

International Technical Leaders: Developed and Emerging ETFs Celebrate 10-Year Anniversary

Summing up a Strong 2017 and analyzing historical returns for International Momentum

CHARLIE COLEMAN, ASSOCIATE PORTFOLIO MANAGER, NASDAQ DORSEY WRIGHT

Summary

- International markets strengthened in 2017 relative to U.S. equity markets
- Broad International Developed and Emerging markets had several years of underperformance relative to U.S. equities since the 2008 financial crisis
- International momentum portfolios have constantly outpaced broad market cap indexes
- DWA International Developed Momentum (DWADMT) and Emerging Markets (DWAEMT) are available as ETFs through the Dorsey Wright Technical Leaders lineup at Invesco.

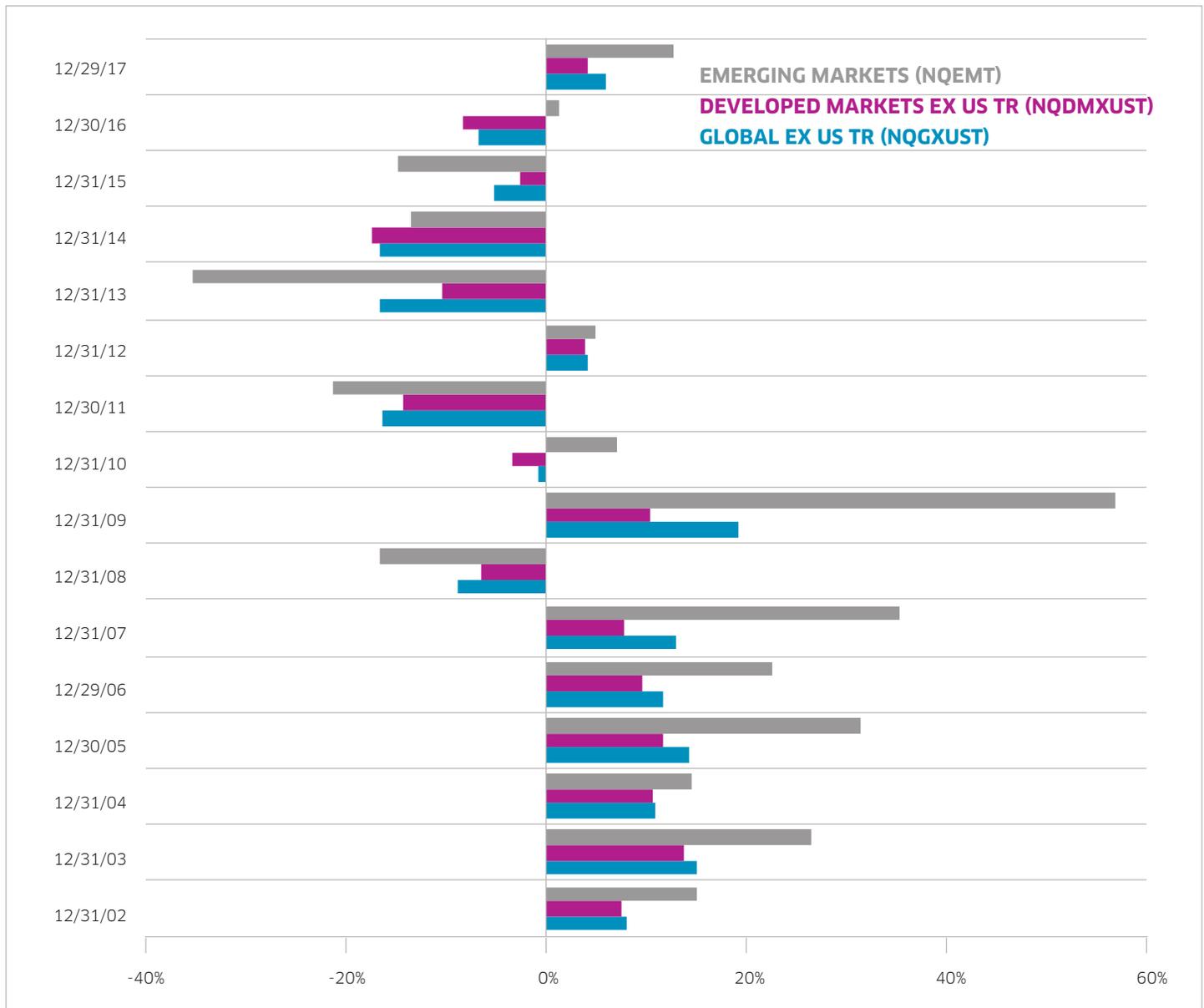
Arguably one of the most pronounced stories of the year has been the rally in international markets after a multi-year stretch of underperformance relative to U.S. equity markets (S&P 500 (SPX)). Through the end of 2017, Global Ex-U.S. markets (NASDAQ Global Ex United States TR Index (NQGXUST)) has continued to show positive strength in the face of numerous areas of contention such as failing Brexit negotiations and increased political issues with North Korea.

