Universal Advisor Performance Standards

WHITE PAPER

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Developed & Presented by:

[Logos: BrightScope, Spaulding Group]
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PREAMBLE

When only one standard exists, individuals and firms will understandably assume that it applies to them, or at least that it’s something they should follow. This can be a problem, since that standard may not have been intended for them, and may, in fact, have characteristics, rules, features that don’t apply, and perhaps miss things that should be there. Some of its rules may be “best practice” for the industry it was intended to serve, but not another.

The Global Investment Performance Standards (GIPS®), being the only standard that addresses performance reporting, has created a challenge for a number of segments in the marketplace, including the retail / high net worth space. It is not uncommon for financial planners, investment advisors, and registered representatives to ask “are we GIPS compliant?” or “are our reports compliant with the GIPS standards?” or “do we calculate our returns compliant with GIPS?” These questions, and no doubt their answers, create confusion.

The purpose of this document is to propose a set of standards, the Universal Advisor Performance Standards (UAPS), for the retail / high net worth space, to address two areas:

- Reporting to prospective clients
- Reporting to existing clients

While the immediate motivation for the UAPS standards is to serve the needs of the retail and high net worth industry within the United States, we see no reason why these standards cannot apply to non-U.S. institutions, as well.

As with the GIPS standards, the UAPS standards are ethical principles that require full disclosure. And as with the GIPS standards, they are not entirely prescriptive, i.e., not every single required action is defined, nor do the UAPS standards cover all cases or situations that might arise. Compliant firms are encouraged to seek the advice of their internal or external compliance or legal team, outside experts, or the UAPS help desk, for further guidance.

Why doesn’t GIPS apply?

The GIPS standards are primarily geared for institutional asset managers, who serve the needs of pension funds, endowments, foundations, etc. They are intended for institutions that have full discretion1 over their clients’ assets.

A critically important part of the GIPS standards is the concept of “the firm,” which is what holds itself out as being “GIPS compliant.” It is a “unit, division, department, or office that is organizationally and functionally segregated from other units, divisions, departments, or offices and that retains discretion over the assets it manages and that should have autonomy over the investment decision-making process. Possible criteria that can be used to determine this include:

- being a legal entity,
- having a distinct market or client type (e.g., institutional, retail, private client, etc.), and
- using a separate and distinct investment process.”2

Many brokerage firms would find it difficult (if not impossible) to define itself, or even a segment of itself, as being a “firm” for GIPS purposes, because of the large number of financial planners they employ and the thousands of accounts they have.

We are not attempting to dissuade a firm from considering or achieving GIPS compliance if they are able to. However, it is our belief that this would be a virtually impossible task for most brokerage firms. Hence the need for

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1 Here, we mean “legal discretion.” GIPS actually employs a second version of “discretion,” which goes beyond legal discretion, and takes into consideration cases where the client has imposed restrictions on the manager, which result in the account to not “be representative” of the manager’s style. This is not what we are addressing here. Unless otherwise when we use the word “discretion,” we mean it from a legal standpoint. That is, has the client given the firm the authority to execute trades on their behalf.
a standard that is sensitive to its characteristics.

Client relationships can vary considerably within a brokerage firm. In some cases, the firm has legal discretion over the client’s assets, and can execute trades on their behalf.

More often, reps have no or only partial discretion over their accounts. And while they can offer advice and counsel to their clients, they cannot guarantee that the client will agree with their advice. Therefore, are the results of these clients representative of the advisor’s or firm’s skills? While this is a question that cannot be easily answered, it is one that needs to be considered when showcasing past performance that wasn’t entirely that of the firm or rep.

GIPS requires firms to collect fully actual, fee-paying discretionary accounts into “composites,” and to calculate asset-weighted returns which are then used to represent their past performance. GIPS compliant firms typically have many composites, to represent their various strategies. Such a requirement would not be appropriate for the retail market, given the limitations typically found. To enable reporting to a wider variety of audiences, UAPS permits multiple methods to be employed to represent past performance.

The GIPS standards also do not include anything regarding reporting to existing clients. Our experience has shown that many institutions would like guidance in this area.

Section I addresses reporting to prospective clients. Section II addresses reporting to existing clients.

I. REPORTING TO PROSPECTIVE CLIENTS

A. WHY ARE STANDARDS NEEDED?

Investors are able to search for and compare the merits of mutual funds, insurance policies and many other types of financial products before making a purchasing decision. However, when it comes to their most important financial relationship – their financial advisor – they are frequently unable to evaluate the advisor’s background or investment performance in advance of hiring him or her.

One of the most important criteria when selecting an advisor is information about their investment performance. However, only a small percentage of advisors currently disclose performance. While many SEC-registered advisory firms have embraced GIPS as a solution to provide performance information to prospective clients, GIPS specifically excludes brokers who manage nondiscretionary accounts for clients. By ignoring nondiscretionary accounts, GIPS effectively excludes brokers from providing performance information to prospects. Even those SEC registered advisors who might otherwise report performance frequently fail to do so out of fear they might run afoul of SEC (U.S. Securities & Exchange Commission) and FINRA (Financial Industry Regulatory Authority) advertising regulations.

A performance standard that covers advisors of all types (both investment advisers and brokers) will create a strong incentive for all advisors to calculate and disclose performance. Access to consistent performance across all advisors would assist consumers in their selection of an advisor, and help advisors efficiently grow their practices.

B. SCOPE

UAPS for prospect reporting includes:

- Prospect performance advertising for nondiscretionary advisors
- A review of the full range of portfolio discretion
- An overview of the FINRA and SEC performance advertising rules

3 Here, we mean “discretion” from GIPS’ perspective: that is, an account that hasn’t imposed restrictions such that it is not representative of the manager’s strategy.
C. PURPOSE

The purpose of these standards is to provide guidance and “best practices” for firms to use when preparing reports for prospective clients. It is not intended as legal advice and advisors should always consider SEC and FINRA advertising rules that may apply to them in any given situation. These standards will provide a framework wherein a prospective client could effectively evaluate and compare multiple advisors.

