CLS's WEEKLY 3

What You Need To Know About the Markets

MAY 22, 2018

1. Recent trends highlight a unique convergence between the ETF and mutual fund industries.
2. Can past performance help determine skill versus luck?
3. Evaluating cyclical trends helps to find investment opportunities and reinforce decisions.

CLS INVESTMENTS

Market Performance

Equities	LAST WEEK	QTD	YTD '18
Total U.S. Market[1]	-0.27	+3.33	+2.66
Domestic Large-Cap Equity[2]	-0.47	+3.02	+2.24
Domestic Small-Cap Equity[3]	+1.27	+6.49	+6.40
International Equity[4]	-0.85	+1.67	+0.47
Developed International Equity[5]	-0.47	+2.89	+1.32
Emerging Market Equity[6]	-2.26	-2.63	-1.25
Fixed Income	**LAST WEEK**	**QTD**	**YTD '18**
U.S. Investment Grade Bonds[7]	-0.46	-1.29	-2.73
Cash Equivalent[8]	+0.03	+0.22	+0.56
Commodities	**LAST WEEK**	**QTD**	**YTD '18**
Commodity[9]	+0.45	+3.62	+3.20

[1]Russell 3000 [2]S&P 500 Index [3]Russell 2000 Index [4]MSCI ACWI ex-U.S. Index [5]MSCI EAFE Index [6]MSCI Emerging Markets Index [7]Bloomberg Barclays Capital U.S. Aggregate Bond Index [8]Bloomberg Barclays Capital 1-3 Month U.S. Treasury Bill Index[9]Bloomberg Commodity Index

As of 5/18/2018

Week in Review

Equity markets across the globe were generally negative last week with the exception of standout performance from U.S. small-caps, which were up more than 1%. Emerging markets were the laggards, dropping more than 2%.

The Treasury yield curve steepened over the week as 10-year Treasuries crossed above the 3% mark, leading to negative returns for the broad bond market. Commodities performed well despite the strengthening U.S. dollar as oil prices continue to rise.

In economic news, initial jobless claims were above expectations but remain near post-crisis lows. Mortgage applications fell, and housing starts missed expectations as 30-year mortgage rates hit their highest levels since 2011. Lastly, retail sales remained weak, representing weakness in consumer spending.

The Race to Zero

"Nothing? Who do you think you're dealing with? Nothing costs nothing." — Terry Benedict, Ocean's Twelve (2004)

One of the biggest advantages of exchange traded funds (ETFs) over mutual funds (MFs) is lower expense ratios. Since ETFs are primarily index-based, and many have similar exposures, one of the most common ways firms compete is by lowering fees. Thus, newly launched ETFs have been undercutting existing fund expense ratios. In turn, issuers of the existing funds have been cutting their fees to stay relevant. This has generated a vicious cycle, which has come to be known as "the race to zero." This race has been a net benefit to investors, and if you are a thrifty shopper like me, ETFs have become that much more appealing.

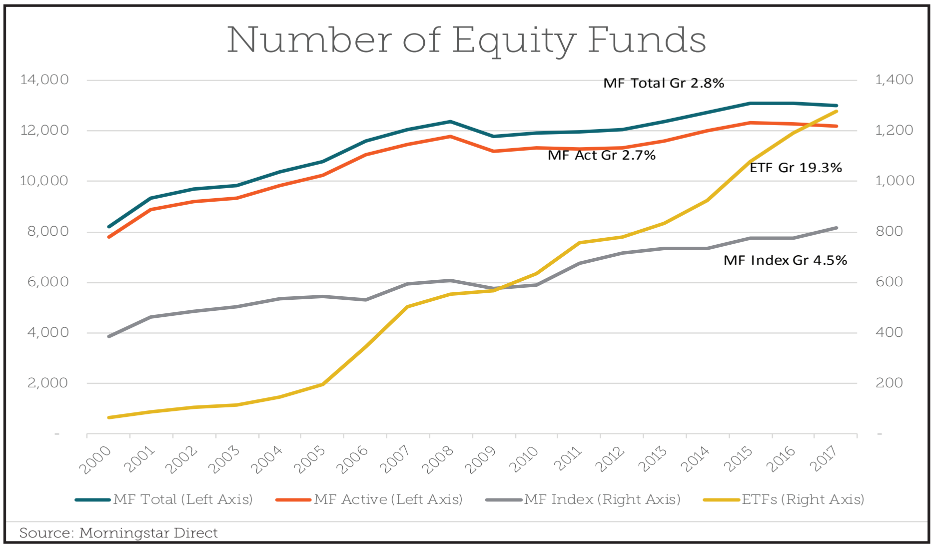
But the rise of ETFs and their huge asset growth have turned some heads in the MF world, particularly as some of that growth has been at the expense of MF assets. In response, it appears MF managers have followed suit and begun to reduce expenses and shift focus to index products to remain competitive. I have prepared an evaluation of expense growth over time for equity MFs and ETFs. But first, let's take a look at growth in the number of funds and assets to gain a better insight of market trends.

