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## INVESTMENT PERFORMANCE COUNCIL (IPC)

### Guidance Statement on Calculation Methodology

#### Preface

The Investment Performance Council (IPC) has stated its intentions to transform the current Global Investment Performance Standards (GIPS®) into “gold” standards which will represent global best practices for historical performance calculation and presentation. The IPC has agreed to follow an evolutionary approach for development of the GIPS standards, which includes a strategy of not introducing significant changes to the GIPS standards before 2005. This strategy is designed to maintain a sensible balance between improving the GIPS standards while avoiding undue disruption to firms that are, or are in the process of, claiming compliance. Currently, the “gold” GIPS Standards (which do incorporate all provisions relating to this guidance statement) are out for a period of public comment. During the second half of 2004, the IPC will be analyzing all public comments and potentially altering “gold” GIPS based on the feedback from the industry.

With regards to calculation methodology, current GIPS Provision 1.A.6 reads as follows:  
*“Accrual accounting must be used for dividends (as of the ex dividend date) for periods beginning 1 January 2005.”*

As a result of the IPC’s analysis of current GIPS requirements, the 1 January 2005 effective date for accrual accounting of dividends was deemed impractical due to the fact that most portfolio management systems and technology do not accrue dividends. In order to maintain a practical approach to evolving the Standards, the IPC agreed to move this effective date into the future. Firms are not expected to implement GIPS Provision 1.A.6 in 2005 as currently stated in the GIPS standards. Although this provision is now currently proposed (in the “gold” GIPS draft) to become a requirement on or before 2010, firms are **strongly** encouraged to adopt the infrastructure necessary to implement this provision **as soon as possible**.

Because moving the date to 1 January 2010 is only proposed and is not expected to be finalized until 2006 with the release of the final “gold” GIPS standards, the following Guidance Statement will reflect both what the current GIPS standards require and what is proposed under the “gold” GIPS revisions. This Guidance Statement takes effect on 1 June 2004. After 1 June 2004, firms must follow this guidance, regardless of what effective date is chosen for GIPS provision 1.A.6.

The “gold” GIPS proposal is currently available for public comment through 1 August 2004 on the AIMR Website at [www.aimr.org/standards](http://www.aimr.org/standards).

## **Introduction**

Achieving comparability among investment management firms’ performance presentations requires uniformity in the methods used to calculate returns. Although the GIPS standards allow flexibility in return calculation, the return must be calculated using a methodology that incorporates the time-weighted rate of return concept. The standards require a time-weighted rate of return because it removes the effects of cash flows, which are generally client-driven. By removing the effects of cash flows, a time-weighted rate of return best reflects the firm’s ability to manage the assets according to a specified strategy or objective and is the basis for the comparability of composite returns.

On 1 January 2010 it is currently proposed in “gold” GIPS that a “true” Time-Weighted Return will become a requirement. Firms may use alternative approximations to the “true” Time-Weighted Return prior to 1 January 2010 provided the calculation method chosen represents returns fairly, is not misleading, and is applied consistently.

It should be noted that the return calculation is dependent on accurate and consistent input data which is also critical to effective compliance with GIPS.

In this guidance statement, the term “return” is used rather than the more common term “performance” to emphasize the distinction between return and risk and to encourage the view of performance as a combination of risk and return. Risk measures are valuable tools for assessing the abilities of asset managers; however, this guidance statement focuses only on return calculation.

Money- or dollar-weighted returns may add further value in understanding the impact to the client of the timing of external cash flows, but are less useful for comparison and are therefore not covered by this guidance statement.

## **Guiding Principles**

Calculation Principles – The following are guiding principles that firms must use when calculating portfolio and composite returns:

- Firms must calculate total returns. Total returns must include income as well as realized and unrealized gains and losses.
- Firms must calculate returns after the deduction of all trading expenses.
- Firms must calculate returns at least on a monthly basis. For periods prior to 2001, firms may calculate portfolio returns on a quarterly basis. For periods prior to 2006, firms may calculate composite returns on a quarterly basis; however, it is recommended that firms calculate composite returns on a monthly basis.

- Firms must use time-weighted rates of return that adjust for cash flows, where a "cash flow" is an external flow of cash and/or securities (capital additions or withdrawals) that is client initiated.
- Firms must link the periodic returns geometrically.
- Composites must be asset-weighted using beginning-of-period weightings or a method that reflects both beginning market value and cash flows.

Valuation Principles – The following are guiding principles that firms must use when determining portfolio values as the basis for the return calculation:

- Portfolio valuations must be based on market values (not cost basis or book values).
- Accrual accounting must be used for fixed income securities and all other assets that accrue interest income. Accrual accounting must be used for dividends (as of the ex dividend date) for periods beginning 1 January 2005. (proposed to change to 1 January 2010 in “gold” GIPS) Accruals must be included in the market value calculation of the denominator and the numerator.
- Firms must use trade-date accounting for periods beginning 1 January 2005.