D. THE RANGE OF PORTFOLIO DISCRETION

There is a wide range of account management services offered by advisors and the level and extent of advice provided to a retail client varies depending on the type of account and the type of advisor.

Historically, broker services have primarily been transactional in nature, and while brokers would sometimes make securities recommendations, they often did not have discretion over client accounts. The regulatory standard of care that evolved for brokers is built around arms-length relationships, fair-dealing and the concept of suitability. The primary requirement is that brokers must have an “adequate and reasonable basis” upon which to recommend a transaction to a retail client and this transaction must be suitable to a client’s financial situation, needs and risk tolerance. Brokers have additional requirements, such as the best execution of securities transactions, reporting requirements and significant compliance and oversight rules, but fundamentally, brokers do not have discretion and do not owe a fiduciary duty to clients.

Investment advisers, on the other hand, provide continuous and ongoing investment advisory services and owe an affirmative fiduciary duty to their clients, requiring them to act only in the best interest of the client and to avoid or disclose all direct and indirect conflicts of interest. The fiduciary standard of care makes sense in light of the complete discretion most investment advisers exercise over their client accounts.

Historically these different regulatory structures made sense because broker-dealers primarily executed investment transactions whereas investment advisers focused on supplying investment advice. However, over the past 10-15 years, the lines of demarcation between brokers and investment advisers have become increasingly murky. The advent of fee-based brokerage accounts that function very similarly to advisory accounts and the increasing use of titles such as “investment advisor” or “wealth manager” by brokers have made the distinction harder for consumers to understand. In addition, many “independent” investment adviser representatives are registered representatives of broker-dealers and agents of insurance companies. So while they may at times don the “hat” of an investment adviser and act as a fiduciary to a client, they may also don the broker “hat” and offer the same client other financial products for a commission. The blurring of the lines of demarcation for what is advice and how advisors can and should calculate and disclose performance has made it difficult for brokers or those advisors who offer advisory account and brokerage accounts to effectively report performance.

The predominant performance standards for investment advisers are the GIPS standards. Under the GIPS standards, only fee-based discretionary accounts are included in performance composites. In fact, GIPS makes it clear that discretionary managers should remove accounts from composites that are labeled nondiscretionary for a variety of reasons, largely relating to client-imposed restrictions such as a client approval of transactions, client restrictions on asset allocation, or client cash flow requirements. The GIPS standards do not specify precisely what may cause a portfolio to be labeled nondiscretionary, but specify that to achieve GIPS compliance a firm must have a definition of discretionary and must apply that definition consistently across all portfolios. The key trigger for labeling a portfolio nondiscretionary due to client-imposed restrictions relies on a determination by the firm that the restriction will “significantly hinder the implementation of the intended strategy.”

While this approach makes sense for advisors who only offer investment advisory accounts, in many cases a client may have an investment advisory account, a brokerage account with personalized advice and a fully self-directed
brokerage account all with the same advisor. Providing consistent performance reporting in this scenario does not fit neatly into the methodology laid out by the GIPS rules, which only addresses fee-based discretionary accounts.

There are three primary types of accounts ordered below by the degree of discretion:

- Discretionary: Fee-based investment advisory account
- Hybrid: Fee-based brokerage account with personalized advice
- Nondiscretionary: Self-directed brokerage account

We believe that fee-based accounts that receive personalized advice from either a broker or a dually registered advisor can also be grouped into composites for the purposes of performance reporting, albeit with their own set of rules and disclosures. Provided the accounts in the composite are consistent in the level of advice offered and meet the other standard rules of composite construction laid out by UAPS, we believe performance can be standardized and presented to investors with the appropriate disclosures in such a way as to not be misleading. More research needs to be done into the classification of fee-based brokerage accounts that receive personalized advice to ensure that the accounts being grouped are truly representative of the advice of the advisor. Fully self-directed brokerage accounts however should not be included in any performance composite.

E. OVERVIEW OF SEC AND FINRA PERFORMANCE ADVERTISING RULES

Despite the current lack of a standard for how to calculate and present performance for anything but investment advisory accounts with full legal discretion, both SEC and FINRA registered advisors are allowed to present performance to the public provided their disclosures adhere to existing SEC and FINRA performance advertising rules. However, due to differences between the rules, in practice FINRA-registered firms advertise performance far less frequently than do SEC-registered firms.

The legal principles behind the advertising regulations of the SEC and FINRA differ greatly, resulting in frequent confusion amongst dually registered firms about which rules apply in a given scenario. The SEC has recently released a study calling for the harmonization of the advertising rules, but for the time being the FINRA and SEC rules remain distinct. A brief overview of these performance advertising rules follows.

The Investment Advisers Act that governs SEC-registered firms has a broad proscription against fraud and deceit, but provides little granular guidance for investment advisers as it relates to performance disclosure. Much of this guidance has come through responses to no-action letters and the exam process. The SEC advertising rules do however have some specific prohibitions that are relevant to this discussion. The SEC specifically prohibits an ad that refers to any testimonial concerning the adviser, or any advice, analysis, report, or other service rendered by such adviser. The SEC also prohibits an ad that refers to past specific recommendations of the adviser that were or would have been profitable unless the adviser complies with certain conditions.

As it relates to use of performance results, the SEC finds that use of performance results is false or misleading if it implies, or a reader would infer something about the adviser’s competence or about future investment results that would not be true if the advertisement included all material results.

General Rules (SEC):

- Must disclose material market or economic conditions.
- Must reflect the deduction of advisory fees, brokerage fees, or any other fees that the client would have paid or actually paid.
- Must reflect reinvestment of dividends and other earnings.
- Must confirm that the performance is a composite and that no portfolios were left out.
- Must disclose details about the composite (number of accounts, assets, % of firm or adviser assets, total adviser assets).
- Must compare to an appropriate index.
- Cannot refer to past, specific recommendations made by the adviser that were profitable, unless the
advertisement sets out a list of all recommendations made by the adviser within the preceding period of not
less than one year, and complies with other, specified conditions.

