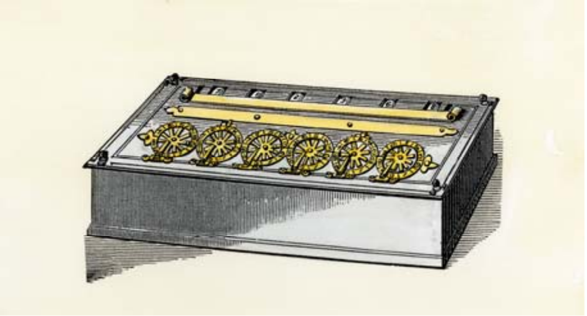
INVESTMENT STRATEGY CONSULTING

Performance Reporting and Analytics

Managing Risk Through Information

Performance Reporting and Analytics **What are the Basics?**



Proper portfolio monitoring can disclose when a manager should be terminated or given additional capital, if the portfolio has shifted from its target strategy, the effectiveness of tactical decisions, and whether the overall portfolio design needs to be revisited. Without the use of accurate, timely data and information, decision making is impeded. Sound data maintenance, aggregation and reporting are the foundational first steps when evaluating the success of an institution's portfolio strategy, monitoring progress towards financial objectives and setting realistic goals for future performance.

What does return have to do with it?

Accurate, timely return data is essential to informed portfolio decision making. But it is relative performance which is most critical when evaluating the results of your investment strategy and the quality of the advice of your professional asset managers and other investment advisors. Selecting benchmarks which are appropriate for each asset, investment account, asset class and/or composite is integral to the process. Additionally, it is imperative that investors understand returns in the context of each assets risk profile and its effect on the portfolio as a whole. The greater the risk, the higher the long-term return target should be.

Examples of relative return data:

- Custom or market index comparisons presented either simplistically alongside of asset and aggregate performance data or the results of analytics such as benchmark relative attribution and appropriate risk adjusted return measures and ratio analysis.
- Inflation adjusted returns or comparisons to data such as the change in the Consumer Price Index.
- For taxable entities, comparisons to return streams such as Treasury bonds and tax exempt municipal bonds may be useful. A municipal portfolio, for example, may generate lower before-tax returns but yield greater after-tax benefits.
- Specialized risk and performance measures.

Time Weighted (TWR) vs Dollar Weighted (IRR) Returns

Investors are most familiar with the concept of Time Weighted Returns (TWRs) because the methodology is used to calculate published returns on public funds and major market indices such as those published by Standard & Poor (S&P), Dow Jones, MSCI and others. TWRs facilitate comparing your portfolio to the market.

TWRs eliminate the effect of choices related to the timing of cash contributions or withdrawals to an investment during the performance period. In other words, the TWR isolates the returns on assets over a period of time regardless of the timing of cash flows. Dollar Weighted Returns (IRRs) on the other hand, incorporate the timing of cash flows into the measure. Using either the current asset valuation or a projected estimated exit value, the average weighted rate of return of cash flows over the measurement period is computed. The advantages of using TWRs are highlighted below:

- **Benchmarking and Comparison --** TWRs are used to calculate published returns on public “40 Act” or UCITS funds and major market indices such as those published by S&P, MSCI and Dow Jones. Comparability among investment management firms’ performance, the various composites within the portfolio and publicly reported benchmarks requires uniformity in methods used to calculate returns. Only TWRs facilitate comparisons across portfolios due the consistent methodology applied to each asset and aggregations.
- **Timing --** Although investors make decisions related to the timing of their cash flows to and from funds and investment managers, IRRs published by fund managers are based on the investment timing of the Fund, not the Fund’s investors; thus making the effect of cash flow timing materially different from that of its investors, opaque and vulnerable to finesse.
- **Composite and Portfolio Aggregation --** Performance of all meaningful composites is essential to the fair presentation, consistency, and comparability of performance over time and among firms A composite is an aggregation of one or more portfolios or assets managed according to a similar investment mandate, objective, or strategy. The total portfolio aggregation then incorporates the entirety of all assets which may or may not be included in various composites. Composite and the total Portfolio return is the asset-weighted average of all assets in the aggregation.

  Although Global Investment Performance Standards (GIPS), as published by the CFA Institute, do not require that compliant investment managers use TWRs for Real Estate and Private Equity investments, these managers are reporting on these funds as individual assets only. Conversely, investors in these funds require the ability to incorporate the returns of all investments in their composites and portfolios. Therefore, they require the use of methodologies which facilitate aggregation of the entire portfolio. As noted above, only TWRs facilitate comparisons across portfolios due the consistent methodology applied to each asset and aggregations.
- **Returns Based Analysis --** Once TWR data has been accumulated and a historical performance record has been created using consistent best practices, the availability of useful returns based analytics and measures is limitless. For example, if well conducted, RBSA will make it possible to get a good representation of a fund’s style which can be useful when creating and selecting benchmarks, analyzing correlations, performing risk/return analysis, selecting new managers, etc. These options for analysis are only available if a performance record exists using TWR methodology. *Note that the usefulness of private equity and real estate data for these purposes is limited.*
- **Consistency --** GIPS standards as published by the CFA Institute require that compliant investment managers adhere to specific data input, calculation and valuation methodologies when reporting IRRSs However, consistency and transparency amongst investment manager IRR methodologies is not common.

