The Symphony Fund – "Return Driver" based investing

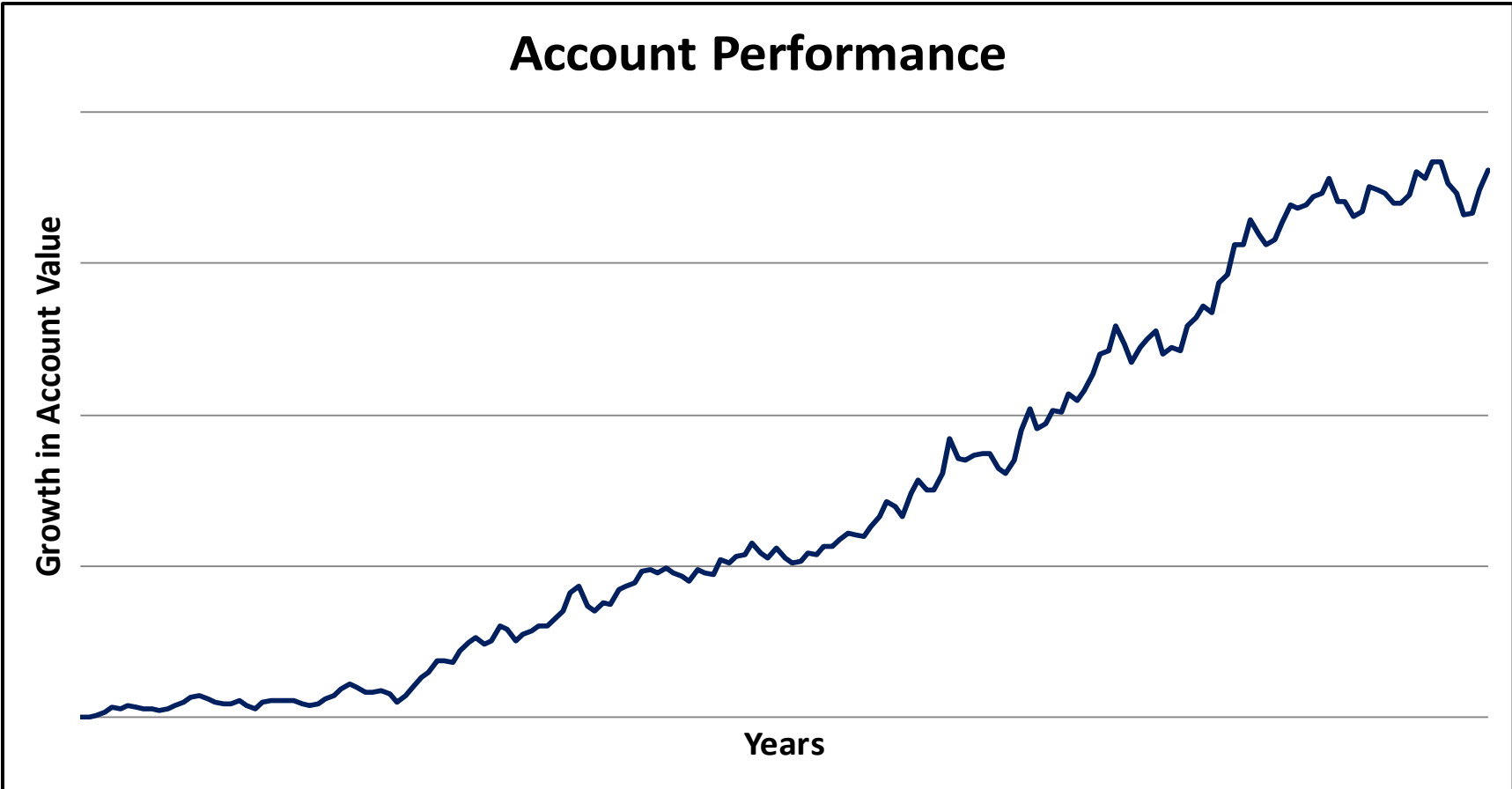*"For **every action**, there is **an equal and opposite reaction"***

Every market has a reason for behaving the way it does hence a "return driver" can be identified
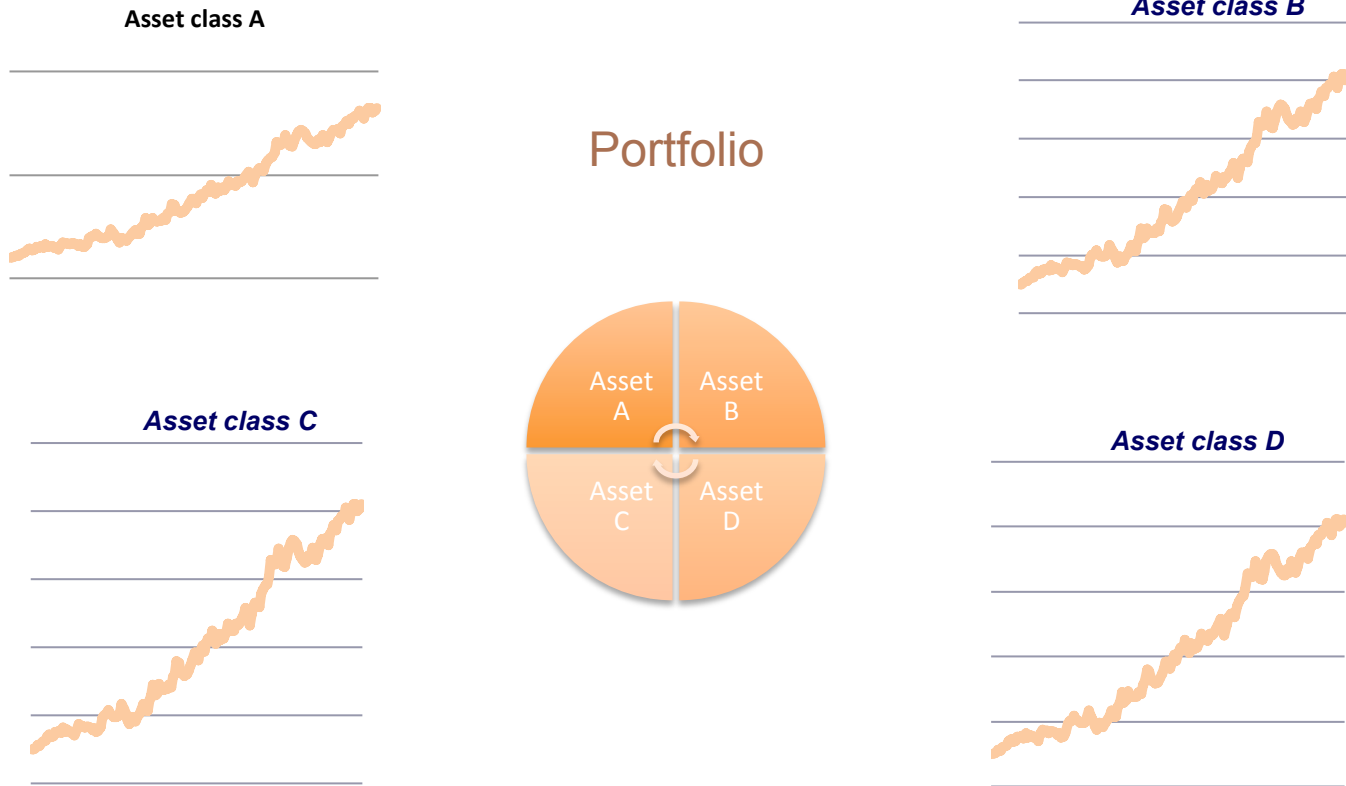
What do clients want? Predictable, consistent returns

Account Performance

Growth in Account Value

Years

Common mistake: assuming the best way to achieve this objective is by selecting a variety of smooth equity curves and "diversifying" by **asset class**

Asset class A

Asset class B

Portfolio

Asset class C

| Asset A | Asset B |
| Asset C | Asset D |

Asset class D

Asset class diversification = non-correlation is proving to be elusive

Correlation between S&P 500 and other assets
2003-2007

ASSET CLASS	CORRELATION WITH S&P 500
Developed Market Intl. Stocks	0.97
Emerging Market Stocks	0.74
Frontier Market Stocks	0.12
20-Year U.S. Treasury Bonds	-0.09
Inv. Grade U.S. Corporate Bonds	0.17
Real Estate	0.52
Commodities	-0.11
Hedge Funds	0.67
Private Equity	0.66

Source: Center for Applied Research at State Street

Correlation between S&P 500 and other assets
2008-2012

ASSET CLASS	CORRELATION WITH S&P 500
Developed Market Intl. Stocks	0.98
Emerging Market Stocks	0.88
Frontier Market Stocks	0.82
20-Year U.S. Treasury Bonds	-0.63
Inv. Grade U.S. Corporate Bonds	0.06
Real Estate	0.88
Commodities	0.67
Hedge Funds	0.85
Private Equity	0.85

