DIRECTIONS
A quarterly publication of CLS Investments SPRING 2016

The Backbone of Successful Investing

An interview with a Senior Performance Analyst

In this quarter's Directions, we will interview two-decade industry veteran Gene Frerichs, often referred to internally at CLS as The Franchise given his vast knowledge, experience, and technical skills. The interview will give a complete review of the importance of performance analysis, including the four steps to analyzing performance, the tools involved, and the techniques CLS employs to help make investment decisions. Understanding the importance of performance analysis can help us achieve our ultimate goal: to provide the most complete and accurate data so we can make the best decisions for investors.

Gene Frerichs joined CLS in 1997. Throughout his career at CLS, Mr. Frerichs has been responsible for helping develop the Portfolio Administrator and Performance Analyst positions. Currently, Mr. Frerichs is an Investment Performance Analyst. In 1993, Mr. Frerichs received his Bachelor of Arts degree in Mathematics from Chadron State College in Nebraska. He currently holds a FINRA Series 65 license and has completed the first level of the CIPM program offered through the CFA Institute.

Former astronomer, Carl Sagan once said "You have to know the past to understand the present." That quote is one way to understand performance analysis, right?

That's right. Successful investing isn't just about picking securities and building portfolios. It's also about building and maintaining relevant investment reports that can measure and assess performance. This is critical information for both investors and investment managers alike.

Historical performance analysis can help us understand what worked and what didn't. Without it, we'd be operating blind. On its face, the analysis process is very simple. Start with a $100 investment, it goes up to $101, and you've got a 1% return. Basic high school math, right? But from there, performance analysis explodes in complexity.

So what goes into performance analysis? Walk us through it.

In straightforward terms, there are three steps to analyzing performance. First, choose a benchmark. At CLS, we're global investors so most of our portfolios are benchmarked against an Equity Baseline Portfolio (EBP) that contains both domestic and international stocks.

Second, calculate excess returns. This is pretty simple. Just measure the

performance versus the benchmark. Are you ahead or behind, and by how many percentage points?

The third step is more complicated, and it's one where CLS is truly ahead of the curve. This is attribution analysis, which I describe as the *why* of performance. After calculating excess returns, say we outperformed our benchmarks by 2%. But why? Where is that outperformance coming from? There are three ways to analyze attribution, let me elaborate:

1. Returns. At CLS, we use this method to analyze our competitors' performance. It's appropriate to use when there is limited access to information about relevant holdings. It calculates returns backwards – by studying performance, it determines the likeliest holdings. (It is fascinatingly accurate on what it can predict.)

2. Holdings. We use this method to analyze our own portfolios. It's a solid, middle-ground way to calculate attribution and is an industry standard.

3. Transactions. This is the most advanced, and most accurate, method, but it requires significantly more detailed data than holdings analysis.

CLS is known for our Risk Budgeting Methodology, and we place a lot of emphasis on it. But our attribution analysis is also really cutting-edge, and it plays an important role in analyzing risk. Tell us about some of the in-house attribution techniques CLS has developed.

Like I mentioned earlier, our attribution analysis at CLS is very advanced, particularly in terms of the detail it provides to portfolio managers. We've developed attribution reports around our proprietary risk budget score that quantify and evaluate the decisions of our portfolio management team. The team can then determine whether they need to make adjustments and accurately evaluate performance given the real-time constraints of an individual's own risk budget score. Joe Smith, Senior Market Strategist, is also developing reports based on smart beta tied to our X Factor Investment Theme. There are few templates available because smart beta is so new, so stay tuned for Joe's work as it is rather groundbreaking.

Do you also use industry tools to analyze attribution?

We use FactSet, which is the standard of many leading financial firms. FactSet allows us to break performance down to the granular level of individual stocks or subsets. This analysis measures both asset allocation and stock selection, which helps us determine the precise reason for our out- or underperformance – down to the assets allocated, and more specifically the stocks selected.

So why is performance analysis such a crucial part of the investment process – other than shining a light on what we're doing so we're not investing blindly?

Well, one portfolio might contain a number of ETFs, which we use a lot of at CLS, and each ETF might contain hundreds or thousands of stocks. That's what makes them great diversifiers. Detailed attribution analysis can reveal subtle differences in ETFs which can lead to significant out- or underperformance.

Diving this deep into data is pretty new for a firm of CLS's size. Our Investment Research Team is in its fourth year, and it is a significant commitment. Is it worth it?

Absolutely, the benefits are substantial. It might not save us from every market dive, but it will provide a far superior understanding of what's happening in the markets. Ultimately, it will help us serve our clients and help investors achieve their financial goals.

Thanks for your time, you're definately a wealth of inforamtion Gene.

