

CHELSEA GLOBAL ADVISORS

**| Markets are Cyclical.
Knowledge is Cumulative. |**

Client Brochure
April 2015

INVESTMENT
MANAGEMENT
SERVICES

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A Solutions Firm Focused on Client Needs

Value Proposition

- › Exclusive focus on helping clients meet their investment goals
- › Senior, experienced, educated risk taker assigned to client coverage
- › U.S., European and Asian market expertise
- › Completely independent – no conflicts of interest
- › Cost effective alternative to larger, more traditional money managers

The Service

- › Initial and ongoing meetings to discuss and understand the client's investment goals, risk preferences and time horizon
- › Model portfolio recommendations with active management (asset class and sector tilts) and dynamic weights
- › Regular market updates, strategic and thematic research

Strategy to Build and Protect Real Wealth

- › Favour savings over consumption and collect risk premiums on offer
- › Minimize portfolio turnover and transaction costs
- › Minimize and defer tax consequences

Our Commitment to Clients

- › Set realistic portfolio return expectations
- › Present forecast and market expectations in terms of probabilities or ranges
- › Control exposure to various risk factors and avoid undue risk concentrations
- › Continually monitor risk, returns and market developments

Chelsea Global Advisor, LLC- Client Relationship

- › A client will have an Investment Advisor Agreement with Chelsea Global Advisors, LLC. The client will also have a separate agreement in place with a broker/custodian. Our Firm has an established relationship with a preferred broker/custodian. Clients may elect to retain or select their own broker/custodian.
- › Chelsea Global Advisors, LLC does not have access to any funds or securities in a client's account.
- › Your investment assets are held by an independent custodian.
- › All investment proceeds are exchanged directly between the client and the broker/custodian.
- › Clients may elect to withdraw available funds from their brokerage/custodian account at any time.
- › Investment management fees are deducted directly from a client's brokerage account on a periodic basis according to the fee schedule as detailed in the Investment Advisor Agreement.
- › Chelsea Global Advisors, LLC manages the assets in client accounts on a discretionary basis. Funds are invested into one or more of our Model Portfolios, based upon the client's asset allocation investment objectives and risk preferences.
- › Chelsea Global Advisors, LLC cannot move funds between Model Portfolios without the express permission of the client.
- › Cash accumulated in a portfolio from dividends, coupons or from sale proceeds can be reinvested in the portfolio, transferred to another portfolio or be held in a cash management account (Default Option) based solely on a client's instructions.
- › Clients have complete control and access to their account and have complete visibility into trades, positions, balances and performance at all times.
- › Transaction fees are paid (or are deducted from proceeds), by the client directly to the broker/custodian. Chelsea Global Advisors, LLC does not receive any pecuniary or other benefit from client transaction fees.

Model Portfolios

Chelsea Global Advisors, LLC offers five Model Portfolios. Investing in one, or a combination of model portfolios, is solely based upon the client's investment goals, risk preferences and time horizon. Chelsea Global Advisors, LLC assists clients to make the right portfolio selection based upon their own individual needs. The final portfolio selection decision is always made by the client.

Portfolio	Investment Objective	Risk Profile
Global Equity	Capital Appreciation - Provides a convenient way to get broad exposure across developed, including U.S., and emerging non-U.S. equity markets around the world.	Moderate Aggressive
Global Opportunities	Total Return - Seeks capital appreciation and income by investing in a wide range of global equity, fixed income and alternative securities.	Moderate Aggressive
Dynamic Balanced	Total Return - Seeks to provide both current income and long-term growth of capital by investing in a combination of U.S. based common stocks and fixed-income securities.	Conservative
Dynamic Income	Current Income - Seeks to provide current income by investing in primarily fixed income and preferred stock securities.	Moderate Conservative
Real Return	Total Return - Seeks to achieve real return (i.e. keeps pace with inflation) consisting of capital appreciation and current income.	Moderate Aggressive

- Clients may elect to peruse a more customized and bespoke portfolio choice option based upon their individual needs. Chelsea Global Advisors, LLC will work with the client to design and manage suitable portfolio choices.

