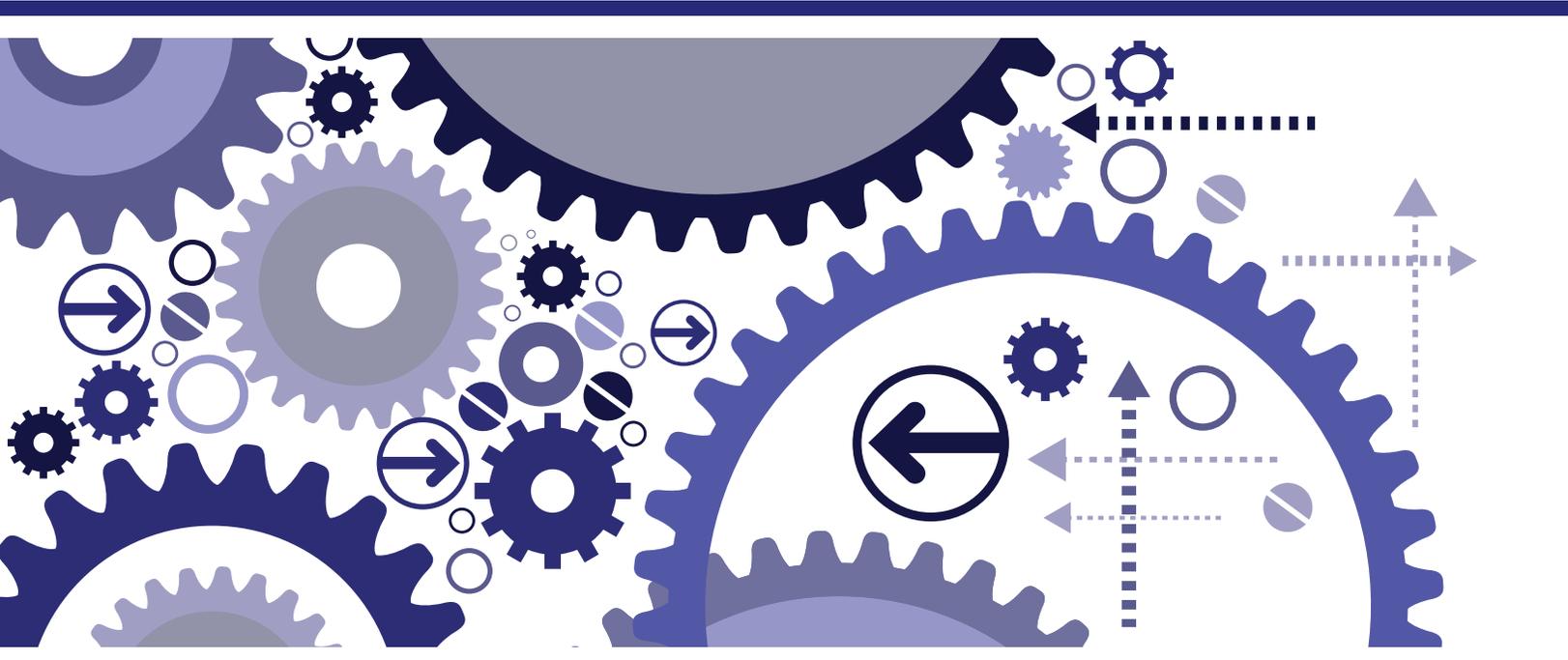# Applying behavioral science to build wealth

AthenaInvest takes a unique approach to investment management, using measurable and persistent behavioral factors to build innovative investment solutions.

That's the idea behind AthenaInvest.

The industry leader in Behavioral Portfolio Management, AthenaInvest, employs a patented investment process built on a deep academic foundation, using proprietary research developed and refined over 35 years of interaction with leading academics and institutional managers. This rigorous academic foundation remains central to AthenaInvest's asset management business today.

