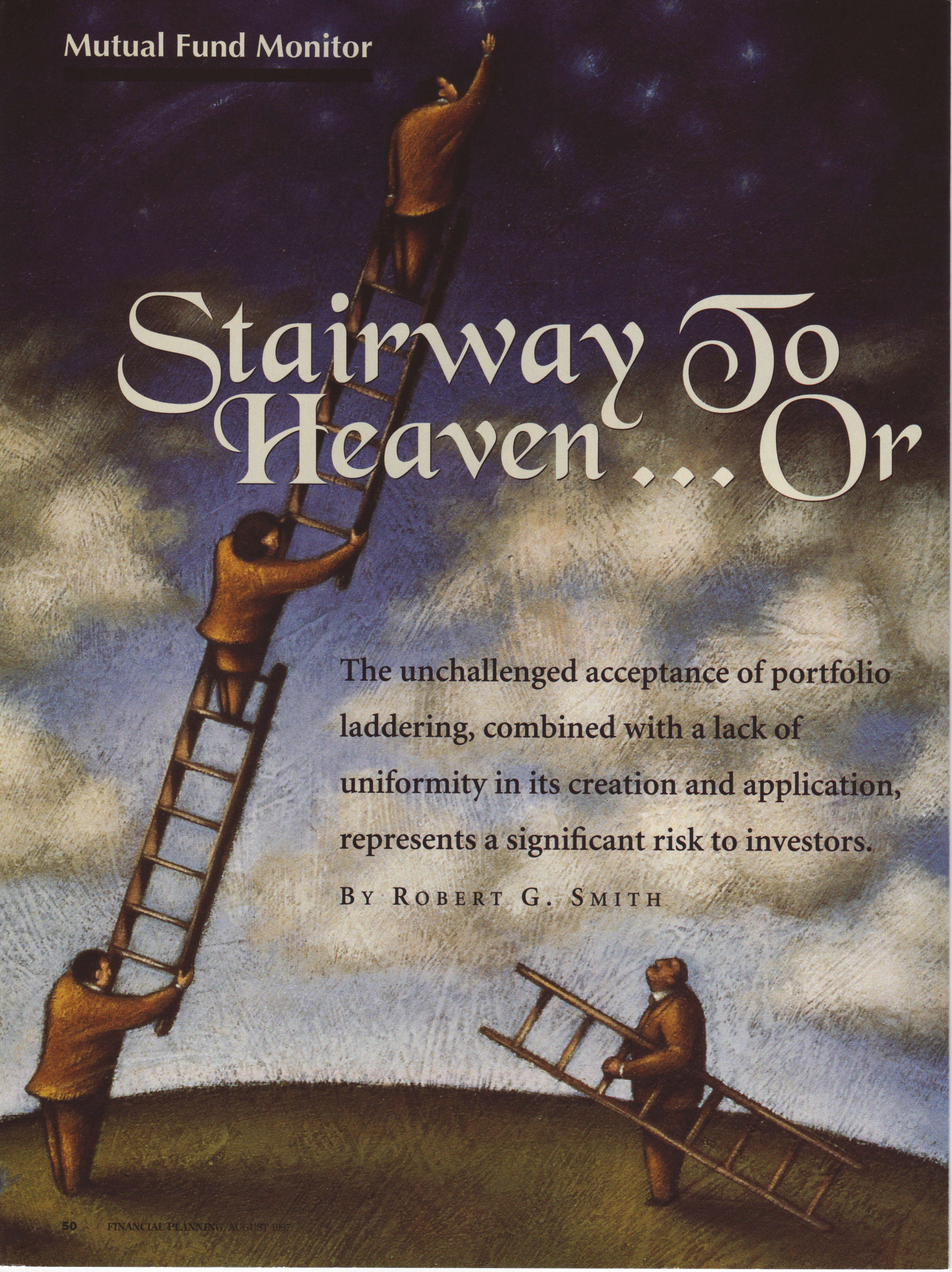

Stairway To Heaven . . . Or

The unchallenged acceptance of portfolio laddering, combined with a lack of uniformity in its creation and application, represents a significant risk to investors.

BY ROBERT G. SMITH

Ten years ago, a buying frenzy gripped investors in Southern California real estate. The herd mentality created a what-could-go-wrong atmosphere that pumped irrational optimism into even seasoned investors.

But there were clouds on the horizon. The California defense industry was collapsing, and the state's economy would soon follow. The few to whom the portents were visible escaped before the precipitous drop in real estate prices that followed. It is a classic example of the pitfalls of bandwagon investing.

Somewhere Else?

