CLS's WEEKLY 3

What You Need To Know About the Markets

SEPTEMBER 6, 2017

In This Edition

1. There are two notable things going on in the markets regarding risk and how it's impacting CLS portfolios.
2. A look at how CLS uses behavioral analysis.
3. Why you shouldn't follow the Dow Jones, and much more.

Market Performance

Equities	AUGUST	YTD '17	12-MONTH
Total U.S. Market[1]	+0.19%	+11.20%	+16.06%
Domestic Large-Cap Equity[2]	+0.31%	+11.93%	+16.23%
Domestic Small-Cap Equity[3]	-1.27%	+4.42%	+14.91%
International Equity[4]	+0.52%	+18.92%	+18.88%
Developed International Equity[5]	-0.04%	+17.05%	+17.64%
Emerging Market Equity[6]	+2.23%	+28.29%	+24.53%
Fixed Income	**AUGUST**	**YTD '17**	**12-MONTH**
U.S. Investment Grade Bonds[7]	+0.90%	+3.64%	+0.49%
Cash Equivalent[8]	+0.09%	+0.47%	+0.57%
Commodities	**AUGUST**	**YTD '17**	**12-MONTH**
Commodity[9]	+0.40%	-2.72%	+2.99%

[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 8/31/2017

August Market and Portfolio Review

Thanks to a nice little rally at month-end, the U.S. stock market was able to eke out a small gain for the month. For globally diversified and balanced portfolios, which held bonds and international stocks, August was even better than U.S market indices may have indicated.

In August, the overall U.S. stock market (Russell 3000 Index) was barely above 0%, but it still has an 11% gain for the year. Larger companies (S&P 500 Index) have done slightly better in both time frames, but smaller companies (Russell 2000 Index) have clearly lagged, down more than 1% for August and only up 4% year-to-date.

Overseas markets did better again last month. Overall, international markets (MSCI ACWI ex-U.S. Index) were up nearly 1%, with developed markets basically unchanged. Emerging markets (MSCI Emerging Markets Index) continue to be leaders this year, up more than 2% for the month. So far this year, international markets are up nearly 19%, and emerging markets are up more than 28%!

The bond market (Bloomberg BarCap Aggregate Bond Index) had another decent month too, up nearly 1%, and nearly 3% year-to-date. 10-year Treasury yields ended the month at 2.12%.

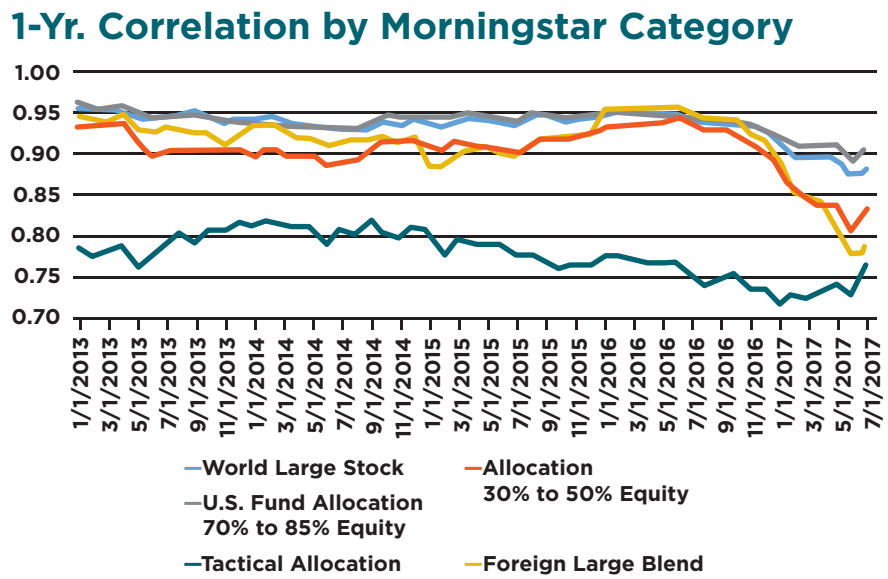
Commodities (Bloomberg Commodity Index) also eked out another small gain on the month, continuing a small winning streak. Nonetheless, they are still down nearly 3% this year.

