Portfolio Performance Evaluation

INSIGHT
WEALTH
MANAGEMENT

Presentation by

Bob Pugh, CFA, CFP®

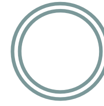
to the

American Association of Individual Investors

Washington, DC Chapter

July 18, 2015

Introduction and Overview



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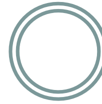

Bob Pugh, CFA, CFP® Brief Biography

- President, Insight Wealth Management. Inc., an independent , fiduciary Registered Investment Adviser in Gainesville, VA, providing fee-only wealth and investment management, and financial planning services to individuals, families, businesses and non-profit organizations since 2005. Member of the Schwab Advisor Services network of select independent advisors for custody and brokerage of client assets.
- National Association of Personal Financial Advisors (NAPFA) – Registered Financial Advisor (www.napfa.org), member of the Financial Planning Association (www.fpanet.org), CFA Institute (www.cfainstitute.org) and the National Association for Business Economics (www.nabe.com).
- President of the CFA Society of Washington, DC, 2005 to 2007, and Eastern Region Presidents Council Representative, CFA Institute, 2009 to 2011.
- Over twenty-five years of experience as an economist, financial educator and analyst, portfolio manager, and personal financial planner in the private and public sectors. Experience includes serving as an economic analyst with the Central Intelligence Agency, director of investment research at another firm, and senior financial analyst in municipal government.
- Graduate degrees in global political economy from The Johns Hopkins University, School of Advanced International Studies, and in financial economics from the University of North Carolina at Greensboro
- Full-time and adjunct faculty member experience with numerous colleges and universities, including nine years as a member of the Practitioner Faculty in Finance with The Johns Hopkins University's (JHU) Carey School of Business, and with the JHU School of Medicine, teaching graduate-level courses in investment analysis, portfolio management, and corporate finance, and continuing education in the Business of Medicine program. Currently teach the full Level III CFA Exam review courses for the CFA Society of Washington, DC and the World Bank.
- Community Volunteer, including serving as President of the Prince William Symphony Orchestra for four years, Lay Speaking Minister in the Virginia United Methodist Conference, and over twelve years of service with the Virginia Cooperative Extension's Personal Finance Program in Prince William County. Recently appointed by the Prince William County, Virginia Board of Supervisors as a Board Member of the Health Systems Agency of Northern Virginia.
- Mensan since 1999. Current Certified Proctor, and past Testing Coordinator and Public Affairs Officer of Metropolitan Washington Mensa (www.mwm.org).
- Contact information available at www.insightwealth.com

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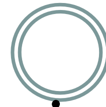
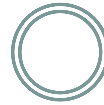


The Result of Not Measuring and Tracking Objectively the Performance of Your Portfolio:

Introduction and Overview



- Evaluating portfolio performance is important for all investors, whether they are managing their own assets or have hired help.
- If an investor can get better after-fee and after-tax risk-adjusted results by purchasing an index fund and some bank CDs, they should. Results matter.
- Techniques covered in this workshop are appropriate for all types of investors – fundamental, technical, active, passive, etc.

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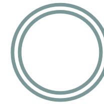

- What ***NOT*** to do:
  - Ric Edelman's Secret #5 in "Ordinary People, Extraordinary Wealth":
  - "It does not matter how the S&P 500 performs – or any other index, for that matter . . . What matters instead is that the performance of your investments are (sic) matching the Individual Investor Index (I^3)."
  - "The most common way our clients evaluate their overall portfolio is by examining the percentage gain for the year."
  - Describes the S&P 500 as, "some external, arbitrary standard"

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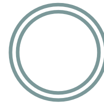

- Edelman's Individual Investor Index is a return goal only that does not reflect the risk taken attempting to get that return or allow for an unbiased evaluation of the quality of the services he delivers.

- Investors need an objective measure of their portfolio's performance compared to relevant benchmarks to evaluate their advisor's or funds' performance, or to determine if their own self-managed strategies are working.

