



WHITE PAPER

Defining Success

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If you're responsible for the decision-making process on your credit union investment portfolio, then it might make you wonder exactly how we define our success.

All too often the investment portfolio manager for credit unions views the investment portfolio as a separate entity with a unique set of risk characteristics, managed to the lowest risk possible and with no real method of measuring success. If the portfolio was adding to the total risk of the credit union, there was no method used to extract that information. To compound the problem, most managers are measured by comparing the portfolio yield to a peer group, other competitor or local group of managers without regard to the amount of risk taken to get the yield or any other factors that are relevant to the return of the portfolio.

In order to overcome these pitfalls, we suggest an investment manager take the time to build an appropriate investment portfolio benchmark.¹ Before we decide on an appropriate benchmark, we have to understand exactly what a benchmark is, and what it is not.

Let's begin with what a benchmark is not. A benchmark is not an index. An index is defined as a specific security market. When comparing the performance of your personal 401(k) account to the S&P 500, you are comparing your skill as an investment manager to the performance of a market. This may be valid for a manager who is allowed to invest in the market, but for credit union investment managers this has the potential to lead to questionable decisions.

Most published fixed income indexes include several issues that are prohibited from inclusion in credit union portfolios by policy or regulation. Using these indexes as performance comparison can be similar to comparing apples to bowling balls.

A benchmark on the other hand, is used to define an objective of a portfolio and should be built with the constraints of the portfolio in mind. If a portfolio is restricted from investing in low-rated corporate bonds, for example, the benchmark should not be reflective of low-rated corporate bonds. By using a benchmark as our comparative tool, rather than an index, we can measure how much additional performance is added by the manager's skill since both the portfolio and the benchmark are built with the same constraints.

With the preference for a benchmark over an index, how do we decide what an appropriate benchmark is for the credit union portfolio? To answer this, let's first look at the makeup of a valid benchmark. According to C. Mitchell Conover, a benchmark should contain the following characteristics:

- Unambiguous
- Investable
- Measurable
- Appropriate
- Reflective of current opinions
- Specified in advance
- Accountable²

If we see the methods of building a benchmark we can begin to see the benefits to both the manager of the investment portfolio and those who supervise the portfolio manager. A benchmark that is measurable makes performance comparison rather easy. When specified in advance, both the portfolio manager and the supervisor have clear expectations of performance under various market conditions before the measurement period begins. This unambiguous definition defines both expected return and the acceptable risk agreed to by both parties. The challenge now is to construct a benchmark that encompasses each of these characteristics so we can quickly and easily measure success in the management of the investment portfolio. For credit unions especially, the task of building a benchmark is complicated with the presence of other assets on the balance sheet and the makeup of the liabilities that

¹ This reading substantially draws upon "Market Indexes and Benchmarks" by C. Mitchell Conover, PhD, CFA, CIPM from the CFA Refresher Reading, 2016

² "Market Indexes and Benchmarks" by C. Mitchell Conover, PhD, CFA, CIPM from the CFA Refresher Reading, 2016

fund the assets. The liabilities of the balance sheet are what will define the risks we can take with the assets. This is also known as a liability benchmark, or what we can use to accurately reflect the return required to meet future obligations. When we know the risk constraint we can measure the expected return from the securities. Also, we must build a benchmark that will allow the manager to assess the impact of each security on the performance of the balance sheet along with reviewing the performance of the investment manager within the credit union's risk constraints.

Both the loan assets and the liabilities have characteristics that house a level of risk that must be taken into consideration when building a benchmark for the investment portfolio. Fortunately, we have tools to measure the risk characteristics of all three balance sheet components; loans, investments and the liabilities that fund them. Our asset/liability management model is the perfect tool to gather the information necessary to construct an appropriate benchmark for the investment portfolio.

As financial institutions, we measure the current market value of our balance sheet along with the projected earnings from that balance sheet through the ALM process. We also measure these projected financial statements under various rate environments to see how we may be vulnerable to changes in the level of interest rates or the shape of the yield curve. This is standard risk management for a credit union. However, we rarely use this tool to develop a target for performance of any component of the balance sheet. If we use the asset /liability model to perform what-if type analysis, we can accomplish the task of building a benchmark for the investment portfolio that is custom built to the balance sheet.

