What Is Overlay?
A Look at Four Common Applications

Antony Motl, CFA
Portfolio Manager

August 2023

An overlay program is a comprehensive portfolio management solution designed to help investors increase expected return and reduce tracking error relative to a targeted policy allocation. The scope of the overlay program can be narrow or broad depending on each investor's objectives and constraints. This framework allows for seamless integration of the overlay program with investment staff, underlying investment managers, and other stakeholders. An overlay program is highly customizable; investors may choose one or more components to alleviate specific portfolio shortfalls and inefficiencies.

Key takeaways

» Overlay instruments can result in earning a financial market return on the amount of cash in the portfolio, thereby removing the effect of cash drag while still maintaining daily liquidity.

» A rebalancing overlay automatically rebalances exposures back to policy targets, which avoids the pitfalls of physically rebalancing over multiple days, if not longer. A responsive rebalancing overlay can take advantage of short-term market volatility.

» A transition overlay can help keep a portfolio invested when investors reallocate assets between investment managers. Though it's not a component that investors need to use consistently, it can be beneficial when portfolios change or unique situations arise.

» An overlay program is an efficient means for implementing a currency hedge. It allows investors to hedge developed-market currency exposure with precision and at low cost, and it reduces policy-based tracking error.

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Cash overlay

In our experience, cash overlay is the most common overlay strategy used by institutional investors. Most investors begin the portfolio-building process by establishing long-term return and risk objectives. To help achieve these objectives, they create investment policies to delineate asset-allocation targets. Within the asset allocation, cash, as an asset class, is generally given a 0% weight. A fundamental thesis of investing posits that over the long run risk assets are expected to earn a risk premium above cash returns.

Cash is often required for a variety of reasons, including benefit payments, endowment distributions, capital calls, and other operational expenses. Selling just the right amount of invested assets to make these payments with perfect precision is onerous and tough, if not impossible. In addition, when cash comes into the portfolio through contributions or other sources, investing it across the entire asset allocation isn't always immediately possible or cost-effective. As a result, investors typically keep at least some cash ready to meet these on-demand liquidity needs. This cash position introduces a drag on portfolio returns.

Further, cash is not exclusively found in cash accounts at the fund level. Individual investment managers may have residual cash exposure as well. Separately managed accounts (SMAs), for example, may hold cash in their portfolio to settle trades and pay commissions and fees.

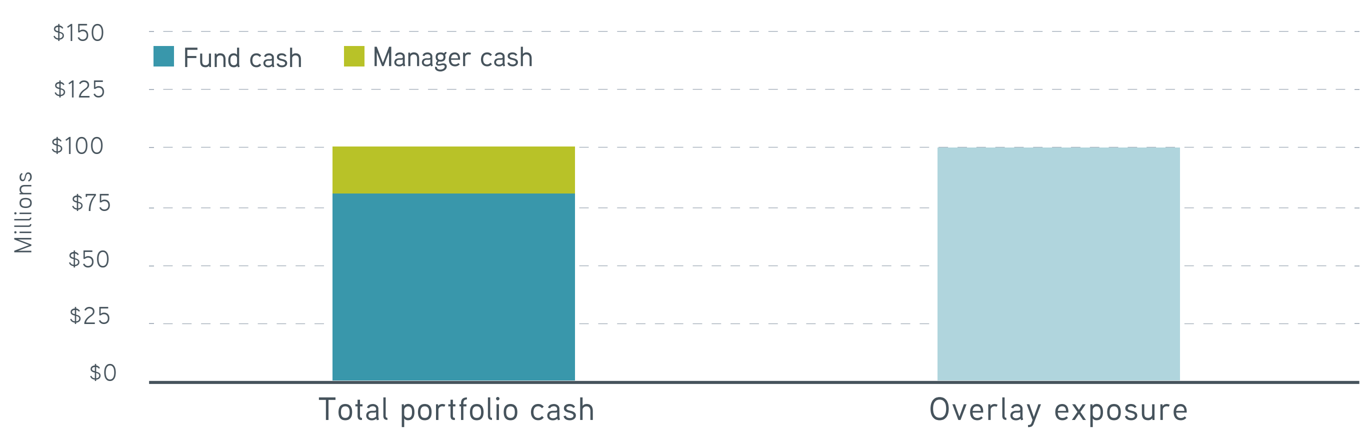
Typically, SMA managers do not hold cash to enhance performance. Commingled vehicles also generally maintain a certain level of cash to accommodate redemption activity. Although on a smaller scale, this residual cash exposure serves as an additional drag on long-term performance.

Overlay instruments can be useful tools to reduce the cash drag on an investor's portfolio. Using these instruments in an overlay strategy can result in earning a financial market return on the amount of cash in the portfolio, thereby removing the effect of cash drag while still maintaining daily liquidity.

