

Global Investment Performance Standards (GIPS®) for Asset Owners

Explanation of the
Provisions in Section 22

August 2020



CFA Institute®
Global Investment
Performance Standards

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INTRODUCTION

The Explanation of the Provisions in Section 22 provides interpretation of each provision contained in Section 22: Input Data and Calculation Methodology. Asset owners that choose to comply with the Global Investment Performance Standards (GIPS®) must comply with all applicable requirements of the GIPS standards, including any Guidance Statements, interpretations, and Questions and Answers (Q&As) published by CFA Institute and the GIPS standards governing bodies.

Consistency of input data used to calculate performance is critical to effective compliance with the GIPS standards and establishes the foundation for full and fair investment performance presentations. Achieving transparency among asset owners' performance presentations requires uniformity in methods used to calculate returns. The GIPS standards mandate the use of certain calculation methodologies to facilitate a clear understanding of the information. It is important that the data being presented to the oversight body is consistent and transparent to aid in the evaluation of performance information and foster strong investment decision-making.

Each provision is included in a grey text box. Within the provisions are words appearing in small capital letters. This indicates defined terms that can be found in the GIPS Standards Glossary. Below each provision is a discussion that provides interpretive guidance to help readers understand the provision.

22. INPUT DATA AND CALCULATION METHODOLOGY

22.A. Input Data and Calculation Methodology—Requirements

Assets

Provision 22.A.1

TOTAL ASSET OWNER ASSETS MUST be the aggregate FAIR VALUE of all discretionary and non-discretionary assets managed by the ASSET OWNER. This includes both fee-paying and non-fee-paying PORTFOLIOS.¹

Discussion

Asset owners include (but are not limited to) pension funds (both public and private), endowments, foundations, family offices, provident funds, insurers and reinsurers, sovereign wealth funds, and fiduciaries that have investment responsibility for a pool of assets. They typically do not have external clients. Total asset owner assets include all discretionary and non-discretionary assets for which an asset owner has investment management responsibility. Total asset owner assets include assets assigned to an external manager provided the asset owner has discretion over the selection of the external manager. All portfolios included in total asset owner assets must be included in a total fund.

For periods beginning on or after 1 January 2011, asset owners must value all discretionary and non-discretionary assets in accordance with the definition of fair value. Fair value is defined in the GIPS standards as the amount at which an investment could be sold in an arm's-length transaction between willing parties in an orderly transaction. The valuation must be determined using the objective, observable, unadjusted quoted market price for an identical investment in an active market on the measurement date, if available. In the absence of an objective, observable, unadjusted quoted market price for an identical investment in an active market on the measurement date, the valuation must represent the asset owner's best estimate of the fair value. Fair value must include any accrued income.

¹REQUIRED for periods beginning on or after 1 January 2011. For periods prior to 1 January 2011, TOTAL ASSET OWNER ASSETS MUST be the aggregate of either the FAIR VALUE or the MARKET VALUE of all discretionary and non-discretionary assets managed by the ASSET OWNER.

The requirement to value all assets at fair value applies to assets in both fee-paying and non-fee-paying portfolios. One example of a non-fee-paying portfolio is one that is internally managed and no explicit investment management fees are charged for managing those assets. Total asset owner assets must reflect the fair value of all discretionary and non-discretionary assets within the asset owner definition. For periods prior to 1 January 2011, total asset owner assets must be the aggregate of the fair value or market value of all discretionary and non-discretionary assets under management within the defined asset owner.

Some asset owners use an external manager to manage some or all of the total asset owner assets. If an asset owner has discretion over selecting (i.e., can hire and/or fire) the external manager, the asset owner must include the assets managed by the external manager in total asset owner assets. If the asset owner does not have discretion over external manager selection, it must not include the assets managed by the external manager in total asset owner assets, total fund assets, or composite assets.

An asset owner retains the responsibility for its claim of compliance for all of its assets, including its discretionary assets managed by external managers and their reported performance. Therefore, all discretionary assets managed by an external manager must be treated by the asset owner in the same manner as assets managed internally and must be subject to the same policies and procedures as internally managed assets. If the asset owner intends to place reliance on information from external managers, it must ensure that the records and information provided by the external manager meet the requirements of the GIPS standards. For reliance on third-party records and information, please refer to Provision 21.A.20.

Total asset owner assets must include:

- assets for which the asset owner has either conditional or unconditional authority to make investment decisions;
- fee-paying assets and non-fee-paying assets;
- assets managed outside the asset owner (e.g., by external managers) for which the asset owner has asset allocation (assignment) authority (i.e., the asset owner has discretion over the selection of the external manager); and
- cash and cash equivalents (substitutes). (See Provision 22.A.8 for additional guidance on the inclusion of cash and cash equivalents in total asset owner assets.)

Provision 22.A.2

TOTAL ASSET OWNER ASSETS, TOTAL FUND assets, and COMPOSITE assets MUST:

- a. Include only actual assets managed by the ASSET OWNER.
- b. Be calculated net of leverage and not grossed up as if the leverage did not exist.

Discussion

Total asset owner assets, total fund assets, and composite assets must include only actual assets managed by the asset owner. Assets represented by simulated, backtested, or model performance must not be included in total asset owner assets, total fund assets, or composite assets because such assets do not represent actual assets managed by the asset owner.

Total asset owner assets, total fund assets, and composite assets must include any externally managed assets for which the asset owner has discretion in selecting the external manager.

When a total fund or composite strategy employs leverage, the total fund or composite assets and total asset owner assets must be presented net of the leverage and not grossed up as if the leverage did not exist. For example, if an asset owner is managing a total fund that has \$200 million in assets and the asset owner chooses to borrow \$50 million, the total fund's net assets are \$200 million, and its gross assets are \$250 million. Because the asset owner chose to lever the total fund, the asset owner must use \$200 million when calculating total asset owner assets, total fund assets, and composite assets if the total fund is in a composite.

Provision 22.A.3

The ASSET OWNER MUST NOT double count assets when calculating TOTAL ASSET OWNER ASSETS, TOTAL FUND assets, and COMPOSITE assets.

Discussion

Asset owners are prohibited from double counting assets when calculating total asset owner assets, total fund assets, or composite assets. If double counting is not eliminated, assets reported will be inflated and result in a misleading GIPS Asset Owner Report. For asset owners that create additional composites that include portfolios included in the total fund, or include portfolios in more than one composite, care must be taken to ensure assets are not counted more than once. (An additional composite is a grouping of portfolios representing a particular strategy or asset class that the asset owner chooses to present in a GIPS Asset Owner Report.)

As an example, suppose that Asset Owner XYZ has created two additional composites, the All Equity Composite and the Externally Managed Equity Composite. Asset Owner XYZ has the following three equity portfolios:

Portfolio 1 is internally managed and invested in domestic equities, with net assets of €20 million.

Portfolio 2 is an externally managed segregated account invested in international equities, with net assets of €30 million.

Portfolio 3 is an externally managed pooled fund invested in global equities, with net assets of €20 million.

The All Equity Composite includes Portfolio 1, Portfolio 2, and Portfolio 3 and has net assets of €70 million.

The Externally Managed Equity Composite includes Portfolio 2 and Portfolio 3 and has net assets of €50 million.

Each of these portfolios must be included only once in the calculation of total fund assets and total asset owner assets.

Provision 22.A.4

TOTAL FUND and COMPOSITE performance MUST be calculated using only actual assets managed by the ASSET OWNER.

Discussion

Total fund and composite performance must be calculated using only actual assets managed by the asset owner. This performance must include any externally managed assets for which the asset owner has discretion in selecting the external manager.

Simulated, backtested, or model performance must not be included in any total fund or composite because such performance does not represent actual assets managed by the asset owner. Similarly, asset owners must not blend the history of two existing total funds or composites to create simulated performance for a “hybrid” or model total fund or composite and present it as a GIPS-compliant track record. For example, if the performance of actual portfolios in an equity additional composite is combined with the performance of actual portfolios in a fixed-income additional composite to show what the results might have been had the equity and fixed-income portfolios been combined, the results would be considered a simulated strategy. (An additional composite is a grouping of portfolios representing a particular strategy or asset class that the asset owner chooses to present in a GIPS Asset Owner Report.) This “hybrid” or model composite may be presented as supplemental information only if all of the component parts are presented. Even though the returns for the equity and fixed-income additional composites are based on actual assets managed by the asset owner, the arbitrary method of combining them historically is subject to manipulation and does not represent real-time, actual asset allocation decisions. The performance results of this simulated strategy would, therefore, be considered hypothetical performance.

Asset owners may present theoretical performance in GIPS Asset Owner Reports. Theoretical performance is not derived from actual assets invested in the strategy presented, and it includes

model, backtested, hypothetical, simulated, indicative, ex ante, and forward-looking performance. Theoretical performance must be clearly labeled as supplemental information. Asset owners must not link historical theoretical performance with actual performance.

General/Accounting

Provision 22.A.5

TOTAL RETURNS MUST be used.

Discussion

Total return, which is measured over a specified period, has two components: (1) the appreciation or depreciation (capital change) of the assets in the total fund or portfolio over the specified period and (2) the income earned on the assets in the total fund or portfolio over the specified period. When calculating the performance of a total fund or portfolio, the GIPS standards require asset owners to use a total return.

Provision 22.A.6

TRADE DATE ACCOUNTING MUST be used.²

Discussion

For periods beginning on or after 1 January 2005, trade date accounting must be used. For the purpose of complying with the GIPS standards, trade date accounting is defined as recognizing the asset or liability on the date of purchase or sale and not on the settlement date. Recognizing the asset or liability within three business days of the date the transaction is entered into (the trade date T, T + 1, T + 2, or T + 3) satisfies the trade date accounting requirement for purposes of the GIPS standards. Settlement date accounting recognizes the asset or liability on the date when the exchange of cash and investments is completed.

For purchases, when using settlement date accounting, any movement in value between the trade date or booking date and the settlement date will not affect performance until the settlement date. For purchases, when using trade date accounting, the change in value will be reflected for each valuation between trade date and settlement date. Performance comparisons between total funds,

²REQUIRED for periods beginning on or after 1 January 2005.

portfolios, and/or composites that use settlement date accounting and those that use trade date accounting may not be valid. The same problem occurs when comparing settlement date total funds, portfolios, and composites with their benchmarks.

The principle behind requiring trade date accounting is to ensure there is not a significant lag between trade execution and reflecting the trade in the performance of a portfolio. For the purpose of compliance with the GIPS standards, portfolios are considered to satisfy the trade date accounting requirement provided that transactions are recorded and recognized consistently and within normal market practice—typically, a period between the trade date and up to three business days after the trade date (T + 3).

External cash flows are typically booked on the date when they are actually received or distributed. If an asset owner receives notification of incoming funds and trades on a pre-announced external cash inflow before it is received into the portfolio, the portfolio will become leveraged during the period between the trade date and the date when the external cash inflow is physically received. To “cover” this additional exposure and eliminate the leverage effect, asset owners may choose to apply the trade date and settlement date principles to pre-arranged external cash flows by booking the external cash flow with a trade date that reflects the date the asset owner may trade in advance of the external cash inflow and a settlement date that reflects the date when the cash is received. If the asset owner chooses to match the trade date of pre-announced external cash flows to the trade date of trades related to those external cash flows, it should establish this as its policy and treat all pre-announced external cash flows consistently.

Provision 22.A.7

ACCRUAL ACCOUNTING MUST be used for fixed-income securities and all other investments that earn interest income, except that interest income on cash and cash equivalents may be recognized on a cash basis. Any accrued income MUST be included in the beginning and ending TOTAL FUND and PORTFOLIO values when performance is calculated.

Discussion

Accrual accounting allows the recording of financial transactions as they come into existence rather than when they are paid or settled. When determining the valuation for a security that pays interest income, asset owners must include the income that would have been received at the end of the performance period had the security actually paid interest income earned during the performance period.

Accrued interest income must be included in both the beginning and ending total fund and portfolio values when performance is calculated. Interest should be accrued for a security in the total fund or portfolio using whatever method is customary and appropriate for that security.

Some instruments already include accrued income as part of the security's market price. If income for these instruments is being accrued as part of the income recognition process, steps should be taken to ensure that the income is not double counted.

Income on cash and cash equivalents may be recognized on either an accrual or cash basis. Accrued income for cash and cash equivalents can be difficult to calculate. Unlike bonds with a known coupon rate, some short-term securities (e.g., overnight deposits) may not have a published interest rate. Asset owners must develop a methodology for accounting for short-term interest earnings and consistently apply the method selected. Asset owners could consider using the last actual known interest rate to accrue income for the most recent period. When the actual rate becomes known, an adjustment can then be made to allocate the actual income earned to the proper period. In this way, there is no systematic underestimation or overestimation of income, and income is also properly assigned to the period when earned. Cash basis accounting (recording the income for short-term cash and cash equivalents as it is actually received) will tend to lag the suggested accrual method by recognizing income a month after it was earned. Either method is acceptable, however, and the method chosen must be used consistently.

An issue that may arise is how to calculate the performance of a bond, including the accrual of interest, when a bond goes into default. In this situation, the asset owner must recognize the loss when it occurred, and the historical performance must not be recalculated. The accrual of interest must be included in the calculation method up until the point of the bond's default. At that point, the calculation method would reflect the loss of accrued interest by adjusting the amount of accrued interest to zero. When and if the bond comes out of default and there is a reasonable expectation that the bond will commence paying interest, including back interest, the asset owner must begin accruing for such interest payments. The asset owner must not allocate such payments over periods when they were originally due but not paid.

Provision 22.A.8

Cash and cash equivalents that are considered discretionary and part of the investable assets of the TOTAL FUND MUST be included in TOTAL FUND assets and performance calculations.

Discussion

Asset owners often maintain a number of cash accounts. Some are held within the total fund and are available for investment along with other total fund assets. When cash and cash equivalents are considered discretionary and part of the investable assets of the total fund, they must be included in all total fund assets and performance calculations. The asset owner's asset allocation decisions, including allocation to cash, are a component of the investment strategy implementation and thus part of the total fund's return.

