Week 9 - Portfolio Analytics

Imagine these scenarios. . .

- You are trying to negotiate a new energy contract across 10 different facilities and 20 gas and oil suppliers.
- Your colleague is managing accounts receivable across 38 different currencies in spot and forward markets.
- Another colleague manages collateral for workers' compensation funding in all 50 states.
- Yet another colleague manages 5 fund managers for a health insurer.

Portfolios are Everywhere!

- We can conceive of every margin as a long position in revenue and a short position in costs.
- At least the mean and standard deviation of the portfolio will be traded off.
- Operational and financial constraints narrow the possible choices to achieve performance (mean = "mu" = μ) and risk (standard deviation = "sigma" = σ) goals.

Our "working example" ...

- ... is Working Capital = Receivables + Inventory - Payables.
- The CFO needs answers around why it is so big and always seems to bulge when the economic fortunes of our customers are in peril of deteriorating.
- She knows that there are three culprits: the euro rate, the Sterling rate, and Brent crude.
- She commissions you and your team to figure out the ultimate combination of these factors that contributes to a $100 million working capital position with a volatility of over $25 million this past year.

Previously on Financial Analytics

- Practically the entire course!
- Especially the volatilities we examined last week.
- Remembering some matrix maths we learned in Week 1 as well.

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