Erasmus
School of
Economics

Millennium Capital: Embracing the beauty of volatility

Group 3

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Structure of presentation

Outperform the market

1. Introduction to Millennium Capital
2. Investment Strategy
3. Performance Overview
4. Lessons and Experiences

Volatility

Two approaches

1. **Writing options: realized volatility**
2. **Buying straddles: expected volatility**

Introduction to Millennium Capital

Event-driven growth fund

Benchmark: S&P 500

Investment objective:

- Outperform the market
- Exploit events causing volatile (extreme) returns
- Manage accompanied risk in a sustainable manner

Target clients:

- Aspiration for short-term wealth growth
- Appetite for risk
- No cash needs

Investment Strategy

Pillars of the strategy

1) Active portfolio: earnings release volatility

2) Passive portfolio: factor ETFs

3) Market dynamics: hedge instruments

Active portfolio: ingredients

Three ingredients for a successful (earnings) straddle trade

1) Vega-maximized

2) Delta-neutral

3) Stock profiles with extreme returns

$$\nu / \delta$$

So, which profiles exhibit extreme returns?

Three steps to identify volatile profiles around earnings releases

1) Analysts' earnings estimate dispersion

Forecast uncertainty

Analysts' dispersion measure $= \frac{\text{std.dev.of est.EPS}}{\text{current share price}}$

