GUIDANCE STATEMENT ON THE APPLICATION OF THE GIPS® STANDARDS TO ASSET OWNERS

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GIPS Guidance Statement on the Application of the GIPS Standards to Asset Owners

INTRODUCTION

Target Audience

This Guidance Statement addresses the application of the Global Investment Performance Standards (GIPS®) to entities that manage investments, directly and/or through the use of external managers, on behalf of participants, beneficiaries, or the organization itself (“asset owners”). These entities include, but are not limited to, public and private pension funds, endowments, foundations, family offices, provident funds, insurers and reinsurers, sovereign wealth funds, and fiduciaries. If these entities have discretion over the assets under management, either by managing assets directly or by having the discretion to hire and fire underlying investment managers, they are able to claim compliance with the GIPS standards. Typically, asset owners are accountable to an oversight board, such as a board of trustees, which is responsible for establishing investment policies and monitoring performance. Please note that the term asset owner applies to organizations, such as pension plans and foundations, and not to individuals.

Most asset owners do not have prospective clients and do not compete for business. They manage an entity’s assets solely for the purpose of supporting the organization and are accountable only to its oversight board. This model is a different model from the traditional investment manager that markets its performance to attract and retain clients. The GIPS standards have requirements that address traditional investment managers and may not be applicable to asset owners, or may be unclear when applying them to asset owners. This Guidance Statement addresses these differences and provides guidance for asset owners that do not compete for business when interpreting and applying the GIPS standards.

Some asset owners, such as pension funds, manage the assets of other related asset owners, to gain efficiencies and cost savings. For example, a state employee pension plan may also manage the employee pension plans of local municipalities within that state. This Guidance Statement applies to these situations as well.

Some asset owners have the authority to compete for business by marketing to prospective clients, as is done by traditional investment managers. These asset owners would follow the existing guidance and requirements of the GIPS standards. This Guidance Statement may also be a helpful reference for these asset owners for understanding terms within the GIPS standards.

It is possible that an organization may act as both an asset owner, where investment authority and ownership are vested with the organization itself, as well as an asset manager, where it is competing for assets whose vesting lies with external clients (e.g., pension plan, sovereign wealth fund, insurance company). In such situations, the part of the organization acting as an asset manager must be defined as a separate firm that initially brings five years of performance history into compliance with the GIPS Standards and adheres to the broader GIPS Standards.
The part of the organization acting as an asset owner must be defined as a separate firm and adhere to the Guidance Statement on the Application of the GIPS Standards to Asset Owners, which makes it possible to initially come into compliance with the GIPS standards with a one-year track record building to ten years.

If an organization is acting as both an asset owner and an asset manager and is offering investment in the same product to prospective clients that the asset owner is managing, the organization must consider itself to be an asset manager for the purposes of GIPS compliance and present a five-year track record when initially coming into compliance. In this instance, it would be difficult to separate the organization into two GIPS firms, therefore, the asset owner would adhere to the existing guidance and requirements of the GIPS standards and must not present only a one-year track record when initially coming into compliance.

Reasons for an Asset Owner to Claim Compliance with the GIPS Standards

The establishment of a voluntary global investment performance standard leads to an accepted set of best practices for calculating and presenting investment performance that is readily comparable among investment firms, regardless of geographic location. This is an important goal for all entities involved in asset management. Whether or not an asset owner markets to prospective clients, its compliance with the GIPS standards demonstrates to relevant parties (such as its members, legislative bodies, oversight boards, and the general public) the following:

- A voluntary commitment to follow global industry standards with respect to performance calculation and presentation that are based on the principles of fair representation and full disclosure;
- Adherence to best practice with respect to the valuation of investments;
- The establishment of robust investment performance policies and procedures;
- A commitment to methods of calculation and presentation of investment performance that are consistent, transparent, and comparable; and
- The commitment to adopt the same set of performance standards that are often required of any external investment managers that the asset owner retains.

Need for Additional Guidance for Asset Owners

The primary factor that differentiates asset owners from other entities that claim compliance with the GIPS standards is that asset owners typically do not market to prospective clients. Instead, they manage assets on behalf of employees of a corporation or public entity (as in the case of pension funds) or on behalf of other asset owners (e.g., foundations, endowments, family offices). This difference does not preclude asset owners from claiming compliance with the GIPS standards, but it does make additional guidance helpful in determining how the GIPS standards can be applied to their organization.

It is also the case that asset owners may apply a meaning to some of the terms used in the GIPS standards that differs from the definition used in the GIPS standards or by traditional investment managers. This is another reason why additional guidance may be helpful to asset owners that seek to comply with the GIPS standards.
Application of Terms Used in the GIPS Standards to Asset Owners

The following discussion does not redefine the terms used in the GIPS standards; rather, it clarifies how these terms apply to asset owners.

Definition of the Firm

A firm claiming compliance with the GIPS standards must be defined as an investment firm, subsidiary, or division held out to clients or prospective clients as a distinct business entity. A distinct business entity is an entity that retains discretion over the assets it manages and that should have autonomy over the investment decision-making process. In the case of asset owners, the firm is defined as the organization or entity that has discretion over the total assets managed by the organization or entity. For a public pension fund, the firm is generally defined by legislation. In the case of foundations, endowments, or family offices, the firm is the entity established by the governing body to manage the pool of assets. For the purpose of this Guidance Statement, the terms “asset owner” and “firm” are used interchangeably.

If the asset owner manages only one pool of assets (i.e., one total fund), that fund represents total firm assets. If the asset owner manages more than one total fund, total firm assets equal the combined assets of all of the total funds managed by the asset owner. As is always the case when calculating total firm assets, care must be taken to avoid double counting of assets.

Discretion

To have discretion over assets, a firm complying with the GIPS standards must either manage the assets internally and/or have the ability to hire and fire external investment managers. Therefore, this Guidance Statement applies to asset owners that manage assets internally and to those that have control over asset allocation decisions and can hire and fire external investment managers.

Many firms that claim compliance with the GIPS standards use external investment managers, including fund-of-funds managers and investment management firms using sub-advisors for the management of assets or portfolios. The fact that asset owners often use external investment managers to manage some or all of their assets is not unique among firms complying with the GIPS standards, and the same concept for determining discretion applies to asset owners as to all other firms. If the asset owner has discretion to assign assets to a sub-advisor, those assets must be included in the firm’s total firm assets.

Recordkeeping

The Guidance Statement on Recordkeeping Requirements states that if a firm utilizes a third party to provide any service (e.g., sub-advisor, custodian, performance measurement), the firm is responsible for its claim of compliance and must ensure that the records and information provided meet the requirements of the GIPS standards. Therefore, as is the case for all firms
using external managers and service providers, an asset owner claiming compliance with the GIPS standards is responsible for ensuring that the data received from various external sources is accurate and must be able to aggregate information that may be supplied by external service providers as needed.

Composites/Composite Construction

When discussing composites and composite construction for asset owners, it is helpful to keep in mind how the following terms are used in this Guidance Statement:

- **Total Fund**: A pool of assets managed by an asset owner according to a specific investment mandate, which is typically composed of multiple asset classes. The total fund is typically composed of underlying portfolios, each representing one of the strategies used to achieve the asset owner’s investment mandate.

- **Portfolio**: The GIPS standards define a portfolio as an individually managed group of investments. A portfolio may be an account or pooled investment vehicle. From the asset owner’s perspective, a portfolio is typically an account representing one of the individual strategies in or components of the asset owner’s total fund, and portfolios are considered investments rather than client accounts. The GIPS standards require that all actual, fee-paying, discretionary portfolios be included in at least one composite.

- **Composite**: While composite is a term that asset owners often use to refer to any grouping of accounts or assets, the term has a specific meaning in the GIPS standards. In the GIPS standards, a composite is defined as an aggregation of one or more portfolios managed according to a similar investment mandate, objective, or strategy. Asset owners typically manage one multi-asset-class total fund according to a specific investment mandate. In this situation, the total fund must be in a composite.
  - If the asset owner manages only one total fund, there will be only one required composite and it will contain the one total fund.
  - If the asset owner manages more than one total fund according to the same investment mandate, all total funds managed according to the same investment mandate must either be included in individual composites and presented to the relevant oversight board separately or be included together in the same composite.

Due to the unique nature of asset owners as compared to traditional investment managers, the option for asset owners to create separate total fund composites and present them to the oversight board separately even if they are managed according to the same investment mandate has been provided. This departure from general GIPS composite construction requirements is to accommodate the focus of most oversight boards, which are charged with establishing investment policies or mandates for the fund and monitoring the performance of the fund relative to its objectives. A composite with more than one total fund may not be meaningful for an oversight board. If an asset owner uses this option, it must present the compliant presentation for each total fund composite to the respective oversight board.

- If the asset owner manages multiple, separate total funds with different investment mandates, there must be a separate composite to represent each investment mandate.
Examples of Required Composites for Pension Funds

The following are examples of the required composites for pension funds with different types of plan structures.

**Example One:** A pension fund is charged with the management of a total fund to benefit retired police officersmen and firefightersmen according to an investment mandate and guidelines set forth by the supervising legislative body, which is the only total fund under management. The total fund is made up of eight underlying portfolios, each representing a different strategy: large-cap equity, mid-cap equity, small-cap equity, international equity, long-duration fixed income, real estate, private equity, and investable cash. In this case, there is one multi-asset-class investment mandate and, therefore, one required composite, which contains the one total fund that has eight underlying portfolios.

**Example Two:** A pension fund is charged with the management of two separate total funds: Fund A to benefit retired police officersmen and firefightersmen, and Fund B to benefit retired teachers. The supervising legislative body has established the same investment mandate and guidelines for each fund, and the funds are managed with the same strategies. In this case, there are either two required composites where one contains Total Fund A and the other one contains Total Fund B, or there is one required composite that contains both Total Fund A and Total Fund B.

**Example Three:** A pension fund is charged with the management of two separate total funds: Fund C to benefit retired police officersmen and firefightersmen and Fund D to benefit retired teachers. The supervising legislative body has established a different investment mandate for each total fund. In this case, there are two separate investment mandates and, therefore, two required composites, one of which includes Total Fund C and the other Total Fund D.

