

# FUND PERFORMANCE EVALUATION

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# Business Reasons for Performance Evaluation

- Feedback and Control of the Investment Process.
- Incentive Compensation for Investment Professional.
- Marketing the Funds.

# Dimensions of Performance Evaluation

- Measuring the Rate of Return.
- Assessing Superior/Inferior Results.
- Separating Skill from Luck.

# Measuring Rate of Return

- Time-Weighted Rate of Return
  - Measures the return on the Fund’s “first” invested dollar.  
Used to evaluate manager’s performance.
- Dollar-Weighted Rate of Return
  - Measures the return of the Fund’s “average” invested dollar.  
Used to evaluate the investors’ experience in the Fund.
- Examples of Return Measures and Their Interpretation

# Comparing Rates of Return

- Fund returns are usually compared against appropriate market benchmarks, and against populations of other Funds.
- Appropriate Benchmarks
  - Representative of the Fund's objectives and restrictions.
  - Feasible to constructed in real marketplace.

# Comparing Rates of Return (2)

- Appropriate Comparative Population
  - Similar objective, style, restrictions, and risk.
  - May require establishment of independent performance evaluation industry.

# Performance – Skill or Luck

- Equally skilled managers, operating under identical guidelines, and using the same set of investable stocks, will produce different returns in each measurement period.
- Coin Flipping Example.
- Synthetic Mutual Fund Return Distributions.

# Performance – Skill or Luck (2)

- Elapsed Time to Demonstrate Performance.
- The enormous influence of randomness in returns (luck) suggests that a successful Fund business should employ multiple fund managers and management styles.

# Risk Adjusting Performance

- Ex-post risk is measured by either the Fund's "beta", or by the standard deviation of its returns.
- Market, and Fund, Performance Characteristic Line.
- "Scatter" diagram of Funds' returns and risks.
- Risk adjusted performance assessment is made comparing the returns of Funds exhibiting similar risk.

# Risk Adjusting Performance (2)

- The Sharpe and Modigliani risk adjustment measures answer the question, “How does a Fund’s performance compare with the market index adjusted to the Fund’s total risk (standard deviation of return)”.
- The Treynor risk adjustment measure answers the question, “How does the Fund’s performance compare with the market index adjusted to the Fund’s systematic risk (beta)”.

# Risk Adjusting Performance (3)

- “The Sharpe, Modigliani, and Treynor measures each give the same assessment of superior or inferior performance to the market, but may give different relative rankings of Fund risk-adjusted performance.