2) Analysts' one year earnings estimate

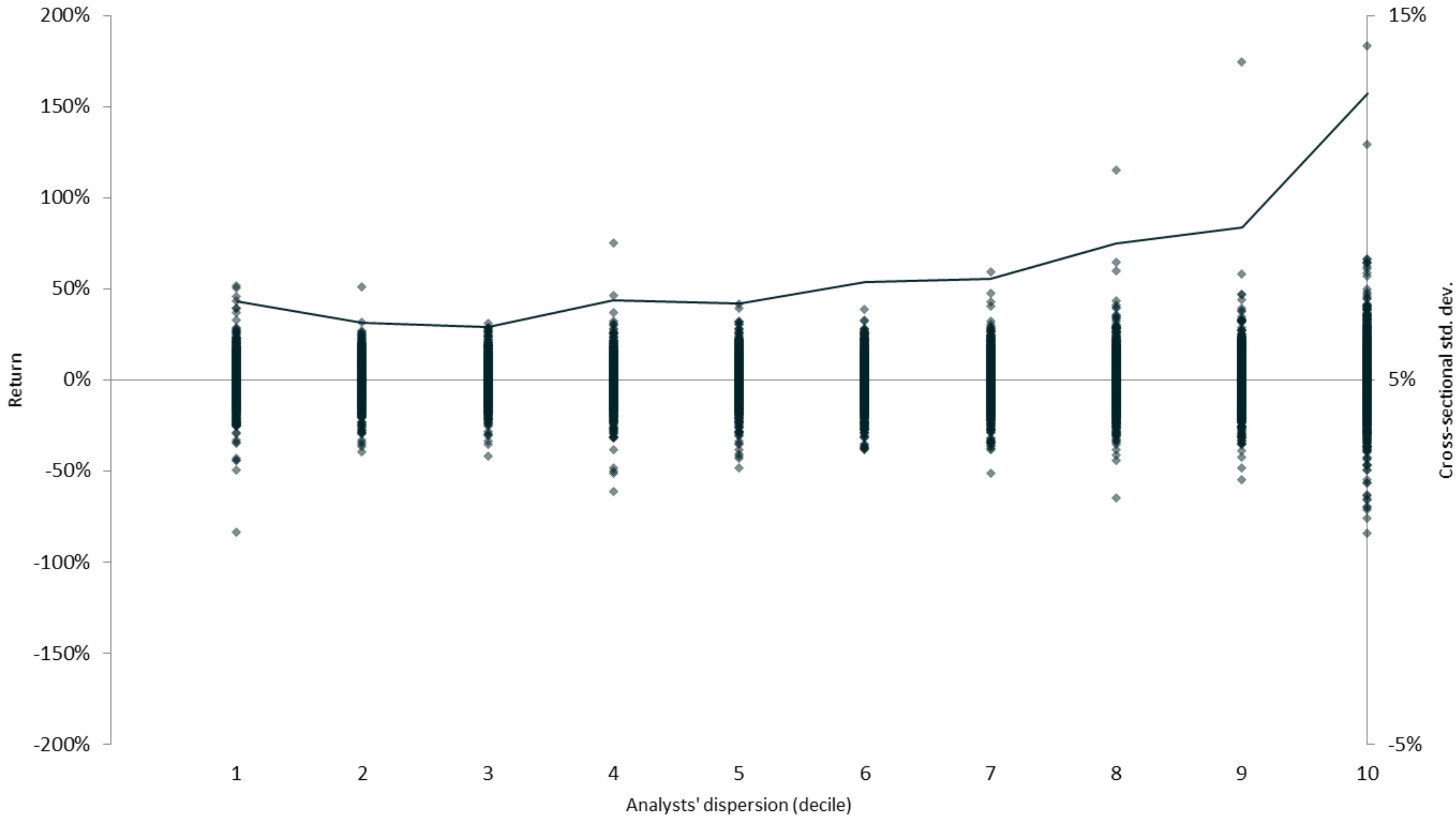
Earnings potential

Analysts' expectation measure $= \frac{\text{est.EPS}_{t+5} - \text{est.EPS}_{t+1}}{\text{current share price}}$

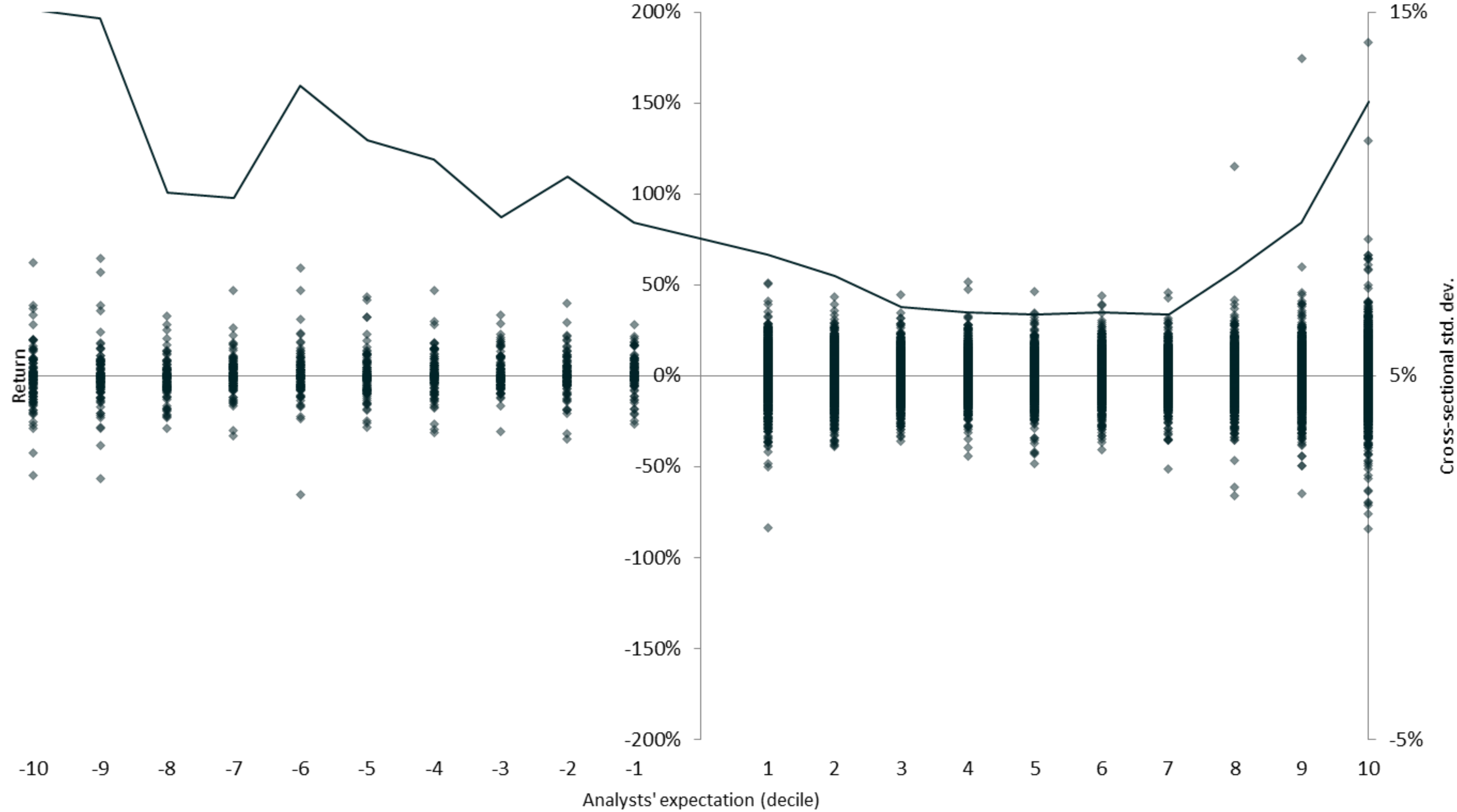
When the est. EPS_{t+1} is positive and the est. EPS_{t+5} is negative, then the nominator was replaced by -1(est. EPS_{t+1} – est. EPS_{t+5}).