While market prices are steadily moving higher this year, risk (as defined as price volatility) has declined for many multi-asset ETF portfolios. In turn, returns are steady and providing a smooth ride for investors. No wonder so many surveys lately show investors are feeling comfortable. But, will this trend continue?

Risk is decreasing for two reasons. First, in absolute risk terms (as defined by price volatility), overall market volatility is dropping. By some measures, it recently reached its lowest levels since the 1960s. That alone explains why investment firms are seeing inflows and higher asset-retention rates. Volatility is destabilizing for investors and often a catalyst for emotional decision-making. That is the case whether prices are falling (investors are nervous of losing money), or rising (investors fear missing out on gains).

The second reason is correlations between asset classes are also dropping. Correlations between asset class segments and strategies have dropped significantly — in other words, the diversification benefit is as strong as it has been in years, making portfolio risk measures drop for many globally balanced portfolios, such as those managed by CLS.

For example, the upper right chart, prepared by Jackson Lee, CFA, Quantitative Investment Research Analyst at CLS, shows that correlations are decreasing among mutual fund categories versus a global equity benchmark. All else being equal, this trend lowers portfolio risk.



Source: Morningstar

At CLS, we strategically manage balanced portfolios to relative *risk* targets (unlike other strategic managers who manage to target *asset* allocations). This decline in correlations has lowered our actual portfolio risk levels. While risk levels remain within our Risk Budget bands, they are definitely on the lower edges. This is not because we are becoming more cautious, it is simply due to the current market dynamics.

When correlations start to move higher again, as they eventually will do, portfolio risk numbers will rise — not necessarily because we're becoming more bullish (though we could be if the market offers investments on sale), but because market internals are changing.

It should be noted, however, that not all balanced portfolios in the industry are showing reductions in portfolio risk. I believe that is because many balanced funds do not include much exposure to international markets or real assets, such as commodities and natural resources. In addition, many balanced funds are crowding into popular sectors, such as consumer discretionary stocks. At CLS, our decisions are driven by relative valuations and a contrarian bent, so we tend to have less exposure to the popular sectors and more exposure to the undervalued and unloved.

The chart on the next page, created by CLS Portfolio Manager Grant Engelbart, CFA, illustrates how risk has changed for many ETFs. It

shows year-over-year changes in relative risk (as defined by dividing the standard deviation of the ETF by the standard deviation of a global equity benchmark) and in portfolio beta.

Some conclusions:

- Relative risk increased in every broad asset class, except EFV (developed international value stocks), in the two one-year periods shown, but there were a lot of divergences in betas.
- Energy and natural resources saw large risk reductions from a beta standpoint.
- Emerging market risk has also dropped significantly.
- Many funds are overweight to the consumer discretionary sector (Amazon dominates this sector, but it also includes investor darlings, such as Netflix and Tesla, along with powerhouse names like Home Depot and McDonalds), which has actually *increased* in beta by 25%.

In summary, portfolio risk — whether measured in absolute or relative terms, or both — has been dropping this year. I would suggest caution and warn that these numbers won't always look like this. Absolute volatility is cyclical and will rise. Correlations are also cyclical, and they will also rise.

For many ETF investors, I have two recommendations. First, simply be aware of how exceptional the current environment is and anticipate that portfolio risk will rise again. Second, it might be a good time to consider broader diversification, whether that means becoming more global, adding more real assets, or even diversifying further into value-oriented sectors, such as financials and energy. Doing so should help manage overall portfolio volatility, especially once overall stock market volatility starts to pick up again.

