



# Methodology Performance Ranking

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## Summary

The performance ranking is an opinion on the fund’s historical performance in comparison to other funds in similar category measured through a quantitative yardstick. It provides an initial screening criterion to investors. The ranking is a purely quantitative measure, avoiding any biases. It is based on historical returns of a fund relative to other funds in similar category.

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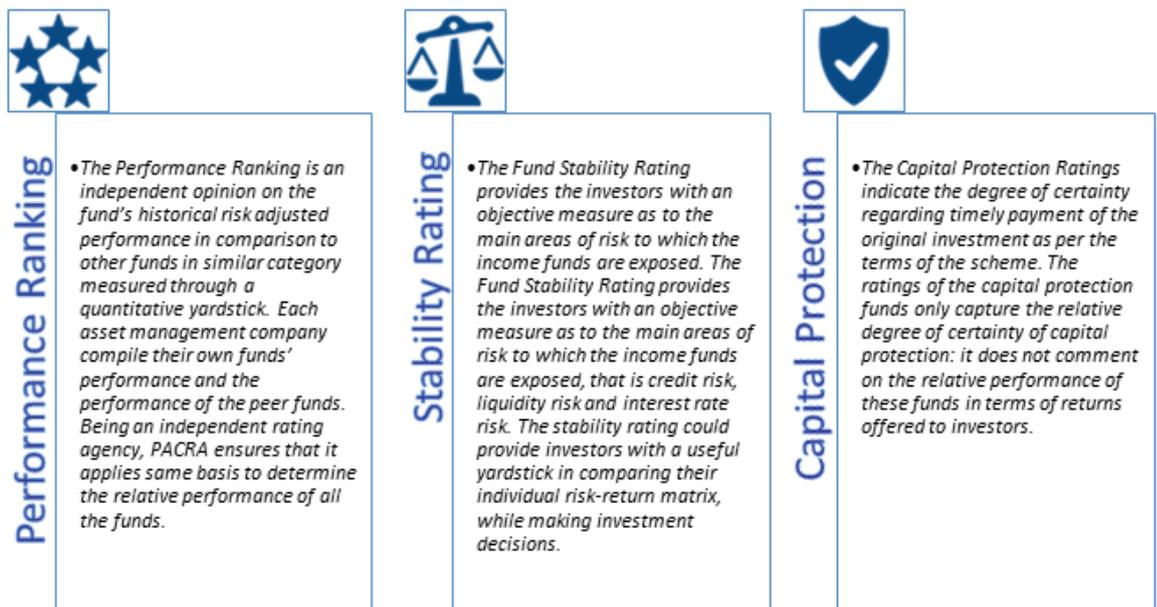
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## 0. Introduction

- **Performance Ranking:**  
Independent view on relative performance of fund
- Purely quantitative measure

**0.1** Mutual fund is an effective tool for mobilizing resources from a large pool of investors, and in turn, providing them access to a variety of assets, which might otherwise be difficult. Pakistan’s mutual fund industry has witnessed notable evolution in its overall structure. Asset management companies (AMCs) have introduced a variety of products in line with varying risk-return preferences of investors.

**0.2** The asset management business has two distinct elements – 1) the asset manager, and 2) the mutual funds. PACRA has developed separate methodologies to capture distinct components of the industry. Asset Manager Rating is an opinion on the quality of fund management, capability to manage risks inherent in asset management business, ability to generate sound fund performance and effectiveness of an AMC’s systems and processes. PACRA offers three products to capture varied factors of different types of mutual funds, i) Performance Ranking, ii) Stability Rating, and iii) Capital Protection Rating. The performance ranking is purely a quantitative measure, comparing historical returns of a fund relative to other funds in the same category of classification. The fund stability rating provides the investors with an objective measure as to the main areas of risk to which the income funds are exposed. Capital protection rating reflects the degree of protection offered on the original investment of the unit holders:



**0.3** 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. PACRA’ Mutual Fund Performance Ranking attempts to address this investor need. The performance ranking provides an initial screening criterion to investors. It is based on historical returns of a fund relative to other funds in similar category. PACRA mainly follows Circular No. 7 of 2009 of SECP for defining fund categories – each having distinct characteristics – and rankings of funds in a particular category are comparable.