3) A combination of the two

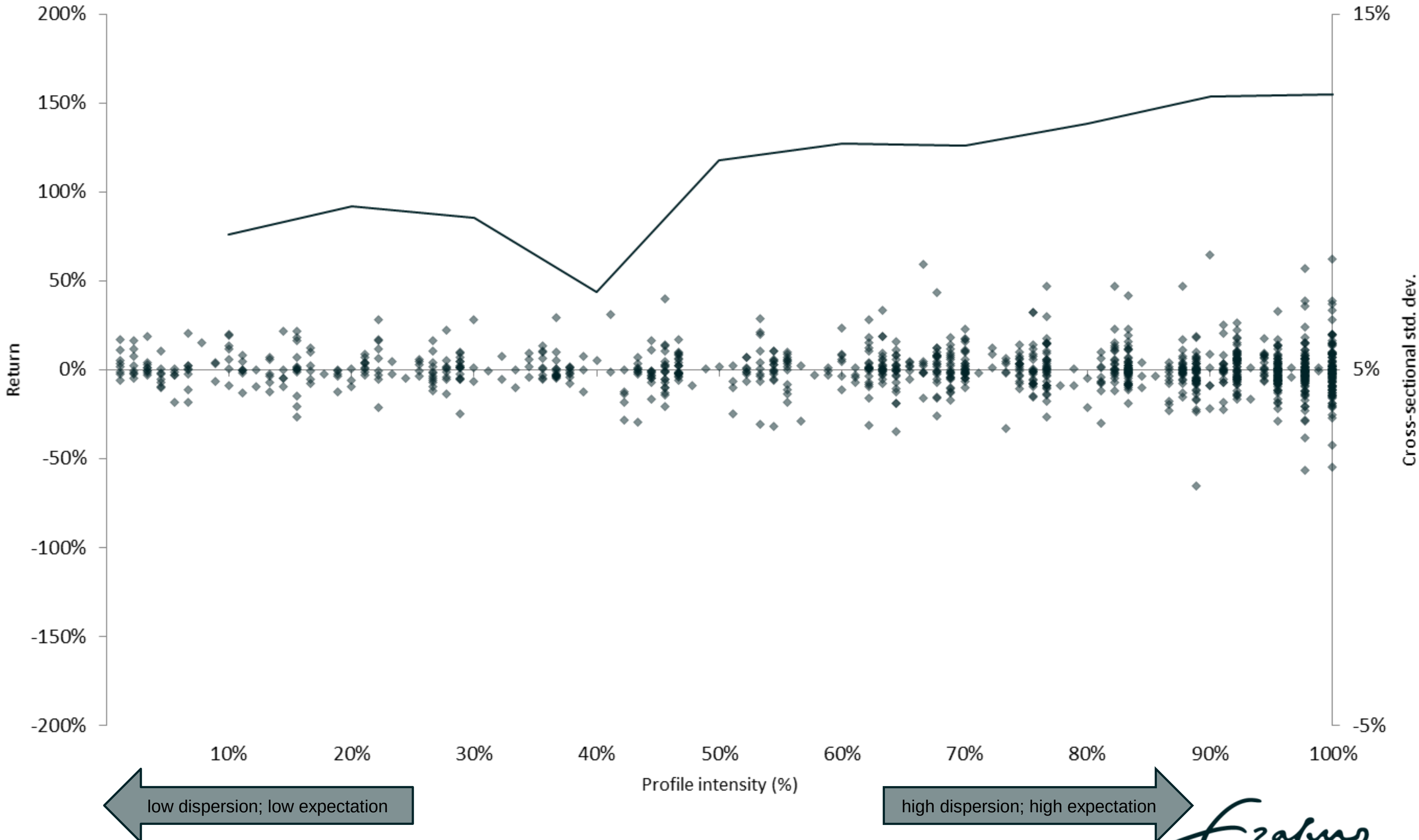
Profile (1): Analysts' dispersion VS post-announcement volatility



