DISTILLATE CAPITAL

RATIONAL INDEX DESIGN

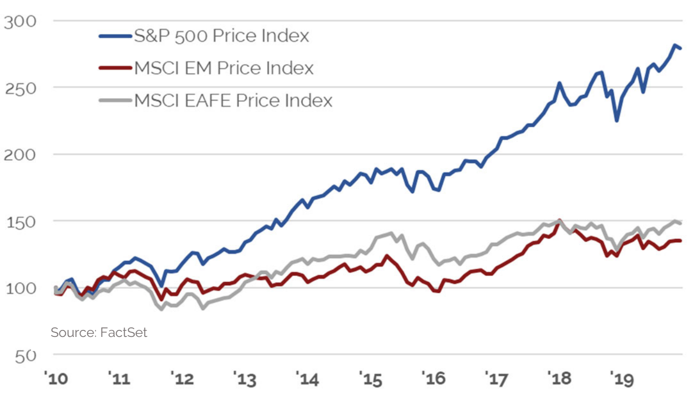
Regional Equity Performance & Valuation

A key thesis underpinning our investment process is the idea that as accounting rules changed and companies evolved from physical products and plants to more asset-light businesses, many traditional measures of value lost meaning. In our paper on valuation and accounting, we discuss why we think this explains the much-discussed underperformance of "value" as defined by traditional metrics like price-to-book (P/B) or price-to-earnings (P/E) and why free cash flow-based methodologies do not suffer from these distortions and have performed much better. In addition to conversations about "value" missing this critical issue, we think discussions around regional performance would also benefit from a free cash flow contextualization.

Since the financial crisis, U.S. equities have significantly outperformed their international counterparts. This is evident in **Figure 1** which compares the indexed price performance of the S&P 500 Index with that of the MSCI EAFE and MSCI EM Indexes and shows that the international indexes have lagged by over 100 percentage points since the end of 2009.

U.S. equities have significantly outperformed international ones.

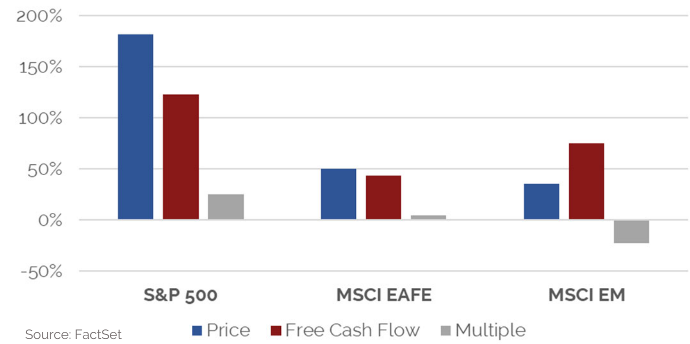
Figure 1: Price Performance by Key Regional Index



To dig into the drivers of this divergence in performance, we can deconstruct price changes into free cash flow growth and changes to the price multiple of free cash flow. **Figure 2** shows the results of this exercise and highlights that the outperformance of U.S. equities was driven by strong growth in free cash flow estimates, with only a relatively minor contribution from multiple expansion. For the MSCI EAFE Index, price gains since 2010 are almost identical to growth in free cash flows as there was no expansion in the multiple. Lastly, the MSCI EM Index has seen somewhat stronger free cash flow growth, but it was largely offset by a modest contraction in the free cash flow multiple such that price performance was even weaker than the EAFE Index.

U.S. outperformance was driven by stronger free cash flow growth.

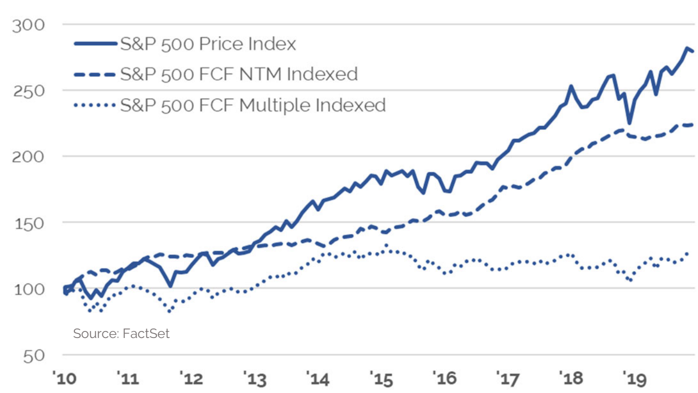
Figure 2: Index Price Gain, Free Cash Flow Growth, and Multiple Expansion (12/2009 to 12/2019)



We can also look at how these same drivers of performance have progressed over time. Since 2009, the United States has experienced fairly steady free cash flow growth. While the free cash flow multiple did expand between 2012 and 2014, it has been fairly steady since (**see Figure 3**). This may come as a surprise given frequent commentary that the recent rally has been the result of multiple expansion and not fundamental gains.