Fee Schedule

Amount Under Management	Annual Percentage Fee	Transaction Fess Paid to CGA ¹
AUM up to \$500,000	1.25% or 125 basis points	Zero
AUM from \$500,001 to \$5,000,000	1.00% or 100 basis points	Zero
AUM over \$5,000,001	.75% or 75 basis points	Zero

Example 1:

Assets under management \$220,000. Annual fee = \$2,750 or $220,000 \times .0125$

Example 2:

Assets under management \$1,220,000. Annual fee = \$12,200 or $1,220,000 \times .01$

Example 3:

Assets under management \$5,220,000. Annual fee = \$39,150 or $5,220,000 \times .0075$

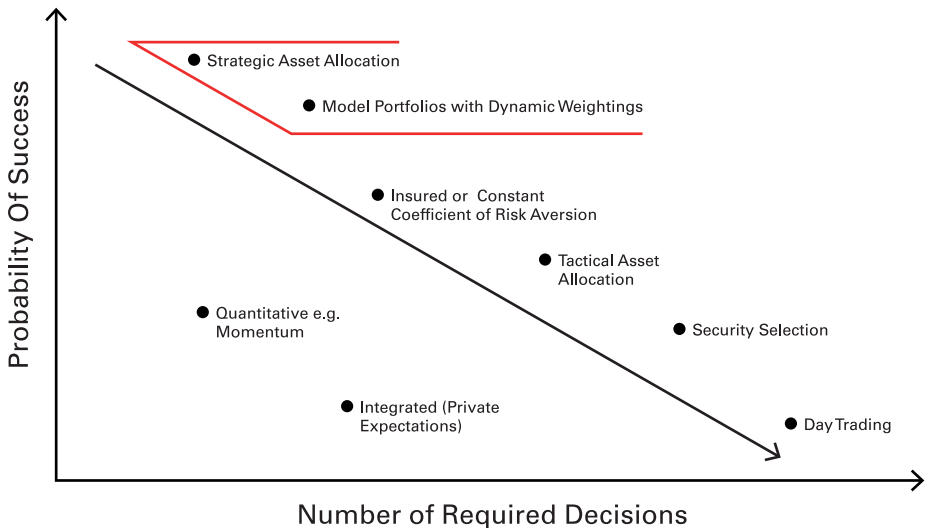
- Research suggests that low cost investment management services outperform higher cost alternatives. Higher costs can significantly depress a portfolio’s growth over long periods. Costs create an inevitable gap between what the markets return and what an investor actually earns. Keeping expenses down, managing tax consequences and avoiding frequent transaction fees can help narrow the gap.

1. CGA = Chelsea Global Advisors, LLC . All transaction fees are paid directly to the executing broker/custodian. Chelsea Global Advisors does not receive any compensation for client transactions. Please see the following page for a description of transaction fees. All fees paid to Chelsea Global Advisors , LLC for investment advisory services are separate and distinct from the fees and expenses charged by mutual funds and/or exchange-traded funds (ETFs) and paid to their sponsors.

Executing Broker and Custodian

- › Chelsea Global Advisors, LLC has selected Interactive Brokers (IB) to provide execution, clearing, custodial and reporting services for its investment management clients. Clients may also elect to retain or select their own broker/custodian.
- › Chelsea Global Advisors, LLC performed a due diligence analysis of six potential brokers before selecting Interactive Brokers . IB is registered with the Securities and Exchange Commission, 16 Self Regulatory Organizations or SROs and with 52 States and Territories. The Company, established in 1998, is a registered broker dealer (CRD#36418) and is regulated by FINRA's Boston District Office. Interactive Broker's Group is a publicly traded company on NASDAQ Symbol: IBKR.
- › Barron's Magazine voted Interactive Brokers the best online broker for 2014 for the third consecutive year based upon a combination of factors including range of offerings, customer service and all-in costs.
- › Interactive Brokers execution commissions rates are significantly below other brokers. Example: 100 shares of a U.S. Listed Equity bought or sold will cost \$1.00 at IB.
- › Interactive Brokers has, subject to change, a required minimum account balance of \$10,000. An activity fee, a maximum of \$6 per month, is charged to accounts where monthly commissions fall below the required minimum. The activity fee cannot exceed \$72 in one calendar year.
- › Chelsea Global Advisors, LLC performs ongoing due diligence reviews of Interactive Brokers to ensure its services continue to meet client needs and expectations.

Approaches to Managing Money



Reducing the number and frequency of required decisions increase the probability of overall success. For example, assume that the probability of making each investment decision correctly is 52%, meaning as an investor, you have some skill. It is clearly more difficult to be right across 20 decision points than it is to be across 10. That's why there are so few successful day traders, since day trading requires multiple decision points each day. Too many decision points may also lead to over trading, which leads to unnecessarily high transaction fees.

A Simple Yet Powerful Equation

$$\Delta S = \mu dt + \sigma dw$$

The change in a security's price, such as an equity or equity index, is the combination of a deterministic component, μ , and a random drift, or σ . Over long periods of time, the deterministic component tends to assert itself and dominate price formation. The random component, commonly called volatility or noise, usually governs the formation of short term price fluctuations.