Source: Center for Applied Research at State Street

Dangers of the asset class approach: **Large drawdowns / losses** can occur when **asset classes** become highly correlated due to common event risk
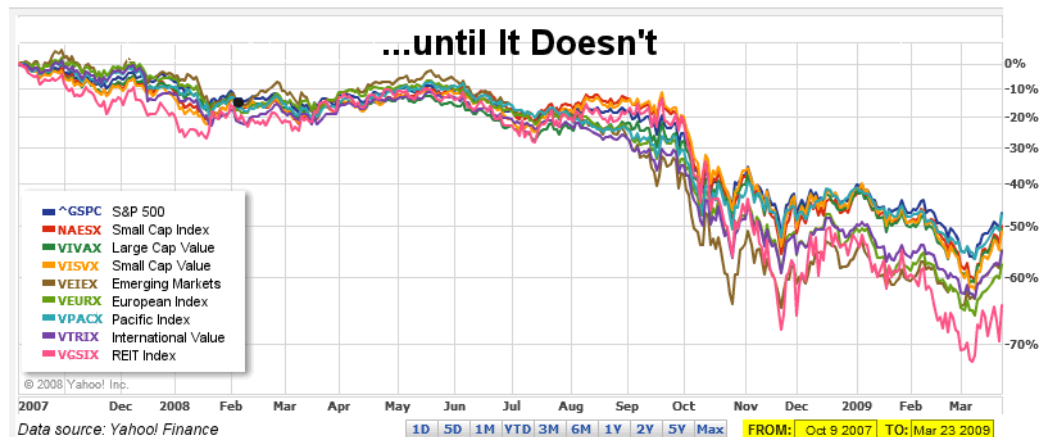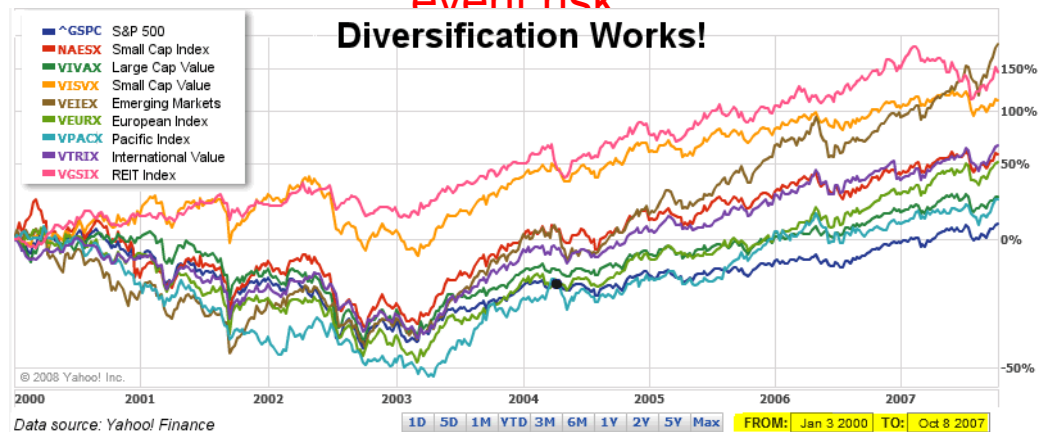
Conventional portfolios are **constrained** by the use of asset classes

- Modern Portfolio Theory / Efficient Frontier
- Mean-Variance Modeling
- Markowitz Modeling
- 60/40 Stock & Bonds
- Risk Parity

Drawdowns are the biggest impediment to long-term gains and are a **true measure of risk**

% Drawdown	% return required to recover
10%	11.11%
20%	25%
30%	42.85%
40%	66.66%
50%	100%
60%	150%
70%	233%
80%	400%
90%	900%
100%	You're broke!

Defining the "ideal client account": a high return / risk ratio....i.e. annual returns that are in line with the worst peak-to-trough drawdown

Account Performance

Growth in Account Value

Years
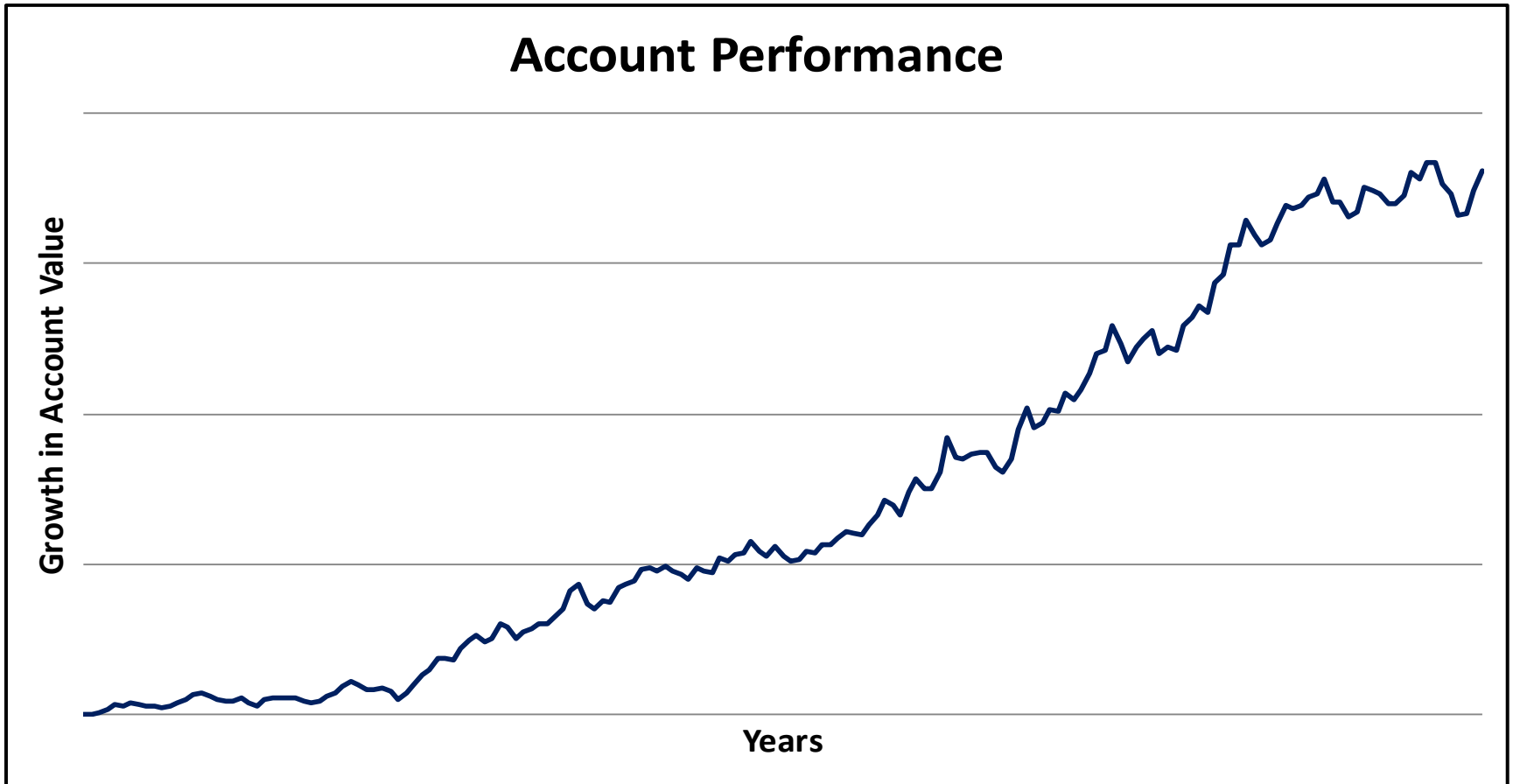
Stocks have a poor risk / return ratio (considering maximum loss of >80% versus nominal average annual return of 5% since 1900)

The Ten Largest Stock Market[1] Drawdowns Between January 1926 and December 2012

A stock market drawdown encompasses the complete cycle of market decline (from peak to trough) and subsequent recovery (from trough to peak).

		Decline From Peak[3]	Return Required to Recovery[4]	Market Peak	Market Trough	Market Recovery	Decline In Months	Recovery In Months	Drawdown Duration In Months
	1	83.66%	511.95%	Aug 1929	Jun 1932	Feb 1945	34	152	186
Recent[2]	2	55.32%	123.79%	Oct 2007	Mar 2009	Aug 2012	17	42	59
	3	44.71%	80.87%	Aug 2000	Sep 2002	Oct 2006	25	49	74
	4	42.60%	74.22%	Dec 1972	Sep 1974	Jun 1976	21	21	42
	5	29.58%	42.00%	Aug 1987	Nov 1987	May 1989	3	18	21
	6	29.15%	41.15%	Nov 1968	Jun 1970	Mar 1971	19	9	28
	7	22.26%	28.63%	Dec 1961	Jun 1962	Apr 1963	6	10	16
	8	21.83%	27.93%	May 1946	Nov 1946	Oct 1949	6	35	41
	9	16.49%	19.75%	Nov 1980	Jul 1982	Oct 1982	20	3	23
	10	15.73%	18.67%	Jan 1966	Sep 1966	Mar 1967	8	6	14
	Average	36.13%	96.90%				16	35	50

Source: Towneley Capital Management – 10 Worst drawdowns for stocks

Bonds also have a low return / risk ratio

10yr US Treasury – worst DDs	Year
-16%	1980
-14%	1987
-12%	2009
-12%	1994
-10%	2003
-10%	1979
-9%	1981
-9%	1999
-8%	1984
-8%	1983
Average: -11%	