Rely on Information to **Protect Assets and Manage Risk**

Markets are fraught with unforeseen risks and events. Investors need the ability to weigh risks, costs and performance across asset classes using the best available information at any time. In combination with a robust due diligence program, risk data and analytics are required to properly:

- Measure and assess portfolio risks
- Provide enhanced data and reporting to stakeholders such as donors and oversight committees and boards
- Increase operational efficiencies
- Respond to rapidly changing market dynamics
- Measure performance and attribution

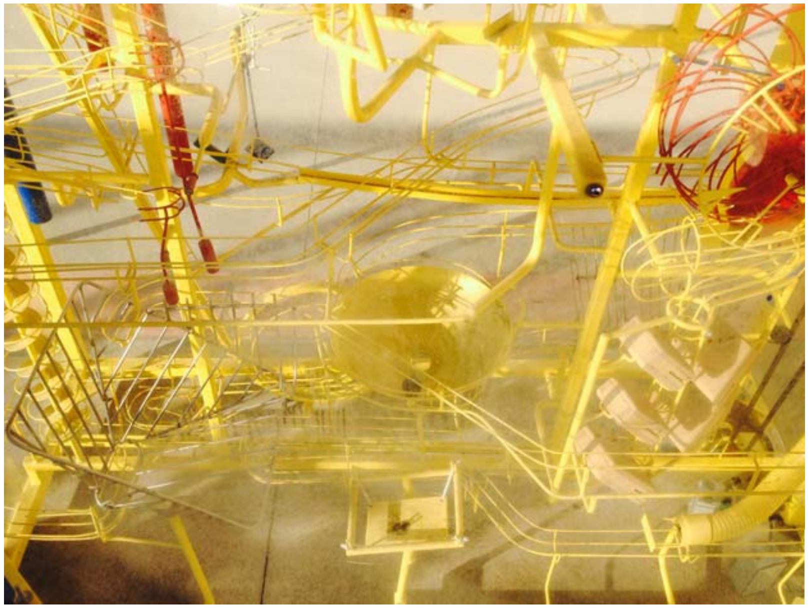
How Can ISC **Improve Portfolio Planning and Decision Making?**

Advantages of Partnering with ISC

Let us help you bridge the resource gap and navigate the hidden multiple perils of investment portfolio performance reporting and analytics. We have the qualifications, experience and technology to make sure decision makers have the information they need.

- **If it were easy, everyone would do it…**

  At first glance, performance reports may appear to be simplistic. A series of lines and columns compared to benchmarks. How hard could it be? Don't you just press a button? Although performance on individual assets or accounts is not overly complex (depending on transactions), building and maintaining account composites which incorporate the universe of investment assets in your portfolio held by various custodians and fund sponsors is another matter. Building and maintaining a history using consistent best practice methodologies, is another matter yet.



  Most investors want to see performance data for an extended period or from the inception of their portfolio. This data requires the historical aggregation of daily/monthly/quarterly calculations and weighted composites for portfolio groupings and benchmarks using a consistent methodology which incorporates industry best practices. It also requires the availability of benchmark pricing information and powerful technologies which can maintain historical performance data and produce useful risk analytics. Employees with various skill levels in your organization will evolve and rotate in and out of roles. Short of having a dedicated investment performance analyst role and material capital investments in technology, consistent maintenance of complex portfolio data over many years is nearly impossible. ISC analysts use state of the art technology and "fool proof" systems to create, reconcile and maintain performance data. We understand the data, the systems and the specific requirements of our Clients.

❖ **Independent Reporting**

ISC is a fee-only investment consultant; we do not have financial relationships with or sell investment or insurance products or earn commissions. Our analysts, therefore, are not conflicted by either financial benefits linked to investment are focused 100% on the best interests of our clients. In addition to being best suited to provide independent reporting on investment results, we are also able to provide a candid assessment of the performance of your portfolio and collaborate with you in determining whether or not it is supporting your financial strategies.

❖ **Consistent "Best-Practice" Methodologies**

For reporting to be at all useful, it must represent current and historical data accumulated using consistent "best-practice" methodologies. The CFA Institute has published "Principles for Investment Reporting" and "Global Investment Performance Standards" which represent an industry standard for performance reporting by investment managers. As consultants, we cannot claim to be "GIPS compliant" (a description reserved for asset managers only). However, we look to these standards, especially those related to input data, calculations methodology and composite construction, for guidance in defining and maintaining our systematic approach to performance reporting. ISC methodologies are consistently maintained and do not deviate over time.

❖ **Your time is valuable**

Time is the most important resource you have…and there never seems to be enough. Why spend hours and hours accumulating data and pouring over spreadsheets which may contain inconsistent or erroneous results? By partnering with ISC, your time is spent doing what you do best. It is our job to make you shine.

ISC Performance Reports:

Our base-line portfolio performance reports include the following fundamental components specifically formatted to the needs of your organization:

- Time weighted performance (TWRs) of each manager in the portfolio for the current period and other periods as defined by our Clients compared to custom or major market indices.
- The performance of our Client's portfolio in each sector or custom composite compared to custom sector or composite indices.
- The performance of the overall portfolio, measured against a custom or major market index.
- Customized comment on portfolio performance, highlighting where the portfolio is performing well and where there may be areas of concern; identifying areas where performance appears to be satisfactory but is actually worrisome, or where it appears to be worrisome but is in fact acceptable.
- Commentary on various market sectors, so that clients who have a more detailed interest in market events, momentum, and valuations including consensus views about where in the capital markets value seems to lie and where valuations have experienced significant moves.
- How the portfolio is positioned against its target asset allocation strategy.
- For clients with private equity and real estate investments, either manager provided or recomputed schedules showing various analytics as required. These may include: (a) original commitments, (b) takedowns to date, (c) distributions, (d) remaining commitments, and (e) an internal rate of return (IRR) for each investment.

ISC Risk Measures, Market Data and Analytics:

Risk measures, market data and analytics are available to ISC Clients as either system produced (standard) reports where available or using customized models and methodologies.

- **Returns Based Analytics**
- **Exposures**
- **Economic and Consensus Market Data and Forecasts**
- **Global (Benchmark Relative) Attribution**
- **VAR**
- **Other Customized Analysis**