

Purgatory for Pessimists: An Unemotional, Factor-Based Approach to International Equities

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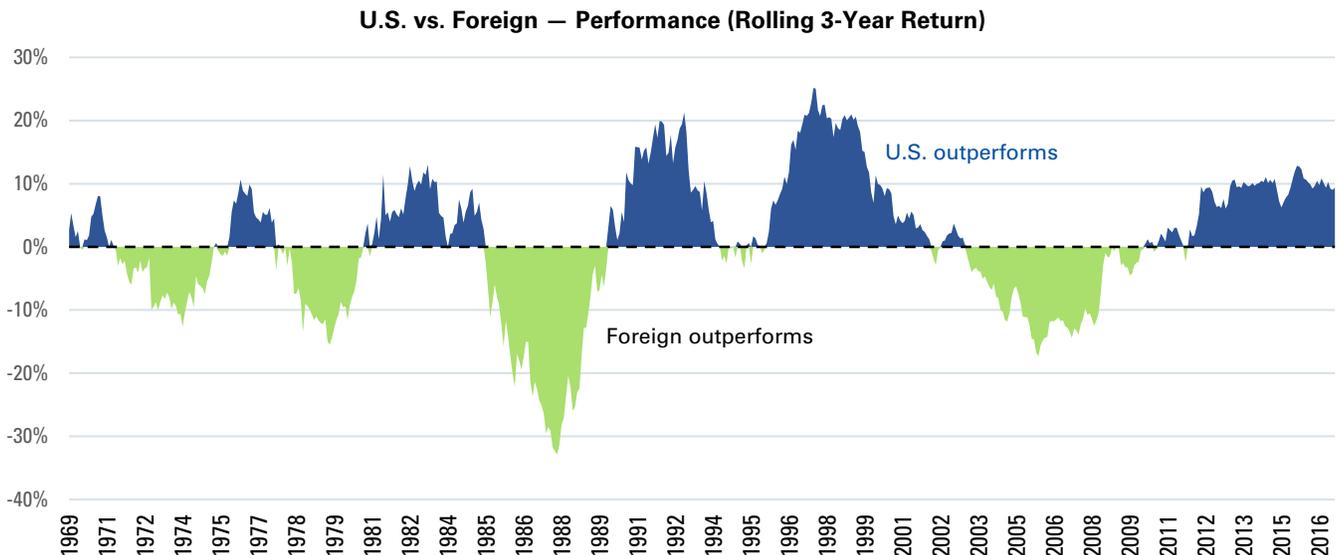
The current bull market has been unkind to non-U.S. allocations. At a conference I recently attended, the term “TINA” (There Is No Alternative) came up more than once in the context of allocating investor portfolios. It captures the collective sentiment that equities, despite a massive bull run and rising valuations, are one of few viable asset classes to park capital. Expected returns on fixed income are likely to be low and identifying top quartile alternative managers—let alone gaining access to them—is increasingly difficult.

This conundrum is further exacerbated by the dramatic outperformance of U.S. stocks on the global equity stage, captured in the table below. International and Emerging Markets have lagged their U.S. counterparts by over 5% annualized for the trailing 10-years. To put that return gap in perspective, the current balance of \$1M invested in International and Emerging Markets 10 years ago would be worth about half of a similar investment in the U.S., or \$1.1 million less.

Of course, the persistent rise has lifted U.S. valuations. No matter what metric you look at (earnings, sales, cash flow, book value) or the time frame (cyclically-adjusted, trailing 12-months, normalized) the U.S. is now more expensive than it was a few years ago. While value is not a good timing metric, it’s hard to ignore valuations that are 17% cheaper for International and 35% cheaper for Emerging Markets.

Trailing Returns (As of 9/30/17)	Returns (%)		
	U.S.	International	Emerging Markets
1-Year	18.6	19.4	22.9
3-Year	10.8	5.2	5.3
5-Year	14.2	8.4	4.3
7-Year	14.4	6.6	2.9
10-Year	7.4	1.9	1.7
Current P/E	23.9	19.9	15.6
	<i>Discount to U.S.</i>	<i>17% cheaper</i>	<i>35% cheaper</i>

Though 10 years can seem like an eternity for investors, it’s actually only about *one full market cycle*. Expanding our window into returns for U.S. and non-U.S. markets back to 1970 reveals a regular cyclical pattern of leadership, as shown below in the chart of rolling 3-year performance. The current market environment represents the fifth “round trip” cycle over the past 4½ decades.



