First Principles Capital Management

Customized LDI strategies

First Principles Capital Management (FPCM) is a leader in the design and management of customized investment solutions for institutional investors – among the first movers of the solutions-based business models in the industry.

FPCM utilizes an LDI approach for a broad set of investors to meet a variety of investment objectives.

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A solutions-based approach for investors

Liability Driven Investing (LDI) is an investment term widely recognized by Defined Benefit (DB) plan sponsors and investment professionals. In this context, LDI broadly represents the investment strategies focused on managing the risks associated with a pension plan's liability.

Pension funds, however, are not exclusive beneficiaries of a liability-centric approach to asset management. **Endowments, foundations, corporations, and other institutional investors also have unique liability profiles**. The primary concern of any institution with a relatively defined set of payment obligations should be to invest in an asset portfolio that, with a high degree of confidence, will generate cashflows that will satisfy those payment obligations. This can be achieved by developing an investment strategy that will generate contractual cash inflows that closely match the liability payments over time. This simple and bespoke strategy can be a compelling alternative to the more widely used total return investment strategy, which may rely on asset sales to fund liability payments thereby exposing the investor to additional market and operational risks.

Total return vs. defined cashflow approach

One important factor of a liability aware investment objective is the ability to adjust the strategy to changes in the target liability profile. Typically, there is more certainty in the estimate of the amount and timing of short to intermediate term liabilities than of long dated liabilities.

Consider the following case studies:

*A **university** wishes to designate a pool of excess operating cash to the retirement of debt over the intermediate term.*

*A **pension** has recently de-risked a portion of its growth portfolio and has designated the resulting proceeds to meet benefit payment obligations over the next five years.*

*A **professional sports franchise** requires management of a pool of capital to meet the estimated draw schedule of its stadium construction project.*

The primary benefit of a cashflow-oriented investment strategy is the high degree of certainty of meeting these specific liabilities. Conversely, a total return strategy introduces uncertainty since asset sales may be required to fund payment obligations. If yields decline and/or spreads tighten, the total return strategy could generate positive performance. However, if interest rates rise and/or credit spreads widen the performance can be negative. The magnitude of the potential variability will depend on the duration of the specific total return strategy. This mark-to-market (MTM) exposure can be particularly detrimental around the dates of required liability payments. Moreover, for short-to-intermediate term mandates, investors lack the benefit of time to recover from any such MTM loss. While a total return strategy could have superior performance to the cashflow matched approach, a client with a tight budget would have to accept the possibility of adverse movements and a potential shortfall to the original budget.

A simulation of the market risk exposure of a total return asset strategy (short maturity corporate ETF) for two different liability profiles illustrates this point:

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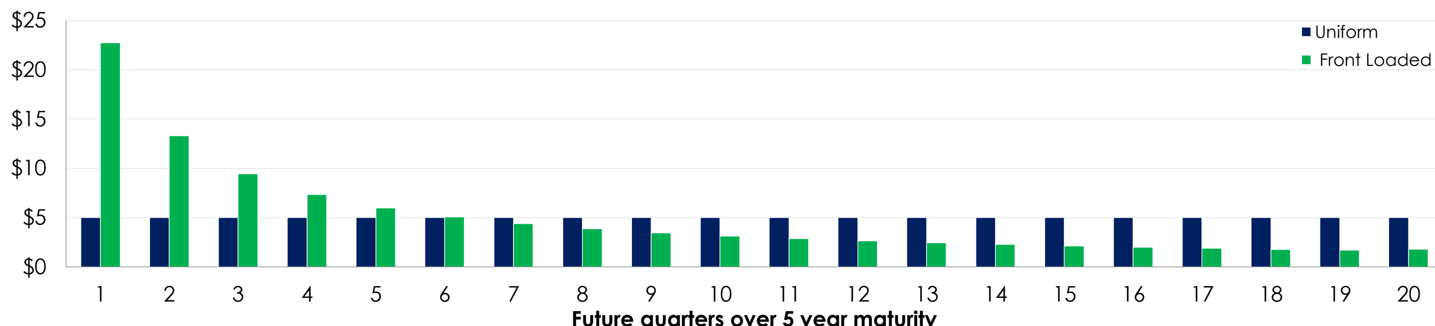
The first cashflow schedule has "front loaded" quarterly draws, while the second has equal quarterly or uniform draws, both over a five-year period [Figure 1]. The total dollar amount for both schedules is $100mm.

Figure 1. Examples of cashflow schedule [$MM]



Source: FPCM

Figure 2 shows the results of a simulation of the potential range of cumulative return paths of a total return short maturity corporate ETF versus the potential cumulative return of two cashflow-matched strategies: one with US Treasuries and the other with single-A rated corporate securities. Figure 3 shows the total amount of capital (present value) at inception of the investment to cover the two liability examples and the associated cashflow matched and total return investment strategies. The most conservative strategy is to invest in Treasury securities that exactly correspond to the cashflow schedule by matching coupon and maturing principal to the timing of the draws. Alternatively, it is possible to increase the return with a moderate increase in risk by matching the cashflows with single-A corporates. The income return for both cashflow-matched investment approaches has a high degree of certainty. On the other hand, the total return strategy (short maturity corporate ETF) introduces larger variability of outcome as the range of costs can be near 10% of the amount of capital at inception. Faster draw schedules (e.g., the front-loaded example) accumulate less investment income and are thus more sensitive to events occurring at/near portfolio inception, whereas longer schedules allow for some adverse outcomes to be reversed over time.

