

SHARPER ♦ GRANITE



Optimal Portfolio Management

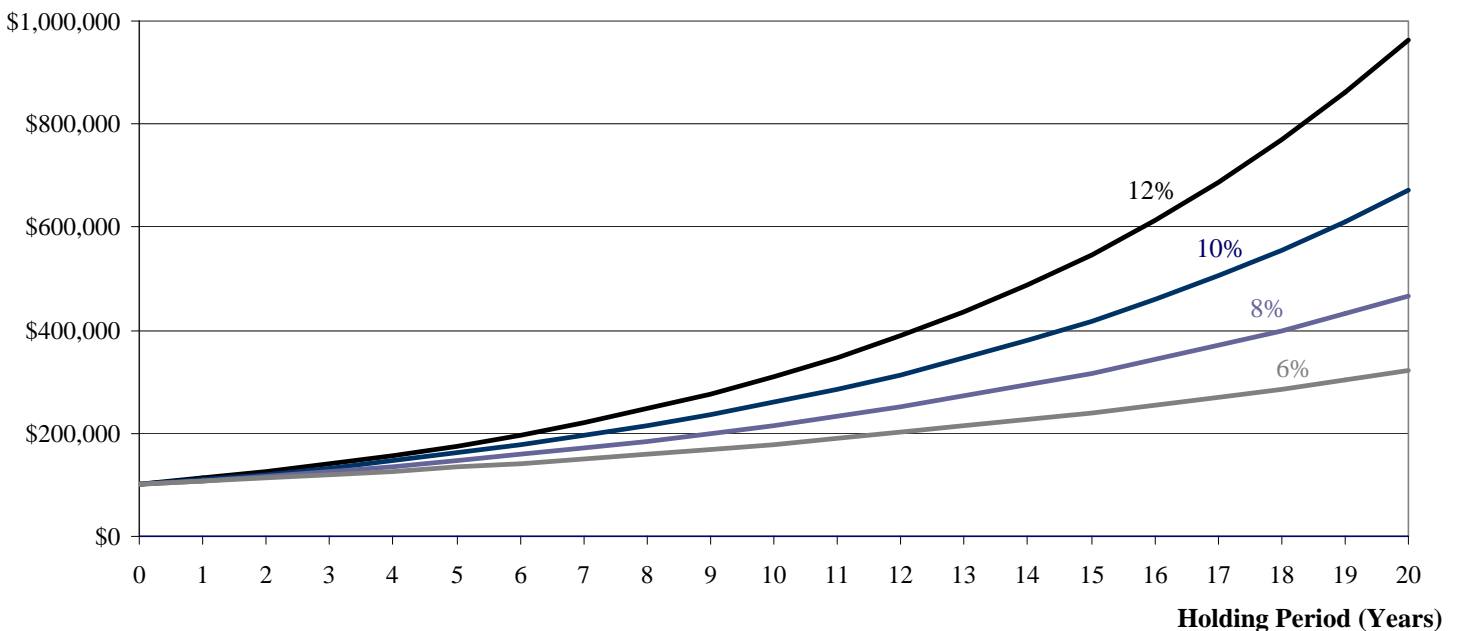
Achieving Financial Goals through Optimal Portfolio Management

Sharper ♦ Granite helps clients achieve their financial goals by constructing and managing optimal portfolios, designed to maximize return while minimizing risk, and customized around each client's unique financial situation.

The Sharper ♦ Granite investment philosophy begins with sound academic research covering decades. Our investment processes leverage key data and objective research from academics at institutions such as the Wharton School of Business and the Kellogg Graduate School of Business. Based on this research and economic analysis, we have developed a fundamentally sound investing strategy.

Even small improvements in return are worth a tremendous amount over time. Optimizing a portfolio to gain every bit of expected return holds tremendous value. Elevating annual returns slightly from 10% to 12% (at the same risk) over the course of 20 years is worth approximately \$250,000 for every \$100,000 originally invested.¹

Growth of \$100,000 Invested Over 20 Years ¹



In judging portfolio performance, risk must be considered as well as return. In seeking additional return, the tradeoff is always increased risk. When judging portfolio performance, most tend to look exclusively at returns because they are easily understood and frequently used in the media as a basis for investment comparisons.