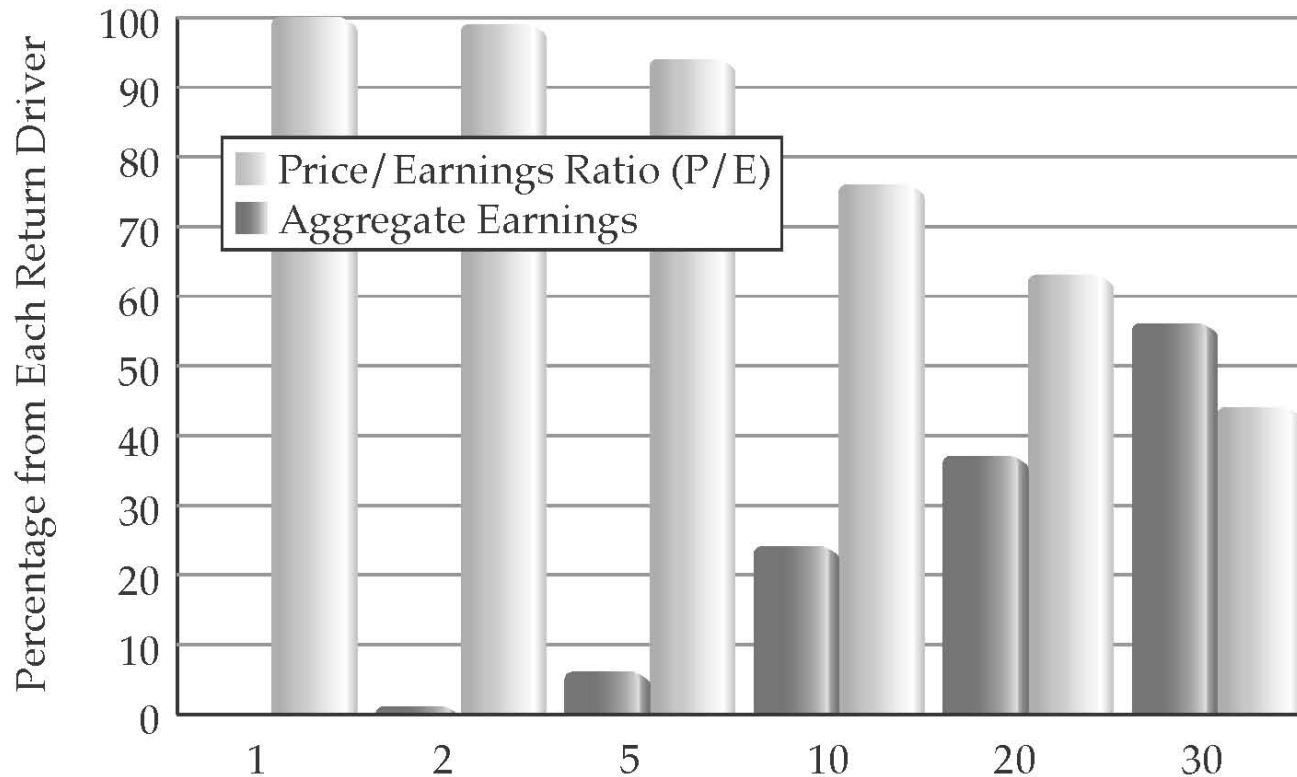Introducing Symphony Fund's "return driver" based investment philosophy

Definition:

A "return driver" is the primary underlying condition that drives the price of a market.
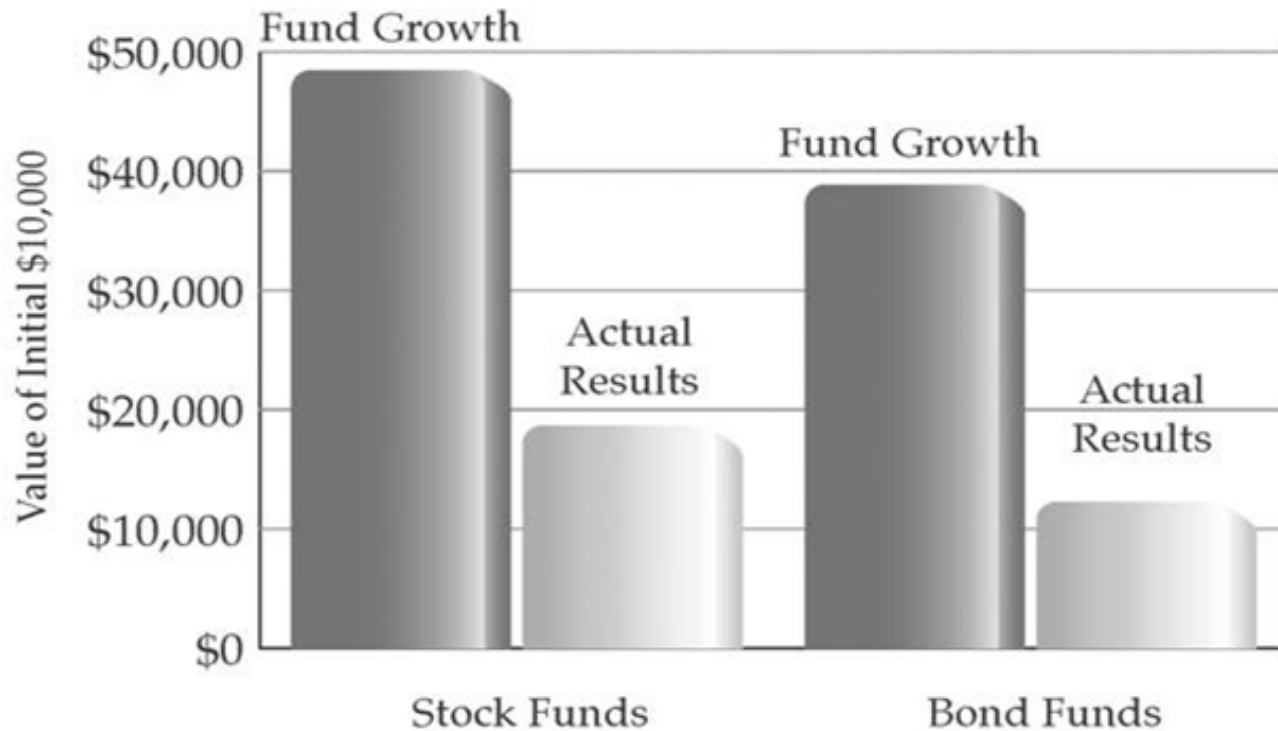
Identifying return drivers
Example 1: Corporate Earnings Growth and Sentiment
are Stock Market **Return Drivers** over different periods of time

Identifying return drivers:
Investors do the opposite of what they should do, under-performing the very funds they invest in

Example return-driver based strategy: Investors consistently mis-time the markets so we follow leveraged ETF money flows and do the opposite what they do, buying when they sell (when ETFs are sold heavily)
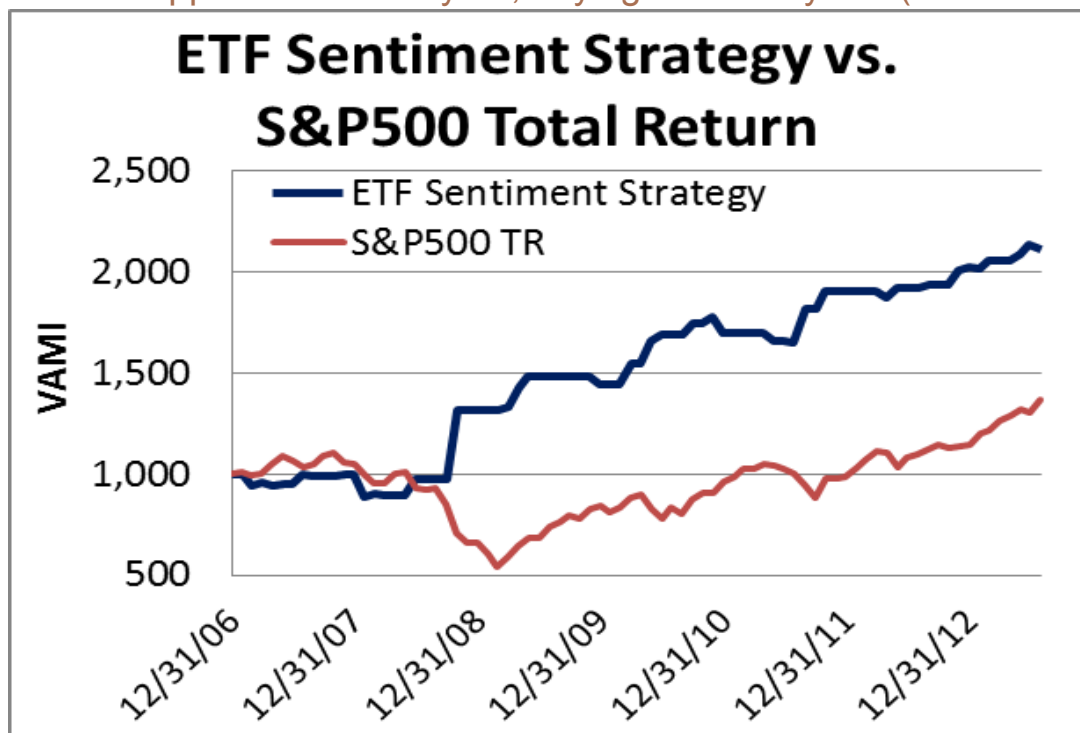
ETF Sentiment Strategy vs. S&P500 Total Return

	ETF	S&P500
Annualized Return	12.01%	4.90%
Annualized Volatility	16.74%	17.26%
Maximum Drawdown	11%	51%
Time in Market	22%	100%

Correlation of Returns:	
ETF Sentiment & S&P 500	
2007-2008	-0.61
2009-2013	-0.01
Entire Period	-0.32

	ETF	S&P500
Annualized Return	12.01%	4.90%
Annualized Volatility	16.74%	17.26%
Maximum Drawdown	11%	51%
Time in Market	22%	100%

Impressive returns of this <u>one</u> single strategy may lead some funds to design their whole strategy around one such return driver.

