The Pakistan Credit Rating Agency Limited

Performance Ranking Criteria

Assessment Framework

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Summary

The performance ranking is an opinion on a fund's historical performance in comparison to other funds in similar category. It is measured through a quantitative framework and provides prospective investors with an initial screening criterion. The ranking is derived purely from quantitative metrics to capture historical returns of a fund relative to other funds in similar category, avoiding any biases.

Analyst Contacts
Zohaib Zafar
+92-42-3586 9504
zohaib.zafar@pacra.com

The Pakistan Credit Rating Agency Limited
Head Office
FB1 Awami Complex
Usman Block, New Garden Town
Lahore
Phone +92 42 3586 9504

Karachi Office
PNSC Building, 3rd Floor
M.T. Khan Road, Lalazar, Karachi
Phone +92 21 35632601

1. Introduction

Performance Ranking:
An independent view on the relative performance of a fund.

Purely quantitative measure.

1.1 A mutual fund is an effective tool for mobilizing pooled resources from a large number of investors, and in turn, providing them access to a variety of assets. Pakistan's mutual fund industry has witnessed notable evolution in the overall structure as asset management companies (AMCs) continue to introduce a variety of products in line with the varying risk-return preferences of different investors.

1.2 The asset management business has two distinct elements; the asset manager, and mutual funds. PACRA has developed separate methodologies to capture distinctive components of the industry. PACRA's 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 returns, and effectiveness of an AMC's systems and processes. PACRA offers three products to capture the varied factors of different types of mutual funds; Performance Ranking, Stability Rating and Capital Preservation Rating.

Performance Ranking	Stability Rating	Capital Preservation
Performance Ranking is an independent opinion on fund's historical risk adjusted performance in comparison to other funds in similar category measured through a quantitative yardstick. Each asset management company compiles their own funds' performance and the performance of peer funds. Being an independent rating agency PACRA ensures that it applies same basis to determine the relative performance of all funds.	Fund Stability Rating provides investors with an objective measure to the main areas of risk to which income funds are exposed, that is credit risk, liquidity risk and interest rate risk. Stability Rating provides investors with a useful yardstick to compare their individual risk-return matrix while making investment decisions.	Capital preservation rating indicates the level of certainty regarding timely payment of the original investment as per the terms of a fund. Capital preservation rating is aimed towards investors who are mindful of their original investment and do not intent to have downside risk, while retaining the ability to tap upside potential.

1.3 Every mutual fund investor has a distinct set of investment objectives and preferences. All investors typically have unique risk-return perceptions and investment horizons that make it difficult to assess these preferences with a single yardstick. PACRA's Mutual Fund Performance Ranking attempts to address these investor needs. The performance ranking provides an initial screening criterion to investors. It is based on the historical returns of a fund relative to other funds in a similar category. PACRA mainly follows Circular No. 7 of 2009 of SECP's guidelines & any **continuations** thereafter for defining fund categories – each having distinct characteristics – and rankings of funds in a particular category are comparable.

1.4 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).

1.5 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 likewise, captures seasonality.

2. Defining a Category

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

2.1 Fund categories define groups of funds whose constituents are similar in their risk exposure so that the comparison of returns 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.

2.2 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

2.3 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 which is not already covered by any of the above categories. However, a new category will only be created if there are at least three 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.

2.4 In a category, where the number of existing funds happen to be less than three, the funds would end up being placed in the closest possible category to determine their relative performance. Others, such as Fund of funds that tend to have sub-fund constituents by default would likewise be placed in the closest category only to determine their relative performance.

2.5 Separate categories are to be made in respect to various types of Islamic funds or others with a distinctive nature. However, as brought up beforehand, given the evolving nature of the industry, whenever there are less than three funds available to create a new category, they would end up being clubbed for ranking purposes in other relevant categories possessing largely similar characteristics. Nevertheless, while determining the ranking of funds **originally** falling in a given category, funds clubbed in to that category on case-by-case basis would end up excluded.

Information Required on Defining a Category:

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

3. Measuring Performance

Monthly performance is used to calculate the returns

Absolute and risk-adjusted returns have similar weightages in the final ranking Risk is measured using downside deviation.

