
Morningstar Fee Level Methodology

Morningstar Methodology

30 September 2017

Contents

2 Category Groupings

Morningstar Fee Level

6 Broad

7 Distribution

10 Variable Products

Important Disclosure

The conduct of Morningstar's analysts is governed by Code of Ethics/Code of Conduct Policy, Personal Security Trading Policy (or an equivalent of), and Investment Research Policy. For information regarding conflicts of interest, please visit: <http://global.morningstar.com/equitydisclosures>

Introduction

The Morningstar Fee Level for mutual funds was developed to help investors compare an investment vehicle's relative level of fees with those of similar investment vehicles. This methodology applies to all US-based mutual funds and subaccounts in Morningstar's database.

There are three different Morningstar Fee levels:

- ▶ Broad
- ▶ Distribution
- ▶ Variable Products

Each of the three Morningstar Fee Levels places funds in a category grouping. Morningstar Fee Level–Broad ranks mutual funds using only the category groupings as comparison groups to determine the rank of each fund. Morningstar Fee Level–Distribution, however, further combines mutual funds with similar distribution channels and expense structures to create smaller comparison groups within each category grouping. Similarly, Morningstar Fee Level–Variable combines subaccounts into smaller comparison groups within the category grouping based on similar distribution channels and expense structures.

Category Groupings

1. Aggressive Allocation
2. Bank Loan
3. Bear Market
4. Commodities
Commodities Agriculture + Commodities Broad Basket + Commodities Energy + Commodities Industrial Metals + Commodities Miscellaneous + Commodities Precious Metals
5. Conservative Allocation
6. Convertibles
7. Corporate Bond
8. Currency
Single Currency + Multicurrency
9. Diversified/Asia/Japan
Diversified Pacific/Asia + Japan Stock
10. Emerging Markets Bond
11. Emerging Markets Stock
China Region + Diversified Emerging Markets + India Equity + Latin America Stock + Pacific/Asia ex-Japan Stock
12. Europe Stock
13. Equity Alternative
Long-Short Equity + Market Neutral + Options-based
14. Foreign Large Cap
Foreign Large Value + Foreign Large Blend + Foreign Large Growth
15. Foreign Small/Mid-Cap
Foreign Small/Mid-Value + Foreign Small/Mid-Blend + Foreign Small/Mid-Growth
16. Government
Long Government + Intermediate Government + Short Government
17. High-Yield Bond
18. High-Yield Municipal
19. Inflation Protected

20. Intermediate-Term Bond
21. Large Cap
Large Value + Large Blend + Large Growth
22. Long-Term Bond
23. Managed Futures
24. Mid-Cap
Mid-Value + Mid-Blend + Mid-Growth
25. Miscellaneous Region
26. Moderate Allocation
27. Moderately Aggressive Allocation
28. Moderately Conservative Allocation
29. Multialternative
30. Emerging Markets
31. Multisector Bond
32. Municipal Intermediate
Municipal California Intermediate + Municipal National Intermediate + Municipal New York Intermediate + Municipal Single State Intermediate
33. Municipal Long
Municipal California Long + Municipal National Long + Municipal New York Long + Municipal Single State Long
34. Municipal Other
Municipal Massachusetts + Municipal Minnesota + Municipal New Jersey + Municipal Ohio + Municipal Pennsylvania
35. Municipal Short
Municipal National Short + Municipal Single State Short

36. Nontraditional Bond

37. Preferred Stock

38. Retirement Income

39. Short-Term Bond

40. Small Cap

Small Value + Small Blend + Small Growth

41. Specialty

Communications + Consumer Cyclical + Consumer Defensive + Equity Energy + Energy Limited Partnership + Equity Precious Metals + Financials + Global Real Estate + Health + Industrials + Miscellaneous Sector + Natural Resources + Real Estate + Technology + Utilities

42. Tactical Allocation

43. Target Retirement 2000–2010

44. Target Retirement 2011–2015

45. Target Retirement 2016–2020

46. Target Retirement 2020–2025

47. Target Retirement 2026–2030

48. Target Retirement 2031–2035

49. Target Retirement 2036–2040

50. Target Retirement 2041–2045

51. Target Retirement 2046–2050

52. Target Retirement 2051–2060

53. Target Retirement 2061+

54. Trading

*Trading-Inverse Commodities + Trading-Inverse Debt + Trading-Inverse Equity +
Trading-Leveraged Commodities + Trading-Leveraged Debt + Trading-Leveraged Equity + Trading-
Miscellaneous*

55. Ultrashort Bond

56. Volatility

57. World Allocation

58. World Bond

59. World Stock

Morningstar Fee Level—Broad

Methodology

Fund share classes are first grouped together into category groupings. The methodology applies to all U.S.-open end funds in Morningstar's database and excludes the Morningstar load-waived share classes.