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One allocation approach would be to simply buy the respective index ETFs for International and Emerging Markets and call it a day. While market level valuation metrics can be useful as a first pass, they tend to obfuscate risk and reward within broad averages. Explanations abound as to why non-U.S. stocks have lagged—from central bank intervention to economic growth to geopolitical crises. I tend to think of non-U.S. markets as “Purgatory for Pessimists” because there is always something of justifiable concern. Because we are hard-wired to form simple heuristics for efficient decision making, the line of thinking will go something like this: crisis in Greece, Greece in Europe, European crisis, Europe outside U.S., foreign = unsafe. Rinse and repeat for Russia, Abenomics, North Korean hostilities, and China’s ascendancy. A simple indexing approach to these markets naively manages these “risks” by obfuscating them within average index returns.

DIGGING BEYOND MARKET CAP TO IDENTIFY OPPORTUNITY

The return and valuation metrics presented (see table, page 1) are all based on common market cap-weighted indexes that cover hundreds, if not thousands, of stocks across their respective market. They tend to favor larger capitalization firms, thus omitting at the worst and underweighting at the least, a large portion of the global opportunity set. As believers that a stock’s characteristic profile predisposes its future performance, we often look at factor spreads for evidence of opportunity to generate excess return.

We have found that six themes collectively define the factor profile of a stock—regardless of geography, market cap, or style. Three of the themes are used specifically to *select* stocks: Value, Momentum, and Shareholder Yield. We assess value through the lens of multiple underlying factors—sales, cash flows, and earnings. Our Momentum theme seeks stocks with strong appreciation over the prior 3, 6, and 9 months, while avoiding those that are highly volatile. Shareholder Yield represents a total return of capital to shareholders through dividends and share buybacks. The three remaining themes are useful for *eliminating* stocks from consideration that fail on certain quality tests: Earnings Quality, Financial Strength, and Earnings Growth. Earnings Quality evaluates the use of accruals to boost earnings. Financial Strength assesses a company’s reliance on outside sources of capital to support its balance sheet. Earnings Growth helps to avoid unprofitable firms.

Factor Spreads: High Decile minus Low Decile (%)
(1991–2016)

	U.S.	Non-U.S.	
		Ordinaries	ADRs
VALUE	17.8	19.1	21.1
MOMENTUM	8.5	11.9	14.1
YIELD	13.1	11.4	10.1
EARNINGS QUALITY	8.8	7.9	9.2
FINANCIAL STRENGTH	10.5	8.3	13.4
EARNINGS GROWTH	11.5	8.8	9.2
Average Spread	11.7	11.2	12.9

The table on this page shows the return differential between the highest-ranked and lowest-ranked decile of these six factor themes from 1991–2016.¹ We look at the spreads within three universes: U.S. stocks, International Ordinary Shares, and American Depository Receipts (ADRs, which are traded like stocks in the U.S. but provide exposure to foreign companies).

While factor investing is commonly applied to U.S. stocks, the table above demonstrates that stock selection based on factors can be as effective, if not more so, outside the U.S. market. For example, the spread in return between the cheapest and most expensive U.S. stocks is 17.8% over the 26-year period. For Ordinaries, the Value spread widens to 19.1%, and for ADRs it’s even wider (21.1%). We present ADRs alongside Ordinaries to show that these uniquely structured securities provide an enticing alternative to the operational complexity and cost structure of local share portfolios without degradation in factor returns.

The key takeaway from the factor spreads shown above is that tremendous performance differentiation underlies average returns for broad groups of stocks. Wider spreads generally suggest a larger opportunity to

¹ Prior to 1991, the ADR universe of stocks was not large enough for comparison.