If the asset owner does not control the actual investment of cash (e.g., cash is always invested in a custodial money market fund) but does control the amount of the total fund that is allocated to cash, then the cash assets must be included in the asset owner's total fund assets and the performance of cash must be included in the total fund performance. The fact that the investment of cash is technically not under the asset owner's control will not generally affect the total fund's returns as much as the allocation of assets to cash, which is under the asset owner's control.

Operating cash accounts that are not available for investment, such as a checking account used for payments to beneficiaries, vendors, and others, should not be included in total fund assets and performance calculations.

If a cash account has multiple purposes and is available for investment as well as used as an operating cash account, and an asset owner is unable to differentiate the portion of the cash account that is available for investment, it is recommended that a conservative approach be taken. The entire cash account should be considered available for investment and included in total fund assets and performance calculations.

Cash accounts that are not included in total fund assets because they are not available for investment must not be used in the calculation of total asset owner assets. Asset owners must create policies and procedures for the treatment of cash accounts and apply them consistently.

Provision 22.A.9

Returns for periods of less than one year **MUST NOT** be annualized.

Discussion

Total fund or composite performance reflects only the performance of actual assets managed by the asset owner. When returns for periods of less than one year are annualized, the partial-year return is "extended" in order to create an annual return. The extrapolation of the partial-year return produces a simulated return and does not reflect the performance of actual assets. Therefore, performance for periods of less than one year must not be annualized.

Care must be taken when money-weighted returns (MWRs) are calculated and the total fund or composite has less than a year of performance. Many asset owners use Excel to calculate MWRs using the XIRR function. The XIRR function calculates an annualized internal rate of return (IRR) (an IRR is a method that can be used to calculate an MWR). When calculating an XIRR for a period of less than one year, the annualized return generated must be "de-annualized."

The non-annualized since-inception IRR (SI-IRR) can be calculated as follows:

$$R_{SI-IRR} = \left[(1 + r_{SI-IRR})^{\frac{TD}{365}} \right] - 1,$$

where

R_{SI-IRR} = non-annualized since-inception internal rate of return

r_{SI-IRR} = annualized since-inception internal rate of return

TD = total number of calendar days in the measurement period (less than one year)

For example, a portfolio is funded with \$1,000,000 cash on 1 September 2020. Another \$75,000 is contributed on 10 September 2020. At the end of the month, 30 September 2020, the portfolio is valued at \$1,100,000. Also assume that end-of-day cash flows are used. Using Excel's XIRR formula, the annualized SI-IRR is 34.41%.

Dates	External Cash Flows & Ending Valuation	Explanation
1 Sep 20	\$(1,000,000)	Contribution
10 Sep 20	\$(75,000)	Contribution
30 Sep 20	\$1,100,000	Portfolio value as of 30 September 2020
	34.41%	Calculated annualized return using XIRR

To calculate the non-annualized return in Excel, using the non-annualized SI-IRR formula, the calculation is as follows:

$$\begin{aligned} &= (1+0.3441)^{(29/365)}-1 \\ &= 2.38\% \end{aligned}$$

Provision 22.A.10

All returns **MUST** be calculated after the deduction of TRANSACTION COSTS incurred during the period. The ASSET OWNER may use estimated TRANSACTION COSTS only for those PORTFOLIOS for which actual TRANSACTION COSTS are not known.

Discussion

Transaction costs are defined as the costs of buying or selling investments. These costs typically take the form of brokerage commissions, exchange fees and/or taxes, and/or bid–offer spreads from either internal or external brokers. Custodial fees charged per transaction should be considered custody fees and not transaction costs. For real estate, private equity, and other private market investments, transaction costs include all legal, financial, advisory, and investment banking fees related to buying, selling, restructuring, and/or recapitalizing investments but do not include dead deal costs.

Gross-of-fees returns, net-of-external-costs-only returns, and net-of-fees returns must reflect the deduction of transaction costs incurred in the purchase or sale of investments. Transaction costs must be deducted when calculating performance because these are costs that must be paid in order to implement the investment strategy. An asset owner may use estimated transaction costs only for those portfolios whose actual transaction costs are not known. It is the asset owner's responsibility to determine if there are any regulatory requirements that would prohibit the use of estimated transaction costs. If such regulatory requirements exist, estimated transaction costs must not be used.

When a portfolio's transaction costs are not known, a reasonable estimate of transaction costs (i.e., an estimate that the asset owner judges to be a fair approximation of actual transaction costs) may be used. Some approaches for determining a reasonable estimate of transaction costs include basing estimated transaction costs on:

- actual transaction costs for portfolios that the asset owner manages in the same or a similar strategy, or
- actual transaction costs for similar securities that trade in a similar market.

The estimate of transaction costs may take the form of a percentage cost that can be applied to the portfolio return to determine the portfolio return after the deduction of those costs, or as a monetary value. If a monetary value is used, for costs that are based on the size of the transaction, the asset owner should scale the monetary transaction cost estimate sourced from a similarly managed portfolio to the monetary value of the portfolio.

For the treatment of estimated transaction costs in bundled fee portfolios, please refer to Provision 22.A.11.

Regardless of the approach used, the asset owner must have documentation supporting the transaction costs on which the estimate is based.

Asset owners that use estimated transaction costs must document their policies and procedures for estimating transaction costs, along with the rationale for their method of estimating transaction costs, and apply the policies consistently. The methodology and assumptions used to estimate transaction costs must be periodically reviewed to ensure that the policies are still judged to result in a reasonable estimate of transaction costs.

Provision 22.A.11

For PORTFOLIOS with BUNDLED FEES, if the ASSET OWNER cannot estimate TRANSACTION COSTS or if actual TRANSACTION COSTS cannot be segregated from a BUNDLED FEE, when calculating GROSS-OF-FEES returns or NET-OF-EXTERNAL-COSTS-ONLY returns, these returns MUST be reduced by the entire BUNDLED FEE or the portion of the BUNDLED FEE that includes the TRANSACTION COSTS.

Discussion

A bundled fee portfolio is an externally managed segregated account that has a fee structure that combines multiple fees into one total or “bundled” fee. Bundled fees can include any combination of investment management fees, transaction costs, custody fees, and/or administrative fees. An example of a bundled fee is an all-in fee, a type of bundled fee that is typically offered in certain jurisdictions where asset management, brokerage, and custody services are offered by the same company. Calculations of gross-of-fees and net-of-external-costs-only returns for all portfolios, including bundled fee portfolios, must reflect the deduction of transaction costs incurred by the portfolio during the measurement period.

A gross-of-fees return is the return on investments reduced by transaction costs and all fees and expenses for externally managed pooled funds incurred during the period. When calculating a bundled fee portfolio’s gross-of-fees return, if the asset owner can identify the portion of the bundled fee that includes the transaction costs, that is the only portion of the bundled fee that must be deducted when calculating gross-of-fees returns. If the asset owner is unable to determine the portion of the bundled fee that includes the transaction costs and is unable to determine an appropriate estimate of transaction costs, then the entire bundled fee must be deducted when calculating the bundled fee portfolio’s gross-of-fees return.

A net-of-external-costs-only return is the gross-of-fees return reduced by investment management fees for externally managed segregated accounts.^A A net-of-external-costs-only return must, therefore, reflect the deduction of transaction costs and investment management fees. To meet the requirements of the GIPS standards when calculating a bundled fee portfolio’s net-of-external-costs-only return, if the asset owner can identify the portion of the bundled fee that includes transaction costs and investment management fees, that is the only portion of the bundled fee that must be deducted when calculating net-of-external-costs-only returns. If the asset owner is unable to identify the portion of the bundled fee that includes transaction costs and investment

^A The definition of NET-OF-EXTERNAL-COSTS-ONLY included in the Glossary in the 2020 edition of the GIPS standards is incorrect and should state:

NET-OF-EXTERNAL-COSTS-ONLY: The GROSS-OF-FEES return reduced by INVESTMENT MANAGEMENT FEES for externally managed SEGREGATED ACCOUNTS.

management fees, and it is unable to determine an appropriate estimate of transaction costs, then the entire bundled fee must be reflected (i.e., reduce performance) when calculating the bundled fee portfolio's net-of-external-costs-only return.

Provision 22.A.12

All REQUIRED returns MUST be calculated net of leverage.

Discussion

All required returns must be calculated net of leverage. Leverage refers to loans taken at the discretion of the asset owner. For example, suppose that an asset owner is managing a real estate portfolio internally with a value of \$1.5 million and borrowed \$500,000 to fund a portion of the investments. The net of leverage amount (i.e., the assets on which performance is calculated) is \$1 million, not \$1.5 million, which is the gross of leverage amount.

Externally managed segregated accounts may also be levered. Using the same example, assume instead that this real estate portfolio was managed by an external manager. The asset owner funded the portfolio with cash, and the external manager borrowed \$500,000. The net of leverage amount, \$1 million, must be used to calculate this portfolio's performance, not the grossed-up amount of \$1.5 million.

The rationale for requiring that all returns be calculated net of leverage is that an unlevered return (i.e., a return that is gross of leverage) is hypothetical, and it is not appropriate for an asset owner to include such a return when calculating performance of a portfolio, total fund, or composite. Unlevered performance is permitted to be presented only as supplemental information.

Provision 22.A.13

The ASSET OWNER MUST calculate performance in accordance with its TOTAL FUND-specific or COMPOSITE-specific calculation policies.

Discussion

An asset owner must create total fund-specific and composite-specific policies for calculating the performance of its total fund(s) and composites. It must apply these policies consistently when calculating performance. An asset owner must ensure that its policies for calculating performance address not only assets managed internally but also those managed externally or for

which performance is calculated externally. An asset owner claiming compliance with the GIPS standards that uses external managers and service providers is responsible for having policies and procedures in place to ensure that the relevant outsourced services produce information on which the asset owner relies that is consistent with the requirements of the GIPS standards and that all GIPS standards requirements have been met. (See Provision 21.A.20.)

Although it is not possible to list all of the items that must be included in an asset owner's policies and procedures for calculating the performance of its total funds, portfolios, and any composites, the following are examples of some of the items that an asset owner must address in its policies and procedures relating to performance calculation.

- How the asset owner ensures that the information from external managers and other third-party service providers meets the requirements of the GIPS standards and can be used, as necessary, to produce returns that comply with the GIPS standards;
- The policies for estimating transaction costs, if estimated transaction costs are used;
- The fees and expenses deducted when calculating
 - ◆ Full gross-of-fees returns
 - ◆ Gross-of-fees returns
 - ◆ Net-of external-costs-only returns
 - ◆ Net-of-fees returns;
- The methodology for calculating a time-weighted return (TWR) for total funds, portfolios, and composites for which the asset owner presents a TWR;
- The methodology for calculating a money-weighted return (MWR) for total funds, portfolios, and composites for which the asset owner presents an MWR;
- The calculation methodology for total funds and portfolios with external cash flows;
- The treatment of reclaimable withholding taxes when recording interest income and dividends;
- The treatment of side pockets, if any;
- How the asset owner identifies the fees that are being charged, including performance-based fees, for any externally managed pooled funds and externally managed segregated accounts when calculating returns;
- How the asset owner determines the investment management costs for internally and externally managed assets; and
- How the asset owner determines how its various cash accounts are treated when calculating assets and performance;

Although an asset owner must establish a total fund-specific or composite-specific calculation policy, that policy may differentiate calculations used for different types of portfolios in the total fund or composite. For example, suppose that an asset owner has an additional composite that

includes two portfolios: an internally managed portfolio that uses a daily TWR calculation methodology and an externally managed segregated account that uses a Modified Dietz return (with revaluations for large cash flows) calculation methodology. (An additional composite is a grouping of portfolios representing a particular strategy or asset class that the asset owner chooses to present in a GIPS Asset Owner Report.) The asset owner may have a different policy for the return calculation methodologies used for internally managed portfolios versus segregated accounts that are included in the same composite. The asset owner must apply the composite-specific calculation policy consistently, however, based on the return calculation methodologies for each type of portfolio in the additional composite.

It is possible that all of an asset owner's total funds and composites use the same calculation policy; however, the appropriate policy must be determined for each total fund and composite. The asset owner must not simply establish this policy on an asset owner-wide basis without considering whether the policy is appropriate for each total fund or composite.

An asset owner's policies and procedures for calculating performance must be designed to ensure that the asset owner adheres to all applicable laws and regulations regarding the calculation and presentation of performance. Asset owners must establish policies and procedures to ensure that performance and performance-related information does not include false or misleading information.

Policies and procedures should be reviewed regularly to determine if they should be changed or improved, but it is not expected that they will change frequently. An asset owner must not change a policy retroactively solely to increase performance or to present the asset owner in a better light. Retroactive changes to policies and procedures should be avoided.

The asset owner should also conduct periodic testing or other monitoring procedures to ensure that all policies and procedures of any third party on which the asset owner relies are being applied consistently and appropriately.

Provision 22.A.14

For an ASSET OWNER invested in underlying POOLED FUNDS, all returns MUST reflect the deduction of all fees and expenses charged at the underlying POOLED FUND level.

Discussion

If an asset owner invests in underlying pooled funds, it must ensure that all returns reflect the deduction of all fees and expenses charged at the underlying pooled fund level. The values of externally managed pooled funds are typically net of embedded investment management fees and

other fees and expenses. In some instances, asset owners may pay investment management fees for the management of the pooled funds or other fees and expenses that are not embedded in the value of the pooled funds. All fees and expenses that are embedded in such funds or charged externally on behalf of such funds must be deducted when calculating gross-of-fees returns, net-of-external-costs-only returns, and net-of-fees returns.

Provision 22.A.15

When calculating ADDITIONAL RISK MEASURES:

- a. The PERIODICITY of the TOTAL FUND or COMPOSITE returns and the BENCHMARK returns MUST be the same.
- b. The risk measure calculation methodology of the TOTAL FUND or COMPOSITE and the BENCHMARK MUST be the same.