Information on Underlying Strategies

Additional Composites

In addition to the required composite representing the total fund’s investment mandate, an asset owner may choose to create additional groupings of portfolios, representing a particular strategy or asset class. For example, an asset owner may wish to create a grouping of portfolios that represents all domestic equities within the total fund. The circumstances in which the information is being presented will determine whether it may be presented as supplemental information or is required to be presented as an additional composite. Although it is not required, firms may choose to, and are encouraged to, present additional composites when it is meaningful and appropriate.
For example, in Example One above, where the asset owner manages a single total fund, assume that the asset owner would like to create an additional composite for its domestic equity strategy that is composed of the large-cap equity, mid-cap equity, and small-cap equity portions of the total fund. In this case, it can create a domestic equity composite if the domestic equity portion of the total fund meets the criteria for carve-outs as described in the Guidance Statement on the Treatment of Carve-Outs. Among the key criteria is the requirement that a carve-out must be managed separately with its own cash balance or must be accounted for separately with its own associated cash position. Cash allocation is not permitted. If the carve-out requirements cannot be met, a domestic equities composite must not be created. Instead, the performance of the domestic equity assets could be presented as supplemental information as long as, among other things, it is not false or misleading to do so. Please see the next section for further discussion on Supplemental Information.

To determine if a portfolio or grouping qualifies as a composite from a GIPS perspective, and for further guidance on the creation of composites, asset owners should refer to the Guidance Statement on Composite Definition and the Guidance Statement on the Treatment of Carve-Outs. To determine if a portfolio or grouping qualifies as supplemental information, please refer to the Guidance Statement on the Use of Supplemental Information.

Supplemental Information

Supplemental information is defined as any performance-related information included as part of a compliant presentation that supplements or enhances the required and/or recommended provisions of the GIPS standards. The purpose of supplemental information is to provide users of a compliant presentation with the proper context in which to better understand the performance results.

Through the use of supplemental information, an asset owner can calculate and present the performance of a grouping of accounts, such as the domestic equity portion of its total fund(s), without cash. This grouping allows performance to be presented for asset classes or strategies in situations where the cash requirements for carve-outs that are presented as additional composites cannot be met.

Supplemental information must be clearly labeled and identified as supplemental to a particular compliant presentation and be included as part of the compliant presentation for the required composite representing the total fund. Because supplemental information has the potential to be misleading, it is important that an asset owner that wishes to include supplemental information in its compliant presentation complies with the Guidance Statement on the Use of Supplemental Information. Please refer to the first Sample Compliant Presentation in the Appendix for an example of Supplemental Information.
Required Compliant Presentations

A firm claiming compliance with the GIPS standards must have the ability to create a compliant presentation for each of its composites. A compliant presentation is defined as a presentation for a composite that contains all information required by the GIPS standards and may also include additional information and/or supplemental information. If an asset owner firm wishes to create composites in addition to the required composite(s), it must be able to create a compliant presentation for each of these additional composites as well as the required composite(s). A The Appendix presents two sample compliant presentations is included in the Appendix.

Prospective Client

Provision 0.A.9 of the GIPS standards requires that firms must make every reasonable effort to provide a compliant presentation to all prospective clients. The fact that asset owners do not have prospective clients does not relieve them of the obligation to comply with all requirements of the GIPS standards, including preparing and presenting compliant presentations. For those asset owners that do not have prospective clients, rather than providing the compliant presentation to prospective clients, they must make every reasonable effort to provide the compliant presentation to those who have direct oversight responsibility for total fund assets, such as a board of trustees charged with establishing investment policies or mandates for the fund and monitoring the performance of the fund relative to its objectives. If any additional composites have been created, the compliant presentations must also be presented to those who have direct oversight responsibility for total fund assets. Asset owners would not be required to provide the compliant presentation to those who have a more indirect fiduciary role, such as a member of the legislative body that drafts the legislation establishing a public pension plan. For those total funds that have beneficiaries or regulators, a compliant presentation must be provided to the beneficiaries or regulators upon request.

Asset owners that wish to have broader distribution of a compliant presentation(s) more broadly may include them on their websites, and in their annual reports, in their newsletters, or and in other distributed materials. Asset owners may also make reference to their claim of compliance with the GIPS standards on their websites, and in their annual reports, in their newsletters, or and in other distributed materials in accordance with the GIPS Advertising Guidelines.

Error Correction

In accordance with the requirements of the Guidance Statement on Error Correction, if a compliant presentation contains a material error, the compliant presentation must be corrected and the error disclosed. The asset owner must make every reasonable effort to provide the corrected compliant presentation to those who have direct oversight responsibility for total fund assets and other parties that received the erroneous compliant presentation, including current clients, consultants, and verifiers. The Guidance Statement on Error Correction provides a more complete description of the treatment of errors as well as a discussion of how to define materiality.
Outsourcing

Many asset owners have limited internal investment staff and expertise and elect to outsource some or all of their investment operations (e.g., accounting, performance) and/or investment management [e.g., hire external managers, outsource the Chief Investment Officer (CIO)]. If an asset owner chooses to outsource its investment operations and/or investment management, the asset owner still retains the responsibility for its claim of compliance. If outsourcing its investment functions, it can still claim compliance with the GIPS standards as long as it retains discretion over the assets it manages. Many investment management firms that claim compliance with the GIPS standards also use external investment managers, including fund-of-funds managers and investment management firms using sub-advisors for the management of assets or portfolios. The fact that asset owners often use external investment managers (i.e., sub-advisors) to manage some or all of their assets is not unique among firms complying with the GIPS standards, and the same concept for determining discretion applies to asset owners as to all other firms.

If the asset owner has discretion to assign assets to a sub-advisor, those assets must be included in the asset owner’s total firm assets. Once the assets are given to a sub-advisor to manage, the asset owner will not have control over exactly how those assets are invested. Nevertheless, the asset owner chose to invest the assets by placing them with a sub-advisor and has the discretion to hire or fire the sub-advisor. The sub-advisor is not required to be compliant with the GIPS standards itself, however it may be helpful to the firm if the sub-advisor is familiar with the GIPS standards.

The asset owner must treat the assets assigned to a sub-advisor as they would other assets that are managed in-house and must include them in total firm assets, assign them to the appropriate composite(s), and include them in the composite performance calculation. The asset owner can only include the sub-advisor's assets and performance record in composites for the periods that the asset owner assigned the assets to the sub-advisor.

Also, if an asset owner would like to be compliant with the GIPS standards and chooses to outsource performance calculation and/or any other administrative services, it needs to ensure that the relevant outsourced services produce information that is consistent with the GIPS standards requirements and that all GIPS requirements have been met. This includes all aspects of the GIPS standards: valuation, calculation methodology, composite construction, and the creation of the GIPS–compliant presentation. A custodian, administrator, and/or consultant that does not have discretion cannot claim compliance, but may assist asset owners in adhering to various GIPS requirements. It may be helpful to partner with custodians, administrators, prime brokers, and investment managers that understand what is needed to be compliant with the GIPS standards.

Asset owners should assign at least one point person internally to understand and monitor its GIPS-compliance. Depending on the asset owner’s size and complexity, it might have a team of people responsible for GIPS compliance. Some may wish to go through the exercise of coming into compliance on their own and others may hire a consultant to help with the process. Once the
资产拥有者在达到合规后，应定期实施测试或其他监控程序，以确保所有外包政策和程序的一致性和适当性。推荐资产拥有者进行审核，以评估其是否遵守GIPS标准的全部投资组合构建要求，并确保政策和程序已设计用于计算和展示符合GIPS标准的业绩。

应用GIPS标准的资产拥有者

该指导声明澄清了GIPS标准对资产拥有者的要求。它只解决那些要求资产拥有者澄清的条款，要么是由于缺乏潜在客户，要么是由于GIPS标准与资产拥有者对特定术语的定义可能不同。如果一个条款没有被提及，应假设该条款在资产拥有者中的应用方式与任何其他投资管理机构相同。

GIPS标准包括以下章节：

I. GIPS性能标准的条款
   0. 基本合规条款
      1. 输入数据
      2. 计算方法论
      3. 投资组合构建
      4. 披露
      5. 展示和报告
      6. 房地产
      7. 私募股权
      8. 卷包费/单独管理账户（SMA）组合
   II. GIPS估值原则
   III. GIPS广告指南
IV. 验证
V. 词汇表

0. 基本合规条款

0.A.4 GIPS标准必须在公司层面实施。

如前所述，声称符合GIPS标准的公司应被视为投资公司、子公司或对外展示的部门。
prospective clients as a distinct business entity. A distinct business entity is an entity that retains discretion over the assets it manages and that should have autonomy over the investment decision-making process. In the case of asset owners, the firm is defined as the organization or entity that has discretion over the total assets managed by the organization or entity. For a public pension fund, the firm is generally defined by legislation. In the case of foundations, endowments, or family offices, the firm would be the entity established by the governing body to manage the pool of assets. Firms claiming compliance must apply the GIPS standards to the entire firm.

If the asset owner manages only one pool of assets (i.e., one total fund), that total fund represents total firm assets. If the asset owner manages more than one total fund, total firm assets equal the combined assets of all of the total funds managed by the asset owner. As is always the case when calculating total firm assets, care must be taken to avoid double-counting of assets.

0.A.5 Firms MUST document their policies and procedures used in establishing and maintaining compliance with the GIPS standards, including ensuring the existence and ownership of client assets, and MUST apply them consistently.

Asset owners must ensure that the policies and procedures for valuing assets and calculating performance address not only assets managed internally but also those that are managed externally. Therefore, as is the case for all firms using external managers and service providers, an asset owner claiming compliance with the GIPS standards is responsible for ensuring that the input data received from various external sources is accurate and must be able to aggregate information that may be supplied by external service providers as needed. The processes used to calculate performance must be documented in the firm’s policies and procedures.