AthenaInvest was founded as an equity research firm by C. Thomas Howard, PhD to study the behavior of successful active equity managers. Building on the Nobel Prize-winning research of Daniel Kahneman, Dr. Howard is a pioneer in the application of behavioral finance.

We offer our separately managed account strategies on most platforms and sub-advise for investment companies and institutions.

AthenaInvest is privately owned and headquartered in Greenwood Village, Colorado.

Our Investment Philosophy

Behavioral finance research finds that, despite conventional wisdom, an overwhelming preponderance of investment decisions are driven by emotion.

Athena's Core Beliefs

1 Markets are dominated by emotional crowds.
Short-term market movements rarely contain useful information. Overconfident buying and panic selling drive prices.

2 Behavioral research reveals unique opportunities.
Behavioral price distortions in the market are the norm rather than the exception. Active management can take advantage of these opportunities.

3 In large part, emotions determine investor success.
Mastering one's emotions and following a sound financial plan can dramatically improve the chances of avoiding common investor mistakes.

AthenaInvest pioneered a formalized framework to apply behavioral finance principles, known as **Behavioral Portfolio Management** (BPM). Through BPM, which is geared toward building long-term wealth, we meld the academic rigor of statistical behavioral analysis with real-world investment experience.
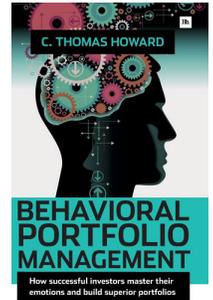
C. Thomas Howard, PhD
CEO, Director of Research

Tom is a Professor Emeritus at the Reiman School of Finance, Daniels College of Business, University of Denver, where he has taught courses and published articles for more than 30 years in the areas of investment management and international finance.

His book, *Behavioral Portfolio Management*, is an insightful treatise on the flaws inherent in modern portfolio theory and the opportunities presented by emotion-driven behaviors of investors. As a thought leader in Behavioral Finance, Tom has spoken at national industry conferences and been featured in industry publications including *Forbes*, *Financial Times* and *Pension & Investments Europe*.

INVESTMENT CLASSIFICATION
AND TRACKING SYSTEM
- US 7,734,526
- Singapore 150371
- Taiwan 200828170

INVESTMENT CLASSIFICATION
AND TRACKING SYSTEM
USING DIAMOND RATINGS
- US 8,352,347

STRATEGY MARKET BAROMETER
- US 8,694,406
- Singapore 184692

Our Behavioral Research

AthenaInvest's portfolio-building process is informed by the company's proprietary, patented database, comprising comprehensive fund and stock data going back to 1997. Free of survivor bias, this robust database of managers, holdings and securities allows us to conduct broad investment research on behavioral factors using large data sets over long time horizons.

The Data (March 1997 - March 2016)

70,973	Mutual Funds & ETFs
161,928	Global Securities
159,571,658	Portfolio Holdings

The Results

We have translated this large data set into useful, actionable investment information. In fact, AthenaInvest has been granted U.S. patents for its unique behavioral research outcomes, including:

- **Active Management Categorization** based on stated investment strategy
- **Stock and Fund Ratings** based on investment manager strategy, consistency and conviction
- **Tactical Market Barometers** based on investor relative strategy preferences

Every investment strategy we develop must have a foundation in the academic literature and pass statistical and economic testing using our database.
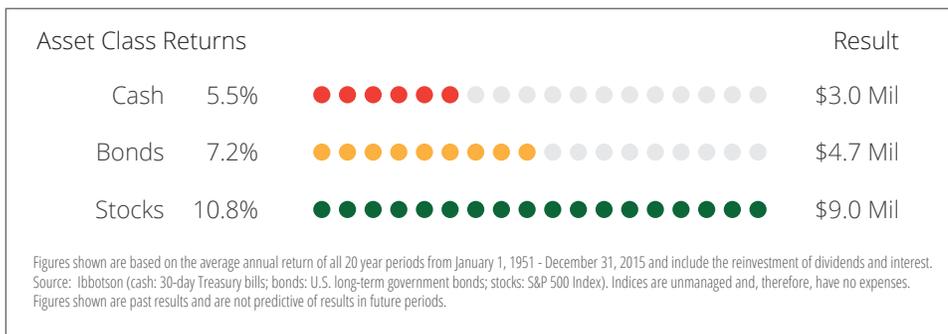
Our Planning Approach

