



First Ascent Asset Management

# GAINING AN EDGE

## Understanding Factors

		Quality 5.89			Quality 5.49				
Value 6.65	Momentum 11.78	Size 3.14		Size 3.60	Size 4.31		Momentum 2.19	Size 2.61	Momentum 7.98
Size 2.07	Quality 4.04	Equal Weighted 1.76		Momentum 2.76	Momentum 4.10		Quality 1.69	Momentum 1.32	Quality 3.29
Equal Weighted 0.40	Equal Weighted 1.30	Value 1.75	Size 4.17	Equal Weighted 1.01	Equal Weighted 3.35		Equal Weighted 0.63	Equal Weighted 0.06	Equal Weighted 1.78
Quality -2.54	Size -5.08	Momentum -3.75	Quality -2.20	Value -1.08	Value -0.50	Momentum -1.04	Value -0.29	Value -1.08	Size -0.88
Momentum -4.57	Value -5.54		Equal Weighted -4.16	Quality -1.25		Size -1.09	Size -1.07	Quality -2.63	Value -3.26
			Value -9.10			Value -1.14			
			Momentum -9.50			Equal Weighted -1.66			
						Quality -3.36			



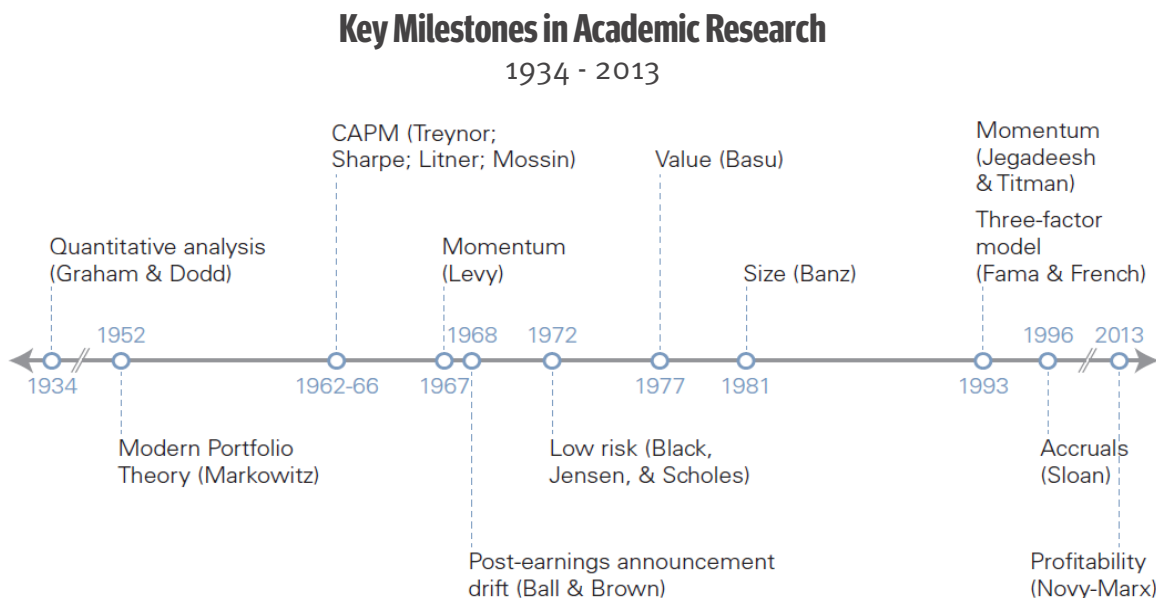
# UNDERSTANDING FACTORS

## What Are Factors?

Factors are characteristics common to a group of securities that help explain their returns. These characteristics are distinct and quantifiable and give rise to similar patterns of performance among the securities within the group that distinguish them from other securities over time.

Decades of academic research has identified hundreds of factors. There are so many of them, in fact, that they are sometimes referred to as the “factor zoo.”

These factors have been studied closely by academics. Their goal is to screen out those that are mere anomalies in the historical data and identify those with a sound statistical basis, a plausible rationale, and favorable performance and/or risk reduction qualities.



Source: GSAM. For illustrative purposes only.

Few factors have stood up to the scrutiny of the researchers. Only a handful are considered robust enough to have both a reasonable chance of persisting into the future and a positive impact on long-term portfolio performance. These include *value*, *size*, *quality*, and *momentum*, which can be described as follows:

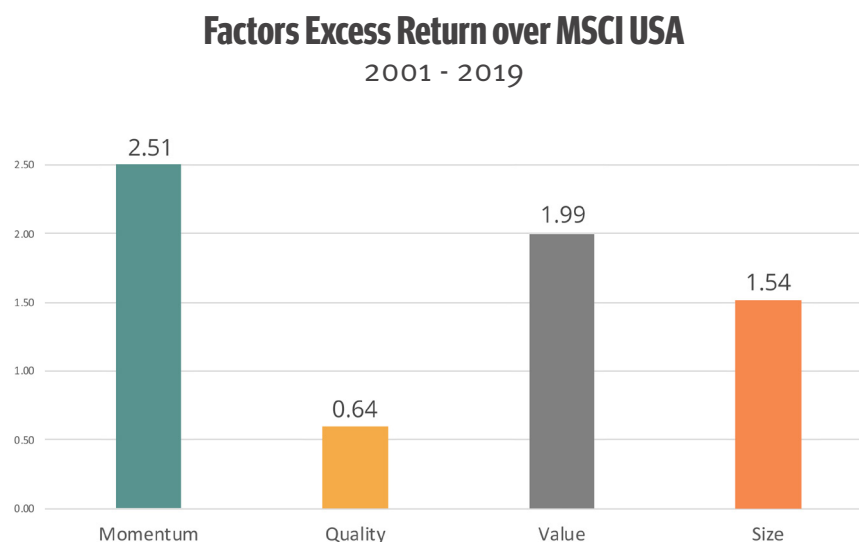
- Value:** stocks that are priced cheaply relative to some measure of their intrinsic value.
- Size:** stocks of smaller companies as measured by the total value of their outstanding shares.
- Quality:** stocks of companies with low debt, high earnings quality, and strong profitability.
- Momentum:** stocks of companies whose share prices have been rising recently.

It is important to understand that academic research does not prove that favorable factor characteristics will persist into the future. It only suggests that, based on past performance patterns and the strength of each factor’s theoretical underpinnings, they seem likely to do so.



## The Historic Performance Edge

The research documents that factors like value, size, quality, and momentum have produced historical performance advantages. An example of this performance edge is quantified below:



Momentum is represented by MSCI USA Momentum Index. Quality is represented by MSCI USA Sector Neutral Quality Index. Value is represented by MSCI USA Enhanced Value Index. Size is represented by MSCI USA Risk Weighted Index. Equal Weighted is the equal weighted annual return of each index. Data source: Morningstar.

## Using Factors to Build Portfolios

It is possible to build portfolios designed to capture the benefits that factors have historically provided. The performance characteristics of those portfolios will be determined by the factors that are emphasized and how they are combined. Here are some points to keep in mind.

Factors tend to be cyclical. Individual factors can go years without producing any performance advantage at all. Their benefits tend to be “lumpy” and are manifested intermittently. Over the long-term, however, they have historically produced quantifiable performance advantages.

Some factors have low correlations to each other. When one is experiencing a period of outperformance, another may be experiencing a period of underperformance. This provides the opportunity to diversify among factors to generate a more stable return stream.



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For example, four factors with strong academic support—value, size, quality, and momentum—have relatively low correlation with each other as shown below:

## Cross Correlations of Excess Returns 2000 - 2018

	Momentum	Value	Quality	Size
Momentum	1.00			
Value	-0.38	1.00		
Quality	0.17	-0.43	1.00	
Size	-0.10	0.30	-0.45	1.00

Correlations of factor excess returns over the S&P 500. Momentum is represented by MSCI USA Momentum Index. Quality is represented by MSCI USA Sector Neutral Quality Index. Value is represented by MSCI USA Value Index. Size is represented by MSCI USA Risk Weighted Index. Data source: Morningstar.

As you can see below, historically, an equal weighted portfolio (shown in blue below) combining value, size, quality, and momentum resulted in a portfolio with solid returns and relatively low volatility.

## Excess Returns over MSCI USA 2001-2019

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Momentum		10.56																	
Value	13.73	8.56		9.17	13.59			5.89			5.49		10.56	4.32				15.92	
Size	11.69	6.98		7.14	7.45		11.70	3.14	11.66	3.60	4.31		3.32	2.61	7.90		3.34		
Equal Weighted	5.37	6.84	4.01	6.14	5.61	4.38	4.04	1.49	4.17	2.76	4.10		2.19	1.44	3.29	4.33	0.59		
Quality	1.71	1.48	0.70	5.09	1.96	2.07	1.29	0.19	0.99	0.63	2.31	0.65	1.69	1.32	0.56	1.88	0.28	2.89	2.75
Momentum	-5.18		-0.88	-2.04	-0.3	-0.14	-4.96	-3.75	-2.20	-1.25	-4.65	-1.04	-1.07	-2.63	-0.88	-0.61	-2.84	-0.69	-1.54
			2.94			2.54	5.08		9.50	2.76			1.09		7.69	2.24		1.13	1.89
			5.33			4.57						1.14			6.48			1.36	3.55
												3.36						6.56	3.98

Momentum is represented by MSCI USA Momentum Index. Quality is represented by MSCI USA Sector Neutral Quality Index. Value is represented by MSCI USA Enhanced Value Index. Size is represented by MSCI USA Risk Weighted Index. Equal Weighted is the equal weighted annual return of each index. Data source: Morningstar.



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It is important to consider how you combine factors in a portfolio. The performance of portfolios with high exposure to factors can deviate significantly from the performance of the broad market and can even underperform over certain time periods.

Attempting to time factors is as difficult as attempting to time the market. Although factors do go in and out of favor, there is little evidence that it is possible to successfully and consistently alter the holdings in a portfolio to take advantage of this cyclical nature.

In building a factor-based portfolio, keep in mind that not every firm defines factors the same way. This means that funds from different firms that provide exposure to the same factor—*value* for example—may perform differently over time. By combining funds from firms that define factors differently, it is possible to get an added diversification benefit as one performs better while another lags.