EXPOSURE DRAFT OF GIPS® GUIDANCE STATEMENT ON OVERLAY STRATEGIES

Effective Date: 1/1/2019

Retroactive Application: Not Required

Public Comment Period: 8/29/2017 – 11/27/2017
GIPS GUIDANCE STATEMENT ON OVERLAY STRATEGIES

Executive Summary
The purpose of this Guidance Statement is to provide guidance on how to apply the GIPS standards to overlay strategies and portfolios.

The Guidance Statement defines the allowable methods for the calculation of overlay exposure. Overlay exposure must be calculated by using the notional exposure of the overlay strategies being managed, the value of the underlying portfolios being overlaid, or a specified target exposure. Because of the nature of overlay strategies, the firm managing the overlay strategy might not manage the underlying portfolio. If the underlying portfolio is managed by the firm, the underlying portfolio must be included in total firm assets and must also be included in a composite and composite assets, if appropriate. If the underlying portfolio is not managed by the firm, overlaid assets must not be included in total firm assets or composite assets.

The calculation section includes guidance on how to calculate the numerator and denominator of an overlay portfolio return calculation. Performance calculation examples are provided. The treatment of collateral and the compounding of returns over time are also discussed.

Firms that manage overlay strategies would be required to disclose both total firm overlay exposure and total composite overlay exposure as of each annual period end in all overlay strategy compliant presentations. Firms that manage overlay strategies can choose not to present (a) composite assets and/or (b) either total firm assets or composite assets as a percentage of total firm assets when these numbers are not considered meaningful. Additional proposed disclosure requirements are included in the presentation and disclosure section of the document.

Guidance is also provided on the determination of investment discretion, composite construction, the selection of benchmarks, and the treatment of significant cash flows.

Sample overlay strategy compliant presentations are provided in the Appendices.
Invitation to Comment

Exposure Draft of the Guidance Statement on Overlay Strategies

CFA Institute established the GIPS Executive Committee as the governing body for the Global Investment Performance Standards (GIPS). The GIPS Technical Committee, responsible for technical oversight of the GIPS standards, seeks comment on the proposal set forth here regarding the Guidance Statement on Overlay Strategies.

Twelve questions are included in this document to obtain feedback on specific issues. In addition to responding to these questions, please provide feedback on the entire document, including items you support. All comment letters will be considered and are greatly appreciated.

Comments must be submitted and received no later than 27 November 2017. Responses will be accepted by email, hard copy, and fax. Please submit your comments as early as possible to facilitate the review process. Unless you request otherwise, all comments and replies will be made public on the GIPS standards website (www.gipsstandards.org). Comments may be submitted as follows:

Email: standards@cfainstitute.org
Fax: +1 (434) 951-5687
Post:
  CFA Institute
  Global Investment Performance Standards
  Re: Guidance Statement on Overlay Strategies
  915 East High Street
  Charlottesville, VA 22902
  USA
Introduction
The following guidance has been developed to address applying the GIPS standards to overlay strategies. Although there is no uniform definition of the term "overlay strategy," broadly speaking, an overlay strategy is one in which the management of a certain aspect of an investment strategy is carried out separately from the underlying portfolio. Overlay strategies are typically designed to either limit or maintain a specified risk exposure that is present in the underlying portfolio or to profit from a tactical view on the market by changing a portfolio’s specified risk exposure. There are also overlay strategies that seek to add value against a specified target allocation or allocated capital at risk. Overlay strategies can be active or passive. The underlying portfolio may be composed of cash and/or securities, or it may be a notional amount representing exposure to a particular asset. Overlay exposure is the notional exposure of the overlay strategy being managed, the value of the underlying portfolio being overlaid, or a specified target exposure. Overlay strategies are often unfunded and implemented by using derivatives, which can lead to the fair value of the overlay portfolio being very small, negative, or even zero. The overlay portfolio itself can be highly leveraged as a result of the use of derivatives. An overlay portfolio may be managed by the same firm that is managing the underlying portfolio or by a separate firm.

Scope of the Guidance Statement on Overlay Strategies
The purpose of this Guidance Statement is to provide guidance on how to apply the GIPS standards to overlay strategies and portfolios. Guidance is provided in the following areas:

- Common types of overlay strategies
- Definition of investment discretion
- Determination of total overlay exposure
- Composite construction
- Selection of benchmarks
- Treatment of significant cash flows
- Performance calculation
- Presentation and disclosure
- Effective date

This Guidance Statement is not applicable to firms that act as overlay managers for multiple-strategy portfolios that are part of a wrap fee/separately managed account program or similar bundled fee programs. Firms that act as overlay managers for wrap fee/separately managed accounts must consult the Guidance Statement on Wrap Fee/Separately Managed Account (SMA) Portfolios.

For further information on alternative investment strategies, please see the GIPS Guidance Statement on Alternative Investment Strategies and Structures.
Common Types of Overlay Strategies

Common types of overlay strategies include, but are not limited to, currency overlay, asset allocation overlay, interest rate overlay, and option overwrite overlay. A brief description of these types of overlay strategies is provided in this section.

Currency Overlay

A currency overlay strategy is typically used to increase, decrease, or maintain the currency exposure of an underlying portfolio by using derivatives, such as forward foreign exchange contracts. Currency overlay strategies may be passive, in which the objective of the overlay is to eliminate a specific portion of the currency exposure in the underlying portfolio, or active, in which the objective of the overlay is to add value by adjusting the currency exposure of the underlying portfolio. The following are examples of currency overlay investment objectives:

- Hedging against adverse movements in foreign currencies
- Participating in positive movements in foreign currencies
- Reducing the volatility impact of the foreign currencies in the portfolio

Active currency overlay strategies may also be implemented on the basis of a notional amount, in which the objective is to add value by creating currency exposure up to this notional amount.

Asset Allocation Overlay

An asset allocation overlay strategy is typically used to increase, decrease, or maintain the asset class exposure of an underlying portfolio through the use of derivatives, such as futures, swaps, options, and/or swaptions. A tactical asset allocation (TAA) overlay is a type of asset allocation overlay in which the overlay manager attempts to profit by increasing or decreasing exposure of an underlying portfolio to one or more asset classes, countries, industry sectors, or other characteristics.

For example, a TAA overlay strategy could require the overlay manager to make tactical asset allocation decisions that are implemented by using long and short derivative positions in the overlay portfolio. The overlay manager is required to take the underlying portfolio into account such that the total exposure to a particular asset class or security position cannot be below zero.

Interest Rate Overlay

An interest rate overlay strategy is typically used to adjust interest rate sensitivity by using cash instruments and interest rate derivatives, such as interest rate futures, swaps, and/or swaptions. The portfolio’s duration is actively managed, which allows the overlay manager to separately manage the interest rate risk component of the underlying fixed-income portfolio such that incremental returns can be generated based on interest rate movements. A passive interest rate overlay strategy aims to manage the interest rate risk of the underlying portfolio on either a benchmark relative or absolute basis. Benchmark relative interest rate management aims to align the duration of the underlying portfolio with the duration of a benchmark. An interest rate overlay strategy on an absolute basis attempts to obtain a specified level of interest rate sensitivity often known as “dollar duration.”

Interest rate overlay strategy examples include, but are not limited to the following:

- Hedging a set of cash flows
- Managing an interest rate overlay to a specified benchmark
- Managing the target duration (The overlay manager uses interest rate instruments to adjust the duration of the underlying portfolio to a target duration.)
Option Overwrite Overlay
An option overwrite overlay strategy is typically used to seek gains through premium income and trading in options on specific securities and indexes. An option overwrite overlay strategy involves the use of option positions in which target exposure is not tied directly to the value of an underlying portfolio. Instead, exposure is typically managed to a predetermined reference target or capital at risk amount that is specified by the client. Option overwrite overlay strategies are typically either risk-reducing (hedge) or return-enhancement strategies.