**0.4** With the maturity in the domestic industry in terms of availability of long-term performance results, PACRA covers three distinct time periods in performance rankings i.e., a performance ranking based on fund’s performance during the trailing 12 months (1-Year Ranking); a performance ranking based on fund’s performance during the trailing 36-months (3-Year Ranking); and a performance ranking based on fund’s performance during the trailing 60-months (5-Year Ranking).

**0.5** PACRA releases rankings twice a year. The period covered is July to June and January to December. This ensures constant updating of the relative performance of the fund and also captures seasonality as well.

## 1. Defining a Category

- Funds having similar risk factors to form a category
- Minimum three funds required for a separate category

**1.1** Fund categories define groups of funds whose constituents are similar in their risk factor exposure so that return comparison is 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.

**1.2** While performance ranking can be computed for all categories of funds, PACRA conducts performance ranking for the following categories for public dissemination:

- Equity
- Balanced
- Asset Allocation
- Index Tracker
- Commodities
- Fund of Funds
- Islamic

**1.3** 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 three such funds to be included in that new category. As the industry matures, PACRA may consider increasing the minimum number of funds required for creating a category.

**1.4** In a category, where the number of funds are less than 3, these funds would be placed in closest category, only to determine these funds' relative performance. Fund of funds and others that have sub-funds would also be placed in the closest category, only to determine these funds' relative performance.

**1.5** Separate categories are to be made in respect of various types of Islamic funds or other distinctive nature funds. However, given the relatively evolving nature of the industry and less than three funds available to create a new category for such funds, these could be clubbed for ranking purposes in other relevant categories having largely similar characteristic. Nevertheless, while determining rankings of funds originally falling in a given category, added funds clubbed in that category would be excluded.

**Information Required on Defining a Category:**

- Risk factors exposure.
- Offering documents.
- Publicly available information on portfolio composition.

## 2. Measuring Performance

- Months' performance is used to calculate return
- Absolute return and risk adjusted return have similar weightage
- Downside deviation used for measuring risk
- 6-Month T-Bill used as a risk-free rate
- Characteristic of a normal distribution is used to determine the ranking

**2.1** PACRA considers both absolute and risk-adjusted fund 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, the level of risk (extent of variability) taken to generate those returns is also important. Risk-adjusted return shows the trade-off investors make between risk and return. Since performance ranking is a combination of both risk and return it is likely to provide investors a better measure to gauge historical performance of different funds.

**2.2 Return:** PACRA calculates a fund's return for a given month 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/Unit

A = Adjustments on account of cash dividend, bonus issue and addition to capital.

**2.3 Risk Adjusted Return:** Previously, in order to calculate a Fund's risk adjusted return, PACRA used the Fund's return volatility measured through standard deviation. This philosophy captures all variations of risk regardless of direction. Generally, investors are more concerned with the negative variation highlighting their risk-averse appetite. Considering this, PACRA has revised its practice and measures the Fund's risk adjusted return using downside deviation. The downside deviation is calculated using the negative volatility relative to the risk-free rate (Rf). PACRA uses 6-Month T-bills yield as a risk-free rate.

$$RAR = \frac{R}{DD(RF)}$$

**Where:**

R = Total return for the month

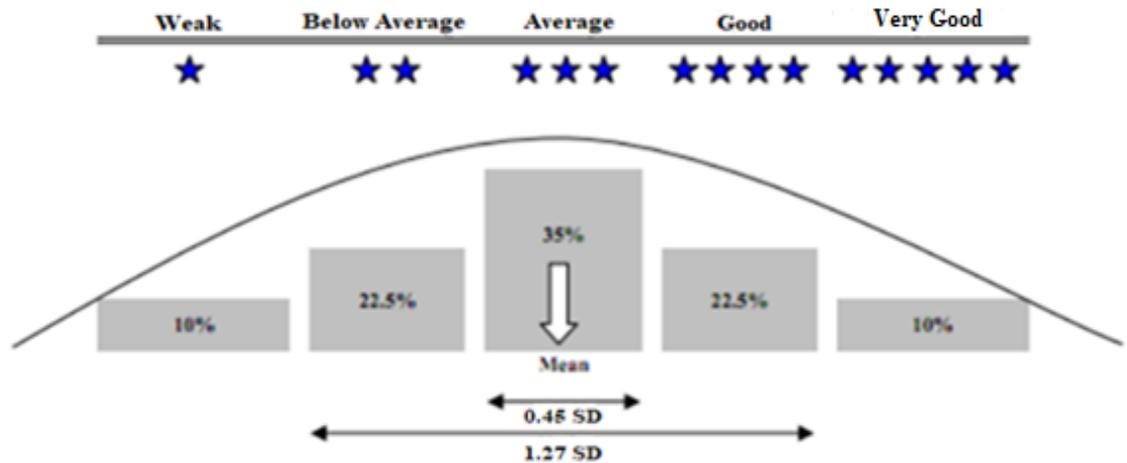
DD = End of month NAV (net assets value) per share/certificate