Discussion

Evaluating past performance requires an understanding of the risks taken to achieve the results. The asset owner may choose to present additional risk measures for a total fund or composite and for the benchmark that it determines are appropriate for the total fund's or composite's investment mandate, objective, or strategy. An additional risk measure is a risk measure included in a GIPS Asset Owner Report beyond those required to be presented. An asset owner may choose to present a proprietary measure of risk as an additional risk measure, but the asset owner must describe the proprietary measure of risk that is presented and explain why it was selected.

The periodicity of the total fund or composite and the benchmark must be identical when calculating additional risk measures. Periodicity refers to the length of the period over which a variable is measured (e.g., total fund or composite performance calculated monthly has monthly periodicity). As an example, if an asset owner is calculating an additional risk measure for a total fund that has monthly returns and a benchmark that has quarterly returns, the asset owner would be required to use quarterly total fund returns, not monthly returns, when calculating an additional risk measure. The asset owner must also determine that there are enough data points for the selected measure to be statistically significant so as not to be misleading.

It is also required that the risk measure calculation methodology of the total fund or composite and the benchmark be the same. Asset owners are required to select a calculation methodology on a total fund-specific or composite-specific basis, document the methodology in their policies and procedures, and consistently apply that methodology. Asset owners are required to maintain records supporting all calculations presented in GIPS Asset Owner Reports.

Valuation

Provision 22.A.16

TOTAL FUNDS and PORTFOLIOS MUST be valued in accordance with the definition of FAIR VALUE.³

Discussion

The quality of a return depends on the quality of the valuations included in the calculation of that return. Performance reporting is of little value unless the underlying valuations are based on sound valuation principles. Beginning 1 January 2011, total fund and portfolio valuations must be based on fair value.

Fair value is defined as the amount at which an investment could be sold in an arm's-length transaction between willing parties in an orderly transition. The valuation must be determined using the objective, observable, unadjusted quoted market price for an identical investment in an active market on the measurement date, if available. In the absence of an objective, observable, unadjusted quoted market price for an identical investment in an active market on the measurement date, the valuation must represent the asset owner's best estimate of the fair value. Fair value must include any accrued income.

As noted in the definition of fair value, when determining fair value, asset owners must use the objective, observable, unadjusted quoted market prices for identical investments in active markets on the measurement date, if available. Markets are not always liquid, however, and investment prices are not always objective and/or observable. For illiquid or hard-to-value investments, or for investments for which no observable market value or market price is available, additional steps are necessary. An asset owner's valuation policies and procedures must address situations in which the market prices may be available for similar but not identical investments, inputs to valuations are subjective rather than objective, and/or markets are inactive instead of active.

A very small number of circumstances exist in which cost or book value may be deemed to be fair value, such as real estate in the first year of the purchase of the property. In such a case, if an asset owner can support a determination that cost or book value and fair value are the same, it is acceptable for book value to be used when calculating asset values and returns.

³REQUIRED for periods beginning on or after 1 January 2011. For periods prior to 1 January 2011, PORTFOLIO valuations (excluding REAL ESTATE and PRIVATE EQUITY) MUST be based on FAIR VALUES OR MARKET VALUES. For periods prior to 1 January 2011, REAL ESTATE investments MUST be valued at FAIR VALUE OR MARKET VALUE (as previously defined for REAL ESTATE in the 2005 edition of the GIPS standards). For periods ending prior to 1 January 2011, PRIVATE EQUITY investments MUST be valued at FAIR VALUE, according to either the GIPS Private Equity Valuation Principles in Appendix D of the 2005 version of the GIPS standards or the GIPS Valuation Principles in Chapter II of the 2010 edition of the GIPS standards.

It is important that an asset owner establish fair valuation policies that take into account the specific characteristics of asset classes or investment types. For example, to fairly value an investment in an international pooled fund might require an asset owner to roll forward the valuation of the fund to the local market, in order to determine a value that reflects the more current exchange rate.

Provision 22.B.6 includes a recommended valuation hierarchy. Asset owners are not required to follow the valuation hierarchy, but it is recommended that they do so.

Although an asset owner may use external third parties to value investments, the asset owner still retains responsibility for compliance with the GIPS standards, which includes the requirement to fairly value investments.

Over time, the type of valuation required and the minimum valuation frequency have changed. Prior editions of the GIPS standards included valuation guidance specific to private equity. The 2020 edition of the GIPS standards has no private equity–specific requirements. Instead, private equity is included in the broader category of private market investments. Please see the historical valuation requirements for various asset classes in the following exhibit.

Time Frame	Valuation Method	Minimum Valuation Frequency
<i>Total Funds and Portfolios (except private market investments)</i>		
1 Jan 2011 to Current	Fair Value	Monthly and on the date of all large cash flows
1 Jan 2010 to 31 Dec 2010	Fair Value or Market Value	Monthly and on the date of all large cash flows
1 Jan 2001 to 31 Dec 2009	Fair Value or Market Value	Monthly
Prior to 1 Jan 2001	Fair Value or Market Value	Quarterly
<i>Private Market Investments (except private equity and directly owned real estate)</i>		
1 Jan 2011 to Current	Fair Value	Quarterly
Prior to 1 Jan 2011	Fair Value or Market Value	Quarterly
<i>Private Equity</i>		
1 Jan 2011 to Current	Fair Value	Quarterly
1 Jan 2008 to 31 Dec 2010	Fair Value (According to the GIPS Private Equity Valuation Principles in Appendix D of the 2005 edition of the GIPS standards, or the GIPS Valuation Principles in Chapter II of the 2010 edition of the GIPS standards)	Quarterly
Prior to 1 Jan 2008	Fair Value (According to the GIPS Private Equity Valuation Principles in Appendix D of the 2005 edition of the GIPS standards, or the GIPS Valuation Principles in Chapter II of the 2010 edition of the GIPS standards)	Annually

Time Frame	Valuation Method	Minimum Valuation Frequency
Real Estate Directly Owned by the Asset Owner		
1 Jan 2011 to Current	Fair Value	Quarterly
1 Jan 2008 to 31 Dec 2010	Fair Value or Market Value (as previously defined for Real Estate in the 2005 edition of the GIPS standards)	Quarterly
Prior to 1 Jan 2008	Fair Value or Market Value (as previously defined for Real Estate in the 2005 edition of the GIPS standards)	Annually
1 Jan 2012 to Current	External Valuation	1. External valuation every 12 months unless the oversight body stipulates otherwise, in which case investments must be externally valued every 36 months; or 2. Annual financial statement audit
1 Jan 2006 to 31 Dec 2011	External Valuation	Every 36 months

Provision 22.A.17

The ASSET OWNER MUST value TOTAL FUNDS and PORTFOLIOS in accordance with the TOTAL FUND-specific or COMPOSITE-specific valuation policy.

Discussion

When daily calculations are not used, an asset owner must not value a total fund or portfolio “opportunistically” and must follow its total fund-specific or composite-specific valuation policies consistently. For example, assume that an asset owner’s valuation policy is to value portfolios for large cash flows, defined in the composite-specific valuation policy as a single external cash flow equal to or greater than 5% of the portfolio’s beginning-of-month value. For any single external cash flow that is less than 5% of the portfolio’s beginning-of-month value, the asset owner must not value the portfolio. For any single external cash flow that is equal to or greater than 5% of the portfolio’s beginning-of-month value, the asset owner must value the portfolio. The asset owner must apply the total fund-specific or composite-specific valuation policy consistently and not “cherry-pick” when to value portfolios.

Although an asset owner must establish a total fund-specific or composite-specific valuation policy, that policy may differentiate valuation frequency for different types of portfolios in the total fund or composite. For example, suppose that an asset owner has a total fund that includes investments in underlying pooled funds, which are valued daily, and externally managed segregated

accounts, which are valued monthly and for external cash flows above 5%. The asset owner may have a different policy for the frequency of valuing pooled funds versus segregated accounts that are included in the same total fund. The asset owner must apply the total fund–specific valuation policy consistently, however, based on the valuation frequency for each type of portfolio in the total fund.

It is possible that all of an asset owner’s total funds or composites use the same valuation policy; however, the appropriate policy must be determined for each total fund or composite. The asset owner must not simply establish this policy on an asset owner–wide basis without considering whether the policy is appropriate for each total fund or composite.

An asset owner must ensure that its policies for valuing assets address not only assets managed internally but also those managed externally or for which valuations are performed externally. An asset owner that uses external managers and service providers is responsible for having policies and procedures in place to ensure that the relevant outsourced services produce information on which the asset owner relies that is consistent with the requirements of the GIPS standards and that all GIPS standards requirements have been met.

Policies and procedures should be reviewed regularly to determine if they should be changed or improved, but it is not expected that they will change frequently. An asset owner must not change a policy retroactively solely to increase performance or to present the asset owner in a better light. Retroactive changes to policies and procedures should be avoided.

The asset owner should also conduct periodic testing or other monitoring procedures to ensure that all outsourced policies and procedures are being applied consistently and appropriately.

Provision 22.A.18

If the ASSET OWNER uses the last available historical price or preliminary, estimated value as FAIR VALUE, the ASSET OWNER MUST:

- a. Consider it to be the best approximation of the current FAIR VALUE.
- b. Assess the difference between the approximation and final value and the effect on TOTAL FUND assets or COMPOSITE assets, TOTAL ASSET OWNER ASSETS, and performance, and also make any adjustments when the final value is received.

Discussion

It is not uncommon for private market investments to be valued using preliminary, estimated values. If an asset owner uses either the last available historical price or preliminary, estimated values as fair value, perhaps in order to produce a GIPS Asset Owner Report on a timely basis, the asset owner must consider the estimate of value to be the best approximation of the current fair

value, and this must be defined in the asset owner's fair valuation policy. When using preliminary, estimated values, the asset owner should obtain an understanding of the process used to establish estimated values in order to determine whether reliance can be placed on the process.

Asset owners must define the use of the last available historical price or preliminary, estimated values, and the treatment of subsequent final values, in their total fund–specific or composite-specific fair valuation policies. The valuation policies must be followed consistently and made available upon request. If the asset owner uses the last available historical price or preliminary, estimated values, when final values are received, the asset owner must assess the difference between the estimate of value and the final value, as well as the effect on total fund or composite assets, total asset owner assets, and performance. If the final values and resulting performance differ materially, asset owners must determine whether any adjustments to the total fund or composite must be made on a prospective basis or retroactively. If total fund or composite valuations are revised retroactively, asset owners must consider the requirements related to error correction and the asset owner's error correction policies. Differences between final and estimated values are not considered to be errors but are treated similarly.

It is important to remember the underlying principles of the GIPS standards: fair representation and full disclosure. If differences between the estimated and final values are consistently material, the asset owner should reassess whether it is proper to continue to use the estimates of fair value.

Provision 22.A.19

TOTAL FUNDS and COMPOSITES MUST have consistent beginning and ending annual valuation dates. Unless the TOTAL FUND OR COMPOSITE is reported on a non-calendar fiscal year, the beginning and ending valuation dates MUST be at calendar year end or on the last business day of the year.⁴

Discussion

It is required that total funds and composites have consistent beginning and ending annual valuation dates. Such consistency will result in improved comparability of data. Unless the total fund or composite is reported on a non-calendar fiscal year, the beginning and ending valuation dates of the total fund or composite must be at calendar year end or on the last business day of the year. Portfolios in a total fund or composite must also have consistent beginning and ending valuation dates corresponding to the reporting period. If the total fund or composite beginning or ending annual valuation dates fall on a weekend or a holiday, the asset owner should use the valuation on the first or last business day of the period, respectively. If there is an available benchmark value

⁴REQUIRED for periods beginning on or after 1 January 2006.

on the same day as the ending valuation day for the total fund or composite, the asset owner should use the benchmark value from the ending valuation day for the total fund or composite. If the total fund or composite ending annual valuation date differs from that of the benchmark, this difference should be disclosed. For example, if the annual period end and the last valuation falls on 30 December because of the New Year's Eve holiday, but the end of the annual period for the benchmark falls on 31 December, any material difference in performance should be disclosed. The asset owner should use the benchmark value from 30 December if it is available.

Note that an asset owner's total fund(s) and/or composites may have different year-end valuation dates if one or more of the asset owner's total funds or composites is reported on a non-calendar fiscal year, whereas other total funds and/or composites are reported as of calendar year end or on the last business day of the year. The annual valuation dates must correspond to the reporting dates for the total fund or composite. It is important, however, that the annual periods within a GIPS Asset Owner Report are consistent. For example, a GIPS Asset Owner Report that reports a total fund's performance annually as of 30 June, its fiscal year end, must consistently report data for years ending 30 June for the total fund. The asset owner may decide in the future to create a GIPS Asset Owner Report for the total fund based on a 31 December valuation and reporting date; however, the asset owner may not mix 30 June and 31 December annual reporting periods in the same GIPS Asset Owner Report and must report all annual returns as of the calendar year end.

Time-Weighted Returns

Provision 22.A.20

When calculating TIME-WEIGHTED RETURNS, TOTAL FUNDS and PORTFOLIOS except PRIVATE MARKET INVESTMENT PORTFOLIOS (see 22.A.30) MUST be valued:

- a. At least monthly.⁵
- b. As of the calendar month end or the last business day of the month.⁶
- c. On the date of all LARGE CASH FLOWS. The ASSET OWNER MUST define LARGE CASH FLOW for each TOTAL FUND and COMPOSITE to determine when the TOTAL FUND and PORTFOLIOS in a COMPOSITE MUST be valued.⁷

⁵REQUIRED for periods beginning on or after 1 January 2001. For periods prior to 1 January 2001, PORTFOLIOS MUST be valued at least quarterly.

⁶REQUIRED for periods beginning on or after 1 January 2010.

