Analyzing and Interpreting Performance Metrics

How to earn CPE credit:

• Scan in and out of the session, attend for the full 50 minutes
• Be logged in to the app and take the CPE survey
  » Click into the Schedule icon
  » Click into the session you’re attending
  » Scroll down to the CPE survey and complete

• Don’t have the app? Paper surveys are available as well.
Analyzing and Interpreting Performance Metrics

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Learning Objectives

• Learn best practices for analyzing the performance of asset managers and internal portfolios
• Utilize the most effective tools to analyze performance metrics
• Understand how performance measurement can help evaluate the effectiveness of investment strategies
Our Challenge
Comparing Portfolio Managers

• Historically subjective
  » Returns: on cost/market
  » Cash Flows: control or not?
  » Risk appetite consideration

• “This is an art, not a science”
  » There are many approaches and concepts to performance measurement
Framework for Performance Comparisons

- **Appropriate**
  - What is the compared goal?
  - How are we going to measure?
- **Transparent**
  - Easily reverse engineered and/or conceptually understood
- **Objective**
  - Impartial and standardized
Appropriate

- Performance Measurement Goals
- Risk Tolerance
MTD Return = 10%

Transparent
- Understood by all parties
  » What are we measuring? Why?
- Simple to reverse engineer
  » How are we measuring?
Objective

- Standardized methods
- Consistent application
- Evaluation based upon the appropriate goals, not preference
Investment Performance Comparison

• Time-weighted vs. Money-weighted (IRR)
• Benchmark Comparison
• Attribution Analysis
  » Equity
  » Fixed Income
• Risk-adjusted Returns
• Portfolio Measurement Presentation
Time-Weighted vs. Money-Weighted (IRR)

• TWR = periodic returns linked over time geometrically
  » Goal: measure portfolio performance without consideration of cash movements
• MWR = discount rate equating the present value of all cash flows to zero
  » Goal: measure the actual dollar amount earned in the portfolio
## Time-Weighted vs. Money-Weighted (IRR)

<table>
<thead>
<tr>
<th>Cash Flow</th>
<th>Beginning MV</th>
<th>Ending MV</th>
<th>Period Return</th>
<th>TWR</th>
<th>MWR</th>
</tr>
</thead>
<tbody>
<tr>
<td>$5,000</td>
<td>$5,000</td>
<td>$4,750</td>
<td>-5.00%</td>
<td></td>
<td></td>
</tr>
<tr>
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<td>$12,508</td>
<td>-15.20%</td>
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<td></td>
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<tr>
<td>$15,000</td>
<td>$27,508</td>
<td>$28,360</td>
<td>3.10%</td>
<td>27.76%</td>
<td>94.64%</td>
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<td>$48,360</td>
<td>$63,231</td>
<td>30.75%</td>
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<tr>
<td>$25,000</td>
<td>$88,231</td>
<td>$103,804</td>
<td>17.65%</td>
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</tbody>
</table>
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</thead>
<tbody>
<tr>
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<td>$25,000</td>
<td>$23,750</td>
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<tr>
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<tr>
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<tr>
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<td>$103,893</td>
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</tbody>
</table>
Benchmark Comparison

• How is my portfolio performing relative to investment goals?
  » Benchmarks provide perspective
• Rates of return alone offer little context
Benchmark Comparison

• Benchmark Types
  » Market Indices
  » Peer Groups
  » Absolute
  » Custom
Benchmark Comparison – Evaluation Criteria

• Appropriate
  » Benchmark is consistent with manager’s style or expertise

• Specified in advance
  » No moving targets

• Measurable
  » Benchmark return readily calculable

• Investable
  » Possible to hold the benchmark directly

• Unambiguous
  » Security identities and weights clearly defined
Attribution Analysis

• Decompose excess return to explain the impact of portfolio management decisions
  » What is causing my excess returns?
• Focus on primary risk factors within portfolio mandate
• Highlight value and tell the story of portfolio returns
Risk-Adjusted Returns

- What’s my risk tolerance?
- How do we define risk?
  » Exposure? Volatility? High turnover?
- What risk was taken to produce portfolio returns?
- What measurements are most appropriate?
Risk-Adjusted Returns

• Portfolio
  » Exposure & Allocation
  » Standard Deviation
  » Value at Risk

• Relative Risk
  » Beta
  » Sharpe Ratio
  » Information Ratio
Investment Performance Presentation

- Maintain historical context
- Standardized
- Removal of guesswork
Closing Thought: Historical Performance Indication

“Past performance may not be an indication of future results.”

• Measure the right things
• Establish correct priorities
• Adhere to mandates
Reminders

- Take the post-session survey in the Clearwater Events app
- Take the Clearwater Client Benchmark Survey in room 440 and earn Clearwater swag.
- Don’t miss the Monday networking reception from 4:30 to 6:30 p.m.
- Session presentations are available in the app