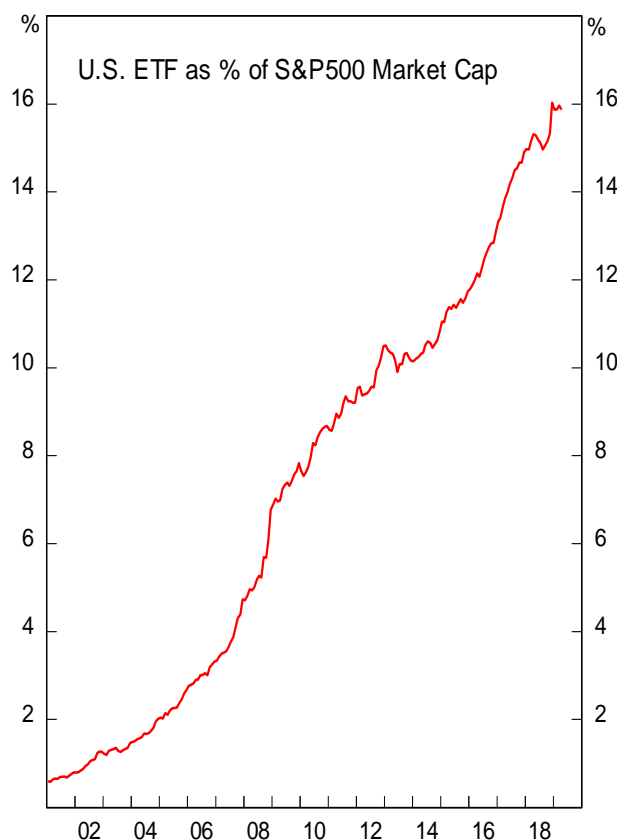


EM Shop

Under-Investment in Emerging Markets Equity

The past two decades' development of global trade and foreign investment in developing countries have lifted the living standard of many, particularly in emerging Asian economies. Share of emerging markets economy in the world has increased by 20% to 34% of world as faster growth from Asian countries, particularly China and India, has lifted the GDP per capita closer to those of the developed world.

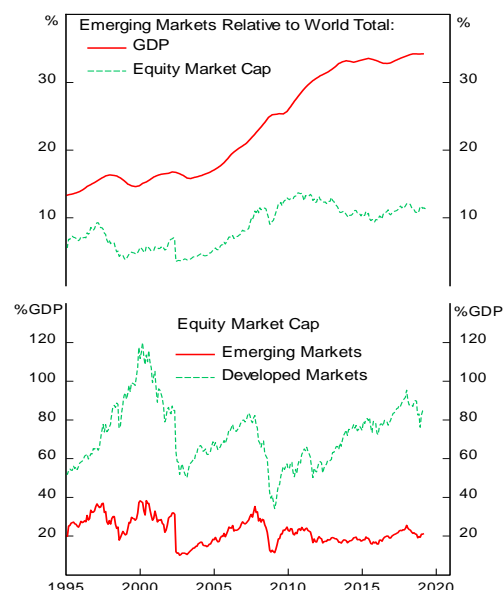
The progress in EM equity market, however, has been lagging as the aggregate equity market cap increase by a meager 4% to 11% over the same period. Whereas the developed markets' equity market cap to GDP ratio has increased from 50% to 80% over the long term, emerging markets has been flat at 20%, highlighting the lack of capital market deepening. This is caused partly by the lack of savings in emerging countries, causing low demand for equities investment and IPO in the countries. As a result of this divergence between the economy and development of stock markets, investors are grossly underinvested in EM countries that are increasingly contribute more share to global growth. In an open economy, however, it is inevitable that money will flow to countries with lucrative investment opportunities.



Rise of the Passive

ETF, as a tool of “passive” investing, has been experiencing tremendous growth in the past two decades. Although data in the Emerging Market is scant, we know that in the beginning of the millennium, ETFs account for only \$50 billion of AUM in the U.S., equivalent to 0.6% of total S&P500 market capitalization. Currently, the number has multiplied by almost 80 times to \$3.9 trillion or equivalent to 16% of S&P500 market cap (**Chart 2**). There are several factors that have been driving the rise of passive investing through ETF, among them low management and transaction fees, capital gains tax advantage compared to mutual funds, underperformance of active mutual funds and increasing coverage of ETF across country and sector.

