

Equity Fundamental Quality: Eleven Identities and No Validated Sleeve

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Abstract

ALPHAC recorded 11 distinct equity-quality return identities spanning gross profitability, operating margin, return on equity, a quality composite, and a growth/profitability/earnings quality composite. Immutable annualized Sharpe measurements range from -0.8316 to +0.7643. Nine of 11 are negative. The two positives are both operating-margin variants over the shortest 2022–2026 history; the same signal over 2000–2026 is -0.4174. No family-wide persisted curves, drawdowns, DSR values, capacity sweep, or broker-reconciled forward record survive for these identities. The correct status is research-only, not a validated sleeve.

Mechanism, literature, and overlap

Quality factors hypothesize that profitable, conservatively financed businesses earn returns not fully explained by market beta, or that investors underweight persistent operating strength. Novy-Marx's gross-profitability evidence provides an important prior ([Journal of Financial Economics](#)). The Fama–French five-factor model incorporates operating profitability and investment ([Journal of Financial Economics](#)). Neither source validates ALPHAC's point-in-time joins, universe, costs, or implementation.

Quality can overlap value, investment, momentum, sector structure, and defensive equity exposure. The taxonomy assigns mixed price-momentum configurations to AlphaMax before fundamental labels; the 11 rows here are therefore the quality-only family boundary, not every run containing a quality feature. One family can contribute at most one independent sleeve.

Complete trial lineage

Signal group	Identities	Persisted Sharpe evidence
eq_gross_profitability	3	-0.8214 to -0.2635
eq_operating_margin	3	-0.4174 to +0.7643
eq_quality_composite	3	-0.8316 to -0.5926
eq_qual_gpe	1	-0.5856
eq_roe	1	-0.7289
Total	11	2 positive; 9 negative

The machine packet publishes each exact hypothesis key, config hash, configuration, immutable ledger source and source hash, observation count, Sharpe, skew, and kurtosis. History varies from 728 to 5,384 observations. That variation is material: the strongest result has only 728 observations and does not replicate in the longer operating-margin identity.

Several long-history measurements have implausibly extreme higher moments, including skew below -24 and kurtosis above 969. Those values are evidence of unresolved return/data construction or tail behavior, not performance achievements. Without the original curves, they cannot be repaired or reinterpreted into credible drawdown and DSR estimates.

Evidence boundary and decision

All 11 rows currently have immutable-ledger-summary evidence only. The audit deliberately reports maximum drawdown and artifact-era DSR as missing. A Sharpe point estimate, even +0.7643, cannot pass selection adjustment, tail-risk, capacity, diversification, or execution gates by itself.

There is no family capacity sweep, no admissible forward configuration, no Alpaca paper sleeve, and no live return attributed to fundamental quality. Existing AlphaMax performance is momentum performance and must not be relabeled as quality.

Decision: NOT ESTABLISHED / RESEARCH ONLY. Zero sleeves. A future quality candidate requires a single preregistered formula, point-in-time fundamental availability, survivorship-inclusive issuer lineage, persisted daily curves, costs and borrow, current-union deflation, capacity, crisis correlation, and broker-reconciled forward evidence.

Reproduction and credit

- `docs/design/PREREG_FUNDAMENTAL_SINGLES.md` : historical family specification.
- `scripts/audit_equity_fundamental_families.py` : deterministic taxonomy and ledger audit.
- `/glassbox/equity_quality_family.json` : machine packet.
- `/glassbox/trial_packet_manifest.json` : global union and remaining identity-packet debt.

The evidence and ALPHAC implementation were authored and directed by **Arhan Canli**, Founder of Canli Capital. Explicit authorship does not imply peer review or independent verification.

References

1. Robert Novy-Marx (2013). *The other side of value: The gross profitability premium*. Journal of Financial Economics. <https://doi.org/10.1016/j.jfineco.2013.01.003>
2. Eugene F. Fama, Kenneth R. French (2015). *A five-factor asset pricing model*. Journal of Financial Economics. <https://doi.org/10.1016/j.jfineco.2014.10.010>