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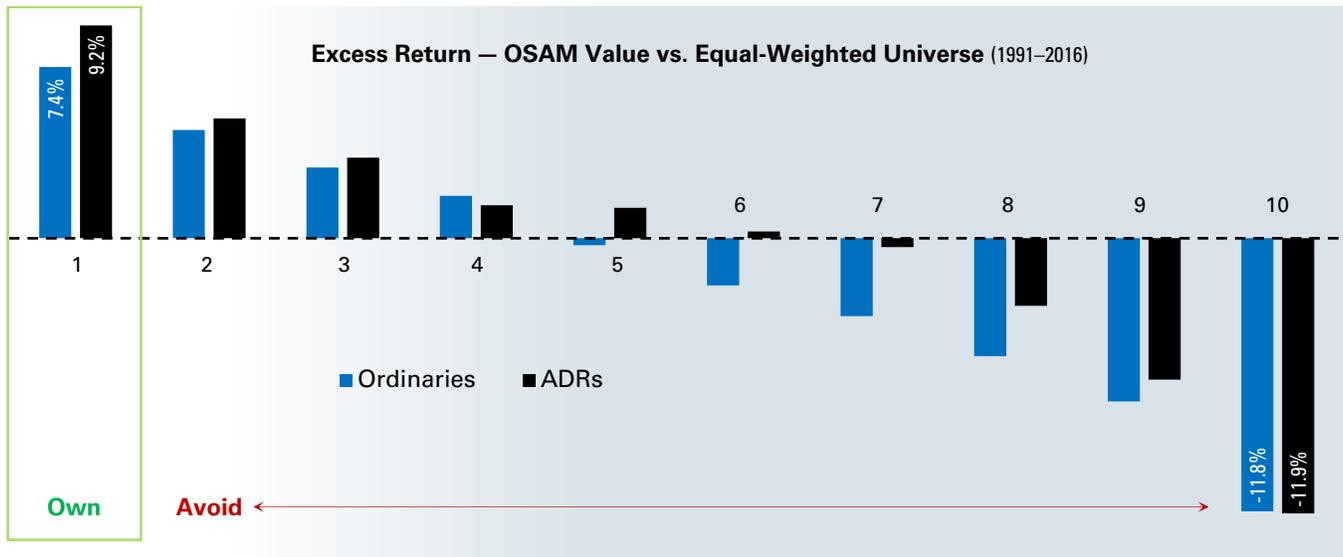
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harvest excess return through a disciplined factor-based approach. Just as a pure indexing approach neglects managing seemingly obvious risks, it also naively turns a blind eye to large, consistent, and persistent structural trends that offer the opportunity to generate alpha.

HARNESSING FACTORS TO CREATE DIFFERENTIATED INTERNATIONAL PORTFOLIOS

Select the ‘Right’ Stocks, Avoid the ‘Wrong’ Stocks

Underlying the factor spreads for Ordinaries and ADRs is a relatively consistent stair-step monotonic trend. As you move from highest-ranked to lowest-ranked stocks on each factor, there is a relatively linear degradation in excess returns. To demonstrate, we take the Ordinary and ADR universes, rank them on our Value theme, and then organize them into decile portfolios from least to most expensive. The chart below shows the annualized excess return on those decile portfolios (from cheapest decile on the left to most expensive on the right). We compare these portfolios to an equal-weighted universe of stocks that meet certain liquidity and market cap criteria.² In other words, we do not begin our assessment from the point of view of a cap-weighted benchmark. Clearly, investors ought to own more of the cheap stocks and fewer of the expensive ones. We’ve found similar results with our other two key stock selection themes: Momentum and Shareholder Yield.



Cap-weighted indexes are agnostic to this empirical evidence. Astute investors would seek to concentrate into the highest-ranked deciles and avoid stocks in the lowest-ranked deciles to enhance portfolio return. There are a couple of ways to do this in practice. One method is to tilt towards cheap stocks, owning a little more of them, and a little less of the expensive stocks, than the cap-weighted index. This is the "smart beta" approach—great for large institutional investors who are more mindful of Tracking Error and care more about Information Ratios than absolute returns. A second approach, which I’ll explore next, is to simply own the highest-ranked stocks, while avoiding the rest of the universe.

Incorporate Multiple Factors for Consistency & Diversification

Value by itself is a powerful factor. However, incorporating Momentum and Shareholder Yield provides benefits to risk-adjusted return and consistency. The table on the next page includes the results from 1991–2016 of a

² For Ordinaries, the universe of stocks is those domiciled outside the U.S. with a market cap greater than \$200M and average daily volume greater than \$250K. ADRs are compared against a similar universe, but with the added constraint that the security must be an ADR. Both universes are equal-weighted and agnostic to benchmark constituency.

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hypothetical multi-factor ADR portfolio built by *eliminating* stocks that rank poorly on our Earnings Quality, Financial Strength, and Earnings Growth themes, then by *selecting* names that fall into the highest-ranking deciles on our Value, Momentum, and Shareholder Yield themes.