For example, if your portfolio returned 12% while the general market returned 10%, you might be pleased. But what if you undertook twice the risk of the general market to get there? In reality your portfolio underperformed on a *risk-adjusted* basis. You may have deserved nearly a 20% return based on the risk you assumed.

Risk is less frequently reviewed because it is less intuitive; however, risk can be measured as volatility, how far portfolio value swings up and down over time. The chart below shows one way to look at both risk and return. It shows actual performance of major indexes, selections from *Morningstar's* "Top Twenty" mutual funds, and model Sharper ♦ Granite Efficient Frontier Portfolios.² The best performing investments land in the upper left region, with low risk and high returns.

Achieving risk-adjusted performance that beats the general market indexes is difficult to do using mutual funds or broker recommendations. Equity mutual funds are good in that they build baskets of stocks to diversify away company specific risk. However, less than 20% actually outperform the S&P 500 Index over time.³ In fact, the average equity mutual fund trailed the S&P 500 Index by 1.5% over the last ten years and by 3.0% over the last twenty years.⁴

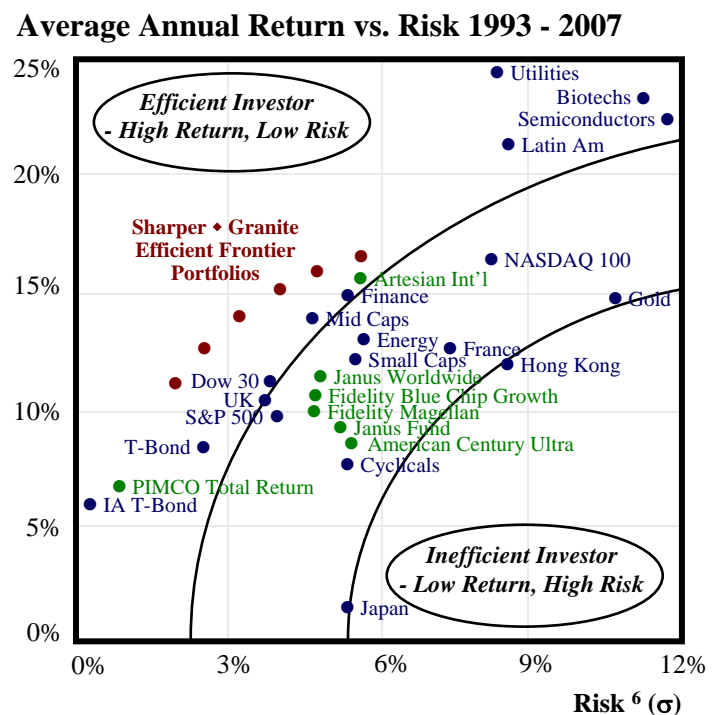
Furthermore, they can be quite expensive. The average no-load equity mutual fund costs 2.6% annually in management fees, tax inefficiencies and transaction costs.³

Finally, mutual funds cannot be customized around each client's time horizon, risk tolerance, upcoming life events, outside investments, and tax strategy. Mutual funds seek to maximize return within their style guidelines, but alignment of asset allocation and overall balance with an individual's financial goals is still left to the individual.

Building a portfolio from individual stocks recommended by an analyst or broker is an even more challenging path to superior performance. Exposed almost daily in the news, Wall Street recommendations are often wrought with conflicts of interest. Suggested trades may be driven by: trading commissions, assistance with an investment bank placement, or trade-matching for larger clients. All of which may generate profits for various parts of the bank or brokerage at the investor's expense.

Even with noble intentions, your broker or fund manager will be challenged to beat the market. Academic studies consistently show that active managers (analysts, brokers and other professionals) who pick stocks and time the market do not add value over the long run. Research spanning the last 60 years is crystal clear: Passive (index-based) management brings higher returns than active management. Ultimately, active managers who pick stocks all compete against one another in a zero-sum game. Their net result trails