⁷REQUIRED for periods beginning on or after 1 January 2010.

Discussion

The requirements contained in Provision 22.A.20 apply to an asset owner's total funds and portfolios, with the exception of private market investment portfolios that are included in composites. For the valuation requirements for private market investment portfolios that are included in composites, asset owners should refer to Provision 22.A.30 and related guidance.

To improve the accuracy of time-weighted performance calculations, the GIPS standards have gradually increased the minimum required frequency of total fund and portfolio valuation from quarterly, to monthly, to the date of all large cash flows.

When calculating time-weighted returns for total funds and portfolios, all total funds and portfolios (with the exception of private market investment portfolios that are included in composites) must be valued at least monthly. Whenever the total fund is valued and performance is calculated, all investments regardless of asset class must be valued at fair value. Valuing total funds and portfolios at different end dates does not allow for comparability of information. Asset owners must be consistent in defining the monthly valuation period to allow for comparability of data for all GIPS Asset Owner Reports. It is also required that the calculation period must end on the same day as the reporting period. In other words, asset owners must value total funds and portfolios on the last day of the reporting period or the nearest business day. For periods beginning on or after 1 January 2010, asset owners must value total funds and portfolios as of the calendar month end or the last business day of the month.

In addition to the requirement for asset owners to value total funds and portfolios at least monthly, asset owners are required to value all total funds and portfolios in a composite on the date of all large cash flows, if the total fund or portfolios in a composite are not valued daily. A large cash flow, defined by the asset owner for each total fund or composite, is the level at which the asset owner determines that an external cash flow may distort performance if the total fund or portfolio is not valued and a sub-period return is not calculated. The asset owner must determine in advance (i.e., on an ex ante basis) what is considered to be a large cash flow on a total fund-specific or composite-specific basis. Asset owners must define the amount in terms of the value of cash/asset flow or in terms of a percentage of the portfolio assets, composite assets, or total fund assets. Asset owners must also determine if a large cash flow is a single external cash flow or an aggregate of a number of external cash flows within a stated period. The determination of the large cash flow level may be influenced by a variety of factors, such as the strategy's nature, its historical and expected volatility, and the targeted cash level of the total fund or composite.

An asset owner must not establish a high large cash flow level solely for the purpose of reducing the number of instances when total funds or portfolios must be valued because of large cash flows. The asset owner also must not base the policy on the degree to which the large cash flow affects the return. The large cash flow level chosen by the asset owner on a total fund-specific or composite-specific basis must represent the asset owner's estimate of the level of external cash flow that would potentially distort the accuracy of a total fund's or portfolio's performance calculation

if the total fund or portfolio is not valued at the time of the external cash flow and a sub-period return is not calculated.

It is possible that all of an asset owner's total funds or composites have the same level of large cash flows; however, the appropriate level must be determined for each total fund or composite. The asset owner must not simply establish this level on an asset owner-wide basis without considering whether the level is appropriate for each portfolio, total fund, or composite.

Revaluing portfolios as of the close of the business day prior to a large external cash flow is acceptable if external cash flows are assumed to take place at the beginning of the day.

When applying these provisions, it should be remembered that private market investment portfolios have separate valuation requirements. Asset owners should refer to the valuation table included in Provision 22.A.16 for additional guidance on valuation requirements, including the valuation requirements for private market investments.

Provision 22.A.21

When calculating TIME-WEIGHTED RETURNS for TOTAL FUNDS and PORTFOLIOS except PRIVATE MARKET INVESTMENT PORTFOLIOS (see 22.A.31), the ASSET OWNER MUST:

- a. Calculate returns at least monthly.⁸
- b. Calculate monthly returns through the calendar month end or the last business day of the month.⁹
- c. Calculate sub-period returns at the time of all LARGE CASH FLOWS, if daily returns are not calculated.¹⁰
- d. For EXTERNAL CASH FLOWS that are not LARGE CASH FLOWS, calculate TOTAL FUND and PORTFOLIO returns that adjust for daily-weighted EXTERNAL CASH FLOWS, if daily returns are not calculated.¹¹
- e. Treat EXTERNAL CASH FLOWS according to the TOTAL FUND-specific or COMPOSITE-specific policy.
- f. Geometrically LINK periodic and sub-period returns.
- g. Consistently apply the calculation methodology used for an individual TOTAL FUND or PORTFOLIO.

⁸REQUIRED for periods beginning on or after 1 January 2001.

⁹REQUIRED for periods beginning on or after 1 January 2010.

¹⁰REQUIRED for periods beginning on or after 1 January 2010.

¹¹REQUIRED for periods beginning on or after 1 January 2005.

Discussion

Provision 22.A.21 applies to all total funds and portfolios except private market investment portfolios that are included in composites. Please refer to Provision 22.A.31 for the requirements regarding the calculation of a time-weighted return (TWR) for private market investment portfolios included in composites.

TWRs measure the asset owner's performance and attempt to negate or neutralize the effect of external cash flows that enter or exit a total fund or portfolio. (Dividend and interest income payments are not considered external cash flows.) The GIPS standards do not require a specific method to be used to calculate TWRs but do require the return methodology to meet certain criteria.

Although it is required that TWRs be calculated at least monthly, many asset owners calculate daily returns. If daily returns are not calculated, an asset owner must calculate sub-period returns for total funds and portfolios at the time of all large cash flows in order to calculate a more accurate TWR. A large cash flow is the level at which the asset owner determines that an external cash flow may distort performance if the total fund or portfolio is not valued at the time of the external cash flow and a sub-period return is not calculated. A large cash flow is defined by the asset owner for each total fund and composite to determine when the portfolios in that total fund or composite are to be valued for performance calculations. Asset owners must define the amount, for each total fund and composite, in terms of the value of the cash/asset flow or in terms of a percentage of the portfolio assets, composite assets, or total fund assets. Asset owners must also determine if a large cash flow is a single external cash flow or an aggregate of a number of external cash flows within a stated period of time.

For periods beginning on or after 1 January 2001, asset owners must calculate total fund and portfolio TWRs at least monthly. When calculating and presenting performance in a GIPS Asset Owner Report, calculating returns for total funds and portfolios at different end dates does not allow for the comparability of information. Therefore, to facilitate comparability, for periods beginning on or after 1 January 2010, asset owners must calculate monthly returns as of the calendar month-end or the last business day of the month.

The actual valuation of the total fund's or portfolio's investments and calculation of return each time a large cash flow occurs will result in a more accurate TWR calculation than using either the Original Dietz method or the Modified Dietz method, but it is less accurate than a "true" TWR calculation methodology, which requires valuation and return calculation with every external cash flow.

The returns calculated for each sub-period are geometrically linked according to the following formula:

$$r_t^{TWR} = [(1 + r_1) \times (1 + r_2) \times \dots \times (1 + r_I)] - 1,$$

where r_t^{TWR} is the time-weighted return for period t and period t consists of I sub-periods.

The chief advantage of valuing a total fund or portfolio at the time of large cash flows and calculating sub-period returns is that it calculates a better estimate than the midpoint or day-weighting methods. The major disadvantage is that it requires precise valuation of the total fund or portfolio each time a large cash flow occurs. In practice, this means that asset owners must have the ability to value total funds and portfolios on a daily basis. If all investments are not accurately priced for each sub-period valuation, errors generated in the return calculation may be greater than the errors caused by using the midpoint or day-weighting approximation methods. In such cases, it is important to be able to correct for errors, such as missed security splits, mispricings, and improperly booked transactions, because day-to-day compounding will not correct for them automatically if external cash flows occur.

As of 1 January 2005, the calculation of total fund returns or portfolio returns that adjust for daily-weighted external cash flows is required, if daily returns are not calculated. The denominator in the calculation of a TWR that adjusts for daily-weighted external cash flows reflects the weighting of external cash flows for the days they have been in the total fund or portfolio and available for investment during the period. An asset owner must create a total fund-specific or composite-specific policy for the treatment of external cash flows and apply the policy consistently. Examples of acceptable methods for calculating returns that adjust for daily-weighted external cash flows are the Modified Dietz method and internal rate of return (IRR). These methods are estimates of TWRs.

Modified Dietz Method

The Modified Dietz method improves upon the Original Dietz method, which assumes that all external cash flows occur during the midpoint of the period. In an attempt to determine a more accurate return, the Modified Dietz method weights each external cash flow in the denominator by the amount of time it is held in the portfolio. The formula for estimating the TWR using the Modified Dietz method is

$$r_t^{MD} = \frac{V_t^E - V_t^B - \sum_{i=1}^I CF_{i,t}}{V_t^B + \sum_{i=1}^I (CF_{i,t} \times w_{i,t})}$$

where

- r_t^{MD} = the Modified Dietz return for the portfolio for period t
- V_t^E = the ending value of the portfolio for period t
- V_t^B = the beginning value of the portfolio for period t
- i = the number of external cash flows (1, 2, 3, . . . I) in period t
- $CF_{i,t}$ = the value of external cash flow i in period t
- $w_{i,t}$ = the weight of external cash flow i in period t (assuming the external cash flow occurred at the end of the day), as calculated according to the following formula:

$$w_{i,t} = \frac{D_t - D_{i,t}}{D_t},$$

where

$w_{i,t}$ = the weight of external cash flow i in period t , assuming the external cash flow occurred at the end of the day

D_t = the total number of calendar days in period t

$D_{i,t}$ = the number of calendar days from the beginning of period t to external cash flow i

The numerator of $w_{i,t}$ is based on the assumption that the external cash flows occur at the end of the day. If external cash flows were assumed to occur at the beginning of the day, the numerator would be $[(D_t - D_{i,t}) + 1]$. An asset owner may choose to use a beginning-of-day or end-of-day external cash flow assumption or some combination of the two. The key is to establish a policy and treat external cash flows consistently.

The chief advantage of the Modified Dietz method is that it does not require total fund or portfolio valuation on the date of each external cash flow. Its chief disadvantage is that it provides a less accurate return than when the total fund or portfolio is valued at the time of each external cash flow. The estimate suffers most when a combination of the following conditions exists: (1) one or more large external cash flows occur; and (2) external cash flows occur during periods of high market volatility—that is, the total fund's or portfolio's returns are significantly non-linear.

The following is an example of a return calculation using the Modified Dietz method. The example is for a portfolio with a beginning value of \$100,000 on 31 May, an ending value of \$135,000 on 30 June, and external cash flows of $-\$2,000$ on 6 June and $\$20,000$ on 11 June. Assume the external cash flows were reflected at the end of the day.

31 May	Beginning Value (BV)	\$100,000
6 June	Cash Flow (CF)	$-\$2,000$
11 June	Cash Flow (CF)	$\$20,000$
30 June	Ending Value (EV)	\$135,000

$$R_{\text{Modified Dietz}} = \frac{EV - BV - CF}{BV + (W \times CF)}$$

W is the weight of the external cash flow for the month. Because June has 30 days and the external cash flows were assumed to occur at the end of the day, the weights of the external cash flows are calculated as $(30 - 6)/30 = 0.80$ and $(30 - 11)/30 = 0.6333$, respectively.

$$R_{\text{Modified Dietz}} = \frac{135,000 - 100,000 - (-2,000 + 20,000)}{100,000 + (0.80 \times -2,000) + (0.6333 \times 20,000)}$$

$$R_{\text{Modified Dietz}} = \frac{17,000}{111,067} = 15.31\%$$

If the asset owner's policy was to treat external cash flows as occurring at the beginning of the day, the asset owner would have added 1 to the numerator in the weight calculation, and the weights to be multiplied by the external cash flows would be calculated as $(30 - 6 + 1)/30 = 0.8333$ and $(30 - 11 + 1)/30 = 0.6667$, respectively.

The following is an example of a return calculation using the Modified Dietz method and revaluing during the month for a large cash flow (assumed to be 10% in this example). To calculate performance for the month, we must calculate performance for the sub-periods before and after the large external cash flow and then geometrically link the sub-period returns. In this example, we use the same data as the prior example but instead value the portfolio at the time of the large cash flow on 11 June.

31 May	Beginning Value (BV)	\$100,000
6 June	Cash Flow (CF)	-\$2,000
11 June	Cash Flow (CF)	\$20,000
11 June	Ending Value (EV)	\$125,000
30 June	Ending Value (EV)	\$135,000

Sub-period 1 calculation, from 31 May through 11 June:

Because sub-period 1 has 11 days and the external cash flows are assumed to occur at the end of the day, the weight of the external cash flow on the sixth day is $(11 - 6)/11 = 0.4545$. The weight of the cash flow on the 11th would be zero because it is assumed to happen at the end of the day on 11 June, which is when the portfolio was revalued.

$$R_{\text{Modified Dietz (sub-period 1)}} = \frac{125,000 - 100,000 + (-2,000 + 20,000)}{100,000 + (0.4545 \times -2,000) + (0 \times 20,000)}$$

$$R_{\text{Modified Dietz (sub-period 1)}} = \frac{7,000}{99,091} = 7.06\%$$

Sub-period 2 calculation, from 11 June through 30 June:

$$R_{\text{Modified Dietz (sub-period 2)}} = \frac{135,000 - 125,000}{125,000}$$

$$R_{\text{Modified Dietz (sub-period 2)}} = \frac{10,000}{125,000} = 8.00\%$$

To calculate the monthly return, geometrically link sub-period returns 1 and 2: $(1 + 0.0706) \times (1 + 0.08) - 1 = 0.1563$, or 15.63%.

Other formulas in addition to the Modified Dietz method for calculating approximate TWRs are also permitted.

Internal Rate of Return (IRR) Method

The IRR, which is a money-weighted return, is the implied discount rate or effective compounded rate of return that equates the present value of cash outflows with the present value of cash inflows. The IRR method is an acceptable method to use to calculate a TWR when no large cash flows occur during the sub-period. To create a TWR, the IRRs before and after the large cash flow are calculated and then linked together geometrically.