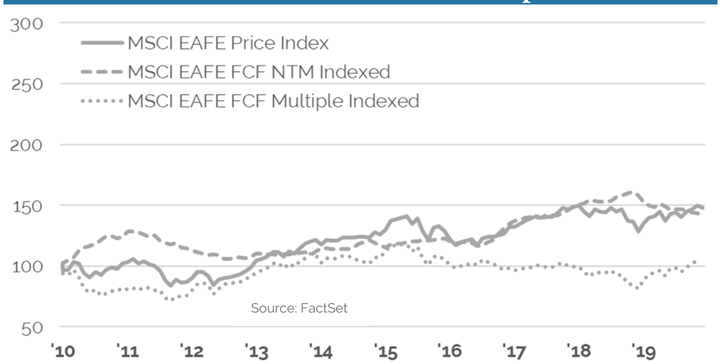
Free cash flow growth has been a steady driver of price gains in the U.S. and multiple expansion aided modestly in the earlier part of the decade.

Figure 3: Indexed S&P 500 Index Price, Free Cash Flow, and Free Cash Flow Multiple Over Time



For the EAFE Index, the multiple has been flat and price gains have matched anemic free cash flow gains.

Figure 4: Indexed MSCI EAFE Index Price, Free Cash Flow, and Free Cash Flow Multiple Over Time

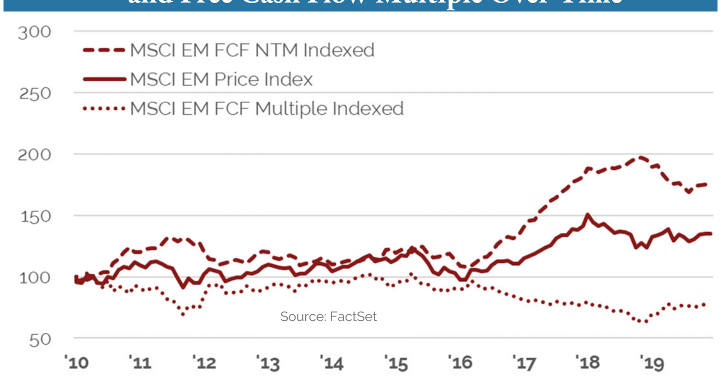


The same analysis for the international developed world index (the MSCI EAFE) using the same scale as we did with the U.S. shows a flat multiple over time with very sclerotic gains in free cash flow (**see Figure 4**). Weakness in Europe is partly related to sluggish domestic economic conditions, but also due to particular weakness in certain sectors. The telecom sector, for instance, has experienced a drop in free cash flow since 2010 due to massive declines at Telefonica, Orange, and Vodafone. The utilities sector has also been especially hard hit in Europe amid a challenging shift to renewables, and free cash flow fell sharply at Enel, Engie, Electricite de France, Ibedrola, RWE, and others. Excluding the utilities and communications sectors, overall EAFE free cash flow growth from the end of 2009 to the third quarter of 2019 would have been nearly 25% higher.

In emerging markets, the story is somewhat more nuanced. Free cash flow gains were virtually static until 2016 when they suddenly expanded sharply and then moderated more recently. Counteracting this free cash flow increase, however, was multiple contraction that began around the same time and negated much of the benefit of improving fundamentals (**see Figure 5**). The drivers of the recent uptick in free cash flow in Emerging Markets are fairly broad across sectors and stocks, with large gains from Petrobras, Alibaba, Tencent, China Petroleum and Chemical, Vale, Reliance Industries, Lukoil, and Saudi Basic Industries.

Free cash flow growth for the MSCI EM Index was fairly flat until recently, but was largely offset by a falling free cash flow multiple.

