Portfolio Theory

Accounting & Finance

Why the right portfolio is not just the best assets.

Portfolio risk depends on the covariance between holdings, not only their individual risks.

$$\sigma^2 p = w_1^2\sigma_1^2 + w_2^2\sigma_2^2 + 2w_1w_2\rho\sigma_1\sigma_2$$

$\rho = 1$ Move together.	**No diversification benefit**
$\rho = 0$	**Meaningful risk reduction**
$\rho = -1$ Theoretical.	**Risk can reach zero**

THE COMMON MISTAKE

× **Diversifying by holding many similar assets**

✓ **Holding assets with low correlation**

Thirty tech stocks are one bet. Correlation, not count, determines whether diversification actually works.

The efficient frontier is the set of portfolios with the best return for each level of risk. Anything below it is dominated.