



**Case Study –Modular Fund Administration architecture allows business flexibility.**

**Background:**

A large investment management firm sells a classical, open ended money market financial instrument to their institutional investors. The investment manager uses this fund to provide investors with access to their expertise in managing a classical diversified portfolio of equities and bonds.

In order to support the trading and reporting requirements of the money market fund, the investment manager uses an integrated, internal IT system which manages both the portfolio of equities and bonds, and the underlying transfer agency/fund administration requirements, such as tracking investor buys and sells (and their underlying cash flows), fee calculations, and the distribution of portfolio gains as additional money market units.

**Increase performance, while offsetting value risk through an externally managed portfolio.**

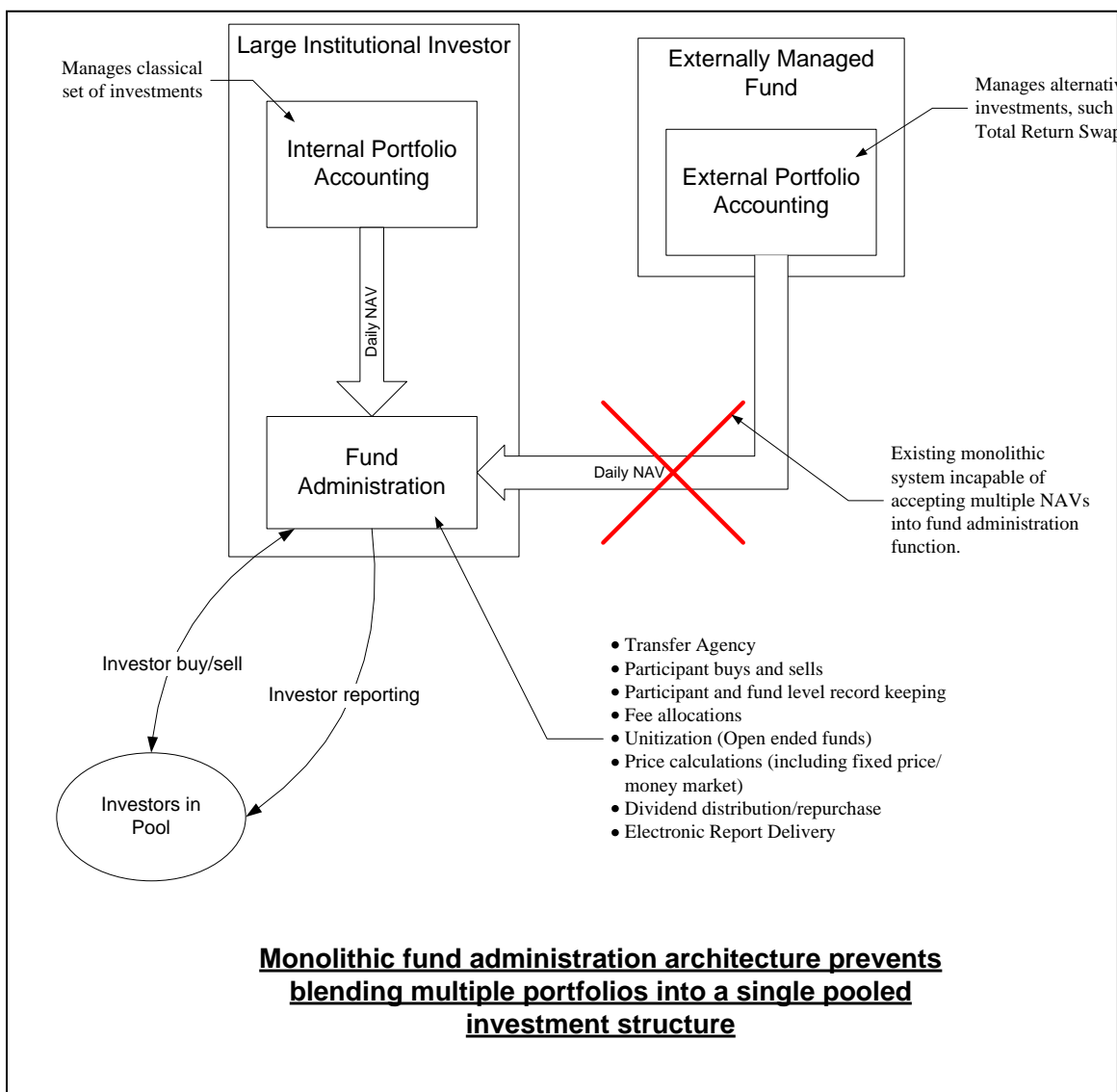
The managers of the fund decide that they would like to increase the performance of their investments, while maintaining stable rate of return to their investors. They begin discussions with an external investment management firm that offers a total return swap. The external firm has their own system for managing the instrument. The instrument allows them to offset potential gains of an asset they own for a more predictable return for their investors. They approach an external manager about how to work together.

**The problem**

The problem arises when the Net Asset Value (NAV) of the assets represented by the internal, standard portfolio need to be joined with NAV of the externally managed assets, to create a merged value for the underlying fund. The internally developed IT system of the primary investment manager was not designed to accommodate multiple NAVs in the Transfer Agency function of the pool. Without this capability, the primary investment managers can not cooperatively manage a single open ended pooled vehicle.

## A monolithic fund administration architecture

The vast majority of fund administration systems are built on a monolithic architecture, that integrates the portfolio management functions (units of underlying assets, prices of those assets, roll up of total assets and generate a Net Asset Value – NAV for a single portfolio) with the fund administration functions (investor purchases and redemptions, fund unitization, unit pricing, generation of trade confirms, investor reporting). This architecture works well for single portfolio pools. However, this architecture breaks down when the total assets in the pool transcend a single portfolio.



## A modular fund administration architecture

As the complexity of asset structures within a pool goes up (to accommodate complex derivatives such as swaps), and multiple investment management firms want to cooperate for a single pooled vehicle, so will the need for a modular fund administration architecture.

A modular fund administration architecture cleanly separates the record keeping functions of the pool (transfer agency, unit pricing, dividend distribution or reinvestment, investor record keeping) from the portfolio management functions of the underlying assets, and provides a robust interface between them. This modular architecture separates the complexities associated with asset management from the internal functions required to keep records and do reporting for individual investors in the pool.

With a modular fund administration architecture, the solution to the problem described above becomes quite simple. The Fund Administration module accepts two NAVs, one from the internally managed portfolio, and one from the externally managed portfolio. These multiple NAVs are aggregated into a single NAV which is then used for managing the internals of the money market fund itself. The internal and external portfolios can be managed independently of one another, as long as the timing of NAV generation is synchronized to enable the processing of the pool.