3. Definition of Investment Discretion
Overlay portfolios are subject to the same criteria for the definition of investment discretion as described in the GIPS Guidance Statement on Composite Definition. That is, portfolios may be considered non-discretionary if documented client-imposed restrictions significantly hinder the firm from fully implementing its intended strategy.

Investment restrictions imposed on overlay portfolios may be quite different from those typically encountered in traditional non-overlay portfolios. In addition to the examples of client-imposed restrictions that may cause a portfolio to be classified as non-discretionary that are included in the Guidance Statement on Composite Definition, the following are examples of investment restrictions that may result in an overlay portfolio being initially characterized as non-discretionary or characterized as non-discretionary when the restrictions begin to hinder the manager's ability to implement the strategy:

- Maximum drawdown limits, loss limits, tracking error limitations, or other relevant limitations are imposed by the client that results in the firm no longer being able to manage the portfolio in the intended manner.
- Counterparty limitations that may hinder the overlay manager’s ability to obtain best execution of a transaction. These limitations could be directly imposed by the client or could be the result of credit restrictions counterparties have placed on the client.
- Client-imposed restrictions prohibiting the use of certain types of derivative instruments that the firm would normally use to implement its intended overlay strategy.

These examples do not automatically lead to the classification of an overlay portfolio as non-discretionary, but must be evaluated by the firm based on specific facts and circumstances to determine whether the client-imposed restrictions interfere with the implementation of the intended investment strategy.

The following are more specific examples of a counterparty limitation and a client-imposed investment restriction that may result in an overlay portfolio being characterized as non-discretionary.

Counterparty Limitation Example
An overlay manager typically implements its strategy by investing in various types of derivatives. However, a client's investment mandate requires the overlay manager to use all derivative transactions with one specific counterparty. This overlay portfolio may be considered non-discretionary if the overlay manager is unable to implement the overlay strategy in the intended manner because of the counterparty restriction.

Client-Imposed Restriction Example
An interest rate overlay manager typically implements its strategy by entering into interest rate swaps to achieve each client's target duration. However, a new client's investment mandate prohibits the use of interest rate swaps and requires the overlay manager to use futures instead. This overlay portfolio may
be considered non-discretionary if the overlay manager is unable to implement the overlay strategy in the intended manner because of the investment restriction requiring the use of futures contracts.

**Question 1: Are these examples regarding the determination of discretion appropriate or are additional examples or other criteria needed? If additional examples or other criteria are needed, please explain your suggestions.**

### 4. Determination of Total Overlay Exposure

Overlay exposure must be the notional exposure of the overlay strategies being managed, the value of the underlying portfolios being overlaid, or a specified target exposure.

Because of the nature of overlay strategies, the firm managing the overlay strategy might not manage the underlying portfolio. Therefore, it is helpful to understand the amount of overlaid assets and exposure overseen by the overlay manager. Overlaid assets must not be included in total firm assets or composite assets unless the underlying portfolio is managed by the firm.

**Overlay Exposure Principles**

- Both total firm overlay exposure and total composite overlay exposure must fairly represent the overlay strategies being managed by the firm.
- Total firm overlay exposure must include all discretionary and non-discretionary overlay strategies for which a firm has investment management responsibility.
- Total firm overlay exposure and total composite overlay exposure calculations are independent of the total firm assets and composite assets calculations.
- Overlay exposure must be calculated by using the notional exposure of the overlay strategies being managed, the value of the underlying portfolios being overlaid, or a specified target exposure ("the allowable methods").
- If the underlying portfolio is managed by the firm, the underlying portfolio must be included in total firm assets and must also be included in a composite and composite assets, if appropriate.
- Both total firm overlay exposure and total composite overlay exposure must include overlay strategies assigned to a sub-advisor provided the firm has discretion over the selection of the sub-advisor.
- Firms that manage overlay strategies must disclose both total firm overlay exposure and total composite overlay exposure as of each annual period end in all overlay strategy compliant presentations.
- Composite overlay exposure must be calculated using one of the allowable methods on a composite by composite basis.
- When calculating total firm overlay exposure, firms must sum the overlay exposures of all portfolios managed, even if different allowable methods are used. For purposes of calculating total firm overlay exposure, firms must not recalculate overlay exposures to a single method.
- Firms that manage overlay strategies can choose not to present (a) composite assets and/or (b) either total firm assets or composite assets as a percentage of total firm assets when these numbers are not considered meaningful.

The following are overlay exposure examples.

**Example: Currency Overlay Exposure**

An overlay manager implements various passive currency hedging programs. The overlay portfolios managed have a variety of “base” currencies and a variety of “exposure” currencies (non-base currencies) that the overlay manager is responsible for hedging. Total firm overlay exposure is the aggregate value of all underlying portfolios in “exposure” currencies, irrespective of base currency, expressed in a single currency. Total composite overlay exposure is the aggregate value of underlying
portfolios in “exposure” currencies included in a particular composite. With respect to currency overlay, overlay exposure is also known as “hedgeable exposure.”

A portfolio has holdings denominated in USD, EUR, JPY, CHF and AUD. An overlay manager was appointed to hedge USD, EUR, and JPY to GBP and instructed to leave the CHF and AUD denominated assets unhedged. The overlay manager considers the GBP value of the USD, EUR, and JPY holdings as “overlay exposure,” irrespective of the hedge ratio. The GBP value of the CHF and AUD holdings is not included in the overlay exposure calculation because the overlay manager has no mandate to hedge these exposures.

Example: Beta Overlay Exposure
An overlay manager that does not manage the underlying portfolio is directed to obtain $450 million in notional exposure to the ABC Index. Hence, the overlay manager executes total return swap trades totaling $450 million notional exposure. Subsequently, the notional exposure has grown to $500 million at period end. At this point, the overlay manager is directed to pare its notional exposure to $250 million. Rather than paying break fees to reduce the exposure of the existing swap, the overlay manager enters into an offsetting swap whereby the portfolio pays the index return to a counterparty.

In total, the overlay manager now has $500 million notional exposure of received ABC Index swaps and $250 million in paid ABC Index swaps for this portfolio at period end. The overlay manager must reflect $250 million of notional exposure, not $750 million, in both its total firm overlay exposure and total composite overlay exposure calculations in order to fairly represent the overlay strategy being managed by the firm.

To differentiate, if the overlay manager used $500 million received ABC Index swaps for one portfolio and $250 million paid ABC Index swaps for a portfolio in another composite, the overlay manager must reflect $750 million notional exposure in its total firm overlay exposure, and $500 million and $250 million in the respective total composite overlay exposure calculations at period end.

Example: Absolute Return Overlay Exposure
The typical objective of an absolute return overlay is to add an incremental return to the underlying portfolio. Absolute return overlay exposure is typically expressed as the target exposure of the overlay strategy.

Question 2: Are the three “allowable methods” for calculating overlay exposure appropriate?

Question 3: Are there other methods for calculating overlay exposure that are also appropriate? If so, please explain.

Question 4: Should the allowable method(s) be required or recommended by strategy type? If so, please propose a required or recommended method by strategy type.