Figure 2. Cumulative returns for short maturity corporate ETF (Simulation) vs Cashflow matched approach

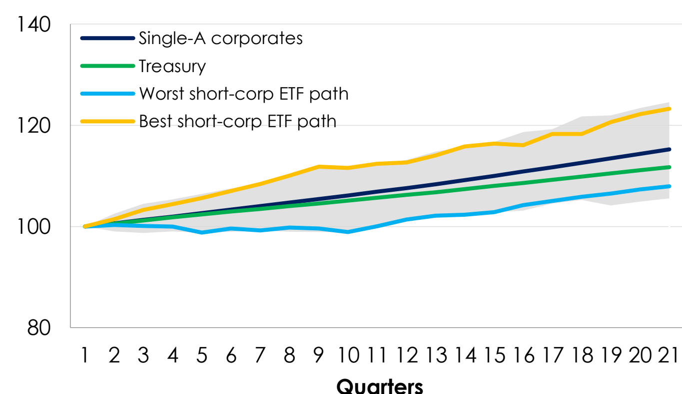
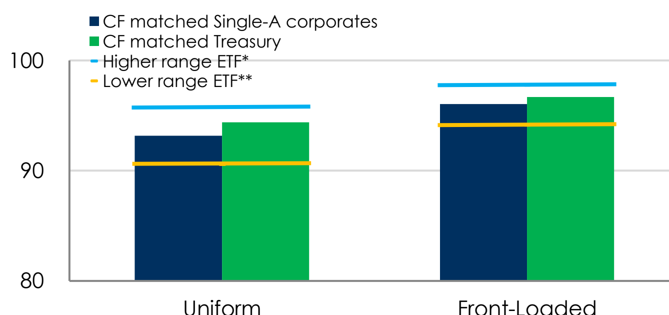


Figure 3. Cost of funding $100mm distributions [$MM]



Note: Short-corp ETF results estimated using Monte Carlo Simulation, quarterly returns with mean 2.7% and st. dev. 1.28% annualized
*Higher range = 95% percentile of the cost distribution
**Lower range = 5% percentile of the cost distribution

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Additional risk considerations – project and operational

In addition to reducing investment risk, clients implementing a customized strategy to manage a specific liability can meaningfully reduce:

- Opportunity cost due to project or actuarial risk
- Operational risk

In certain capital projects it is common to experience unforeseen changes to the estimated liability draw schedule. For example, a construction project may be ahead of schedule, or there may be delays. The ability to employ a flexible asset management strategy allows the client to minimize the opportunity cost of investing excess cash or selling assets at an inopportune time to raise unforeseen liquidity.

Operational risk addresses the process and activities required to transfer cash to fund obligations. Creating an investment strategy that generates cash on required dates and a process for the reliable flow of funds relieves the client from the related governance and operational burdens of selling partial ETF holdings and ensuring settlements are received on the appropriate dates. Ensuring the proper execution of flow of funds reduces the risk of delays in meeting obligations.

Execution of a customized strategy

There are two generally overlooked aspects of a successful client experience with a cashflow-oriented investment solution:

- True customization - tailored solutions vs. generic products or strategies camouflaged as solutions
- Dedicated communication and access to experienced investment and operations teams within a fully outsourced model to bring scale to the client and advisor (if applicable).

The implementation of a customized cashflow-oriented solution should be executed through a high touch relationship between the investor, advisor and investment manager. The ideal solutions-based manager will have considerable design and markets experience, along with an expanded toolbox to manage and service customized asset management solutions. The relationship is supported by an investment team, infrastructure, and technology necessary to support a high touch relationship.

Ultimately, the client/advisor should make the choice between a total return strategy or a cashflow-matched approach with eyes wide open, i.e., fully aware of the risk/reward involved in both strategies and in context of their specific tolerance to short-fall risks, opportunity costs, and portfolio management expertise and flexibility.

We invite you to explore our approach

First Principles Capital Management (FPCM) is a leader in the design and management of customized investment solutions for institutional investors – among the first movers in the solutions-based business models in the industry. FPCM utilizes a liability-centric approach for a broad set of investors to meet a variety of investment objectives. Clients benefit from:

- FPCM's experience with different client segments and applications in liability-driven and cashflow-oriented investment management
- Flexibility in managing various sized accounts
- Focus on initial portfolio construction, essential in execution of an effective strategy
- Capability for dynamic adjustments following portfolio implementation

We would be pleased to provide an analysis of your liability profile.
Please contact Maxwell Amster at 212-324-6015 or mamster@fpcmllc.com

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