Even though asset owners typically do not manage third-party client assets, asset owners are not exempt from the requirement to ensure the existence and ownership of assets. Asset owners must establish policies and procedures to ensure the existence and ownership of the assets under their management, including ensuring that the information provided by either a custodian or an underlying external manager adheres to the requirements of the GIPS standards, if the asset owner is placing reliance on that information.

0.A.8 Statements referring to the performance of a single, existing client PORTFOLIO as being “calculated in accordance with the Global Investment Performance Standards” are prohibited, except when a GIPS-compliant FIRM reports the performance of an individual client’s PORTFOLIO to that client.

For most asset owners, the performance reported to those with oversight responsibility will be that of the required composite and additional composites, if they are created. It is permissible to state that the total fund and additional composite performance was calculated in accordance with the Global Investment Performance Standards if this statement is true.
0.A.9 FIRMS MUST make every reasonable effort to provide a COMPLIANT PRESENTATION to all PROSPECTIVE CLIENTS. FIRMS MUST NOT choose to whom they present a COMPLIANT PRESENTATION. As long as a PROSPECTIVE CLIENT has received a COMPLIANT PRESENTATION within the previous 12 months, the FIRM has met this REQUIREMENT.

As discussed above earlier, asset owners must make every reasonable effort to provide a compliant presentation to those who have direct oversight responsibility for total fund assets. An updated version of the compliant presentation must be provided to those with oversight responsibility for the total fund assets at least once every 12 months.

0.A.10 FIRMS MUST provide a complete list of COMPOSITE DESCRIPTIONS to any PROSPECTIVE CLIENT that makes such a request. FIRMS MUST include terminated COMPOSITES on the FIRM’S list of COMPOSITE DESCRIPTIONS for at least five years after the COMPOSITE TERMINATION DATE.

The list of composite descriptions must be provided to those who have direct oversight responsibility for total fund assets upon request. If the asset owner has only one required composite and has not chosen to create any additional composites, the compliant presentation for the one composite, which must include the composite description, can be used to satisfy Provision 0.A.10. If the asset owner has created composites in addition to the required total fund composite, those composites must be included on the list of composite descriptions in addition to the required total fund composite.

0.A.11 FIRMS MUST provide a COMPLIANT PRESENTATION for any COMPOSITE listed on the FIRM’S list of COMPOSITE DESCRIPTIONS to any PROSPECTIVE CLIENT that makes such a request.

As discussed above earlier, asset owners must make every reasonable effort to provide a compliant presentation to those who have direct oversight responsibility for total fund assets. An updated version of the compliant presentation must be provided to those with oversight responsibility for the total fund assets at least once every 12 months. In addition, if the asset owner has created additional composites, the asset owner must provide a compliant presentation for any additional composites listed on the firm’s (i.e., asset owner’s) list of composite descriptions to those who have direct oversight responsibility for the plan if they make such a request.

0.A.12 FIRMS MUST be defined as an investment firm, subsidiary, or division held out to clients or PROSPECTIVE CLIENTS as a DISTINCT BUSINESS ENTITY.

As discussed above earlier, firms claiming compliance with the GIPS standards must be defined as an investment firm, subsidiary, or division held out to clients or
prospective clients as a distinct business entity. A distinct business entity is an entity that retains discretion over the assets it manages and that should have autonomy over the investment decision-making process.

In the case of asset owners, the firm is defined as the organization or entity that has discretion over the total assets managed by the organization or entity. For a public pension fund, the firm is generally defined by legislation. In the case of foundations, endowments, or family offices, the firm is the entity set up by the governing body to manage the pool of assets.

If the asset owner manages only one pool of assets (i.e., one total fund), that total fund represents total firm assets. If the asset owner manages more than one total fund, total firm assets equal the combined assets of all of the total funds managed by the asset owner. As is always the case when calculating total firm assets, care must be taken to avoid double counting of assets.

1. **INPUT DATA**

The provisions within Section 1 (Input Data) do not require further clarification for application to asset owners. However, it should be noted that, as of 1 January 2011, firms must use fair value when calculating the value of all investments (i.e., total fund assets). Market value was required prior to 1 January 2011. Fair value is explained in detail in Chapter II of the GIPS standards: GIPS Valuation Principles of the GIPS standards.

When determining fair value, including the frequency for when fair value must be determined, the applicable requirements for an asset class or asset type—including real estate, private equity, and alternative investments—must be followed. Whenever the total fund is valued and performance is calculated, all investments regardless of asset class must be valued at fair value. Please see the real estate and private equity sections of this Guidance Statement for more information.

For example, the real estate provisions found in provisions 6.A.1 through 6.A.5 (Input Data) would apply to an asset owner if real estate assets are included in the total fund. In the case of private equity, Provisions 7.A.1 and 7.A.2 (Input Data) would apply if private equity assets are included in the total fund.

Asset owners may invest in alternative investments, such as hedge funds, and may use estimated valuations provided by fund administrators because final valuations may not be available on a timely basis. Asset owners that wish to use estimated values as fair values must consider requirements for doing so included in the section Estimated versus Final Values (Section 2.2.3) of the Guidance Statement on Alternative Investment Strategies and Structures.

Please refer to the Guidance Statement on Alternative Investment Strategies and Structures for more information on valuing portfolios when investments are not fully liquid (Section 2.2.1) and the frequency of valuation of portfolios (Section 2.2.2).
2. **CALCULATION METHODOLOGY**

All provisions within the Calculation Methodology section of the GIPS standards apply to an asset owner. Note, however, that for an asset owner, the total fund is typically a multi-asset class fund, including such asset classes as equity, fixed income, real estate, and private equity, designed to fulfill the investment mandate. Although there are different types of assets included in the total fund, total fund performance must be calculated using a consistently applied time-weighted return methodology that adheres to the requirements of the GIPS standards.

**Cash**

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. In such cases, when a cash account is considered discretionary and is part of the investable assets of the total fund, it must be included in total fund assets as well as performance calculations.

There may be other operating cash accounts, such as a checking account that is used for payments to beneficiaries, vendors, and others. While the checking account may be associated with the total fund, it is 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 assets and performance calculations of the total fund.

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 assets as well as performance calculations of the total fund.

Cash accounts not included in total fund assets must not be included in total firm assets. Asset owners must create policies and procedures for the treatment of cash accounts and apply them consistently.

**Calculating Performance**

While asset owners must report time-weighted returns (TWR), which are required by the GIPS standards, they may find it useful to calculate and report money-weighted returns (MWR) as well. In addition, local regulations may require some plan sponsors to report MWR in financial statements. It is recommended that a MWR be presented if the asset owner deems it to be helpful and important in understanding the performance of the total fund. It is recommended that any MWR included in a compliant presentation be calculated as a net-of-fees returns. While the required TWR represents the performance of the asset owner, the MWR represents the combination of the asset owner’s performance and the impact of cash flows. In the case of a
pension plan, although neither the pension plan sponsor nor the pension fund participants typically control the timing of the cash flows into or out of the total fund, the MWR may be informative in determining how the timing of plan contributions and withdrawals has impacted the total fund’s performance. MWR may also be a better indicator of profitability of the total fund.

Calculation of Gross-of-Fees and Net-of-Fees Returns

The GIPS standards require that gross-of-fees returns reflect the deduction of transaction costs and that net-of-fees returns reflect the deduction of transaction costs and investment management fees. However, unlike traditional investment management fees that are typically charged as a percentage of the value of a portfolio’s assets, investment management fees and related costs for an asset owner may be determined differently.

Asset owners typically incur a wide variety of costs and expenses that are related either directly or indirectly to the management of the assets, as follows:

**Externally managed pooled funds:** The values of externally managed pooled funds are typically net of imbedded investment management fees. In some instances, asset owners may pay investment management fees for the management of pooled funds that are not imbedded in the value of the pooled funds. Consistent with the Guidance Statement on Alternative Investments Strategies and Structures, investment management fees paid through such funds or on behalf of such funds must be deducted when calculating gross-of-fees returns, net-of-external-costs-only returns (as described below), and net-of-fees returns.

**Externally managed separate accounts:** Asset values provided by external investment managers for management of separate accounts may include or exclude investment management fees paid by the asset owner to the external investment managers. Investment management fees paid to external investment managers for separate accounts must be deducted when calculating net-of-external-costs-only returns (as described below) and net-of-fees returns.

**Investment management costs:** Determining investment management costs for internally managed assets is not a straightforward process. In addition to all investment management costs for portfolio management, it may also involve a *pro-rata* share of overhead and other related costs and fees, including data valuation fees, investment research services, custodian 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. These investment management costs must be deducted when calculating net-of-fees returns.

The various returns that a plan sponsor or an asset owner may calculate are as follows:

**Full gross-of-fees return:** This is the return on investments; and reflects the deduction of only transaction costs. The full gross-of-fees return may only be presented only as supplemental information because it does not reflect the deduction of investment management fees paid that
are embedded within the externally managed pooled fund asset values or paid for the management outside of the pooled fund.

**Gross-of-fees return:** This is the return on investments reduced by embedded investment management fees for externally managed pooled funds, as well as any other investment management fees paid for the management outside of the pooled fund, even if the payment is made from other assets and payments do not flow through the pooled fund. Investment management fees paid to externally managed separate accounts are not deducted in the gross-of-fees return.

**Net-of-external-costs-only return:** This is the gross-of-fees return reduced by all costs for externally managed separate accounts.

**Net-of-fees return:** This is the net-of-external-costs-only return reduced by all other investment management costs.

Because the net-of-fees return reflects performance after all costs associated with the management of the assets, this return is required to be presented.