5. Composite Construction
Composites for overlay strategies are subject to the principles described in the GIPS Guidance Statement on Composite Definition. That is, composites must be defined according to investment mandate, objective, or strategy and the firm’s criteria for defining composites must be applied consistently. Possible criteria for defining overlay strategy composites include exposure limits, target volatilities, hedge ratios, etcetera.
Currency Overlay Composite Construction Criteria

a. Base currency: Hedging a particular “exposure” currency to a particular “base” currency will produce different (and opposite results) to a portfolio that is hedged the other way. Therefore, base currency is a key characteristic by which currency overlay composites can be constructed.

b. Benchmark hedge ratio: The results of a 100% hedge to a particular base currency will be different from a hedge of anything other than 100% to the same base currency. In addition, the benchmark for each portfolio with a different hedge ratio will not be the same. Using the benchmark hedge ratio as a criterion for constructing currency overlay composites may be appropriate.

c. Passive and active investment strategies: Passive and active currency hedging overlay strategies have very different risk and return characteristics, and hence, there should be separate composites for passive currency hedging overlay strategies and for active currency hedging overlay strategies.

Interest Rate Overlay Composite Construction Criteria

Overlay managers often must manage interest rate overlay mandates based on specific client guidelines and/or liability data, duration targets, or interest rate risk hedge ratios. A customized benchmark may be used that is based on the plan’s liability. It may be appropriate to construct single portfolio composites because of the customized nature of the investment mandates or to create a single composite and use a portfolio-weighted custom benchmark.

Absolute Return Overlay Composite Construction Criteria

All absolute return overlay portfolios with the same absolute risk–return profiles must be included in the same absolute return overlay composite. This strategy is implemented by using derivatives as well as restricted and below investment-grade securities.

Treatment of New/Terminated Overlay Portfolios in Composites

The GIPS standards require that composites must include new portfolios on a timely and consistent basis after each portfolio comes under management. Because overlay strategies often use derivatives, overlay portfolios are often invested more quickly than non-overlay portfolios, which might result in a new overlay portfolio policy that brings such portfolios into overlay composites more quickly than the inclusion policy for non-overlay composites. Firms must establish a new portfolio policy on a composite-specific basis and apply it consistently.

Example: Currency Overlay

New currency overlay portfolios will be included in a composite from the first full month following the inception date of the portfolio, whereas terminated currency overlay portfolios will be included through the last full month that the portfolio was managed to the strategy.

Example: Interest Rate Overlay

New interest rate overlay portfolios are included in the composite at the beginning of the month after the required amount of dollar duration is obtained to meet the client’s interest rate hedging objective. Terminated interest rate overlay portfolios are included in a composite through the last full period the portfolio was managed under full discretion, no matter how long it takes to unwind the interest rate hedge.

6. Selection of Benchmarks

The GIPS standards require benchmark returns to be presented in each compliant presentation. It is not unusual for a custom benchmark to be used for overlay strategies. A benchmark comparison for overlay strategies is not always used to assess the manager’s performance in the same way that a comparison may be used for non-overlay strategies. An overlay benchmark comparison may not be an appropriate measure to evaluate the overlay strategy. Therefore, firms may take various approaches when selecting a
benchmark for overlay composites. Some firms use market indexes, whereas others use absolute return targets as benchmarks.

The GIPS standards also require disclosure of the benchmark description in each compliant presentation. The benchmark description is defined as general information regarding the investments, structure, and/or characteristics of the benchmark. The description must include the key features of the benchmark or the name of the benchmark for a readily recognized index or other point of reference. If the firm determines that no appropriate benchmark for the composite exists, the firm must disclose why no benchmark is presented. If a custom benchmark or combination of multiple benchmarks is used, the firm must disclose the benchmark components, weights, and rebalancing process.

Firms must determine which benchmarks are most appropriate for their overlay composites. When determining what benchmark information to present in a compliant presentation of an overlay strategy, firms must be guided by the principles of fair representation and full disclosure.

**Example: Currency Overlay Benchmark Description**
The following benchmark disclosure examples are for passive currency overlays. The first example is for a multi-currency hedging program for which the objective is to hedge 50% of the foreign currency exposure (risk currency). The second example is for a single currency hedge with a 100% hedge ratio.

**Benchmark Is 50% Hedged**
The benchmark represents the performance of a one-month rolling currency hedge covering 50% of the exposure of each risk currency. The benchmark is constructed monthly by using mid-spot rates and one-month mid-forward points published by an independent source. The weighting of each currency in the benchmark replicates the currency weightings in the composite as of the beginning of each month.

**Benchmark Is 100% Hedged**
The benchmark is calculated from the cash flows arising from a passive hedge of the risk currency (EUR) to the base currency (USD) using one-month forward positions at a 100% hedge ratio.

**Example: Description of Interest Rate Overlay Benchmarked to a Blend of Interest Rate Swaps**
The benchmark is a custom blend of various maturity interest rate swap indexes, less one-month Libor pro-rated for the number of days in the performance period, and adjusted for the interest accrual on the difference in the value of the portfolio and the benchmark. The custom swap index returns are obtained from the index provider, and the custom swap blend may change from time to time at the client’s discretion. The custom benchmark is rebalanced to the custom swap blend weights upon portfolio rebalancing, which is performed on a monthly basis.

**Example: Description of Interest Rate Overlay Benchmarked Directly to a Liability**
The benchmark is the change in the present value of the cash flows of the liability over the period.

**Example: Absolute Return Overlay Benchmark Description**
The benchmark is 0% per annum.

**Example: Tactical Asset Allocation Overlay Benchmark Description**
The benchmark is the target allocation blend, which is 40% XXX UK Equity Index, 25% YYY International Equity Index, and 35% ZZZ UK Fixed-Income Index. The benchmark is rebalanced monthly.
7. Treatment of External Cash Flows

The concept of external cash flows in the context of overlay portfolios does not directly relate to physical cash flows into and out of the overlay portfolio, but rather to changes in the overlay exposure (i.e., target exposure of the overlay or the underlying exposure being overlaid). Hence, client or underlying manager-directed overlay portfolio exposure changes are considered to be external cash flows. GIPS guidance on external cash flows, large cash flows, significant cash flows, and temporary new accounts applies to overlay portfolios in this context.

With respect to large cash flows, the GIPS standards require that firms must define large cash flows for each composite to determine when portfolios in that composite must be valued, and portfolios must be valued on the date of all large cash flows. These requirements apply to overlay strategy portfolios. Firms with overlay portfolios must define a large cash flow at the level at which the firm determines that an external cash flow (i.e., overlay exposure change) may distort performance if the overlay portfolio is not valued. Firms must define a large cash flow amount in terms of the exposure, or a percentage of the exposure, to overlay portfolio or overlay composite assets. Please see the calculation example below for the application of a large external flow to an overlay portfolio calculation. Please see Section 8 for additional examples of the application of external cash flows to overlay portfolios.

The adoption of a significant cash flow policy for overlay strategy composites is optional. If such a policy is adopted, a significant cash flow would be defined at the level at which the firm determines that a client or underlying portfolio manager-directed external cash flow (i.e., overlay exposure change) may temporarily prevent the firm from implementing the overlay composite strategy. The measure of significance must be determined as either a specific monetary exposure amount or a percentage of overlay portfolio assets (based on the most recent valuation). In the case of significant overlay exposure changes, the entire portfolio would be temporarily removed from the composite while the new exposure is implemented. If a firm has adopted a significant cash flow policy for a specific composite, the firm must disclose how it defines a significant cash flow for that composite and for which periods. Alternatively, a firm can choose to use a temporary new account to remove the effect of a significant cash flow on a portfolio. Please see the GIPS Guidance Statement on Treatment of Significant Cash Flows for further information.

Example: Currency Overlay Implementation

A client-directed change in the foreign currency exposure of the underlying portfolio is considered to be an external cash flow. The overlay manager defines a large cash flow in which the inflow/outflow results in the currency overlay portfolio being outside the contractual tolerance limits of a 98% to 102% hedge ratio (around the target of 100%). Overlay portfolios will be revalued and performance will be calculated for all large cash flows.