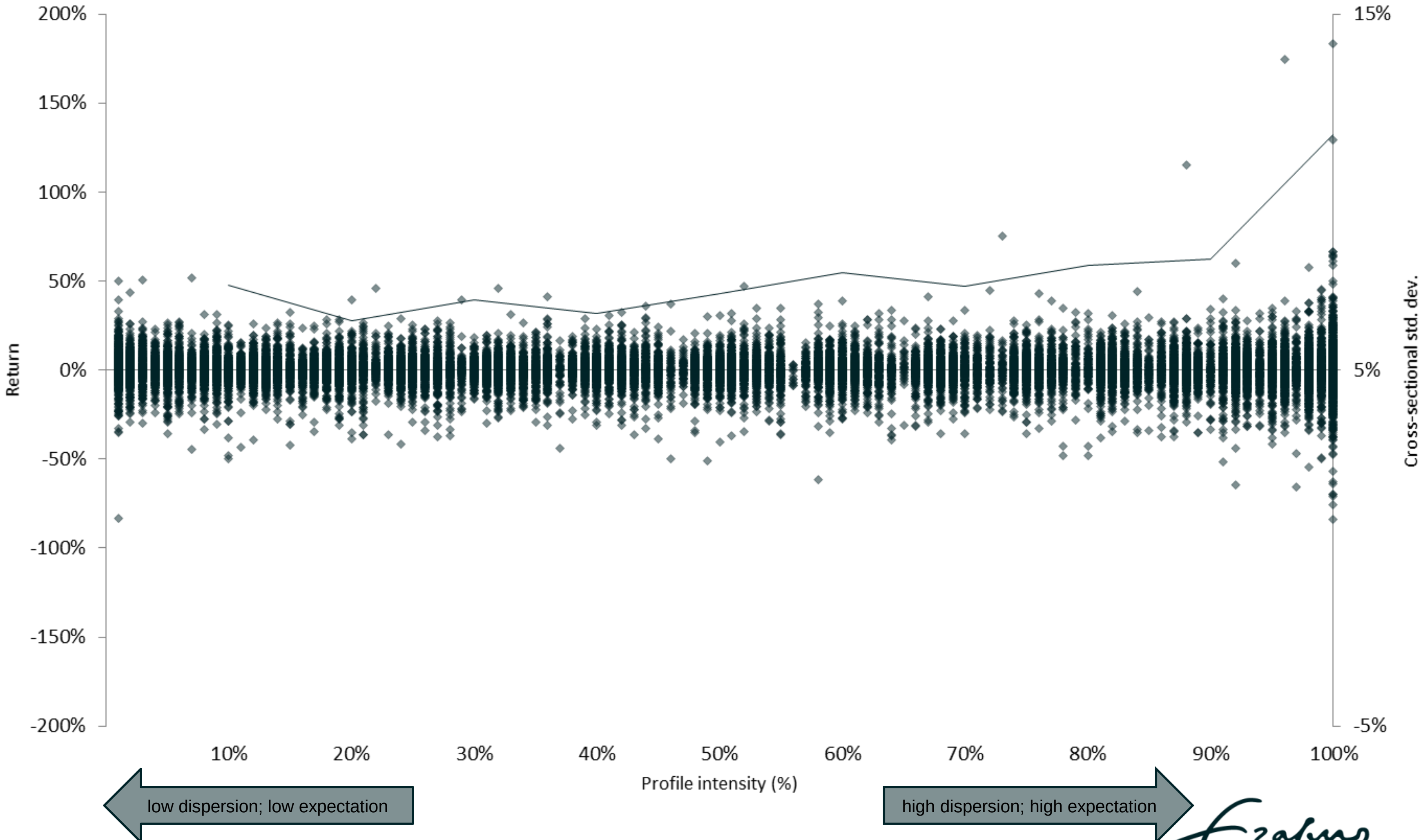
Profile (2): Analysts’ one-year expectation VS post-announcement volatility



Profile (3a): Analysts' dispersion combined with negative expectations VS post-announcement volatility



Profile (3b): Analysts’ dispersion combined with positive expectations VS post-announcement volatility



