

IMPORTANCE OF DISCIPLINED INVESTMENT PROCESSES & THE ROLE OF QUANTITATIVE METHODOLOGIES: MY PERSPECTIVE

Indrani De, CFA

New Amsterdam Partners LLC.

- As an investment firm, we believe in the “Rational Beliefs Equilibrium Theory” (Mordecai Kurz, Stanford University) – There is mispricing in the equity markets.
- A successful investor has to do two things to profit from this mispricing
 1. Identify instances of mispricing
 2. Identify the triggers that will correct the mispricing and lead to the expected stock return.
- **Quantitative analysis allows us to systematically identify investment opportunities arising from mispricing.**
- **A consistent quantitative approach allows us to consider**
 1. **A much larger potential investment set than otherwise possible.**
 2. **Easier to keep aside the human biases, and stick to the core investment beliefs.**

- To illustrate the above two points in **our quantitative process**;
- The potential investment set for our stock selection model is each of the 10,000 + stocks listed on the Compustat database.
- Run these 10,000 + stocks through basic eligibility screens, concentrating on factors like;
 1. availability of complete accounting data
 2. adequate trading liquidity
 3. sufficient wall street analyst coverage
 4. minimum & maximum market capitalization range, based on the strategy.
- These basic criteria reduce the number of securities to consider from 10,000 + to @ 2000.
- The Stock Selection Model ranks these @ 2000 companies, by their Expected Return over the next 12 months, and outputs the 100 highest expected return stocks.
- **Without a quantitative process, there is no way to potentially consider such a vast pool of stocks.**

- Model based on GARP Philosophy: Growth at Reasonable Price
- Quantitative Model based on fundamental equity factors.

- Believe that Total Stock Return has three components:
 1. Growth in EPS
 2. Cash Flow Component – [Profitability - Requirement for Growth]
 3. Change in Valuation – ceteris paribus, moving from current PB to the Equilibrium PB.

- Can predict the Expected Stock Return by predicting
 1. Earnings Growth G
 2. Profitability measured by ROE
 3. Equilibrium Price-Book

- **By restricting our investment to stocks that are highly rated by this model, our investment philosophy remains consistently GARP.**

- **Using the quantitative model ensures that we stick to the core investment philosophy.**

- **Algorithms for calculating G, ROE, Equilibrium PB are all based on well-established empirical research;**
 - Sell-side research tends to have over-estimation bias
 - Dispersion in estimates is important
 - Information content in the effective tax rates paid by companies.
 - Research & development expenses are more important for growth in certain sectors
 - Mean reversion in valuation
- Apart from the basic stock selection model, we use other quantitative tools/ models based on published empirical research
 - Corporate Innovation
 - Potential Manipulators
 - Outside Vendor tools
- **Avoid data-mining. Empirical results should always have a theoretical/ economic rationale. Ensure that the result is not just a data quirk - that there is a “why” behind the result.**

Suggestion for Back-testing/ Implementing new model

- If you already have one quantitative model, and are considering adding another model, then back-testing should ensure;
 1. That new model adds positive value in a large sample like the overall equity markets
 2. Consistency in value addition over time, in different sectors, in the market capitalization space of interest etc.
 3. That it works well within your existing quantitative process – adds value over & above what your existing models were already capturing.
 4. There is a sound theoretical rationale to the model

- To ensure efficient use of the model; Buy/ Sell stocks based on model output - only if certain minimum pick-up in expected return.
 1. This avoids unnecessary turnover & trading costs.
 2. It lowers the sensitivity to minor changes in the model output.

- We do NOT use an optimizer –optimizers are very sensitive to input assumptions. Do a bottom – up portfolio construction.

- We control portfolio risk by ensuring that characteristics/ factor bets are in line with that of benchmark in terms of:
 1. Sector weights
 2. Forecast Growth – Value/ Growth spectrum
 3. Valuation - Value/ Growth spectrum
 4. ROE
 5. Market Capitalization