Today, there is no short of ETF covering various category of Emerging Markets universe, from the traditional country, region and sector division to those focusing on dividend and factor investing, and those utilizing leverage and fundamental weighting mechanism. This makes it easy for investors to implement their asset allocation strategy and diversify across market without paying horrendous transaction and management fees. The efficiency of ETF, however, is not without drawbacks. It has been long argued that passive investing amplifies bubbles as most ETFs are based on market-capitalization weighting mechanism that overweight “overvalued” firms and “underweight” “undervalued” firms, hence investor discretion is necessary. Even more attention should be given when choosing the index benchmark. For example, on two of the largest EM ETF, Vanguard FTSE Emerging Markets ETF (VWO) and iShares MSCI Emerging Markets ETF (EEM), one has a significant South Korea exposure and the other has none (**Table 1**).



Country	% of ETF Market Cap	
	VWO	EEM
China	33.5	30.99
Taiwan	13.7	10.84
India	12.1	9.22
Brazil	8.5	7.56
South Africa	6.6	5.89
Russia	4.2	4.06
Thailand	3.9	2.94
Malaysia	3	2.15
Mexico	3	2.64
Indonesia	2.3	2.11
South Korea	0	12.14

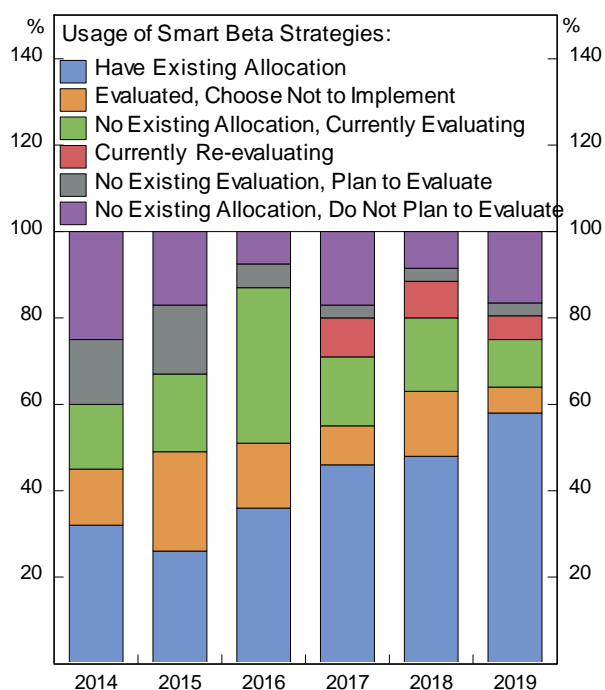
Table 1. Country Composition of VWO and EEM ETF

Is “Smart”/Multifactor ETF Really Smart?

The idea of having an actively managed EM portfolio with low management fee is a utopia for many investors. In the recent years the number of actively managed ETF, or also known as smart beta or multifactor ETF, has surged and already covers multiple asset classes. It is estimated that smart ETFs are now managing \$ 880 billion worldwide. Two main reasons investors are attracted by the smart beta strategies are the possibility of the instrument to act as a low-cost return enhancement and risk reduction strategy (Smart Beta: FTSE Russell 2019 Global Survey Findings from Asset Owners). Currently almost 60% of institutional investors have already implemented smart beta strategy in their portfolio, double the rate 5 years ago, and 15% more are evaluating the strategy.

The smart or multifactor ETF has been quite successful in performing against the U.S. and Developed Markets benchmark. Among the top 4 smart ETF focusing on the U.S. market, three has been outperforming or tracking the S&P500 and one is a flop. And for the top 2 tracking DM ex-US market, both has been outperforming the MSCI World Ex-US benchmark significantly with lower volatility. Investing in this instrument, however, could sometimes be akin to a black box approach as not all provider fully disclose the trading mechanism of the index.