The following chart below shows the calculation of the returns just described above.
Example:

<table>
<thead>
<tr>
<th>Return Type</th>
<th>Returns</th>
<th>Information Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Fund fund full gross-of-fees return</td>
<td>11.00%</td>
<td>Supplemental information only</td>
</tr>
<tr>
<td>Investment management fees for externally managed pooled funds</td>
<td>(0.05%)</td>
<td></td>
</tr>
<tr>
<td>Total Fund fund gross-of-fees return</td>
<td>10.95%</td>
<td>Optional</td>
</tr>
<tr>
<td>Investment management fees for externally managed separate accounts</td>
<td>(0.04%)</td>
<td></td>
</tr>
<tr>
<td>Total Fund fund net-of-external costs-only return</td>
<td>10.91%</td>
<td>Optional</td>
</tr>
<tr>
<td>Investment management costs</td>
<td>(0.16%)</td>
<td></td>
</tr>
<tr>
<td>Total Fund fund net-of-fees return</td>
<td>10.75%</td>
<td>Required</td>
</tr>
</tbody>
</table>

Given the different layers of costs associated with an asset owner and the fact that various returns may be presented, it is important that there is sufficient disclosure to provide clarity on what is included in the total fund returns being presented. The returns presented must be clearly identified, and the compliant presentation must include a description of the investment management fees, other costs, and expenses that are reflected in the returns presented.

Asset owners must establish policies and procedures for determining how costs will be calculated for internally managed assets, including which costs and expenses are considered investment management costs, and must follow the policies and procedures consistently.

3. COMPOSITE CONSTRUCTION

To understand the application of Section 3 (Composite Construction) to asset owners, please refer to the section on Composites/Composite Construction contained in the Introduction to this Guidance Statement. There are three main points from this discussion:

1) The only required composite(s) for an asset owner is (are) the composite(s) corresponding to the investment mandate of the total fund(s). (If the asset owner has more than one investment mandate, there would be more than one required composite);
2) The asset owner may choose to create additional composites to reflect the performance of portfolio(s) included in the total fund that reflect individual strategies or asset classes, but this doing so is not required; and
3) The asset owner must be able to create a compliant presentation for each composite that it creates.
Interpretations regarding composite construction for asset owners are indicated in the following sections below. Remember that, for the purposes of this Guidance Statement, the term “portfolio” is typically an account representing one of the strategies in or components of the asset owner’s total fund, rather than a client account. This difference should be taken into consideration when applying Section 3 of the GIPS standards to an asset owner.

3.A.1 All actual, fee-paying, discretionary PORTFOLIOS MUST be included in at least one COMPOSITE. Although non-fee-paying discretionary PORTFOLIOS may be included in a COMPOSITE (with appropriate disclosure), non-discretionary PORTFOLIOS MUST NOT be included in a FIRM’S COMPOSITES.

The only required composite(s) for most asset owners is (are) the composite(s) representing the investment mandate of the total fund(s). If the asset owner manages more than one total fund according to the same investment mandate, all total funds managed according to the same investment mandate must either be included in individual composites and presented to the relevant oversight board separately or be included in the same composite and presented to the oversight board as one composite. If the asset owner manages total funds with different investment mandates, then each mandate must be represented by a separate composite. All managed assets would be considered discretionary at the total fund level and must be included in the appropriate composite. Due toBecause of the nature of asset owners, all assets managed by the asset owner must be included in the composite, whether they are fee-paying or non-fee-paying.

3.A.4 COMPOSITES MUST be defined according to investment mandate, objective, or strategy. COMPOSITES MUST include all PORTFOLIOS that meet the COMPOSITE DEFINITION. Any change to a COMPOSITE DEFINITION MUST NOT be applied retroactively. The COMPOSITE DEFINITION MUST be made available upon request.

The required composite(s) for most asset owners is (are) the composite(s) representing the investment mandate of the total fund(s). If the asset owner manages more than one total fund according to the same investment mandate, all total funds managed according to the same investment mandate must either be included in individual composites and presented to the relevant oversight board separately or be included in the same composite and presented to the oversight board as one composite. If the asset owner chooses to create an additional composite, then all portfolios that meet the composite definition must be included in the additional composite. When composites are created at the portfolio level, the carve-out requirements must be met. (See discussion under provision 3.A.8 and the Guidance Statement on the Treatment of Carve-Outs.)
3.A.5 **COMPOSITES MUST include new PORTFOLIOS on a timely and consistent basis—after each PORTFOLIO comes under management.**

For a required total fund composite, any new portfolios (i.e., investments) within the total fund must be included in the total fund composite as soon as they are funded. If there is more than one total fund in a composite and if any of them are being newly established, then this requirement is applicable. For any additional composites the asset owner chooses to create, any new portfolios must also be included in the composites as soon as they are funded.

3.A.6 **Terminated PORTFOLIOS MUST be included in the historical performance of the COMPOSITE up to the last full measurement period that each PORTFOLIO was under management.**

Since the required composite for an asset owner is based on the total fund, any terminated portfolios (i.e., investments) must be included in total fund performance through the day the assets are last managed. If there is more than one total fund in a composite and if any of them are terminating, then this requirement is applicable. For any additional composites the asset owner chooses to create, any portfolios being terminated must also be excluded from the composites through the last day the assets are managed.

3.A.7 **PORTFOLIOS MUST NOT be switched from one COMPOSITE to another unless documented changes to a PORTFOLIO’S investment mandate, objective, or strategy or the redefinition of the COMPOSITE makes it appropriate. The historical performance of the PORTFOLIO MUST remain with the original COMPOSITE.**

For an asset owner, the required composite(s) includes all total funds managed. This provision is applicable if the asset owner chooses to create a composite that includes more than one total fund. If the asset owner chooses to create additional composites representing an asset class or strategy within the total fund, this provision is also applicable.

3.A.8 **For periods beginning on or after 1 January 2010, a CARVE-OUT MUST NOT be included in a COMPOSITE unless the CARVE-OUT is managed separately with its own cash balance.**

The term “carve-out” may be a term that is not familiar to an asset owner. As defined in the GIPS standards, a carve-out is a portion of a portfolio that is by itself representative of a distinct investment strategy. It is used to create a track record for a narrower mandate from a multi-strategy portfolio managed to a broader mandate. For periods beginning on or after 1 January 2010, a carve-out must be managed separately with its own cash balance and there can be no cash allocation. The concept of carve-outs applies to an asset owner if it is choosing to create an additional composite for one or more of the underlying strategies within the total fund.
asset owner is only creating only the required composite(s) for the total fund(s), the requirements relating to carve-outs are not applicable since because cash as well as all other assets of the total fund are already included in the composite(s). Please refer to the preceding Additional Composites section and the Guidance Statement on the Treatment of Carve-Outs.

3.A.9 If the FIRM sets a minimum asset level for PORTFOLIOS to be included in a COMPOSITE, the FIRM MUST NOT include PORTFOLIOS below the minimum asset level in that COMPOSITE. Any changes to a COMPOSITE-specific minimum asset level MUST NOT be applied retroactively.

All discretionary portfolios and investments within the total fund, regardless of their size, must be included in the required composite for an asset owner. However, if the asset owner chooses to create additional composites representing an asset class or strategy within the total fund, this provision is applicable.

3.A.10 FIRMS that wish to remove PORTFOLIOS from COMPOSITES in cases of SIGNIFICANT CASH FLOWS MUST define “significant” on an EX-ANTE, COMPOSITE-specific basis and MUST consistently follow the COMPOSITE-specific policy.

From the perspective of the total fund, all of the underlying portfolios are equivalent to investments, so a portfolio may not be removed from the total fund or additional composite calculations because of a cash flow that results from the re-allocation of cash from one asset class to another or from the addition of new cash to the portfolio, therefore this provision is not applicable.

3.B.2 To remove the effect of a SIGNIFICANT CASH FLOW, the FIRM SHOULD use a TEMPORARY NEW ACCOUNT.

This recommendation is not applicable to an asset owner with respect to a total fund; since because all cash flows must be reflected in the total fund and additional composites.

4. DISCLOSURE

4.A.2 FIRMS MUST disclose the definition of the FIRM used to determine TOTAL FIRM ASSETS and FIRM-wide compliance.

Please refer to the Introduction section of this Guidance Statement for a discussion of how the concepts of the definition of the firm and total firm assets apply to asset owners. As is true for all firms that claim compliance with the GIPS standards, the definition of the firm must be included in the asset owner’s compliant presentation(s).
4.A.3 FIRMS MUST disclose the COMPOSITE DESCRIPTION.

For asset owners, the composite description, which must include all key features of the composite’s investment mandate, objective, or strategy, would be expected to include the following:

- The asset allocation of the total fund as of the most recent annual period end;
- The investment objective of the total fund;
- The actuarial rate of return or spending policy description;
- A description of the asset classes and/or other groupings within the total fund, such as the composition of the asset class, strategy used, types of management used (e.g., active, passive, internal, external), and relevant exposures; and
- The use of leverage, derivatives, and short positions.

4.A.4 FIRMS MUST disclose the BENCHMARK DESCRIPTION.

For asset owners, the total fund benchmark is typically a blend of the asset class benchmarks based on the policy weights of the respective asset classes. The benchmarks utilized by each asset class must be disclosed, along with their weights as of the most recent annual period end as well as general information regarding the investments, structure, and/or characteristics of the benchmarks.

Typically, the components and/or weights of the multi-asset class benchmark for the total fund change periodically. Asset owners must disclose the benchmark components as of the most recent annual period end and must offer to provide information about historical benchmark components and/or weight changes upon request. Material changes to benchmark components or weights, such as the addition of a new benchmark to the blend of benchmarks, must be disclosed.

4.A.5 When presenting GROSS-OF-FEES returns, FIRMS MUST disclose if any other fees are deducted in addition to the TRADING EXPENSES.

See the introduction to Section 2 (Calculation Methodology) for additional discussion of gross-of-fees returns, net-of-external-costs-only returns, and net-of-fees returns. If gross-of-fees returns are presented, then asset owners must disclose if any other fees are deducted in addition to trading expenses, embedded investment management fees for externally managed pooled funds, and investment management fees paid for the management of pooled funds, if any.

4.A.6 When presenting NET-OF-FEES returns, FIRMS MUST disclose:

a. If any other fees are deducted in addition to the INVESTMENT
MANAGEMENT FEES and TRADING EXPENSES;
b. If model or actual INVESTMENT MANAGEMENT FEES are used; and
c. If returns are net of any PERFORMANCE-BASED FEES.