Chelsea Global Advisors, LLC seeks to capture the market's natural drift by focusing on longer term value creation rather than on daily price movements. Our Firm does not chase returns. Our strategy is simple:

- › Harvest multiple sources of returns
- › Allocate risk, not dollars
- › Deploy multiple, low correlation strategies
- › Limit risk concentrations
- › Keep costs low

Market Drift: An Investor's Best Friend

“The market does not articulate its positive insights while negatives are front and centre. We appreciate that it is disconcerting to read the morning newspapers regarding global strife, corruption, inhumanity to man and nature and still have an optimistic outlook.”

Birinyi Associates

- › There is an ongoing 32 year bull market in high quality sovereign bonds. Interest rates are near zero or even negative in the G4 markets of the U.S., UK, Japan and the Euro zone
- › There has been a strong positive drift to equity risk returns during past 130 years
- › Total Factor Productivity or TFP, meaning the return on technology, capital and labour continues to improve in both developed and in emerging markets
- › ‘Bubbles’ that leave productive assets in place (e.g. Dot.com bubble of 1997-2000) are very different from buying frenzies of scarcity assets (e.g. Real Estate, Gold or Oil).

It is critical to know the long term return distribution profile of securities in your chosen asset class and avoid chasing returns.

Portfolio Construction

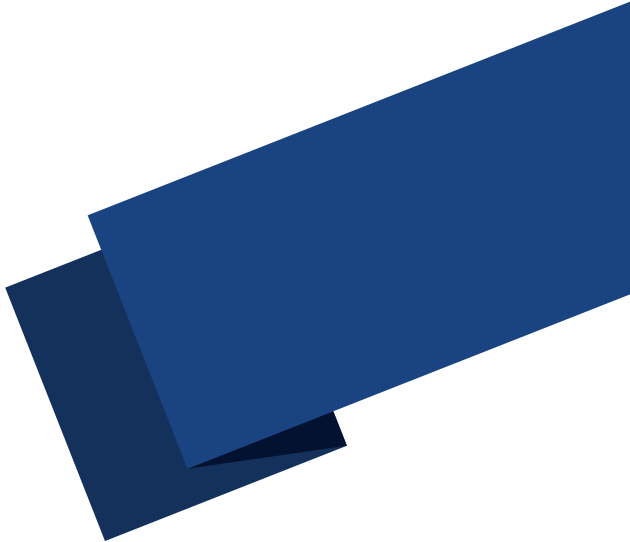
The Problem: $r = N[\mu, \Sigma]$

- r Portfolio return
- N Normalized Standard Distribution
- μ Mean return of assets
- Σ Covariance matrix of asset returns

The Solution: $\omega_i = 1/\delta * \Sigma^{-1} \mu$

- ω Weight assigned to asset i
- δ Risk aversion coefficient
- μ Mean return of asset i
- Σ^{-1} Inverse covariance matrix

The challenges to finding an optimal solution to the portfolio construction problem include parameter estimation, an unwieldy covariance matrix and the fact that the historical data, such as returns and variance, are backward looking and may not be indicative of the future evolution of prices. Also, the solution tends to be unstable, meaning that as the vectors of mean returns and covariance change though time, even slightly, the recommended weights can change drastically.



Allocation to Risky Assets

Assume a world with only one risky asset, the S&P 500 Index and one risk free security, a T-Bill. Consider the mean observable return of the S&P 500, μ , has been 10% and the standard deviation, or σ is 20%. Further assume that you have a risk aversion coefficient, δ , of 1.30, consistent with the average for most Americans.¹ How much of your overall portfolio should you allocate to the risky assets such as the S&P 500 Index?

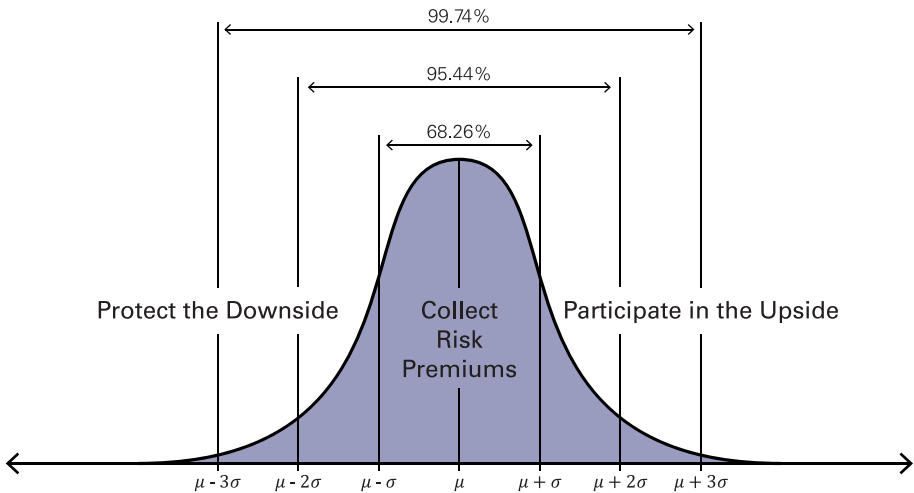
$$(\omega)\text{Weight}_{\text{S\&P Index}} = 1/1.30 * .10/.20 = 38\%$$

