Strategy

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Benchmark Selection for Cash Portfolios

Introduction

Corporate treasury managers are frequently confronted with the task of picking the right benchmarks for their cash portfolios. Unlike stocks and long bonds, a market-based index is often too long or too risky for cash investments. Some treasurers resort to comparing "yield" earned on investments on the assumption that it is the only relevant factor in a "buy-and-hold" strategy. We want to offer our take on choosing appropriate benchmarks for corporate cash portfolios.

The Need for Benchmarking

Some argue that, if a cash investor's main objective is to maximize yield, having a benchmark is irrelevant. Within reasonable risk parameters, the higher the yield, the better. Why, then, is there a need for benchmarking?

A benchmark is the yardstick to direct an investment strategy and to measure the success of this strategy. Its usefulness lies in its representation of a "neutral" position for the investor with matched investment horizon, risk tolerance, liquidity needs and return objectives with its investment policy. In addition to being a measurement of manager performance, the benchmark is frequently used to simulate interest rate scenarios and to analyze trading and opportunity costs Even though a perfect benchmark may not exist for a given cash portfolio, adopting one provides a good starting point for the cash manager to understand return attributions.

Golden Rules of a Good Benchmark

An appropriate benchmark, according to the securities industry trade group CFA Institute, is a recognized published index, a tailored composite of assets or indexes, or a peer group of similar funds or portfolios. Good benchmarks generally share the following common characteristics:

- They are objective and investible
- They are representative of the asset classes
- They represent comparable risk levels to a policy mandate
- They are developed from publicly available information

Common Types of Cash Benchmarks

Peer Group Averages: Also known as the "horserace" method, this is a commonly used method of measuring returns against that of a large universe of mutual funds with similar investment objectives and styles. For cash portfolios, Lipper, iMoneyNet, and Crane Data all provide peer group average performance of eligible institutional class money funds.

These money market fund peer group averages may be appropriate benchmarks for hold-to-maturity investors of very high quality investments with short average maturities. According to SEC Rule 2a-7, money funds must have a security maturity limit of 397 days and average maturity no more than 60 days. Money funds are allowed to use the "amortized cost", or book value, method to compute returns. The investment grade requirement also makes the average credit quality comparable to most buy-and-hold cash investors. We should note that, after October 2016, institutional prime money funds must adopt market-based pricing towards net asset value (NAV) calculations. Peer averages may become less accurate as benchmarks if the figures do not contain both income and principal (NAV) return components.

A major drawback of the peer group method is the big maturity gap between the money market universe, which may be 30 to 45 days long, and the short-duration bond universe, which can be as long as two years. Peer group comparison is also a net-of-fees return that makes it difficult to discern whether a strong number is the result of a manager's investment skills or due to a lower fee structure.

Treasury Bills Indices: Comparing the returns of a cash portfolio against that of a comparable maturity U.S. Treasury Bill is a simple and elegant way of benchmarking cash returns. Citigroup, for example, has a full range of Treasury Bill indices from one month through one year. The benefit of picking a T-bill index is the simplicity and transparency of a T-bill that matches the average maturity of a portfolio. On the other hand, using a T-bill index understates the credit risk of the portfolio and introduces mismatched yield curve exposure when a portfolio is compared against a single security that is replaced at the end of each month.

LIBOR Benchmarks: To account for the credit risk of a non-Treasury mandate, some cash accounts use LIBOR as short-term benchmarks. LIBOR, or London Interbank Offered Rates, is the lending rate at which banks borrow funds from each other in the London interbank market. Each day, LIBOR rates are posted for different currencies, including the Dollar, and at different maturities ranging from overnight to 12 months. The average credit rating of the 18 international banks included in LIBOR would suggest an implied AA credit rating.

Despite the credit risk representation, we find LIBORs to be inferior to T-Bills as cash benchmarks. They violate at least two of the four rules of a good benchmark as they are not investible directly, and there is not an industry recognized index provider that produces rate of return information on them. Recent investigations by U.K. and U.S. regulators into LIBOR manipulation at several international banks and subsequent settlements point to the biased and unregulated nature of this market. In addition, risk premium of bonds and commercial papers, at times, may not have anything to do with LIBOR, which primarily reflects banks' appetite for risk.