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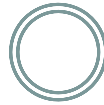
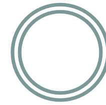


- Calculate time-weighted (geometric) return adjusted for cash flows
- Calculate risk measured as standard deviation of returns
- Evaluate risk-adjusted return (Sharpe ratio)
- Determine appropriate benchmarks and compare portfolio return and risk to those benchmarks
- Evaluate results of active management strategies (Information Ratio)
- Assess the sources of the portfolio's performance (attribution analysis)
- Consider other sources of risk

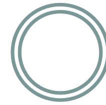
Time-Weighted (Geometric) Return



Basic measure of return is the percent change in the portfolio's value during the measurement period, adjusted for cash flows:

$$return_1 = \frac{\text{Porfolio Value}_1 \text{ - Cash Flows - Portfolio Value}_0}{\text{Portfolio Value}_0}$$

Time-Weighted (Geometric) Return

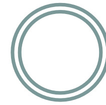


- Use the basic measure of return (adjusted for cash flows) for sub-periods, and time-weighted returns for multiple periods.
- Reflects compounding of returns.

$$return = [(1+r_1)(1+r_2)...(1+r_n)] - 1$$

[(0.995)(0.965)(1.025)(1.001)(0.997)(1.013)(0.987)
(0.999)(1.007)(1.043)(1.042)(1.031)] - 1 = 10.77%

Time-Weighted (Geometric) Return

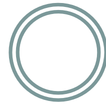


For average periodic returns, use geometric averages, which reflect compounding, rather than arithmetic averages:

$$return = [(1 + r_1)(1 + r_2)...(1 + r_n)]^{\frac{1}{n}} - 1$$

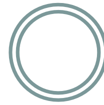
$$return = [(1.1077)^{\frac{1}{12}} - 1] = .086\%$$

Risk



- In traditional finance theory and practice, investment risk is typically measured as standard deviation of returns.
- Standard deviation is calculated easily with a spreadsheet or financial calculator.
- See example in handout.

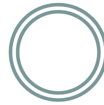
Risk-Adjusted Return



- Many measures of risk-adjusted return exist but the Sharpe Ratio is most often used.
- Measures how much excess return (total portfolio return minus the risk-free, or cash rate) the portfolio earns for the amount of risk taken, measured as standard deviation of returns.

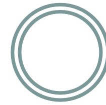
$$S = \frac{r_p - r_{rf}}{\sigma_p} \qquad S = \frac{10.77 - 3.00}{2.32} = 2.05$$

Benchmarks



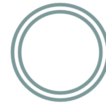
- Compare risk and return to relevant benchmarks
- Characteristics of good benchmarks (from CFA Level III curriculum):
  - ***Unambiguous*** about the securities and their weights in the benchmark
  - ***Appropriate*** to the portfolio's style and investing approach
  - ***Measurable***
  - ***Investable***
  - ***Specified*** in advance
  - ***Accountable*** to the portfolio's manager
  - ***Reflective*** of current investment best practice

Assessing Active Management



- Information Ratio (IR) measures the consistency of an investor's ability to beat indexes or benchmarks (active management).
- IR is the ratio of the average periodic excess returns of the portfolio compared to its benchmark, to the standard deviation of the excess return.
- Standard deviation of the excess returns is active management risk
- IR of .50 is OK and an IR of 1.00 or above indicates consistently successful active management.

Assessing Active Management

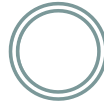


In the example we are using, the IR is only 0.079. This indicates a failure of active management and that the investor should shift to passive management using index funds.

$$IR = \frac{\text{Average Periodic Excess Return (ER)}}{\sigma_{ER}}$$

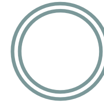
$$IR = \frac{0.18}{2.30} = 0.079$$

Attribution Analysis



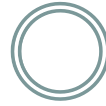
- Attribution analysis is more complicated mathematically than return or risk analysis
- Usually breaks portfolio performance into allocation, security selection and other components
- Specialized software with portfolio data is usually required
- Mathematics of attribution analysis are beyond the scope of this presentation, and often are challenging even for Level III CFA candidates

Black Swans



- Events that are not highly probable but would have a high negative impact, and are difficult or impossible to foresee, or to time
- Traditional finance theory risk analysis is based on standard deviation of returns and doesn’t do well with black swan risk
- Geopolitical
  - War in Middle East
  - Major terrorist event
- Financial
  - Greek default?
  - Major bank(s) failure
- Other Regional or Global Catastrophes
  - Pandemic
  - Climate or weather disaster
  - “Honey Boo-Boo” renewed for another season

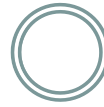
Conclusions



- Evaluate your investing results objectively and make changes as needed. Otherwise, you are driving blind and might go off a cliff.

- NEVER deal with an advisor who won't provide objective portfolio analysis and performance evaluation using industry standard techniques (not just account statements).

Questions?



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Bob is available in person or by conference/video call for a free, no-obligation initial consultation and portfolio review, or to answer your questions about this presentation and help you with the available resources.

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