Event-Driven Investing

Interview preparation summary · HF track

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INT.HE.1.a · Merger arbitrage

Calculate the deal spread, the gross and annualised return and the implied probability of completion in a cash merger, and use them to judge whether the spread pays for the risk.

In a cash merger the buyer agrees to pay a fixed price per share for the target. Until closing, the target trades below the offer. The deal spread is the offer price minus the target's current price; it is the profit if the deal completes. The gross return is the spread divided by the price paid, and the annualised return scales it for the time to closing, so a spread of 5.9% over eight months is about 8.9% simple. The downside price is where the target would trade if the deal broke, usually near its undisturbed price adjusted for the market since then. The implied probability of completion is the price at which the market is indifferent: current price minus downside, divided by offer minus downside. Compare it with your own probability. The expected value per share is your probability times the spread minus the break probability times the loss, and it must exceed the return you could earn elsewhere for the same time. A high annualised spread on a risky deal is not a bargain: it may simply be paying for a low chance of completion. Check which risks the spread covers before sizing, as the next outcomes show. See Valuation and Earnings Quality for judging the target's standalone value.

WORKED EXAMPLE: READING A CASH DEAL SPREAD

Quillon, an invented buyer, has agreed to buy Larkmoor Foods for 50.00 in cash. Larkmoor trades at 47.20 and the deal is expected to close in 8 months. Before the bid Larkmoor traded at 38.00, which you take as the downside. What are the spread, the gross and annualised returns and the implied probability of completion? If you think the true probability is 90%, what is the expected profit per share?

Answer: The spread is 2.80, 5.9% gross and about 8.9% annualised. The market implies a 76.7% chance of completion; at your 90% the expected profit is 1.60 a share. The trade is worth doing only if you can explain why the market is too pessimistic.

> **Interview tip:** Quote the implied probability and say why yours differs. The spread is the price of the risk, not free money.

INT.HE.1.b · Merger arbitrage

Hedge a stock-for-stock deal, calculate the profit in completion and break outcomes, and size a merger arbitrage position from the loss if the deal breaks.

In a stock deal the buyer offers a fixed number of its own shares for each target share, so the value of the offer moves with the buyer's price. The arbitrageur buys the target and shorts the buyer in the ratio of the offer, for example 0.8 shares of the buyer per target share, which fixes the spread whatever the buyer's price does. The hedge adds costs and risks: borrowing the buyer's shares, paying its dividends, and a break, when the hedge is closed and the target falls back while the buyer may move the other way. Collars, which adjust the ratio within a range of the buyer's price, and mixed cash and stock offers need care when finding the hedge. Position size comes from the loss on a break, not from the spread: divide the loss you will accept by the loss per share if the deal fails. The break-even probability is the loss divided by the sum of the spread and the loss, and the expected value uses your own probability. A higher probability of completion does not justify a larger position if the loss on a break is large, because a single failure can erase the income of many deals. Use Risk and Portfolio Construction for the limits on a single position.

WORKED EXAMPLE: A HEDGED STOCK DEAL AND ITS SIZE

A buyer offers 0.80 of its shares for each share of an invented target. The buyer trades at 60.00 and the target at 45.60. If the deal breaks, the target falls to 36.00. The fund has 1,500m of capital and accepts a loss of 0.4% of capital on a break. What is the spread, the hedge, the profit if the buyer falls to 54.00 and the deal completes, the position size and the break-even probability? If the probability is 85%, what is the expected value per share?

Answer: The spread is 2.40 and the hedge is 0.80 buyer shares short per target share, which gives 2,400 profit per 1,000 shares whatever the buyer does. The loss budget allows 625,000 shares, 1.9% of capital. The deal must complete at least 80% of the time to break even, and at 85% the expected value is 0.60 a share.

> **Interview tip:** Size from the loss on a break and give the break-even probability. If the margin between your probability and the break-even one is thin, say so and size down.

INT.HE.1.c · Merger arbitrage

Assess regulatory, antitrust, financing, shareholder and timing risks in a deal, show how a delay changes the annualised return and the price, and describe how deals fail.

A deal can fail or slip at several points. Regulatory risk is the largest for deals between competitors: an antitrust authority may clear the deal in a first phase, open a longer second-phase review, require the sale of businesses, or block it. Other authorities, such as foreign investment screens and sector regulators, can add time and conditions. Financing risk matters when the buyer relies on debt or on the target's own cash; a falling market or a buyer's credit downgrade can make funding costly, and a financing condition can let the buyer walk. Shareholder risk arises when the target's holders must vote and think the price too low, or when the buyer's holders must approve a large share issue. Litigation, a material adverse change clause, a competing bid and the outside date, after which either side may terminate, are other failure points. Timing matters because the return is annualised: the same gross spread over a longer time is a lower return, and the market reprices a delayed deal by widening the spread. Reverse termination fees, paid by a buyer that fails to win approval, reduce the loss but rarely cover it. When news arrives, restate the probability, the date and the downside, and check whether the spread still pays for them.

WORKED EXAMPLE: A DELAY AND THE PRICE IT IMPLIES

In the Larkmoor deal (offer 50.00, price 47.20), the buyer receives a second request from the antitrust authority. The closing date moves from 8 to 14 months. You require 8% a year on deal capital. What happens to the annualised return at the old price, and at what price would the deal give 8% a year?

Answer: A delay from 8 to 14 months cuts the annualised return from 8.9% to 5.1% at the same price. To earn 8% a year the shares would have to trade near 45.73, so the market reprices a delay by widening the spread, and the holder suffers a loss on the way.

