

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 actual recorded performance of a mutual 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' 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.

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Rating Methodology

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PACRA will assign two types of Star ratings i.e. a star rating based on funds' performance during the trailing 12 months, and a long-term star rating based on funds' performance during the trailing 36-months.

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. **Equity Fund – Closed End:** A closed-end fund that at least invests around 50% of its net assets in equities at all times.
2. **Equity Fund – Open End:** An open-end fund that at least invests around 50% of its net assets in equities at all times.
3. **Balanced Fund:** A fund that carries a mix of interest-based and equity securities and at least invests around 30% of its net assets in equities at all times.
4. **Income Fund:** A fund that invests in interest-based instruments / securities and weighted average maturity of its assets is more than 90 days at all times.
5. **Money-Market Fund:** A fund that invests in money market and other short-term interest based instruments / securities including spread transactions. The weighted average maturity of its assets is less than 90 days at all times.
6. **Fund of Funds:** A fund that mainly invests in other funds with such investments forming at least around 50% of its net assets at all times.
7. **Asset Allocation Fund:** A fund that can invest in any class of asset in any proportion according to criteria set in its offering document.
8. **Islamic Fund:** A fund that invests in *shariah* compliant instruments only.

The category of a particular fund will be established on the basis of the offering document of the fund and publicly disclosed information about its portfolio composition. The definition of a particular category can



be narrowed down to generate a new category and, similarly, a new fund category can also be designed if a new class of assets is identified and is not covered by any of above categories. However, a category would only be created if there are at least two such funds being operated by two different asset managers to be included in that new category.

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:

$$R = \frac{PE - PB \pm A}{PB}$$

Where

- R = Total return for the month
- PE = End of month NAV (net assets value) per share/certificate
- PB = Beginning of month NAV per share/certificate
- A = Adjustments on account of cash dividend, bonus issue and addition to capital.

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 per unit of risk. The ratio is calculated as follows:

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

Where

- AR = Average monthly return for the trailing 12 monthly periods (as explained above)
- SD = Standard deviation of the monthly returns of the fund. SD is computed using the returns for trailing 12 monthly periods.

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:

★★★★★	Superior	Top 10%
★★★★	Good	Next 20%
★★★	Average	Next 40%
★★	Weak	Next 20%
★	Poor	Bottom 10%

Other elements considered while calculating a score are as follows:

- The ratings are calculated on the basis of performance during a particular year. However, in case of long-term star rating the performance during the trailing 36 months is considered.
- Only those funds are eligible for rating that have remained operational throughout the given period (i.e. one year for star rating and 3 years for long-term star rating).
- A month is used as a reference period to calculate performance.
- Funds are rated using performance in 12 months (36 months for long-term star rating) and geometric mean of returns and sharpe ratio over this period are used to calculate the final score.
- In case of income and money market funds, the score of return would have 50% weightage, the score of risk – as calculated using Sharpe ratio – would have 25% weightage and the balance 25% weightage is assigned to the credit quality of the assets of the fund.

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 on the basis of their performance during a given financial year. 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.