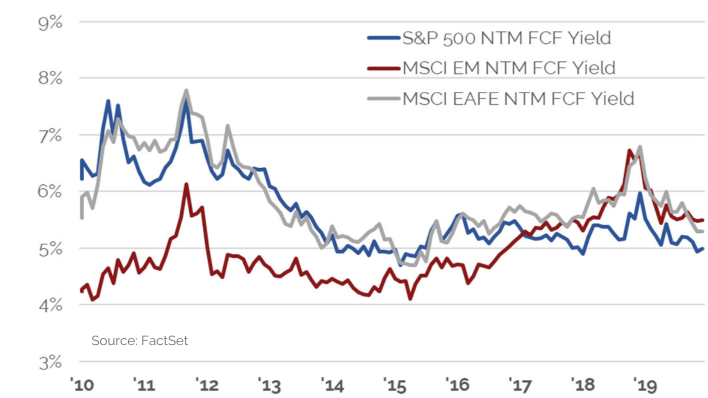
Figure 5: Indexed MSCI EM Index Price, Free Cash Flow, and Free Cash Flow Multiple Over Time



To understand the price return of the different geographies over this period, it is worth noting that the indices were not equally priced at the beginning. The U.S. index was the least expensive in 2010, with the highest starting free cash flow yield, while the emerging market index was the most expensive with a yield of just over 4% (**see Figure 6**). Over time, free cash flow yields in the various regions have largely converged with each region currently yielding a little over 5%.

After the U.S. started as the least expensive market at the end of 2009, free cash flow yields have converged over time.

Figure 6: Free Cash Flow Yield Over Time by Index



All of this then leads to the important question about the prospects for returns looking forward. With free cash flow yields now being similar across regions, it is less obvious whether one region should be favored. It is also important to consider differences in prospective growth rates, sector composition, the through-cycle stability of cash flows, and leverage, some of which are highlighted in **Table 1**. Since U.S. equities generally look attractive on these attributes and are only slightly more expensive on free cash flow yield, they continue to look fairly appealing overall. The emerging markets index is now considerably cheaper than it was at the end of 2009, which makes it relatively more attractive, though it is less stable than the U.S. index and nearly 40% of its weight is in the financials, energy, and materials sectors where fundamentals tend to be more volatile. The EAFE Index is valued roughly in line with the others, but is more levered, less stable, and exposed to more challenged domestic economic conditions.

On balance, this analysis points to a more neutral stance on regional weightings with perhaps some favoring of the U.S. and EM. This runs counter to suggestions from many that U.S. equities are expensive relative to their foreign counterparts. Such views are typically predicated on the use of book value or earnings per share to gauge valuation—metrics that we believe have lost meaning in a capital-light world and may lead investors astray on a regional basis just as they have done in trying to differentiate value within regions.

Table 1: Regional Index Key Stats, as of Dec. 2019

	S&P 500	EAFE	EM
Free Cash Flow Yield	5.0%	5.3%	5.5%
Fundamental Stability	0.67	0.47	0.59
Leverage	1.4	1.92	1.0
10-Yr Annualized FCF Growth	8.5%	3.8%	5.8%

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Free Cash Flow *refers to a company's operating cash flow, less its capital expenditures. Data excludes the real estate sector.*

Table 1 Methodology: Free Cash Flow (FCF) Yield *is based on the next-twelve-month free cash flow estimate relative to market capitalization. Stocks in the index without estimates are excluded, as are stocks with FCF yields above 50% or less than -20%, and the remaining names are reweighted based on those exclusions.* ***Fundamental Stability*** *is Distillate Capital's proprietary measure of through-cycle cash flow stability with a higher value indicating greater stability of long-term cash flow generation.* ***Leverage*** *is based on Distillate Capital's proprietary measure of indebtedness which looks at the ratio of adjusted net debt (including important off-balance-sheet items, such as certain lease obligations) to an adjusted measure of forecast Earnings Before Interest, Taxation, Depreciation, and Amortization (EBITDA). Companies with leverage ratios above 20x or below -5x are excluded.* ***10-Yr Annualized Free Cash Flow Growth*** *measures the annualized change of 12-month forward free cash flow estimates as of 12/5/2019 compared to estimates as of 12/31/2009.*

The ***S&P 500 Index*** *is an index of roughly the largest 500 U.S. listed stocks maintained by Standard & Poor's. The* ***MSCI EAFE Index*** *and the* ***MSCI Emerging Markets Index*** *are stock indexes representing the equity markets of developed non-U.S. countries and emerging markets countries, respectively.*

Indexes are not available for direct investment. Investment in a security or strategy designed to replicate the performance of an index will incur expenses, such as management fees and transaction costs, which would reduce returns.

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