Institutional investors partner with an overlay manager to identify all potential cash that could be subject to the overlay strategy (shown as overlay exposure in figure 1). The manager monitors the cash position and sizes the overlay positions accordingly.

Let's take a historical look at how an overlay strategy would have performed compared with simply holding cash (figure 2). Starting in 2002, we assume an investor implemented an overlay strategy on a static $10 million cash balance, with 60% invested in the MSCI ACWI and 40% invested in a Bloomberg Barclays US Aggregate. An overlay over this period could earn an incremental 4.31%, or $9.3 million more than cash returns, as proxied with three-month Treasury bills (T-bills).

FIGURE 1: OVERLAY EXPOSURE EQUALS TOTAL PORTFOLIO CASH



Source: Parametric, 2023. For illustrative purposes only and is not meant to depict the performance of a specific investment. **Past performance is no guarantee of future results.**

How to establish a cash overlay program

With a cash overlay program in place, investors can maintain the necessary amount of cash to meet on-demand liquidity needs while earning a market return better aligned with their portfolio benchmark. With that in mind, investment staff can increase portfolio liquidity without losing market exposure. Establishing a cash overlay program involves three steps:

Initiation. At the outset of an overlay program, overlay managers purchase overlay instruments to match the amount of cash in the portfolio. The investment guidelines detail the mix of benchmark exposures purchased, generally similar to the portfolio's overall benchmark.

Daily monitoring. The portfolio management team monitors cash balances daily from the investor's custodial bank. Then the team reviews cash exposure and determines what trades, if any, are required to keep the portfolio fully invested.

Margin account setup. The team allocates a portion of existing cash to a liquidity account to satisfy margin requirements associated with the overlay. The remaining cash in the portfolio is available for use in ongoing operations and is also subject to the overlay.

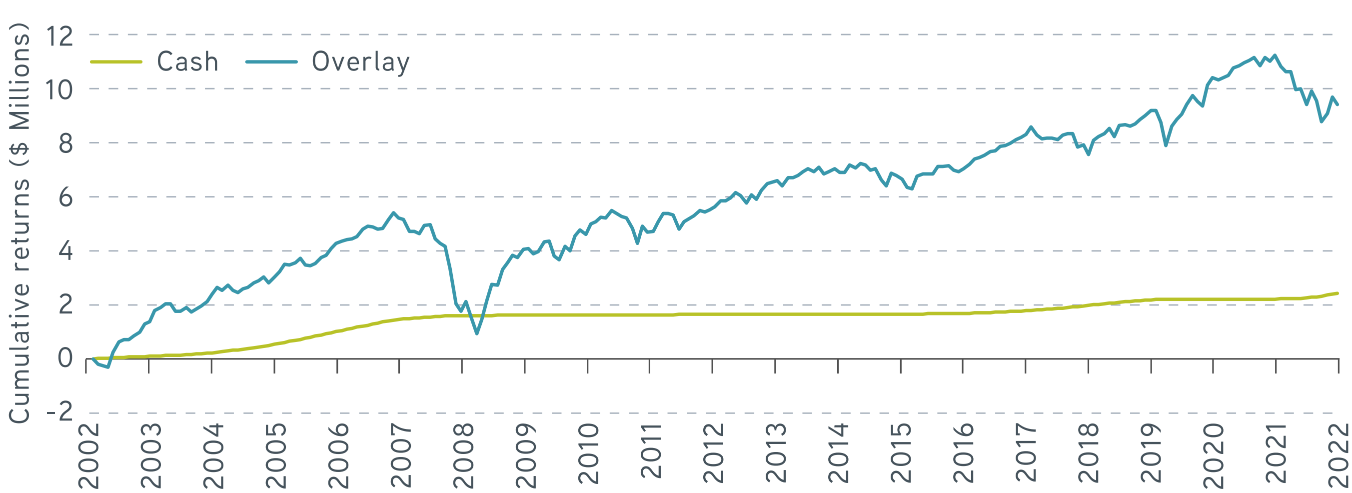
Rebalancing overlay

Portfolio rebalancing is also a widely utilized portfolio risk management strategy. However, there are many ways a rebalancing program can be implemented. One such solution is through an overlay program. Rebalancing through an overlay program provides the following benefits:

Monitored portfolio exposures daily. The portfolio management team establishes a secure link with the investor's custodian to monitor portfolio market values. Then they create a comprehensive report that provides an up-to-date snapshot of the investor's portfolio positioning. The investment guidelines detail the parameters of the rebalancing overlay, such as asset class thresholds.