Tempting…..but NOT ROBUST

Identifying return drivers:
Example 2: Certain commodities, in this case orange juice, sometimes trade near their marginal cost of production. Positions accumulated near the marginal cost of production. Hurricanes subsequently wiped out crops, forcing price upwards

Orange Juice
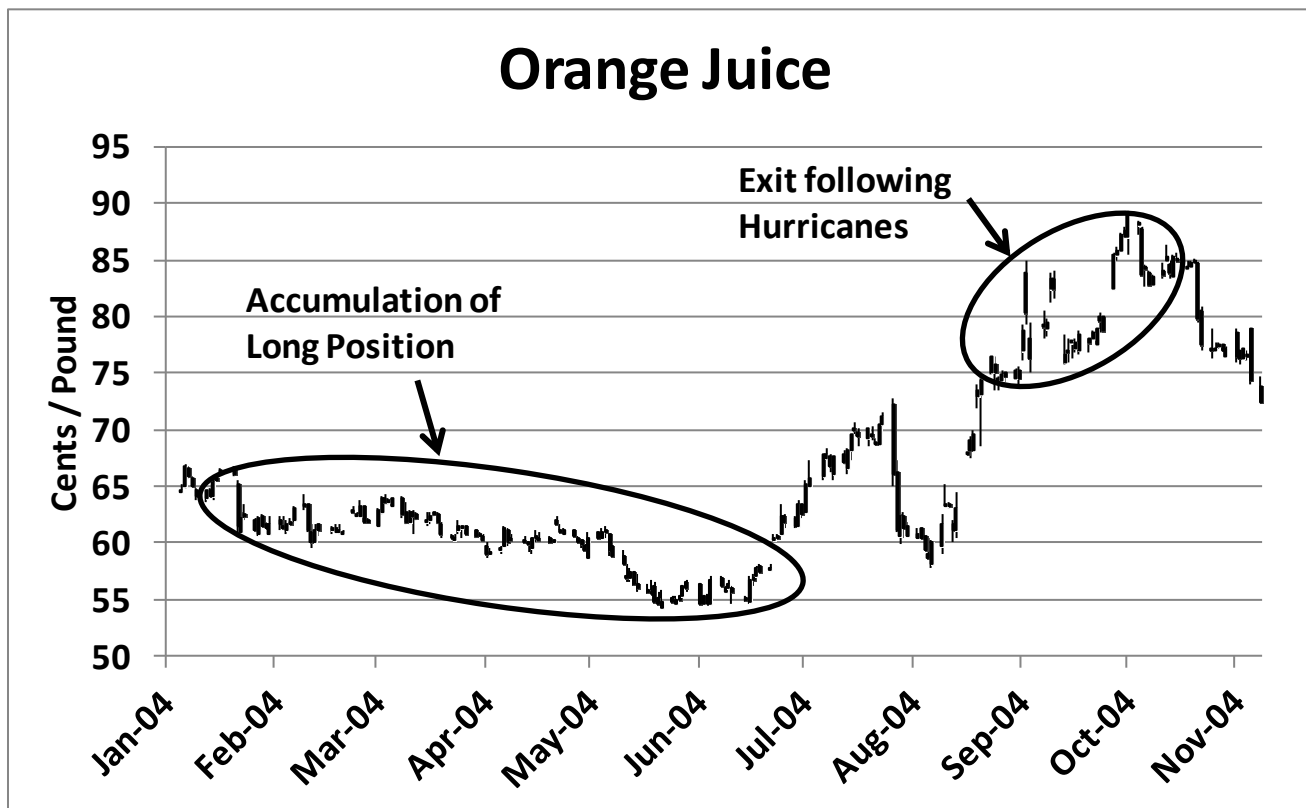
The Symphony Fund

Example 3: A strategy employed by Brandywine's founder in the 1980s was to look at market reactions following report releases. These event based strategies trade financial and agricultural markets following the release of potentially market-moving reports. The observation made by Mr. Dever in the 1980s, that still applies today, is that quite often the data released in a government report does not have the expected effect on the resultant price action in affected markets. It is this divergence that lies at the heart of these trading strategies.

FT6000 Series Composite Tested Performance
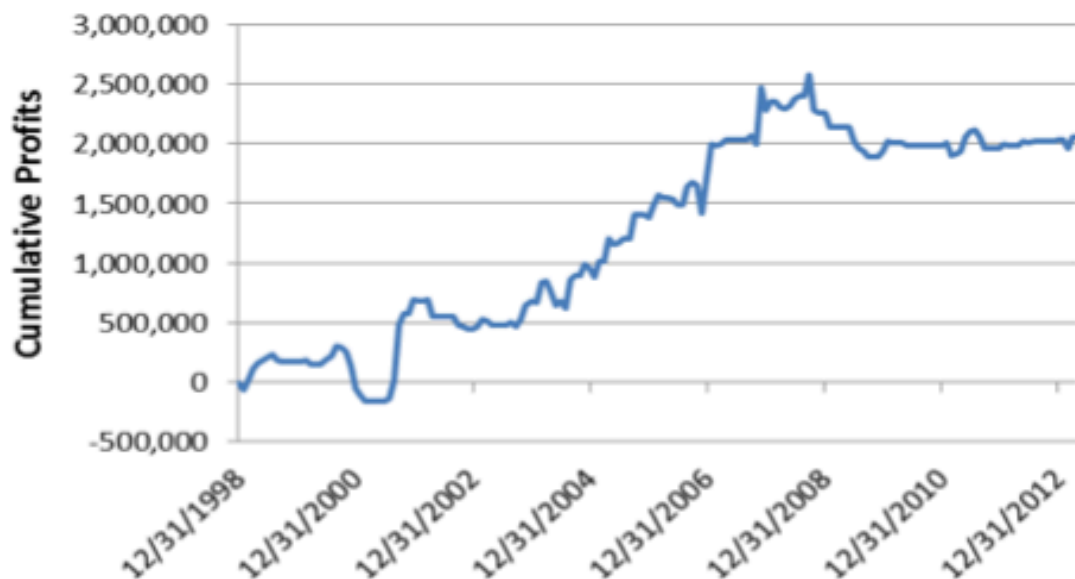
Characteristics	
Markets Traded	Fin. & Coms.
% Winning Trades	64%
Avg. Trade Lengths:	
All	33
Winners	33
Losers	32
Trades/Market/Year	1.1
Time in Market	13%
Correlations:	
BTOP 50	0.00
S&P 500	0.06

How is the Symphony Fund different from most CTAs / Managed Futures fund

Many CTAs add real value in a portfolio due to their low / negative correlation to stocks HOWEVER most employ trend-following strategies which, on a stand-alone basis, give returns that are **LUMPY** and **INCONSISTENT**
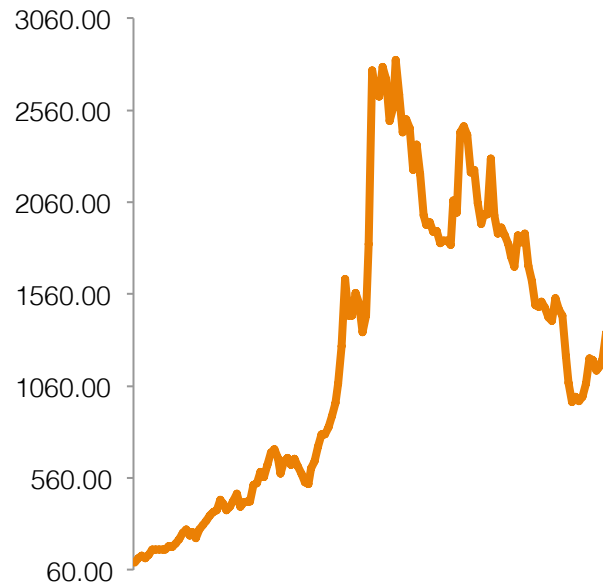
**Trend-following is just one 1 out of 40+ "return drivers"
in the Symphony portfolio but the fund maintains the same low
correlation to stocks**

The Symphony Fund – Investment process

Identify

Identify "Return Driver"

Test

Design a strategy that captures this and test rigorously

Validate

Is it likely to produce a robust / repeatable return in the future?

Implement

Combine multiple uncorrelated "return driver" based strategies to form a diversified portfolio

Then apply each trading strategy to ALL relevant markets
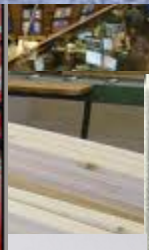
True Diversification

"The sum of all parts is greater than the individual"

Although profitable over the long-term, many of these strategies are individually "ugly" however, smooth predictable returns CAN be achieved in the fund by combining lots of these uncorrelated return streams

