Information Ratio in Mutual Funds: Definition, Formula & Calculation

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Understanding how to measure mutual fund performance is crucial for investors aiming to make informed decisions. One key metric that seasoned investors use is the Information Ratio. While the Sharpe Ratio is widely known, the Information Ratio provides an additional layer of insight, especially when comparing actively managed <u>mutual funds</u> to a benchmark. This article explores what is information ratio, its formula, how it is calculated, and its significance in evaluating mutual funds.

What is the Information Ratio in Mutual Funds?

The Information Ratio in mutual funds measures a fund manager's ability to generate excess returns relative to a benchmark, adjusted for the risk taken. It compares the fund's active return (the return above the benchmark) to the volatility of that active return. This makes it particularly useful for assessing the skill of active fund managers, especially in equity funds.

While the <u>Sharpe Ratio</u> evaluates returns in the context of total risk, the Information Ratio focuses solely on active risk, making it suitable for investors choosing among funds with the same benchmark.

Why the Information Ratio Matters to Mutual FUND Investors?

The Information Ratio is a crucial metric for those investing in actively managed funds. It tells you not just whether a fund exceeds its benchmark, but how consistently it has done so. A high Information Ratio indicates that the fund manager consistently outperforms the benchmark with minimal additional risk.

For investors looking to fine-tune their portfolio, especially with equity funds, this ratio helps distinguish true performance skill from market luck.

Information Ratio Formula & Step by Step Calculation

Let's break down the information ratio formula:

 Information Ratio (IR) = (Portfolio Return – Benchmark Return) / Standard Deviation of Excess Return

Here is what each component of the formula represents:

- **Portfolio Return:** The annualized return generated by the fund/portfolio during a particular period, usually expressed in percentage terms.
- **Benchmark Return:** The annualized return of a comparable index (e.g., NIFTY 50, BSE 30), also measured in percentage terms.
- **Standard Deviation of Excess Return:** Measures how much a funds return deviate from its benchmarks return over time.

Example:

If a fund returns 12% annually and its benchmark returns 9%, the active return is 3%. If the tracking error is 2%, the Information Ratio would be:

Information Ratio = 3% / 2% = 1.5

What Is a Good Information Ratio? How to Read the Number

Understanding how to read the Information Ratio can greatly influence your investment decisions. Typically:

- **Above 1.0:** Excellent performance, indicating high consistency in beating the benchmark.
- Between 0.4 to 0.99: Reasonable skill shown by the fund manager.
- Below 0.4: Weak performance.
- **Negative:** Indicates the fund underperforms the benchmark consistently.

So, what is considered a good information ratio? A ratio of 0.5 and above is generally seen as acceptable, with anything over 1 considered exceptional.

Information Ratio in Mutual Funds: Category Benchmarks

In <u>equity mutual funds</u>, each category—like large-cap, mid-cap, or thematic—tracks a relevant benchmark. These benchmarks help investors assess how well a fund is performing relative to its peer group.

The Information Ratio is especially useful for comparing funds within the same category. It measures not just outperformance but the consistency and efficiency of that outperformance against a benchmark. A higher IR indicates that a fund manager is delivering superior returns with better risk control.

For a sharper equity fund analysis, pair the Information Ratio with other key metrics like Sharpe Ratio and Alpha to get a well-rounded view of performance.

If you're looking to deepen your understanding of fund analysis overall, here's a helpful guide on how to measure mutual fund performance using key metrics like Sharpe Ratio, Alpha, Beta, and more.

Information Ratio vs. Sharpe Ratio: Key Differences

Both the Sharpe Ratio and Information Ratio are important tools for evaluating mutual fund performance, but they serve different purposes and offer distinct insights.

| Feature | Information Ratio | Sharpe Ratio |
|----------------|-----------------------|----------------|
| Benchmark Used | Specific market index | Risk-free rate |

| Measures | Active return per unit of active risk | Excess return per unit of total risk |
|-----------------|---------------------------------------|--------------------------------------|
| Best For | Comparing active managers | Overall fund performance |
| Risk Considered | Tracking Error | Standard Deviation |

In summary, Information Ratio vs Sharpe Ratio is not a matter of which is better, but rather which is more appropriate for your analysis. Use the Information Ratio when comparing funds with the same benchmark and looking for manager skill.

Limitations of the Information Ratio & When to Use Alternatives

While the Information Ratio is a powerful tool, it does come with limitations:

- Short Time Frames: Ratios can be misleading over short periods due to insufficient data.
- Benchmark Choice: An inappropriate benchmark can distort the ratio.
- **Doesn't Capture Tail Risks:** It ignores extreme market movements that could affect returns.

In such cases, supplementing with metrics like the Sharpe Ratio, Sortino Ratio, and Alpha can give a more holistic view of fund performance.

Key Takeaways on Information Ratio

- 1. The Information Ratio evaluates the risk-adjusted performance of a mutual fund relative to a benchmark.
- 2. It is especially useful for evaluating equity funds and active fund managers.
- 3. A higher ratio suggests consistent outperformance with lower relative risk.
- 4. It complements other metrics like the Sharpe Ratio in a comprehensive mutual fund performance review.
- 5. Always consider time frame, benchmark suitability, and additional performance indicators when using this ratio.

FAQs

1. What is the information ratio formula?

The formula is: (Portfolio Return - Benchmark Return) / Tracking Error.

2. How do you calculate information ratio in mutual funds?

Calculate the active return by subtracting the benchmark return from the portfolio return, then divide it by the tracking error.

3. What is considered a good information ratio?

A ratio above 0.5 is generally considered good. Above 1.0 is excellent.

4. What does a negative information ratio mean?

It means the fund underperformed its benchmark on a risk-adjusted basis.

5. Information ratio vs. Sharpe ratio - which is better?

It depends. Use the Information Ratio for comparing active fund managers; use the Sharpe Ratio for assessing total return vs total risk.

6. How much data history is needed to trust an information ratio?

Ideally, use at least 3 to 5 years of data for meaningful insights.

7. Does a higher information ratio always mean lower risk?

Not necessarily. It means better risk-adjusted performance, but not inherently lower total risk.

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