

QuantLens

Metrics guide: what every number means and how to use it

Edition 18 October 2026. Covers the screener, fund ranking, signals, alerts, reports, backtest and optimizer.

Read this first. QuantLens turns free and secondary data into rankings and rules-based signals. It is a screening aid: it tells you where to look first and what to question, not what to buy. Scores are relative (a percentile among the names you ran), the data has known gaps (especially for Nairobi), and none of it is backtested as a trading strategy. Never act on a signal without checking the company's filings.

1. How a score is built

For each equity, QuantLens collects 12 fundamental metrics, converts each into a **percentile rank** within the group being compared (0 = worst, 100 = best), averages them into three pillars, then blends the pillars: **Value 35%, Quality 40%, Growth 25%**.

Step	What happens	Why it matters to you
Peer group	Each stock is ranked inside its sector when the sector has 5 or more names in the run, otherwise against the whole universe.	A bank is not compared with a miner on P/B. If you run 8 stocks, the ranking is only as meaningful as those 8.
Percentiles	Higher-is-better metrics rank high to low; lower-is-better (P/E, P/B, EV/EBITDA, debt/equity) are inverted.	A score of 80 means 'better than about 80% of the group', not '80% good'. Some name is always on top.
Clean-up	Non-positive P/E, P/B and EV/EBITDA are treated as missing (negative earnings must not look cheap). Extreme values are clipped to the 2nd/98th percentile.	One bad data point cannot swing the ranking, but a loss-maker gets no credit on that metric rather than a penalty.
Missing data	Missing metrics are skipped, not counted as zero. A name needs at least 50% of the 12 metrics (the coverage) to receive a score.	Low coverage means the score rests on few numbers. Treat coverage under 0.6 with suspicion.

2. The twelve fundamental metrics

Metric	Pillar	Formula	Better	How to read it, and the traps
pe	Value	Price / earnings per share	Lower	Years of current profit you pay for. Under 10 is cheap for most sectors, over 25 expensive. Very low P/E (under 3) is often a warning: one-off gains, cyclical peak, or bad data. Not meaningful for loss-makers (excluded).
pb	Value	Price / book value per share	Lower	Under 1 means the market values the company below its accounting equity. The key valuation for banks and insurers. Low P/B with low ROE is a value trap, not a bargain.
ev_ebitda	Value	Enterprise value / EBITDA	Lower	Capital-structure-neutral valuation for industrials. Available from Yahoo for most listed markets; blank for Nairobi (no EBITDA in the inputs).
fcf_yield	Value	(Operating cash flow - capex) / market cap	Higher	Cash the business generates relative to its price. Above 5% is attractive; negative means it burns cash. Blank for most NSE names.
dividend_yield	Value	Dividend per share / price	Higher	Cash return today. Check the payout is covered by earnings: a yield over 10% often signals a falling price or a one-off special dividend.
roe	Quality	Net income / shareholders' equity	Higher	Profit earned on owners' money. Above 15% is strong for most sectors. Banks use leverage, so compare banks only with banks.
roa	Quality	Net income / total assets	Higher	Profit per shilling of assets. Typically 1-2% for banks, higher for asset-light businesses.
net_margin	Quality	Net income / revenue	Higher	Profit kept from each shilling of sales. Compare within a sector only: distributors earn 2%, software 25%.
debt_equity	Quality	Total debt / equity	Lower	Balance-sheet risk. Not used for banks and insurers (deposits and policy liabilities are not 'debt'); left blank for them.
current_ratio	Quality	Current assets / current liabilities	Higher	Ability to pay bills due within a year. Under 1 is a liquidity warning; over 3 may mean idle cash.
revenue_growth	Growth	Revenue / prior-year revenue - 1	Higher	Top-line momentum. Check the definition: some insurers report 'insurance revenue' only.

Metric	Pillar	Formula	Better	How to read it, and the traps
earnings_growth	Growth	EPS growth (or net-income growth when EPS is unavailable)	Higher	Growth off a depressed base looks huge. Growth is not computed when the prior year was a loss.