Name	Ticker	Beta 8/1/15 to 7/31/16	Beta 8/1/16 to 7/31/17	Beta Change %
PowerShares DB Agriculture ETF	DBA	0.20	-0.19	-192.7%
Energy Select Sector SPDR® ETF	XLE	1.11	0.22	-80.4%
Financial Select Sector SPDR® ETF	XLF	1.02	0.30	-71.0%
iShares MSCI EAFE Value ETF	EFV	1.12	0.49	-56.5%
SPDR® S&P Global Natural Resources ETF	GNR	1.35	0.69	-49.0%
iShares MSCI Emerging Markets ETF	EEM	1.23	0.71	-42.2%
iShares MSCI Emerging Markets ETF	EEMA	1.17	0.92	-21.8%
iShares MSCI ACWI ex U.S. ETF	ACWX	1.10	0.91	-16.8%
iShares MSCI Emerging Markets Sm-Cp ETF	EEMS	1.08	0.91	-15.4%
iShares MSCI EAFE ETF	EFA	1.08	0.99	-7.9%
Technology Select Sector SPDR® ETF	XLK	1.00	1.18	17.6%
Consumer Discret Sel Sect SPDR® ETF	XLY	0.94	1.18	25.7%
Guggenheim Frontier Markets ETF	FRN	0.93	1.18	27.0%
iPath® Bloomberg Cmdty TR ETN	DJP	0.26	0.38	46.2%

Behavioral Analysis

At CLS, when we determine return expectations, we use five categories of potential return drivers: valuations, technicals, fundamentals, economic, and quantitative.

We are changing the label of one of these drivers from technicals to behavioral. This move is motivated by our belief that "behavioral" is a more representative term of how we think and make investment decisions. Behavioral not only captures traditional technical analysis (the study of market prices), but also sentiment analysis (what investors are thinking, saying, and doing).

To put it another way, we think the CMT Association's definition of technical analysis is a great term for behavioral analysis.

"..the study of data generated by the action of markets and by the behavior and psychology of market participants and observers. Such study is usually applied to estimating the probabilities for the future course of prices for a market, investment or speculation by interpreting the data in the context of precedent."

We use behavioral analysis in a few ways. First, it provides inputs into the CLS Edge Score (our proprietary expected return score for every ETF). Currently, for example, the overall stock markets are displaying positive momentum, which should provide a boost to expected 12-month returns.

Second, it helps inform our trading decisions (short-term transaction timing). For example, if we want to sell an investment, but it is displaying positive technicals, or if sentiment analysis is positive, we may postpone the trade until we feel the timing is better.

As Benjamin Graham, who is often considered the father of value investing and the mentor of Warren Buffett, said:

"In the short run, the market is like a voting machine—tallying up which firms are popular and unpopular. But in the long run, the market is like a weighing machine—assessing the substance of a company."

Behavioral analysis helps us understand investor sentiment within the marketplace and determine how investors are voting with their dollars.

As investment managers and counselors, we believe our greatest value-add when making investment decisions and providing investment counsel is to be aware of the behavioral biases of the markets, investors, and ourselves.

Benchmark Construction: Why It's Important

When I'm on the road talking to investors, many find the information in this section extremely useful. My goals are to explain:

- How a few of the major benchmarks are flawed and should be disregarded.
- How the "market" is defined and benchmarks are constructed.
- How smart beta ETFs, which are also passively managed to benchmarks, are constructed - and why we like them.

First, let's talk about the benchmark we hear about every day: the Dow Jones Industrial Average (DJIA).

The DJIA is a market benchmark favored by many investors, and particularly, the financial media. It has the historical advantage as the first index many became aware of: the first-mover advantage.

But, it's not a good benchmark. In general, a benchmark should be most representative of an investment. For an investor trying to understand how the overall U.S. stock market has performed, the DJIA fails. It is composed of only 30 stocks, captures only about 20% of the overall market, and is weighted by price, not market capitalization. For more on why the DJIA isn't representative of the market, please check out this excellent CLS blog post.

Let's look at a simple example of how a price-weighted index works. In this case, we have three companies. Company A has a stock price of $10, Company B has a price of $20, and Company C has a price of $70.

The prices total $100. As a result of the index being price-weighted, the company with the $70 stock price dominates the index with a 70% portfolio weight. This is how the DJIA is weighted. The higher-priced stocks get the larger weights — even if the stock with the higher price is a smaller company.

The best definition of the "market," however, is determined by looking at the total market capitalization of all stocks. That can be found by multiplying the share price by shares outstanding of each company.