(1991–2016)	Return (%)	Sharpe Ratio	3-Year Base Rate (%)
Multi-Factor	13.9	0.52	95%
MSCI ACWI ex U.S.	5.6	0.03	—
Excess Return:		8.3	

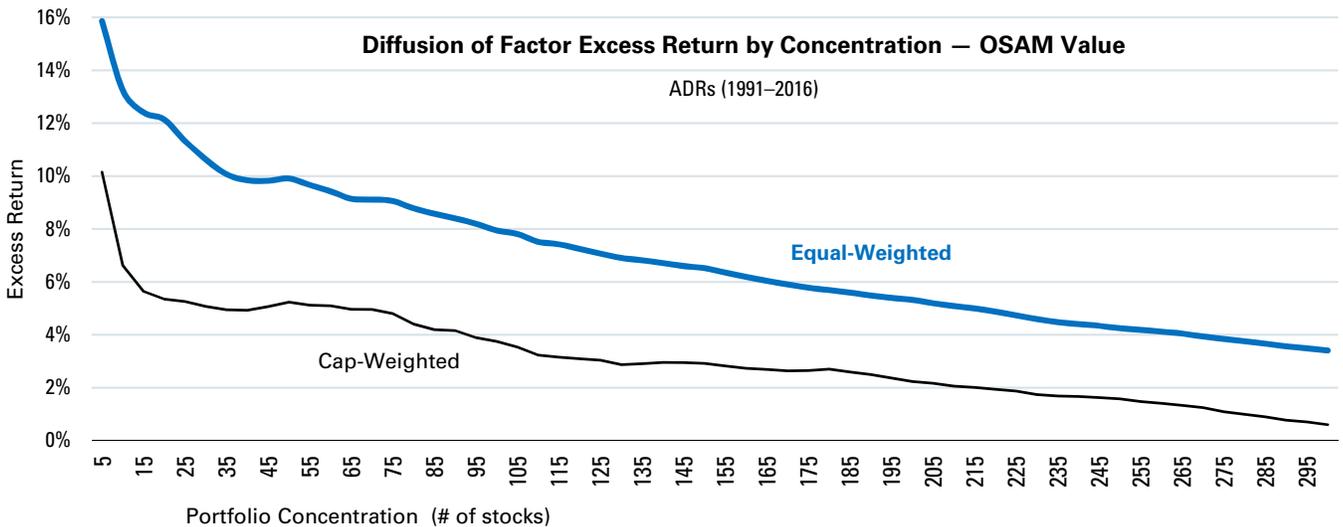
This multi-factor ADR portfolio outperforms the MSCI ACWI ex U.S. by 8.3% annualized over the period with a dramatically higher Sharpe Ratio. Importantly, the multi-factor portfolio’s performance is *consistent*. We measure consistency with Base Rates, which are batting averages for how often a strategy beats its benchmark in rolling periods. In this case, the multi-factor portfolio outperforms the benchmark 95% of the time in rolling 3-year periods.

Concentrate & Weight by Conviction – not Market Cap

Inherent in owning only the highest-ranked names by a given factor is accepting that large portions of the eligible universe will go un-owned. This introduces significant differentiation into a portfolio in terms of Active Share, but also higher Tracking Error.³ Given the information above on Value, we should certainly be comfortable *not owning* the underperforming deciles and accepting the Tracking Error that results.

To evaluate the importance of concentration, we ran portfolios ranging from 5 to 300 stocks and, as the number of names within the portfolio expanded, we charted the excess return relative to the MSCI ACWI ex U.S. We constructed two versions of the concentrated portfolios to show the deleterious impact of market cap-weighting when introduced.

The equal-weighted version ADR simply ranks all stocks in the universe on our Value theme and then equal-weights the cheapest names. The cap-weighted version selects the exact same names, but weights them in the portfolio proportionate to their market caps.



In both cases, the degradation of excess return is apparent as the number of names allowed in the portfolio expands. Also, notice the disparity in excess return between an equal-weighted versus a cap-weighted portfolio construction process. *These are the exact same stocks!* Yet, a cap-weighted approach underperforms by hundreds of basis points, even in large 300-stock portfolios.

³ Active Share is a simple calculation that compares the holdings of a fund or portfolio with the holdings of the index used as its benchmark (e.g., an Active Share of 60% means that 60% of a portfolio’s allocations are different than the benchmark’s allocations).

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There are No Free Lunches, Embrace Lower Capacity

All of this looks great on paper. The challenge is in effective implementation. As concentration increases, strategy capacity decreases. And, as the tie to market cap weighting is severed, capacity decreases and implementation costs increase.