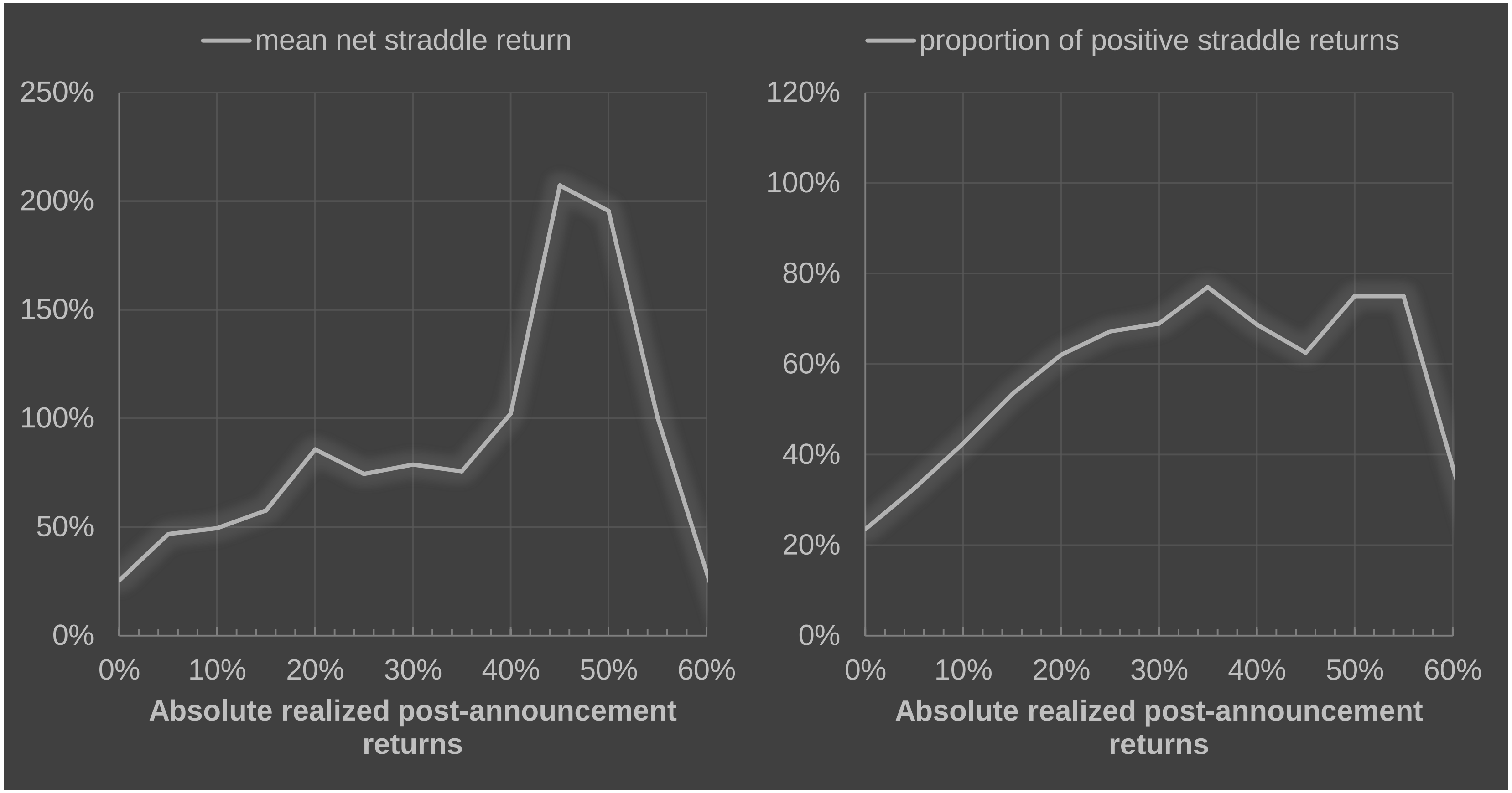
Primary conclusion

1) Analysts' earnings estimate dispersion: Highest = best (extreme returns)

2) Analysts' one year earnings estimate
Extremely low & high = best

3) A combination of the two
Extremely low & high = best

Straddles VS extreme returns (absolute value)?