### **Time-Weighted Rate Of Return**

Valuing the portfolio each time there is an external cash flow ought to result in the most accurate method to calculate the time-weighted rates of return, referred to as the “true” Time-Weighted Rate of Return Method. Beginning 1 January 2010, this methodology is proposed in “gold” GIPS to be required. Until 2010, approximation methods are permitted.

A formula for calculating a true time-weighted portfolio return whenever cash flows occur is:

$$R_{TR} = \frac{(EMV - BMV)}{BMV},$$

where *EMV* is the market value of the portfolio at the end of the sub-period, before any cash flows in the period, but including accrued income for the period. *BMV* is the market value at the end of the previous sub-period (i.e., the beginning of the current sub-period); including any cash flows at the end of the previous sub-period and including accrued income up to the end of the previous period.

The sub-period returns are then geometrically linked according to the following formula:

$$R_{TR} = ((1 + R_1) \times (1 + R_2) \dots (1 + R_n)) - 1,$$

where  $R_{TR}$  is the total return and  $R_1, R_2, \dots, R_n$  are the sub-period returns for sub-period 1 through  $n$  respectively. Sub-period 1 extends from the first day of the period up to and including the date of the first cash flow. Sub-period 2 begins the next day and extends to the date of the second cash flow, and so forth. The final sub-period extends from the day after the final cash flow through the last day of the period.

This method assumes that the cash flow is not available for investment until the beginning of the next day. Accordingly, when the portfolio is revalued on the date of a cash flow, the cash flow is not reflected in the Ending Market Value, but is added to the Ending Market Value to determine the Beginning Market Value for the next day. If the cash flow is available for investment at the beginning of the day the value of the cash flow should be added to the Beginning Market Value.

Note that some day-weighting methods assume the cash flow is available midday and half weight the cash flow in that day. The GIPS standards do not specify which cash flow recognition method firms must use; however, once a method(s) is chosen and the criteria and assumptions are determined, they must be consistently applied.

### **Approximation Of Time-Weighted Rate Of Return**

As mentioned in the Introduction, the GIPS standards require firms to calculate returns using a methodology that incorporates the time-weighted rate of return concept. The GIPS standards allow flexibility in choosing the calculation methodology, which means that firms may use alternative formulas.

Calculating a true time-weighted rate of return is not an easy task and may be very cost intensive. For these reasons, firms may use an approximation method to calculate the total return of the individual portfolios for the periods and sub-periods. The most common approximation methods combine specific rate of return methodologies (such as the original Dietz method, the Modified Dietz method, the original Internal Rate of Return (IRR) method, and the Modified IRR method) for sub-periods and incorporate the time-weighted rate of return concept by geometrically linking the sub-period returns. The main difference between the various methods is the calculation of the average capital invested, which is the denominator used to calculate the return of a specific sub-period. Depending on the specific method, the average invested capital is based on different weights of the cash flows.

Just as the GIPS standards transition to more frequent valuations, the standards also transition to more precise calculation methodologies. Therefore, the GIPS standards require firms to calculate approximated time-weighted rates of return that adjust for daily-weighted cash flows by 1 January 2005 (e.g., Modified Dietz method) and will likely require the calculation of true time-weighted rates of return with valuations occurring at each external cash flow by 1 January 2010.

This guidance statement does not contain details on the different formulas for calculating approximate time-weighted rates of return.

### **Composite Return Calculation**

The GIPS standards state that composites must be asset-weighted using beginning-of-period weightings or a method that reflects both beginning market value and cash flows. The intention is to show a composite return that reflects the overall return of the set of the portfolios included in the composite.

To calculate composite returns, firms may use alternative formulas so long as the calculation method chosen represents returns fairly, is not misleading, and is applied consistently.

The GIPS standards require asset weighting of the portfolio returns within a composite using beginning-of-period weightings, beginning-of-period market values plus weighted cash flows, or by aggregating portfolio assets and cash flows to calculate performance as a single master portfolio.

According to the Beginning Market Value-Weighted Method the composite return,  $R_{BMV}$ , can be calculated using the formula

$$R_{BMV} = \frac{\sum_{i=1}^n (BMV_i \times R_i)}{BMV_{TOTAL}},$$

where  $BMV_i$  is the beginning market value (at the start of the period) for a portfolio,  $R_i$  is the rate of return for Portfolio  $i$ , and  $BMV_{TOTAL}$  is the total market value at the beginning of the period for all the portfolios in the composite.