Ranking

Within each comparison group, a fund share class' most recent annual report net expense ratio will be ranked against its peers. If a fund share class is part of a fund of funds, the most recent prospectus net expense ratio will be used instead of the annual report net expense ratio. Both the prospectus net expense ratio and annual report net expense ratio should be annualized. If they are not annualized, they should be discarded in favor of an older ratio that is annualized. Each share class is assigned a quintile score (1 to 5) and a corresponding Fee Grade/Label (High, +Avg [Above Average], Avg [Average], -Avg [Below Average], Low).

Morningstar uses the following formula to determine the percentile rank of an expense ratio in a series. Percentile ranks range from 1 (best) to 100 (worse) with all intermediate values spread evenly over that range.

All observations are ranked in the desired order (ascending). Percentile ranks are assigned as follows:

$$\text{PctRank} = \begin{cases} i & \text{for } i = 1 \\ \text{FLOOR}[99*(i-1)/(n-1)+1] & \text{for } i > 1 \end{cases}$$

Where:

N = Total number of observations

i = Absolute rank of each observation

Floor = A function that rounds down to the next integer (e.g., 89.83 rounds down to 89)

Morningstar does not require a minimum number of items in order to percentile rank a set of data. For example, if there are only three fund share classes in a distribution class for a comparison group, we will percentile rank those three (1, 50, and 100).

Exhibit 1 Percentile Ranks Are Mapped Into Quintiles

Range	Quintile	Word Label
0 < Percentile Rank ≤ 20	1	Low
20 < Percentile Rank ≤ 40	2	Below Average or – Average
40 < Percentile Rank ≤ 60	3	Average or Avg
60 < Percentile Rank ≤ 80	4	Above Average or + Average
80 < Percentile Rank ≤ 100	5	High

Source: Morningstar.

Morningstar Fee Level—Distribution

Methodology

Fund share classes are first grouped together into category groupings. The methodology applies to all U.S. open-end funds in Morningstar's database and excludes the Morningstar load-waived share classes.

Distribution Class Criteria

Comparison groups are further determined by the criteria listed below. This allows for an "apples to apples" comparison of fund share classes with similar distribution channels and expense structures.

Data Points Required (Most Recent):

Maximum front load
Maximum deferred load
12b-1 fee
Minimum initial purchase
Share class type

Front Load: Front load of greater than 1.00%; 12b-1 fee less than or equal to 0.50%; minimum initial purchase less than \$100,000; share class type does not equal Retirement.

Deferred Load: Max deferred load greater than 1.00%; front load equal to 0%; minimum initial purchase less than \$100,000; share class type does not equal Retirement.

Level Load: Deferred load less than or equal to 1.00%; front load equal to 0%; 12b-1 fee greater than 0.25%; minimum initial purchase less than \$100,000; share class type does not equal Retirement.

No Load: Minimum initial purchase less than \$100,000; share type does not equal Retirement or Institutional; 12b-1 fee less than or equal to 0.25%; front load equal to 0%; deferred load equal to 0%.

Institutional: Share class type equals Institutional or minimum initial purchase is greater or equal to \$100,000; share class type does not equal Retirement.

Retirement, Small: Share class type equals Retirement; 12b-1 fee is greater than 0.50%.
Retirement, Medium: Share class type equals Retirement; 12b-1 fee is greater than 0.00% and less than or equal to 0.50%.

Retirement, Medium: Share class type equals Retirement; 12b-1 fee is greater than 0.00% and less than or equal to 0.50%.

Retirement, Large: Share class type equals Retirement and 12b-1 fee is 0.00%.

Example distribution class comparison groups include:

1. Bank Loan – Front Load
2. Bank Loan – Deferred Load
3. Bank Loan – Level Load
4. Bank Loan – No Load
5. Bank Loan – Institutional
6. Bank Loan – Retirement, Small
7. Bank Loan – Retirement, Medium
8. Bank Loan – Retirement, Large
9. Bear Market – Front Load
10. Bear Market – Deferred Load
11. Bear Market – Level Load
12. Bear Market – No Load
13. Bear Market – Institutional
14. Bear Market – Retirement, Small
15. Bear Market – Retirement, Medium
16. Bear Market – Retirement, Large

number of category groups * number of distributions classes = number of comparison groups

Ranking

Within each comparison group, a fund share class' most recent annual report net expense ratio will be ranked against its peers, using five quintiles. If a fund share class is part of a fund of funds, the most recent prospectus net expense ratio will be used instead of the annual report net expense ratio. Both the prospectus net expense ratio and annual report net expense ratio should be annualized. If they are not annualized, they should be discarded in favor of an older ratio that is annualized. Each share class is assigned a quintile score (1 to 5) and corresponding Fee Grade/Label (High, +Avg [Above Average], Avg [Average], -Avg [Below Average], Low).

Morningstar uses the following formula to determine the percentile rank of an expense ratio in a series. Percentile ranks range from 1 (best) to 100 (worse) with all intermediate values spread evenly over that range.