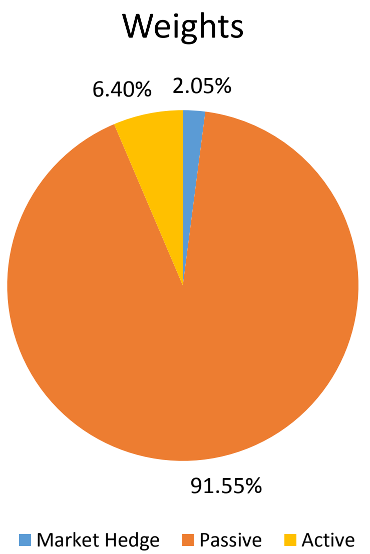
Let’s turn to the other pillars

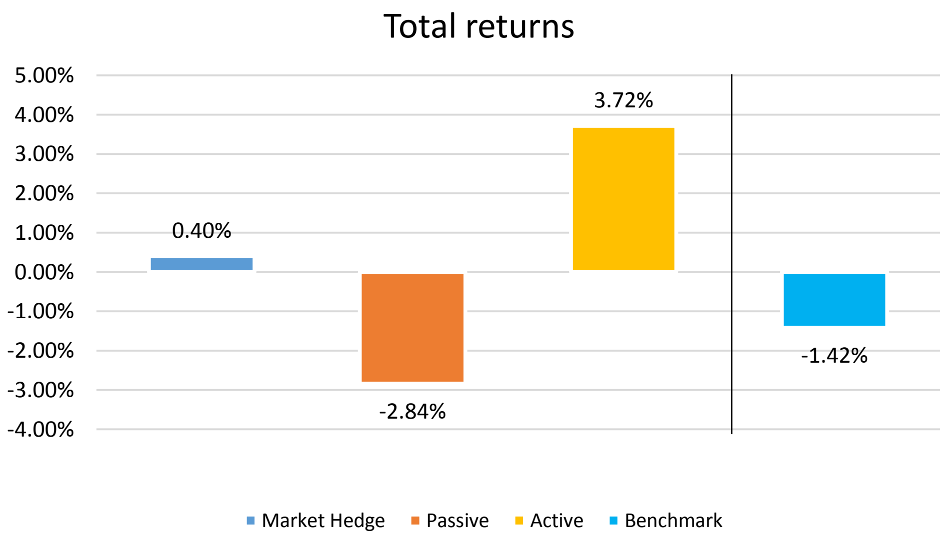
Factor ETFs & Hedges

Passive portfolio:
- Size & low-volatility (SMLV)
- Beta (EQAL, SPY, VOO, IVV)
- Size & value (IWX)
- Value, quality, size & momentum (ONEO)
- Financials (XLF)

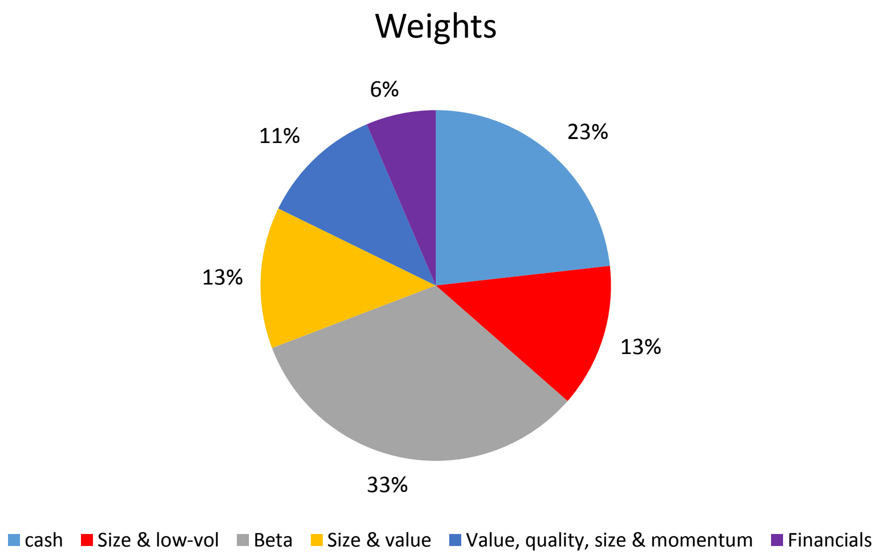
Hedge instruments:
- VIX levels and option premia
- S&P 500 sentiment (downside risk)

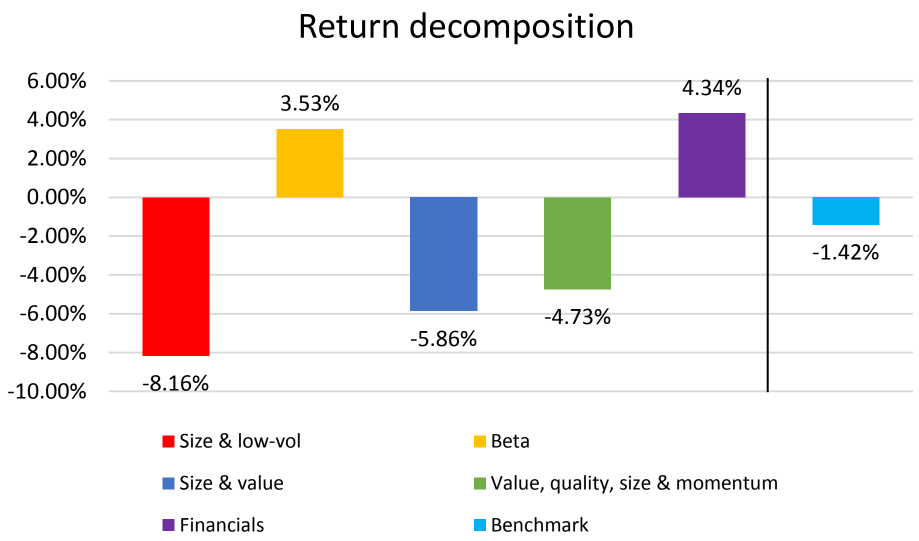
How did we do?
Performance: Total portfolio