Process example:
One sample value strategy applied on commodities….profitable in the long-term but individually unappealing
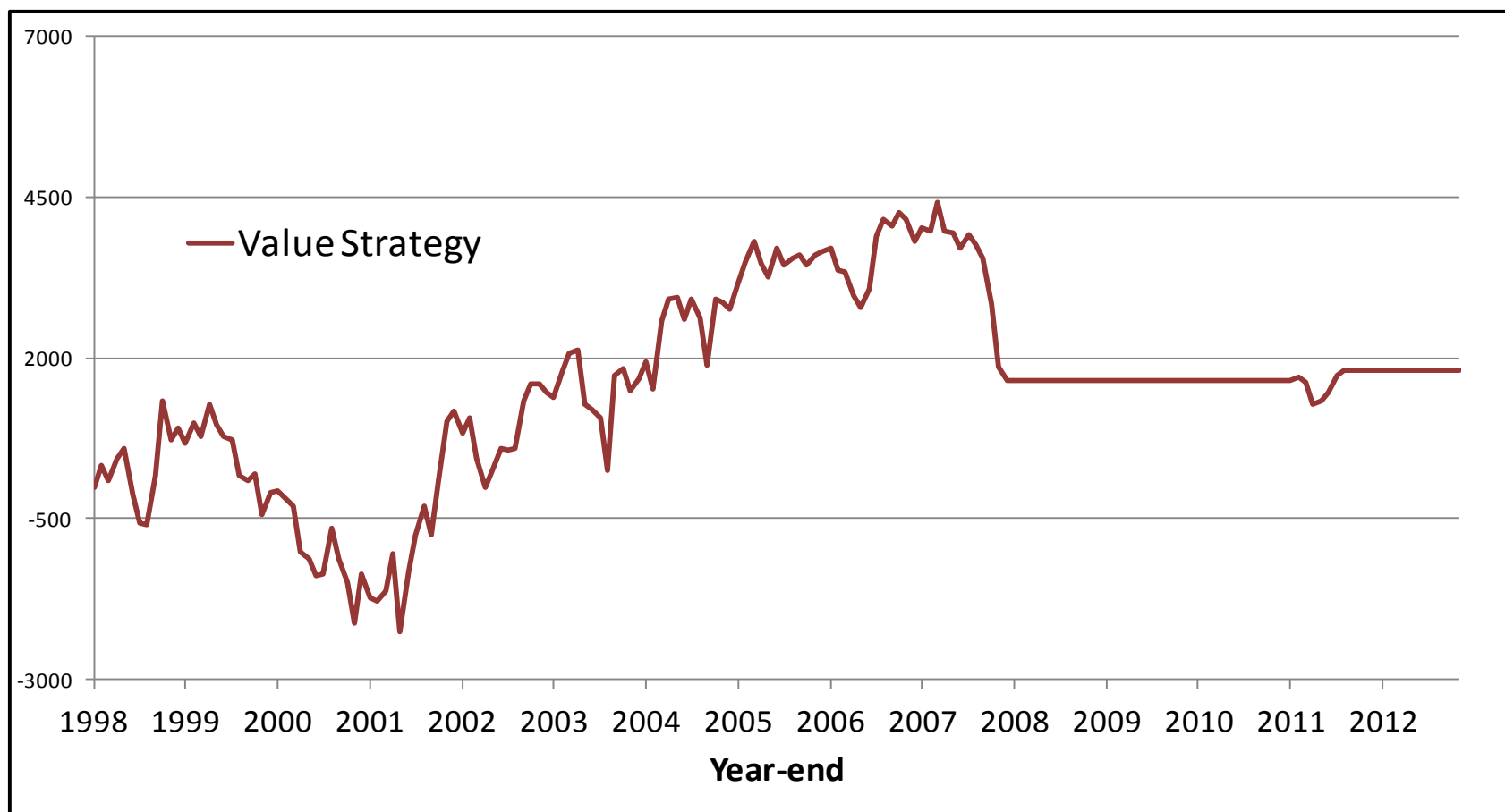
Step 2:
Add complementary strategy