RF = Beginning of month NAV per share/certificate

**2.4** The ranking for each fund is determined using the characteristics of a normal distribution. The basic philosophy is to rank the funds based on the distance (measured through standard deviation) of their returns and risk adjusted returns (R & RAR) from the mean R & RAR of that particular category. In simplistic terms, a fund's performance (measured by assigning 50 % weight each to the fund's return and risk adjusted return) falling within a close range of the mean is rated as average, while funds' performance beyond the said range is rated as good, below average, superior or weak based on the direction and quantum of the deviation from the mean.

**2.5** As per the characteristics of a normal distribution, 0.45SD and 1.27SD from the mean would include 35% and 80% of the observations, respectively, while the remaining observations would fall

beyond 1.27SD. Using the above relationship, the performance rankings to funds are assigned within 5 categories described below:



**2.6** We need to emphasize that the characteristics of a normal distribution hold true when the sample size is sufficiently large. Due to limited number of funds in various categories, an outcome of the evolving nature of the mutual fund industry, the assigned rankings within a category might not follow a complete normal distribution pattern. However, the above criterion is considered more appropriate in achieving the basic objective of ranking funds’ R & RAR relative to the category mean in the current industry dynamics.

**Information Required on Measuring Performance:**

- Publicly available returns data
- Publicly available NAV data
- Market index data

### 3. Key Elements – A Recap

**3.1** The key elements of the methodology are:

*The rankings are calculated on the basis of performance during a particular period (12 months for 1-Year performance ranking, 36 months for 3-Year performance ranking and 60 months for 5-Year performance ranking). For a particular fund the relevant period ranking will be disclosed.*

*For measuring performance, equal 50% weightage is assigned to return and risk adjusted return*

*Only those funds are eligible for ranking that have remained operational for one year.*

*A month of a year is used as a reference period to calculate performance.*

*New category would be created with a minimum number of 3 funds.*

*Single fund clubbed with any category would be excluded while determining rankings of fund originally falling in that category.*

*Rankings are based on past comparative performance of the fund. PACRA's opinion is not a recommendation to purchase, sell or hold a fund, in as much as it does not comment on the Fund's NAV or suitability for a particular investor.*

**Performance Ranking**

An opinion on the fund’s historical performance in comparison to other funds in similar category measured through a common yardstick. The ranking is purely quantitative evaluation based on historical absolute and risk adjusted return of a fund.

<b>Scale</b>	<b>Definition</b>
<b>5 - Star</b>	<b>Very good performance</b>
<b>4 - Star</b>	<b>Good performance</b>
<b>3 - Star</b>	<b>Average performance</b>
<b>2 - Star</b>	<b>Below average performance</b>
<b>1- Star</b>	<b>Weak performance</b>

<p><b>Outlook</b> Being based on actual performance, no Outlook or Rating Watch can be assigned to fund performance rankings.</p>	<p><b>Rating Watch</b> Being based on actual performance, no Outlook or Rating Watch can be assigned to fund performance rankings.</p>	<p><b>Suspension</b> It is not possible to update an opinion due to lack of requisite information. Opinion should be resumed in foreseeable future. However, if this does not happen within six (6) months, the rating should be considered withdrawn.</p>	<p><b>Withdrawn</b> A rating is withdrawn on a) termination of rating mandate, b) cessation of underlying entity, c) the debt instrument is redeemed, d) the rating remains suspended for six months, e) the entity/issuer defaults., or/and f) PACRA finds it impractical to surveill the opinion due to lack of requisite information.</p>	<p><b>Harmonization</b> A change in rating due to revision in applicable methodology or underlying scale.</p>
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**Surveillance:** Surveillance on a mutual fund ranking opinion is carried out on a periodic basis till it is formally suspended or withdrawn. A comprehensive surveillance of ranking opinion is carried out at least once every six months.

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