

## Safety Reserve®

WHITEPAPER

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For more than seventy-five years, common stocks have provided the highest total return of any asset class. This has occurred because common stocks represent the direct ownership of the real, generative assets of society: productive, profitable companies. Therefore, in order to participate fully in the economic growth of a society, and to increase benefits apace with rising standards of living, a fund must invest predominantly in common stocks.

However, common stocks are subject occasionally to disastrous declines in value. If investors lose faith in the strength of the economy, or if deep political uncertainty clouds the future, common stocks may be abandoned for “safer” assets, leading to large losses for investors. History teaches that these extremely disruptive market environments can occur, although they are rare. For example, during the Great Depression, common stock prices fell by 90%, and did not fully recover for almost fifteen years. There is no reason to believe that similar large declines cannot occur in the future.

Most benefit funds are structured to perform well under normal market conditions. However, during a full-scale market panic, the everyday rules of the investment game change. The liquidity of ordinary common stocks and bonds may vanish overnight. Even if a buyer for a security can be found, the offered price may be so low as to make the deal a poor choice.

Trustees must never find themselves in a position requiring the liquidation of high quality long-term holdings at distressed prices in order to pay promised benefits. A Safety Reserve portfolio is a practical mechanism for protecting a fund during a “market meltdown,” and thus represents a form of self-insurance against financial disasters. With a well-designed Safety Reserve, a fund will never miss a benefit payment, even in an environment that bankrupts other funds. This security permits Trustees to formulate a long-term investment strategy that is opportunistic rather than defensive.

### Operation of a Safety Reserve®

A Safety Reserve consists of three components:

1. a structured portfolio of emergency funds
2. a mechanism for rebalancing the emergency pool annually
3. a formal plan for implementation in the unlikely event the pool is needed

#### CONTRIBUTORS

James E. Meketa

**The first step** is to define the period of intended Safety Reserve coverage. A Safety Reserve can guarantee benefit payments for short periods of potential crisis, or multi-year periods. Most Trustees select five years as a favorable compromise between length of coverage and opportunity cost. It is important to avoid over insuring, or under insuring.

**Next**, the Fund's actuaries must calculate the year by year worst-case benefit outflows that would likely occur during a market collapse. It is important that the demographic analysis be both realistic and conservative, since it will determine how much money will be invested in the Safety Reserve. Generally, the analysis assumes a prolonged and deep recession, combined with a multi-year decline in the stock and bond markets.

**And finally**, the Safety Reserve portfolio is created and funded with the appropriate pool of assets. Specific bonds are chosen such that their interest payments and maturities exactly match the Fund's potential benefit outflows over the coverage period. The Safety Reserve is maintained in a segregated portfolio, and updated periodically, usually once a year.

## Structure of a Safety Reserve®

In a true market crisis, investors will shun all but the very most secure investments, regardless of their quality or long-term potential. This is simply human nature. Since it is likely that *only* short-term bonds guaranteed by the United States Treasury will hold their value and remain liquid at the height of a panic, a Safety Reserve must be a secure pool of Treasury obligations. We recommend strongly that only direct obligations of the US Treasury be used to fund a Safety Reserve.

Short-term Treasuries have a lower expected return than virtually any other asset class. This can be understood as the "premium cost" of the Safety Reserve "insurance," and is the reason why Trustees should avoid the temptation to over insure.

Most funds always hold some Treasury bonds through their fixed income managers, and Trustees might be tempted to ask "why create a Safety Reserve when my fund already contains Treasuries?" The answer is straightforward. In a sudden market collapse, these bonds may not be available for liquidation. For example, managers with broad guidelines may have shifted temporarily to non-Treasury bonds to pick up extra yield, at precisely the wrong time. Or, the Treasury bonds may be held in a commingled pool, where the exact ownership is uncertain. The bonds may be out on security loan, and subject to broker default. Or, there may simply not be enough bonds to meet the necessary obligations.

A Safety Reserve is carefully structured to hold exactly enough Treasury bonds to guarantee the coverage period. All of the Treasuries are concentrated in a single passive portfolio, with minimal or no management fees.

## Annual rebalancing

A Safety Reserve portfolio is *passive*, meaning that its assets are not actively traded, but are merely held in the portfolio. However, each year the passage of time shortens the average maturity of all bonds in the Safety Reserve by one year, and the shortest bonds will mature. Also, each passing year marks a change in the future stream of potential benefits. For this reason, a Safety Reserve is not *static*; it must be reset periodically, generally once per year.

Resetting a Safety Reserve is a simple process. The actuarial assumptions for the coverage period are reassessed, and adjusted for any benefit improvements. Then the bonds in the Safety Reserve are adjusted to match the new pattern of cash flows. If there have been substantial benefit increases, it may be necessary to add additional funds to the Safety Reserve.

## Other considerations

The Safety Reserve portfolio should be custodied in a separate, client specific account. Under no circumstances should the Trustees use positions in commingled or mutual funds. Further, the Safety Reserve should be excluded from any securities lending programs. In the midst of a financial panic, there must be no barriers to accessing the Safety Reserve.

## Cost of a Safety Reserve®

No insurance policy is free; there is always a premium to be paid. As mentioned above, the premium cost of a Safety Reserve is the opportunity cost associated with holding short maturity Treasuries. Since most funds hold uncontrolled allocations of Treasuries, a premium is already being paid, every year. Unfortunately, this premium may not result in a viable insurance policy at precisely the time it is most needed. A Safety Reserve, on the other hand, allows a fund to allocate the minimum amount of money to Treasuries consistent with a prudent long term strategy.

The out-of-pocket cost of operating a Safety Reserve is minimal. Since the portfolio is passive, there are no brokerage or transaction costs. Also, it is often possible to hire a money manager to “oversee” the Safety Reserve for a very small annual fee.

## Using Treasury Inflation Protected Securities

Treasury Inflation Protected Securities, also known as TIPS bonds, are a relatively new type of Treasury bond designed to remove the risk of inflation from bond investing. TIPS bonds are now issued regularly by the US Treasury, but were first made available to investors only in January 1997. As with ordinary Treasuries, the full faith and credit of the US government backs TIPS bonds.

With one important difference, TIPS bonds are identical to traditional US Treasury securities. Traditional US Treasuries pay a specified rate of income and return par value at the maturity date. TIPS bonds also pay income and return the owner's principal at a stated maturity date. However, the principal value and coupon income for each TIPS bond is adjusted daily to reflect the effects of inflation, as measured by the Consumer Price Index (CPI). The CPI inflation rate used is the monthly rate experienced three months prior.

Since TIPS bonds provide both the security of a Treasury guarantee, as well as protection against inflation, they are a good choice for a portion of a Safety Reserve portfolio.

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