CHARTA LEARNING · LESSON NOTES

Due Diligence on Managers and Funds

FRM Part II

1 A story: the record that looked perfect

- Corvane Capital: long/short equity, $300m fund
- Strong record: 11% a year for three years
- Hollin plans to invest $40m
- Question: what could make this fund fail?

IN THE LESSON

- Hollin Pension Fund, a made up pension plan, has found a manager it likes.
- Corvane Capital runs a long short equity fund of three hundred million dollars.
- Long short equity means the fund buys shares it expects to rise and sells short shares it expects to fall, that is, it borrows them and sells them, hoping to buy them back more cheaply.
- Corvane has a strong record, eleven per cent a year for three years.
- Hollin plans to invest forty million dollars.
- Before it does, Hollin asks a blunt question: what could make this fund fail?
- To answer it, Hollin first studies how hedge funds have failed in the past, because the same causes keep coming back.

2 Four families of failure

Four groups of causes; operational is the largest, roughly half

Cause	Typical examples
Operational	Bad valuations, weak controls, theft
Investment	Leverage, concentration, style drift
Business	Thin capital, no scaling, key people
Fraud	Outright deception of investors

IN THE LESSON

- Studies of failed hedge funds sort the causes into four groups, and operational failure is the largest, roughly half of the cases in the widely cited post mortems.
- Operational failures come from the machinery around the portfolio: valuations that are wrong, weak controls, and assets that are simply taken.
- Investment failures come from the portfolio itself: too much leverage, meaning borrowed money or derivatives that magnify gains and losses, too much concentration in a few positions, and style drift.
- Business failures come from the firm as a business: too little capital, systems that did not grow with the fund, and the loss of key people.
- Fraud is outright deception of investors.
- We now look at each group more closely.

3 Operational and investment causes

- Operational: valuations overstated or set by the manager
- Unauthorised trading; misappropriated assets
- Misrepresentation to investors; weak controls
- Investment: excess leverage, concentration, illiquidity
- Style drift; no risk limits

IN THE LESSON

- Start with the first two groups.
- Operational causes begin with valuations that are overstated, or set by the manager itself, so that nobody independent checks the number.
- Then unauthorised trading, where someone trades beyond what is allowed, and misappropriation of assets, a polite phrase for taking investors' money.
- Then misrepresentation to investors, telling them something untrue about the fund, and weak controls that let all of this happen unseen.
- Investment causes are excessive leverage, concentration in a few bets, and illiquid positions, meaning holdings that cannot be sold quickly without a big cut in price.
- Last come style drift, where the fund wanders away from its stated strategy, and the absence of risk limits.

4 Business causes, and the usual trigger

- Business: inadequate capital
- Infrastructure not scaled as assets grow
- Loss of key people
- Trigger: poor performance, then redemptions
- Redemptions expose weak liquidity and controls

IN THE LESSON

- The third group, business causes, is about the firm rather than the trades.
- The first is inadequate capital, so the firm has too little money to survive a lean spell.
- The second is a failure to scale infrastructure as assets grow, so a fund that triples in size is still run by the same small back office.
- The third is the loss of key people, such as a founder who makes every decision.
- Now notice how failures tend to unfold.
- Poor performance is usually the trigger, and investors then ask for their money back.
- Those redemptions expose whatever was weak underneath, above all thin liquidity and poor controls.
- Let us put numbers on both ideas.

5 Example 1: Hollin's file of failures

Hollin's file (made up): 40 hedge fund failures, by main cause

Operational	20 ÷ 40	**50%**
Investment	12 ÷ 40	**30%**
Business	5 ÷ 40	**12.5%**
Fraud	3 ÷ 40	**7.5%**
Check: all causes	20 + 12 + 5 + 3	**40 = 100%**

Largest single group: operational, about half

IN THE LESSON

- Hollin's research team keeps its own file of forty hedge fund failures, made up for this lesson, each sorted by its main cause.
- Twenty were operational.
- Twenty over forty is fifty per cent.
- Twelve were investment failures, thirty per cent.
- Five were business failures, twelve point five per cent.
- Three were outright fraud, seven point five per cent.
- As a check, twenty plus twelve plus five plus three is forty, so the shares add up to one hundred per cent.
- The largest single group is operational, about half, just as the published studies find.
- That tells Hollin where to spend its effort.
- Checking Corvane's returns is not enough, and its operations deserve at least as much attention.