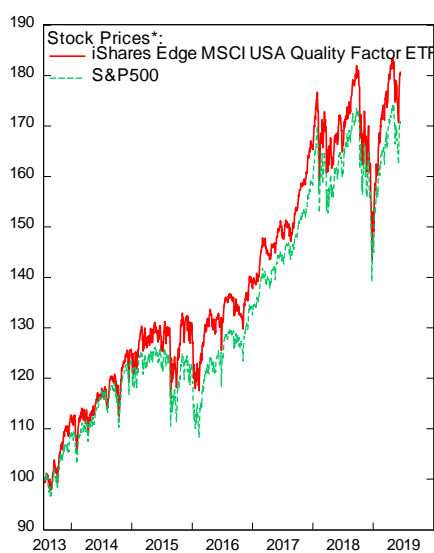
The picture is less rosy for Emerging Markets Smart ETF. In the EM space, currently there are 19 “Smart” or multifactor ETF listed in the U.S. exchange and are based on various broad Emerging Market index, including the well-known MSCI Emerging Markets Index. However, most of their return has been disappointing - not only the return of these ETF is on par or worse than investing in traditional EM benchmark, such as MSCI EM ETF, volatility of these ETF is also higher. Out of the 9 top smart ETF on the broad EM category, 5 are a flop. It is likely that the inefficiency and different characteristics of emerging countries’ equity render factor investing less useful. For example, it would be difficult to categorize conglomerates into category such as value or growth, or even compare volatility across market when currency movement could be very volatile. Moreover, value trap is a common occurrence in EM countries where apparently cheap companies mask underlying governance issue such as accounting fraud.



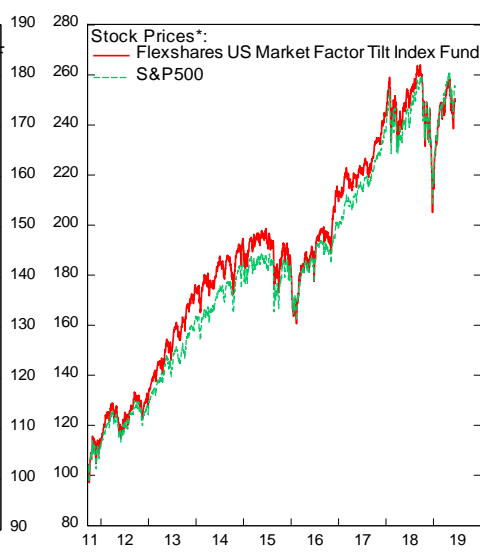
Source: FTSE Russell 2019 Global Survey Findings from Asset Owners

