

MUTUAL FUND RATING METHODOLOGY

INTRODUCTION

Mutual fund industry in Pakistan is showing impressive growth. Its acceptance as a useful tool to deploy funds is on rise amongst both individual and corporate investors. However, at the same time, the increasing number of asset managers as well as funds has necessitated the need of an independent opinion on their performance.

PACRA follows a comprehensive approach to rate the two distinct ingredients of the mutual fund industry – asset managers and funds. These two are rated on separate scales. The asset manager rating seeks to determine the professional capacity of asset managers and the fund rating focuses on relative performance of a mutual fund. While the fund rating reflects the actual recorded performance, the likelihood of sustainability of performance – or improvement – can be judged from the rating of the manager of that fund.

PROCESS OVERVIEW

Every mutual fund investor has a distinct set of investment objectives and preferences. They all usually have unique risk-return perception and investment horizons that make it difficult to capture these preferences in a single yardstick for guiding investment decisions. PACRA's Mutual Fund Rating (commonly referred to as *Star Rating*) attempts to address this investor need. The star rating provides an initial screening criterion to investors. The rating is a purely quantitative measure, avoiding any biases. It is based on historical returns of a fund relative to other funds in similar category. PACRA has defined different fund categories – each having distinct characteristics – and ratings of funds in a particular category are comparable. The rating methodology is designed in a manner that the star rating of a fund conveys a sense of how skillfully the fund has been managed; that is, the relative star ratings of two funds in a category should be affected more by manager skill than by market circumstances or events that lie beyond the fund managers' control.

PACRA's mutual fund rating, therefore, provides a useful yardstick to existing and potential investors and facilitates their investment decisions.

PACRA's comprehensive offerings include instrument and entity credit ratings, insurer financial strength ratings, fund ratings, asset manager ratings and real estate gradings.

PACRA's opinion is not a recommendation to purchase, sell or hold a security, in as much as it does not comment on the security's market price or suitability for a particular investor.

March 2006

Rating Methodology

PACRA has used due care in preparation of this document. Our information has been obtained from sources we consider to be reliable but its accuracy or completeness is not guaranteed. PACRA shall owe no liability whatsoever to any loss or damage caused by or resulting from any error in such information. None of the information in this document may be copied or otherwise reproduced, stored or disseminated in whole or in part in any form or by any means whatsoever by any person without PACRA's written consent. Our reports and ratings constitute opinions, not recommendations to buy or to sell.

DEFINING A CATEGORY

Fund categories define groups of funds whose constituents are similar in their risk factor exposures so that return comparisons are meaningful. Moreover, the observed return differences among funds relate primarily to security selection, or to variation in the timing and amount of exposure to different elements affecting the category. Each of these, over time, may be presumed to exercise a skill-related effect.

The following considerations apply while assigning a fund to a particular category:

- Funds are grouped by the type of investments that dominate their portfolios.
- In general, funds in the same category can be considered reasonable substitutes for the purposes of portfolio construction.
- Category membership of a fund is based on long-term portfolio composition philosophy for the fund as disclosed by its asset manager.

PACRA, after a detailed evaluation of mutual funds in Pakistan, has identified the following categories:

1. **Income Fund:** A fund that remains at least 50% invested in debt securities, including money market instruments and capital market financing transaction, at all points in time.
2. **Equity Fund:** A fund that remains at least 50% invested in equity securities at all points in time.
3. **Balanced Fund:** A fund that carries a mix of equity and debt securities. A particular asset type should not constitute more than two-third of the total assets.
4. **Absolute Return Fund:** A fund that can invest in any asset class without any limit with the primary objective of maximizing the returns. If a fund initially classified in any of the above three categories (debt, equity or balanced) does not adhere to the stated investment parameter, it would be treated as an absolute return fund.
5. **Islamic Fund:** a fund that invests in *shariah* compliant instruments only.

The category of a particular fund will be established after evaluating its asset portfolio and in consultation with its asset manager. In case a particular fund is not being rated by PACRA, its category membership will be decided on the basis of the offering document of the fund and public information available about its portfolio composition. The definition of a particular category can be narrowed down to generate a new category only if there are at least five funds to be included in the new category. Similarly, a new fund category can also be designed if a new class of assets, forming substantial portion of at least portfolios of five funds, is identified and is not covered by any of above categories.