In the not-too-distant future, I suspect investors will have the same historical perspective of laddered maturity portfolios as a low-risk approach to fixed-income investing. While financial advisers routinely recommend portfolio laddering as a conservative strategy, there is virtually no empirical evidence to support it and surprisingly, little has been published in academic or professional journals about it. I can't think of another financial concept so universally embraced by the investment community that is as bereft of historical analysis.

The unchallenged acceptance of portfolio laddering—combined with a lack of uniformity in its creation and application—represents a surreptitious and significant risk to investors. Let me explain.

Fixed-income investment programs typically have a stated objective, such as income generation or capital appreciation, or are structured to satisfy a specific liability while preserving capital. These aims are represented by market indexes or specific cash-flow requirements, with the investment assets competing to match the stated objectives.

However, in a laddered maturity portfolio, the objective is poorly defined and often stated merely as safety. While safety is certainly desirable, it is a nebulous objective that subjects the portfolio's return to uncertainty. And the greater the uncertainty or variability of total return patterns, the riskier the investment discipline. Since a laddered portfolio's total return is undetermined and changeable, it is inherently risky—the opposite of what conservative investors anticipate.

Most laddered portfolios avoid the long end of the yield curve and are constructed along a rolling one-to-five or one-to-seven year maturity horizon. Financial planners and their clients—seeking to maintain principal by holding securities to maturity or not wishing to actively manage portfolio cash flows in changing markets—presume laddering has created a dynamic yet passive portfolio that avoids loss of principal. But there are inherent contradictions in this approach.

Laddering is an intermediate to long-term investment approach, given its purpose to avoid principal risk by holding each security to maturity. But this singular focus overlooks the fact that fixed-income total returns are comprised of:

- coupon income,
- reinvestment of periodic coupon income and principal, and
- security price changes over time.

The longer the time frame, the greater the impact of the first two on total returns. The greatest risk to achieving reasonable returns in a laddered portfolio is not short-run price changes but reinvestment risk, because by utilizing a hold-to-maturity strategy to neutralize price risk, the impact of income and reinvestment in the total return equation is elevated. Most laddered portfolios are biased towards short to intermediate maturities and the inherent rollover process maintains this bias over an extended period. Since short-term interest rates have historically been far more volatile than longer term rates, the overall volatility of a laddered portfolio is significantly raised.

Many financial advisers would be surprised to learn that since the late 1970s, the 30-year Treasury bond has exhibited just 47% of the yield volatility of the six-month Treasury bill. The meaningful drop in income volatility from short to long maturities demonstrates that laddered portfolios, biased toward shorter maturities, may actually produce much higher risk in the form of return volatility than portfolios with an extended maturity focus.

Our firm analyzed the performance of three laddered portfolios over several years using U.S. Treasury securities exclusively to eliminate the differences or risks attributable to credit quality or market liquidity. Each portfolio was constructed using zero coupon, recently auctioned and older seasoned securi-

Illustration: Janet Atkinson/SIS

ties, and laddered in two ways:

1) a duration-weighted basis to match the duration of an equally weighted maturity portfolio of one- to five-year U.S. Treasury strip securities, and

2) An equal dollar distribution of maturities to replicate the conventional approach used by most investors.

The study produced some interesting observations. First, despite virtually identical levels of credit quality and market liquidity within each portfolio, their respective returns were materially different over the majority of the reviewed periods.

Second, after one year, all annualized portfolio return variations ranged from a low of 25 basis points to a high of 93 basis points, equivalent to 5.53% and 12.99% respectively. Third, the zero coupon portfolio generated superior returns to either of the coupon-bearing portfolios in almost all periods for both groups (zeros do not have reinvestment risk).

Fourth, zeros provided better gross returns than off-the-run portfolios, although the latter did have the best risk-adjusted returns of the three, likely because duration is longest for zeros and shortest for off-the-run securities. Fifth, the on-the-run portfolio achieved the least attractive results in both groups for all periods. Finally, the equally distributed portfolios achieved tighter performance results for all periods compared to duration-weighted portfolios.

Laddered portfolios can be a useful discipline in approaching certain financial obstacles, but as with any investment discipline, an objective is required to measure success. Financial advisers would be wise to identify a measurement standard with which to evaluate performance, one that reflects the risk tolerances as well as quality and liquidity requirements of their client.

Caution should also be exercised in securities selection. Significant return disparities and higher volatilities are possible in laddered portfolios with only minor adjustments in the securities held or in their relative weightings. The use of on-the-run laddered portfolios offers little comparative advantage over zero coupon (which boasts inherently lower transaction costs due to its minimal annual cash flows) or off-the-run portfolios in normal market environments.

I have not observed any notable advantages in laddered maturity portfolios in terms of risk, return or definition of client objectives. I believe other investment approaches, active or defensive, are available that better facilitate the definition of investor objectives and risk parameters. FP

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