Market Value Benchmarks: Unlike a portfolio that uses the amortized method to compute book value returns, accounts with securities longer than one year should consider adopting a market-value based, or total return, index that marks-to-market all unrealized gains and losses. Some of the commonly used short-duration market value benchmarks include the *Merrill Lynch 1 Year Treasury Note, the Merrill Lynch 1 to 3 Year Corporate & Government, and the Merrill Lynch 1 to 5 Year Corporate & Government* Indices. Accounts with a credit mandate excluding BBB securities can also find an index with a comparable maturity and minimum credit rating, such as the Merrill Lynch 1-3 year A-Rated and Above Index.

The choice for the appropriate market-value based index is contingent upon the account's interest rate risk tolerance and the willingness to realize accounting gains and losses as periodic portfolio duration extension trades may be need to keep pace with the duration of the benchmark. While one may find one index provider preferable to another, the specific decisions are often based on availability that best matches an account's mandate.

Tax-advantaged Benchmarks: The municipal bond market has long been recognized as being less liquid and more fragmented than the government and corporate markets. Because of this, few index-based benchmarks exist for cash portfolios. The SIFMA Municipal Swap Index, produced by the Bond Market Association, is widely used to track the performance of high-quality tax-exempt obligations with seven-day reset schedules. Longer maturity benchmarks include the *Merrill Lynch 1 to 3 Year Municipal Index*, and the *Barclays 1-Year Municipal Bond Index*.

Some corporate accounts that are taxpayers find it simpler and more transparent to use a taxable benchmark adjusted for its assumed corporate tax rate. Aside from certain tax sensitive trading strategies, benchmark selection criteria are essentially the same as those used for non-taxpaying accounts.

Custom Benchmarks: A custom benchmark is one that combines two or more benchmarks to better represent an account's tolerance for interest rate and credit risks. For example, an account with an "enhanced return" mandate may create a custom benchmark from the Merrill Lynch 3-month T-Bill and the 1-3 Year Corporate/Government indices in a 50/50 mix to benefit from the yield curve steepness while still maintaining an overall low duration risk. Similar adjustments can be made to credit ratings, asset classes and industry sectors.

The benefit of a customized benchmark is that it may best represent a particular investment mandate. However, it is not without its drawbacks as it is more difficult to track and maintain on an ongoing basis. Also, detailed return attribution analysis is often impossible since index producers do not construct security level information for return analysis.

Other Types of Benchmarks: Among the less common benchmark methods, some cash investors use the "yield plus a risk margin" method; others may use a "benchmark portfolio." Still others use a dynamic "benchmark rule" that changes as circumstances do. Each comes with its own advantages and drawbacks.

Choosing the Right Benchmark for Your Portfolio

A good benchmark should reflect the "neutral" position for a given investment policy. For all accounts, the first step in selecting an appropriate benchmark is to determine a portfolio level tolerance for interest rate risk, as represented by its duration or average maturity, and credit risk, as represented by average credit ratings. Other factors, such as liquidity constraints and portfolio turnover restrictions, should also be considered.

For relatively short, hold-to-maturity accounts, a comparable maturity Treasury Bill index can be used in addition to a money market Peer Group Average to adjust for higher interest rate risk assumed. For portfolios containing securities longer than a year, a market index with comparable duration and credit quality may be more appropriate. Sometimes two or more indices can be combined into a custom benchmark to mimic the risk characteristics of the portfolio mandate. However, be prepared to deal with higher maintenance costs and occasional benchmark drifting.

A good cash benchmark should be simple, objective, representative, and publicly available. Beware of benchmarks that are complicated, subjective, inconsistent, or proprietary. At the end of the day, a benchmark is meant to measure the success of certain portfolio objectives. It should be an important risk-adjusted, performance-enhancing tool, rather than a hindrance to the cash manager.

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