

Given that a simple change to federal funds investments would have simultaneously eliminated the interest rate spread and reduced the volatility, as expressed by the standard deviation, to zero, the Board believed that the Reserve Banks' imputed investment income method may have imputed an inappropriately low NICB to priced services.¹⁶ Correspondent banks and BHCs invest in a much wider array of investments than those imputed by the Federal Reserve, including loans, Treasury securities with longer maturities, government agency securities, government-sponsored enterprise securities, federal funds, commercial bonds, commercial paper, money market mutual funds, asset-backed securities, foreign currencies, repurchase agreements, and derivatives. As a result, the Board requested comment on a proposal to expand imputed investment options within a risk management framework similar to that used by banks, BHCs, and regulators in evaluating investment risk. To implement the proposal, the Board requested comment on two methods.

II. Summary and Analysis of Comments

The Board received two responses, both from Reserve Banks, to its request for comment. Although the Federal Reserve worked with private-sector representatives in developing the methods on which the Board requested comment, the Board received no comments from the banking industry. Both commenters favor changing the method used for imputing investment income and believe that a new method more consistent with the practices of BHCs will provide a better basis on which to impute income used in setting Federal Reserve fees.

A. Investments

Because the BHCs are a proxy for providers of priced-services activities, options for Reserve Bank clearing balance investments should be comparable to those available to BHCs. In principle, all of the investments available to BHCs could be appropriate clearing balance investments. In its request for comment, the Board proposed limiting imputed investments to federal funds; investments suitable for a buy-and-hold strategy, such as Treasury securities, government agency securities, commercial paper, and

municipal and corporate bonds; and money market and mutual funds.¹⁷ For investments with a fixed term, this strategy eliminates capital gains and losses from the investment returns and simplifies the recognition and reporting of imputed investment income. Realized and unrealized gains and losses on imputed mutual fund investments would be incorporated in the total return and recorded as net earnings. The Board requested comment on whether this investment strategy was appropriate.

Both commenters considered it reasonable to expand the imputed investment options. To limit discretion allowed in "managing" the portfolio and on the array of allowable investments, one commenter suggested that the investments be selected from a relatively narrow set of assets with readily observable market values. The second commenter suggested choosing investments with average or lower than average risk characteristics and recommended that the set of fixed-income investments be limited to those that are investment grade.

The Board has concluded that in constructing an imputed portfolio, investments will be selected from those allowable to banks and BHCs and will employ a buy-and-hold strategy for those investments with a stated maturity. Mutual fund gains and losses will be incorporated in the total return and recorded as net earnings. When investing in fixed-income instruments, only those of investment grade will be imputed.

B. Risk-Management Framework

The Board considered the comparability of the imputed investments with investments of a similar private-sector entity, and requested comment on establishing a risk-management framework to limit the imputed investments to prudent levels in accordance with sound business practice and regulatory constraints. To address these risks, the exposure to any one type of risk would be limited and measured in terms of earnings or equity at risk. The Reserve Banks currently use three risk measures in calculating the PSAF that address liquidity, interest rate, and credit risk. In its request for comment, the Board proposed incorporating these measures, while

adopting a specific constraint on credit risk, and adding a measure to address the longer-term effects of interest rate risk. In addition, the Board requested comment on any other risk-management criteria that should be considered.

1. Liquidity Risk

Although clearing balances are short term in nature, the Board previously determined that a portion of clearing balances remained stable and initially established \$4 billion as available to fund long-term assets used in the delivery of priced services, rather than invested only in short-term assets.¹⁸ Neither commenter objected to making the portion of core clearing balances not used to fund priced services assets available for investment in longer-term instruments. The Board believes that limiting the use of clearing balances to fund longer-term assets to only that portion that is deemed core clearing balances effectively manages liquidity risk.

2. Interest Rate Risk

In considering interest rate risk, one must evaluate the effect on earnings should the rate used to determine the cost of funds and the investment yield on those funds change at different intervals. To evaluate the risk of funding longer-term assets with short-term liabilities at rates that do not change concurrently and the resulting earnings volatility, the Board adopted the interest rate sensitivity analysis measure as part of its PSAF method. As adopted, this measure requires that longer-term investment of clearing balances be managed so that a 200-basis-point change in the rates for both the yield on all relevant priced services assets and the cost of all relevant priced service liabilities would not affect earnings, measured by the overall priced services recovery rate, by more than 200 basis points.

In requesting comment, the Board proposed adopting a second measure of interest rate risk, known as economic value of equity (EVE), for use in conjunction with the earnings at risk measure. The EVE measure, which is used by BHCs and regulators, compares the present value of interest-bearing assets and liabilities in the current rate environment resulting from a change in interest rates. The comparison shows the change in present values as a proportion of equity.¹⁹ The Board

fall in the range of the average plus or minus two standard deviations.

¹⁶ While reducing interest rate risk, a change in investment from Treasury bills to Federal funds would, in theory, increase credit risk. As a practical matter, however, banks have not incurred losses due to default in federal funds transactions.

¹⁷ Mutual fund investments would be selected from those that are publicly available and widely held. The specific funds used for imputing income would be disclosed during the price-setting process so that performance could be tracked and replicated. See companion notice, Federal Reserve Bank Services, elsewhere in today's **Federal Register**.

¹⁸ 66 FR 52617, October 16, 2001.

¹⁹ EVE is used as a complement to the interest rate sensitivity analysis already adopted to evaluate the effects of long-term mismatches between assets and liabilities on the value of an entity; the interest