The 'optimal' portfolio would invest 38% of its funds to the S&P 500 Index and the balance or 62%, to the risk free T-Bill. How do you measure or know your risk coefficient? Ask yourself how much of your net worth are you willing to risk or lose in exchange for the prospect of earning higher returns before you would make an emotionally charged decision and abandon your financial plan?



1. Risk Aversion at the Country Level, Working Paper 2014-005B, Federal Reserve Bank of St. Louis Research Division. Lower risk aversion coefficients indicate more willingness to face uncertainty and drawdowns in return for the prospect of higher returns. Reducing the risk aversion coefficient from 1.3 to 1.0 would result in a higher allocation to the S&P 500 and a lower allocation to the T-Bill.

What Can Happen vs. What is Likely to Happen



The return profile of risky assets is not normally distributed. The 'tails' tend to be fatter than the above chart illustrates. That means investors should expect periodic out sized moves in prices. However, there are a number of strategies, such as portfolio diversification, that may help to dampen the impact stress events. Correlation and dispersion are essential tools in understanding overall portfolio performance.

Chelsea Global Advisors, LLC generally favours an asset allocation approach over security selection strategies. However, there are instances when market conditions may support security selection. Ingredients for a Stock Picker's Market include:

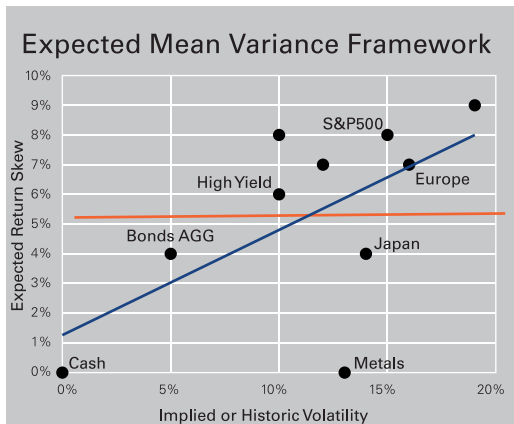
- High return dispersion between stocks
- High equity market volatility
- Good market liquidity
- Tepid macro economic environment e.g. Modest growth and inflation prospects
- Below average valuations

Skew Adjusted Mean Variance Framework

Data

Asset	Expected Volatility	Expected Return
Cash	0%	0%
S&P 500	15%	8%
Large Cap	16%	7%
Small Cap	19%	9%
Europe	12%	7%
Japan	14%	4%
Bonds AGG	5%	4%
High Yield	10%	6%
REITS	10%	8%
Metals	13%	0%

Results: QI > QII > QIII > QIV



Data Skew Example:

Bull Case	+7%
Base Case	+4%
Bear Case	-6%

Assume each case is equally weighted. The skew adjusted expected return of the portfolio equals 5%, which is simply the sum of the bull, base and bear cases. However, it is easy to flex each case and scenario weighting by using volatilities implied in risk reversals. e.g. $R_{25} = \sigma_{\text{put}_{25}} - \sigma_{\text{call}_{25}}$. Assume 25 Delta S&P 500 risk reversal is quoted at 5% - meaning implied put volatility exceeds implied call volatility for same expiry options by 5%. Match the option expiry to the investor's investment horizon. In this case, an investor may consider to weight or assign a higher probability to the bear case outcome by at least 5%. Key advantage to intuition and approach is the use of observable/ tradable variables (skew) to assign odds to scenarios. The key insight here is that the options market provides valuable information about the potential future path of a security's price.

The Arithmetic May Be Right, But The Math Is All Wrong

Case 1

Assume there are 10,000 money managers competing for your business. At least 300 of them will show 5 years of consecutive out performance, based purely on randomness, not skill: $10,000 \cdot .5^5 = 312$. Why overpay for skill, when both the empirical and academic evidence strongly suggest that it does not exist? Low investment management and transaction fees will enhance portfolio returns.