The IRR is the value of R that satisfies the following equation:

$$V_E = \sum_{i=0}^n CF_i(1+R)^{W_i},$$

where V_E and W_i are the same as for the Modified Dietz method.

The external cash flows, CF_p , are also the same as with the Modified Dietz method with one important exception: The value at the beginning of the period is also treated as an external cash flow—that is, $V_B = CF_0$.

The IRR is obtained by selecting values for R and solving the equation until the result equals V_E . For example, if three external cash flows (including the value at the beginning of the period) have occurred, the formula will have three terms:

$$V_E = CF_0(1+R)^{W_0} + CF_1(1+R)^{W_1} + CF_2(1+R)^{W_2}.$$

The first term deals with the first external cash flow, CF_0 , which is the value of the portfolio at the beginning of the period; W_i is the proportion of the period when the external cash flow CF_i was held in the portfolio. Because CF_0 is in for the whole period, $W_0 = 1$. The larger the value of CF_i in the term, the more it will contribute to the total; but the smaller the exponent (i.e., the value of W_i), the less the term will contribute to the sum. The usual effect is that the first term, with a large CF_0 and W_0 equal to 1, will contribute far more than the other terms.

The advantages and disadvantages of the IRR method are the same as those of the Modified Dietz method. The IRR method has the additional disadvantage of requiring an iterative process solution. It is also possible to have multiple answers if both positive and negative external cash flows occur.

When calculating the TWR for portfolios, periodic and sub-period returns must be linked geometrically.

An asset owner must create a total fund–specific and composite-specific policy for the treatment of external cash flows for each of its total funds and composites and must apply that policy consistently. For example, the same definition of a large cash flow must be used when evaluating a cash flow for all portfolios within a specific total fund or composite. Policies and procedures for the calculation methodology used for an individual portfolio must also be created and applied consistently.

Money-Weighted Returns

Provision 22.A.22

When calculating MONEY-WEIGHTED RETURNS, the ASSET OWNER MUST value PORTFOLIOS at least annually and as of the period end for any period for which performance is calculated.

Discussion

When calculating a money-weighted return (MWR), an asset owner must value portfolios at least annually and as of the period end for any period for which performance is calculated. Valuations must be in accordance with the definition of fair value. A more frequent valuation is considered good business practice and is recommended.

When calculating time-weighted returns (TWRs), valuations at the time of large cash flows and at period end are needed because those valuations are inputs to the TWR calculation. In a true TWR calculation, sub-period returns are calculated either daily or at the time of each external cash flow and then geometrically linked together to derive a return for the period.

For MWRs, valuations are needed only at the end of the period being measured. In addition, many portfolios for which MWRs are calculated involve private market investments with valuations that are generally performed on a less frequent basis because they are illiquid securities. For these reasons, when calculating an MWR, asset owners must value portfolios at least annually and as of the period end for any period for which performance is calculated, rather than monthly and at the time of large cash flows.

More-frequent valuations are generally required for oversight body reporting purposes and are considered good business practice.

Provision 22.A.23

When calculating MONEY-WEIGHTED RETURNS, the ASSET OWNER MUST:

- a. Calculate annualized SINCE-INCEPTION MONEY-WEIGHTED RETURNS or the annualized MONEY-WEIGHTED RETURN for the longest period for which the ASSET OWNER has sufficient records.
- b. Calculate MONEY-WEIGHTED RETURNS using daily EXTERNAL CASH FLOWS.¹²
- c. Include stock DISTRIBUTIONS as EXTERNAL CASH FLOWS and value stock DISTRIBUTIONS at the time of DISTRIBUTION.

Discussion

A money-weighted return (MWR) is a return that reflects the change in value and the timing and size of external cash flows. One commonly used method for calculating an MWR is to calculate an internal rate of return (IRR). In general, the IRR is the implied discount rate or effective compounded rate of return that equates the present value of cash outflows with the present value of cash inflows. The since-inception IRR (SI-IRR) is a specific version of the IRR in which the measurement period of the MWR covers the entire investment period since inception.

Unlike when using IRR to calculate a time-weighted return (TWR), using IRR to calculate an MWR does not involve the calculation or linking of sub-period returns. A single IRR is calculated for the entire period.

The IRR is the return for which the net present value of a cash flow series is equated to zero and is calculated by solving for the return that satisfies the following equation:

$$0 = \sum_{i=0}^I CF_i (1 + r_{IRR})^{-\left(\frac{t_i}{365}\right)},$$

where

CF_i = external cash flow i (negative values for outflows [capital calls] and positive values for inflows [distributions])

i = number of external cash flows (1, 2, 3, ..., I) during the measurement period

r_{IRR} = annualized internal rate of return

t_i = number of calendar days between the beginning of the measurement period and the date of external cash flow i

¹²Daily EXTERNAL CASH FLOWS are REQUIRED beginning 1 January 2020. Prior to 1 January 2020, quarterly or more frequent EXTERNAL CASH FLOWS MUST be used.

The SI-IRR is a special version of the IRR in which the period-end value of the investment is treated as a synthetic terminal cash inflow, calculated as follows:

$$0 = \left[\sum_{i=0}^I CF_i (1 + r_{SI-IRR})^{-\left(\frac{t_i}{365}\right)} \right] + \left[V_E (1 + r_{SI-IRR})^{-\left(\frac{TD}{365}\right)} \right],$$

where

- CF_i = external cash flow i [negative values for outflows (capital calls) and positive values for inflows (distributions)]
- i = number of external cash flows (1, 2, 3, ..., I) during the measurement period
- r_{SI-IRR} = annualized since-inception internal rate of return
- t_i = number of calendar days between the beginning of the measurement period and the date of external cash flow i
- V_E = value of the investment at the end of the measurement period
- TD = total number of calendar days in the measurement period

Note that the above annualized formula assumes a 365-day year convention and thus may have slight inaccuracies when the measurement period contains one or more leap years.

Asset owners must calculate and present the annualized SI-IRR or the annualized MWR for the longest period for which the asset owner has sufficient records. If the period is less than a full year, asset owners must present the non-annualized SI-IRR. The non-annualized SI-IRR is calculated as follows:

$$R_{SI-IRR} = \left[(1 + r_{SI-IRR})^{\frac{TD}{365}} \right] - 1,$$

where

- R_{SI-IRR} = non-annualized since-inception internal rate of return
- r_{SI-IRR} = annualized since-inception internal rate of return
- TD = total number of calendar days in the measurement period

As of 1 January 2020, external cash flows must be reflected on a daily basis when calculating an MWR, which results in a more accurate return. Using daily external cash flows means that the external cash flows are dated on the date the external cash flows occur—for example, the date of a capital call or the date of a distribution. For periods prior to 1 January 2020, asset owners must calculate an MWR by using quarterly or more frequent external cash flows. However, asset owners should use daily external cash flows in calculating an MWR prior to 1 January 2020 if daily external cash flows are available.

In dealing with legacy cash flow streams that might be dated monthly for periods prior to 1 January 2020, the asset owner should assume that all external cash flows occurred on a particular date in the month regardless of the actual date of the external cash flow. The same is true if external cash flows are reflected on a quarterly basis. The asset owner could assume that all external cash flows within the month happened on the last business day of the respective month.

For example, the following table shows the date the cash flow could be reflected for performance purposes.

Date	Cash Flow	Quarterly Cash Flows		Monthly Cash Flows	
		Cash Flow	Date	Cash Flow	Date
4 Jan 2017	(100)			(100)	31 Jan 2017
7 Feb 2017	(100)			(100)	28 Feb 2017
9 Mar 2017	(100)	(300)	31 Mar 2017	(100)	31 Mar 2017
18 Apr 2017	(100)			(100)	30 Apr 2017
1 May 2017	(100)			(100)	31 May 2017
2 Jun 2017	(100)	(300)	30 Jun 2017	(100)	30 Jun 2017
14 Jul 2017	(100)			(100)	31 Jul 2017
8 Aug 2017	(100)			(100)	31 Aug 2017
9 Sep 2017	(100)	(300)	30 Sep 2017	(100)	30 Sep 2017
4 Oct 2017	(100)			(100)	31 Oct 2017
8 Nov 2017	(100)			(100)	30 Nov 2017
1 Dec 2017	(100)	(300)	31 Dec 2017	(100)	31 Dec 2017

Stock distributions must be included as external cash flows and must reflect the value at the time of distribution. The cash flow is reflected on the date the asset owner receives the distribution

In addition to SI-IRR, asset owners may calculate an MWR using the Modified Dietz method over the entire period. Unlike when being used to calculate a TWR, using the Modified Dietz method to calculate an MWR does not involve the calculation or linking of sub-period returns. A single MWR is calculated for the entire period.

An example for a total fund MWR calculation for a four-year period follows.

Modified Dietz							
Dates	Terminal Value	Cash Flow (CF)	Day of CF/Valuation	Weighted CF	Numerator	Denominator	Return
31 Dec 2016		2,000,000	0	2,000,000			
8 Jan 2017		200,000	8	198,905			
24 Dec 2017		(50,000)	358	(37,748)			
20 Feb 2018		(200,000)	416	(143,053)			

Modified Dietz							
Dates	Terminal Value	Cash Flow (CF)	Day of CF/ Valuation	Weighted CF	Numerator	Denominator	Return
6 Mar 2018		150,000	430	105,852			
11 Dec 2018		(20,000)	710	(10,281)			
25 Jun 2019		100,000	906	37,988			
3 Jul 2019		30,000	914	11,232			
14 Aug 2019		(50,000)	956	(17,283)			
21 Mar 2020		(200,000)	1,176	(39,014)			
4 Jun 2020		80,000	1,251	11,499			
22 Nov 2020		(50,000)	1,422	(1,335)			
3 Dec 2020		150,000	1,433	2,875			
31 Dec 2020	2,300,000		1,461		160,000	2,119,637	7.55% Cumulative
Total		2,140,000		2,119,637			1.84% Annualized

The numerator is the terminal value less the sum of the cash flows: (2,300,000 – 2,140,000), or 160,000.

The denominator is the sum of the weighted cash flows: (2,119,637).

The cumulative return is calculated as 160,000/2,119,637, or 7.55%.

To calculate the annualized return, the formula is $(1 + r)^{(1/n)} - 1$. In this example, it would be:

$$= (1 + 0.0755)^{(1/4)} - 1$$

$$= 1.84\%.$$

Gross and Net Returns

Provision 22.A.24

When the ASSET OWNER calculates TOTAL FUND and COMPOSITE NET-OF-FEES returns, these returns MUST reflect the deduction of:¹³

- TRANSACTION COSTS.
- All fees and expenses for externally managed POOLED FUNDS.
- INVESTMENT MANAGEMENT FEES for externally managed SEGREGATED ACCOUNTS.
- INVESTMENT MANAGEMENT COSTS.

¹³REQUIRED for periods beginning on or after 1 January 2015.

Discussion

For asset owners, a net-of-fees return is defined as the return that reflects the deduction of transaction costs, all fees and expenses for externally managed pooled funds, investment management fees for externally managed segregated accounts, and investment management costs.

For purposes of the GIPS standards, asset owners must reduce all returns, including total fund or composite net-of-fees returns, by transaction costs. Transaction costs are defined as the costs of buying or selling investments. These costs typically take the form of brokerage commissions, exchange fees and/or taxes, and/or bid–offer spreads from either internal or external brokers. Custodial fees charged per transaction should be considered custody fees and not transaction costs. For real estate, private equity, and other private market investments, transaction costs include all legal, financial, advisory, and investment banking fees related to buying, selling, restructuring, and/or recapitalizing investments but do not include dead deal costs. An asset owner may use estimated transaction costs only for those portfolios whose actual transaction costs are not known. (For additional information on the deduction of transaction costs, please refer to Provision 22.A.10.)

Investment management fees are the fees payable to external managers for externally managed assets. Investment management fees are typically asset based (percentage of assets), performance based (based on the portfolio's performance on an absolute basis or relative to a benchmark or other reference point), or a combination of the two but may take different forms as well. Investment management fees also include carried interest. Fees and expenses for externally managed pooled funds include embedded investment management fees, as well as any other investment management fees paid for the management of the pooled fund, even if the payment is made from other assets and payments do not flow through the pooled fund. Total fund and composite net-of-fees returns must reflect the deduction of investment management fees for externally managed segregated accounts, as well as all fees and expenses, including investment management fees, for externally managed pooled funds.

Investment management costs include all internal costs for both internally and externally managed assets.^B Determining investment management costs is not a straightforward process for an asset owner. In addition to costs for portfolio management, they may also involve overhead and other related costs and fees, including data valuation fees, investment research services, custody fees, pro rata share of overhead (such as building and utilities), allocation of non-investment-department expenses (such as human resources, communications, and

^B The definition of INVESTMENT MANAGEMENT COSTS included in the Glossary in the 2020 edition of the GIPS standards is incorrect and should state:

All internal costs for both internally and externally managed assets. In addition to costs for portfolio management, they may also involve overhead and other related costs and fees, including data valuation fees, investment research services, custody fees, pro rata share of overhead (such as building and utilities), allocation of non-investment-department expenses (such as human resources, communications, and technology), and performance measurement and compliance services.

technology), and performance measurement and compliance services. Total fund and total fund composite net-of-fees returns must reflect the deduction of investment management costs.

The following table illustrates the calculations for total fund full gross-of-fees, gross-of-fees, net-of-external-costs-only, and net-of-fees returns. It starts with the return on investments before the deduction of any transaction costs, fees, or expenses.