See the introduction to Section 2 (Calculation Methodology) for additional discussion of gross-of-fees returns, net-of-external-costs-only returns, and net-of-fees returns.

Asset owners must disclose if any other fees are deducted from net-of-fees returns in addition to investment management fees, investment management costs, trading expenses, embedded investment management fees for externally managed pooled funds, and investment management fees paid for the management of pooled funds, if any. Asset owners must also disclose if model or actual investment management fees and investment management costs are used and if returns are net of any performance-based fees.

4.A.8 FIRMS MUST disclose which measure of INTERNAL DISPERSION is presented.

A measure of internal dispersion for a total fund composite is not required unless an asset owner has more than five total funds in a composite. If the asset owner chooses to create additional composites at the underlying strategy level, this provision would be applicable if there are more than five portfolios in the composite that are managed with the same investment mandate, objective, or strategy. An asset owner may choose to present an internal dispersion measure for an annual period even if not required to do so. If the asset owner chooses to present a measure of internal dispersion, the asset owner must disclose which internal measure is presented.

An asset owner that creates an additional composite, such as a domestic equity composite that includes seven different sub-portfolios, each managed according to different strategies (large-cap value, mid-cap growth, etc.), would not be required to provide a measure of internal dispersion. This grouping of accounts managed according to different investment mandates, objectives, or strategies would be considered a composite consisting of one portfolio. A measure of internal dispersion in this instance is not required.

4.A.9 FIRMS MUST disclose the FEE SCHEDULE appropriate to the COMPLIANT PRESENTATION.

While this provision is typically not applicable to an asset owner that does not manage third-party assets, there may be instances in which an asset owner is compensated in a manner similar to traditional investment managers. In these cases, this provision 4.A.9 would apply; and the fee schedule must be disclosed. Regardless of the manner in which investment management fees and related costs are incurred, asset owners must disclose the costs reflected in the performance that is presented in the compliant presentation. See the introduction to Section 2.
(Calculation Methodology) for additional discussion of investment management costs.

4.A.11 **FIRMS MUST disclose that the FIRM’S list of COMPOSITE DESCRIPTIONS is available upon request.**

If the asset owner has only one required composite and has chosen not to create any additional composites, the compliant presentation itself represents the firm’s list of composite descriptions because the description of the sole composite is included in the compliant presentation. If the asset owner chooses to create additional composites representing one or more strategies within the total fund, or if the asset owner has more than one required composite, the list of composite descriptions must be created by the asset owner and made available upon request to those with oversight responsibility for the assets managed by the asset owner.

4.A.23 **For periods prior to 1 January 2010, if CARVE-OUTS are included in a COMPOSITE, FIRMS MUST disclose the policy used to allocate cash to CARVE-OUTS.**

Please refer to the discussion under provision 3.A.8. This provision is applicable only if an asset owner creates composites (i.e., carve-outs) for one or more of the underlying strategies within the total fund that included the allocation of cash prior to 1 January 2010.

4.A.25 **For the periods beginning on or after 1 January 2006, FIRMS MUST disclose the use of a SUB-ADVISOR and the periods a SUB-ADVISOR was used.**

While the use of sub-advisors (i.e., external managers) and the periods a sub-advisor was used must be disclosed, the percentage of externally managed assets is not required information. The percentage of externally managed assets may be helpful information, however, and it is recommended that asset owners disclose this information as of the most recent annual period end in their compliant presentation(s). Doing so would allow an asset owner to meet this disclosure requirement. If asset class returns are presented, it is recommended to provide this information at the asset class level as well.

4.A.30 **If the FIRM changes the BENCHMARK, the FIRM must disclose the date of, description of, and reason for the change.**

This provision applies to a fundamental change in the benchmark—for example, a change in an index used in calculating the benchmark—rather than to periodic minor changes in benchmark weights or components. As explained in provision 4.A.4 above, the disclosure of the benchmark composition as of the most recent annual period end and an offer to provide information about the other periods upon request are sufficient for benchmark changes that are not material changes to benchmark components or weights.
4.A.32 If the FIRM has adopted a SIGNIFICANT CASH FLOW policy for a specific
COMPOSITE, the FIRM MUST disclose how the FIRM defines a
SIGNIFICANT CASH FLOW for that COMPOSITE and for which periods.

See the discussion under Provision 3.A.10. This provision is not applicable.

4.B.8 FIRMS SHOULD disclose if a composite contains proprietary assets.

For a typical asset owner, proprietary assets will represent 100% of the composite,
and this fact will already be disclosed given the nature of the composite. If this fact is
not already disclosed, asset owners should disclose this information.

5. PRESENTATION AND REPORTING

5.A.1 The following items MUST be presented in each COMPLIANT
PRESENTATION:

5.A.1.a. At least five years of performance (or for the period since the FIRM’S inception
or the COMPOSITE INCEPTION DATE if the FIRM or the COMPOSITE has
been in existence less than five years) that meets the REQUIREMENTS of the
GIPS standards. After a FIRM presents a minimum of five years of GIPS-
compliant performance (or for the period since the FIRM’S inception or the
COMPOSITE INCEPTION DATE if the FIRM or the COMPOSITE has been
in existence less than five years), the FIRM MUST present an additional year of
performance each year, building up to a minimum of 10 years of GIPS-
compliant performance.

Because of the unique nature of assets owners, in that they do not compete for clients,
instead of requiring an initial five-year compliant track record, asset owners must
initially present at least one year of GIPS-compliant performance that meets the
requirements of the GIPS standards. After an asset owner presents a minimum of 1-
year of GIPS-compliant performance, it must present an additional year of
performance each year, building up to a minimum of 10 years of GIPS-compliant
performance that is required to be presented in a compliant presentation. Asset
owners are also encouraged to bring their historical track record into compliance.

Importantly, this exception is allowed only for asset owners that do not have
prospective clients and do not compete for business. It applies only for asset owners
that manage an entity’s assets solely for the purpose of supporting the organization
and are accountable only to their respective oversight boards.
5.A.1.b. COMPOSITE returns for each annual period. COMPOSITE returns MUST be clearly identified as GROSS-OF-FEES or NET-OF-FEES.

See Section 2 (Calculation Methodology) for a discussion of various returns. As is true for all firms that claim compliance with the GIPS standards, firms must clearly label composite returns as gross-of-fees or net-of-fees. In addition to presenting composite returns in compliant presentations, asset owners should consider including additional information or supplemental information that would be helpful and appropriate.

5.A.1.f. The number of PORTFOLIOS in the COMPOSITE as of each annual period end. If the COMPOSITE contains five or fewer PORTFOLIOS at period end, the number of PORTFOLIOS is not REQUIRED.

This information is not required for an asset owner if there are five or fewer total funds in a required composite. If the asset owner chooses to create additional composites for the underlying strategies of the total fund, the number of portfolios must be presented if the composite contains more than five portfolios at each annual period end. An asset owner may choose to present this information even if not required to do so.

As discussed in provision 4.A.8, if an asset owner creates an additional composite, such as a domestic equity composite that contains portfolios managed according to different investment mandates, the composite is viewed as consisting of only one portfolio and this provision is not applicable.

5.A.1.i. A measure of INTERNAL DISPERSION of individual PORTFOLIO returns for each annual period. If the COMPOSITE contains five or fewer PORTFOLIOS for the full year, a measure of INTERNAL DISPERSION is not REQUIRED.

The asset owner may simply indicate that the measure of internal dispersion is not required and/or meaningful if there are five or fewer total funds in the required composite. If there are more than five total funds in the composite for the full year, then a measure of internal dispersion is required to be presented. An asset owner may choose to present an internal dispersion measure for an annual period even if not required to do so.

If the asset owner chooses to create additional composites for the underlying strategies of the total fund, a measure of internal dispersion is required if the composite contains more than five portfolios for the full year that are managed according to the same investment mandate, objective, or strategy. As discussed in provision 4.A.8, if an asset owner creates an additional composite, such as a domestic equity composite that contains portfolios managed according to different investment mandates, the composite is viewed as consisting of one portfolio only and no measure of internal dispersion is required.
5.A.3. **FIRMS MUST NOT LINK** non-GIPS–compliant performance for periods beginning on or after 1 January 2000 to their GIPS-compliant performance. **FIRMS may LINK** non-GIPS-compliant performance to GIPS-compliant performance provided that only GIPS-compliant performance is presented for periods on or after 1 January 2000.

This provision does not apply because there is no minimum date by which all asset owners’ track records must comply with the GIPS standards and this Guidance Statement. However, only GIPS-compliant performance is allowed to be presented in an asset owner’s compliant presentation. Please note the relevant guidance in provision 5.A.1.a.

Please see the Effective Date section below for more guidance on presenting GIPS-compliant asset owner performance retroactively.

All performance calculated for periods beginning on or after 1 January 2018 must be calculated in accordance with this second version of the Guidance Statement.

**Other Information**

An asset owner newly coming into compliance with the GIPS standards may have elected to bring only one year of their track record into compliance. If this asset owner has a historical track record longer than one year that it is not bringing into compliance, it may present the longer track record outside of the compliant presentation. It may link the compliant and the non-compliant track record as long as it discloses the periods of non-compliance. The compliant presentation must include only GIPS-compliant information. Linking compliant and non-compliant track records outside of a compliant presentation is an exception that only applies to asset owners and does not apply to asset managers.

**6. REAL ESTATE**

In the **Real Estate** provisions (Section 6), the requirements that pertain to provisions 6.A.1 through 6.A.5 (Input Data) are applicable to an asset owner if real estate assets are part of the total fund. Real estate valuation principles require an external valuation to be undertaken on assets at defined intervals in accordance with the GIPS Valuation Principles. For quarterly valuation requirements effective 1 January 2010, the asset owner must establish and document the quarterly valuation approach in their policies and procedures.