> **Interview tip:** Say what a delay does to the annualised return and to the price, and then reassess the probability. Candidates often treat a delay as harmless if the deal still completes.

INT.HE.2.a · Special situations, distress and the portfolio

Analyse special situations such as tender offers, buybacks, spin-offs and index changes, calculate the value to a holder, and explain why forced or uninformed selling creates opportunities.

Special situations are corporate events that are not mergers but still create price gaps. In a tender offer a company or a bidder offers to buy a stated number of shares at a stated price, often at a premium; if more shares are tendered than wanted, each holder is prorated, so the value is a blend of the tender price on the accepted shares and the post-tender price on the rest. A buyback returns cash and raises earnings per share, but it creates value for continuing holders only if the price paid is below intrinsic value. A spin-off distributes a subsidiary to the parent's shareholders; the parts may be worth more than the whole if they are valued by their own peers, and in the first weeks the new shares often face selling by holders who do not want them or whose mandate forbids them, which has nothing to do with value. Index changes force funds that track an index to buy or sell on a known date, so the price may move ahead of the date and reverse afterwards. In each case check the rights and dates in the documents, the size of the forced flow compared with normal volume, and whether the opportunity is already priced in.

WORKED EXAMPLE: A TENDER OFFER AND PRORATION

Corvell, an invented listed company, has 100m shares at 26.00 and will buy 20m shares at 30.00 through a tender offer. You hold 1,000 shares and plan to tender all of them. What is the value per original share if 50m shares are tendered? What if all 100m are tendered?

Answer: With 50m shares tendered the value is 27.00 a share, a gain of 3.8%; with all 100m tendered it is 26.00 and the gain is zero, because proration dilutes the premium as more holders tender.

> **Interview tip:** Show the proration arithmetic and say that the return depends on how many holders tender.

INT.HE.2.b · Special situations, distress and the portfolio

Explain, in outline, restructuring, bankruptcy emergence and event-driven credit, calculate recoveries through a waterfall and judge the fulcrum security and the return over a long and uncertain timetable.

When a company cannot service its debt it may restructure out of court or enter a formal process, such as a court-supervised reorganisation. Claims are paid in order of priority: secured creditors first, then unsecured creditors, then equity, which is normally wiped out or heavily diluted when debt exceeds value. The value to share out is the enterprise value on emergence, which is a judgement of the business's earnings and a multiple, and the fulcrum security is the class that is only partly covered by that value and so receives the reorganised equity or sets the outcome. Event-driven credit looks for mispriced claims around the event: a bond priced below the expected recovery, or a claim whose terms are misunderstood. Returns come from the gap between price and recovery, but timing is long and uncertain, legal costs and delays reduce recoveries, and a small change in enterprise value can move the fulcrum's recovery by a large amount. Position size must allow for no income for a long time and a wide range of outcomes. Specialist legal advice is needed for the details of any process, and this is only an outline.

WORKED EXAMPLE: A RECOVERY WATERFALL AND AN UNSECURED BOND

An invented company has senior secured debt of 250m and unsecured bonds of 300m. You estimate its enterprise value on emergence at 400m, 300m or 450m with probabilities of 50%, 25% and 25%. The unsecured bonds trade at 38 per 100 of face and you expect a resolution in 18 months. What is the recovery in each case, the expected recovery and the return?

Answer: Recoveries are 50, 16.7 and 66.7 per 100, an expected 45.8, a gain of 20.6% over 18 months or about 13.3% a year. The bonds are the fulcrum security, so the low case loses 56%, which should limit the size.

> **Interview tip:** Draw the waterfall, name the fulcrum, and size for the low case. Say that this is an outline and that legal advice is needed in a real process.

INT.HE.2.c · Special situations, distress and the portfolio

Build and size an event-driven portfolio, show how deal risk is correlated with the market, set catalysts and timelines, and structure an event-driven pitch.

An event-driven portfolio holds many positions, each with a defined event and a timetable, and the aim is returns that do not depend on the market's direction. In practice the independence is partial. Merger spreads widen in a sell-off, because arbitrageurs must sell to meet losses or margin calls, financing becomes harder and buyers may reconsider. So the portfolio loses in a market shock, then recovers if the deals complete. A few breaks can erase the income of many successes: each position earns a small spread but loses a large amount on a failure, so the portfolio return is like selling insurance. Measure the income if all deals complete, the loss per break, the number of breaks that would erase the income, and the mark-to-market loss if spreads widen by a stated amount. Size positions from the loss on a break, cap the exposure to one buyer, one sector or one regulator, and keep some capital for new situations. The catalyst timeline lists for each position the dates of votes, regulatory decisions and the outside date. A good pitch states the event and the timeline, the outcomes with probabilities and payoffs, the downside if it fails, the size and hedge, the catalysts and what would change the view.

WORKED EXAMPLE: A MERGER ARBITRAGE BOOK IN A SELL-OFF

A fund holds 20 deal positions, each 4% of capital, with an average gross spread of 5% and an average loss on a break of 18%. Each deal has a 95% chance of completion. How much income does the book earn if all deals complete, what does one break cost, how many breaks would erase the income, and what is the mark-to-market loss if average spreads widen from 5% to 8% in a sell-off?

Answer: The book earns 4.0% if all deals complete, 3.08% in expectation, loses 0.72% per break, needs about 5.6 breaks to lose its income, and loses about 2.4% on paper if spreads widen 3 points in a sell-off.

Interview tip: Report income, loss per break and the market-shock loss. A diversified list of deals is still exposed to one market factor.

Summary of the Charta interview-preparation topic. Companies and figures in the examples are invented. Draft content, not yet expert reviewed.