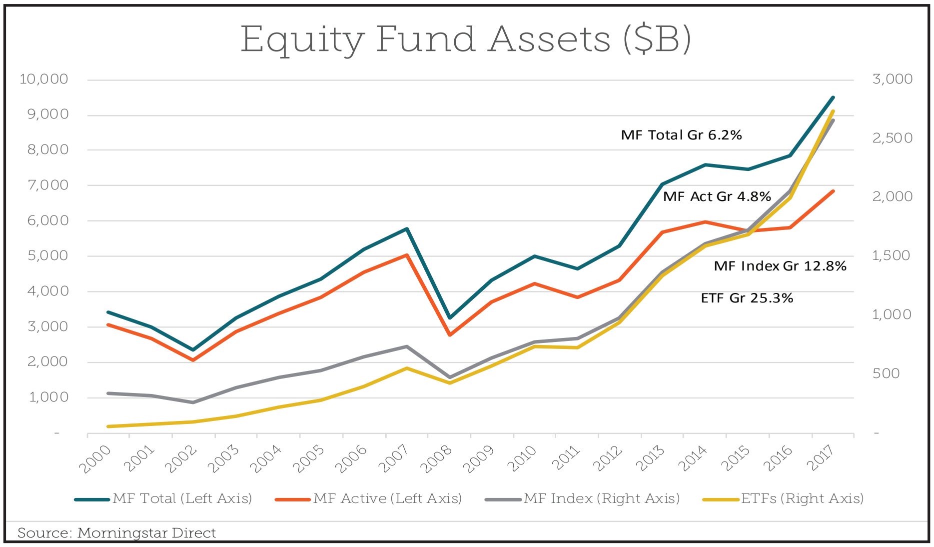
Number of Funds

The first chart shows the growth in the number of equity funds. Annual growth of total MFs and active MFs has been quite slow since 2000 (just under 3%), and it flattened out after 2009, which is when ETFs really took off. ETFs stand out with their spectacular growth rate of almost 20% per year with no end in sight. Note that index MFs have more than doubled in number since 2000, growing at a higher rate than active MFs — evidence that fund sponsors appear to have shifted focus on the types of products they launch.

Fund Assets

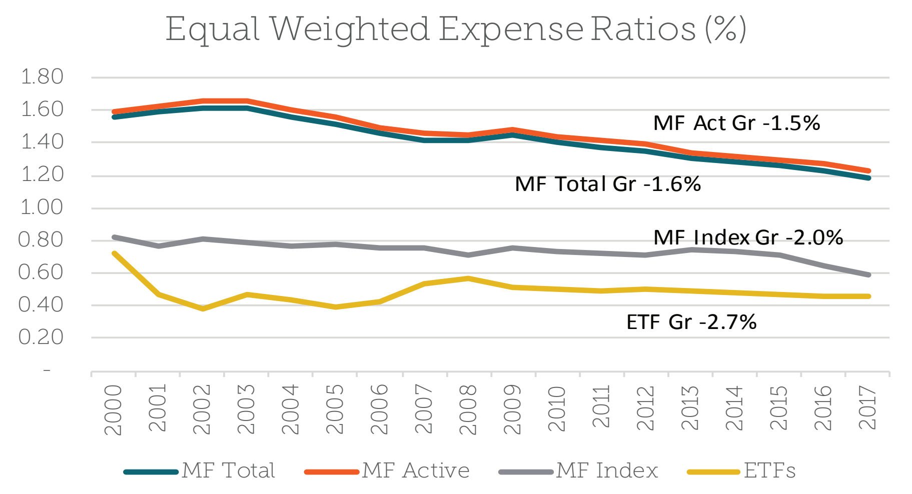
The next chart shows assets have grown for all categories, but there has been a lot more volatility in asset growth for active MFs (including several sharp declines). The growth in index MFs and ETFs has been smoother and significantly stronger. Index MF assets have experienced double-digit annual growth, more than twice that of active MF assets, while ETFs have grown 5x faster with a staggering 25% growth rate.