All observations are ranked in the desired order (ascending). Percentile ranks are assigned as follows:

$$\text{PctRank} = \begin{cases} i & \text{for } i = 1 \\ \text{FLOOR}[99*(i-1)/(n-1)+1] & \text{for } i > 1 \end{cases}$$

Where:

n = Total number of observations

i = Absolute rank of each observation

Floor = A function that rounds down to the next integer (e.g., 89.83 rounds down to 89)

Morningstar does not require a minimum number of items in order to percentile rank a set of data. For example, if there are only three fund share classes in a distribution class for a comparison group, we will percentile rank those three (1, 50, and 100).

Exhibit 2 Percentile Ranks Are Mapped Into Quintiles

Range	Quintile	Word Label
0 < Percentile Rank <= 20	1	Low
20 < Percentile Rank <= 40	2	Below Average or – Average
40 < Percentile Rank <= 60	3	Average or Avg
60 < Percentile Rank <= 80	4	Above Average or + Average
80 < Percentile Rank <= 100	5	High

Source: Morningstar.

Morningstar Fee Level – Variable Products

Methodology

Subaccounts are first grouped together into category groupings. The methodology applies to all U.S. variable annuity subaccounts and U.S. group variable annuity subaccounts in Morningstar's databases. The methodology does not apply to variable life and variable universal life subaccounts, primarily because policy-level mortality and expense charges are not uniformly assessed as asset-based fees.

Distribution Class Criteria

Comparison groups are further determined by the criteria listed below. This allows for an "apples to apples" comparison of subaccounts with similar distribution channels and expense structures.

Policy Data Points Required (Most Recent):

Mortality and Expense Risk Charge (M&E)

Administrative Charge

Distribution Charge

Share class type

Class A: Front-load structure with no contingent deferred sales charges.

Class B: Contingent deferred sales charge schedule greater than three years, no front load.

Class C: Contingent deferred sales charge schedule of one year or less, no front load.

Class I (No Load): No front load or contingent deferred sales charge and M&E less than 1%.

Class L: Contingent deferred sales charge, three- to four-year level or declining schedule.

Class O: Front load spread out over x years and contingent deferred sales charge, both determined by a breakpoint-based reducing schedule.

Class X: Contingent deferred sales charge, no front load, and contractual (i.e. non-optional) up-front premium bonus.

Group VA: Subaccounts in policies solely available to an employer as a funding vehicle for a qualified or non-qualified deferred compensation plan, or to individuals who purchase the policies through a qualified group plan, such as a 403(b).

Example distribution class comparison groups include:

1. Bank Loan – Class A
2. Bank Loan – Class B
3. Bank Loan – Class C
4. Bank Loan – Class I
5. Bank Loan – Class L
6. Bank Loan – Class O
7. Bank Loan – Class X
8. Bank Loan – Group VA
9. Bear Market – Class A
10. Bear Market – Class B
11. Bear Market – Class C
12. Bear Market – Class I
13. Bear Market – Class L
14. Bear Market – Class O
15. Bear Market – Class X
16. Bear Market – Group VA

number of category groups * number of distributions classes = number of comparison groups

Ranking

Within each comparison group, a fund share class' most recent annual report net expense ratio will be ranked against its peers. If a fund share class is part of a fund of funds, the most recent prospectus net expense ratio will be used instead of the annual report net expense ratio. Both the prospectus net expense ratio and annual report net expense ratio should be annualized. If they are not annualized, they should be discarded in favor of an older ratio that is annualized. Each share class is assigned a quintile score (1 to 5) and corresponding Fee Grade/Label (High, +Avg [Above Average], Avg [Average], -Avg [Below Average], Low).

Morningstar uses the following formula to determine the percentile rank of an expense ratio in a series. Percentile ranks range from 1 (best) to 100 (worse) with all intermediate values spread evenly over that range.

All observations are ranked in the desired order (ascending). Percentile ranks are assigned as follows:

$$\text{PctRank} = \begin{cases} i & \text{for } i = 1 \\ \text{FLOOR}[99*(i-1)/(n-1)+1] & \text{for } i > 1 \end{cases}$$

Where:

n = Total number of observations

i = Absolute rank of each observation

Floor = A function that rounds down to the next integer (e.g., 89.83 rounds down to 89)

Morningstar does not require a minimum number of items in order to percentile rank a set of data. For example, if there are only three fund share classes in a distribution class for a comparison group, we will percentile rank those three (1, 50, and 100).

Exhibit 3 Percentile Ranks Are Mapped Into Quintiles

Range	Quintile	Word Label
0 < Percentile Rank <= 20	1	Low
20 < Percentile Rank <= 40	2	Below Average or – Average
40 < Percentile Rank <= 60	3	Average or Avg
60 < Percentile Rank <= 80	4	Above Average or + Average
80 < Percentile Rank <= 100	5	High

Source: Morningstar.