Return vs. Risk of Select Portfolios⁵



the general market because of the frictional costs of their trading.⁷

- *“Our study shows that both the informed and the uninformed investors can expect to make the same return.”*⁸
 - Joe Stiglitz, Stanford University, Chairman of the Council of Economic Advisors under President Clinton
 - Sandy Grossman, Wharton School of Business
- *“Unless investors have significant private information not already in stock prices, they aren't going to make above-normal returns, except by accident.”*⁹
 - Merton Miller, Nobel Laureate in Economics, Harvard Business School
- *“Actively managed mutual fund investing has all the earmarks of a random process. There is no evidence that funds that performed well in the past will continue to do so.”*
 - Eugene Fama, University of Chicago Graduate School of Business
- *“The bulk of evidence suggests that any supposedly superior stock picking investment strategy should be taken with a grain of salt. In the end it is likely that the margin of superiority that any professional manager can add is so slight that the statistician will not be able to detect it.”*¹⁰
 - *Solutions Manual for Investments*, Zvi Bodie, Alex Kane and Alan J. Marcus

Picking the right stocks at the right time is difficult even for experts. The best portfolios are built with low-cost, tax-efficient, index-based securities and focus on optimal asset allocation. In fact, studies show that asset allocation is *the* most important factor, rather than stock picking or market timing. Asset allocation is responsible for 77 – 93% of a portfolio’s total return.¹¹

Sharper ♦ Granite constructs and manages low cost, custom portfolios, optimized for both risk and return. Sharper ♦ Granite portfolios generate value beyond most actively managed mutual funds and stock and bond portfolios by excelling in four key areas.

1. Build portfolios with maximum, risk-adjusted performance

- Construct portfolios with the optimal combination of securities that maximize total risk-adjusted return.
- Emphasize sector index-based securities rather than individual stocks or mutual funds.

2. Minimize costs and taxes

- Minimize transaction costs.
- Use the lowest cost, most tax efficient securities available in a given asset category.
- Rebalance portfolios efficiently.

3. Customize portfolios around client-specific needs

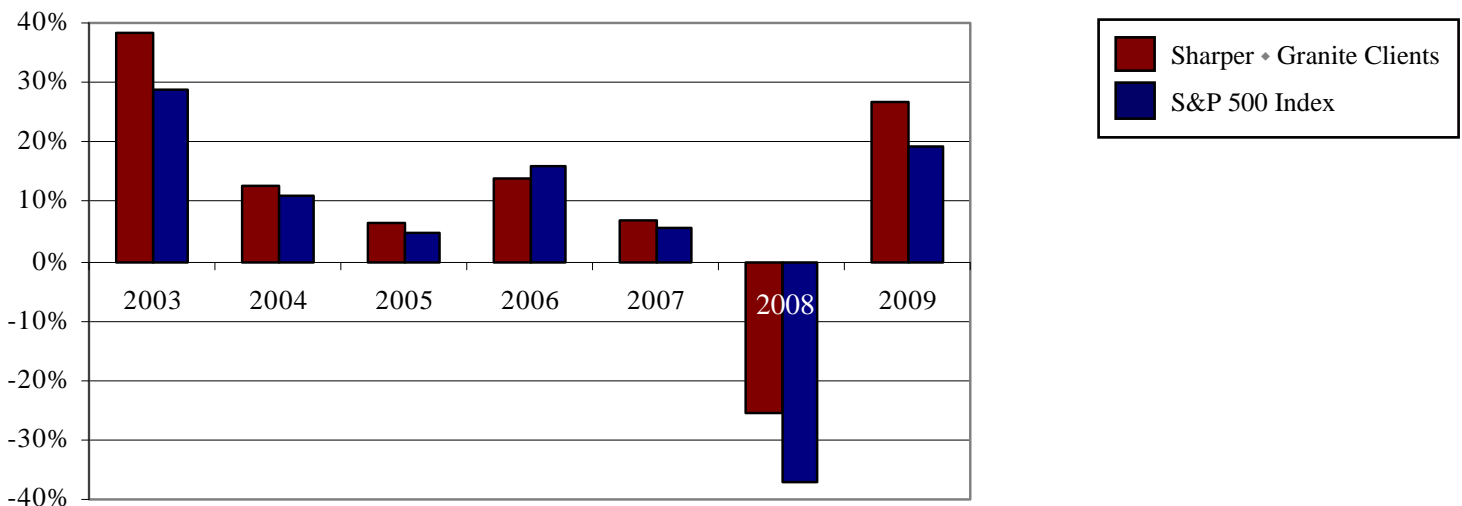
- Customize portfolios around client time horizon, risk profile, and life events.
- Build portfolios which *factor all client assets*, even those outside of Sharper ♦ Granite direct management. Total client net worth may consist of real estate, company stock and options, 401(k)’s, etc. Optimal portfolios are constructed to balance the risks and tendencies of these other assets.