MEASURING PERFORMANCE

PACRA considers both absolute and risk-adjusted performance. Absolute return refers to the appreciation or depreciation that a fund has achieved over a period of time and effectively this is what an investor takes home at the end. However, at the same time, the level of risk (extent of variability) that is involved with those returns is also important. Risk-adjusted return shows the trade-off investors make between risk and return. Since star rating is a combination of both risk and return it is likely to provide investors a better measure to gauge historical performance of different funds.

RETURN

PACRA calculates a fund's return for a given quarter as follows:

$$R = \frac{PE - PB + D +/- A}{PB} - RF$$

Where

- R = Total harmonized return for the quarter
- PE = End of quarter NAV (net assets value) per share/certificate
- PB = Beginning of quarter NAV per share/certificate
- D = Cash distributions during the period
- A = Adjustment on account of addition to capital at a value different from NAV (valid in case of closed-end mutual funds)
- RF = Risk free rate – weighted average yield on 3-month treasury bills

RISK

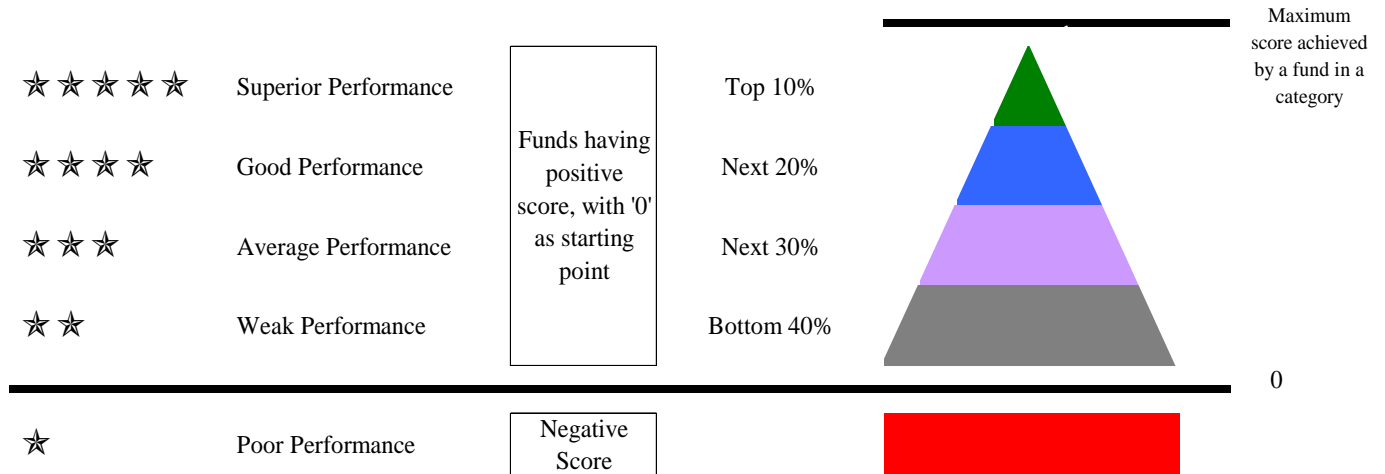
PACRA uses Sharpe Ratio – a technique developed by Nobel prize winning economist William Sharpe – to measure a fund's risk adjusted return. Mathematically, Sharpe Ratio is the return generated over the risk free rate, per unit of risk. The ratio is calculated as follows:

$$SR = \frac{R}{SD}$$

Where

- R = Total return for the quarter (as explained above)
- SD = Standard deviation of the quarterly returns of the fund. SD is computed using the trailing quarterly total returns for the appropriate time period, which is four trailing quarters at minimum and twelve trailing quarters at maximum.

PACRA calculates an overall quantitative score by combining these two equally weighted measures of historical performance. The star rating of a fund is then assigned according to the following distribution:



Other elements considered while calculating a score are as follows:

- Quarter of a year is used as a reference period to calculate performance.
- Funds are rated using two time periods – the trailing four quarters (one year) and trailing twelve quarters (three years) – and simple average of returns and sharpe ratio in these periods are used to calculate the final score.
- To arrive at the star rating, the score calculated on the basis of trailing four quarters has 60% weightage and the balance 40% weightage is given to the score of trailing twelve quarters.
- In case of an income fund, the score calculated according to above discussed criteria has 75% weightage and the balance 25% weightage is assigned to the credit quality of the assets of the fund.
- Funds with less than four quarters of performance history are not rated.

To summarise, the star rating is strictly a quantitative measure and funds are rated within their respective categories. The rating exercise measures performance of funds in a risk and return combination and then funds are ranked accordingly. It is important to note that a fund’s particular star rating is with reference to its category and consequently, ratings are comparable only in the same category.