Reduced transaction costs and flexibility in all market environments. Rebalancing synthetically using an overlay program is typically more cost-efficient than physical rebalancing. Further, trading physical securities often requires the purchase of a basket of securities, whereas a set of overlay exposures can be used to rebalance in a cost-effective manner. A rebalancing overlay can be particularly effective during periods of elevated volatility, when transacting in physical assets may carry prohibitively high transaction costs.

FIGURE 2: OVERLAY STRATEGY PERFORMANCE (NET) VERSUS CASH, JANUARY 2002–DECEMBER 2022



Sources: Parametric, Bloomberg, 4/19/2023. Simulated results are for illustrative purposes only, do not represent the results of any investor's trading program, and should not be relied upon for investment decisions. Actual results will vary from those demonstrated. Securitized cash results are shown net of advisory fees (15 bps per year with a $1,500/month retainer fee) and estimated transaction costs (5 bps). Securitized cash balance is $10 million, reset to base level each month. Cash is assumed to be invested 60% in the MSCI ACWI Index, 40% in the Bloomberg Barclays US Aggregate Index. It is not possible to invest directly in an index. Indexes are unmanaged and do not reflect the deduction of fees or expenses. All investments are subject to loss.

Minimized exposure gaps throughout the rebalancing process. While moving funds between asset classes during a physical rebalance, there is often a settlement period in which market exposure is lost. Having a rebalancing overlay in place allows investors to keep the portfolio in line with the asset allocation while remaining invested during the rebalancing of funds.

Disciplined, responsive process that removes behavioral biases. A rebalancing overlay is most commonly set up to automatically rebalance exposures back to policy targets when a threshold is crossed. This disciplined process avoids the potential pitfalls introduced with behavioral tendencies. Rebalancing synthetically also occurs in real time, while physical rebalancing takes multiple days, if not longer. A responsive rebalancing overlay can take advantage of short-term market volatility.

The illustrative data in figure 3 shows a generic asset allocation, rebalanced after exceeding predefined rebalancing bands from January 2003 through December 2022, with one that wasn't rebalanced. The asset allocation mix includes 30% S&P 500®, 5% Russell 2000®, 25% MSCI EAFE, and 40% Bloomberg Barclays Aggregate. 10% proportional rebalancing assumes a rebalance is executed after an asset class is outside of its 10% proportional band. For example, a 30% target to S&P 500® with a 10% proportional band would result in an effective rebalance band of 3%. The entire portfolio would be rebalanced if the S&P 500® allocation fell below 27% or rose above 33%.

Transition overlay

Institutional investors frequently reallocate assets between investment managers. A transition overlay can help keep the portfolio invested and earning a market return while assets are being transitioned. A transition overlay can be a beneficial solution for the following portfolio activities:

Manager redemptions. Transition overlay can add synthetic exposures in a customized manner based on an investor's needs, for example by fully redeeming a poor-performing investment manager and sending those funds to a manager in the same asset class. Transition overlay can add exposure at the time of the manager redemption and subsequently remove the transition overlay when the new manager is invested. In addition, with a transition overlay in place, the investor can place the full redemption, then take their time to thoroughly research a new investment manager. Transition overlay can be used regardless of the manager type—for example, SMA or commingled funds—whereas a traditional transition manager may be limited in the accounts serviced.

Long-settled transactions. Redemption of illiquid investment managers, such as hedge funds, is often accompanied by a long settlement period of 30 days or longer. These redeemed funds typically earn no market return during the settlement period, so a transition overlay can be a useful tool for keeping receivables invested until physical funds are received.

Asset allocation changes. Transition overlay can help investors implement asset allocation changes. A transition overlay allows investors to move to new asset allocation targets synthetically before making physical manager changes. Synthetic exposure can then be removed as investors make subsequent manager decisions.

FIGURE 3: REBALANCING SUMMARY, JANUARY 2003–DECEMBER 2022

Methodology	Annual rebalancing (net)	Monthly rebalancing (net)	10% proportional bands (net)
Annualized return	6.31%	6.20%	6.34%
Rebalances per year	1	12	2.27
Annualized volatility	9.14%	9.44%	9.62%

Source: Parametric, 2022. Simulated results are for illustrative purposes only, do not represent the results of any investor's trading program and should not be relied upon for investment decisions. Returns are presented net of management fees and expected transaction costs. Transaction costs are assumed to be 5bps, which is accounted for in the returns of the simulation. This analysis assumes the following fee schedule: 15 bps per year on the first $50 mm, 10 bps per year on the next $100 mm, five bps per year on any remaining amount; $18,000/year retainer fee; defaults to $75 k annual minimum. Hypothetical portfolio is rebalanced back to 30% S&P 500® Total Return Index, 5% Russell 2000® Total Return Index, 25% MSCI EAFE Total Return Index, and 40% Bloomberg Barclays US Aggregated Index. It is not possible to invest directly in an index. Indexes are unmanaged and do not reflect the deduction of fees or expenses. Synthetic results will vary from those demonstrated. All investments are subject to loss.