The overlay manager defines a significant cash flow in which the inflow/outflow results in the currency overlay portfolio being outside the contractual tolerance limits of 90% to 110% hedge ratio (around the target of 100%). Overlay portfolios are temporarily removed from the currency overlay composite as a result of the significant cash flows.

Example: Interest Rate Overlay Implementation (Benchmarked to a Blend of Interest Rate Swaps)

The overlay manager manages an interest rate hedging portfolio to be duration neutral versus a relevant swap-blend benchmark. A client-directed cash flow resulting in an adjustment to the interest rate hedge will be considered a large cash flow when the effect of such change is 0.50 years or greater to the target duration of the hedge.
Example: Cash Equitization Overlay Implementation
An overlay manager is hired to equitize the underlying cash of an equity manager. The overlay manager uses derivatives to establish exposure equal to the cash held by the equity manager. When the equity manager informs the overlay manager that the amount of cash has changed, the target exposure has to be adjusted and this change in target exposure is treated as an external cash flow.

Example: Notional Exposure Change Attributable To a Large External Cash Flow
The overlay manager does not manage the underlying portfolio. The overlay manager defines a large cash flow as an external cash flow greater than 10% of notional exposure.

<table>
<thead>
<tr>
<th>Reference</th>
<th>Date</th>
<th>External Cash Flows</th>
<th>Notional Exposure</th>
<th>Profit from Overlay Strategy</th>
<th>Total Return</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i)</td>
<td>31 Dec 14</td>
<td>100,000,000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(ii)</td>
<td>20 Jan 15</td>
<td>20,000,000</td>
<td>120,000,000</td>
<td>1,600,000</td>
<td>1.60%</td>
</tr>
<tr>
<td>(iii)</td>
<td>31 Jan 15</td>
<td></td>
<td>1,120,000</td>
<td></td>
<td>0.93%</td>
</tr>
<tr>
<td>(iv)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2.54%</td>
</tr>
</tbody>
</table>

(i) As of 31 December 2014, the notional exposure (D) is 100 million.
(ii) As of 20 January 2015, the overlay manager is advised that the notional exposure (D) has increased to 120 million because of an external cash flow (C) that is a large cash flow because it is greater than 10% of notional exposure. This results in a notional exposure increase of 20 million. The profit (E) from 31 December 2014 to 20 January 2015 is 1.6 million, or a total return (F) of 1.60%.
(iii) The profit (E) since 20 January 2015 is 1.12 million, or a total return (F) of 0.93%.
(iv) The overlay portfolio’s January 2015 total return (F) is calculated by geometrically linking the two sub-period total returns such that \((1 + 1.60\%) \times (1 + 0.93\%) - 1\) = 2.54%.

8. Performance Calculation
GIPS guidance on calculation methodology applies to overlay portfolios. Please see the GIPS Guidance Statement on Calculation Methodology for further information. The following sections provide additional guidance and new requirements on the time-weighted return calculation for overlay portfolios.

Numerator
The numerator of the overlay portfolio return calculation must include all income and unrealized and realized gain/loss earned by the overlay portfolio during the period, calculated after the deduction of actual trading expenses incurred during the period (for example, commissions on futures transactions or clearing fees on cleared swaps)—that is, the profit/loss. Accrual accounting must be used for instruments that accrue interest.

If the management of the collateral is part of the overlay strategy, then any collateral income during the period must be included in the numerator.

Denominator
The denominator used in an overlay portfolio return calculation must be calculated by using one of the following methods:

(i) The notional exposure of the overlay strategy as of the beginning of the period.
(ii) The value of the underlying portfolio being overlaid as of the beginning of the period.
(iii) The specified target exposure as of the beginning of the period, which can be defined as either a target exposure or determined by a formula used to calculate the target exposure for each period.

All portfolios in an overlay composite must use the same method to calculate the denominator and firms must disclose the method used. The method used to calculate the denominator of an overlay portfolio return must be the same as the method used to calculate the composite’s total overlay exposure. Firms must consistently apply the methodology chosen to calculate the denominator.

When an interest rate overlay is benchmarked to a set of cash flows, the notional amount of derivatives required to hedge the interest rate exposure will not equal the present value of the cash flows being hedged because the notional amount will vary depending on the instruments chosen to implement the hedge. Hence, an interest rate overlay return calculated by dividing the profit/loss earned by the portfolio during the period by the notional exposure of the instruments used would not be comparable to the change in present value of the cash flows being hedged. Therefore, the denominator for an interest rate overlay benchmarked to a set of cash flows must be the sum of the present value of the cash flows being hedged as of the beginning of the period.

Please note that the use of derivatives often requires collateral. The value of that collateral is typically only a fraction of the exposure value. The use of the collateral value as the denominator is an inappropriate method and results in a misleading return. If the management of the collateral is part of the overlay strategy, then the value of the collateral as of the beginning of the period must be included in the denominator.

**Question 5: Are the methods used to calculate the denominator in an overlay portfolio return calculation appropriate?**

**Collateral/Margin**

Overlay strategies typically require collateral (sometimes referred to as margin). The collateral provided may be for the required minimum or for a larger amount. The required minimum amount may be determined by law or regulation. There are different ways the collateral can be managed and this can impact the overlay portfolio return calculation. For example,

- a client or another party manages the collateral separately from the overlay strategy. Hence, the overlay manager has no discretion over the collateral, so the collateral income must be excluded from the overlay portfolio return unless the collateral income amount is not available because of administrative limitations. In this case, the inclusion of the collateral income because of administrative limitations must be disclosed.

  or

- the collateral is actively managed by the overlay manager as part of the overlay strategy. In this scenario, the collateral income must be included in the overlay portfolio return.

**Question 6: Is the requirement to include collateral income in the overlay portfolio return when the collateral is actively managed appropriate? If not, should this be changed to a recommendation?**

Firms must establish a policy on the treatment of collateral in the portfolio return calculation on a composite-specific basis.

**Question 7: Is the requirement to establish a composite specific policy on the treatment of collateral appropriate? If not, should this be changed to a recommendation?**
Compounding Returns over Time

The returns of overlay portfolios must be geometrically linked when the overlay exposure changes over the time period. The purpose of geometric linking is to account for the compounding effect of returns. If a 1,000 portfolio earns a 10% return in Period 1, it has 1,100 to invest in Period 2. If in Period 2 the portfolio loses 10%, it has an ending value of 990. To calculate the total return for Periods 1 and 2, geometrically link the two returns: \((1 + 10\%) \times (1 – 10\%) – 1 = –1\%\).

**Question 8:** Do you agree that 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 is appropriate.

When the exposure remains constant over time, the overlay portfolio’s return must not be geometrically linked. Instead, returns must be calculated as the cumulative profit/loss for the calculation period divided by the denominator. The following is an example:

<table>
<thead>
<tr>
<th>Reference</th>
<th>Date</th>
<th>Target Exposure</th>
<th>Profit/Loss from Overlay Strategy</th>
<th>Cumulative Profit/Loss from Overlay Strategy</th>
<th>Monthly Total Return</th>
<th>Year-to-Date Total Return</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i)</td>
<td>31 Dec 14</td>
<td>500,000,000</td>
<td></td>
<td></td>
<td>10.00%</td>
<td>10.00%</td>
</tr>
<tr>
<td>(ii)</td>
<td>31 Jan 15</td>
<td>500,000,000</td>
<td>50,000,000</td>
<td>50,000,000</td>
<td>4.00%</td>
<td>14.00%</td>
</tr>
<tr>
<td>(iii)</td>
<td>28 Feb 15</td>
<td>500,000,000</td>
<td>20,000,000</td>
<td>70,000,000</td>
<td>–4.80%</td>
<td>9.20%</td>
</tr>
<tr>
<td>(iv)</td>
<td>31 Mar 15</td>
<td>500,000,000</td>
<td>–24,000,000</td>
<td>46,000,000</td>
<td>–4.80%</td>
<td>9.20%</td>
</tr>
</tbody>
</table>

(i) As of 31 December 2014, the target exposure (C) is 500 million.
(ii) The total return (F) for January 2015 is 10% and is calculated as 50 million profit (D) divided by 500 million target exposure (C).
(iii) The total return (F) for February 2015 is 4.00% and is calculated as 20 million profit (D) divided by 500 million target exposure (C). The cumulative profit (E) is 70 million. The year-to-date total return (G) is calculated as 70 million profit divided by 500 million target exposure.
(iv) The total return (F) for March 2015 is –4.80% and is calculated as 24 million loss (D) divided by 500 million target exposure. The cumulative profit (E) is 46 million. The year-to-date total return (G) is calculated as 46 million profit divided by 500 million target exposure.