Case 2

80% of people day trading or speculating on short term market moves lose money. The algebraic equivalence of the above statement: $NW \cdot .2 \cdot T = NL \cdot .8 \cdot T$, where NW is the position size of the winning traders, NL is the position size of the losing traders and T is the overall number of traders. Rearranging the equation, we get $NW = 4 \cdot NL$. That is, the winning trader's position size is 4 times bigger than the losing traders. It's very hard to make money by overtrading against the larger institutions.

Case 3

Assume the market is fair and outcomes are random; Trader A starts out with \$50; Trader B starts out with \$500; The probability that B ends up with all of A's money after n tries is about 91% ($500/550$). If you bet \$1 at each try, then the contest should be over by $n = 25,000$ ($50 \cdot 500$) or much sooner.

Lessons Learned

Lesson 1: Markets Are Not Normally Distributed

Annual implied S&P 500 volatility is about ~ 13% , and is directly observable. That is a little less than 1% per day ($.13/\sqrt{252}$). A daily decline of 20% is approximately a 24x sigma(standard deviation) event. The theoretical probability of a 20% decline is on the order of once every $2*10^{76}$ years. Excel Check: = $1/(1-NORMSDIST(24))$. The empirical probability of that happening again is about .000132, since it happened once (1987) in the past 30 years ($1/(30*252)$).

Lesson 2: The Rules Can Change

The recent revaluation of the Swiss Franc by the Swiss National Bank was a 25x sigma (standard deviation) event and was completely contrary to the Central Bank's stated intention.

Lesson 3: Risk Preferences Can Change

Today's low interest rates may encourage undue use of leverage and promote excessive risk seeking behaviour. It only takes an adverse 10% market move to completely wipe out an investor's equity who is leveraged 10 to 1.

Lesson 4: Ignore the Experts

The biggest market surprises in 2014 were the collapse of the price of oil, the rally in sovereign government bond prices, the emergence of negative interest rates and the strength of the U.S. Dollar – all completely opposite to consensus expert forecasts.

Lesson 5: Investing And Emotions Do Not Mix Well

Bouts of market volatility may divert attention away from reason and judgment and may lead to sub optimal decisions. Remaining faithful to a well prepared investment plan is the best defence against over or under reacting to news and events.



Rights and Responsibilities of a Chelsea Global Advisor, LLC Client

- › You have the right to professional, courteous and consistent service.
- › You have the right to work with an experienced and trustworthy Financial Advisor.
- › You have the right to expect financial recommendations based upon your specific goals, risk preferences and investment time horizon.
- › You have the right to access your account information, including balances, positions and performance at all times.
- › You have the right to full and fair disclosure of all investment management fees, transaction costs and other charges at all times.
- › You have the right to expect your Financial Advisor to always put your interests first, with no conflicts of interest.
- › You have the right to expect your Financial Advisor to address and resolve any client complaints immediately.
- › You have the right to full confidentiality and protection of your personal and financial data.
- › You have the right to have all information presented in clear and understandable terms.
- › You have the right to open and frequent communication with your Financial Advisor.
- › You have the right to ask questions.
- › You have the responsibility to disclose current, and any changes to, your financial situation including goals, needs and constraints.
- › You have the responsibility to understand and acknowledge that investing involves risk and it is possible to lose money on any investment.
- › You have the responsibility to review account statements, transactions and balances to ensure your instructions are being followed and to alert Chelsea Global Advisors, LLC of any errors or omissions.
- › You have the responsibility to seek professional tax and accounting advice where appropriate.
- › You have the responsibility to sign and accept the Chelsea Global Advisors, LLC Investment Management Agreement and to execute a separate agreement between yourself and your executing broker/custodian.
- › You have the responsibility to engage in a consultative and collaborative financial planning and investment management process with your Financial Advisor.
- › You can terminate your relationship with Chelsea Global Advisors, LLC at any time.

Contact Us:

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The logo for Chelsea Global Advisors features the company name in white, uppercase, sans-serif font, stacked in three lines: "CHELSEA", "GLOBAL", and "ADVISORS". The text is centered within a dark blue rectangular background that has a 3D effect, appearing as if it's a slightly offset layer on top of another dark blue layer.

**CHELSEA
GLOBAL
ADVISORS**

The logo consists of a dark blue rectangular box with a 3D effect, appearing to be layered over another similar box. The text "CHELSEA GLOBAL ADVISORS" is written in white, bold, uppercase letters across the top box.

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www.chelseaglobaladvisors.com