2017 PERFORMANCE



The rationale behind the rally in international equities varies based on the source. Reasons include historically low (or negative) interest rates spurring increased spending, overly inflated U.S. equity multiples causing other markets to seem increasingly “cheap,” and the falling U.S. Dollar, creating greater appreciation during the FX conversion. With multiple possible drivers of the international equity rally, alongside interest rates that continue to be supportive of spending and equity investing rather than saving or using fixed income, this does not seem to be a short-lived phenomenon. It has been several years since we have seen relative performance dominance of international equities over the U.S. Since 2008 the U.S. markets have outperformed International Developed Markets (NASDAQ DM Ex United States TR Index (NQDMXUST)) and Emerging Markets (NASDAQ Emerging Markets TR Index (NQEMT)), seven out of ten years, and the combined Global Ex-U.S. markets (Global Ex- U.S. markets (NASDAQ Global Ex United States TR Index (NQGXUST)) six out of ten years including 2017. Looking back further however, from 2000 to 2017 Global Ex U.S. markets outperformed U.S. markets nine out of 17 years.

GLOBAL MARKET RETURNS VS. S&P 500



The majority of outperformance came from 2000 to 2008, as international markets had a tremendous bull run. Emerging markets entered a “golden age” of performance more than tripling returns of the S&P 500, while international developed markets doubled the returns of the S&P 500. The international rally saw an end when global returns took a sharp downward turn during the start of the 2008 global financial crisis. Since the crisis, U.S. markets have been fueled by a strong economic recovery while many countries around the globe are still feeling the recession’s effects.

Through the utilization of factor tilts however, international developed returns have continued to be attractive relative to the simple market cap indexes that continue to be the baseline for performance. Over the eight years that that International developed market cap indexes underperformed U.S. markets, several portfolio factors have performed noticeably better. The two highest returning factors over the time frame are share buybacks and momentum. Since the end of 2008 International Developed Momentum (Dorsey Wright Developed Markets Technical Leaders NTR (DWADMNTR)) has outperformed International Developed markets over 55% of the time.

INTERNATIONAL DEVELOPED FACTOR RETURNS

2009	2010	2011	2012	2013	2014	2015	2016	2017
Global x US 45.66%	Momentum 20.55%	Dividend -1.57%	Global x US 20.12%	Momentum 37.73%	Buyback 2.54%	Buyback 7.98%	Buyback 13.49%	Buyback 34.57%
Momentum 42.82%	Dividend 14.40%	Low Vol -3.29%	DM x US 19.82%	Buyback 33.86%	Low Vol 2.34%	DM X US Growth 4.47%	Dividend 10.77%	Momentum 31.48%
Dividend 37.96%	Global x US 14.26%	DM x US Value -11.65%	DM x US Value 18.83%	DM x US Value 23.59%	Dividend -0.61%	Momentum 1.06%	DM x US Value 5.68	DM X US Growth 29.34%
DM x US 36.76%	Low Vol 14.09%	DM X US Growth -11.82%	DM X US Growth 17.28%	DM X US Growth 22.94%	Global x US -2.96%	DM x US -1.30%	Global x US 5.13%	Global x US 27.74%
Buyback 35.90%	DM X US Growth 12.60%	DM x US -12.26%	Buyback 16.99%	DM x US 22.00%	DM x US -3.78%	Low Vol -3.43%	Low Vol 4.01%	DM x US 26.09%
DM x US Value 35.06%	DM x US 11.70%	Buyback -13.11%	Momentum 16.96%	Dividend 19.19%	DM X US Growth -4.06%	Global x US -3.79%	DM x US 3.67%	Low Vol 22.81%
DM X US Growth 29.91%	Buyback 8.09%	Global x US -14.13%	Low Vol 14.71%	Low Vol 17.21%	DM x US Value -4.92%	DM x US Value -5.22%	DM X US Growth -2.66%	DM x US Value 22.12%
Low Vol 20.65%	DM x US Value 3.81%	Momentum -17.37%	Dividend 13.12%	Global x US 15.81%	Momentum -5.36%	Dividend -18.73%	Momentum -7.56%	Dividend 19.99%

Data Source: Factset and Nasdaq Indexes. The returns above are index returns. Indexes are not available for direct investment and do not include fees or transaction costs. Past performance is not indicative of future results. Potential for profits is accompanied by possibility of loss.

Prior to index inception dates performance is based on a back-test of the data

Global x US	Nasdaq Global Ex United States	DM X US Growth	MSCI EAFE Growth	Momentum	Dorsey Wright DM Technical Leaders
DM x US	Nasdaq Developed Ex United States	DM x US Value	MSCI EAFE Value	Buyback	Nasdaq International Buyback Achievers
Low Vol	S&P Int Developed Low Volatility	Dividend	Nasdaq International Dividend Achievers		

Similar to International Developed Markets, Emerging Market factor returns have also had a rotation in strength over time. With a lack of factor specific indexes going back into the start of the 2000's, the data is not as robust as more Developed Markets. However, looking at Emerging Market Momentum (Dorsey Wright Emerging Markets Technical Leaders NTR (DWAEMNTR)) post 2008, a similar story to Developed Markets is presented. Momentum is one of the top two performing factors five out of nine years and from 2009 through the end of 2017 momentum is the top performing factor.

