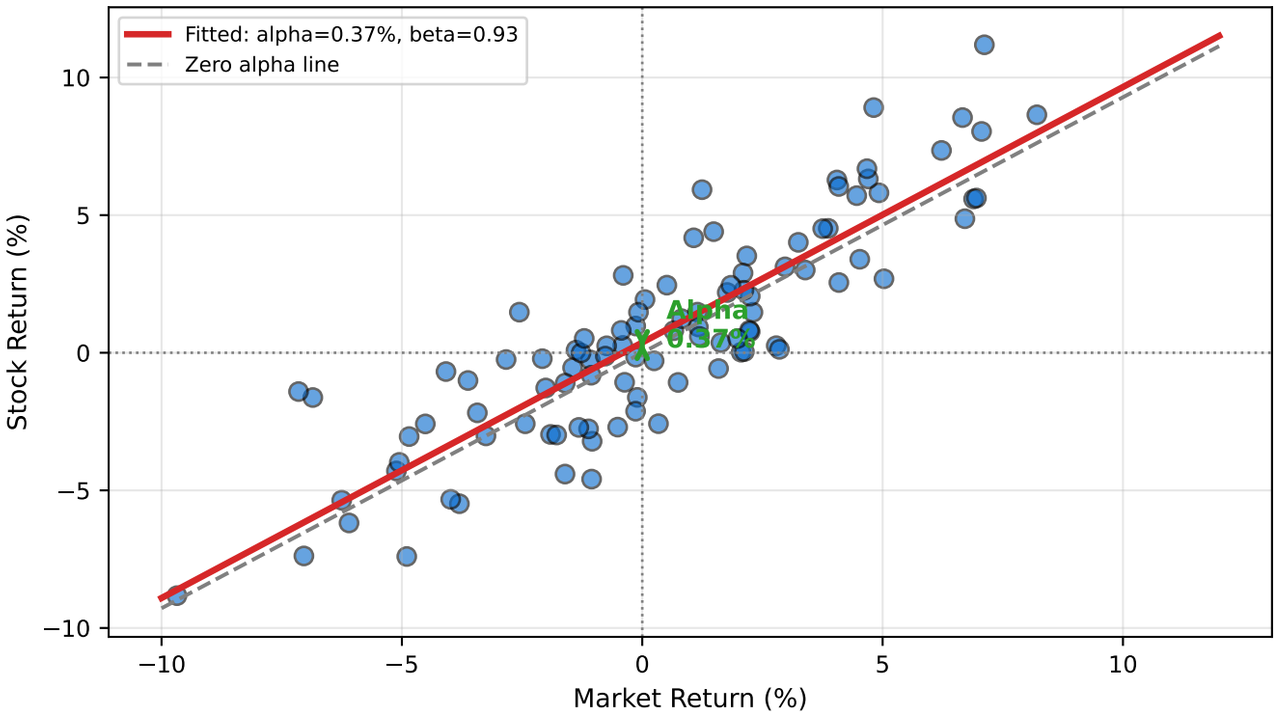
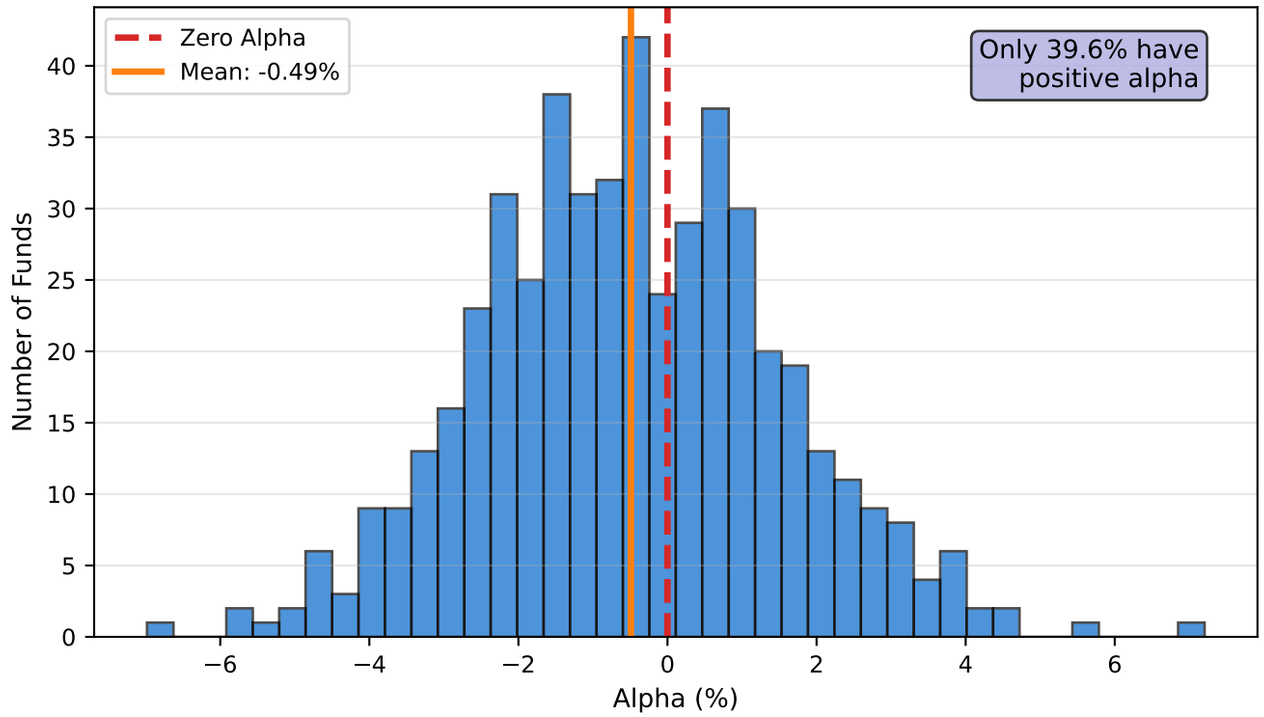
Alpha and Beta: Separating Skill from Market Risk

