PRINCIPLES OF FINANCE

SEARCH FOR ALPHA

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Challenges in finding alpha



The elusive search for Alpha

Wealth managers are moving higher up the risk curve to drive performance

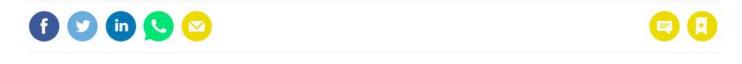
Source: FT, 22 June 2015

The past three years have not been straightforward for investing. Less than 20 per cent of wealth managers' portfolios have added positive alpha, according to figures from Asset Risk Consultants, against 50 per cent that generated negative alpha in the three years to the end of 2014.

Traditionally a task for hedge funds

Hedge Funds: Alpha-hunting with funds of funds

BY PETER MEIER, PATRICK DÜTSCH | DECEMBER 2012 (MAGAZINE)



Peter Meier, Oliver Liechti and Patrick Dütsch run hundreds of FoHFs through a factor model and find those focused on trading strategies delivering the best returns and the highest alphas

Most po



Source: IPE.com

From hedge funds to private equity

Apr 15, 2014, 05:23pm EDT

Private Equity Returns: It's All About Alpha



Source: Forbes.com

Investing in new economies



Source: McKinsey.com

What is alpha anyway?

Finance & economics

Mar 22nd 2007 edition >

Buttonwood

What's it all about, alpha?

Demystifying fund managers' returns

Source: The Economist

This approach suggests the whole idea of alpha might be an illusion. Academics can explain most of it, and the only reason they cannot explain all of it is because they are not clever enough to think of the missing factors.

Figure 7

Factor investing - The origins

1960s

1964
The separation
of beta and alpha:
Using Markowitz's
mean variance
analysis, Sharpe,
Lintner and Mossin
develop the
Capital Asset
Pricing Model
(CAPM)

1970s

Low Volatility:
Haugen and Heinz
find that low
volatility stocks
realize extra riskadjusted returns

1973-76
Robert Merton's
Intertemporal
Capital Asset
Pricing Model and
Richard Roll's
arbitrage Pricing
Theory establish a
theoretical
framework for
factor investing

1980s

1981 Size: Banz finds that small cap stocks outperform large caps

1981 Basu shows that low PE stocks generate higher returns than high PE stocks

1981-85 Shiller, DeBondt and Thaler start gathering evidence against market rationality

1983 Invesco launches its 1st quantitative strategy 1990s

1992 Size and value: Fama/French 3-factor model adds size and value to the market factor

1993 Momentum: Jegadeesh and Titman analyze a momentum factor

1997 Carhart finds that a 4-factor model including momentum improves performance 2000s

2008
Asset growth:
Cooper, Gulan and
Schill find that
asset growth
predicts future
returns

2009
Norges Bank
Investment
Management
(NBIM) review
approach to Active
Management
(Ang, Goetzman &
Schaefer)

2010s

2008
Profitability:
Novy-Marx shows
that operating
profitability
predicts future
returns.

2015
Hou, Xue and
Zhang's q-model
based on
profitability and
asset growth
dominates longestablished ones.

2015
Fama and French
add operating
profitability and
asset growth to
their model, giving
rise to the 5-factor
model

Source: Invesco. Illustrative examples of macro and style factors.

Most popular factors

- **Size:** Small-capitalization stocks tend to outperform large capitalization stocks over time.
- Value: A stock with a market price that is below the company's intrinsic value. Over time, stocks with a lower price relative to their intrinsic value have outperformed.
- Momentum: A stock that has recently trended upward tends to continue rising.
- Quality: Stocks that are of a higher quality tend to outperform poorer quality stocks over time.
- **Volatility:** Stocks with a lower volatility tend to outperform higher volatility stocks over time.

Factor performance

2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Volatility	Size	Size	Volatility	Size	Value	Volatility	Volatility	Size	Momentum
-29.23	42.05	18.19	8.04	16.69	32.66	12.06	5.82	9.38	32.59
Quality	Value	Momentum	Momentum	Quality	Momentum	Quality	Momentum	Value	Size
-37.54	41.87	16.54	4.79	15.44	30.28	7.26	4.54	8.86	23.92
Momentum	Quality	Quality	Quality	Value	Quality	Momentum	Quality	Volatility	Quality
-39.92	32.32	13.31	-0.06	15.01	26.56	7.03	3.14	8.18	23.89
Size	Volatility	Volatility	Size	Momentum	Size	Value	Size	Quality	Value
-41.92	17.18	12.76	-9.34	14.79	26.53	4.56	-1.05	5.63	22.88
Value	Momentum	Value	Value	Volatility	Volatility	Size	Value	Momentum	Volatility
-42.63	14.76	9.15	-11.05	8.87	19.41	3.42	-2.73	4.75	18.04

The chart represents the MSCI factor indexes calendar year performance for quality, momentum, value, size and volatility expressed in U.S. dollar terms. Source: Morningstar as of December 31, 2017.

The factor zoo

- McLean and Pontiff (2013) studied 82 factors published in tier-one academic journals. They found that at least 10 out of 82 factors were artifacts of reporting mistakes in the databases (now corrected).
- Levi and Welch (2014) examined 600 factors from both the academic and practitioner literature.
 They found that 49% of the factors produced zero to negative premia out-of-sample, suggesting that investing based on the identified factors is only ever so slightly better than tossing coins.
- Harvey, Liu, and Zhu (2014) studied 315 factors from top journal articles. Adjusting for "data-snooping," they conclude that only a handful of the factors in the zoo are actually statistically significant: the value, low volatility, and momentum anomalies are very significant; market and illiquidity are significant; small-cap is insignificant, as are many of the newer and more exotic factors such as idiosyncratic volatility and quality (measured as default risk, ROE, and ROI).
- Feng, Giglio and Xiu (2020) study 150 factors using machine learning.

Is the alpha even possible to calculate?

Opinion Fund management

A new methodology to find genuine alpha creators

There is an easier way to evaluate the work of managers without complex models

Shahin Shojai AUGUST 8 2010

Source: FT.

Main point: Calculating the alpha requires knowing the risk of investments. Challenging for complex and illiquid assets.

Smart alpha or smart beta?

Smart alpha

- Active investment strategy
- Seeks to exploit market anomalies (inefficiencies) to produce positive alpha
- Forward-looking and dynamic

Smart beta

- Passive investment strategy
- Replaces the market portfolio by alternative weighting methods which emphasize factors such as size, value, momentum or low volatility
- Neither forward-looking nor dynamic

From alpha to smart beta

FTfm Exchange traded funds

+ Add to myFT

Should the smart money be on smart beta?

ETFs based on factors such as value or momentum have yet to live up to their promise

Source: FT, 30 March 2020.

Recommended



Special Report **FTfm: Smart Beta**Mystery is part and particle of smart beta

"The challenge of getting alpha out of active funds consistently has driven people to passive funds or smart beta," says Ms Fuhr. "The ability to identify factors and invest in them purely is something people have embraced."

Yet — despite a wealth of data showing exposure to smart beta factors has consistently led to outperformance over

market cycles — many have been disappointed.