While investment management is important, the foundation of successful investing is avoiding behaviors that can sabotage a well-developed plan. It is critical to use needs-based planning to separate short-term needs from longer-horizon growth needs. This helps minimize emotional reactions to market declines.

Expected Returns

We believe that investing in the asset class with the highest expected return for the longest time possible produces the best investment results. Consider the following:

HYPOTHETICAL GROWTH OF $1 MILLION OVER 20 YEARS

Asset Class Returns		Result
Cash	5.5%	$3.0 Mil
Bonds	7.2%	$4.7 Mil
Stocks	10.8%	$9.0 Mil

Figures shown are based on the average annual return of all 20 year periods from January 1, 1951 - December 31, 2015 and include the reinvestment of dividends and interest. Source: Ibbotson (cash: 30-day Treasury bills; bonds: U.S. long-term government bonds; stocks: S&P 500 Index). Indices are unmanaged and, therefore, have no expenses. Figures shown are past results and are not predictive of results in future periods.

Active Management

In addition, we believe active equity management can add considerable value. A growing number of academic studies confirm excess returns of 4% - 6% annually from truly active management:

- **Active Managers Deliver Alpha if they Remain Truly Active**
  Amihud and Goyenko, 2008, New York University

- **High Conviction Ideas from the Best Managers Deliver Superior Returns**
  Cohen, Polk, and Silli, 2009, Harvard University

- **Active Managers Have Skill**
  Howard, 2015, University of Denver

Athena Managed Accounts

Athena's core investment strategies can be accessed independently
or as a diversified behavioral equity portfolio.

PORTFOLIO	INCEPTION	INVESTMENT STRATEGY
SPECIALIZED EQUITY PORTFOLIOS		
**Athena Pure Valuation	Profitability** *(Long-term growth)*	7/1/2002	A concentrated equity portfolio managed with a unique combination of traditional value and behavioral approaches
Athena Dividend Income Equity *(Growth & Income)*	10/1/2010	Invests in high dividend-paying equities selected based on equity manager conviction
Athena Global Tactical ETFs *(Long-term growth)*	9/1/2010	Designed to invest in the right market at the right time utilizing broad market ETFs based on investor preference
BLENDED EQUITY SOLUTION PORTFOLIOS		
Athena Managed Equity *(Long-term growth)*	10/1/2011	A combination of the three strategies above to provide a diverse behavioral equity portfolio

Strategic Partners

Industry leaders are recognizing the potential of Behavioral Portfolio Management. Princeton Fund Advisors and ICON Advisers each have partnered with AthenaInvest to offer a mutual fund and fund-strategist portfolios, respectively all using Athena's patented behavioral research.

Recognized Performance

Athena portfolios have been recognized by multiple publications and rankings, including *International Wealth & Finance, Morningstar*, *PSN* and *Barrons*.

Athena Pure Valuation | Profitability
- #1 Performing Small Value SMA for 2013: Morningstar Advisor[1]
- Barrons Separate Account Winner: Q1 and Q2 2013[2]
- PSN Top Guns: 2010, 2011, 2012, 2013, 2014, 2016[3]

Athena Dividend Income Equity
- PSN Top Guns: 2014, 2016[3]

Athena Global Tactical ETFs
- #1 Tactical Equity Managed ETF Portfolio for 5 Year Returns as of 12/31/2016: Morningstar Advisor[4]
- PSN Top Guns: 2013, 2014, 2015, 2016[3]

"Everyone has the brainpower to make money in stocks. Not everyone has the stomach."