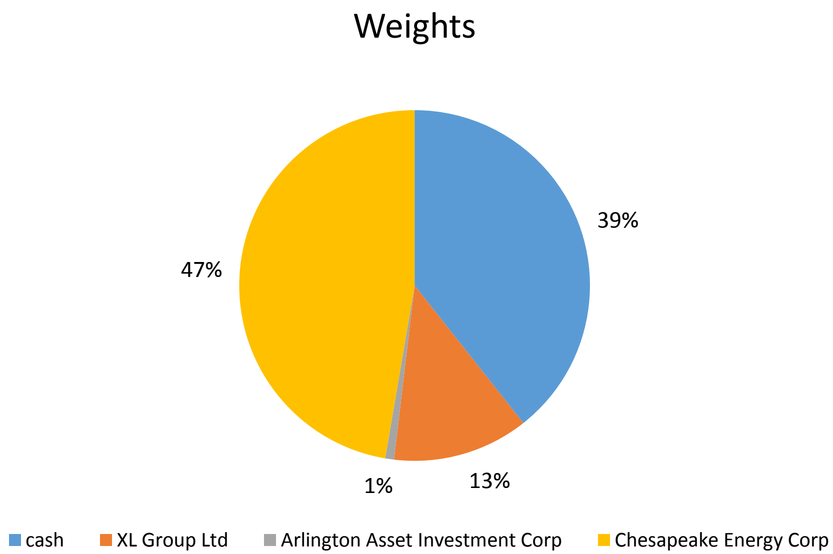


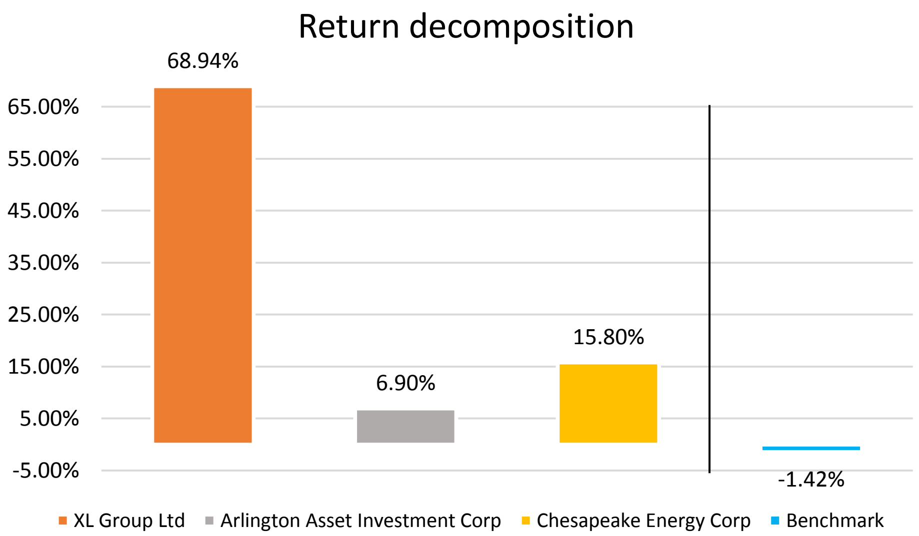
Passive portfolio



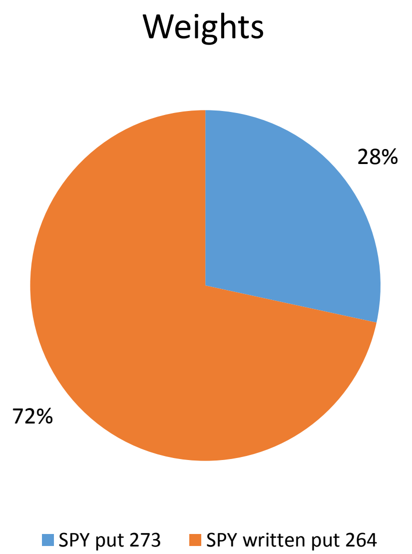


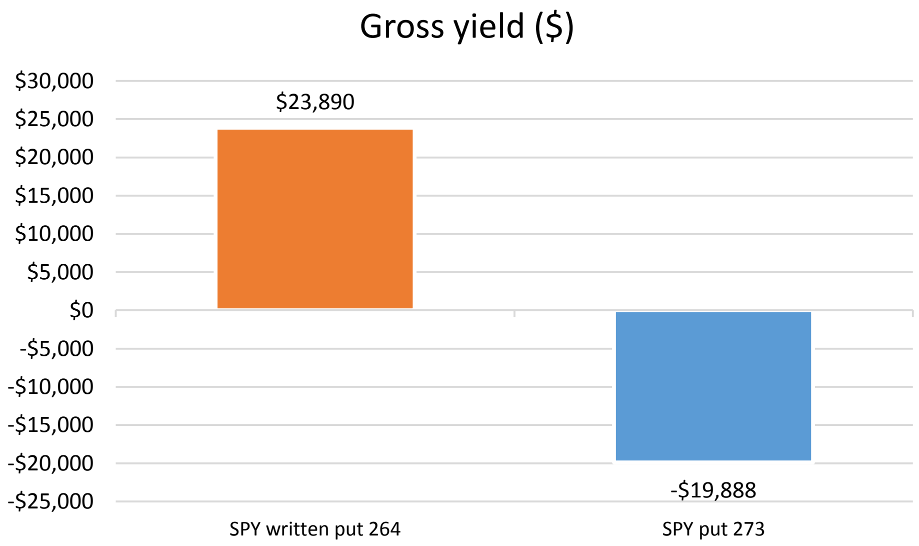
Active portfolio





Hedge instruments

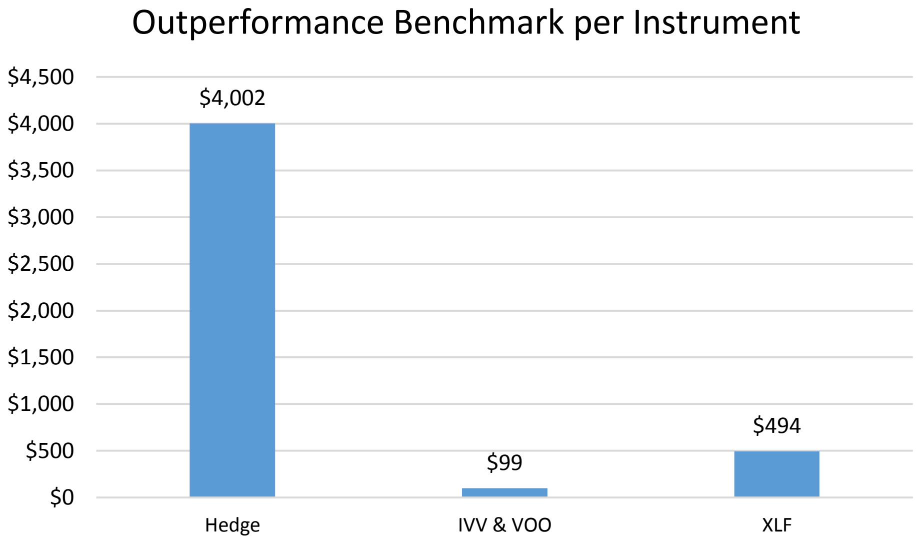




Switch in approach for passive portfolio: passively managed to actively managed (7th Feb – 23rd Feb)

What did we do?

- Stop-losses activated on ETFs
- Hedge on the S&P 500
- Timing the market with new ETF positions



Overall performance: metrics

Alpha, beta and Sharpe ratios

- Outperformed benchmark (S&P 500)
- High alpha