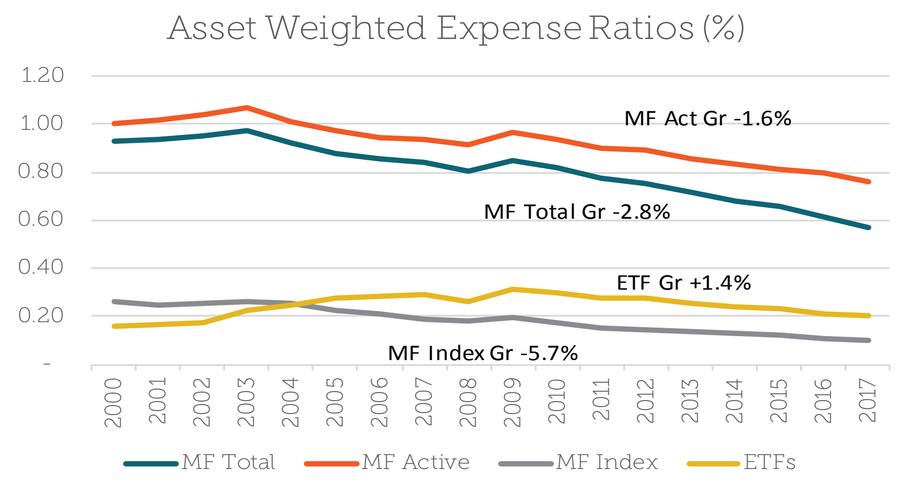


Expense Ratios
Equal-weighted expense ratios have come down for all categories. Downward growth is led by ETFs, close to -3%, reinforcing the "race to zero" theme. Shifting to asset-weighted reveals some interesting insights. First, active MF growth does not change much from the equal-weighted number — evidence that investors are willing to pay up for active management. Second, index MF growth shows a huge drop relative to active and actually ends up being lower than ETF growth — evidence that investors put a major focus on cost for index MFs. Lastly, and most interestingly, ETF asset-weighted expenses have actually increased. The reason is the rise in availability of smart beta and actively managed ETFs for which, similarly to active MFs, investors are willing to pay a little extra for alpha generation.

In summary, I present a snapshot of the actual numbers for categories we have covered comparing where we were in 2000 to where we are today. Certainly, the rise of ETFs has had a meaningful impact on the MF world, but it is interesting that MFs are also rubbing off on ETFs as investors show they don't mind paying a little extra for non-market-cap index exposure.



Source: Morningstar Direct



Source: Morningstar Direct

Summary of Stats		
Number of Funds		
	2000	2018
MF Total	8,189	13,027
MF Active	7,804	12,210
MF Index	385	817
ETFs	64	1,278
Fund Assets ($B)		
	2000	2018
MF Total	3,415	9,514
MF Active	3,072	6,857
MF Index	343	2,657
ETFs	59	2,733
Equal Weight Exp Ratio (%)		
	2000	2018
MF Total	1.56	1.19
MF Active	1.60	1.23
MF Index	0.82	0.59
ETFs	0.72	0.45
Asset Weight Exp Ratio (%)		
	2000	2018
MF Total	0.93	0.57
MF Active	1.00	0.76
MF Index	0.26	0.10
ETFs	0.16	0.20

Source: Morningstar Direct

"In the end, after reviewing our past performance, we could come to only one conclusion. We're so much better when we wing it." — Daniel Lugo, Pain & Gain (2013)

I recently had the pleasure of meeting Kenneth French at a Dimensional Fund Advisors institutional conference. He is a legend in the investing world and a pioneer in factor investing. He is best known for his work with his colleague, Eugene Fama, on the Fama-French Three-Factor Model, which shows that value and size can explain differences in stock returns in addition to market beta. His discussion at the conference was based on the idea that the past three and five years of returns (common evaluation metrics) do not give an investor enough precision to determine skill versus luck when evaluating active managers.