Returns on 6-Month T-Bills are used as the risk-free rate of return

Characteristics of a normal distribution are used to determine the performance ranking

3.1 PACRA considers both absolute and risk-adjusted returns to measure fund performance. Absolute returns refer to the appreciation/depreciation of a fund's value over a period of time. The absolute return is effectively what an investor takes home. The level of risk (extent of variability) taken to generate those returns is also important to consider. Risk-adjusted returns show the trade-off investors make between risk and return. Since PACRA's performance ranking is a combination of both risk and return, it provides investors a sound measure to gauge the historical performance of different funds.

3.2 **Return:** PACRA calculates a fund's return for a given month as follows:

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

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, bonuses issued, and additions to capital.

3.3 **Risk-adjusted Return:** In the past, in order to calculate a Fund's risk adjusted return, PACRA used the Fund's return volatility, which was 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 the risk-free rate.

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

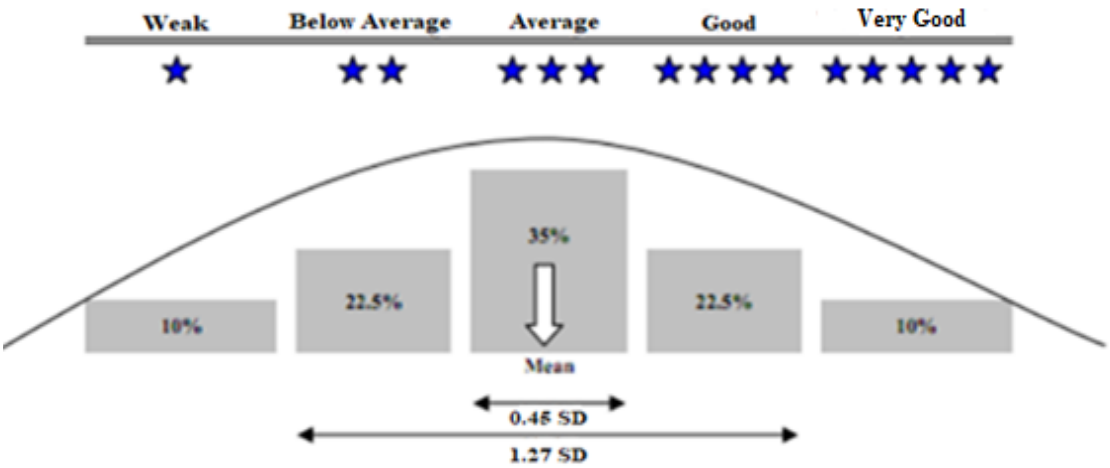
Where:

R = Total returns for the month.

DD(RF) = The downside deviation of a fund calculated over a monthly time horizon using the risk-free rate as a minimum acceptable rate of return.

3.4 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 absolute and risk adjusted returns (R & RAR) from the mean R & RAR of their particular categories. A more precise elucidation may be that a fund's performance is measured by assigning 50% weightage to the cumulative distribution functions (CDF) of both the fund's absolute and risk-adjusted returns' normalized deviations. An overall CDF falling within close proximity to the mean is rated as average, whereas funds that perform beyond the said range may be rated as good, below average, superior or weak based on the direction and quantum of the deviation from the mean.

3.5 As per the characteristics of a normal distribution, 0.45 and 1.27 standard deviations from the mean would include 35% and 80% of the observations respectively, while the remaining observations would fall beyond 1.27 standard deviations from the mean. Using this relationship, the performance rankings to funds are assigned within 5 categories described below:



3.6 The characteristics of a normal distribution hold true when a sample size is sufficiently large. Due to the limited number of funds in various categories, an outcome of the evolving nature of the mutual fund industry, the assigned rankings within a category may not follow a complete normal distribution pattern. However, the above criterion is considered more appropriate in achieving the basic objective of ranking the 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

4. Key Elements

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 absolute and risk adjusted returns.

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 funds 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.

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

Outlook Being based on actual performance, no Outlook or Rating Watch can be assigned to fund performance rankings.

Rating Watch Being based on actual performance, no Outlook or Rating Watch can be assigned to fund performance rankings.

Suspension 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.

Withdrawn 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.

Harmonization A change in rating due to revision in applicable methodology or underlying scale.

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.