Fortunately for U.S. domiciled investors, ADRs provide cost effective vehicles whose implementation costs are on par with their U.S. common stock counterparts. Below, we compare the all-in market impact cost to make trades of various sizes for U.S. common stocks, ADRs based on portfolios of 50, 100, 200, and 300 stocks at portfolio sizes from \$50 million to \$1 billion.

In all cases, portfolios are more expensive to trade as concentration and capacity increase, but the overall cost to trade U.S. and ADR stocks is remarkably similar—skilled traders can narrow the gap further. Impact costs increase significantly between the 50-stock and 100-stock portfolios for both regions, reinforcing that there are tangible implementation costs to balance out the benefits of concentration.

Impact Costs by Concentration & Capacity (5-yrs ending 10/31/17)

ADRs (basis points)					
# Stocks	\$50M	\$100M	\$250M	\$500M	\$1B
50	35	41	53	67	87
100	23	27	34	42	54
200	24	26	30	35	42
300	27	28	31	34	40

U.S. Stocks (basis points)					
# Stocks	\$50M	\$100M	\$250M	\$500M	\$1B
50	22	25	34	46	66
100	19	21	26	34	45
200	19	19	22	27	36
300	18	18	20	23	30

Plan Accordingly

As the U.S. bull market rages on, it is important for investors to remember that all market cycles are mean reverting. The U.S. has been the leader, but may not be in the future. In fact, 2017 has seen a reversal of the prior years' trend. While Emerging and Developed Markets have outperformed, it remains to be seen if this trend continues. Valuations are significantly discounted outside the U.S. market. Factor spreads are equally as wide as, or wider than, historical averages, which suggests that disciplined investors have a significant opportunity to harness the power of factors to create differentiated portfolios.

For our part, we suggest a strategy that parses the international landscape to eliminate stocks which rank poorly on quality criteria and then concentrate on names with strong Value, Momentum, and Shareholder Yield. Our International ADR strategy has successfully used this methodology since inception in January 2006. A key driver of performance has been application of a *consistent factor profile* over time. The characteristics table below illustrates the current positioning of the portfolio.

Across valuation metrics—sales, earnings, and cash flows—the portfolio is priced at significant discounts. As well, it meets or beats the benchmark's Quality metrics (Debt-to-Equity, 1-Year EPS Growth, and ROIC). Plus, the portfolio has stronger Momentum and higher Shareholder Yield. We believe this recipe for stock selection will continue to deliver strong results in the future.

(As of 9/30/17)	O'Shaughnessy International ADR	MSCI AC World ex U.S. Index	Relative Advantage vs. Benchmark
Price-to-Sales	0.8	1.3	35% cheaper
Price-to-Earnings	13.0	16.8	22% cheaper
EBITDA-to-EV	15.7	10.4	51% higher
FCF-to-EV	7.4	2.3	222% higher
Shareholder Yield (%)	2.7	2.6	5% higher
9-Mo. Momentum (%)	34.1	17.4	96% higher
Debt-to-Equity	0.9	1.1	16% lower
1-Year EPS Growth (%)	79.2	49.5	60% higher
ROIC	30.7	24.1	27% higher

87% Active Share (OSAM's IADR portfolio vs. MSCI ACWI ex U.S.)

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The risk-free rate used in the calculation of Sortino, Sharpe, and Treynor ratios is 5%, consistently applied across time.

The universe of All Stocks consists of all securities in the Chicago Research in Security Prices (CRSP) dataset or S&P Compustat Database (or other, as noted) with inflation-adjusted market capitalization greater than \$200 million as of most recent year-end. The universe of Large Stocks consists of all securities in the Chicago Research in Security Prices (CRSP) dataset or S&P Compustat Database (or other, as noted) with inflation-adjusted market capitalization greater than the universe average as of most recent year-end. The stocks are equally weighted and generally rebalanced annually.

Hypothetical performance results shown on the preceding pages are backtested and do not represent the performance of any account managed by OSAM, but were achieved by means of the retroactive application of each of the previously referenced models, certain aspects of which may have been designed with the benefit of hindsight.

The hypothetical backtested performance does not represent the results of actual trading using client assets nor decision-making during the period and does not and is not intended to indicate the past performance or future performance of any account or investment strategy managed by OSAM. If actual accounts had been managed throughout the period, ongoing research might have resulted in changes to the strategy which might have altered returns. The performance of any account or investment strategy managed by OSAM will differ from the hypothetical backtested performance results for each factor shown herein for a number of reasons, including without limitation the following:

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