To state his point, French discussed the probability of having a negative premium over various time frames. Fama and French have proven that a historic premium exists for market beta, size, and value, but the research is performed using long time periods (for example 1927 to 2017). Many active managers utilize these premiums as their alpha drivers. Thus, these factors help explain and evaluate active managers' returns. As the table on the following page shows, the probabilities of a negative premium decrease as the time period increases — meaning the likelihood of skill making an impact over luck increases. While there is improvement, note that even at the 10-year time frame, market beta (stocks beating Treasuries) has been negative 9% of the time, while value and size (active return drivers) have been even worse. So, perhaps using past returns to evaluate active managers is not the best strategy.

To test this theory further, I performed my own analysis on the probability of outperformance of active managers depending on past performance. I compared large-cap blend category funds to the S&P 500 Index performance since 1990 to determine the probability of a fund that beat the index over the past three, five, seven, and 10 years continuing to beat the index over the next one year or three years. As the table below shows, the probability is not materially different given the various past time frames. Furthermore, using past performance as a predictor is actually unfavorable as the probability of future outperformance is less than half (about 40%) over the following year and only about a third over the following three years.

So, if using past performance to evaluate active managers is a bad idea, what can be used? On the next page are some of the criteria we at CLS utilize to evaluate active managers. These metrics can generally be summarized as choosing active managers who have dependable investment methodologies, sound processes, and can be trusted over the long term to follow through as promised.

Probabilities of Outperformance
Large Cap Blend Funds vs. S&P 500
Since 1990

	Probability that fund beat over the next...	
If a fund beat over the past...	1 year	3 years
3 years	41%	34%
5 years	38%	34%
7 years	39%	36%
10 years	38%	32%

Source: Morningstar Direct, 1990-2017

Probability of a Negative Premium (%)					
	1-Year	3-Year	5-Year	10-Year	20-Year
Market Beta	34	24	18	9	3
Size	41	34	30	23	15
Value	37	28	22	14	6
Momentum	28	16	10	3	0

Source: Fama/French Data Library and ETF.com

Fund Selection and Monitoring Metrics

Low cost

- Expense ratio — lower expense is a strong predictor of future returns.
- Portfolio turnover — lower turnover typically translates to lower costs and more investment conviction.

Dependability

- Benchmark R-squared — consistency of exposure relative to a benchmark provides more reliability to fund data.
- Category R-squared — consistency of exposure relative to a style box classification provides evidence of reliability (large value managers should not be tilted toward small growth).

Longevity and Stewardship

- Size of fund — size is useful in gauging sustainability.
- Does the portfolio manager invest in the fund they manage? — shows conviction with process and alignment with investors.

