Comparative Analysis of A, B Type and Exchange Traded Funds Performances with Mutual Fund Performance Measures, Regression Analysis and Manova Technique.

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The objective of the study is to evaluate risk-reward relationship and relative performances of the 4 different groups of mutual funds. To this end, daily return data of these 12 mutual funds (3 type variable fund; 3 B type variable fund; 3 A type stock fund and 3 A type Exchange traded fund) together with daily market index (imkb100) return and daily return of riskless rate for the period from January 2006 to Feb 2010. The 180-day maturity T-Bill has been selected to represent riskless rate. To determine performances of mutual funds; Sharpe ratio, M² measure, Treynor index, Jensen index, Sortino ratio, T² ratio, Valuation ratio has been applied and these indicators produced conflicting results in ranking mutual funds. Then timing and selection capability of the fund manager has been determined by applying simple regression and Quadratic regression. Interestingly all funds found to have positive $\alpha$ coefficient, indicating positive selection capability of managers; but in terms of timing capability only one fund managers showed success. Finally, to determine extent to which mean returns are differs between mutual funds, market index (imkb100) and riskless rate (180 day T-Bill) results of the analysis revealed that mean returns of individual security returns differs at P≤0,01 level. That shows instability in returns and poor ex-ante forecast modeling capability.

The Findings of the study could be articulated as following:

1. The sampled mutual funds, T-bills and imkb100 index, contrary to the expectation, did not followed high risk – high return relationship pattern.

2. All mutual fund managers found to have positive $\alpha$ coefficient that is they are successful in selecting securities to be included in their portfolio (fund). And Exchange-traded mutual funds shared first two ranking with this respect.

3. With respect to timing capability of the fund managers, quadratic regression analysis applied and only one mutual fund managers found to have $c^2$ coefficient. That
meant among twelve fund managers only one of them achieved to time security transaction correctly.

4. In terms of mutual fund performance ranking criteria (Sharpe ratio, M² measure, Treynor index, Jensen index, Sortino ratio, T² ratio, Valuation ratio) ranking of the individual mutual funds varied based on the underlying assumptions that the performance criteria utilized. Therefore, in order to judge all dimensions of the fund performance all criteria need to be taken into consideration.

5. In the study, covariance matrices of dependent variable has been tested and it was determined that they are not equal according to the Box’s M test at $P \leq .000$ level. That show fund mean returns varies over the years, preventing to modeling ex-ante forecasting process.

6. In the following step, sources of differences among variables and among period have been analyzed with Tukey’s B test by applying binary comparisons. Result of the analysis showed that in bdj, ec2, skd and gdf variables no statistically significant difference have been found over the year, while T-bill mean returns varied every year and formed 4 different subsets.