Combined performance shows some improvement….
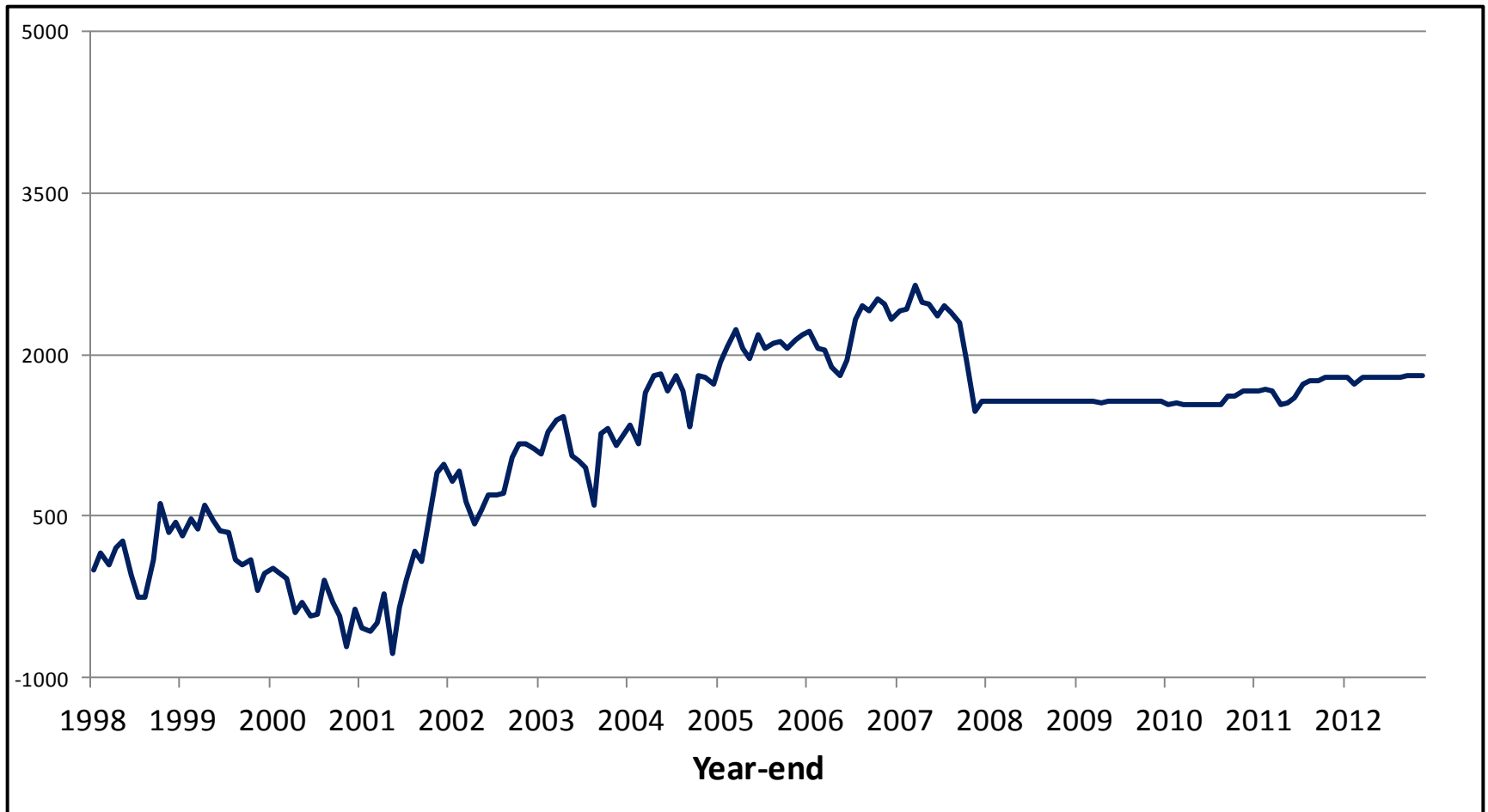
i.e. Same performance but visible risk reduction…
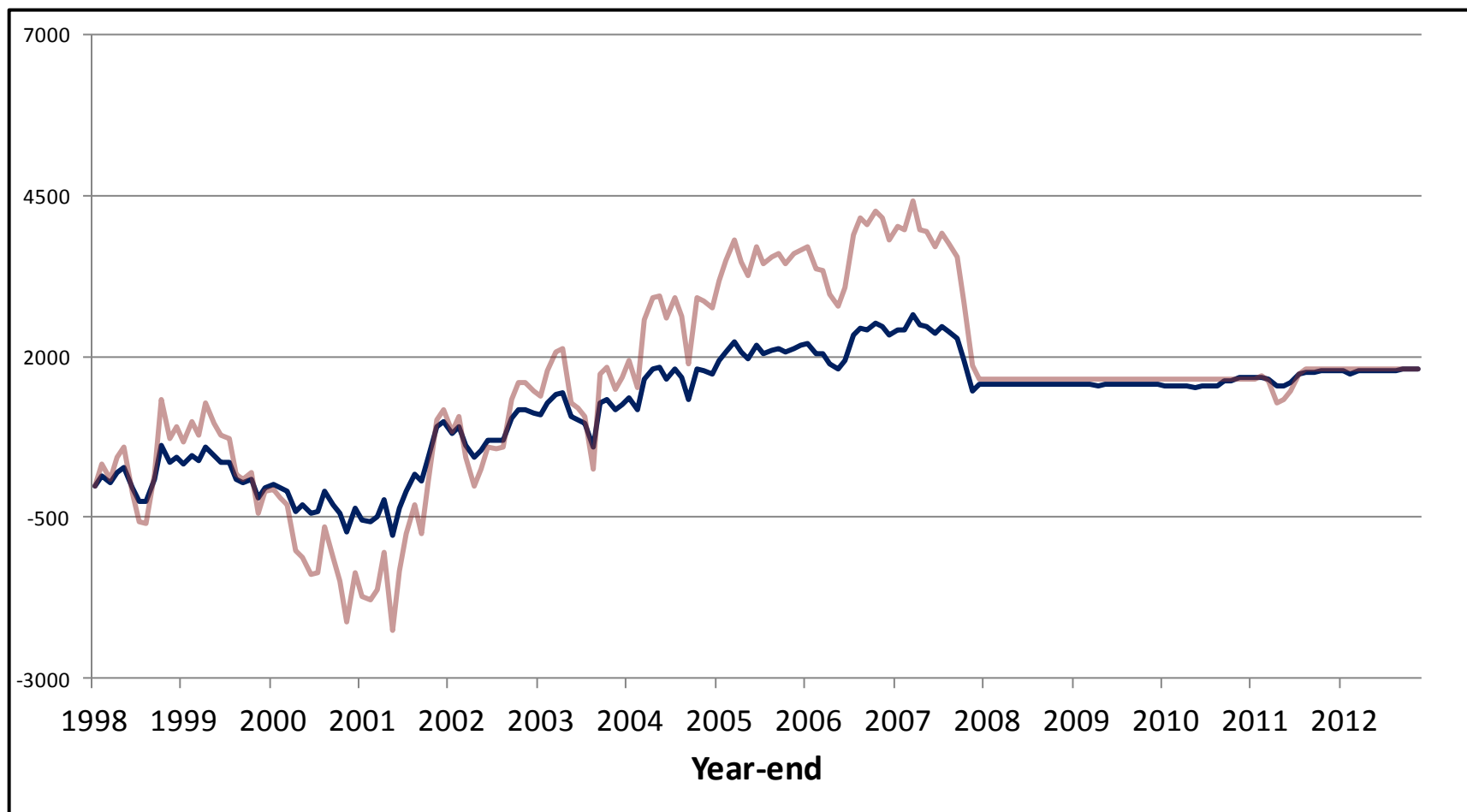
Combine more strategies & diversify further
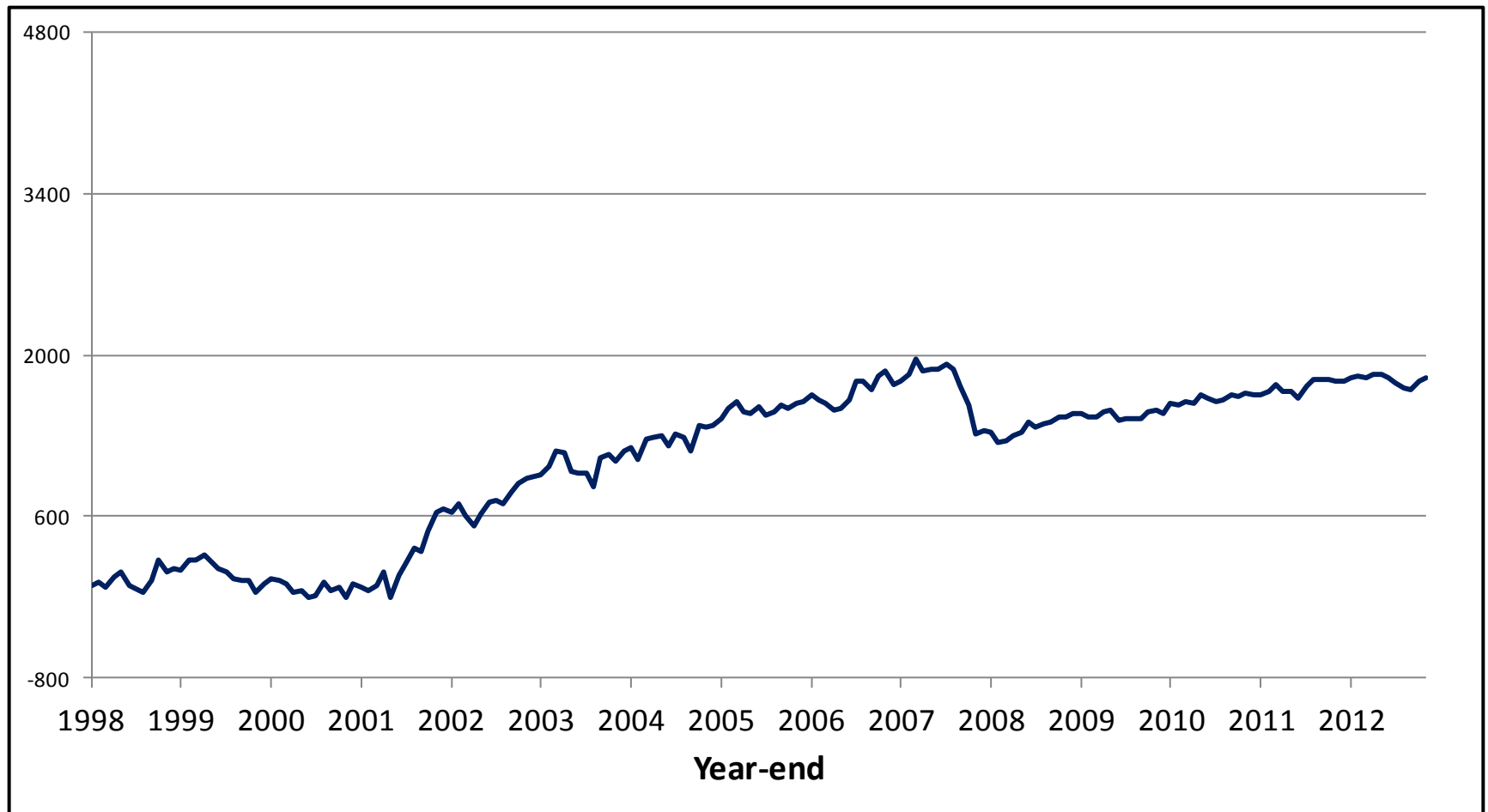
Repeat process…
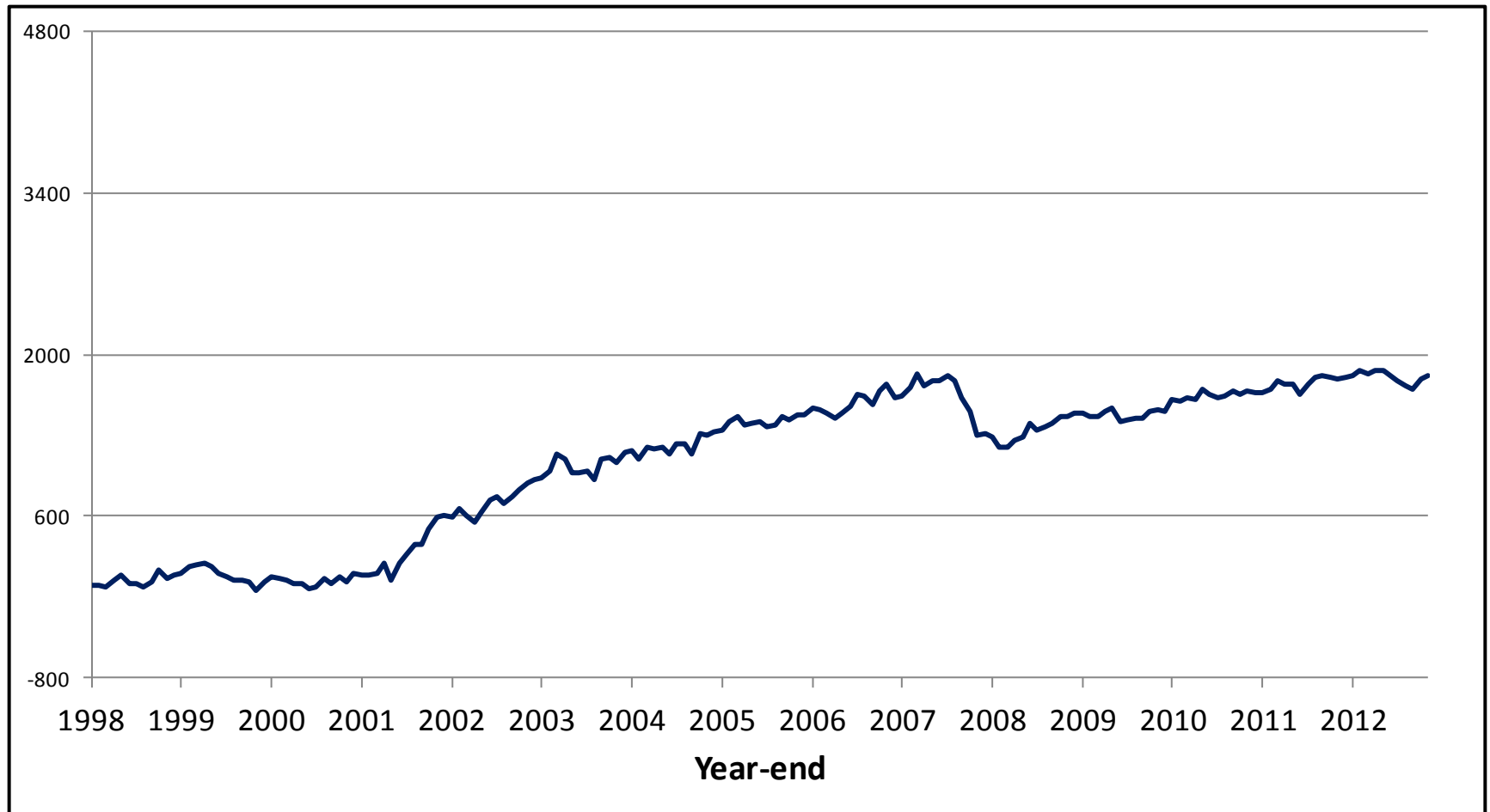
Strategy-Market Combinations:

359

Return/Risk Ratio: 0.25

Improvement Over Stocks: 1.40x

Strategy-Market   Return/Risk Ratio: 0.55
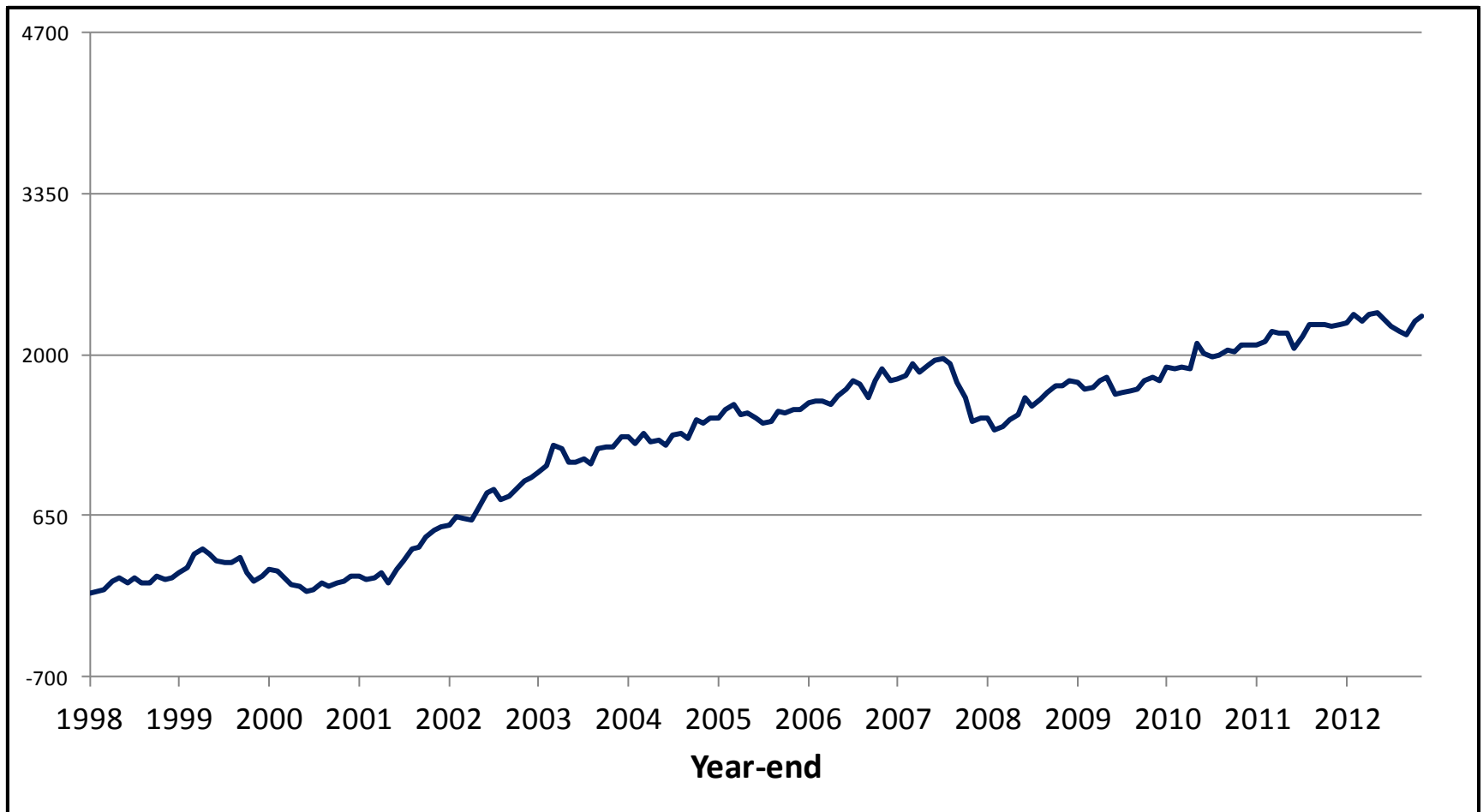
Combinations: 1000   Improvement Over Stocks: 4.55x
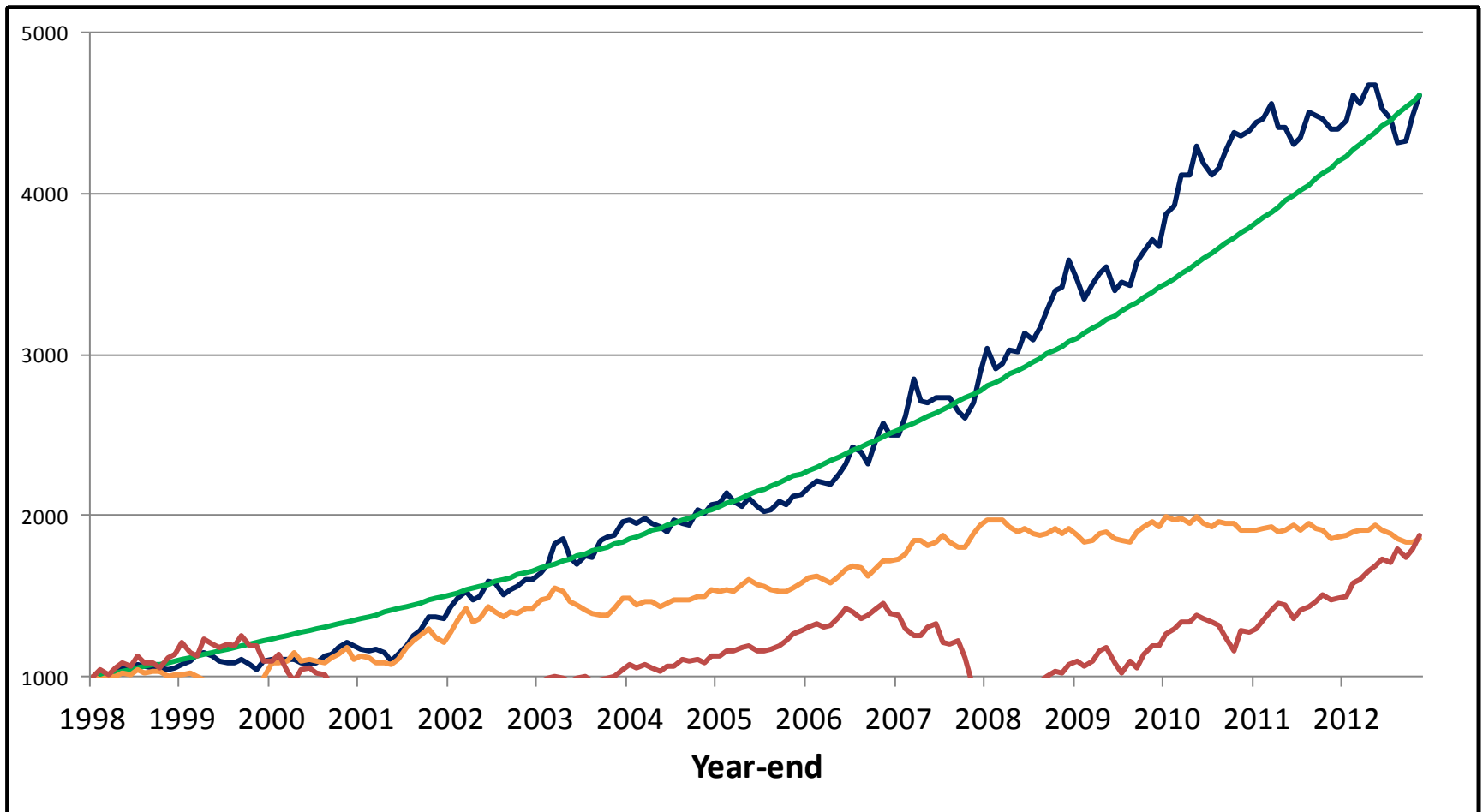
The Symphony Fund

Strategy-Market
Combinations: 1100

Return/Risk Ratio: 1.11
Improvement Over Stocks: 6.94x
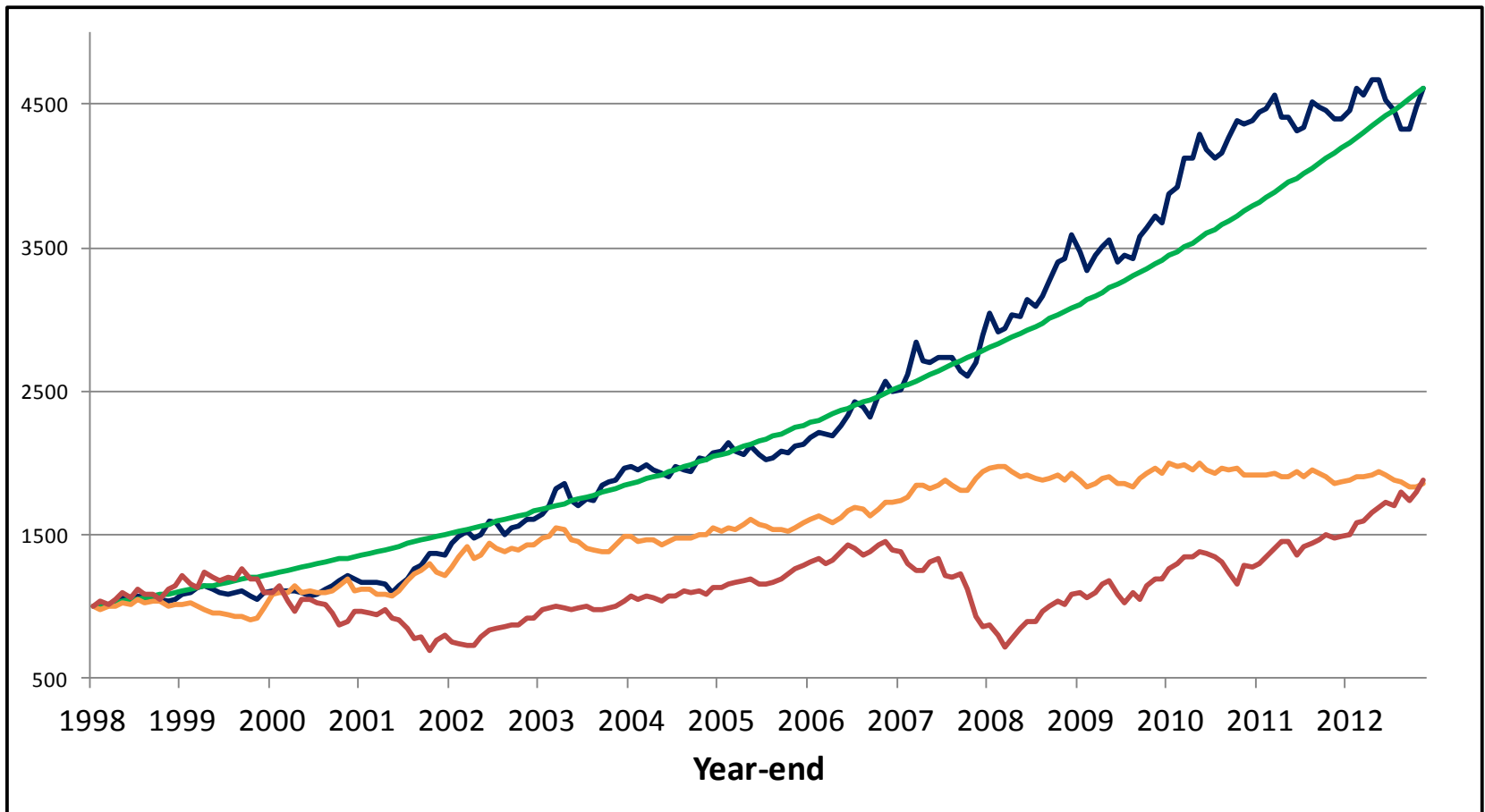
Symphony's underlying fund strategy has often profited when stocks suffer:

**Brandywine Profits
When Stocks Post Losses**
Peak-to-Trough Drawdowns in S&P 500

Aug 2000 – Sep 2002
S&P 500 TR: –44.73%
Brandywine: +31.13%

Oct 2007 – Feb 2009
S&P 500 TR: –50.95%
Brandywine: +26.05%

S&P 500 Total Return
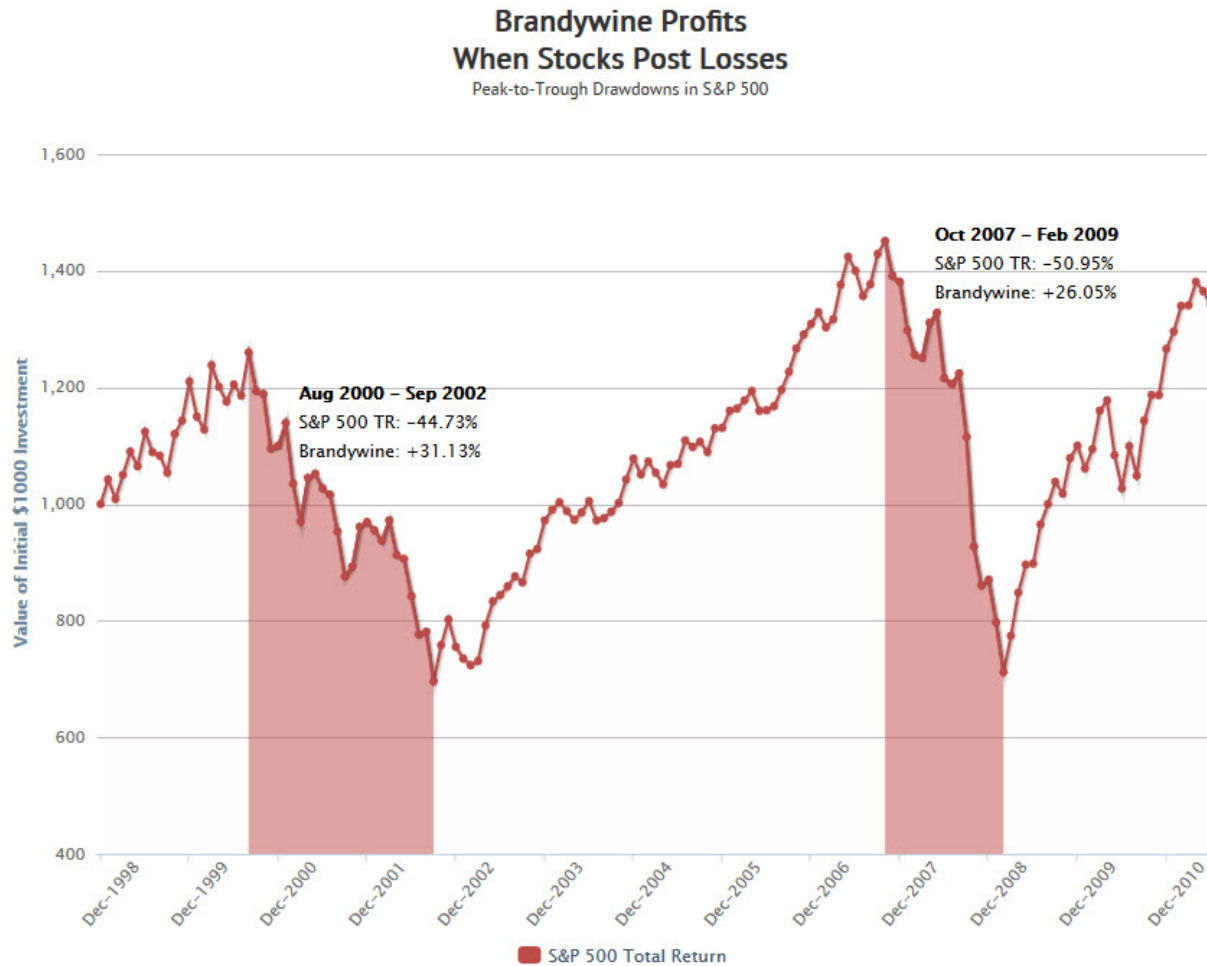
Real returns of Symphony's underlying strategy: 21% pa with zero correlation to stocks, even in equity bull market

Actual Performance
January 1991 – December 1998
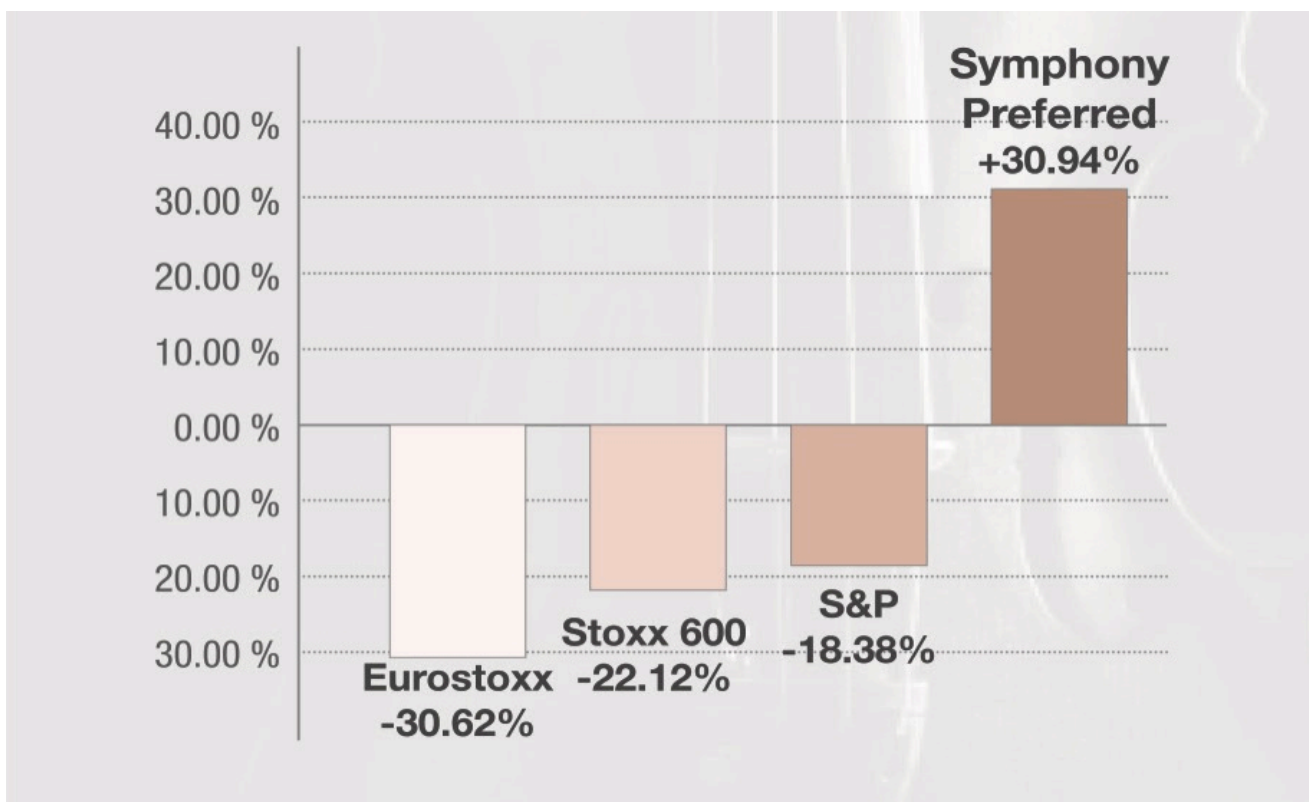
The Symphony Fund

1. A culmination of >30yrs of research, development and live trading
2. A highly diversified portfolio of "return-driver" based strategies
3. Applied across a very broad range of markets & sectors
4. EU onshore open-ended fund with £, € and $ share classes
5. Monthly liquidity
6. Positive returns with negative correlation to equities since launch