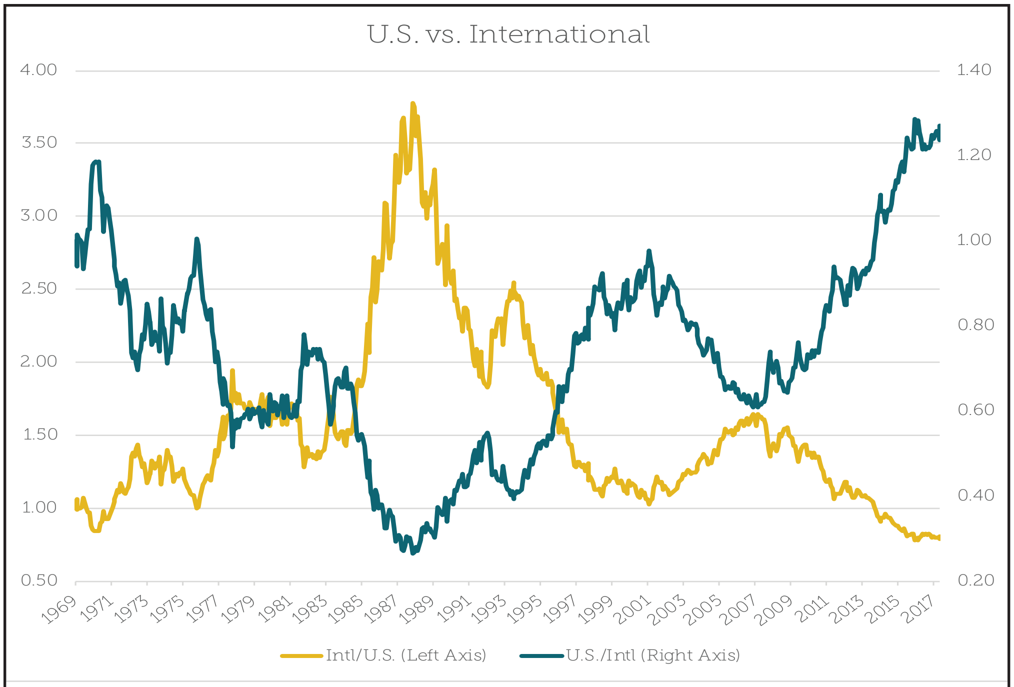
"You know, the thing about a shark, he's got... lifeless eyes, black eyes, like a doll's eyes. When he comes at ya, doesn't seem to be living... until he bites ya. And those black eyes roll over white, and then... ah, then you hear that terrible high-pitched screamin', the ocean turns red." — Quint, Jaws (1975)

As active managers, we look for investment opportunities all over the world. One way to find an opportunity is to evaluate cyclicality among various continuums (markets tend to move in cycles). As you may know, one of our current themes at CLS is Be Active. Our two major convictions for this theme are along the continuums of U.S. versus international and growth versus value. We often discuss the attractive relative valuations of international and value stocks as reasons to favor these asset classes, but reviewing cyclicality provides additional support for our investment decisions.

The idea of cyclicality relies on the theory of mean reversion, meaning as the performance gap between two assets widens, there is a greater probability for the performance to reverse and converge. Investing in the losing asset is called taking a contrarian view (opposite of the crowd) and is very difficult to do psychologically. But as the saying goes: In investing, you have to be different to win. Investing in the winning asset is called following the herd and may be dangerous as the divergence grows. Think about the widening gap as the jaws of a shark: They open the widest just before they sharply snap back and take a bite out of you.

U.S. Versus International

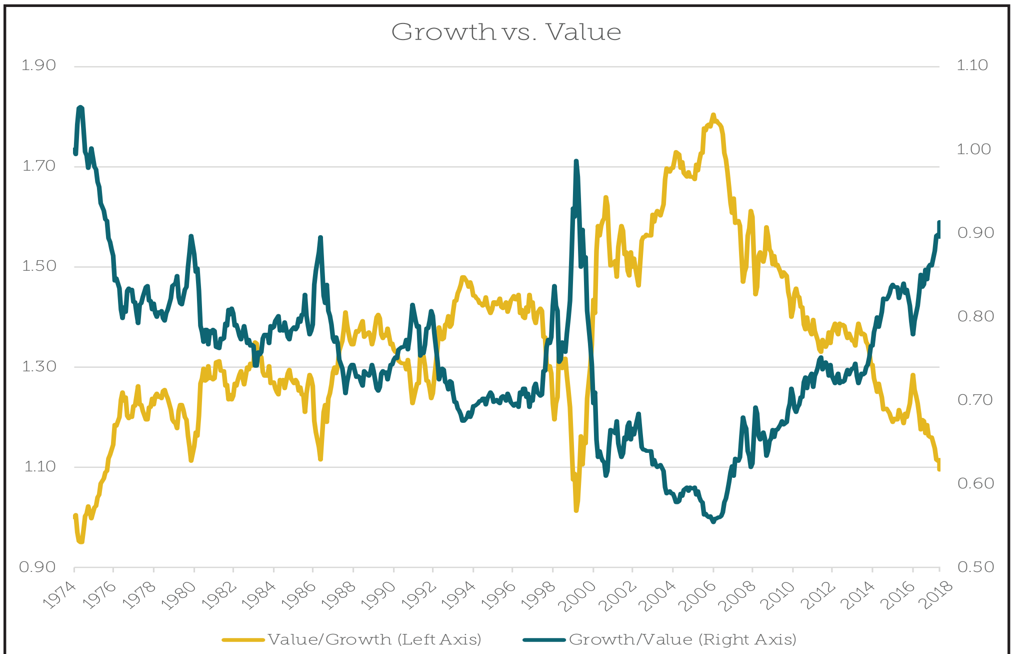
The chart below shows relative returns of the U.S. market versus international going back almost 50 years. The two lines are simply inversions of each other, but plotting them together provides more insight into cyclicality. Note that there are very clear cyclical flows (up, down, up, down) in return differences over time, and the trends seem to reverse at extremes. Since the financial crisis of 2008, the U.S. market has strongly outperformed international. In fact, the current gap is one of the largest we have ever seen. But the trend is starting to flatten out. So, as the shark's mouth is open wide, which side of the trade would you rather be on?