U.S. and Developed Markets Ex-US

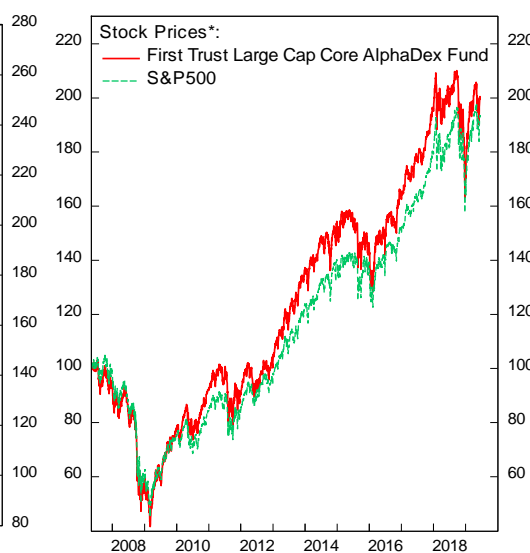
Ticker	Standard Deviation		Name	Description	AUM
	ETF	S&P500 / MSCI DM Ex-US			
QUAL US Equity	12.54	19.28	iShares Edge MSCI USA Quality Factor ETF	The iShares Edge MSCI USA Quality Factor ETF (the Fund) seeks to track the investment results of an index that measures the performance of U.S. large and mid capitalization stocks as identified through three fundamental variables: return on equity, earnings variability and financial leverage.	10793.0
LRGF US Equity	13.14	13.18	iShares Edge MSCI Multifactor USA ETF	iShares Edge MSCI Multifactor USA ETF is an exchange traded fund incorporated in the USA. The Fund seeks to track the investment results of an index composed of U.S. large and mid capitalization stocks that have favorable exposure to target style factors subject to constraints.	1053.1
TILT US Equity	13.73	13.24	FlexShares Morningstar US Market Factor Tilt Index	FlexShares Morningstar US Market Factor Tilt Index Fund is an exchange-traded fund incorporated in the USA. The Fund seeks to track the performance of the Morningstar US Market Factor Tilt Index.	1413.9
FEX US Equity	19.39	19.28	First Trust Large Cap Core AlphaDEX Fund	First Trust Large Cap Core AlphaDEX Fund is an exchange-traded fund incorporated in the USA. The Fund seeks investment results to the Defined Large Cap Core Index, which ranks stocks from the S&P 500 Index on growth factors including three, six and 12-month price appreciation, sales to price and one year sales growth, and separately on value factors.	1407.6
INTF US Equity	13.85	16.06	iShares Edge MSCI Multifactor International ETF	iShares Edge MSCI Multifactor International ETF is an exchange-traded fund incorporated in the USA. The Fund seeks to track the investment results of an index composed of global developed market large and mid capitalization stocks, excluding the U.S., that have favorable exposure to target style factors subject to constraints.	1253.3
RODM US Equity	11.66	12.33	Hartford Multifactor Developed Markets ex-US ETF	Hartford Multifactor Developed Markets ex-US ETF is an exchange-traded fund incorporated in the USA. The Fund seeks to generate returns and reduce volatility through the systematic re-allocation of risks commonly found in capitalization-weighted indexes and similarly benchmarked active approaches in developed markets equities (ex-US).	2192.6



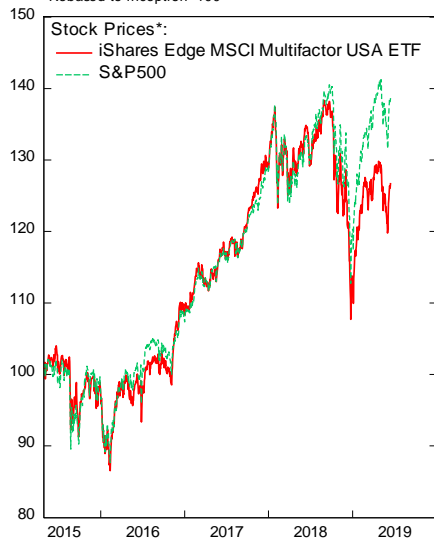
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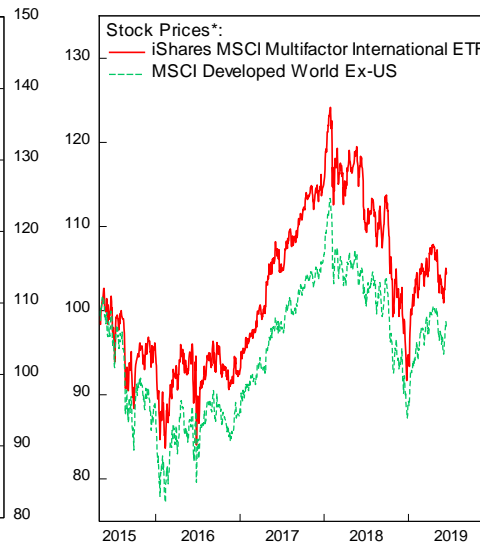
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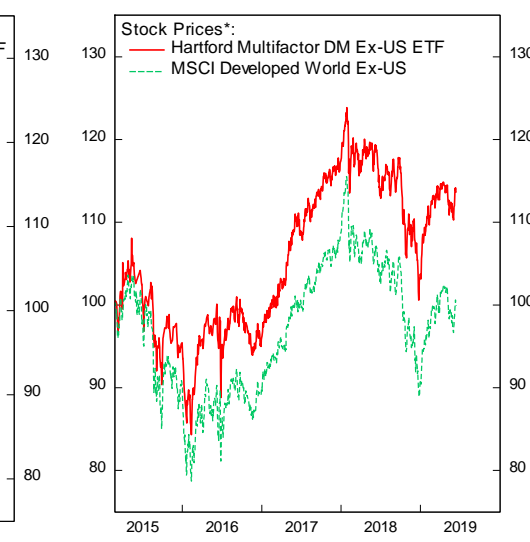
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Emerging Markets