With the tools at our disposal we can analyze the effect of various risk levels in the balance sheet on the outcome of our financial performance. Analyzing the financial performance under various scenarios using properly constructed benchmark investment portfolios allows management to see exactly how a balance sheet performs under various rate scenarios and shocks.

We have addressed the type of benchmark we need to use and the liability benchmark that will limit the risk we can take on the asset side of the balance sheet. We have addressed how to measure the benchmark with the income simulation procedure we use in our asset/liability modeling technique. Next we address the specifics of the benchmark.

The construction of a benchmark should abide by the seven previously mentioned characteristics. However, the benchmark must be more than these items. A benchmark should help evaluate the skills of the portfolio manager and allow the supervisory committee to establish the acceptable interest rate risk while projecting acceptable levels of expected return.

Let's address the first requirement, measuring a manager's skills. In order to determine if a manager is adding return within the risk constraint, it is preferable to measure against a portfolio benchmark that reflects a passive style. A passive investment style is one that requires no manager discretion. The style works under a set of rules, investment risk limits and predictable decisions. The most obvious example of the passive investment style for credit unions is the investment portfolio ladder. Under a ladder style a manager will place investment dollars over a variety of maturities with a targeted average maturity. As investments mature the proceeds are merely placed at the end of the ladder, or in areas of the ladder where there are no current investments. The average maturity of the ladder is meant to be constant so each decision is merely a balancing routine to bring the ladder back to its proper maturity. For a credit union, a ladder of simple, option free securities will work best.

By comparing the actual portfolio to a passive style like a ladder, the difference in portfolios becomes obvious. Additional returns gathered by adjusting weightings of the portfolio along the maturity spectrum, using different asset classes or other management discretion can be attributable to that - discretion.

We have now accomplished identifying the type of benchmark, the reason we want this type and what we should include in that benchmark. Our final task is to determine how to build this benchmark. For that we turn to the asset/liability model.

Remember, the process of building a benchmark is to determine the risk limits and return expectations we should have for the investment portfolio. In order to arrive at these two results, we will have to experiment with various benchmark levels to arrive at the optimal combination of interest rate risk and return expectations. The tool we use for this experimentation is the asset/liability model.

When asset/liability models are used we are projecting income and measuring price volatility (or in a simpler term, risk) of the current balance sheet under several possible interest rate scenarios. Now, we will project the income and calculate the price volatility under these rate scenarios for several balance sheets. Each forecast will happen using a balance sheet that includes a distinct benchmark portfolio. Each forecast with its separate benchmark portfolio will contain a different level of risk. Each forecast will produce a unique forecast return and a unique price volatility result. These results are the basis in choosing the appropriate investment portfolio benchmark.

(Same as prior paragraph) Once a benchmark is constructed and selected it is important to remember that the passage of time will affect the benchmark. Each month that passes will bring a benchmark one month closer to maturity. It is imperative to update the benchmark each month in order to maintain the appropriate level of risk contained in the benchmark. We also must update the pricing in order to capture the correct levels of expected returns available in the marketplace. By maintaining a consistent level of interest rate risk and an updated return available in the market we will ensure that the measurement process is relevant and accurate.

Finally, we have to be sure to update the benchmark selection process regularly. Keep in mind that the benchmark was chosen to optimize performance within the constraints of the liability structure and assets (mostly loans) already on the balance sheet. As liabilities and other assets change, the optimal benchmark may also change. Changes in the marketplace may also require the portfolio benchmark to change, so updating the analysis of portfolio benchmark selection should become a matter of routine.

Using updated portfolio benchmarks will help investment managers outline the expectations for the investment portfolio, help define the expectations from supervisors and help measure the effectiveness of the manager's work. For all of these reasons, credit unions should further explore the choice and use of portfolio benchmarks in the management of the investment portfolio.