Using the same three companies in the prior example, let's add shares outstanding for each. In this case, Company A has issued one billion shares outstanding, so its overall market capitalization is now $10 billion (traditionally the standard minimum market-cap threshold to be considered a large-cap company). Given that Company A and Company B issued significantly fewer shares, their share of the total market cap has been reduced. Company C, for instance, went from a 70% benchmark weight in the price-weighted benchmark to a 20% weight in the market-cap-weighted index.

Note: Company C would qualify as a mid-cap stock as its market cap is over the traditional $2 billion market-cap threshold and Company B would be considered a small-cap since it is under $2 billion.

Another note: When the total market is broken down into large-, mid-, and small-cap categories by market cap, large-caps make up approximately 70% of the total market, mid-caps make up about 20%, and small-caps roughly 10%. This is handy to know as many investors "diversify" their portfolios

Price Weighted		Share of Total Price
	Price	
Company A	$10	10%
Company B	$20	20%
Company C	$70	70%
Total	**$100**	

Market Cap Weighted		Share of Total Price	Shares Outstanding	Market Capitalization	Share of Total Market Cap
	Price				
Company A	$10	10%	1,000,000,000	$10,000,000,000	70%
Company B	$20	20%	71,428,571	$1,428,571,429	10%
Company C	$70	70%	40,816,327	$2,857,142,857	20%
Total	**$100**			**$14,285,714,286**	

Revenue Weighted	Price	Share of Total Price	Shares Outstanding	Market Capitalization	Share of Total Market Cap	Total Revenues	Shares of Total Revenues	Price/ Revenues
Company A	$10	10%	1,000,000,000	$10,000,000,000	70%	$1,428,571,429	20%	7.0
Company B	$20	20%	71,428,571	$1,428,571,429	10%	$5,000,000,000	70%	0.3
Company C	$70	70%	40,816,327	$2,857,142,857	20%	$714,285,714	10%	4.0
Total	**$100**			**$14,285,714,286**		**$7,142,857,142.86**		**2.0**

by investing half in large-caps and half in small-caps. That does not create a balanced equity portfolio; it creates a very imbalanced one with a large overweight to small-caps and significant underweights to large- and mid-sized stocks.

The weights for each company have nothing to do with its fundamentals (how a company makes money, its financial situation, etc.). In fact, it could be argued the market-cap index is simply a popularity index. In theory, a company with poor fundamentals could be extremely popular with investors and demand high-market weights. Index investors are essentially buying that when they buy the market indices, which in turn pushes prices up even more.

James Montier and Matt Kadnar wrote in GMO's recent white paper on this matter:

"A decision to allocate to a passive S&P 500 index is to say that you are ignoring what we believe is the most important determinant of long-term returns: valuation. At this point, you are no longer entitled to refer to yourself as an investor. You may call yourself a speculator, but not an investor."

Another way of building an index — through fundamental factors, such as revenues (sales) — is illustrated in the chart above.

In this case, Company B has the highest sales and could be considered the largest company with the most significant economic imprint, and would take the largest weight at 70%. Company C, the stock with the highest price and largest weight in the price-weighted index, has the lowest revenues and the lowest index weight. I think it makes sense that the company with the larger economic footprint — whether it is through revenues, income, or another factor — would have the largest weight and demand the larger investment.

The last column in the chart above, labeled Price/Revenues (perhaps a more common name is price-to-sales ratio), lists the market cap (price per share) divided by total revenues (or revenue per share). The lower the number, the better the valuation. Company B has by far the most attractive valuation with a ratio of 0.3. Company A, meanwhile, which has the largest market-cap weight, also has the highest valuation.

Assuming equal growth rates (an aggressive assumption given the valuation differences; higher growth companies tend to have higher valuations), which company deserves a higher allocation? Given the vast difference in valuations, I would allocate much more to Company B.

Smart beta ETFs, which CLS uses heavily, base their index construction on factors, such as fundamentals. As hinted above, we believe these are better benchmarks and will help us enhance risk-adjusted returns in the years to come.