If real estate investments are part of the total fund, the asset owner must value real estate assets whenever the total fund is valued and performance is calculated, at least monthly and at the time of large cash flows. For some real estate investments, it may be difficult to obtain valuations with this frequency, but firms must create valuation policies and procedures that address how to determine fair value for real estate investments monthly and at the time of large cash flows.
The fair value for real estate investments may be determined based on the last quarterly valuation, adjusted for capital activity and any material economic and/or investment-specific events that would alter the valuation significantly (e.g., comparable sales, building/property damage caused by an unusual event). If material economic and/or investment-specific events occur, they must be considered when determining fair value. The valuation would seek to identify significant events relating to the marketplace or the specific real estate asset that would result in valuation changes. Fair value must be used to value all assets, including real estate assets, as of 1 January 2011. For periods prior to 1 January 2011, real estate investments must be valued at market value, as previously defined for real estate in the 2005 edition of the GIPS standards.

For example, if an asset owner becomes aware that fire has damaged a building, it must incorporate this event in the valuation. If an asset owner invests in a real estate closed-end partnership, it is not required to actively visit all of the buildings owned by the partnership to make sure they are still at the value being recorded. If the asset owner becomes aware of the fact that a building in the partnership has lost value, it must incorporate it in the valuation. The asset owner is not required to send staff around the world to check on and ensure that all the buildings the partnership is invested in are still standing.

It is possible that the “last available price” can be stale. For example, for real estate, that price might be from 6 months ago or 12 months ago or the monthly value might be the last price from last year, but it would be used until there is a revaluation or if there is a reason to believe the last valuation no longer represents fair value.

Please refer to the GIPS Handbook discussion under of Provision provisions 6.A.1 through 6.A.5 and the GIPS Valuation Principles for more information on valuing real estate investments. The asset owner must establish and document the valuation approach it uses in its policies and procedures and apply the approach consistently.

Assuming carve-out requirements are met, an asset owner may want to create a real estate asset class composite. Provisions 6.A.6 through 6.A.26 (Calculation Methodology, Disclosure, and Presentation and Reporting) are applicable to an asset owner only if the asset owner chooses to create an additional composite for a real estate strategy.

7. PRIVATE EQUITY

In the Private Equity provisions (Section 7), the requirements in Provisions 7.A.1 and 7.A.2 (Input Data) are applicable to an asset owner if private equity assets are part of the total fund.

Note that it is recommended in Provision 7.B.1 that private equity investments are valued at least quarterly. If private equity investments are part of the total fund, the asset owner must value private equity assets whenever the total fund is valued and performance is calculated, at least monthly and at the time of large cash flows. For some private equity investments, it may be difficult to obtain valuations with this frequency, but firms must create valuation policies and procedures that
address how to determine fair value for private equity investments monthly and at the time of large cash flows.

The fair value for private equity investments may be determined based on the last annual valuation, adjusted for capital activity and any material economic and/or investment-specific events that would alter the valuation significantly. If material economic and/or investment-specific events occur, they must be considered when determining fair value.

For example, if an asset owner becomes aware that a private investment in a company lost significant value, it must incorporate this in the valuation. If an asset owner invests in a private equity closed-end partnership, it is not required to actively monitor the investments in all of the underlying companies owned by the partnership to make sure they are still at the value being recorded. However, if the asset owner becomes aware of the fact that an underlying investment in the partnership has lost value, it must incorporate it in the valuation. The asset owner is not required to send staff to check on and ensure that all investments in companies owned by the partnership are properly valued.

It is possible that the “last available price” can be stale. For example, for private equity, that price might be from 6 months ago or 12 months ago or the monthly value might be the last price from last year, but it would be used until there is a revaluation or if there is a reason to believe the last valuation no longer represents fair value.

Please refer to the GIPS Handbook discussion under provisions 7.A.1 and 7.A.2 and the GIPS Valuation Principles for more information on valuing private equity investments. The asset owner must establish and document the valuation approach it uses in its policies and procedures and apply the approach consistently.

Assuming carve-out requirements are met, an asset owner may want to create a private equity composite.

Provisions 7.A.3 through 7.A.28 (Calculation Methodology, Composite Construction, Disclosure, and Presentation and Reporting) apply to an asset owner only if the asset owner chooses to create an additional composite for a private equity strategy.

Although internal rates of return are required for private equity composites, asset owners must use time-weighted returns to calculate total fund performance.

-typically not applicable to an asset owner because the asset owner is not acting as a general partner in a closed-end private equity fund. Therefore, asset owners can show a time-weighted return for a private equity composite.

Asset owners may choose to present a compliant presentation with time-weighted returns for a private equity composite instead of the information required in a private equity—compliant presentation. The asset owner must choose which type of compliant presentation they will present to its oversight board (i.e., compliant presentation with time-weighted returns or internal rates of return), create policies and procedures, and apply them consistently. The asset owner
must not change the type of compliant presentation it will present to its oversight board to make itself look better.

8. **WRAP FEE/SEPARATELY MANAGED ACCOUNT (SMA) PORTFOLIOS**

The provisions within Section 8 (Wrap Fee/Separately Managed Account Portfolios) are not applicable to an asset owner.

II. **GIPS VALUATION PRINCIPLES**

All provisions within Chapter II (GIPS Valuation Principles) are applicable to an asset owner and no further clarification is needed.

III. **GIPS ADVERTISING GUIDELINES**

All provisions within Chapter III (GIPS Advertising Guidelines) are applicable to an asset owner. If an asset owner chooses to claim compliance with the GIPS standards in any written material, such as an annual financial report, the asset owner must follow the GIPS Advertising Guidelines or include a compliant presentation in the publication.

IV. **VERIFICATION**

All provisions within Chapter IV (Verification) are applicable to an asset owner and no further clarification is needed.

**EFFECTIVE DATE**

The effective date of this second version of the Guidance Statement on the Application of the GIPS Standards to Asset Owners is 1 January 2018.

For periods beginning on or after 1 January 2018, an asset owner must comply with the second version of the Guidance Statement on the Application of the GIPS Standards to Asset Owners.

For periods beginning on or after 1 January 2015 and ending prior to 1 January 2018, an asset owner must comply with either the first or second version of the Guidance Statement on the Application of the GIPS Standards to Asset Owners.

For periods prior to 1 January 2015, an asset owner must comply with the 2010 edition of the GIPS Standards and related guidance or the first or second version of the Guidance Statement on the Application of the GIPS Standards to Asset Owners.

Retroactive application of the first and second versions of this Guidance Statement is not required and no restatement of GIPS-compliant performance is required. Asset owners may voluntarily choose to apply the first or second version of the Guidance Statement retroactively.
considering the effective dates described above. In this case, they must disclose whether any restatement of the historical track record was necessary as a result of the retroactive application.

Information included in the compliant presentation, specifically total fund returns, may have been calculated in accordance with the guidance and requirements of the GIPS standards in existence prior to the initial effective date of the first version of this Guidance Statement (1 January 2015). In this instance, asset owners must disclose how those returns differ from those that would have been calculated according to the requirements of this Guidance Statement and its prior version.

Sample disclosure:
“Beginning 1 January 2015, ABC Pension Plan’s GIPS-compliant performance is calculated net-of-all-fees. Prior to 1 January 2015, performance was calculated net of transaction costs and external investment management fees.”

Asset owners that are newly coming into compliance must initially present a minimum of a 1-year GIPS-compliant track record. Asset owners are encouraged, but not required, to apply this guidance to historical periods.

For example, assume an asset owner wishes to newly claim compliance with the GIPS standards as of 1 January 2020. The asset owner reports performance on a calendar basis. It must present annual performance for 2019 in a compliant presentation and performance for the annual period of 2019 must be compliant. Assuming the asset owner initially claims compliance only for 2019, the asset owner must build up to 10 years of GIPS-compliant performance (i.e., the compliant presentation must include performance for each year from 2019 through 2028).
Appendix

Sample Compliant Presentations

Centerville Police and Fire Retirement System
Total Fund Composite
1 January 2004 through 31 December 2013

<table>
<thead>
<tr>
<th>Year</th>
<th>Gross Return (%)</th>
<th>Net Return (%)</th>
<th>Benchmark Return (%)</th>
<th>% of Externally Managed Assets</th>
<th>Total Composite Assets (Equals Total Firm Assets) ($ millions)</th>
<th>3-Year Annualized Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>21.65</td>
<td>21.53</td>
<td>21.96</td>
<td>39</td>
<td>51.42</td>
<td>15.9</td>
</tr>
<tr>
<td>2012</td>
<td>12.73</td>
<td>12.61</td>
<td>11.98</td>
<td>33</td>
<td>46.1</td>
<td>12.4</td>
</tr>
<tr>
<td>2011</td>
<td>1.79</td>
<td>1.67</td>
<td>1.17</td>
<td>35</td>
<td>42.8</td>
<td>8.9</td>
</tr>
<tr>
<td>2010</td>
<td>14.63</td>
<td>14.50</td>
<td>14.86</td>
<td>32</td>
<td>41.2</td>
<td>9.2</td>
</tr>
<tr>
<td>2009</td>
<td>18.44</td>
<td>18.34</td>
<td>19.03</td>
<td>31</td>
<td>36.9</td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td>10.28</td>
<td>10.15</td>
<td>9.50</td>
<td>35</td>
<td>39.4</td>
<td></td>
</tr>
<tr>
<td>2006</td>
<td>17.78</td>
<td>17.68</td>
<td>16.63</td>
<td>34</td>
<td>36.8</td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td>13.12</td>
<td>13.00</td>
<td>11.95</td>
<td>33</td>
<td>32.4</td>
<td></td>
</tr>
<tr>
<td>2004</td>
<td>12.84</td>
<td>12.72</td>
<td>11.33</td>
<td>33</td>
<td>29.1</td>
<td></td>
</tr>
</tbody>
</table>

Centerville Police and Fire Retirement System (CPFRS) claims compliance with the Global Investment Performance Standards (GIPS) and has prepared and presented this report in compliance with the GIPS standards. CPFRS has been independently verified for the periods from 1 January 2006 through 31 December 2013.

Verification assesses whether (1) the firm has complied with all the composite construction requirements of the GIPS standards on a firm-wide basis and (2) the firm’s policies and procedures are designed to calculate and present performance in compliance with the GIPS standards. The Total Fund Composite has been examined for the periods from 1 January 2006 through 31 December 2013. The verification and performance examination reports are available upon request.

