QF624-2025-W10

Number of participants: 18

1. In the Black–Litterman framework, the “prior” expected returns are derived from

2 correct answers
out of 10 respondents

	Historical sample means of asset returns	50%	5 votes
	Investor’s subjective views	30%	3 votes
✓	The equilibrium market portfolio implied returns (the “reverse-optimized” returns)	20%	2 votes
	A simple equal-weight allocation	0%	0 votes

2. Suppose an investor has a view that Asset 1 will outperform Asset 2 by 2%. Which structures in Black–Litterman encode this view?

6 correct answers
out of 9 respondents

	The market-implied prior Π only	0%	0 votes
✓	The pick-matrix P and the view vector Q	67%	6 votes
	The covariance matrix Σ and scalar τ	22%	2 votes
	The posterior returns vector	11%	1 vote

3. The posterior expected returns in Black–Litterman lie “in between” the prior and the views because

6 correct answers
out of 6 respondents

	The model ignores extreme views entirely	0%	0 votes
✓	It takes a weighted average of Π and Q where weights are determined by $\tau\Sigma$ and Ω	100%	6 votes
	It replaces Π with Q if the views are positive	0%	0 votes
	Ω is always set to zero	0%	0 votes

4. Increasing the entries of Ω (i.e., lowering confidence in the views) will generally

7 correct answers
out of 7 respondents

	Move the posterior returns closer to the investor's views	0%	0 votes
✓	Move the posterior returns closer to the equilibrium prior Π	100%	7 votes
	Have no effect on the posterior returns	0%	0 votes
	Invert the ordering of assets by expected return	0%	0 votes

5. One conceptual advantage of Black–Litterman over a pure mean–variance optimization is that it

7 correct answers
out of 7 respondents

	Eliminates all estimation error in the covariance matrix	0%	0 votes
	Always yields a 100% invested portfolio	0%	0 votes
✓	Naturally shrinks extreme mean-variance allocations back toward the market portfolio	100%	7 votes
	Requires no inputs beyond historical returns	0%	0 votes