- Low beta
- Strong Sharpe

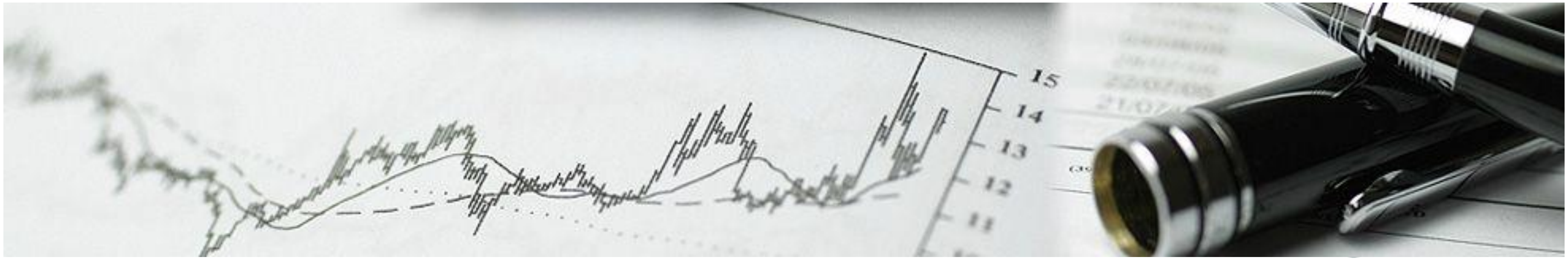
Portfolio return	1.28%		
Market return	-1.42%	Portfolio Std. Dev.	0.75%
Annualized alpha	17.65%	Sharpe Ratio Portfolio	1.69
Beta	0.42	Sharpe Ratio Market	-1.43

Lessons and Experiences

We keep learning from experiences

- Liquidity constraints
- Information from earnings report is valuable
- Economic environment should be considered
- Factors are not a guarantee for success

Thank you for your attention! We now look forward to a fruitful discussion!



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Thank you!

Comments?
Questions?