3. Reading the screener columns

Column	Meaning	How to use it
value / quality / growth	Pillar scores, 0-100 (average of that pillar's metric percentiles).	Look for balance. A 95 value with a 30 quality is cheap for a reason.
coverage	Share of the 12 metrics available (0-1).	Above 0.8 is solid. Nairobi names are typically 0.55-0.67 because debt, cash-flow and current-ratio inputs are mostly blank.
score	Weighted blend of the pillars, 0-100. Blank when coverage is under 0.5.	A starting point for research. Compare within a run, never across runs or markets.
sector	Sector used for the peer ranking.	If it shows 'Unknown', the sector comparison fell back to the whole universe.
fy_end	Financial year the fundamentals describe (Nairobi).	Old fiscal years mean stale ratios, and ratios use the latest stored price.
data_confidence	How well sourced the Nairobi inputs are.	medium : figures agree across 2 or more sources or come from a primary document. partial : key items missing or estimated. low : sources conflict or are thin. Low-confidence rows are capped at HOLD.
vol	Annualised standard deviation of daily returns.	Under 20% is calm (large US stocks), over 40% is very volatile. Higher volatility needs a higher expected return.
max_drawdown	Largest peak-to-trough fall over the history window.	-20% is routine, -50% means a holder lost half at some point. Ask whether you could sit through it.
momentum_12_1	Price change from 12 months ago to 1 month ago.	Positive means the market has been rewarding the stock. Skipping the latest month avoids short-term reversal. Strongly negative momentum on a 'cheap' stock is the classic value trap.
traded_days_%	Share of days with at least one trade (Nairobi).	Under 50% means you may be unable to buy or sell when you want.
avg_daily_kes_m	Average value traded per day, KES millions (Nairobi).	Under KES 1m a day: a quoted return is not capturable at any size. The screener hides these by default.

4. Return and risk statistics

Statistic	Definition	Rule of thumb
cagr	Compound annual growth rate of the price series.	NSE prices ignore dividends, so returns are understated (a 7% yielder loses 7 points a year).
sharpe	Mean excess return over the risk-free rate / volatility, annualised.	Under 0.5 weak, 0.5-1 decent, above 1 strong. Needs at least a year to mean anything.
sortino	Like Sharpe but penalises only downside volatility.	Higher than Sharpe when most of the volatility is on the upside.
beta	Sensitivity to the benchmark (CAPM regression).	1.0 moves with the market; 0.5 half as much; negative moves against it.
alpha	Annualised return above what beta explains (Jensen's alpha).	Positive alpha over a short window is often luck. Look for persistence.
VaR / CVaR (95%)	Daily loss exceeded on the worst 5% of days / the average loss on those days.	CVaR is the honest measure of a bad day.

5. Funds and ETFs

Funds are ranked **inside peer groups** (for example 'US equity: broad market'), each against a benchmark that fits the group, so a bond fund is never judged against the S&P 500. Groups with fewer than 3 funds show 'n/a'. The 0-100 score is a percentile within the group; it is not comparable across groups.

Component	Weight	Better	Notes
Sharpe	25%	Higher	Risk-adjusted return over the window.

Component	Weight	Better	Notes
Expense ratio	20%	Lower	A guaranteed drag every year. Shown as a percentage (0.03% = 3 basis points).
Alpha	15%	Higher	Return beyond what the fund's market exposure explains.
Sortino, max drawdown, rolling 1-year hit rate	10% each	Higher	Hit rate = share of rolling 1-year windows in which the fund beat its benchmark.
Manager tenure, AUM (log scale)	5% each	Higher	AUM under \$100m raises closure risk. Missing data (common for UK/EU ETFs) is skipped, not scored as zero.

6. Signals: how BUY, HOLD and SELL are decided

A signal is the score plus gates. Gates can only **lower** a signal, never raise it. Each signal shows its reasons and flags, and a conviction level.

Signal	Rule (equities with a score)
STRONG BUY	Score at least 78, quality at least 60, positive 12-1 momentum, drawdown shallower than -40%, and data not marked partial or low.
BUY	Score at least 68.
HOLD	Score between 35 and 68, or a BUY/SELL that a gate downgraded.
SELL	Score at most 35.
NO SIGNAL	Not enough fundamentals to score. For equities the report falls back to a technical-only signal (below).

