

Volatility Calculation Methodology

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1. What is Volatility?

Volatility represents the degree of variation in the price of a security or a portfolio over a certain period.

Higher volatility implies more frequent and larger price swings, while lower volatility indicates stable and predictable performance.

2. How We Measure Volatility on RupeeRakshak.com

Finmo Investment Advisers Private Limited ("Finmo", "rupeerakshak.com", "rupeerakshak", "we", "us", or "our") will be adopting calculating volatility using the **standard deviation of returns** over a **rolling one-year** period. Currently the Volatility is calculated as per prescribed formulae and the Volatility type is updated manually in the backend. The three types of volatility available for selection are High Volatility, Medium Volatility and Low Volatility.

Return data may be based on daily or weekly closing values depending on the asset class.

3. Formula for Volatility

$$\sigma = \sqrt{\frac{\sum (R_i - R_{avg})^2}{n - 1}}$$

Where:

- **R_i** = Return at period i
- **R_{avg}** = Average return
- **n** = Number of observations

To **annualize** the volatility:

$$\text{Annualized Volatility} = \sigma \times \sqrt{T}$$

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Where **T** = 252 (for daily returns) or 52 (for weekly returns)

4. Basket-Level Volatility

For baskets with multiple securities, we calculate **portfolio-level volatility** using:

$$\text{Portfolio Volatility} = \sqrt{(w_1^2 \cdot \sigma_1^2 + w_2^2 \cdot \sigma_2^2 + 2w_1w_2 \cdot \text{Cov}_{12} + \dots)}$$

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Where:

- **w_i** = weight of asset i
- **σ_i** = standard deviation of asset i
- **Cov_{ij}** = covariance between asset i and j

This provides a more accurate picture of the **overall basket risk**, accounting for diversification benefits.

5. Classification Based on Volatility

Risk Category Annualized Volatility (%)

Low Risk Less than 10%

Moderate Risk 10% to 18%

High Risk Above 18%

These bands are aligned with SEBI's Risk-o-Meter for mutual funds to help investors compare and choose wisely.

6. How Often Is It Updated?

- Volatility figures are updated **monthly** or after any **basket rebalance**
- The "Last Updated" date is shown on each basket card
- Risk category may change based on updated data

7. Why It Matters

Knowing the volatility of a basket helps investors:

- Align investments with their personal **risk appetite**
- Choose baskets suitable for **short-, medium-, or long-term goals**
- Remain informed during **market fluctuations**

✦ *Note: Volatility is an estimate based on historical data. It does not predict future market behavior*

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