Source: Bloomberg, 12/31/1969-5/16/2018. U.S. represented by MSCI USA Index and International represented by MSCI EAFE Index

Growth Versus Value

A similar chart, to the right, plots the relative returns of global growth and value stocks. It shows that these cycles tend to be shorter-term in nature as compared to the previous chart. Growth, led by the media-popular FAANG stocks, has outperformed since 2014, creating another wide gap. While the current gap is not as wide as the one experienced during the tech bubble of 2000, it does appear to be wider than several other growth-outperforming peaks. Thus, the probabilities of reversion, and the chances of a shark bite, have increased.



Source: Bloomberg, 12/31/1974–5/17/2018. Value represented by MSCI World Value Index and growth represented by MSCI World Growth Index

Kostya Etus, CFA

Portfolio Manager

Konstantin "Kostya" Etus specializes in international investments. He is a co-manager on two mutual funds (aggressive allocation and international) and manager on various separate account strategies, including Core Plus ETF and SRI/ESG. In addition, he manages 529 plans.

Mr. Etus has eight years of investment experience, including six at CLS. He began his career at CLS in 2011 as a Trading Specialist and became a Research/Portfolio Analyst in early 2013. In 2016, he was promoted to Portfolio Manager. Prior to working at CLS, Mr. Etus worked as an Associate Financial Analyst at ConAgra Foods, Inc., managing the company's global cash network.

He graduated from the University of Nebraska at Omaha with a Bachelor of Science degree in Business Administration and obtained Master of Investment Management and Financial Analysis and Master of Business Administration degrees from Creighton University. He holds the FINRA Series 65 securities registration and the Chartered Financial Analyst (CFA) designation.

Did you know? Kostya grew up in Soviet Russia.

The Russell 3000 Index is an unmanaged index considered representative of the U.S. stock market. The index is composed of the 3,000 largest U.S. stocks. The S&P 500 Index is an unmanaged index of 500-large capitalization companies. This index is widely used by professional investors as a performance benchmark for large-cap stocks. The Russell 2000 Index is an index comprised of the 2,000 smallest companies on the Russell 3000 Index and offers investors a benchmark for small-cap stocks. The MSCI ACWI ex U.S. Index (MSCI All-Countries World Index, excluding U.S.) is an index considered representative of stock markets of developed and emerging markets, excluding those of the U.S. The MSCI EAFE Index is an index which tracks performance of international equity securities in developed countries in Europe, Australia, Asia, and the Far East, excluding the U.S. and Canada. The MSCI Emerging Markets Index is an index which tracks performance of large and mid-cap firms across countries classified as emerging market countries. The Bloomberg Barclays Capital U.S. Aggregate Bond Index measures performance of the U.S. investment-grade bond market. The Bloomberg Barclays Capital 1-3 Month U.S. Treasury Bill Index includes all publicly issued zero-coupon U.S. Treasury Bills that have a remaining maturity of less than 3 months and more than 1 month, are rated investment grade, and have $250 million or more of outstanding face value. The Bloomberg Commodity Index is made up of exchange-traded futures on physical commodities and represents commodities that are weighted to account for economic significant and market liquidity. An index is an unmanaged group of stocks considered to be representative of different segments of the stock market in general. You cannot invest directly in an index.

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Alpha, also called the risk-adjusted return, is the difference between an asset's expected return and its actual return. Beta is a measure of the volatility, or systematic risk of a security or a portfolio in comparison to the market as a whole. 1542-CLS-5/22/2018