Emerging Market Factor Returns

2009	2010	2011	2012	2013	2014	2015	2016	2017
Emerging Markets 83.20%	Low Vol 29.43%	Low Vol -5.82%	Low Vol 22.73%	Low Vol -0.36%	Low Vol -1.54%	Growth -11.12%	Dividend 16.96%	Growth 47.12%
Value 79.70%	Momentum 28.77%	Momentum -8.10%	Emerging Markets 20.98%	Momentum 0.34%	Emerging Markets 0.10%	Low Vol -11.67%	Value 15.48%	Momentum 41.51%
Growth 78.38%	Emerging Markets 22.12%	Dividend -11.85%	Growth 20.86%	Growth 0.07%	Growth -0.09%	Momentum -12.41%	Emerging Markets 13.14%	Emerging Markets 34.65%
Dividend 74.89%	Dividend 20.18%	Value -17.57%	Dividend 20.25%	Emerging Markets -2.77%	Momentum -0.90%	Emerging Markets -13.44%	Growth 7.87%	Value 28.67%
Momentum 69.28%	Growth 19.58%	Growth -18.77%	Momentum 16.76%	Dividend -3.97%	Value -3.60%	Value -18.16%	Low Vol 4.36%	Low Vol 27.21%
Low Vol 59.98%	Value 18.80%	Emerging Markets -19.27%	Value 16.68%	Value -4.70%	Dividend 16.79%	Dividend -20.60%	Momentum 1.40%	Dividend 24.33%

DATA SOURCE: Factset, MSCI and Nasdaq Indexes. The returns above are index returns. Indexes are not available for direct investment and do not include fees or transaction costs. Past performance is not indicative of future results. Potential for profits is accompanied by possibility of loss.

Prior to index inception dates performance is based on a back-test of the data

Emerging Markets	Nasdaq Emerging Markets	Growth	MSCI Emerging Markets Growth	Low Vol	MSCI Emerging Markets Low Volatility
Value	MSCI Emerging Markets Value	Momentum	Dorsey Wright EM Technical Leaders	Dividend	MSCI Emerging Markets High Dividend

Accessing the momentum Factor

Several indexes have been created over the past 15 years to track momentum as a factor in a variety of universes, each with a different index construction. The Nasdaq Dorsey Wright Technical Leaders index line is focused on accessing momentum across U.S. and international markets. The index line includes 12 focused indexes, with broad market and sector exposure as well as two international indexes, one focused on Developed Markets (DWADM) and one on Emerging Markets (DWAEM). The indexes are all constructed to maximize the momentum factor exposure over other factors that may be present in the portfolio such as market vs equal weighting, which can alter the momentum return profile. During the index construction, the universe¹ is ranked with securities displaying the highest relative strength (momentum) characteristics ranked higher than those with lower relative strength characteristics. Those securities with a higher ranking will have the largest weight while those with lower rankings will be excluded or have a smaller allocation. Through factor weighting, the index momentum factor becomes a primary driver of returns rather than the market cap versions of similar indexes.

DWAEM² and DWADM³ have been live since October of 2007. Since the inception of the strategies, both have experienced periods of strength and weakness relative to their broad benchmarks as displayed in the factor return charts above.

Accessing the Indexes

Dorsey Wright Developed Markets Technical Leaders (DWADM) is available to investors through the Invesco DWA Developed Markets Momentum ETF (ticker: PIZ) while Dorsey Wright Emerging Markets Technical Leaders [DWAEM] is available to investors through the Invesco DWA Emerging Markets Momentum ETF (ticker: PIE). Both of the ETFs just celebrated their 10-year anniversary in December of 2017. The entire Technical Leaders index line is available as ETFs through Invesco. The current lineup of ETFs includes nine U.S. sectors, three focused on broader U.S. market exposure and two international momentum ETFs.

1 A full list of universes and index can be found in the Nasdaq Dorsey Wright index methodology. https://indexes.nasdaqomx.com/docs/Methodology_DorseyWrightTechnicalIndexes.pdf

2 Universe is the Nasdaq Emerging Markets Index

3 Universe is the Nasdaq Developed Markets Ex United States Index

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The relative strength (momentum) strategy is NOT a guarantee. There may be times where all investments and strategies are unfavorable and depreciate in value. Relative Strength is a measure of price momentum based on historical price activity. Relative Strength is not predictive and there is no assurance that forecasts based on relative strength can be relied upon.

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Dorsey Wright receives index licensing fees based on assets for the DWA ETFs listed above.

More Information

For more information on the Dorsey Wright, please email dwa@dorseywright.com.