There are other popular benchmarks to pick on, including the S&P 500 Index and NASDAQ Index. The NASDAQ is basically a cap-weighted index of the companies listed solely on the NASDAQ exchange. This excludes stocks listed on the NYSE (New York Stock Exchange) and other exchanges. The NASDAQ only captures about 36% of the overall market. It is really just a carry-over from the late 1990s when the index was used as a proxy (an imperfect one) of technology stocks.

What about the S&P 500 Index? This cap-weighted index is better than the DJIA or NASDAQ, but it only captures large-cap stocks and some mid-cap stocks. As a result, it covers about 80% of the overall market. We use it as a U.S. large-cap stock proxy (but, as noted earlier, it's not pure large-cap exposure).

Benchmark Construction: Why It's Important (Continued)

To represent the overall stock market, we use the Russell 3000. This market-cap-weighted index captures large-, mid-, and small-cap companies.

For reference, the table to the right shows recent total market capitalizations.

This section jammed in several market definitions. I hope it was useful.

Index	Total Market Cap	% of Russell 3000
Russell 3000	$26,824,566,000,000	100%
S&P 500	$21,685,000,000,000	81%
NASDAQ	$9,746,842,000,000	36%
DJIA	$6,102,015,000,000	23%

Source: Bloomberg

As always, a sincere thank you for reading. If you have any questions or feedback, including the new format on our podcast, please let me know.

Stay balanced.

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Chief Investment Officer

Rusty Vanneman is responsible for all investment operations at CLS, including investment philosophy, process, people, positioning, and performance. Mr. Vanneman is also responsible for internal and external communications regarding market environment and current investment strategies. He is part of the management team on two mutual funds (one aggressive and one balanced).

*Mr. Vanneman joined CLS in September 2012 as Chief Investment Officer. Previously, he served as Chief Investment Officer and Portfolio Manager at Kobren Insight Management (KIM) in the greater Boston area. His 11-year tenure at KIM included a 5-year span during which the firm was owned by E*TRADE Financial and he served as the Senior Market Strategist for E*TRADE Capital. Prior to working at KIM, he was a Senior Analyst at Fidelity Management and Research (FMR Co) in Boston. He was also a Managing Analyst at Thomson Financial.*

*Mr. Vanneman received a Bachelor of Science degree in Management from Babson College where he graduated with high distinction. He holds the Chartered Financial Analyst (CFA) designation and is a member of the CFA Institute. He is also a Chartered Market Technician (CMT) and a member of the Market Technician's Association (MTA). In addition, Mr. Vanneman authored the book "Higher Calling: A Guide to Helping Investors Achieve Their Goals." He was named one of the Top 10 Portfolio Managers to Watch by Money Management Executive in 2017.**

Did you know? Rusty had a brief stint as a cowboy near Valentine in Cherry County, Nebraska.

**CLS Investments, LLC ("CLS") Chief Investment Officer, Rusty Vanneman, CFA, CMT, was selected as a "Top 10 Fund Managers to Watch" in 2017 by Money Management Executive. Money Management Executive is an unbiased, third-party publication covering the asset management industry. Money Management Executive chose the list of managers to watch by screening Morningstar data from funds with a single manager, ranked as having the best three-year annualized returns in their respective categories. The list of managers was published March 27, 2017. Money Management Executive is not affiliated with CLS. Ratings and awards may not be representative of any one client's experience and are not indicative of CLS's future performance.*

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 composite of 500-large capitalization companies. This index is widely used by professional investors as a performance benchmark for large-cap stocks. The Russell 2000® is an index comprised of the 2,000 smallest companies on the Russell 3000 list and offers investors access to small-cap companies. It is a widely recognized indicator of small capitalization company performance. The MSCI All-Countries World Index, excluding U.S. (ACWI ex US) is an index considered representative of stock markets of developed and emerging markets, excluding those of the US. The MSCI EAFE Index is a composite index which tracks performance of international equity securities in 21 developed countries in Europe, Australia, Asia, and the Far East. The MSCI Emerging Markets Index is a composite index which tracks performance of large and mid-cap firms across 21 countries classified as emerging market countries. The Barclay's Capital U.S. Aggregate Bond® Index measures the performance of the total United States investment-grade bond market. The Barclay's 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 22 exchange-traded futures on physical commodities and represents 20 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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