FINRA Advertising Rules related to performance disclosure are more detailed and restrictive. Like most FINRA
advertising requirements, FINRA requires pre-approval of advertising before it is made available to the public.
FINRA also has specific rules related to projected performance, hypothetical performance, related performance
and targeted returns, all of which impact the ability of a registered rep to provide performance information to
prospects.

Neither the SEC nor FINRA have a specific prohibition against performance advertising for advisors who work with
clients on a nondiscretionary basis. However, given that the UAPS standards will apply predominantly to dually-
registered advisors and broker-dealer representatives, the standards will have to work within the FINRA and SEC
rules governing performance advertising in order to ensure widespread adoption and utilization.

F. BEST PRACTICES FOR PERFORMANCE CALCULATION

There are four primary ways to disclose performance that are relevant to this discussion:

1. Representative Portfolios. This is a commonly used practice, but given concerns over cherry-picking and
   survivorship bias, it is considered a poor choice to represent performance. Nonetheless, this method may be
   used under UAPS provided there are sufficient disclosures so that the recipient understands the limitations.

2. Model Portfolios. Model portfolios do not represent actual client performance. In many cases, they do not
   reflect the impact of commissions or trading costs. However, for some advisors, they may be ideal, especially
   when their clients often do not agree with all of their recommendations. They may be shown under UAPS
   provided they include a disclosure that fully explains its limitations, and that the results are not from an
   actual portfolio.

3. Equal-Weighted Composites. A composite is a collection of accounts that have a similar strategy. This is
   the ideal approach, as it avoids the potential biases of a representative portfolio, and includes all accounts
   that were managed in accordance with a given strategy. Unlike GIPS, that requires asset-weighted returns,
   UAPS requires equal-weighted returns because we believe they are more representative of a manager’s
   performance. As set-weighting can skew the results in the direction of the largest accounts, distorting the
   actual performance that was experienced by all clients that were managed in that strategy.

4. Back-tested results. Individuals who provide back-tested results have the benefit of hindsight in constructing
   their models. While back-tested results may also be shown, they are considered a poor choice under UAPS.
   Adequate disclosures need to be included, so that the recipient does not mistake the performance shown as
   being from actual portfolios.

Composites are a best practice and the GIPS standards have well-articulated rules related to composite
construction. We believe that these rules apply in the creation of nondiscretionary, advice-based account
composites as well. In constructing these composites, the firm and advisor, when possible, should group
portfolios into composites, and must include all fee-paying, non-encumbered* portfolios.
Compliant firms may chose which approach(es) to employ, based on what they are able to construct. If
the results are for a single manager, this needs to be explained; if it is for a group, or a strategy that is
employed across the entire firm, this needs to be indicated. While composites are the ideal and preferred
method to provide past performance, and are arguably “best practice,” it is likely that they cannot be shown
in all cases.

Compliant firms may chose which approach(es) to employ, based on what they are able to construct. If the results
are for a single manager, a group, or a strategy that is employed across the entire firm, this needs to be indicated.
While using composites is the ideal and preferred method to provide past performance, it is only “best practice”
and is not mandatory as it is likely that composites cannot be shown in all cases.

*The word “encumber” means to impede or hinder. Rather than use the term “nondiscretionary” as GIPS does, we prefer the term
“non-encumbered,” because it is more appropriate and avoids the confusion of using a word that has a different meaning from a
legal standpoint.
Historical performance, regardless of the method used, must include the following:

- Annual time-weighted firm’s returns for the prior five years (ending December 31)
- Annualized and cumulative 36 month returns for the firm, for the most recent year-end
- Annual time-weighted returns for an appropriate benchmark, that corresponds to the strategy
- Annualized and cumulative 36 month benchmark returns for the most recent year-end
- Standard deviation and Sharpe ratio for the prior 36 months, as of the most recent year-end, for both the firm and benchmark

For composites, the period ending market value of all the accounts that comprise the composite, as well as the number of accounts present at year-end, must be shown.

For the representative account, the account’s year-end market value must be shown. In the event the account was changed during the reporting period, a disclosure must be included that explains that this occurred (and how often), along with the reason.

Returns must be shown net-of-fees (if applicable) and net-of-commissions, except in the case of model portfolios or back-tested results, unless they were applied, in which case the assumptions that were made must be shown.

Sample reports are provided in Appendix C (starting on page ).

G. CALCULATING RETURNS AND RISK

In reporting performance to prospective clients, a rep is touting their investment skills. Consequently, a time-weighted rate of return metric is needed in order to eliminate the impact of external cash flows.

There are two forms in which time-weighted returns can be derived:

- Exact method. A measure that revalues the portfolio for all cash flows, in order to completely eliminate their impact on the return
- Approximation method. A measure that approximates the exact method. Portfolios are revalued at least monthly

Ideally, firms will measure performance using the exact method; however, they may choose to use the approximation method.

Accuracy of any statistic is always an important issue to consider, and this is especially true with rates of return. The performance measurement industry has recognized that the accuracy of the approximation method can be diminished when cash flows are large, especially in volatile markets. Therefore, UAPS requires that firms revalue portfolios for large flows, where large is at the discretion of the firm. However, if the flow exceeds 10% of the most recently calculated market value of the portfolio, revaluation is mandatory.

Intermediate returns are geometrically linked to produce longer period results.

Please refer to section II.D (starting on page ]]) and Appendix A (starting on page [ ]) for a more detailed discussion on this subject.