A Note to 401(k) Investors

from CLS Senior Performance Analyst, Gene Frerichs

One aspect of performance analysis that impacts 401(k) investors is the difference between time-weighted and money-weighted returns. Analyzing performance through time-weighted returns measures how the advisor performed; the money-weighted method measures how the money performed. Money-weighted measurement is the traditional approach, and it's a legacy method used by a number of prominent firms. But it can actually distort results.

For example, if an investor has a brand new account with $100 invested that earns a 1% return over one year, the earnings will be $1. However, if three days before year-end, a rollover of $10,000 is deposited, which also returns 1%, the final earnings will be $101. With a money-weighted return, $101 will be applied to the original $100 amount, pushing the rate of return to more than 100 percent. Time-weighted return, meanwhile, measures each dollar while it is invested. In this scenario, it will measure the percentage earned on the $100 separately from that earned on the $10,000 and then link them together.

Time-weighted return provides the best measurement of how CLS performs as a money manager. It does require more immediate pricing data than money-weighted return, and 20 years ago, that would have been overly cumbersome. But today, in the digital age where we can download billions of data points in real-time, it makes more sense to use the most accurate method.

2016 Investment Themes

from CLS Chief Investment Officer, Rusty Vanneman, CFA

X-FACTOR

We expect lower U.S. stock market returns in the year(s) ahead and will therefore be emphasizing factor-based ETFs, otherwise known as "smart beta" ETFs. These ETFs have a rules-based approach to building a portfolio, which emphasizes a factor, such as value, growth, or high quality. Factor-based ETFs capture the essence of active management but at a fraction of the cost. We believe this emphasis will enhance returns in the year(s) ahead. CLS Investments is already an industry leader in the usage of smart beta ETFs, and this emphasis is likely to grow.

In addition, we expect market volatility will increase in the year(s) ahead. Market volatility has been at historically low levels in recent years, and this usually sets the stage for increased volatility. If that is the case, additional risk management, via factor-based risk management, should fortify our risk budgeting approach.

INTERNATIONAL OPPORTUNITIES

In a low-growth world, valuations, yields, monetary policies, and reforms play greater roles, and international markets are more likely to benefit from these factors than U.S. markets going forward. Currently in international markets, valuations are lower, dividend yields are higher, reforms are taking hold, and central banks are providing greater support.

While these benefits are powerful, some international markets are facing certain headwinds. For example, some emerging market economies aren't growing as once expected. A diversified approach to international investing may be complemented by targeted allocations in particular countries, regions, and sectors. We expect wider performance dispersion between countries when reforms and policies have an outsized effect.

CREATIVE DIVERSIFICATION

Given the low level of interest rates, we continue to be creative in how we diversify our equity-dominated portfolios. We can do this in two ways. First, we can be tactical in our fixed-income exposures, which we have been. We have actively managed our duration (i.e., interest rate sensitivity), credit, and sector exposures. Currently, our portfolios are less interest-rate sensitive than the overall bond market, and our overall credit quality is higher than in years past. Second, we can use alternative asset class segments and strategies, which can include managed futures, hedge fund strategies, and currencies. This could also mean increased exposure to commodities, which have been beaten down over the last several years (many commodities are at multi-year price lows). Commodities are a diverse and broad asset class, and we can utilize the broad array of ETF offerings to tailor our exposure.

The views expressed herein are exclusively those of CLS Investments, LLC, and are not meant as investment advice and are subject to change. No part of this report may be reproduced in any manner without the express written permission of CLS Investments, LLC. Information contained herein is derived from sources we believe to be reliable, however, we do not represent that this information is complete or accurate and it should not be relied upon as such. All opinions expressed herein are subject to change without notice. This information is prepared for general information only. It does not have regard to the specific investment objectives, financial situation and the par-ticular needs of any specific person who may receive this report. You should seek financial advice regarding the appropriateness of investing in any security or investment strategy discussed or rec-om¬mended in this report and should understand that statements regarding fu¬ture prospects may not be realized. You should note that security values may fluctuate and that each security's price or value may rise or fall. Accordingly, investors may receive back less than originally invested. Past performance is not a guide to future performance. Investing in any security involves certain sys-tematic risks including, but not limited to, market risk, interest-rate risk, inflation risk, and event risk. These risks are in addition to any unsystematic risks associated with particular investment styles or strategies.

An ETF is a type of investment company whose investment objective is to achieve the same return as a particular index, sector, or basket. To achieve this, an ETF will primarily invest in all of the securities, or a representative sam-ple of the securities, that are included in the selected index, sector, or basket. ETFs are subject to the same risks as an individual stock, as well as additional risks based on the sector the ETF invests in. The Equity Baseline Portfolio (EBP) is a blended index comprised of 60% domestic equity (represented by the Russell 3000 Index) and 40% in-ternational equity (represented by the MSCI ACWI ex US Index), rebalanced daily.

1411-CLS-3/31/2016