: Guidance Statement on Overlay Strategies

Analytic Investors, a Los Angeles based derivatives overlay manager for over 45 years with $2 billion in overlay strategies, is submitting a comment letter to respond to the Exposure Draft of the New Guidance Statement on Overlay Strategies posted for public comment from 8/29/2017 – 11/27/2017.

Response to Question 8:

Do you agree the returns for overlay portfolios must be geometrically linked when the overlay exposure changes over the time period? If not, please explain what method(s) you believe are appropriate.

Analytic Investors believes that the combined underlying asset and derivatives portfolio returns must be geometrically linked when the exposure changes over time. Additionally, Analytic Investors believes that it is correct to geometrically link the returns of underlying asset portfolio in isolation (without the derivatives portfolio included). Analytic Investors ***does not agree*** that it is correct to geometrically link the derivatives portfolio in isolation (without the underlying asset portfolio).

By compounding the period by period performance of the overlay in isolation of the total portfolio, a significant portion of the total portfolio performance is neglected in the form of cross products. This results in the sum of the compounded overlay return and the compounded underlying asset return to differ significantly over time from the total portfolio compounded return. The difference in misleading performance numbers could, at best, result in damage to the manager's reputation and at worse, result in legal action from clients who believe that they have been misled. Instead, Analytic argues the compounded return over time of the overlay portfolio should be calculated by subtracting the compounded underlying asset return from the total portfolio compounded return.

The goal of any performance calculation should be to accurately reflect the entire impact of an investment strategy on the portfolio. Achieving this goal requires that the average and compounded returns (and the standard deviation of returns) should make sense when performance is calculated over the life of the strategy. For example, if the strategy consists of more than one sleeve then the one period returns for each sleeve should sum to the total portfolio returns. When compounded cumulative returns are calculated, the cumulative compounded returns for all of the sleeves (underlying assets and overlay sleeves) should also sum to the compounded cumulative total portfolio return.

For example assume that we are attempting to calculate the performance for an option overlay on an equity portfolio. If we let N = the net asset value of the entire portfolio (equity, cash and options) and $ E equals the dollar gain to the portfolio's equities over the performance period and $D equals the gains to the option (or derivative) sleeve in the portfolio.

1-period Equity Return:

$$equity\ return = R_E = \frac{\$_E}{N}$$

1-period Derivatives Return:

$$derivative\ return = R_D = \frac{\$_D}{N}$$

1-period Total Return:

$$total\ return = R_{TOT} = \frac{\$_E + \$_D}{N} = R_E + R_D$$

Note that since both of the individual sleeve returns have the NAV in the denominator, the percent returns can be added together to get the total portfolio return. This methodology meets the standard promoted in the paragraph above for an accurate performance calculation with desirable properties.

Now suppose you want to calculate a two period compound return for the total portfolio. Notice that the resulting terms in the two period equity return equation can be placed into two buckets, the summation of each period's return plus the product of each period's return. The same is true with the two period derivatives only compounded return.

2-period Compounded Equity Return:

$$(1 + R_{E1}) \times (1 + R_{E2}) - 1 = 1 + R_{E1} + R_{E2} + (R_{E1} \times R_{E2}) - 1 = [R_{E1} + R_{E2} + (R_{E1} \times R_{E2})]$$
$$= [compounded\ equity\ return]$$

2-period Compounded Derivatives Return:

$$(1 + R_{D1}) \times (1 + R_{D2}) - 1 = 1 + R_{D1} + R_{D2} + (R_{D1} \times R_{D2}) - 1 = [R_{D1} + R_{D2} + (R_{D1} \times R_{D2})]$$
$$= [compounded\ deriv\ return]$$

2-period Compounded Total Return:

$$\begin{aligned}(1 + R_{TOT1}) \times (1 + R_{TOT2}) - 1 &= (1 + R_{E1} + R_{D1}) \times (1 + R_{E2} + R_{D2}) - 1 \\ &= 1 + (R_{E1} + R_{D1}) + (R_{E2} + R_{D2}) + (R_{E1} \times R_{E2}) + (R_{E1} \times R_{D2}) + (R_{D1} \times R_{E2}) \\ &+ (R_{D1} \times R_{D2}) - 1 \\ &= [(R_{E1} + R_{E2}) + (R_{E1} \times R_{E2})] + [(R_{D1} + R_{D2}) + (R_{D1} \times R_{D2})] \\ &+ [(R_{E1} \times R_{D2}) + (R_{D1} \times R_{E2})] \\ &= [compounded\ equity\ return] + [compounded\ deriv\ return] + [cross\ terms]\end{aligned}$$

$$compounded\ total\ return \neq [compounded\ equity\ return] + [compounded\ deriv\ return]$$

The resulting 2-period compounded total return equation contains the same terms present in the compounded equity return and the compounded derivatives return, plus some "extra terms" added at the end. These extra terms are highlighted in yellow and we will refer to them as **cross-product terms**. These cross product terms present in the compounded total return only exist because there is a derivative overlay. This is the basis for why Analytic believes these terms should logically be attributed to the derivatives overlay performance.

These cross- product terms in the multi period performance for a portfolio with a derivatives overlay represent:

- The interaction of the individual sleeves in the portfolio. In this case, the cross-product terms reflect the interaction between the derivatives return and equity return.
- These interactions include any leveraging or financing effect due to the derivative activity. For example, a covered call overlay may generate cash from the sale of calls that can be invested in more stock or the losses from a covered call overlay may cause the sale of stock to cover the option losses and result is less stock in the portfolio.
- Another interaction could be the effect of using derivatives to hedge the stock. If the hedge reduces the volatility of the total portfolio without changing the combined return the hedged portfolio will grow at a faster rate than the unhedged portfolio.

Analytic is suggesting that in order to calculate the true impact and performance of an overlay portfolio, you need to calculate the compounded total return and then subtract out the compounded return of all the sleeves that are not considered. Then the remaining return reflects the total impact the overlay has on the total portfolio. This calculation would include the cross-product returns of all the sleeves with respect to the overlay, which accounts for additional overlay characteristics such as opportunity cost, premium reinvestment, leverage, volatility reduction, etc. Conversely, using solely the compounded overlay return will not take into account these additional risks or benefits.

$$compounded\ overlay\ return = [compounded\ total\ return] - [compounded\ equity\ \ return]$$
$$= [compounded\ derivatives\ return] + [cross\ terms]$$

Any calculation that fails to capture the entire impact of a strategy potentially misleads the client. For example, a consistently rising equity market would likely lead to a covered call overlay that produces negative returns. Negative overlay returns will cause the cross product terms to be primarily negative. The compounded effect of the neglected negative cross product terms can be very large. If the overlay returns were compounded individually as suggested by GIPS, the sum of the compounded equity and compounded overlay returns will be significantly higher than the compounded total portfolio return. If this occurs a client would likely believe that the overlay manager was trying to mislead the client into thinking that the negative impact of the covered call overlay was smaller than the real impact.

Question 9:

Do you agree that the overlay returns must not be linked geometrically linked when the exposure remains constant, but rather the returns must be calculated as the cumulative profit/loss for the calculation period divided by the denominator?

If the denominator does not change over the investment period then this approach will work. However, why not implement a general procedure that works under all circumstances? Why not, implement the methodology used by all 40 Act funds? Analytic recommends the guideline should be: Calculate the profit/loss for each day and divide this daily profit/loss by the previous end of day NAV to get a daily return. Then geometrically compound the daily returns to get an investment period return. This will work with or without the presence of cash flows.

Best Regards,

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Chief Investment Officer

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