IQIC - Quantitative Tools

#4: Risk Rules

Why Every Strategy Needs Explicit Risk Rules

- A strategy without risk rules isn't finished, even if the entry/exit/signal logic is solid.
- Risk rules protect you from the scenario where the signal is "right" long-term but a single bad trade or period wipes out the account before it can prove out.
- Risk management isn't about avoiding losses — it's about making sure no single loss (or string of losses) can end the strategy.
- Framing line: good strategies fail all the time from bad risk management, not bad ideas.

Position Limits and Concentration

- Position limit = the max amount of the portfolio allowed in a single asset (e.g., no more than 5% in any one stock).
- Prevents one bad pick from doing outsized damage to the whole portfolio.
- Concentration risk also applies at the sector/theme level — being "diversified" across 20 stocks means nothing if they're all in the same industry.
- Position limits should scale with conviction and risk, not be arbitrary.

Portfolio-Level Exposure and Diversification

- Exposure = how much of the portfolio is actively at risk at any given time (e.g., fully invested vs. partially in cash).
- Diversification spreads risk across assets/sectors/factors so no single source of risk dominates outcomes.
- A portfolio can be diversified in name but still highly correlated in practice (e.g., many "different" stocks that move together in a downturn).
- Goal: reduce reliance on any one bet being correct.

Exit and Risk-Management Rules

- These are rules that get you out of a position for risk reasons, separate from the strategy's normal signal-based exit.
- Common examples: stop-loss (sell if a position drops X%), trailing stop, max portfolio drawdown limit that triggers de-risking.
- Purpose: cut losses before they become catastrophic, even if the underlying signal hasn't technically changed.
- These rules should be defined in advance — deciding "in the moment" during a loss is exactly when discipline breaks down.

Risk-Management Checklist

- ❑ Position limits defined
- ❑ Sector/concentration limits checked
- ❑ Portfolio exposure rules set
- ❑ Stop-loss/exit-for-risk rules defined
- ❑ Max drawdown threshold identified

- ★ Reusable checklist students can apply to their own strategy.
- ★ Closer: a strategy isn't complete until its risk rules are as well-defined as its entry and exit rules.

Additional Resources

- Investopedia: "Position Sizing," "Diversification," and "Stop-Loss Order" explainer pages
- Book: *Quantitative Trading* by Ernest Chan (risk management chapter)
- Book: *Market Wizards* by Jack Schwager — risk management lessons from real traders (good for a more narrative/relatable resource)