Return Type	Return	Information Type	Glossary Definition
Total Fund return on investments	11.10%	Supplemental information only	
Transaction costs	-0.10%		
Total Fund full gross-of-fees return	11.00%	Supplemental information only	The return on investments that reflects the deduction of only transaction costs
Fees and expenses for externally managed pooled funds	-0.40%		
Total Fund gross-of-fees return	10.60%	Optional	The return on investments reduced by transaction costs and all fees and expenses for externally managed pooled funds
Investment management fees for externally managed segregated accounts	-0.65%		
Total Fund net-of-external costs-only return	9.95%	Optional	The gross-of-fees return reduced by investment management fees for externally managed segregated accounts ^c
Investment management costs	-0.16%		
Total Fund net-of-fees return	9.79%	Required	The return that reflects the deduction of transaction costs, all fees and expenses for externally managed pooled funds, investment management fees for externally managed segregated accounts, and investment management costs

^cThe definition of NET-OF-EXTERNAL-COSTS-ONLY included in the Glossary in the 2020 edition of the GIPS standards is incorrect and should state:

The GROSS-OF-FEES return reduced by INVESTMENT MANAGEMENT FEES for externally managed SEGREGATED ACCOUNTS.

Provision 22.A.25

When the ASSET OWNER calculates TOTAL FUND and COMPOSITE NET-OF-EXTERNAL-COSTS-ONLY returns, these returns MUST reflect the deduction of:¹⁴

- a. TRANSACTION COSTS.
- b. All fees and expenses for externally managed POOLED FUNDS.
- c. INVESTMENT MANAGEMENT FEES for externally managed SEGREGATED ACCOUNTS.

Discussion

For asset owners, a net-of-external-costs-only return^D is the gross-of-fees return reduced by investment management fees for externally managed segregated accounts. It therefore reflects the deduction of transaction costs and all fees and expenses for externally managed pooled funds, which are already reflected in the calculation of the gross-of-fees return, as well as investment management fees for externally managed segregated accounts. Investment management costs for internally and externally managed assets are not deducted from this return.

For purposes of the GIPS standards, asset owners must reduce all returns, including total fund or composite net-of-external-costs-only returns, by transaction costs. Transaction costs are defined as the costs of buying or selling investments. These costs typically take the form of brokerage commissions, exchange fees and/or taxes, and/or bid–offer spreads from either internal or external brokers. Custodial fees charged per transaction should be considered custody fees and not transaction costs. For real estate, private equity, and other private market investments, transaction costs include all legal, financial, advisory, and investment banking fees related to buying, selling, restructuring, and/or recapitalizing investments but do not include dead deal costs. An asset owner may use estimated transaction costs only for those portfolios whose actual transaction costs are not known. (For additional information on the deduction of transaction costs, please refer to Provision 22.A.10.)

Investment management fees are the fees payable to external managers for externally managed assets. Investment management fees are typically asset based (percentage of assets), performance based (based on the portfolio's performance on an absolute basis or relative to a benchmark or other reference point), or a combination of the two but may take different forms as well. Investment management fees also include carried interest. Fees and expenses for externally managed pooled funds include embedded investment management fees, as well as any other

¹⁴REQUIRED for periods beginning on or after 1 January 2015.

^DThe definition of NET-OF-EXTERNAL-COSTS-ONLY included in the Glossary in the 2020 edition of the GIPS standards is incorrect and should state:

The GROSS-OF-FEES return reduced by INVESTMENT MANAGEMENT FEES for externally managed SEGREGATED ACCOUNTS

investment management fees paid for the management of the pooled fund, even if the payment is made from other assets and payments do not flow through the pooled fund. Total fund and composite net-of-external-costs-only returns must reflect the deduction of investment management fees for externally managed segregated accounts, as well as all fees and expenses, including investment management fees, for externally managed pooled funds.

Please see the table in Provision 22.A.24 for a demonstration of the calculations for total fund full gross-of-fees, gross-of-fees, net-of-external-costs-only, and net-of-fees returns.

Provision 22.A.26

When the ASSET OWNER calculates TOTAL FUND and COMPOSITE GROSS-OF-FEES returns, these returns MUST reflect the deduction of:¹⁵

- a. TRANSACTION COSTS.
- b. All fees and expenses for externally managed POOLED FUNDS.

Discussion

For asset owners, a gross-of-fees return is the return on investments reduced by transaction costs and all fees and expenses for externally managed pooled funds.

For purposes of the GIPS standards, asset owners must reduce all returns, including total fund and composite gross-of-fees returns, by transaction costs. Transaction costs are defined as the costs of buying or selling investments. These costs typically take the form of brokerage commissions, exchange fees and/or taxes, and/or bid–offer spreads from either internal or external brokers. Custodial fees charged per transaction should be considered custody fees and not transaction costs. For real estate, private equity, and other private market investments, transaction costs include all legal, financial, advisory, and investment banking fees related to buying, selling, restructuring, and/or recapitalizing investments but do not include dead deal costs. An asset owner may use estimated transaction costs only for those portfolios whose actual transaction costs are not known. (For additional information on the deduction of transaction costs, please refer to Provision 22.A.10.)

A gross-of-fees return must also reflect the deduction of all fees and expenses for externally managed pooled funds. This includes embedded investment management fees for externally managed pooled funds, as well as any other investment management fees paid for the management of the pooled fund, even if the payment is made from other assets and payments do not flow through the pooled fund.

¹⁵REQUIRED for periods beginning on or after 1 January 2015.

Investment management fees for externally managed segregated accounts are not deducted from the gross-of-fees return.

Please see the table in Provision 22.A.24 for a demonstration of the calculations for total fund full gross-of-fees, gross-of-fees, net-of-external-costs-only, and net-of-fees returns.

Composite Returns

Provision 22.A.27

COMPOSITE TIME-WEIGHTED RETURNS except PRIVATE MARKET INVESTMENT COMPOSITES (see 22.A.32) MUST be calculated at least monthly.¹⁶

Discussion

The more frequently composite returns are calculated, the more accurate the results will be. Quarterly composite calculations are permitted for periods prior to 1 January 2010; subsequently, composite returns must be calculated at least monthly. The portfolios included in the composite must be consistent for the entire performance measurement period. See Provision 22.A.28 for a discussion of composite return calculations.

Private market investment composites are excluded from this provision because private market investment portfolios that are included in private market investment composites are not required to be valued monthly.

Provision 22.A.28

COMPOSITE TIME-WEIGHTED RETURNS MUST be calculated by using one of the following approaches:

- a. Asset-weighting the individual PORTFOLIO returns using beginning-of-period values;
- b. Asset-weighting the individual PORTFOLIO returns using a method that reflects both beginning-of-period values and EXTERNAL CASH FLOWS; or
- c. Using the aggregate method.

¹⁶ REQUIRED for periods beginning on or after 1 January 2010. For periods beginning on or after 1 January 2006 and ending prior to 1 January 2010, COMPOSITE returns MUST be calculated at least quarterly.

Discussion

A composite is defined as an aggregation of one or more portfolios or total funds that are managed according to a similar investment mandate, objective, or strategy. The objective in calculating the composite's return is to use a method that will conceptually produce the same value as if the assets of all the individual portfolios in the composite were aggregated and a return is calculated as if the composite were one portfolio.

The GIPS standards are based on the principle of asset-weighted composite returns. For example, if a composite contains two portfolios, one of which is 10 times the size of the other, the rate of return for the larger portfolio should have more of an effect on the composite return than the rate of return for the smaller portfolio. The asset-weighted return methods satisfy this principle by weighting each portfolio's contribution to the composite rate of return by its beginning value (as a percentage of the composite's beginning value) or by its beginning value plus weighted external cash flows (as a percentage of the composite's beginning value plus weighted external cash flows). The GIPS standards require asset weighting of the portfolio returns within a composite by using beginning-of-period values, by using beginning-of-period values plus weighted external cash flows, or by aggregating portfolio assets and external cash flows to calculate performance as a single master portfolio.

New portfolios must be included in composites on a timely and consistent basis as soon as they are funded (see Provision 23.A.6). Terminated portfolios must be included in the historical performance of the composite through the final day the assets are managed (see Provision 23.A.7). When an asset owner needs to include in composite returns portfolios that do not have a full month of performance, the asset owner must calculate composite returns more frequently than monthly (e.g., daily) and therefore must be able to value portfolios in the composite on the day that the new portfolio joins the composite. Assuming an asset owner calculates composite returns daily, the asset owner would include in the daily composite return calculation only those portfolios that were managed for the full day. Asset owners must create and document policies and procedures for calculating composite returns and follow those policies and procedures consistently.

If the asset owner uses a transition manager upon termination of an external manager, the performance of the transition manager must be reflected in total fund performance. If the portfolio was included in any additional composites, the asset owner would need to determine if the transition strategy reflects the composite strategy to determine whether the track record of the transition manager would be included in the composite. (An additional composite is a grouping of portfolios representing a particular strategy or asset class that the asset owner chooses to present in a GIPS Asset Owner Report.)

The following are examples of methods that an asset owner may use when asset-weighting individual portfolio returns when calculating composite time-weighted returns.

The *Beginning Assets Weighting* method for calculating composite returns, R_t , uses the formula:

$$R_t = \frac{\sum_{k=1}^K (V_{k,t}^B \times r_{k,t})}{\sum_{k=1}^K V_{k,t}^B},$$

where

R_t = the beginning assets weighted return for the composite for period t

k = the number of portfolios (1, 2, 3, . . . , K) in the composite at the beginning of period t

$V_{k,t}^B$ = the beginning value of portfolio k for period t

$r_{k,t}$ = the return of portfolio k for period t

The Beginning Assets Weighting method can also be expressed as

$$R_t = \sum_{k=1}^K \left(\frac{V_{k,t}^B}{\sum_{k=1}^K V_{k,t}^B} \times r_{k,t} \right) = \sum_{k=1}^K w_{k,t}^B r_{k,t},$$

where $w_{k,t}^B$ is the weight of the value of portfolio k as a fraction of total composite asset value based on beginning asset values for period t and can be calculated according to the following formula:

$$w_{k,t}^B = \frac{V_{k,t}^B}{\sum_{k=1}^K V_{k,t}^B}.$$

The *Beginning Assets Plus Weighted External Cash Flow* method represents a refinement to the Beginning Assets Weighting method. Consider the case in which one of two portfolios in a composite doubles in value as the result of a contribution on the third day of a performance period. Under the Beginning Assets Weighting method, this portfolio would be weighted in the composite based solely on its beginning value (i.e., not including the contribution). The Beginning Assets Plus Weighted External Cash Flow method resolves this problem by including the effect of external cash flows in the calculation. Assuming that external cash flows occur at the end of the day, the weighting factor for each external cash flow is calculated using the same methodology as in the Modified Dietz method as follows:

$$w_{i,k,t} = \frac{D_t - D_{i,k,t}}{D_t},$$

where

$w_{i,k,t}$ = the weight of external cash flow i in portfolio k in period t , assuming the external cash flow occurred at the end of the day

D_t = the total number of calendar days in period t

$D_{i,k,t}$ = the number of calendar days from the beginning of period t to external cash flow i in portfolio k

The numerator of $w_{i,k,t}$ is based on the assumption that the external cash flows occur at the end of the day. If external cash flows were assumed to occur at the beginning of the day, the numerator would be $[(D_t - D_{i,k,t}) + 1]$. An asset owner may choose to use a beginning-of-day or end-of-day external cash flow assumption or some combination of the two. The key is to establish a policy and treat external cash flows consistently.

The Beginning Assets Plus Weighted External Cash Flow composite return can be calculated as follows:

$$R_t = \frac{\sum_{k=1}^K \left\{ \left[V_{k,t}^B + \sum_{i=1}^{I_k} (CF_{i,k,t} \times w_{i,k,t}) \right] \times r_{k,t} \right\}}{\sum_{k=1}^K \left[V_{k,t}^B + \sum_{i=1}^{I_k} (CF_{i,k,t} \times w_{i,k,t}) \right]},$$

where

R_t = the beginning assets plus weighted external cash flow composite return for period t

$V_{k,t}^B$ = the beginning value of portfolio k for period t

i_k = the number of external cash flows (1, 2, 3, . . . , I_k) in portfolio k

$CF_{i,k,t}$ = the i th external cash flow in portfolio k for period t

$w_{i,k,t}$ = the weight of external cash flow i in portfolio k for period t

$r_{k,t}$ = the return for portfolio k for period t

The Beginning Assets Plus Weighted External Cash Flow composite return method can also be expressed by the following formula:

$$R_t = \sum_{k=1}^K \left(\frac{V_{k,t}^B}{\sum_{k=1}^K V_{k,t}^B} \times r_{k,t} \right),$$

where

R_t = the beginning assets plus weighted external cash flow composite return for period t

$r_{k,t}$ = the return for portfolio k for period t

$V_{k,t}^B$ = the beginning value plus weighted external cash flows of portfolio k for period t , as calculated by the following formula:

$$V_{k,t} = V_{k,t}^B + \sum_{i=1}^{I_k} (CF_{i,k,t} \times w_{i,k,t}),$$

where

$V_{k,t}$ = the value of portfolio k 's beginning assets plus weighted external cash flows for period t

$V_{k,t}^B$ = the beginning value of portfolio k for period t

i_k = the number of external cash flows (1, 2, 3, . . . , I_k) in portfolio k

$CF_{i,k,t}$ = the i th external cash flow in portfolio k for period t

$w_{i,k,t}$ = the weight of external cash flow i in portfolio k for period t

The *Aggregate Return* method combines all the composite assets and external cash flows before any calculations occur to calculate returns as if the composite were one portfolio. Therefore, unlike the Beginning Assets Weighting method or the Beginning Assets Plus Weighted External Cash Flow method, the Aggregate Return method does not use portfolio returns.

The following examples show how to calculate a composite return using the Beginning Assets Weighting method, the Beginning Assets Plus Weighted External Cash Flow method, and the Aggregate Return method, assuming that external cash flows occur at the end of the day.