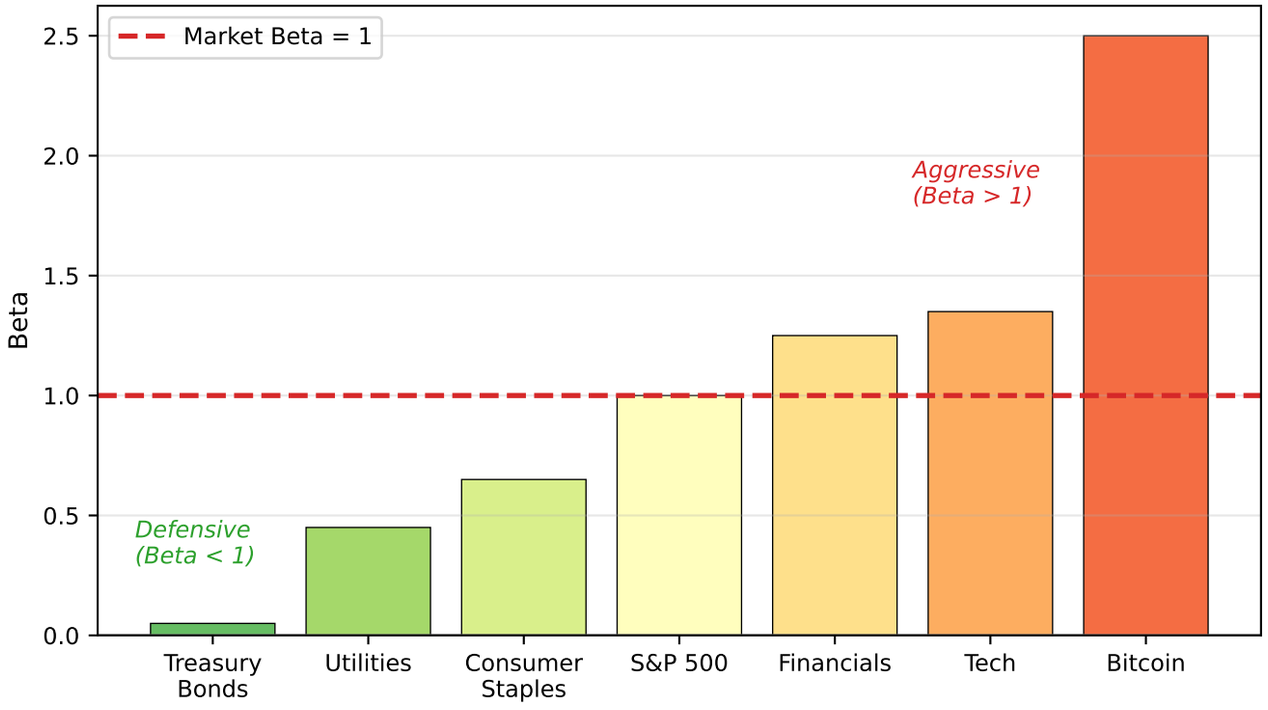
Alpha: Return Above What Beta Explains



Alpha Distribution: 500 Mutual Funds (Annualized)



Beta Spectrum: Defensive to Aggressive



Alpha vs Beta Summary

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ALPHA VS BETA: KEY CONCEPTS

BETA (Risk Exposure)
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- Measures sensitivity to market
- Cannot be "generated" - it's exposure
- High beta = high risk, high expected return
- Can be achieved cheaply via index funds

ALPHA (Skill Premium)
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- Return AFTER accounting for risk factors
- Represents manager skill (or luck)
- Very difficult to generate consistently
- Most active managers have negative alpha

THE MATH:
R_i − R_f = α + β · (R_m − R_f) + ε

Rearranging:
α = (R_i − R_f) − β · (R_m − R_f)

EXAMPLE (Annualized):
- Fund return: 12%
- Risk-free: 2%
- Market return: 10%
- Fund beta: 1.2

Alpha = (12% - 2%) - 1.2 * (10% - 2%)
Alpha = 10% - 9.6% = 0.4%

The fund added 0.4% above its risk-adjusted benchmark.
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