Gate	Effect	Reason
Momentum below -15%	BUY becomes HOLD	Possible value trap: the price is falling while the ratios look cheap.
Momentum above +20% on a SELL	SELL becomes HOLD	Weak fundamentals but the market disagrees; do not fight a strong trend blindly.
data_confidence low	Capped at HOLD	Inputs are thin or conflicting; verify first.
data_confidence partial	Capped at BUY	Key inputs missing or estimated; no STRONG BUY.
Thinly traded	Capped at HOLD	Average daily value under KES 1m or traded on under 50% of days.
Drawdown below -40%	Flag only	Shown so you can judge whether you could tolerate the volatility.

Conviction. High: coverage at least 0.8, medium-or-better data, no flags. Medium: coverage at least 0.55 and data not low. Otherwise Low. **Funds:** peer score at least 75 is BUY, at most 25 is SELL; fees above 1% cap the signal at HOLD. **Technical-only signals** (commodities, FX, crypto, indices, bonds, and equities without fundamentals) count four checks: price above its 200-day average, 50-day average above the 200-day, positive 12-1 month momentum, positive 3-month return. 4 of 4 is BUY, 0 or 1 is SELL, 2 or 3 is HOLD. These are trend rules, with at most Medium conviction.

7. Alerts

Alert	Trigger	What to do
52-week high / low	Latest close is the highest / lowest of the last year.	Highs confirm strength; lows prompt a check of the thesis, not an automatic sell.
Crossed above / below 200-day average	The close moved to the other side of its 200-day average in the last 10 trading days.	A trend change signal; the weakest on volatile or thin names.
Large one-day move	Absolute move of 10% or more.	Check for a data error, a corporate action (split, dividend) or thin trading before reacting.
Deep drawdown	30% or more below the 52-week high.	Cheap or broken? Read the news and the balance sheet.
Stale price	No price for more than 10 days.	Suspended or delisted names and data gaps.

8. Nairobi (NSE) data: what to trust

Item	Source	Limitation
Prices	Daily NSE price lists you uploaded (an unofficial scrape).	No dividend adjustment (returns understated), a few suspicious one-day jumps, and coverage only as far as the files you loaded. Reports warn when prices are older than 14 days.
Fundamentals	data/fundamentals/nse_inputs.csv, filled from your sheets plus web summaries.	Not read from audited PDFs unless noted. Every row records its sources, notes and a confidence level. Some equity figures are estimates (rolled forward from earlier years) and say so in the notes.
Ratios	Computed from the inputs and the latest stored price.	When prices lag the financial year, P/E, P/B and yield mix dates. Check fy_end against the price date.
Banks and insurers	No debt, current ratio or EBITDA.	Their scores rest on P/E, P/B, yield, ROE, ROA, margin and growth only, so coverage tops out near 0.67.
Liquidity	traded_days_% and avg_daily_ks_m from the price lists.	Many NSE shares trade a few thousand dollars a day. Position sizes that matter in a portfolio may move the price.

9. Backtest and portfolio tools

Backtest. Price-based signals only (12-1 momentum or low volatility). At each month-end the top N assets by signal are held equal-weight, trades happen at the close and earn from the next day (no look-ahead), and costs are 20 basis points per side. Fundamental scores are **not** backtested because free data only provides current fundamentals, so a historical test would use information that did not exist at the time. **Optimizer.** Methods: maximum Sharpe, minimum variance, risk parity, equal weight, with a maximum-weight cap and a shrunk covariance estimate. Optimizers amplify estimation error: treat weights as a starting point and prefer a lower cap and longer history.

10. Limits and good practice

- Scores are relative. A top-quartile company in a weak universe can still be a poor investment.
- Free data has errors. Verify the figures that drive a decision against the company's results announcement.
- Signals have not been backtested as a strategy and ignore taxes, spreads and your own circumstances.
- Look at *flags* and *conviction* before the signal itself.
- This document and the app are not investment advice.