**Question 9:** Do you agree that overlay returns must not be 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 not, please explain what method(s) you believe is appropriate.
Performance Calculation Examples

Example: Passive currency hedge overlay
The passive hedge is designed to eliminate a portion of the currency risk in an international portfolio. Performance is typically calculated with reference to the “hedgeable notional exposure”—that is, the value in base currency of the underlying portfolios being hedged. The change in cumulative value in the base currency of the hedges in any period is often referred to as the “contribution from hedging.” The performance of the currency overlay is then calculated as follows:

\[
\text{Contribution from hedging (base currency)} = \frac{\text{Hedgeable notional exposure at beginning of period (base currency)}}{\text{Profit from Hedging (base currency)}},
\]

The overlay manager will often determine what change in value of the underlying exposure would require a rebalance back to the target hedge ratio. For instance, the overlay manager may decide that hedge ratio variations between 98% and 102% (around the target of 100%) do not require the currency hedges to be rebalanced. In the event that the hedge ratio variation is breached and a rebalance of the currency hedge is implemented, then portfolio performance for the partial period before and after rebalancing must be calculated and linked to derive the full period portfolio performance. Please see the following example.

<table>
<thead>
<tr>
<th>Reference</th>
<th>Date</th>
<th>Hedgeable Notional Exposure (base currency)</th>
<th>Profit from Hedging (base currency)</th>
<th>Total Return</th>
</tr>
</thead>
<tbody>
<tr>
<td>(A)</td>
<td>(B)</td>
<td>(C)</td>
<td>(D)</td>
<td>(E)</td>
</tr>
<tr>
<td>(i)</td>
<td>31 Dec 14</td>
<td>100,000,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(ii)</td>
<td>20 Jan 15</td>
<td>120,000,000</td>
<td>1,600,000</td>
<td>1.60%</td>
</tr>
<tr>
<td>(iii)</td>
<td>31 Jan 15</td>
<td>700,000</td>
<td></td>
<td>0.58%</td>
</tr>
<tr>
<td>(iv)</td>
<td></td>
<td></td>
<td></td>
<td>2.19%</td>
</tr>
</tbody>
</table>

(i) As of 31 December 2014, the hedgeable notional exposure (C) is 100 million, expressed in base currency. Currency hedges are implemented to hedge a fixed portion of the currency risk associated with this hedgeable notional exposure.

(ii) As of 20 January 2015, the overlay manager is advised that the size of the hedgeable notional exposure (C) has increased to 120 million because of new investment into the underlying portfolio. This results in a hedgeable notional exposure increase of 20 million and the need for the hedge size to be adjusted. The profit from hedging (D) from 31 December 2014 to 20 January 2015 in base currency is 1.6 million. The first sub-period total return (E) is calculated by dividing the profit by the beginning of period hedgeable notional exposure: \[\frac{1,600,000}{100,000,000} = 1.60\%\].

(iii) The profit from hedging (D) since 20 January 2015 is 0.7 million. The second sub-period total return (E) for the last half of January 2015 is calculated by dividing the profit by the beginning of period hedgeable notional exposure: \[\frac{700,000}{120,000,000} = 0.58\%\].

(iv) The overlay portfolio’s January 2015 total return (E) is calculated by geometrically linking the two sub-period total returns: \[(1 + 1.60\%) \times (1 + 0.58\%) – 1\] = 2.19%.

Example: Interest rate overlay benchmarked to a blend of interest rate swaps
The overlay manager determines that the dollar duration required to achieve the client’s specified interest rate target hedge, taking into account the client’s specified other fixed-income assets that contribute to the hedge. In this example, the dollar duration required for the overlay manager to complete the hedge is $4 billion. The overlay portfolio’s benchmark is a 50%/25%/25% blend of 10-, 20-, and 30-year swap
indexes, which has a weighted duration of 14.03 years. Dividing the required $4 billion dollar duration by the 14.03 years weighted duration equals $285,103,350 swap notional in a 50%/25%/25% blend of 10-, 20-, and 30-year swap indexes required to achieve the client’s target hedge. This amount is the specified target exposure for the period because (1) the benchmark resets each month, while the portfolio does not necessarily terminate existing swaps and roll into new swaps each month, and (2) the portfolio may be positioned differently from the benchmark because of yield curve bets, etcetera, and so, the portfolio may not have the same swap notional exposure as the benchmark. In order to provide a fair comparison of the portfolio dollar return versus the benchmark dollar return, the portfolio return calculation uses the specified target exposure as the denominator.

In the following example, the specified target exposure does not change during the month.

<table>
<thead>
<tr>
<th>Reference</th>
<th>Date</th>
<th>Specified Target Exposure</th>
<th>Profit from Overlay Strategy</th>
<th>Total Return</th>
</tr>
</thead>
<tbody>
<tr>
<td>(A)</td>
<td>(B)</td>
<td>(C)</td>
<td>(D)</td>
<td>(E)</td>
</tr>
<tr>
<td>(i)</td>
<td>31 Dec</td>
<td>285,103,350</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(ii)</td>
<td>31 Jan</td>
<td>20,950,375</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(iii)</td>
<td></td>
<td></td>
<td></td>
<td>7.35%</td>
</tr>
</tbody>
</table>

(i) As of 31 December 2014, the specified target exposure (C) is 285,103,350.
(ii) The profit (D) for January 2015 is 20,950,375.
(iii) The overlay portfolio’s January 2015 total return (E) is calculated by dividing the profit by the beginning of period specified target exposure: 20,950,375/285,103,350 = 7.35%.

In the next example, the client increases the specified target exposure on 15 January. The increase in specified target exposure qualifies as a large cash flow because the firm’s large cash flow policy defines a change in specified target exposure of more than 2% as a large cash flow.