A transition overlay isn't a component that investors need to use on a consistent basis, but it may be an important tool as the portfolio changes or unique situations arise.

Currency overlay

International equity represents an increasingly significant portion of institutional investor portfolios. Investing in international equities introduces two primary risks to an investor's portfolio: equity risk and currency risk. As such, investors should consider disaggregating these risks when evaluating foreign investments. Analyzing the total return of foreign investments without comparing asset returns and currency returns separately conceals any impact to the portfolio from holding foreign currency exposure.

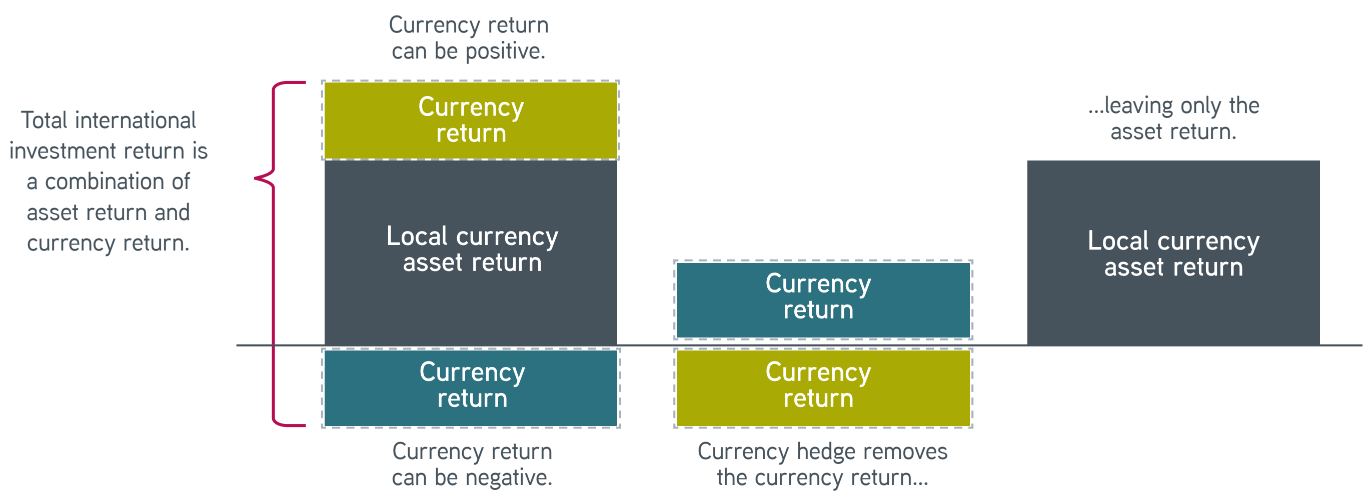
Investors make an explicit decision of how much foreign currency exposure to carry and should reflect this decision in their asset allocation (figure 4). If the resulting decision is to hedge at least a portion of the currency exposure, an overlay program is an efficient means for implementing a currency hedge. The deep derivative currency markets allow investors to hedge developed-market currency exposure with precision and at low cost. To hedge the currency exposure of an international investment, investors need only sell synthetic exposure on the foreign currency with a notional exposure equivalent to the value of the international allocation to be hedged. This effectively eliminates the currency return embedded in the international investment, leaving only the intended asset exposure, such as equity or fixed income. Underlying investment decisions on style or sector are not affected.

Figure 4 illustrates how currency hedging works in very basic terms. It's critical that the investment policy statement captures the hedging decision no matter how much of the portfolio is subject to the hedge. Adding an explicit target for currency-hedged equity exposure can greatly reduce policy-based tracking error and the associated behavioral risks that can be introduced. Investors should evaluate whether they're holding developed-market currency exposure because it's an attractive core risk position or because it's part of an international equity allocation to gain improved diversification.

Conclusion

Investors find customizable solutions valuable for many of the implementation challenges they face when managing an institutional portfolio. Investors can use cash overlay to specifically address on-demand liquidity and residual manager cash that prevent a portfolio from performing at its full potential. Further, investors who use rebalancing overlay in a disciplined manner have the benefit of up-to-date monitoring of exposures, can react quickly to market volatility, and can reduce transaction costs compared to physical rebalancing. Investors have found transition overlay to be a helpful tool to remedy the loss of market exposure during transitions. Finally, investors looking to make a currency risk decision can use currency overlay to modify foreign currency exposure in investor portfolios. These components can be used on a stand-alone basis or in a combination that best meets each investor's objectives.

FIGURE 4: CURRENCY HEDGING



Source: Parametric, 2023. For illustrative purposes only.

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