Accompanying Notes

1. For the purpose of complying with the GIPS standards, the firm is defined as the Centerville Police and Fire Retirement System (CPFRS), which was established in 1985 by the municipality of Centerville and is the manager of the assets of the Centerville Police and Fire Retirement System. The Total Fund was created and incepted in 1985.

2. The Total Fund Composite includes all discretionary assets managed by CPFRS for the benefit of participants in the Centerville Police and Fire Retirement System. The Total Fund blended benchmark is calculated monthly using a blend of the asset class benchmarks.
based on the Total Fund’s strategic weights for the respective asset classes. Each asset class utilizes a total return benchmark. The benchmark (strategic) weights listed below in the following table were in effect from 1 January 2013 through 31 December 2013. The asset class weights listed below are as of 31 December 2013. Information for benchmark strategic weights and asset class weights for other periods is available upon request.

<table>
<thead>
<tr>
<th>Asset Class</th>
<th>Description</th>
<th>Benchmark</th>
<th>Asset Class Weight at 31 Dec 2013 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liquidity reserves</td>
<td>The liquidity reserves asset class is intended to obtain a high level of current income consistent with the preservation of principal and liquidity. Investments generally consist of US dollar-denominated short-term securities of corporations that are rated in the highest category (A1/P1 rating) by the rating organizations and in securities that are guaranteed by the US government or one of its related agencies. Credit quality is emphasized for preservation of principal and liquidity.</td>
<td>B of A Merrill Lynch 3-m Month US Treasury Bill Index</td>
<td>1.0</td>
</tr>
<tr>
<td>Fixed income</td>
<td>The fixed-income asset class is generally fully invested in domestic and international fixed-income instruments, and is composed of the following issuers: US Government and related agencies; mortgage-backed and asset-backed issuers; foreign issuers; corporations, including investment-grade and high-yield; and emerging market debtors. The methodology employed places an emphasis on fundamental economic, portfolio, and security analysis to manage sector weightings and maturity distributions. The fixed-income asset class seeks diversification by market sector, quality, and issuer. The asset class is primarily managed internally, with external managers in specialist segments of the market. Derivatives, including swaps and forward currency contracts, may be used to adjust the exposure to interest rates, individual securities, or to various market sectors in the fixed-income portfolio. Underlying exposure of derivatives for fixed-income investments may not exceed 5% of Total Fund assets.</td>
<td>Barclays US Universal Index, which represents the union of the US Aggregate Index, US Corporate High-Yield Index, Investment Grade 144A Index, Eurodollar Index, US Emerging Markets Index, and the non-ERISA eligible portion of the CMBS Index. The Barclays US Universal Index covers USD-denominated, taxable bonds that are rated either investment grade or high yield.</td>
<td>19.0</td>
</tr>
<tr>
<td>Domestic Equities</td>
<td>The domestic equities asset class includes domestic and international common stocks traded on US exchanges, American depositary receipts (ADRs), real estate investment trust shares (REITs), and domestic equity derivatives</td>
<td>Russell 3000 Index, which measures the performance of the 3,000 largest US companies based on total market capitalization and represents approximately 98% of the investable US equity market.</td>
<td>37.0</td>
</tr>
<tr>
<td>Asset Class</td>
<td>Description</td>
<td>Benchmark (Strategic) Weight (%)</td>
<td>Asset Class Weight at 31 Dec 2013 (%)</td>
</tr>
<tr>
<td>---------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>----------------------------------</td>
<td>--------------------------------------</td>
</tr>
<tr>
<td>International Equities</td>
<td>The international equity asset class is a diversified portfolio including both developed and emerging countries. Portfolios consist of international equities including international common stocks traded on US exchanges, ADRs and ordinaries, International depository receipts (IDRs), country funds, international equity derivatives (including, but not limited to, stock options and index options), and some debt instruments. The asset class emphasizes quantitative and fundamental management approaches and exposures to security selection and country allocation decisions. Managers have the ability to add value through currency management. Underlying exposure of derivatives for international equities may not exceed 8% of Total Fund assets. Derivatives include, but are not limited to, financial, currency, and stock index futures. MSCI All Country World Index Net ex US, which is a free float-adjusted market-capitalization index denominated in US dollars of approximately 45 countries and which measures the equity performance of non-US developed and emerging markets. MSCI assumes the maximum withholding tax rate applicable to institutional investors.</td>
<td>23.0</td>
<td>19.1</td>
</tr>
<tr>
<td>Real Estate</td>
<td>The real estate asset class includes investments in real estate limited partnerships. Each real estate holding is limited to no more than 5% of the total real estate assets. All investments in real estate limited partnerships are valued using the most recently provided values from the respective fund’s general partner. The real estate blended benchmark is calculated quarterly and is a blend of two benchmarks. The benchmarks and their relative weights are as follows: NCREIF Property Index (NPI) (90%) and the Wilshire US REIT Index (10%). The NCREIF Property Index NPI is an unlevered quarterly time-series composite total rate of return measure of investment performance of a very large pool of individual commercial real estate properties acquired in the private market for investment purposes only. All properties in the NPI have been acquired, at least in part, on behalf of tax-exempt institutional investors—the great majority being pension funds. As such, all properties are held in a fiduciary capacity.</td>
<td>12.0</td>
<td>12.8</td>
</tr>
<tr>
<td>Asset Class</td>
<td>Description</td>
<td>Benchmark</td>
<td>Benchmark (Strategic) Weight (%)</td>
</tr>
<tr>
<td>-------------</td>
<td>-------------</td>
<td>-----------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td>Private Equity</td>
<td>Private equity investments primarily include venture and buyout/growth opportunities. Risk is diversified by investing across such different types of private equity as venture capital, leveraged buyouts, and international funds. Private equity risk is also diversified by investing across vintage years, industry sectors, investment size, development stage, and geography. CPFFRS typically invests as a limited partner in closed-end partnerships. Due to the nature of private equity, substantially all investments in this asset class are valued using market-based inputs that are comparable but subjective in nature due to the lack of widely observable inputs.</td>
<td>environment. The Wilshire US REIT Index is a float-adjusted market-capitalization index representing approximately 95 companies that is designed to measure US Equity REIT performance.</td>
<td>8.0</td>
</tr>
</tbody>
</table>

The assets of CPFRRS are managed in accordance with the risk budget for the Total Fund and the individual asset classes. The investment objective for the Total Fund is to earn, over moving twenty-five-year periods, an annualized return that equals or exceeds the actuarial rate of return, approved by the Centerville Police and Fire Retirement Board (“Board”) to value the liabilities of CPFRRS. As of 31 December 2013, the actuarial rate of return is 7.5%. CPFRRS hires external managers to actively manage selected portfolios. The percentage of externally managed assets for the Total Fund was 39% as of 31 December 2013.

3. Returns are net of brokerage commissions, expenses related to trading, and applicable foreign withholding taxes on dividends, interest, and capital gains. All returns and asset values are expressed in US dollars.

Total Fund performance is calculated monthly using time-weighted rates of return and reflects the deduction of transaction costs. Gross returns are net of actual external investment management fees for pooled funds. Net returns are net of all investment management costs (internal and external). Investment management costs include internal investment department compensation, benefits, actual external manager fees, data valuation fees, investment research services, custodian fees, performance measurement services, and the allocation of technology services and other overhead costs and expenses, such as human resources. Total investment management costs to arrive at the net return have ranged from 9 to 13 basis points per year over the past 10 years. All returns are gross of reclaimable withholding taxes on interest income and dividends.
Policies for valuing portfolios, calculating performance, and preparing compliant presentations are available upon request.

4. The Total Fund Composite includes all individual portfolios that are combined into one aggregate portfolio. The performance of the combined portfolio reflects the overall mandate of the plan. Because the Total Fund Composite is one aggregate portfolio for all periods, no measure of internal dispersion of annual portfolio returns is presented.

5. The three-year annualized ex-post standard deviation measures the variability of the composite and the benchmark for the 36-month period. This measure is not required for periods ended prior to 31 December 2011.

6. Because the Total Fund Composite represents 100% of the assets managed by CPFRS, this presentation represents CPFRS’s list of composite descriptions.

## Supplemental Information:

The information in the following table below is supplemental to the Total Fund compliant presentation presented on the previous pages. Performance information is for the period 1 January 2013 through 31 December 2013.

<table>
<thead>
<tr>
<th>Fund/Asset Class</th>
<th>Gross Return (%</th>
<th>Benchmark Return (%</th>
<th>Number of Portfolios</th>
<th>Assets ($ millions)</th>
<th>% of Fund Assets</th>
<th>% of Externally Managed Assets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Fund</td>
<td>21.65</td>
<td>21.96</td>
<td>28</td>
<td>51.42</td>
<td>100</td>
<td>39.0</td>
</tr>
<tr>
<td>Liquidity Reserves</td>
<td>0.12</td>
<td>0.05</td>
<td>1</td>
<td>1.49</td>
<td>2.9</td>
<td>2.9</td>
</tr>
<tr>
<td>Fixed Income</td>
<td>-0.97</td>
<td>-1.35</td>
<td>4</td>
<td>9.46</td>
<td>18.4</td>
<td>5.3</td>
</tr>
<tr>
<td>Domestic Equities</td>
<td>32.06</td>
<td>33.55</td>
<td>3</td>
<td>17.69</td>
<td>34.4</td>
<td>22.0</td>
</tr>
<tr>
<td>International Equities</td>
<td>22.17</td>
<td>22.80</td>
<td>5</td>
<td>9.82</td>
<td>19.1</td>
<td>5.6</td>
</tr>
<tr>
<td>Real Estate</td>
<td>10.59</td>
<td>10.07</td>
<td>7</td>
<td>6.58</td>
<td>12.8</td>
<td>12.8</td>
</tr>
<tr>
<td>Private Equity</td>
<td>35.49</td>
<td>34.55</td>
<td>8</td>
<td>6.38</td>
<td>12.4</td>
<td>12.4</td>
</tr>
</tbody>
</table>

Total Fund and asset class benchmarks as of 31 December 2013 are as follows:

<table>
<thead>
<tr>
<th>Fund/Asset Class</th>
<th>Benchmark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Fund</td>
<td>Total Fund blended benchmark</td>
</tr>
<tr>
<td>Liquidity Reserves</td>
<td>BofA Merrill Lynch 3-month US Treasury Bill Index</td>
</tr>
<tr>
<td>Fixed Income</td>
<td>Barclays US Universal Index</td>
</tr>
<tr>
<td>Domestic Equities</td>
<td>Russell 3000 Index</td>
</tr>
<tr>
<td>International Equities</td>
<td>MSCI All Country World Index Net ex US</td>
</tr>
<tr>
<td>Real Estate</td>
<td>Real Estate blended benchmark</td>
</tr>
<tr>
<td>Private Equity</td>
<td>1% above the Russell 3000 Index</td>
</tr>
</tbody>
</table>
Please refer to Note 2 earlier in the report for further discussion of the Total Fund and asset class benchmarks.

