CLS's WEEKLY 3

What You Need To Know About the Markets

NOVEMBER 14, 2017

1. Will year-end capital gains take down your portfolio?
2. Is technology good or bad for Wall Street?
3. Why Risk Budgeting replaces emotions with math.

CLS INVESTMENTS

Market Performance

Equities	LAST WEEK	QTD	YTD '17
Total U.S. Market[1]	-0.25%	+2.33%	+16.57%
Domestic Large-Cap Equity[2]	-0.14%	+2.71%	+17.33%
Domestic Small-Cap Equity[3]	-1.29%	-0.96%	+9.88%
International Equity[4]	-0.16%	+2.16%	+23.74%
Developed International Equity[5]	-0.40%	+1.43%	+21.67%
Emerging Market Equity[6]	+0.22%	+4.39%	+33.39%
Fixed Income	**LAST WEEK**	**QTD**	**YTD '17**
U.S. Investment Grade Bonds[7]	-0.40%	-0.19%	+2.95%
Cash Equivalent[8]	+0.01%	+0.10%	+0.66%
Commodities	**LAST WEEK**	**QTD**	**YTD '17**
Commodity[9]	+0.49%	+3.47%	+0.50%

[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 11/10/2017

Week in Review

Global stocks finished lower last week after a multi-week stretch of positive gains. The Russell 3000 Index was down 0.3% with large-caps losing less than small-caps. International stocks were mixed for the week, with emerging markets up 0.2% and developed lower by 0.4%. Momentum-based stocks were the best performing smart beta strategy, advancing 0.1%, while value stocks were down 0.2%. Bonds also sold off as the Bloomberg Barclays Aggregate Bond Index was down 0.4%. Yields on the U.S. 10-year Treasury moved higher by 6 basis points to yield 2.4%.

Should Investors Fear Impending Capital Gains?

Over the past few months, taxes have been at the center of economic and policy discussions in Washington. As Congress looks to overhaul the current U.S. tax code, the impact of investment-related taxes on long-term portfolio performance is often overlooked.

Earlier this month, Investment News published an article about why investors may be bracing for large tax bills in the near future. According to its analysis, while only 38% of fund companies had reported their estimated capital gains for 2017, many expected distributions of 10% or more. This could be a headache for investors who might owe taxes next year despite having no plans to fully liquidate their investment holdings.

One of the biggest reasons we like to use ETFs at CLS is that they give investors greater control over their tax situations. While mutual funds tend to distribute capital gains on a yearly basis, ETFs minimize or eliminate the underlying embedded capital gains in portfolios through their unique investment structure.

This structure effectively provides a way for many ETF sponsors to "step-up" the cost basis of the fund as flows move in and out through their creation/redemption process. Over time, this process essentially keeps the average cost basis of the portfolio in line with the markets. This is a benefit to investors as they only pay capital gains taxes for actual gains earned by purchasing and later selling the ETF directly in their account.

As always, investors should consult with their financial advisors to ensure their investments are managed to suit their unique tax situations. If you have more questions on how ETFs maintain their tax-efficiency status, I invite you to check out some of our ETF educational materials for more details.

Joseph Smith, CFA
Senior Market Strategist

Joe Smith specializes in quantitative research, risk management, and ETF due diligence. He serves as Senior Market Strategist for the CLS AdvisorOne International Equity Fund, CLS 's Thematic Growth Strategy, and CLS's Core Plus ETF Strategy.

Prior to joining CLS in 2015, Mr. Smith worked at Russell Investments where he served as an Analyst responsible for asset allocation research, portfolio construction, optimization design, and risk management research. He later joined Russell ETFs as Manager of ETF Product Development and Research, a role in which he developed quantitative indexing strategies implemented as ETFs. Mr. Smith also worked for Charles Schwab Investment Management as a Senior Product Specialist supporting product management activities for the Schwab ETFs fund family. In addition, he worked for CLS during the summer of 2014 as an Investment Analyst.

Mr. Smith received his Bachelor of Science degree in Economics from the University of Washington. He later received his Master of Business Administration from the Tepper School of Business at Carnegie Mellon University.