Ticker	Standard Deviation		Name	Description	AUM
	ETF	MSCI EM			
GEM US Equity	17.02	14.04	Goldman Sachs ActiveBeta Emerging Markets Equity ETF	Goldman Sachs ActiveBeta Emerging Markets Equity ETF is an exchange-traded fund incorporated in the USA. The Fund seeks to provide investment results that closely correspond, before fees and expenses, to the performance of the Goldman Sachs ActiveBeta® Emerging Markets Equity Index.	1682.40
PXH US Equity	28.75	19.96	Invesco FTSE RAFI Emerging Markets ETF	Invesco FTSE RAFI Emerging Markets ETF is an exchange-traded fund incorporated in the USA. The ETF tracks the performance of the FTSE RAFI Emerging Markets Index. The ETF holds emerging market stocks of all sizes. Its investments are selected and weighted on book value, cash flow, sales, and dividends.	1263.26
FEM US Equity	20.11	15.06	First Trust Emerging Markets AlphaDEX Fund	First Trust Emerging Markets AlphaDEX Fund is an exchange-traded fund incorporated in the USA. The Fund seeks investment results that correspond to the NASDAQ AlphaDEX® Emerging Markets Index.	664.83
EMGF US Equity	17.12	13.89	iShares Edge MSCI Multifactor Emerging Markets ETF	iShares Edge MSCI Multifactor Emerging Markets ETF is an exchange-traded fund incorporated in the USA. The Fund tracks the investment results of an index composed of stocks of large and mid-capitalization companies in emerging markets that have favorable exposure to target style factors subject to constraints.	361.05
JPEM US Equity	16.26	14.37	JPMorgan Diversified Return Emerging Markets Equity ETF	JPMorgan Diversified Return Emerging Markets Equity ETF is a U.S. registered exchange-traded fund. The Fund seeks investment results of the FTSE Emerging Diversified Factor Index, which employs a unique risk framework to diversify risks across regions and super sectors, and a multi-factor stock ranking process to identify companies with strong fundamentals.	322.23
QEMM US Equity	15.12	14.03	SPDR MSCI Emerging Markets StrategicFactors ETF	SPDR MSCI Emerging Markets StrategicFactors ETF is an exchange-traded fund incorporated in the USA. The ETF tracks the performance of the MSCI Emerging Markets Factor Mix A-Series Index. The ETF holds emerging market stocks of all cap sizes. Its investments are selected using three criteria: value, quality, and low volatility.	278.40
PIE US Equity	25.16	19.89	Invesco DWA Emerging Markets Momentum Portfolio	Invesco DWA Emerging Markets Momentum Portfolio is an exchange-traded fund incorporated in the USA. The Fund seeks investment results that correspond to the price and yield of the Dorsey Wright Emerging Markets Technical Leaders Index.	158.04
ROAM US Equity	15.44	14.45	Hartford Multifactor Emerging Markets ETF	Hartford Multifactor Emerging Markets ETF is an exchange-traded fund incorporated in the USA. The Fund seeks to generate returns through the systematic re-allocation of risks commonly found in capitalization-weighted indexes and similarly benchmarked active approaches.	93.45
DEMG US Equity	13.31	12.95	The Xtrackers FTSE Emerging Comprehensive Factor ETF	The Xtrackers FTSE Emerging Comprehensive Factor ETF is an exchange traded fund incorporated in the USA. The Fund seeks to track the performance of the FTSE Emerging Comprehensive Factor Index. The index is designed to provide exposure to high alpha generating core emerging markets equities using five premium factors of value, quality, momentum, low volatility and size.	3.58