**Accompanying Notes**

Returns are net of brokerage commissions, expenses related to trading, and applicable foreign withholding taxes on dividends, interest, and capital gains. All returns are expressed in US dollars.

Total Fund and asset class returns are calculated as follows:

Total Fund performance is calculated monthly using the Modified Dietz method. The Total Fund return is net of actual management fees for externally managed real estate and alternative investments. The Total Fund return net of all investment management costs (internal and external) was 21.53% for the year ending 31 December 2013, and the fund underperformed its Total Fund benchmark by 0.43% net of all investment management costs over this same time period. Costs are reported annually by XYZ Benchmarking Inc. on a calendar year basis and are reflected in the Board’s Trustee Summary Report in the LMN Associates quarterly performance report. Investment management costs include internal investment department salaries, performance incentives, benefits, actual external manager fees, and the allocation of Information Technology Services (ITS) costs and other overhead expenses.

Fixed Income performance is calculated monthly using the Modified Dietz method. Performance of the internally managed portfolio excludes cash returns, as cash is swept daily into the liquidity reserves portfolio. Performance reflected above is presented gross of investment management fees.

Domestic Equities performance is calculated daily. Performance of the internally managed portfolios excludes cash returns, as cash is swept daily into the liquidity reserves portfolio. Performance reflected above in this report is presented gross of investment management fees.

International Equities performance is calculated daily. Performance of all portfolios in this asset class includes cash returns. Performance reflected above in this report is presented gross of investment management fees.

Real Estate performance is calculated monthly using the Modified Dietz method with valuation changes reported monthly. Internally managed direct real estate investments are valued by an external appraiser once every three years and by an internal valuation quarterly. Valuations of externally managed commingled real estate funds are determined by the underlying investment manager quarterly, with supporting financial statements when available. Performance of real estate excludes cash returns, as cash is swept daily into the liquidity reserves portfolio. Performance reflected above in this report is presented gross of internal investment management costs and net of external investment management fees.

Alternative Investments performance is calculated monthly using the Modified Dietz method. Alternative investments are valued by the underlying investment manager with supporting
financial statements generally on a quarterly basis. Typically there is a one-quarter lag in the values used by CFPRS, but the values are adjusted to reflect current capital activity. Performance of alternative investments excludes cash returns, as because cash is swept daily into the liquidity reserves portfolio. Performance reflected above in this report is presented gross of internal investment management costs and net of external investment management costs, including management fees, carry, and fund expenses.

Liquidity reserves performance is calculated monthly using the Modified Dietz method.
Genius University Endowment (GUE) claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. GUE has not been independently verified.

For the purpose of complying with the GIPS standards, the firm is defined as the Genius University Endowment (GUE), established in 1972 by the Genius University Investment Committee of the Genius Corporation and is the manager of the GUE’s assets. The Total Fund was created and incepted in 1972. The Total Fund Composite for GIPS-compliance purposes was created in 2016.

The Total Fund Composite includes all discretionary assets managed by GUE for the benefit of Genius University’s endowment. The Total Fund blended benchmark is calculated monthly using a blend of the asset class benchmarks based on the Total Fund’s strategic weights for the respective asset classes. Each asset class uses a total return benchmark. The benchmark (strategic) weights listed in the following table are as of 31 December 2017. Information for benchmark strategic weights and asset class weights for other periods is available upon request.

<table>
<thead>
<tr>
<th>Asset Class</th>
<th>Description</th>
<th>Benchmark</th>
<th>Benchmark Strategic Weight 31 Dec 2017 (%)</th>
<th>Asset Class Weight 31 Dec 2017 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absolute Return</td>
<td>Absolute return investments are expected to generate high long-term real returns by exploiting market inefficiencies. The portfolio is invested in two broad categories: event-driven strategies and value-driven strategies. Event-driven strategies rely on a very specific corporate event, such as a merger, spin-off, or bankruptcy restructuring, to achieve a target price. Value-driven strategies involve hedged positions in assets or securities with prices that diverge from their underlying economic value. Derivatives are used in absolute return strategies.</td>
<td>Barclays 9- to 12-Month Treasury</td>
<td>23</td>
<td>17</td>
</tr>
<tr>
<td>Domestic Equity</td>
<td>This asset class includes active management strategies, aspiring to outperform the market index by a few percentage points annually, net of fees. Because superior stock selection provides the most consistent and reliable opportunity for generating</td>
<td>Wilshire 5000</td>
<td>20</td>
<td>4</td>
</tr>
<tr>
<td>Asset Class</td>
<td>Description</td>
<td>Benchmark</td>
<td>Asset Class Weight 31 Dec 2017 (%)</td>
<td>Benchmark Strategic Weight 31 Dec 2017 (%)</td>
</tr>
<tr>
<td>-----------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-----------------------------------------</td>
<td>-------------------------------------</td>
<td>----------------------------------------</td>
</tr>
<tr>
<td>Fixed Income</td>
<td>attractive returns, GUE favors managers with exceptional bottom-up, fundamental research capabilities and managers searching for out-of-favor securities.</td>
<td>Barclays 1- to 3-Year Treasuries</td>
<td>9</td>
<td>5</td>
</tr>
<tr>
<td>International Equities</td>
<td>GUE uses a passive index strategy for the fixed-income portfolio. GUE favors shorter-term government bonds and does not invest in market-timing strategies and credit risk.</td>
<td>MSCI All Country World Index ex US</td>
<td>22</td>
<td>11</td>
</tr>
<tr>
<td>Natural Resources</td>
<td>GUE invests in equity investments in natural resources—oil and gas, timberland, and metals and mining. These investments share common characteristics: protection against unanticipated global inflation, high and visible current cash flow, and opportunities to exploit inefficiencies.</td>
<td>Cambridge Associates Natural Resources</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Private Equity</td>
<td>Private equity offers long-term risk-adjusted returns, stemming from the value-adding managers that exploit market inefficiencies. GUE’s private equity portfolio includes investments in venture capital, distressed investments, and mezzanine capital. The private equity strategy emphasizes partnerships with firms that pursue a value-added approach to investing. Such firms work closely with portfolio companies to create fundamentally more valuable entities, relying only secondarily on financial engineering to generate returns. Investments are made considering the long-term relationship with the manager and are expected to be the first of several commitments toward the close alignment of the interests of general and limited partners.</td>
<td>Cambridge Associates Private Equity</td>
<td>10</td>
<td>33</td>
</tr>
<tr>
<td>Private Real Estate</td>
<td>Investments in real estate provide meaningful diversification to the Endowment. A steady flow of income with equity upside creates a natural hedge against unanticipated inflation without sacrificing expected return. Although real estate markets sometimes produce cyclical returns, pricing inefficiencies in the asset class and opportunities to add value allow superior managers to generate excess returns over long time horizons.</td>
<td>MSCI US REIT Index</td>
<td>4</td>
<td>18</td>
</tr>
<tr>
<td>Cash</td>
<td>GUE invests in short-term investment fund portfolios to maintain a cash reserve to assist in university operations as needed.</td>
<td>Barclays 1- to 3-Month Treasury</td>
<td>4</td>
<td>4</td>
</tr>
</tbody>
</table>
GUE’s spending policy, which allocates endowment earnings to operations, balances the competing objectives of providing a stable income flow to the operating budget and protecting the endowment’s real value over time. The spending policy manages the trade-off between these two objectives by combining a long-term spending rate target with a smoothing rule, which adjusts spending gradually in any given year in response to changes in the endowment’s value. The target spending rate approved by GUE currently stands at 5.25%. According to the smoothing rule, endowment spending in a given year sums to 80% of the previous year’s spending and 20% of the targeted long-term spending rate applied to the fiscal year-end market value two years prior. The spending amount determined by the formula is adjusted for inflation and constrained so that the calculated rate is at least 4.5%, and not more than 6.0%, of the endowment’s inflation-adjusted market value two years prior. The smoothing rule and the endowment’s diversified nature are designed to mitigate the effect of short-term market volatility on the flow of funds to support GUE operations.

Returns are net of brokerage commissions, expenses related to trading, and applicable foreign withholding taxes on dividends, interest, and capital gains. All returns and asset values are expressed in US dollars.

Total Fund performance is calculated monthly using time-weighted rates of return. Gross returns are net of actual external investment management fees for pooled funds. Net returns are net of all investment management costs (internal and external). Investment management costs include internal investment department compensation, benefits, actual external manager fees, data valuation fees, consulting services, and the allocation of technology services and other overhead costs and expenses. Total investment management costs to arrive at the net return have averaged roughly 15 bps annually since 2000.

Policies for valuing portfolios, calculating performance, and preparing compliant presentations are available upon request.

The Total Fund Composite includes all individual portfolios that are combined into one aggregate portfolio.

The three-year annualized ex-post standard deviation measures the variability of the composite and the benchmark for the 36-month period. This measure is not presented because the Total Fund does not yet have a three-year, 36-month GIPS-compliant track record.