Past performance must also include a risk measure to show the prospect the amount of risk that was taken to achieve the results that were obtained. Many of the individuals a rep serves are unsophisticated investors. Consequently, it’s important that the measures employed do not overwhelm or confuse the client or prospective client. UAPS requires two risk measures to be shown alongside performance:

- Standard deviation
• Sharpe ratio

Standard deviation is a measure of volatility, and is arguably not an ideal measure of risk. However, it is easy to understand, calculate, and communicate. This is why we include it here. For the most recent year, a 36-month, annualized standard deviation is required to be shown along with the annualized performance for the 36-month period.

The Sharpe ratio is a risk-adjusted measure that is well regarded and frequently employed. It is to be shown for the same 36-month period, and annualized. Please refer to Appendix B (starting on page []) for a further discussion on this topic.

II. REPORTING TO EXISTING CLIENTS

A. WHY ARE THE STANDARDS NEEDED?

The brokerage / retail / high net worth space is quite different from the institutional market, for three main reasons:

1. It is often the case that the client accounts are nondiscretionary. Reporting performance for a nondiscretionary client is very different than reporting to a discretionary one.
2. When dealing with discretionary clients, the financial planner often develops quite unique and custom strategies, which may not be replicated across other clients.
3. Often, clients want their broker to consolidate reporting. This can be done in multiple ways, including:
   • Reporting of two or more accounts (e.g., a husband and wife’s) into a “family account”
   • Reporting assets that aren’t controlled by the broker (e.g., mutual funds), the requisite data for which must be brought in to be included in the client’s report

Many firms wrestle with questions such as:

• How should performance be reported?
• Are the GIPS’ calculation rules appropriate?
• Must we report the same way for all of our accounts?
• Should we be including risk measures?
• What benchmarks should we provide?

Today, there are no answers to these and other questions. As a result, many firms either fail to provide reporting, or report the wrong information, which can be confusing and misleading.

B. SCOPE

This part of the standards deals with reporting to existing clients. Section I addresses reporting to prospective clients.

The scope includes:

• Reporting for both discretionary¹ and nondiscretionary clients
• Reporting of rates of return, risk, and benchmarks
• Reporting of performance for securities controlled by the firm, as well as those brought in from other sources
• Reporting at the account, superaccount (e.g., combined accounts or “family” accounts), and subaccount (e.g., asset class) levels
• Recommended formulas

*The word “encumber” means to impede or hinder. Rather than use the term “nondiscretionary” as GIPS does, we prefer the term “non-encumbered,” because it is more appropriate and avoids the confusion of using a word that has a different meaning from a legal standpoint.
This document will not define the way reports must look, or what must be shown. UAPS provides guidance, with minimal prescriptive language.

C. PURPOSE

The purpose of UAPS is to provide guidance and “best practices” for firms to use when preparing reports for their existing clients. It will provide an explanation of various approaches, recommended methodologies, and suggested information to share that will provide clients with insights into how their investments are doing and, where appropriate, how their manager is doing investing for them.6

D. RATES OF RETURN FORMULAS TO USE

1. General

When one holds securities, it is not unusual to want to know how they’re doing. In many cases this assessment is done by simply looking at their realized or unrealized gains and losses, or looking to see how their capital has grown over a period of time.

The problem with relying solely on capital changes is that it doesn’t take into consideration the timing of cash flows.7 Consider Clients A and B, who experience the following:

<table>
<thead>
<tr>
<th></th>
<th>Client A</th>
<th>Client B</th>
</tr>
</thead>
<tbody>
<tr>
<td>12/31/10 Market Value</td>
<td>$1,000,000</td>
<td>$100,000</td>
</tr>
<tr>
<td>12/31/11 Market Value</td>
<td>$1,010,000</td>
<td>$110,000</td>
</tr>
<tr>
<td>Capital Appreciation</td>
<td>$10,000</td>
<td>$10,000</td>
</tr>
</tbody>
</table>

As we can see, each client saw a $10,000 improvement in their portfolio during the year. However, would you think they did equally well? Probably not. Looking at performance from only a “money” standpoint fails to take into consideration the amount of money that was used to obtain the gain (or loss). That’s where rates of return come in.

Rates of return fall into two major categories:

- Time-weighting
- Money-weighting

The distinction between these measures is not insignificant, and it deals primarily with how they handle cash flows.

Time-weighting

Time-weighting ignores, eliminates, or reduces the impact of contributions. The basis for this comes from research done by Peter Dietz in the mid 1960s,8 which led to the development of the first performance calculation standards by the Bank Administration Institute.9

In cases where there is a discretionary account, and where the client controls the timing and size of cash flows, Dietz asked whether these flows should have any impact on the resulting performance. It is not unusual (and has been demonstrated by research) that “investors chase returns.” As a result, it is not uncommon for investors to “buy high and sell low,” which of course runs counter to the recommended approach (to buy low and sell high). As a

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6 The distinction is that for nondiscretionary accounts, the client makes their own decisions, even when they receive recommendations from their financial planner. Contrast this with discretionary accounts, where the financial planner is making investment decisions. These are two different situations, which we highlight below.
7 In this context we are referring to money coming in (contributions) or going out (withdrawals or disbursements) of the portfolio.
8 Dietz (1966)
9 BAI (1968)
result, their poor timing decisions might result in losses (or at least lower performance than otherwise would have been obtained).

Consider the following:

12/31/10 Market Value = $1,000,000
6/30/11 Market Value = $1,500,000

There were no cash flows during the first half of the year, meaning the account is up 50 percent. As a result, the client decides to add an additional $2 million to the portfolio. The rest of the year is as follows:

6/30/11 Market Value = $3,500,000 ($1,500,000 + $2,000,000)
12/31/11 Market Value = $2,500,000

The account lost $1 million during the second half of the year. If we look at this from a gain / loss standpoint, we find the following:

<table>
<thead>
<tr>
<th>Ending Market Value</th>
<th>$2,500,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning Market Value</td>
<td>$1,000,000</td>
</tr>
<tr>
<td>Contribution during year</td>
<td>$2,000,000</td>
</tr>
<tr>
<td>Gain / Loss</td>
<td>−$500,000</td>
</tr>
</tbody>
</table>

What appears to have happened in this scenario is that during the first half of the year, performance was excellent; however, during the latter half, it wasn’t so good. And so, the client’s decision to add $2 million just at the start of the second half of the year may not have been such a good one.