<table>
<thead>
<tr>
<th>Reference</th>
<th>Date</th>
<th>Specified Target Exposure</th>
<th>External Cash Flows</th>
<th>Profit from Overlay Strategy</th>
<th>Total Return</th>
</tr>
</thead>
<tbody>
<tr>
<td>(A)</td>
<td>(B)</td>
<td>(C)</td>
<td>(D)</td>
<td>(E)</td>
<td>(F)</td>
</tr>
<tr>
<td>(i)</td>
<td>31 Dec</td>
<td>285,103,350</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(ii)</td>
<td>15 Jan</td>
<td>350,914,354</td>
<td>65,811,004</td>
<td>15,675,250</td>
<td>5.50%</td>
</tr>
<tr>
<td>(iii)</td>
<td>31 Jan</td>
<td></td>
<td></td>
<td>10,144,535</td>
<td>2.89%</td>
</tr>
<tr>
<td>(iv)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>8.55%</td>
</tr>
</tbody>
</table>

(i) As of 31 December 2014, the specified target exposure (C) is 285,103,350.
(ii) The profit (E) for the first half of January 2015 is 15,675,250. This first period total return (F) is calculated by dividing the profit from the overlay strategy by the beginning of period specified target exposure: 15,675,250/285,103,350 = 5.50%. At the close of business on 15 January 2015, the client increases its target interest rate hedge exposure by 65,811,004, which is considered a large cash flow (D) per the firm’s policies. The new specified target exposure (C) at the close of business on 15 January 2015 is 350,914,354.
(iii) The profit (E) for the period after the large cash flow is 10,144,535. This second period total return (F) for the second half of January 2015 is calculated by dividing the profit by the beginning of period specified target exposure: 10,144,535/350,914,354 = 2.89%.
(iv) The overlay portfolio’s January 2015 total return (F) is calculated by geometrically linking the two sub-period total returns: [(1 + 5.50%) x (1 + 2.89%) – 1] = 8.55%.
Example: Cash equitization overlay
The overlay manager has been directed to obtain ABC Index exposure to equitize 249,186,371 in cash as of 31 December 2014. The overlay manager obtained the exposure by entering into a total return swap on ABC Index. The overlay portfolio's total return for January 2015 is calculated as follows:

<table>
<thead>
<tr>
<th>Reference</th>
<th>Date</th>
<th>Exposure</th>
<th>Profit/Loss from Overlay Strategy</th>
<th>Total Return</th>
</tr>
</thead>
<tbody>
<tr>
<td>(A)</td>
<td>(B)</td>
<td>(C)</td>
<td>(D)</td>
<td>(E)</td>
</tr>
<tr>
<td>(i)</td>
<td>31 Dec 14</td>
<td>249,186,371</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(ii)</td>
<td>31 Jan 15</td>
<td></td>
<td>–7,602,981</td>
<td></td>
</tr>
<tr>
<td>(iii)</td>
<td></td>
<td></td>
<td></td>
<td>–3.05%</td>
</tr>
</tbody>
</table>

(i) As of 31 December 2014, the underlying cash portfolio to be equitized (C) is 249,186,371.
(ii) The loss (D) for January 2015 is 7,602,981.
(iii) The overlay portfolio’s January 2015 total return (E) is calculated by dividing the loss by the exposure: –7,602,981/249,186,371 = –3.05%

Overlay Composite Performance Calculation
Overlay composite returns must be calculated by using one of the methods described in the GIPS Guidance Statement on Calculation Methodology. When calculating overlay asset-weighted composite returns, the portfolios’ returns must be weighted based on the same denominators used to calculate the respective portfolio returns.

9. Presentation and Disclosure
Overlay strategies can be more complex than non-overlay strategies. Firms must be guided by the ethical spirit of the GIPS standards in determining the level of disclosure required to enable a prospective client to interpret the overlay composite.

In addition to the required and recommended presentation, reporting, and disclosure items within the GIPS standards, the following guidance contains additional required disclosures for overlay strategy compliant presentations.

Firms must disclose

- both the total firm overlay exposure and the total composite overlay exposure as of each annual period end.
- the methodology used to calculate total firm overlay exposure and total composite overlay exposure; that is, the notional exposure of the overlay strategy being managed, the value of the underlying portfolio being overlaid, or a specified target exposure as of period end.
- the methodology used to calculate overlay portfolio returns, including how the denominator is calculated.
- whether collateral and collateral income is reflected in the overlay return.
- when (a) composite assets and/or (b) either total firm assets or composite assets as a percentage of total firm assets are not presented because they are not considered meaningful.

Question 10: Should text be added to this Guidance Statement recommending disclosure of the sum of (a) total firm overlay exposure and (b) total firm assets, also known as total firm economic exposure?

Question 11: Are the required disclosures appropriate? If not, please explain.
Please see Appendices A, B, and C for sample overlay compliant presentations.

10. Effective Date
Firms are required to apply this guidance for periods beginning on or after 1 January 2019. Firms are encouraged, but not required, to apply this guidance prior to the effective date. This Guidance Statement is not required to be applied retroactively, and no restatement of GIPS-compliant performance is required. Firms may voluntarily choose to apply this Guidance Statement retroactively and in this case, must disclose if any restatement of the historical track record was necessary as a result of the retroactive application.

Question 12: Is the proposed effective date appropriate or would additional time be needed to implement this Guidance Statement?
### Appendix A

**ABC Management Company**  
**Tactical Asset Allocation Overlay Composite**

<table>
<thead>
<tr>
<th>Year</th>
<th>Composite Gross Return (%)</th>
<th>Custom Benchmark Return (%)</th>
<th>Number of Portfolios</th>
<th>Year-End Total Composite Overlay Exposure (€ millions)</th>
<th>Year-End Total Firm Overlay Exposure (€ millions)</th>
<th>Internal Composite Dispersion (%)</th>
<th>Composite Standard Deviation 3 Year (%)</th>
<th>Benchmark Standard Deviation 3 Year (%)</th>
<th>Annualized Period</th>
<th>Composite Gross Return Annualized Return (%)</th>
<th>Benchmark Return Annualized Return (%)</th>
<th>Year-End Total Composite Assets (€ millions)</th>
<th>Year-End Total Firm Assets (€ millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>6.96</td>
<td>6.56</td>
<td>6</td>
<td>100,533</td>
<td>1,760,287</td>
<td>2.50</td>
<td>2.61</td>
<td>3.00</td>
<td>1 Y</td>
<td>6.96</td>
<td>6.56</td>
<td>5,533</td>
<td>1,696,287</td>
</tr>
<tr>
<td>2015</td>
<td>3.92</td>
<td>3.67</td>
<td>6</td>
<td>120,656</td>
<td>1,740,186</td>
<td>N/A</td>
<td>2.76</td>
<td>2.85</td>
<td>2 Y</td>
<td>5.43</td>
<td>5.11</td>
<td>4,656</td>
<td>1,684,186</td>
</tr>
<tr>
<td>2014</td>
<td>2.89</td>
<td>2.04</td>
<td>&lt;=5</td>
<td>130,962</td>
<td>2,710,341</td>
<td>N/A</td>
<td>3.11</td>
<td>3.29</td>
<td>3 Y</td>
<td>4.58</td>
<td>4.07</td>
<td>4,862</td>
<td>1,671,341</td>
</tr>
<tr>
<td>2013</td>
<td>9.29</td>
<td>9.41</td>
<td>&lt;=5</td>
<td>170,092</td>
<td>2,830,096</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>4 Y</td>
<td>5.73</td>
<td>5.38</td>
<td>3,892</td>
<td>1,683,096</td>
</tr>
<tr>
<td>2012</td>
<td>1.80</td>
<td>1.74</td>
<td>&lt;=5</td>
<td>180,367</td>
<td>2,070,348</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>5 Y</td>
<td>4.94</td>
<td>4.64</td>
<td>4,367</td>
<td>1,407,348</td>
</tr>
</tbody>
</table>

### Compliance Statement

ABC Management Company claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. ABC Management Company has not been independently verified.

### Definition of the firm

ABC Management Company is an independent investment management firm that was established in 2007. ABC Management Company manages a variety of equity, fixed-income, balanced strategies, and overlay strategies for European investors.

### Policies

ABC Management Company’s policies for valuing portfolios, calculating performance, and preparing compliant presentations are available on request.