The Beginning Market Value Plus Cash Flow-Weighted Method represents a refinement to the asset-weighted approach. Consider the case in which one of two portfolios in a composite doubles in market value as the result of a contribution on the third day of a performance period. Under the asset-weighted approach, this portfolio will be weighted in the composite based solely on its beginning market value (i.e., not including the contribution). The beginning market value and cash flow-weighted method resolves this problem by including the effect of cash flows in the weighting calculation as well as in the market values. Assuming that cash flows occur at the end of the day, the weighting factor for each cash flow is calculated as:

$$W_{i,j} = \frac{(CD - D_{i,j})}{CD},$$

where  $CD$  is the total number of calendar days in the period and  $D_{i,j}$  is the number of calendar days since the beginning of the period in which cash flow  $j$  occurred in portfolio  $i$ .

The beginning market value plus cash flow-weighted composite return,  $R_{BMV+CF}$ , can be calculated as follows:

$$R_{BMV+CF} = \frac{\sum_{i=1}^n \left\{ BMV_i + \left( \sum_{j=1}^m CF_{i,j} \times W_{i,j} \right) \right\} \times R_i}{\sum_{i=1}^n \left( BMV_i + \left( \sum_{j=1}^m CF_{i,j} \times W_{i,j} \right) \right)},$$

where  $CF_{i,j}$  is the cash flow  $j$  within the period for portfolio  $i$  (contributions to the portfolio are positive flows, and withdrawals or distributions are negative flows) and  $R_i$  is the return for portfolio  $i$ .

The Aggregate Return Method combines all the composite assets and cash flows before any calculations occur to calculate returns as if the composite were one portfolio. The method is also acceptable as an asset-weighted approach.

### **Geometric Linking Of The Periodic Composite Returns**

To calculate the composite return over more than one (sub-)period, the composite return over the total period is calculated by geometrically linking the individual composite sub-period returns using the following formula:

$$R_{CT} = ((1 + R_{C1}) \times (1 + R_{C2}) \dots (1 + R_{Cn})) - 1,$$

where  $R_{CT}$  is the composite return over the total period and  $R_{C1}$ ,  $R_{C2}$ , and  $R_{Cn}$  are the individual composite returns for the sub-periods 1, 2, and n, respectively.

### **Additional Considerations**

#### Changes To The Methodology

Firms should disclose which return calculation methodology is applied and whether there have been any changes to the calculation methodology.

#### Third-Party Performance Measurement

Firms may use portfolio returns calculated by a third-party performance measurer as long as the formula adheres to the requirements of GIPS standards.

#### Different Valuation And/Or Calculation Methods

Firms are permitted to include portfolios with different valuation and/or calculation methodologies within the same composite (as long as the formulas adhere to the requirements of GIPS standards). Firms must be consistent in the methodology used for a portfolio (e.g., firms cannot change the methodology for a portfolio from month-to-month).

#### Month End Valuations

Firms must be consistent in defining the (monthly) valuation period. The valuation period must end on the same day as the reporting period. In other words, firms must value the portfolio/composite on the last day of the reporting period (or the nearest business day). Aggregating portfolios with different ending valuation dates in the same composite is not permitted after 1 January 2006 (Proposed in “gold” GIPS standards to become effective on this date).

#### Trading Expenses

Returns must be calculated after the deduction of all trading expenses.

### Trade Date Accounting

Trade-date accounting is recommended when calculating returns, although settlement-date accounting is acceptable if disclosed. Firms must use trade-date accounting for periods beginning 1 January 2005. Trade date accounting recognizes an asset or liability on the date the transaction is entered into. As a result, the account will recognize any change between the price of the transaction and the current market value.

### Taxes

Firms must disclose relevant details of the treatment of withholding tax on dividends, interest income, and capital gains. Returns should be calculated net of non-reclaimable withholding taxes on dividends, interest, and capital gains. Reclaimable withholding taxes should be accrued.

### Grossing-Up Or Netting-Down Of Investment Management Fees

Firms are allowed to include portfolios with different grossing-up methodologies within the same composite. Firms must be consistent in the methodology used for a portfolio (e.g., firms cannot change the methodology for a portfolio from month-to-month).

### Large Cash Flows

Firms using approximation methods are permitted to adjust returns to account for large external cash flows, provided the adjustments are treated in a consistent manner. The firm must establish a policy on defining and adjusting for large cash flows and apply this policy consistently. Actual valuations at the time of any external cash flows will likely be required for periods beginning 1 January 2010.

### Disclosures

Firms are encouraged to make all policies and information available on request that are necessary to fully understand the calculation of the portfolio and composite returns.

### **Effective Date**

This Guidance Statement is effective 1 June 2004. Firms currently coming into compliance should apply this guidance to all periods. Firms are encouraged to apply this guidance prior to the Effective Date.