What is the performance? If we wish to eliminate the impact of the cash flows, we use a time-weighted approach. We do this by breaking the year into two parts: how we did up to June 30; how we did from June 30 to December 31.

We began the year with $1 million; this grew by $500,000, which is obviously a 50% increase. We can see this with the following formula:

$$R_{FirstHalf} = \frac{V_1}{V_0} - 1 = \frac{1,500,000}{1,000,000} - 1 = 50.00\%$$

During the second part of the year, we began with $3,500,000 and ended with $2,500,000; our return is found as follows:

$$R_{SecondHalf} = \frac{V_2}{V_1} - 1 = \frac{2,500,000}{3,500,000} - 1 = 28.57\%$$

The return for the second half reflects our loss.

How do we combine these two periods, so that we have a return for the full year? We could add them together,
but that wouldn’t take into consideration the compounding that occurs. And so, we geometrically link the two returns. This results in the following return for the year:

\[
R_{\text{Full Year}} = \prod_{i=1}^{n} (1 + R_i) - 1 = 1 - (R_1 + 1)(R_2 + a) - 1 =
\]

\[
(50.00\% + 1)(-28.57\% + 1) - 1 = (1.5000)(0.7143) - 1 = 7.14\%
\]

When we combine the returns for the two subperiods, we obtain a return for the year of 7.14%, even though the client lost money. This often seems nonsensical, as how can we have a positive return and lose money? Recall that we are eliminating the impact of the cash flows.

During the first half of the year the account was up by 50%; and during the second half, it was down by 28.57 percent. Had the client not experienced the cash flow, but only had the initial investment of $1,000,000, these returns would have resulted in an end-of-year value of $1,071,428; i.e., a profit for the year of $71,428. But because the client added money when they did, a loss resulted.

We use time-weighting to report on the manager of a discretionary portfolio, where the client controls the timing and size of cash flows. Peter Dietz, the BAI, and even the GIPS standards saw the benefit of time-weighting when reporting on manager performance.

Money-weighting

In cases where the client controls the cash flows and the investment decisions, what return method should we use? Too often we find brokerage firms using time-weighting, which doesn’t make sense because it eliminates a critical component of the client’s decision.

In these cases money-weighted returns should be employed, because unlike time-weighting, they take cash flows into consideration.

In our earlier example, where the client has a positive return but saw a loss, the money-weighted return is −25.00 percent. This is obtained by using the Internal Rate of Return formula.

Appendix A provides additional details on both time- and money-weighted formulas.

Which returns to report

We recommend the following:

- For nondiscretionary accounts, report money-weighted returns, since the client controls both the cash flows and the investment decisions
- For discretionary accounts, report time-weighted returns, since the manager controls the investment decisions, but the client controls the cash flows, and (optionally) the money-weighted return, as this reflects the client’s cash flow decision

Note, however, that if an advisor is going to report both time- and money-weighted returns for a discretionary account, caution must be used and the client should be properly informed, since the client will see two different returns. Imagine seeing a report with returns of +7.14% and −25.00%; this could be quite confusing. But, they both have value:

- The 7.14% return is the manager’s, and reflects their investment decisions, independent of the cash flow decisions of the client. We can say that “this is how the manager did.”

10 This is of course assuming “all things equal.” That is, that the manager invested in the same fashion for both cases.
• The −25.00% return takes both the investment decisions and client cash flow timing into consideration. We can say that “this is how the client did.”

Broadly speaking, we encourage advisors to include a clear explanation of how the returns are calculated and what they mean to the client in any performance report they share with a client.

2. Household reporting

When reporting returns at the “household” or “super account,” or “family” level, the same rules should apply. That is, if the portfolios are all discretionary, show time-weighted and (optionally) money-weighted returns; if they are all nondiscretionary portfolios, show money-weighted.

What if they household consists of both discretionary and nondiscretionary accounts? In this case we recommend showing money-weighting, only, as this reflects “how the household did, overall.” Time-weighting wouldn’t be appropriate, since the manager didn’t control all of the investment decisions, and might benefit(suffer) from good(bad) client investment decisions.

3. Subportfolio returns

When reporting below the portfolio level (for example, security returns, sector returns, asset class returns), we recommend using money-weighting, regardless of whether the accounts are discretionary or not.

If they’re nondiscretionary, it should be obvious that money-weighting makes sense, as the client controls all of the decisions.

If they’re discretionary, you might be confused why we recommend this. At the subportfolio level, “cash flows” consist of purchases and sales (for example, the decision to reduce exposure to technology stocks, and increase exposure to financial stocks). If the portfolio is discretionary, then it’s the manager who is making these decisions, so we would want them to be part of the return.

E. BENCHMARKS

Benchmarks serve two main purposes:

• As a reference, to get an idea how a portfolio is doing
• As a “yard stick,” to judge performance

In the case of discretionary accounts, we want to know how the manager performed. If they have a +8.12% return for the year, is this a good thing? We can’t tell. Yes, it’s positive, but does this mean they did well? Perhaps everyone had positive returns.

If we can identify a benchmark that matches up with the investment strategy of the manager, then we can judge whether the manager did a good job, by comparing their performance with that of the benchmark.

Benchmarks should be market indexes that singularly, or in combination with other indexes, represent the manager’s investment approach.

If there is no manager, then we can still benefit from seeing a benchmark, but in this case it’s solely for reference purposes; more of a “out of curiosity, how did I do relative to the Dow Jones Industrial Average, the Consumer Price Index, the S&P 500, etc.”