4. Build lasting client relationships

- Accept compensation only from clients, never through trading activity or selling of particular products.
- Build long-term trust through competence, integrity, and reliability.

This philosophy has resulted in superior risk-adjusted performance for clients over the years. The following chart shows that Sharper ♦ Granite average client performance has beaten the S&P 500 Index on a risk-adjusted basis consistently in both up and down markets.

Sharper ♦ Granite Performance Vs. S&P 500 Index ¹²



While this philosophy differs from the strategy of “stock picking” (via brokers or mutual funds), it aligns with investment basics taught at the top business schools and with the current overall trend in investing. This philosophy is also consistent with the strategies that anchor major financial institutions like Blackrock and Vanguard Group.

Please contact us to receive a free copy of Sharper ♦ Granite’s “Optimal Portfolio Management” presentation and request a free portfolio review which examines your portfolio health in terms of asset allocation, risk, and risk-adjusted return.

Questions?
Contact us at:
questions@sharpergranite.com

Notes and Acknowledgements:

- Dollars are nominal and do not factor possible taxes. The historical stock market total return averaged 10.2% from 1946 – 2008.
- Morningstar Inc. as of October 18, 2001.
- Five-year period from 1997 – 2001. Lipper, Inc.
- Lipper Inc. reports 1.5% annual underperformance from 1993 - 2002. Vanguard Group: 3.0% annually from 1983 - 2002. *Wall Street Journal* study, “Stock Funds Just Don’t Measure Up”, October 5, 1999: 1.4% annually. University of Chicago study: 1.8% annually from 1961 – 1993, Mark Cahart. Blake, Elton and Gruber study: 1.6% annually from 1965 – 1984.
- From January 1, 1992 – December 1, 2002. Red Sharper ♦ Granite portfolios reflect expected model performance. Blue sector performance are defined by Sharper ♦ Granite database indexes which are comprised of common published indexes and index ETF’s for respective sectors. Green mutual funds are drawn from *Money Magazine*’s 100 largest mutual funds, January 1, 2005.
- Risk is defined as monthly standard deviation, σ , the maximum the security can be expected to deviate from its average return in 2 out of every 3 months.
- See “Optimal Portfolio Management”, Sharper ♦ Granite, and “Myths and Misconceptions about Indexing”, Vanguard Group, July, 2003.
- “On the Impossibility of Informationally Efficient Markets”, *American Economic Review*, Vol. 70, pp 393-408, 1980.
- Investment Gurus*, “An Interview with Merton Miller,” Peter Tanous, New York Institute of Finance, February 1997.
- Financial Markets*, Zvi Bodie, Alex Kane and Alan J. Marcus, Chapter 12, 1994 [seminal financial theory text].
- Vanguard Group, July, 2003 reports that 77% of performance can be explained by asset allocation; *Financial Analysts’ Journal*, Brinson, Hood and Beebower, June, 1991 reports 91%; Gary P. Brinson and Associates, 1986, reports 93.6% of performance can be explained by asset allocation.
- Global Investment Performance Standard (GIPS) Original Dietz Method used to calculate returns. Arithmetic average used for return measurement. Performance is net of fees and may include assets tracked for clients that lie outside Sharper ♦ Granite direct management. Such assets total less than 3% of total assets. All client portfolios weighted equally in calculation of average client performance. S&P 500 Index returns include dividends. Past performance does not guarantee future results. Normalization to similar risk as S&P 500 uses weighted average beta of all client portfolio assets, then normalizes to beta = 1.0 (S&P 500 Index beta) using the Securities Market Line (SML). The SML is constructed as a line on the beta-return chart between two points, A and B: A is the point representing “risk free” at beta = 0, return = 3 month return of the 90-day Treasury Bill rate on the last day of the quarter as posted in the *Wall Street Journal*. B is the point representing the “market return” at beta = 1, return = 3 month total return (including dividends) of the S&P 500 Index. Beta (asset) = covariance (asset monthly price %Δ vs. S&P 500 Index monthly price change) / variance (asset monthly price %Δ) using Yahoo! Finance historical price data. 2003 data begins 2Q03. 2009 data is through 3Q09.