Step 1. Our Rating Chart Overview

Metric	Formula	Weight	Rating Thresholds
Sharpe Ratio	(Rp - Rf) / σ□	20%	≥ 2.5: AAA = 8 2.0–2.5: AA 1.5–2.0: A 1.0–1.5: BBB 0.5–1.0: BB 0.0–0.5: B 0.5–0.0: C < -0.5: D
Sortino Ratio	(Rp - Rf) / σd	15%	≥ 3.0: AAA = 8 2.5–3.0: AA 2.0–2.5: A 1.5–2.0: BBB 1.0–1.5: BB 0.5–1.0: B 0.0–0.5: C < 0.0: D
Maximum Drawdown	max((Peak Value - Trough Value) / Peak Value)	10%	< 10%: AAA 10%–15%: AA 15%–20%: A 20%–25%: BBB 25%–30%: BB 30%–35%: B 35%–40%: C > 40%: D
Calmar Ratio	Annualized Return / Maximum Drawdown	10%	≥ 4.0: AAA 3.0–4.0: AA 2.0–3.0: A 1.5–2.0: BBB 1.0–1.5: BB 0.5–1.0: B 0.0–0.5: C < 0.0: D
Treynor Ratio	(Rp - Rf) / β	10%	≥ 0.5: AAA 0.4–0.5: AA 0.3–0.4: A 0.2–0.3: BBB 0.1–0.2: BB 0.0–0.1: B

			-0.1–0.0: C < -0.1: D
Information Ratio	(Rp - Rb) / Tracking Error	10%	≥ 1.0: AAA 0.8–1.0: AA 0.6–0.8: A 0.4–0.6: BBB 0.2–0.4: BB 0.0–0.2: B -0.2–0.0: C < -0.2: D
Alpha (Annualized)	Rp - [Rf + β × (Rb - Rf)]	10%	≥ +5%: AAA +3%–+5%: AA +1%–+3%: A 0%–+1%: BBB -1%–0%: BB -3%–-1%: B -5%–-3%: C < -5%: D
Beta	Cov(Rp, Rb) / Var(Rb)	10%	0.9–1.1: AAA 0.8–0.9 or 1.1–1.2: AA 0.7–0.8 or 1.2–1.3: A 0.6–0.7 or 1.3–1.4: BBB 0.5–0.6 or 1.4–1.5: BB 0.4–0.5 or 1.5–1.6: B 0.3–0.4 or 1.6–1.7: C < 0.3 or > 1.7: D
Omega Ratio	Σ(ri - rth for ri > rth) / Σ(rth - ri for ri < rth)	5%	≥ 1.8: AAA 1.6–1.8: AA 1.4–1.6: A 1.2–1.4: BBB 1.1–1.2: BB 1.0–1.1: B 0.9–1.0: C < 0.9: D

Note:

- *Rp* = Annualized portfolio return
- *Rf* = Risk-free rate
- *σ* = Portfolio volatility
- *σd* = Downside deviation

- *Rb* = Benchmark return
- *β* = Beta (market sensitivity)
- *rth* = Threshold return for Omega Ratio

Step 2. Mapping Ratings to Numerical Scores

We map each letter rating to a numerical score as follows:

- AAA = 8
- AA = 7
- A = 6
- BBB = 5
- BB = 4
- B = 3
- C = 2
- D = 1

Step 3. Example Portfolio Calculation

Suppose we have computed the following values for our portfolio:

- **Sharpe Ratio:** 2.7
- **Sortino Ratio:** 2.6
- **Maximum Drawdown:** 18% (or 0.18)
- **Calmar Ratio:** 3.2
- **Treynor Ratio:** 0.45
- **Information Ratio:** 0.9
- **Alpha (Annualized):** +2%
- **Beta:** 0.8
- **Omega Ratio:** 1.5

Determine the Letter Ratings:
Using our thresholds:

1. **Sharpe Ratio (2.7):**
   ≥ 2.5 → **AAA** (Score 8)

2. **Sortino Ratio (2.6):**
   Falls in 2.5–3.0 → **AA** (Score 7)

3. **Maximum Drawdown (0.18):**
   15%–20% range → **A** (Score 6)

4. **Calmar Ratio (3.2):**
   Falls in 3.0–4.0 → **AA** (Score 7)

5. **Treynor Ratio (0.45):**
   Falls in 0.4–0.5 → **AA** (Score 7)

6. **Information Ratio (0.9):**
   Falls in 0.8–1.0 → **AA** (Score 7)

7. **Alpha (Annualized, +2%):**
   Falls in +1%–+3% → **A** (Score 6)

8. **Beta (0.8):**
   Falls in 0.8–0.9 → **AA** (Score 7)

9. **Omega Ratio (1.5):**
   Falls in 1.4–1.6 → **A** (Score 6)

Summary of Ratings:

Metric	Value	Letter Rating	Numerical Score
Sharpe Ratio	2.7	AAA	8
Sortino Ratio	2.6	AA	7
Maximum Drawdown	0.18	A	6
Calmar Ratio	3.2	AA	7
Treynor Ratio	0.45	AA	7
Information Ratio	0.9	AA	7
Alpha (Annualized)	+2%	A	6
Beta	0.8	AA	7
Omega Ratio	1.5	A	6

Step 4. Calculate the Composite Score

Now, apply the assigned weights:

- **Weights:**
  - Sharpe Ratio: 20%
  - Sortino Ratio: 15%
  - Maximum Drawdown: 10%
  - Calmar Ratio: 10%
  - Treynor Ratio: 10%
  - Information Ratio: 10%
  - Alpha: 10%
  - Beta: 10%
  - Omega Ratio: 5%

Compute the Weighted Contributions:

- Sharpe: 8×0.20=1.68 \times 0.20 = 1.6
- Sortino: 7×0.15=1.057 \times 0.15 = 1.05
- Maximum Drawdown: 6×0.10=0.66 \times 0.10 = 0.6
- Calmar: 7×0.10=0.77 \times 0.10 = 0.7
- Treynor: 7×0.10=0.77 \times 0.10 = 0.7
- Information: 7×0.10=0.77 \times 0.10 = 0.7
- Alpha: 6×0.10=0.66 \times 0.10 = 0.6
- Beta: 7×0.10=0.77 \times 0.10 = 0.7
- Omega: 6×0.05=0.36 \times 0.05 = 0.3

Sum of Weighted Scores:
1.6+1.05+0.6+0.7+0.7+0.7+0.6+0.7+0.3=7.351.6 + 1.05 + 0.6 + 0.7 + 0.7 + 0.7 + 0.6 + 0.7 + 0.3 = 7.35

Thus, the composite weighted score is **7.35** (on a scale from 1 to 8).

Step 5. Map Composite Score to Final Rating

Suppose we define our final rating thresholds as follows (example mapping):

- **7.5 – 8.0:** AAA
- **7.0 – 7.5:** AA
- **6.0 – 7.0:** A
- **5.0 – 6.0:** BBB
- **4.0 – 5.0:** BB
- **3.0 – 4.0:** B

- **2.0 – 3.0:** C
- **< 2.0:** D

A composite score of **7.35** falls into the **AA** range.

Final Example Summary

For our hypothetical portfolio, the individual metric ratings were:

- **Sharpe Ratio:** AAA
- **Sortino Ratio:** AA
- **Maximum Drawdown:** A
- **Calmar Ratio:** AA
- **Treynor Ratio:** AA
- **Information Ratio:** AA
- **Alpha:** A
- **Beta:** AA
- **Omega Ratio:** A

Using our weights, the weighted composite score is **7.35**, which translates to a final portfolio rating of **AA**.