Descriptive information about the benchmark should be provided. In the case of blended benchmarks, details regarding the underlying indexes, the percentages of each, and the rebalancing frequency, should be provided.
F. RISK

Risk measurement is a very complicated and confusing topic. But it’s also an important one. Client reports must include a risk measure, but it’s important that it’s one that makes sense and is easy for the client to understand.

In the case of discretionary accounts, we recommend the following risk measures:

- Standard deviation (of the portfolio and benchmark)
- Sharpe ratio (of the portfolio and benchmark)
- Tracking error

These are to be shown for the most recent annual period, covering the prior 36 months. In all cases, these statistics are to be annualized. The annualized return for the same 36 month period should be shown alongside these risk measures.

Tracking error, by definition, includes both the portfolio and the benchmark. It’s important that comparative information from the benchmark be provided, to assess the level of risk taken.

We do not recommend ex ante (i.e., forward looking risk measures) as they are overly complicated.

We recommend that explanations be provided so the investor understands what the measures mean.

Details regarding these measures appear in Appendix B (see page [ ]).

In the case of nondiscretionary accounts, we recommend showing standard deviation for the portfolio and the referential benchmarks. We don’t recommend any other measure, as it would, in general, not have any value and would be inappropriate, confusing, and possibly misleading.

G. ATTRIBUTION

Attribution is a field of performance measurement which identifies the sources of performance. There are two general forms:

- Relative (the portfolio relative to the benchmark)
- Absolute (the portfolio, alone)

With relative attribution, we seek to identify the sources that contribute to the excess return. In general, we feel that this segment of the market wouldn’t benefit from attribution. However, in cases where (a) the firm is dealing with sophisticated investors, and (b) there are clear selection and allocation decisions that are being made, providing relative attribution could be beneficial.

Absolute attribution (also known as contribution) attempts to reconcile the contributions of underlying portfolio components (e.g., securities or sectors) to the total return. Many show these as “winners” and “losers” (perhaps the top 5 or 10, and the bottom 5 or 10). We recommend providing absolute attribution results, as it provides insights into what helped or hurt performance.

H. REPORT CONTENT

Portfolio returns

Client reports should include returns for the portfolio, across various time periods, including:

- The most recent month, if monthly reporting is done
- The most recent quarter, if quarterly reporting is done

[^11]: Portfolio return minus benchmark return.
• The most recent calendar year
• The most recent 12 months (i.e., a rolling year return)
• The most recent two, three, five, and ten calendar years

Note that if the client doesn’t have return data for any time period, nothing should be shown.

In addition to showing returns for the portfolio, returns for the appropriate benchmark(s), for the same time periods, should be shown.

If the account is nondiscretionary, then money-weighted returns should be shown. If the account is discretionary, then time-weighted and (optionally) money-weighted returns should be shown, with appropriate disclosures to explain what each set of numbers represents, as discussed above. Ideally, a money-weighted benchmark return should be shown with the money-weighted returns, so that we have an “apples to apples” comparison.

Subportfolio returns

Ideally, the report should include returns for asset classes (bonds versus stocks), sectors, and securities. Note that returns should only be shown for periods that an asset was held. For example, if an asset was held for only one month, then do not show the return for a quarter, unless a footnote is provided to clearly state that the return is only for a month.

When showing returns across periods, many financial advisors wish to show returns for all assets held during the period, regardless of whether they were held the full period. This is fine, provided details are included so that the reader knows to which portion of the period the return applies; to imply that the return is for the full period when it wasn’t held the full period is misleading.

Risk measures

If the account is nondiscretionary, we believe that only the standard deviation, for the portfolio and benchmark(s), should be shown.

If the account is discretionary, then additional risk measures should be shown, provided sufficient documentation is included to explain what the measures mean.

Household reporting

If the report is for a household, with multiple individual accounts, then returns should be shown for each account as well as the household. Time-weighting at the household level has little value, so we would expect to see money-weighted returns at this level.

APPENDIX A: RETURN MEASURES

Rates of return can be calculated in many ways. We generally break returns into two major categories: time-weighted and money-weighted. Time-weighted returns eliminate (or reduce) the impact of cash flows, while money-weighted returns include the cash flows’ impact in their result.

When to use which approach? This is a debated topic, but in general we believe that time-weighting’s value is when we are evaluating a manager who does not control the cash flow decisions; that is, a manager who doesn’t determine when money is added or removed from a portfolio should neither be rewarded or penalized because of good or bad cash flow timing decisions.

Space doesn’t provide the opportunity to go into a great deal of detail on these measures. Rather, we provide summary information, which can be augmented with various texts and articles. In addition, we only touch upon the more commonly used measures.
TIME-WEIGHTED RETURNS

There are approximation methods and exact methods to derive time-weighted returns. Ideally, we employ exact methods, as approximation methods can have results which are not very accurate. The accuracy of approximation methods is highly dependent upon (a) market volatility and (b) the size of cash flows relative to the market value. In order to improve the accuracy of approximation methods, “best practice” is to revalue the portfolio whenever large flows occur, where large is generally thought of as 10% of the market value at the time of the flow (lower thresholds will improve the accuracy even more).

Modified Dietz

The most common approximation method is Modified Dietz:

\[ R_{\text{ModDietz}} = \frac{V_E - \sum_{i=1}^{n} C_i}{V_B - \sum_{i=1}^{n} C_i W_i} \]

The numerator shows the amount earned over the period, while the denominator is the amount that has been invested. Note that cash flows are “weighted,” based on when they occur. The weighting factor \( W \) is arrived at in one of two ways, depending on whether we wish to treat them as start- or end-of-day events:

\[ W_{\text{Start-of-day}} = \frac{CD - D_i + 1}{CD} \]
\[ W_{\text{End-of-day}} = \frac{CD + D_i}{CD} \]

Linked Internal Rate of Return / Modified BAI

The Linked IRR, also referred to as Modified BAI, employs the internal rate of return (see below), which is a money-weighted return. By geometrically linking (see below) the monthly results, we obtain an approximation to the true, exact rate of return.