### Composite description

The tactical asset allocation overlay composite includes all fee-paying, discretionary portfolios in which the investment approach is to manage the risk of an entire portfolio using derivatives and cash instruments. The management of the collateral is part of the strategy, and therefore, the collateral is included in the denominator and the collateral income in the numerator of the overlay return calculation. The portfolios in this composite utilize hedging and leverage. Allocation shifts are implemented typically via long and short futures, options, and swaptions. This strategy allows leverage up to but not exceeding 180% of portfolio value. Portfolios are expected to have an investment exposure above 100%. Inherent in derivative instruments is the risk of counterparty default. Leverage may magnify losses as well as gains.

### Methodology used to calculate overlay portfolio returns

The portfolio performance is calculated such that the gain or loss of the portfolio, including any income on the collateral, is divided by the sum of the notional exposure and the value of the collateral at the beginning of the period.

### Methodology used to calculate total overlay exposure

The total overlay exposure value is calculated using the notional exposure. Total composite overlay exposure is the sum of the notional exposures of the portfolios included in the composite at each year-ended 31 December. Total firm overlay exposure is the sum of all notional exposures of all portfolios managed by ABC Management Company at each year-ended 31 December.

### Treatment of collateral

Because the collateral management is part of the overlay strategy, the value of the collateral is included in the denominator and the collateral income is included in the numerator of the performance calculation.

### Leverage

Since the inception of the strategy, leverage has averaged 110% of portfolio value. However, during 2013, leverage averaged 130%, which greatly increased the sensitivity to market volatility and increased the potential for larger realized gains and/or losses. Primarily, the strategy utilizes long and short futures, options, and swaptions.
9. Currency
Returns are presented in Euros.

10. Benchmark
The composite custom benchmark is calculated using the benchmarks of the portfolios in the composite. The benchmark is rebalanced monthly based on the beginning values of the portfolios included in the composite. As of 31 December 2016, the custom benchmark is composed of 23.9% WEI World Equity Index, 19.9% ECBI EMU Corporate Bond Index Non-Financial, 42% ECI EMU Covered Bond Index, 9.5% EMEI Emerging Markets Equity Index, and 4.7% EMBI Emerging Markets Bond Index. The components of the custom benchmark and their underlying weightings for all monthly time periods are available on request. Benchmark returns are gross of withholding taxes.

11. Fees
Returns are presented gross of investment management fees, custodial fees, and withholding taxes but net of all trading expenses.

12. Fee schedule
The standard investment management fee is 150 bps per annum with overlay exposure up to €750 million and 100 bps thereafter.

13. Internal composite dispersion
The internal composite dispersion is calculated using the equal-weighted standard deviation of annual gross returns for those portfolios included in the composite for the entire year. Where a composite consists of five or fewer portfolios for the full year, no measure of dispersion is provided.

14. Ex-post standard deviation
The three-year annualized standard deviation measures the variability of the composite and the benchmark returns over the preceding 36 month period. The three-year annualized ex-post standard deviation for the composite and benchmark is not presented for 2012 and 2013 as the composite had less than 36 monthly returns.

15. List of composites
A list of all composite descriptions is available upon request.

16. Composite creation date
This composite was created in December 2012.
Appendix B

FX Overlay Management Limited
Passive Currency Overlay Composite

Composite characteristics
Reporting currency          CHF
Benchmark                  100% Hedged
Description                The composite includes all institutional and retail passive currency overlay portfolios where the aim is to match the performance of the benchmark with a tracking error target of 25bps per annum. Currency forwards traded over the counter have counterparty default risk.

Period                    1 July 2007 to 31 December 2016

<table>
<thead>
<tr>
<th>Calendar Year</th>
<th>Composite Gross Return (%)</th>
<th>Custom Benchmark Return (%)</th>
<th>Composite Standard Deviation (3 yr annualized %)</th>
<th>Benchmark Standard Deviation (3 yr annualized %)</th>
<th>Number of Portfolios</th>
<th>Dispersion (%)</th>
<th>Year-End Total Composite Overlay Exposure (CHF millions)</th>
<th>Year-End Total Firm Overlay Exposure (CHF millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007*</td>
<td>6.70</td>
<td>6.75</td>
<td>n/a</td>
<td>n/a</td>
<td>2</td>
<td>n/a</td>
<td>167</td>
<td>1,206</td>
</tr>
<tr>
<td>2008</td>
<td>(13.89)</td>
<td>(14.06)</td>
<td>n/a</td>
<td>n/a</td>
<td>2</td>
<td>n/a</td>
<td>203</td>
<td>1,820</td>
</tr>
<tr>
<td>2009</td>
<td>(9.06)</td>
<td>(9.05)</td>
<td>n/a</td>
<td>n/a</td>
<td>2</td>
<td>n/a</td>
<td>231</td>
<td>3,863</td>
</tr>
<tr>
<td>2010</td>
<td>(7.45)</td>
<td>(7.53)</td>
<td>4.03</td>
<td>4.07</td>
<td>2</td>
<td>n/a</td>
<td>275</td>
<td>4,379</td>
</tr>
<tr>
<td>2011</td>
<td>3.88</td>
<td>4.03</td>
<td>4.47</td>
<td>4.52</td>
<td>2</td>
<td>n/a</td>
<td>357</td>
<td>3,068</td>
</tr>
<tr>
<td>2012</td>
<td>10.94</td>
<td>11.05</td>
<td>6.91</td>
<td>6.95</td>
<td>3</td>
<td>n/a</td>
<td>370</td>
<td>2,385</td>
</tr>
<tr>
<td>2013</td>
<td>7.02</td>
<td>6.97</td>
<td>7.21</td>
<td>7.25</td>
<td>3</td>
<td>n/a</td>
<td>357</td>
<td>2,070</td>
</tr>
<tr>
<td>2014</td>
<td>3.35</td>
<td>3.37</td>
<td>6.98</td>
<td>7.02</td>
<td>5</td>
<td>n/a</td>
<td>429</td>
<td>1,789</td>
</tr>
<tr>
<td>2015</td>
<td>(13.14)</td>
<td>(13.13)</td>
<td>7.36</td>
<td>7.36</td>
<td>6</td>
<td>0.09</td>
<td>611</td>
<td>2,451</td>
</tr>
<tr>
<td>2016</td>
<td>7.98</td>
<td>8.16</td>
<td>7.42</td>
<td>7.40</td>
<td>6</td>
<td></td>
<td>602</td>
<td>3,385</td>
</tr>
</tbody>
</table>

1 year       | 7.98                        | 8.16                        |                                                  |                                                  |                      |                |                                                          |                                                          |
3 years annualized | (1.03)                     | (0.97)                      |                                                  |                                                  |                      |                |                                                          |                                                          |
5 years annualized | 2.85                        | 2.90                        |                                                  |                                                  |                      |                |                                                          |                                                          |
Since inception annualized | (0.82)                     | (0.81)                      |                                                  |                                                  |                      |                |                                                          |                                                          |
Since inception cumulative | (7.55)                     | (7.40)                      |                                                  |                                                  |                      |                |                                                          |                                                          |

* This period does not represent a full calendar year
Compliance statement
FX Overlay Management Limited claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. FX Overlay Management Limited has been independently verified for the periods 1 January 2012 to 31 December 2016. The verification reports are available upon request. Verification assesses whether (1) the firm has complied with all the composite construction requirements of the GIPS standards on a firm-wide basis and (2) the firm's policies and procedures are designed to calculate and present performance in compliance with the GIPS standards. Verification does not ensure the accuracy of any specific composite presentation.

Definition of the firm
FX Overlay Management Limited is an independent investment management firm established in 2001. FX Overlay Management Limited manages currency overlay portfolios for institutional clients. FX Overlay Management Limited is a regulated company.