- Peter Lynch

About Athena

AthenaInvest's innovative investment research process, *Behavioral Portfolio Management*, uses measurable and persistent behavioral factors to build innovative investment solutions focusing on active equity management for long-term capital growth. With a focus on behavioral factors, Athena has pioneered a unique and systematic way to view asset allocation, investment selection, and tactical management.

For more information on Athena portfolios, consult your financial professional.

ATHENAINVEST™
(877) 430-5675
www.athenainvest.com
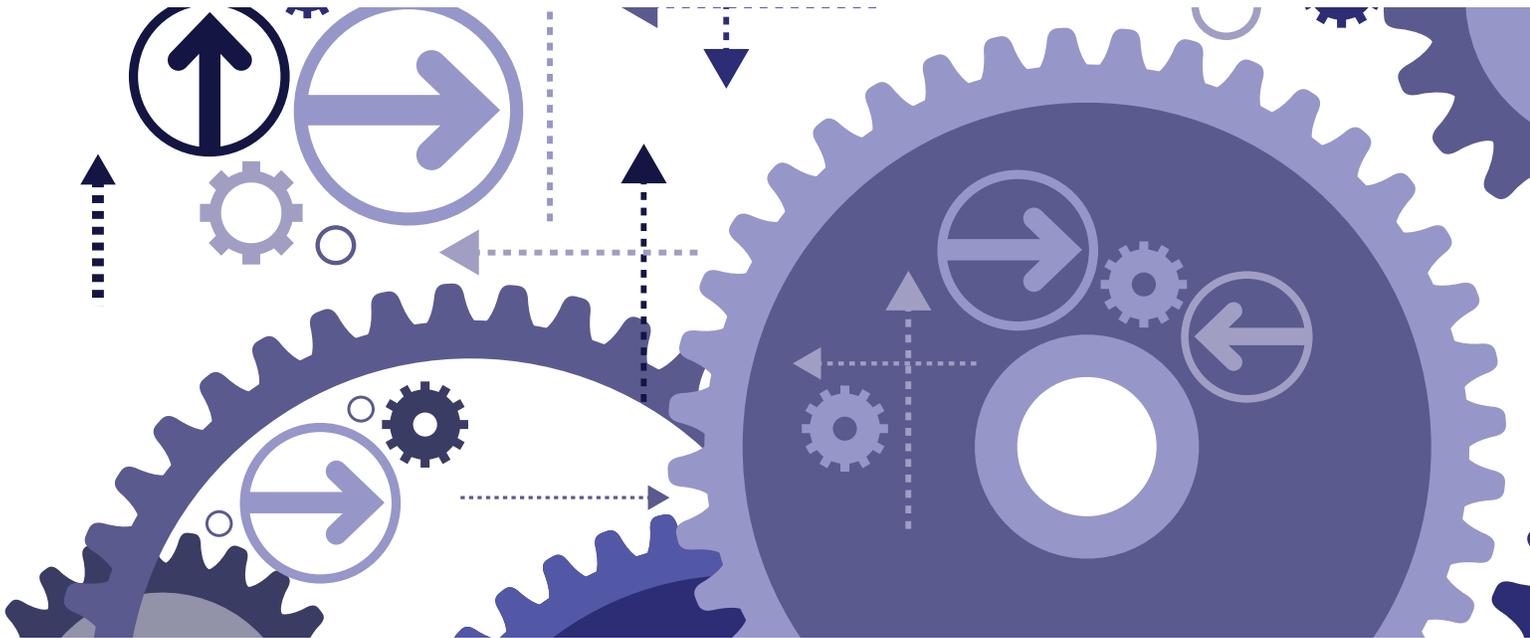
PAST PERFORMANCE DOES NOT GUARANTEE OR INDICATE FUTURE RESULTS