Composite Return

Beginning Assets Weighting method:

Portfolio	BMV	Portfolio Weight	Portfolio Return	Weighted Return
A	450,000	17.08%	12%	2.05%
B	785,000	29.79%	14%	4.17%
C	1,400,000	53.13%	11%	5.84%
Total	2,635,000	100.00%		12.06%

$$R_{BMV} = \frac{(450,000 \times 0.12) + (785,000 \times 0.14) + (1,400,000 \times 0.11)}{(450,000 + 785,000 + 1,400,000)} = 12.06\%$$

Beginning Assets Plus Weighted External Cash Flow method:

Portfolio	BMV	Weighted Cash Flows	BMV plus Wtd CFs	BMV plus Wtd CFs	Portfolio Return	Weighted Return
A	450,000	75,000	525,000	18.95%	12%	2.27%
B	785,000	120,000	905,000	32.67%	14%	4.57%
C	1,400,000	(60,000)	1,340,000	48.38%	11%	5.32%
Total	2,635,000	135,000	2,770,000	100.00%		12.17%

$$R_{BMV+CF} = \frac{[(450,000 + 75,000) \times 0.12] + [(785,000 + 120,000) \times 0.14] + [(1,400,000 - 60,000) \times 0.11]}{(450,000 + 75,000 + 785,000 + 120,000 + 1,400,000 - 60,000)} = 12.17\%$$

Aggregate Return method (using Modified Dietz method):

(Assuming the large cash flow level is established at the composite level and none of the cash flows qualifies as a large cash flow)

Portfolio	BMV	EMV	Cash Flows	Weighted CFs	Portfolio Return
A	450,000	665,000	150,000	75,000	12%
B	785,000	1,140,000	240,000	120,000	14%
C	1,400,000	1,440,000	(120,000)	(60,000)	11%
Total	2,635,000	3,245,000	270,000	135,000	

$$\text{Composite Return } (R_{Aggregate}) = \frac{(\text{Total EMV} - \text{Total BMV} - \text{Total CF})}{(\text{Total BMV} + \text{Total Wtd CF})}$$

$$R_{Aggregate} = \frac{(3,245,000 - 2,635,000 - 270,000)}{(2,635,000 + 135,000)} = 12.27\%$$

When using the aggregate method, an asset owner may encounter a situation in which the composite return falls outside the range of portfolio-level returns for a given period. This scenario can occur if the policies used to calculate portfolio-level returns do not flow through to the aggregate composite-level return calculation policies. “Flowing through” to the composite means that if any portfolio is valued during the month because of a large cash flow, the entire composite would also be valued and the sub-period return calculated for both the portfolio and the composite. An asset owner may establish large cash flow policies, however, such that only those portfolios in the composite that experience a large cash flow during the month are valued at the time of the large cash flow and any portfolios that did not experience a large cash flow are not valued during the month. In such a situation, the composite return may be outside the range of portfolio-level returns for a given period. To prevent this situation from occurring, the asset owner should consider establishing a policy wherein all portfolios in the composite are valued if any portfolio in the composite is valued during the month because of large cash flows. Once an asset owner has established large cash flow policies for a composite, the asset owner must apply the large cash flow policies consistently.

Provision 22.A.29

When calculating COMPOSITE MONEY-WEIGHTED RETURNS, the ASSET OWNER MUST calculate COMPOSITE returns by aggregating the PORTFOLIO-level information for those PORTFOLIOS included in the COMPOSITE.

When calculating composite money-weighted returns, an asset owner is required to aggregate the portfolio-level information for all portfolios included in the composite. This method combines the assets and external cash flows from all portfolios in the composite, so the return is calculated as if the composite were one portfolio. The following example shows how since-inception internal rates of return (SI-IRRs) can be calculated for a composite that includes multiple portfolios.

In 2019, the composite includes only Portfolio 1. The composite SI-IRR will be based solely on the cash flows and terminal value of Portfolio 1. In 2020, Portfolio 2 joins the composite, and at the end of 2020, the two-year annualized SI-IRR will be based on the combined cash flows and terminal values of Portfolios 1 and 2. In 2021, Portfolio 3 joins the composite, and at the end of 2021, the three-year annualized SI-IRR will be based on the combined cash flows and terminal values of Portfolios 1, 2, and 3.

	A	B	C	D	E	F	G
1							
2					Combined		Combined
3	Date	CF or TV	Portfolio 1	Portfolio 2	Portfolio 1 & 2	Portfolio 3	Portfolio 1, 2 & 3
4	31-Dec-2018	Cash Flow	(1,000,000)		(1,000,000)		(1,000,000)
5	15-Jan-2019	Cash Flow	(10,000)		(10,000)		(10,000)
6	31-Dec-2019	Terminal Value	1,090,000				
7	15-Feb-2020	Cash Flow		(5,000,000)	(5,000,000)		(5,000,000)
8	30-Jun-2020	Cash Flow		(1,000,000)	(1,000,000)		(1,000,000)
9	31-Dec-2020	Terminal Value	1,100,000	6,500,000	7,600,000		
10	12-Feb-2021	Cash Flow				(4,000,000)	(4,000,000)
11	15-Mar-2021	Cash Flow	500,000				500,000
12	31-Dec-2021	Terminal Value	900,000	6,700,000		4,200,000	11,800,000
13							
14							
15							
16	Year	SI-IRR Calc	Formula				
17	2019	7.92%	=XIRR(C4:C6,A4:A6,0.1)				
18	2020	8.47%	=XIRR(E4:E9,A4:A9,0.1)				
19	2021	7.33%	=XIRR(G4:G12,A4:A12,0.1)				

Private Market Investments

Provision 22.A.30

When calculating TIME-WEIGHTED RETURNS for PRIVATE MARKET INVESTMENT PORTFOLIOS that are included in COMPOSITES, PRIVATE MARKET INVESTMENT PORTFOLIOS MUST be valued:

- a. At least quarterly.¹⁷
- b. As of each quarter end or the last business day of the quarter.¹⁸

Discussion

A portfolio is considered a private market investment portfolio when it has an investment objective to invest primarily in private market investments. Private market investments include real assets (e.g., real estate and infrastructure), private equity, and similar investments that are illiquid, not publicly traded, and not traded on an exchange.

Investments that are not private market investments must be valued at least monthly and at the time of large cash flows. Because of the illiquidity of private market investments, private market investments that are included in composites must be valued at least quarterly if time-weighted returns are being calculated, and they are not required to be valued at the time of large cash flows. Asset owners may use the Modified Dietz method to calculate the quarterly return. Asset owners are not required to value private market investment portfolios at the time of large cash flows but may do so. The asset owner must establish a composite-specific valuation policy, but that policy may specify a different valuation frequency for different types of portfolios in the composite. There may also be cases in which an asset owner may establish different valuation frequency policies for the same types of portfolios within a composite. For example, the asset owner may have a private market investment portfolio in a composite that allows for monthly subscriptions and redemptions, and the asset owner's policy is to value this portfolio monthly. Another portfolio in this same composite may have the same structure but allows for quarterly subscriptions and redemptions, and so the asset owner values this portfolio quarterly. The asset owner must apply the composite-specific valuation policy consistently based on the specified valuation frequency for the portfolios in the composite, but that policy may differentiate valuation frequency for different types of portfolios in the composite. For example, segregated accounts are valued monthly and at the time of large cash flows, whereas investments in underlying pooled funds are valued daily. The asset owner must apply the composite-specific valuation policy consistently based on the valuation frequency for the type of portfolio.

¹⁷ REQUIRED for periods beginning on or after 1 January 2008.

¹⁸ REQUIRED for periods beginning on or after 1 January 2010.

In all cases, however, each private market investment portfolio in the composite must be valued at quarter end or on the last business day of the quarter.

Quarterly valuations are important for the oversight body to be able to compare performance with private market investment benchmarks, which are typically not updated monthly. Quarterly valuations are also needed for comparability with other asset classes and for comparability of data in GIPS Asset Owner Reports. This quarterly valuation requirement can be met by either internal or external valuations.

Private market investments include real estate. For periods prior to 1 January 2008, real estate investments must be valued at least once every 12 months. The annual valuation requirement for periods prior to 1 January 2008 can be met either by internal or external valuations. An internal valuation is an asset owner's best estimate of value based on the most current and accurate information available to the asset owner. Internal valuation methodologies can include applying a discounted cash flow model, using a sales comparison or replacement cost approach, or conducting a review of all significant events (both general market events and asset-specific events) that could have a material effect on the investment. External valuations for real estate are discussed in Provisions 22.A.33, 22.A.34, and 22.A.35.

Provision 22.A.31

When calculating TIME-WEIGHTED RETURNS for PRIVATE MARKET INVESTMENT PORTFOLIOS that are included in COMPOSITES, the ASSET OWNER MUST:

- a. Calculate returns at least quarterly.¹⁹
- b. Calculate quarterly returns through the calendar quarter end or the last business day of the quarter.²⁰
- c. Calculate PORTFOLIO returns that adjust for daily-weighted EXTERNAL CASH FLOWS.²¹
- d. Treat EXTERNAL CASH FLOWS according to the ASSET OWNER'S COMPOSITE-specific policy.
- e. Geometrically LINK periodic and sub-period returns.
- f. Consistently apply the calculation methodology used for an individual PORTFOLIO.

¹⁹ REQUIRED for periods beginning on or after 1 January 2008.

²⁰ REQUIRED for periods beginning on or after 1 January 2010.

²¹ REQUIRED for periods beginning on or after 1 January 2010.

Discussion

A portfolio is considered a private market investment portfolio when it has an investment objective to invest primarily in private market investments. Private market investments include real assets (e.g., real estate and infrastructure), private equity, and similar investments that are illiquid, not publicly traded, and not traded on an exchange.

Because private market investments do not trade publicly like stocks and bonds do, the return calculation requirements differ for private market investment composites. The portfolio calculation frequency is aligned with the minimum valuation frequency, which is quarterly; therefore, asset owners must calculate portfolio returns at least quarterly.

As of 1 January 2010, asset owners must calculate quarterly returns through the calendar quarter end or the last business day of the quarter when calculating time-weighted returns (TWRs) for private market investments included in composites. Consistency in return calculation dates will result in improved comparability of data for all GIPS Asset Owner Reports.

Because most portfolios within a composite experience external cash flows, it is important that the calculation of portfolio TWRs adjust for daily-weighted external cash flows that occur during the calculation period. This is required for periods beginning on or after 1 January 2010. When calculating TWRs that adjust for daily-weighted external cash flows, periodic and sub-periodic returns must be geometrically linked.

Private market investments do not trade publicly like marketable securities do, and thus they do not have valuations readily available on a monthly basis or at the time of external cash flows. Therefore, asset owners are not required to value private market investment portfolios and to calculate sub-period returns at the time of large cash flows, and to geometrically link these sub-period returns to calculate monthly TWRs, as is required for portfolios that are not private market portfolios. Instead, asset owners must calculate returns for private market investment portfolios at least quarterly and may use methods that adjust for daily-weighted external cash flows, such as the Modified Dietz or the internal rate of return (IRR) methods.

As explained in the discussion for Provision 22.A.21, the Modified Dietz and IRR methods are money-weighted rate of return methods. By means of geometric linking of the periodic Modified Dietz or IRR returns, however, TWRs can be approximated. Asset owners must create composite-specific policies with respect to the methodology used in calculating returns for private market investment portfolios and must apply these policies consistently to the individual portfolios included in the composite.

Provision 22.A.32

COMPOSITE TIME-WEIGHTED RETURNS FOR PRIVATE MARKET INVESTMENT COMPOSITES MUST be calculated at least quarterly.

Discussion

Composite time-weighted returns for private market investment composites must be calculated at least quarterly. Quarterly returns are important for an oversight body to be able to compare performance with private market investment benchmarks, which are typically reported on a quarterly basis. Quarterly returns are also needed for comparability with other asset classes and for comparability of data in GIPS Asset Owner Reports.

Real Estate

Provision 22.A.33

REAL ESTATE investments that are directly owned by the ASSET OWNER MUST:²²

- a. Have an EXTERNAL VALUATION at least once every 12 months unless the OVERSIGHT BODY stipulates otherwise, in which case REAL ESTATE investments MUST have an EXTERNAL VALUATION at least once every 36 months or per OVERSIGHT BODY instructions if the OVERSIGHT BODY REQUIRES EXTERNAL VALUATIONS more frequently than every 36 months; or
- b. Be subject to an annual financial statement audit performed by an independent public accounting firm. The REAL ESTATE investments MUST be accounted for at FAIR VALUE and the most recent audited financial statements available MUST contain an unmodified opinion issued by an independent public accounting firm.

Discussion

This provision applies to all real estate investments that are directly owned by the asset owner. This provision does not apply to real estate that may be held by pooled funds in which the asset owner invests or held by externally managed segregated accounts.

Real estate investments include wholly owned or partially owned:

- investments in land, including products grown from the land (e.g., timber, crops),
- buildings under development, completed buildings, and other structures or improvements,
- equity-oriented debt (e.g., participating mortgage loans), and
- private interest in a property for which some portion of the return to the investor at the time of investment is related to the performance of the underlying real estate.

²²REQUIRED for periods beginning on or after 1 January 2012.

The following investments are not considered to be real estate investments and must follow the provisions of the GIPS standards that are not related to real estate:

- publicly traded real estate securities,
- mortgage-backed securities (MBS) and commercial mortgage-backed securities (CMBS), and
- private debt investments, including commercial and residential loans in which the expected return is solely related to contractual interest rates without any participation in the economic performance of the underlying real estate.

In addition to the requirement to fair value quarterly, real estate investments that are directly owned by the asset owner must have either:

- an external valuation: an assessment of value performed by an independent third party who is a professionally designated or certified commercial property valuer or appraiser. In markets where these professionals are not available, steps must be taken to ensure that only qualified independent property valuers or appraisers are used; or
- a financial statement audit: an audit of a property's or a portfolio's financial statements that includes the real estate investments.