Mr. Smith holds the Chartered Financial Analyst (CFA) designation and is a member of the CFA Society of San Francisco, Pittsburgh, and Nebraska. He is also a member of the Society of Quantitative Analysts and the Quantitative Work Alliance for Applied Finance, Education and Wisdom.

Did you know? In grad school, Joe spent 40 days in nine countries.

Will Machines Take Over Wall Street?

Technology continues to change the way we do things. Ten years ago, the iPhone was introduced by Apple, disrupting the already-booming smart phone market. Today, smart phones are an integral component of our day.

Wall Street is no different when it comes to new technologies. ETFs, robo-advisors, bitcoin/blockchain, and other innovations are paving a new way forward for how investors manage their assets. A recent article in Bloomberg, *"Robots Are Coming for These Wall Street Jobs"*, highlighted how some of these newer technologies are affecting business for investment banks and asset managers, suggesting machines are going to take over everything.

In defense of the humans behind managing money, I would argue that is not necessarily a certainty. True, computing power is increasing at an exponential rate and has the potential to greatly improve efficiency. But, I would argue more firms will enhance how money is managed through the use of these tools.

At CLS, we use technology to conduct extensive quantitative analysis that enhances our Risk Budgeting Methodology. Quantitative analysis is one of the primary return drivers that influence our decisions, encapsulating many of the algorithms and models we use to measure risk in portfolios primarily through factor analysis.

Much of this in-house work is done through advanced statistical tools that help us work with large amounts of data in an efficient manner to determine how much risk we are sourcing from major drivers of investor returns, such as size, value, momentum, minimum volatility, quality, duration, and credit-related factors. In fact, this tool allows us to generate additional risk statistics for the majority of CLS portfolios and benchmarks in a matter of hours (not days).

So, the next time you hear the argument that machines are going to be running your money, keep in mind that as with all new technologies, human input is still necessary to ensure they are properly applied to address the challenges that matter most to you. Technology is only as good as the people who are applying it.

Replacing Emotions with Math

Our advisors and their clients often turn to us as not only stewards of their assets, but coaches who help them think through financial decisions in the face of uncertainty. Uncertainty can have a huge impact on the decisions investors make when it comes to their money.

This year has been exceptional when it comes to risk, as absolute market volatility has continued to hit new lows. In such a low-volatility environment, it can be easy for investors to assume the status quo will remain and to have some emotional buffer behind additional risk-taking in their portfolios.

Risk Budgeting removes the emotion from investing by boiling down investment decisions to standardized risk measures that can ensure clients are always on track to reaching their goals. The math behind our Risk Budget scores may seem complex, but they are quite intuitive. A Risk Budget score for any ETF or mutual fund we use is based on the following:

- **Relative Standard Deviation**: A measure of a portfolio's absolute risk evaluated relative to the absolute risk of a global equity portfolio, in our case the equity baseline portfolio (EBP).
- **Beta**: A measure of the correlated risk of a portfolio to the EBP. It is useful for understanding how similar or differentiated asset movement can be during various cycles in the market.
- **Relative Maximum Drawdown**: A measure of the downside risk relative to drawdown levels for the EBP. It is useful for determining an investment's financial risk and helping to reconcile risk with investor expectations.

These three components are all intended to measure different types of risk that can affect money over time. What makes them effective tools, however, is they can help investors maintain a clearer picture of risk in the markets, regardless of how high or low absolute market volatility currently is.

One really cool tool we recently launched is the Risk Budget Calculator. This allows anyone to visit our website and find out their Risk Budget score. This can be a great tool to help our clients better map their expected risk versus the actual risk they are able to bear. If anyone has ever been curious about how our Risk Budgeting Methodology works, I would highly encourage you to check it out. For more details about CLS's Risk Budgeting Methodology, you can dig deeper into our approach in the CLS Risk Budgeting white paper.

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 Bloomberg Barclay's Capital U.S. Aggregate Bond® Index measures the performance of the total United States investment-grade bond market. The Bloomberg 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 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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