Exact Rate of Return

The exact ROR is derived by revaluing the portfolio whenever a cash flow occurs. If one calculates returns daily, this yields the identical result. The formula is:

\[ R_{\text{Exact}} = \prod_{i=1}^{n} \frac{V_E}{V_{B_i}} - 1 \]

By revaluing for cash flows, we eliminate completely their effect on our return.

Geometric Linking

In order to extend our returns across time (e.g., to extend a daily return to monthly, or monthly to annual), we geometrically link the period results: this causes our returns to compound.
The formula to do this is quite simple:

1. Step 1: Convert our percentage returns to decimal equivalents (e.g., 1.27% = 0.0127)
2. Step 2: Add one to the decimal return values (e.g., 0.0127 + 1 = 1.0127)
3. Step 3: Multiply these values together
4. Step 4: Subtract one from the result
5. Step 5: Convert the decimal to its percentage equivalent.

Money-weighted returns

Money-weighted returns allow cash flows to impact their result. As such, they provide us the best way to tell the client how they did; that is, how their cash flow decisions across time, as well as the investment decisions, performed. Think of a mutual fund for example. If an investor makes monthly contributions to a fund, the fund return itself will be time-weighted, and will eliminate the impact of these cash flows. However, a money-weighted return takes the flows into consideration, and provides the investor with their “personal” rate of return.

The internal rate of return provides us with the exact money-weighted return result. It is a fairly complex formula, in that it cannot be solved directly, as the formulas above can. Instead, it involves an iterative process.

Modifed Dietz can serve as a “proxy” or approximation for the IRR. Please don't get confused, since we introduced Modifed Dietz above as a time-weighted return. The difference in how we use it as a money-weighted formula is that in this case we do not geometrically link the subperiod results; rather, we calculate the value across the entire time period, taking only the beginning of the period and end of period values into consideration, and the flows that occur across the entire period.

APPENDIX B: RISK MEASURES

In this section we will touch briefly upon the more common risk measures, and their appropriateness for client reporting.

Note that we will only touch on the more common risk measures; the reality is that there are many more. In addition, we only consider ex post or backward looking risk measures. We believe that ex ante or forward looking risk measures are, in general, inappropriate for the retail market.

This section is brief and isn't intended to provide all the information necessary to fully understand or implement these measures. There are many texts, articles, and websites available with information that can help you understand these measures more fully.

Standard Deviation

This is the most common and arguably longest used measure of risk. It measures the volatility of returns across time. And while volatility itself is not a good measure of risk, many investors see volatility as an indication of potential risk: high volatility suggests higher risk, while low volatility implies low risk. What do we mean by volatility? How much change occurs in the values across time. If returns change a great deal, volatility will be high; however, if their values don't vary very much from one month to the next, then we’d see a lower volatility.

The appropriateness of standard deviation as a risk measure has been debated, and it’s up to the investor to determine its value. The Global Investment Performance Standards require compliant firms to include standard deviation, but this was most likely done because of its simplicity, common usage, and ease of understanding, not because of its value as a measure of risk.

To see the standard deviation of a portfolio return by itself provides little help; for that matter, to see any risk
measure for the portfolio alone provides little benefit. We usually like to see the same risk measure shown for the corresponding benchmark. And while many investors will not have a benchmark that they are managing their portfolio against, using a common benchmark, such as the S&P 500, can be a reasonable solution. And so, we would want to show both the standard deviation of the client portfolio’s returns, and the standard deviation for at least one benchmark’s returns, for the same period.

We typically calculate standard deviation across monthly returns, and ideally for the prior 36-month period. We can calculate it for shorter periods, but its value diminishes when this is done, since the formula assumes a normal distribution (“bell shaped” curve distribution), for which we usually expect to see at least 30 observations (returns). We can also calculate standard deviation for longer periods (e.g., the prior four, five, six years).

Can we use days instead of months? Yes, though we generally would prefer not to, since these very short time periods exhibit a great deal of “noise.” To use longer periods, such as quarters, can also be done, but in order to satisfy the “rule” to have at least 30 observations would then require 7 ½ years of data. Likewise, to use years would probably be better, but having 30 years of data is unlikely. And so, the convention of using months should be employed.

We often annualize standard deviation results, and this is done by multiplying the value by the square root of 12.

Standard deviation is a formula which is easy to find: most portfolio accounting systems can provide it, as can performance and risk systems. It is also available in Excel. It generally comes in two forms: for the population and for a sample. The only difference is that for the population, we divide by “n,” or the total number of observations (returns), and for a sample, we divide by “n−1.”

The formulas are:

\[
\text{Standard Deviation (Population)} = \sqrt{\frac{\sum_{i=1}^{n}(r_i - \bar{r})^2}{n - 1}}
\]

\[
\text{Standard Deviation (Sample)} = \sqrt{\frac{\sum_{i=1}^{n}(r_i - \bar{r})^n}{n - 1}}
\]

Which to use? We find that the “population” form seems to be more common, though either is acceptable.

Tracking error

Tracking error measures how closely a portfolio follows its benchmark. A high tracking error suggests that the portfolio is moving in a very different way than the benchmark, while a low tracking error means that the portfolio is moving in a very similar fashion. We would expect, for example, that an index fund would have a very low tracking error.

\[
\text{Tracking Error} = \sigma(r_p - r_{B})
\]

The formula is merely the standard deviation of excess returns:

For retail investors who manage their own assets, tracking error is most likely an unnecessary, inappropriate, and potentially misleading statistic to provide, since the investor isn’t managing against any benchmark. To tell the
client that they have a “high” or “low” tracking error will serve no purpose. Its value only exists if someone, be it the financial advisor, portfolio manager, or, in rare cases, the client, is actually investing relative to an index: that is, making investment decisions in an attempt to outperform the index.