If an asset owner chooses an external valuation to satisfy this requirement, the real estate investments must have an external valuation at least every 12 months unless the oversight body stipulates a different frequency for external valuations. For example, if the oversight body stipulates that external valuations will take place every 24 months, then real estate investments that are directly owned must have an external valuation completed at least once every 24 months. Regardless of the frequency stipulated by the oversight body, each real estate investment that is directly owned by the asset owner must have an external valuation at least once every 36 months. Asset owners are encouraged to discuss the importance of external valuation with their oversight body, because valuation is the major element used in the performance return calculation and the external appraisal typically provides a point of reference for subsequent internal valuations performed by the asset owner. An asset owner may not always be successful in convincing the oversight body to move to more frequent external valuations because of the cost of the appraisal. In many markets, however, the cost of obtaining external appraisals, including subsequent updates, are not significant because of technological advances as well as increased availability of market data. For additional information regarding an external valuation, please refer to Provision 22.A.34.

Asset owners that opt to have an external valuation are not required to obtain an external valuation for a property when the property is under a sales contract and the asset owner believes that the sale will be finalized.

Instead of an external valuation, an asset owner may choose to have a financial statement audit. The audit must be performed by an independent, qualified (i.e., professionally designated, certified, or licensed) accounting firm. The accounting firm chosen must be knowledgeable of the accounting rules and principles that apply to the asset owner's financial statements, including

all relevant laws and regulatory requirements. The financial statement audit may be at either the property level or portfolio level.

Although the most recent financial statement audit does not need to be through the most recent period for which the asset owner is claiming compliance with the GIPS standards, a financial statement audit must be performed annually. The real estate investments must be accounted for at fair value, and the most recent audited financial statements available must contain an unmodified opinion issued by the independent public accounting firm.

Provision 22.A.34

EXTERNAL VALUATIONS for REAL ESTATE investments MUST be performed by an independent third party who is a professionally designated or certified commercial property valuer or appraiser. In markets where these professionals are not available, the ASSET OWNER MUST take necessary steps to ensure that only qualified independent property valuers or appraisers are used.

Discussion

An external valuation must be performed by an independent third party who is a professionally designated or certified commercial property valuer/appraiser. In Europe, Canada, and parts of Southeast Asia, the predominant professional designation is that of the Royal Institution of Chartered Surveyors (RICS). In the United States, the professional designation is Member of the Appraisal Institute (MAI). In Australia, the designation is Certified Practising Valuer from the Australian Property Institute. In markets where these professionals are unavailable, steps must be taken to ensure that only qualified independent valuers or appraisers are used. Even if no credentialed professionals are available, it would be unusual to not find a well-qualified independent valuer or appraiser who can value a property in a particular market.

The external valuation process must adhere to practices of the relevant valuation governing and standard setting body. Although appraisal standards may allow for a range of estimated values, it is recommended that a single value (final value conclusion) be obtained from external valuers or appraisers because only one value can be used for performance reporting.

Provision 22.A.35

The ASSET OWNER MUST NOT use EXTERNAL VALUATIONS for REAL ESTATE investments when the valuer's or appraiser's fee is contingent upon the investment's appraised value.

Discussion

The asset owner must not use external valuations when the valuer's or appraiser's fee is contingent upon the investment's appraised value. To do so could damage the objectivity of the valuer or appraiser and lead to a higher valuation than would otherwise be the case. The linking of a valuer's or appraiser's fee to the investment's appraised value will also lead to the perception that the investment's appraised value may have an upward bias, reducing the confidence of those evaluating the investment and the resulting valuation.

Side Pockets

Provision 22.A.36

All TOTAL FUND, COMPOSITE, and POOLED FUND returns MUST include the effect of any SIDE POCKETS held by TOTAL FUNDS, PORTFOLIOS, OR POOLED FUNDS.

Discussion

A side pocket is a segregated investment that is used mainly in alternative investment pooled funds, such as hedge funds, funds of funds, and other alternative investment funds, to separate illiquid or distressed assets from other, more liquid investments or to segregate investments held for a special purpose from other investments. All total fund, composite, and pooled fund returns must include the effect of any side pockets held by the total fund, composite, or pooled fund.

Asset owners may choose to also present returns without side pockets as supplemental information. The oversight body may be interested in the performance history without the effect of side pockets.

22.B. Input Data and Calculation Methodology—Recommendations

Provision 22.B.1

The ASSET OWNER SHOULD value TOTAL FUNDS and PORTFOLIOS on the date of all EXTERNAL CASH FLOWS.

Discussion

To improve the accuracy of time-weighted performance calculations, the GIPS standards have gradually increased the minimum required frequency of total fund valuation and portfolio valuation for many portfolio types from quarterly, to monthly, to the date of all large cash flows for periods beginning on or after 1 January 2010. Best practice, however, is to value total funds and portfolios on the date of all external cash flows. Asset owners are encouraged to create a policy to value total funds and portfolios on the date of all external cash flows as part of the total fund-specific or composite-specific valuation policy where possible.

Provision 22.B.2

Valuations SHOULD be obtained from a qualified independent third party.

Discussion

The quality of valuations used as inputs to calculate performance has a significant effect on the accuracy of total fund, portfolio, and composite returns; therefore, it is important that the valuations used are accurate. It is recommended that asset owners obtain valuations from an independent source because a third party can provide the most objective investment valuations. In most instances, obtaining valuations from an independent third party is considered to be a best practice. An asset owner claiming compliance with the GIPS standards is responsible for its claim of compliance and must ensure that the valuations obtained from a third party can be used to satisfy the requirements of the GIPS standards.

Provision 22.B.3

ACCRUAL ACCOUNTING SHOULD be used for dividends (as of the ex-dividend date).

Discussion

Accrual accounting determines the correct economic value of the total fund or portfolio assets and allows the recording of financial transactions as they come into existence rather than when they are paid or settled. It is recommended that dividends be recognized when earned on the ex-date (accrual basis) versus when paid (cash basis).

Provision 22.B.4

The ASSET OWNER SHOULD ACCRUE INVESTMENT MANAGEMENT FEES and INVESTMENT MANAGEMENT COSTS.

Discussion

Investment management fees are defined as the fees payable to external managers for externally managed assets. They are typically asset based (based on a percentage of assets), performance based (based on the portfolio's performance either on an absolute basis or relative to a benchmark), or a combination of the two, but they may take other forms as well. Investment management fees also include carried interest. Investment management fees for externally managed pooled funds and externally managed segregated accounts are among the fees and expenses that must be deducted when calculating total fund and composite net-of-fees returns and total fund and composite net-of-external-costs only returns. Investment management fees for externally managed pooled funds are also among the fees and expenses that must be deducted when calculating total fund and composite gross-of-fees returns.

Investment management costs are defined as all internal costs for both internally and externally managed assets. In addition to costs for portfolio management, they may also involve overhead and other related costs and fees, including data valuation fees, investment research services, custody fees, pro rata share of overhead (such as building and utilities), allocation of non-investment-department expenses (such as human resources, communications, and technology), and performance measurement and compliance services.^E Investment management costs are among the fees and expenses that must be deducted when calculating total fund and composite net-of-fees returns.

To reflect the most accurate returns, investment management fees and investment management costs should be accrued when possible. Accrual accounting allows the recording of financial transactions as they come into existence rather than when they are paid or settled. Returns can be skewed if investment management fees and investment management costs are reflected in the calculation of returns as they are paid, particularly when portfolio values change significantly.

^E The definition of INVESTMENT MANAGEMENT COSTS included in the Glossary in the 2020 edition of the GIPS standards is incorrect and should state:

All internal costs for both internally and externally managed assets. In addition to costs for portfolio management, they may also involve overhead and other related costs and fees, including data valuation fees, investment research services, custody fees, pro rata share of overhead (such as building and utilities), allocation of non-investment-department expenses (such as human resources, communications, and technology), and performance measurement and compliance services.

Provision 22.B.5

Returns SHOULD be calculated net of non-reclaimable withholding taxes on dividends, interest, and capital gains. Reclaimable withholding taxes SHOULD be accrued.

Discussion

Global investing requires recognition of the tax consequences of investing in different countries. The GIPS standards recommend that performance be reported net of non-reclaimable withholding taxes on dividends, interest, and capital gains. Some countries allow certain types of foreign investors to reclaim a portion of the foreign withholding taxes that are paid. These reclaimable foreign withholding taxes may be credited back to the investor at a later date. It is recommended that reclaimable foreign withholding taxes be accrued, meaning that the refund for reclaimable withholding taxes should be recorded when the reclaimable withholding taxes become a receivable owed to the asset owner, rather than when the refund is actually received.

Provision 22.B.6

The ASSET OWNER SHOULD incorporate the following hierarchy into its policies and procedures for determining FAIR VALUE for PORTFOLIO investments on a TOTAL FUND-specific or COMPOSITE-specific basis.

- a. Investments MUST be valued using objective, observable, unadjusted quoted market prices for identical investments in active markets on the measurement date, if available. If such prices are not available, then investments SHOULD be valued using;
- b. Objective, observable quoted market prices for similar investments in active markets. If such prices are not available or appropriate, then investments SHOULD be valued using;
- c. Quoted prices for identical or similar investments in markets that are not active (markets in which there are few transactions for the investment, the prices are not current, or price quotations vary substantially over time and/or between market makers). If such prices are not available or appropriate, then investments SHOULD be valued based on;
- d. Market-based inputs, other than quoted prices, that are observable for the investment. If such prices are not available or appropriate, then investments SHOULD be valued based on;

- e. Subjective, unobservable inputs for the investment where markets are not active at the measurement date. Unobservable inputs SHOULD be used to measure FAIR VALUE only when observable inputs and prices are not available or appropriate. Unobservable inputs reflect the ASSET OWNER'S own assumptions about the assumptions that market participants would use in pricing the investment and SHOULD be developed based on the best information available under the circumstances.

Discussion

The GIPS standards include a recommended valuation hierarchy as presented in Provision 22.B.6. It is recommended that asset owners incorporate this hierarchy into their policies for determining fair value for portfolio investments on a total fund-specific or composite-specific basis. For further information regarding fair valuation and the frequency of internal and external valuation requirements, please refer to Provision 22.A.16.

Provision 22.B.7

The ASSET OWNER SHOULD use GROSS-OF-FEES returns when calculating risk measures.

Discussion

Acknowledging that there are many acceptable calculation variations for various risk measures, the GIPS standards do not prescribe a specific methodology for calculating risk measures. It is recommended, however, that gross-of-fees returns be used when calculating risk measures. It is recommended that asset owners use gross-of-fees returns because these returns do not reflect the deduction of investment management fees for externally managed segregated accounts, which introduce additional variability of returns.

Asset owners are required to select a calculation methodology, on a total fund-specific or composite-specific basis, for each risk measure presented in a GIPS Asset Owner Report. They must document the chosen calculation methodology in their policies and procedures and then consistently apply the methodology selected.

Provision 22.B.8

PRIVATE MARKET INVESTMENTS SHOULD have an EXTERNAL VALUATION at least once every 12 months.

Discussion

For periods beginning or after 1 January 2020, it is recommended that private market investments have an external valuation at least once every 12 months. (Real estate investments that are directly owned by the asset owner must have an external valuation at least once every 12 months, unless the oversight body stipulates a less frequent external valuation, or be subject to an annual financial statement audit. See Provision 22.A.33.)

Those evaluating an asset owner’s private market investments, including the oversight body, typically prefer an external valuation because it is independent, unbiased, and an “expert” estimate of value that is perceived by the marketplace to be more reliable than an internal valuation.

An external valuation is an assessment of value performed by an independent third party who is a professionally designated or certified commercial property valuer or appraiser. In markets where these professionals are unavailable, steps must be taken to ensure that only qualified independent property valuers or appraisers are used. For additional information regarding an external valuation, please refer to Provision 22.A.34.

Provision 22.B.9

Operating cash accounts that are not available for investment SHOULD NOT be included in TOTAL ASSET OWNER ASSETS, TOTAL FUND assets, or COMPOSITE assets.^F

Discussion

Asset owners often maintain a number of cash accounts. A cash account that is considered discretionary and is part of the investable assets of the total fund must be included in total asset owner assets, total fund assets, or composite assets. There may be other operating cash accounts, such as a checking account that is used for payments to beneficiaries, vendors and others, that may be associated with the total fund but are not part of the total fund from an investment standpoint.

^F In the 2020 edition of the GIPS standards, Provision 22.B.9 incorrectly included the word fully, and stated:

Operating cash accounts that are not fully available for investment SHOULD NOT be included in TOTAL ASSET OWNER ASSETS, TOTAL FUND assets, or COMPOSITE assets.

If the operating cash account (e.g., checking account) is not available for investment, it should not be included in total asset owner assets, total fund assets, or composite assets.

Note that if a cash account has multiple purposes and is available for investment as well as used as an operating cash account, and the asset owner is unable to differentiate the portion of the cash account that is available for investment, it is recommended that a conservative approach be taken. The entire cash account should be considered available for investment and included in total asset owner assets, total fund assets, and composite assets.

Provision 22.B.10

Operating cash accounts that are not available for investment SHOULD NOT be included in TOTAL FUND returns or COMPOSITE returns.^G

Discussion

Asset owners often maintain a number of cash accounts. A cash account that is considered discretionary and is part of the investable assets of the total fund must be included in total fund returns or composite returns. There may be other operating cash accounts, such as a checking account that is used for payments to beneficiaries, vendors and others, that may be associated with the total fund but are not part of the total fund from an investment standpoint. If the operating cash account (e.g., checking account) is not available for investment, it should not be included in total fund returns or composite returns.

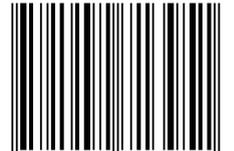
Note that if a cash account has multiple purposes and is available for investment as well as used as an operating cash account, and the asset owner is unable to differentiate the portion of the cash account that is available for investment, it is recommended that a conservative approach be taken. The entire cash account should be considered available for investment and included in total fund returns and composite returns.

^GIn the 2020 edition of the GIPS standards, Provision 22.B.10 incorrectly included the word “fully”, and stated:

Operating cash accounts that are not fully available for investment SHOULD NOT be included in TOTAL FUND returns or COMPOSITE returns.

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