Gizmo Global Bond Management

by

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Gizmo Securities International is a portfolio management and advisory firm based in Boston. Gizmo specializes in asset management for large institutional investors. The firm’s investment style over its 25 years of business could accurately be called 'conservative,' emphasizing fundamentals, diversification, low transaction costs, and low portfolio turnover.

Right now, Gizmo has about $2 billion under management in fixed income securities. About half of this is invested in U.S. Government securities with maturities ranging from 6 to 12 years; the remainder of the portfolio is in high-grade corporate bonds with similar maturities.

Over the last few years, but especially since the fall of the Berlin Wall in 1990 and the fall in U.S. interest rates, Gizmo’s competitors have been touting so-called global bond funds. The attraction for customers is the prospect of both higher yields and reasonable safety through investments in low-risk government securities. Most global bond funds targeting the institutional market appear to be comprised of medium-term maturity bonds issued by stable governments, i.e. from OECD countries. Very often the currency risk in these funds is hedged, but not always.

Pat Lopez has been a fund manager for Gizmo since 1975 specializing in fixed-income securities. She began as a junior analyst and now heads the team that manages the U.S. Government securities portfolio. Her assignment is to explore whether a strategy toward global bond investing can be designed that would be both conservative as far as risks are concerned, but yet offer more competitive yields to clients (and more profits for Gizmo).

In order to analyze this question, Pat has assembled a set of data on bond prices and exchange rates. Data are available on Pat's performance with her portfolio of U.S. bonds. In addition, data are available on indices of foreign government bonds (with an average maturity of 10 years) over the 1975-1990 period. This data is in an EXCEL spreadsheet file named GiZMO.XLS.

Please answer the following questions:
1. Data on the price of a share in Pat's U.S. bond portfolio is listed in Column B of the data file.
   a. What was the average return and risk of Pat's portfolio over its entire history?
   b. How did her performance compare to that for the index of U.S. bond prices, listed in Column C?
   c. Was Pat's portfolio more or less risky than that of the index?

2. Data on the price of foreign bond indices (Source: J.P. Morgan) for Canada, Germany, Japan, and the United Kingdom are in Columns D, E, F, and G of the data file, and spot exchange rates for the four currencies in columns H, I, J, and K.
   a. Expressing the return in terms of U.S. dollars, what was the average return and risk for each of these four bond portfolios over the entire sample period?
   b. Consider an international bond portfolio comprised of an equally-weighted combination of all four foreign countries: Canada, Germany, Japan, and the United Kingdom. Calculate the return and risk for the international bond portfolio. Does the international portfolio appear to have superior risk and return characteristics than its four constituent country bond funds?

3. Data on 1-month Eurocurrency interest rates for the Euro-dollar, Euro-Canadian dollars, Euro-DM, Euro-Yen, and Euro-Sterling are in Columns L, M, N, O, and P. The currency risk from investing in foreign bonds could be hedged by selling the foreign currency value of the bond portfolio forward for one month delivery.
   a. Calculate the return and risk for the hedged international bond fund. (NOTE: Assume that interest rate parity holds so that the forward currency premium is equal to the Eurocurrency interest rate differential.)
   b. How does the return and risk for the hedged international bond fund compare to the unhedged international bond fund you measured in question 2b?
   c. From a practical standpoint, does the currency hedge you applied in question 3a represent a perfect hedge? If not, explain why not?
4. Would Pat have benefited by investing some fraction of her investment funds in the international portfolio, either on a hedged or unhedged basis?

   a. To examine this issue, construct a new portfolio (H10) that is formed by taking 10% of the hedged return and 90% of Pat's original domestic portfolio. Similarly, construct another portfolio (H20) by taking 20% of the hedged return and 80% of Pat's original domestic portfolio. You can form portfolios H30, H40, ... H90, and H100 in a similar fashion. What conclusions do you draw for Pat?

   b. Same as in (a) except look at portfolios U10, U20, etc. formed by taking x% of the unhedged portfolio and (100-x%) of Pat's original portfolio.

5. Suppose Pat learned that international bond investing cost 0.50% more per year in terms of transaction costs (as compared to domestic bond investing), and that foreign governments withheld a tax of 25% on interest payments to foreigners. How would this effect her decision to use foreign bonds in her fixed income investment portfolio?

6. What questions remain for Pat to consider before she should commit any funds to a global bond portfolio?