If we're reporting on a discretionary account, tracking error can have value, especially if the financial advisor is attempting to outperform a particular market index.

Beta

Beta tells us how a security or portfolio moves relative to the market. It comes from the Capital Asset Pricing Model (CAPM), where the market includes all possible investments. We typically see Beta calculated relative to the index the portfolio is being managed against. The benchmark carries a beta of 1.0. If the portfolio has a higher beta, its returns are expected to go up more quickly than the benchmark, and also go down more quickly. The opposite expectations apply to a portfolio with a lower beta than the benchmark.

The formula is fairly straightforward:

\[
\text{Beta} = \frac{\text{Covariance}(r_p, r_B)}{\text{Variance}(r_B)}
\]

As with tracking error, the appropriateness of Beta for many retail investors is questionable, since its value is unclear. This is especially true for nondiscretionary clients. For discretionary, the situation is different, as we might want to show how the portfolio is being managed relative to an industry benchmark. That is, if it is taking on higher risk (exhibited by a higher beta; any beta greater than 1.0 means more risk than the benchmark) or lower risk (a lower beta; beta below 1.0 means lower risk than the benchmark).

Downside deviation

Unlike standard deviation, which looks at returns both above and below the average (i.e., the total distribution of returns), downside deviation only looks at those below average, or below zero, or below the client’s absolute or target return. The formula is identical to standard deviation, except that instead of using all returns for the period, we only include those that fall below our designated value (average (which, in general, isn’t an appropriate value to use), zero (which indicates losses), or the target return).

Upside/Downside Capture Ratio

Upside/downside capture ratio tells us whether the portfolio has outperformed its benchmark during periods of market strength and weakness.

We calculate upside capture ratios by taking the portfolio’s monthly return during months when the benchmark had a positive return, and dividing it by the benchmark’s return during the same month. Downside capture ratios are calculated by taking the portfolio’s monthly return during periods of negative benchmark performance, and dividing it by the benchmark’s return.

An upside capture ratio over 100 tells us that the portfolio has generally outperformed the benchmark during periods of positive benchmark returns. A downside capture ratio of less than 100 tells us that the portfolio has lost less than its benchmark in periods of negative benchmark returns. If the portfolio has positive returns when the benchmark has negative returns, its downside capture ratio will be negative; this means that it moved in the opposite direction (i.e., up when the benchmark went down).

As with other risk measures that compare themselves to benchmarks, the value here can only exist when someone is managing against a benchmark.
Sharpe Ratio

The Sharpe Ratio, named for Nobel Prize Winner William Sharpe, is a risk-adjusted return measure. That is, it combines both risk and return together, where risk is standard deviation. And while it comes in various forms, the most common uses the equity risk premium (average portfolio return minus average risk free rate) in the numerator, to represent our return, and the standard deviation of the portfolio returns in the denominator. As with standard deviation, we generally expect this to be used across a 36 month period.

\[
Sharpe \ Ratio = \frac{r_p - r_f}{\sigma_p}
\]

To have value, we would expect to compare the portfolio's Sharpe Ratio with that of its benchmark; in the absence of a benchmark that is actually being managed against, a common index such as the S&P 500 might work.

The higher the Sharpe ratio, the better.

For retail investors with nondiscretionary accounts, Sharpe Ratio will have little value.

Sharpe ratios are often annualized by multiplying by the square root of 12.

Treynor Ratio

This is another risk-adjusted measure, that is identical to the Sharpe ratio, except that we use Beta in the denominator. Beta can be thought of as measuring the risk of the market, while standard deviation is thought of as measuring total risk. Evidence suggests that the Sharpe ratio is much more commonly used. And, as with the Sharpe ratio, the appropriateness of showing this measure is questionable in many circumstances.

Information Ratio

This measure is also similar to the Sharpe ratio, though it uses the average excess return in the numerator (which we can think of as the "active risk") and tracking error in the denominator.

And, once again we must offer caution in showing this statistic, as its appropriateness and risk of confusion should be considered before reporting it.

Sortino Ratio

This measure is similar to the Sharpe ratio, but only looks at the downside. And so, in the numerator, instead of the "equity risk premium," we have the average portfolio return minus our target (or zero, if we're focusing on losses). The denominator is downside deviation.

APPENDIX C: SAMPLE REPORTS FOR PROSPECTIVE CLIENTS

A. Performance for a representative portfolio
B. Performance for a model portfolio

ANNUAL PERFORMANCE

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<tr>
<th>YEAR</th>
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<tbody>
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<td>1.38%</td>
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<tr>
<td>2010</td>
<td>2.03%</td>
<td>1.97%</td>
</tr>
<tr>
<td>2009</td>
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<tr>
<td>2008</td>
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36-month statistics, for period ending 12/31/2011

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<tr>
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<tr>
<td>SHARP RATIO</td>
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<td>1.58</td>
</tr>
<tr>
<td>STANDARD DEVIATION</td>
<td>2.77</td>
<td>2.64</td>
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</table>

XYZ claims compliance with the XXX Performance Presentation Standards. XYZ is a NYC-based, SEC-registered firm. The results shown in this report represent the past performance for the U.S. Large Cap growth strategy. A model portfolio was used to create the firm's historical performance. The model represents the firm's strategy. However, it does not represent the performance of actual accounts. In addition, the performance shown does not include the impact of trading costs, commissions, or fees. The recipient of this report should take this into consideration, given the limitations of the information provided.

The strategy invests in U.S. large cap growth stocks, which the manager feels offer the greatest opportunity for appreciation. The manager relies upon the internal research team of XYZ to identify prospective securities to invest in.

The benchmark shown is the Russell Large Cap Growth index.

Past performance is no guarantee of future results.
C. Performance of a composite

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36-month statistics, for period ending 12/31/2011

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Past performance is no guarantee of future results.
D. Performance of back-tested results

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36-month statistics, for period ending 12/31/2011

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<tr>
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