Composite assets and total firm assets
Composite assets and total firm assets are not presented because FX Overlay Management Limited is managing only currency overlay strategies without managing the underlying portfolios, and therefore, these numbers are not considered meaningful.

Methodology used to calculate total overlay exposure
FX Overlay Management Limited does not manage any of the underlying assets for its overlay portfolio clients. Total firm overlay exposure represents the total value of all underlying assets for which FX Overlay Management Limited has a mandate to manage the currency overlay. Total composite overlay exposure represents the total value of all underlying portfolios included in this composite.

Performance calculations for portfolios and benchmark
Portfolio and benchmark performance are calculated on a contribution from hedges basis whereby the change in cumulative mark-to-market value of the portfolio/benchmark is divided by the underlying portfolio value being overlaid at the beginning of the period.

Management of the collateral is not part of the overlay strategy. Therefore, the value of the collateral and any collateral income are not included in the overlay performance calculation.

Leverage
This strategy uses forward currency contracts extensively to sell one currency to invest in another in order to adjust the currency exposure of the underlying portfolio. In volatile periods, liquidity and correlations between currencies may influence returns significantly.

Custom benchmark
The benchmark is 100% hedged. The benchmark is based on a zero cost one-month rolling hedge, whereby mid spot rates and one month bid/offer forward points are applied. The composite custom benchmark is calculated using the benchmarks of the portfolios in the composite. The benchmark is rebalanced monthly based on the beginning values of the portfolios included in the composite. The benchmark is multi-currency. As of 31 December 2016, the custom benchmark is composed of 29% USD Bond Index, 50% EURO Bond Index Non-Financial, 12% JPY Bond Index, and 9% GBP Bond Index. The components of the custom benchmark and their underlying weightings for all monthly time periods are available on request. Benchmark returns are net of withholding taxes.

Fees
Performance results are presented gross of investment management fees. The performance will be reduced by the fees associated with the management of the portfolio. Investment management fees range between 3–10 bps per annum, subject to portfolio size.

Ex-post standard deviation
The three-year annualized standard deviation measures the variability of the composite and the benchmark returns over the preceding 36-month period. The three-year annualized ex-post standard deviation for the composite and benchmark is not presented for 2007 through 2009 because the composite had less than 36 monthly returns.

Internal composite dispersion
The composite dispersion is measured by the equal-weighted standard deviation of the returns of each portfolio in the composite. The measure of dispersion considers only portfolios included in the composite for a full year. When a composite consists of five or fewer portfolios for the full year, no measure of dispersion is presented.

Composite creation date and availability
This composite was created in December 2007. A complete list and description of the firm's composites is available on request. Policies for valuing portfolios, calculating performance, and preparing compliant presentations are available on request.
Appendix C

CCWO Management Company
Covered Call Writing Overlay Composite

<table>
<thead>
<tr>
<th>Calendar Year</th>
<th>Composite Net Return (%)</th>
<th>Composite Gross Return (%)</th>
<th>Benchmark Return (%)</th>
<th>Composite Standard Deviation (3 yr annualized %)</th>
<th>Benchmark Standard Deviation (3 yr annualized %)</th>
<th>Number of Portfolios</th>
<th>Internal Dispersion (%)</th>
<th>Year-End Total Composite Overlay Exposure (USD millions)</th>
<th>Year-End Total Firm Overlay Exposure (USD millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>5.99%</td>
<td>6.28%</td>
<td>6.20%</td>
<td>&lt;5</td>
<td>N/A</td>
<td>50</td>
<td>N/A</td>
<td>50</td>
<td>2,624</td>
</tr>
<tr>
<td>2012</td>
<td>9.45%</td>
<td>9.76%</td>
<td>9.58%</td>
<td>&lt;5</td>
<td>N/A</td>
<td>125</td>
<td>N/A</td>
<td>125</td>
<td>5,527</td>
</tr>
<tr>
<td>2013</td>
<td>16.12%</td>
<td>16.42%</td>
<td>16.06%</td>
<td>&lt;5</td>
<td>N/A</td>
<td>173</td>
<td>N/A</td>
<td>173</td>
<td>6,086</td>
</tr>
<tr>
<td>2014</td>
<td>8.45%</td>
<td>8.75%</td>
<td>8.42%</td>
<td>4.56%</td>
<td>8.97%</td>
<td>6</td>
<td>N/A</td>
<td>407</td>
<td>9,455</td>
</tr>
<tr>
<td>2015</td>
<td>3.88%</td>
<td>4.19%</td>
<td>3.88%</td>
<td>5.24%</td>
<td>10.47%</td>
<td>8</td>
<td>N/A</td>
<td>511</td>
<td>9,928</td>
</tr>
</tbody>
</table>

Compliance statement
CCWO Management Company claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. CCWO Management Company has been independently verified for the periods 1 January 2011 to 31 December 2015. The verification reports are available on request. Verification assesses whether (1) the firm has complied with all the composite construction requirements of the GIPS standards on a firm-wide basis and (2) the firm’s policies and procedures are designed to calculate and present performance in compliance with the GIPS standards. Verification does not ensure the accuracy of any specific composite presentation.

Definition of the firm
CCWO Management Company is registered with the US Securities and Exchange Commission (SEC).

Policies
CCWO Management Company’s policies for valuing portfolios, calculating performance, and preparing compliant presentations are available on request.

Composite assets and total firm assets
CCWO Management Company manages only overlay strategies for which covered call writing is utilized, so composite assets and total firm assets are not considered meaningful, and therefore, are not presented.

Composite description
The Covered Call Writing Overlay Composite is composed of all portfolios for which covered call writing is conducted to generate additional income for an underlying large-cap US equity portfolio. The strategy seeks to generate monthly option premium income while protecting against downward moves in the underlying portfolio through selling covered calls with a monthly duration on US equities held in the underlying portfolio at the money, or slightly out of or in the money. The use of derivatives, such as equity options, can involve a high degree of financial risk because a relatively small movement in the price of the underlying security or benchmark may result in an unexpected or disproportionately large movement, unfavorable or favorable, in the price of the derivative instrument. The strategy does not utilize leverage.

Methodology used to calculate overlay portfolio returns
The portfolio performance is calculated such that the gain or loss of the portfolio, including any income on the collateral, is divided by the underlying portfolio and the value of the collateral at the beginning of the period.

Methodology used to calculate total overlay exposure value
The total overlay exposure value is calculated using the underlying portfolios. Total composite overlay exposure value is the sum of the underlying portfolio values included in the composite at each 31 December year end. Total firm overlay exposure value is the sum of all underlying portfolio values of all portfolios managed by CCWO Management Company at each 31 December year end.
Treatment of collateral
Because the collateral management is part of the overlay strategy, the value of the collateral is included in the denominator and the collateral income is included in the numerator in the performance calculation.

Currency
Returns are presented in USD.

Benchmark
The composite is compared against the US Equity Covered Call Writing Index. The US Equity Covered Call Writing Index seeks to simulate a volatility-driven covered call writing strategy based on the eligible individual constituents of the US Equity Index.

Calculation of gross and net returns
Gross returns are presented gross of investment management fees, custodial fees, and withholding taxes but net of all trading expenses. Net returns are gross returns reduced by actual investment management fees.

Fee schedule
The standard investment management fee is 45 bps per annum with overlay exposure up to 50 million and 35 bps thereafter.

Internal dispersion
The composite dispersion is measured by the equal-weighted standard deviation. Internal dispersion is not statistically meaningful (N/A) for periods shorter than a year and for years in which five or fewer portfolios were included in the composite for the full year. No measure of dispersion is presented for partial periods and when the composite consisted of five or fewer portfolios throughout the year.

List of composites
A list of all composite descriptions is available on request.

Composite creation date
This composite was created in September 2011.