6 Example 2: how a bad year becomes a failure

Ashgrove (made up): $500m, liquid share stays 20%, loses 15% in a bad year

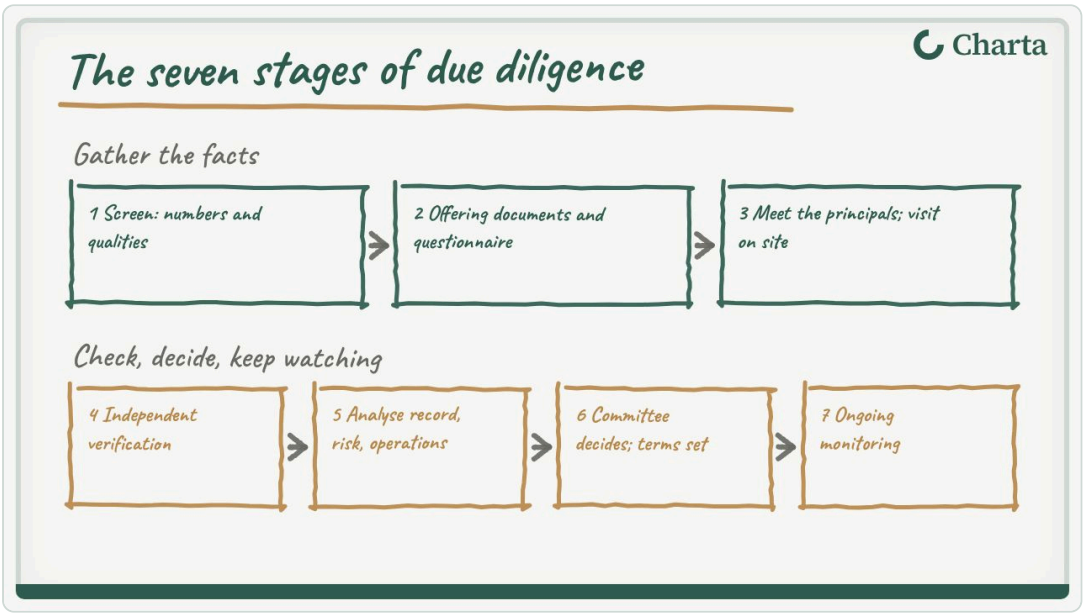
Assets after the loss	500 × (1 − 15%)	**$425m**
Redemption requests: 30%	30% × 425	**$127.5m**
Liquid assets: 20%	20% × 425	**$85m**
Shortfall	127.5 − 85	**$42.5m**
Choices	sell illiquid, or gate / suspend	**Fire sale or gate**

A good record is not safety: check operations as hard as returns

IN THE LESSON

- Take Ashgrove Fund, a made up fund of five hundred million dollars that holds only twenty per cent in liquid assets, and loses fifteen per cent in a bad year.
- Assume the liquid share stays at twenty per cent.
- Its assets fall to five hundred times eighty five per cent, four hundred and twenty five million.
- Alarmed investors ask to redeem thirty per cent of that, one hundred and twenty seven point five million dollars.
- Liquid assets are twenty per cent of four hundred and twenty five, just eighty five million.
- The shortfall is forty two point five million.
- So Ashgrove faces a choice: a fire sale of illiquid assets, which deepens the loss, or a gate that limits redemptions, or a suspension of them.
- Either way, the fund's weak liquidity is exposed.
- The exam point: a good record does not make a fund safe, so check operations as hard as returns.

7 The seven stages of due diligence



IN THE LESSON

- Due diligence on a manager is a structured, repeated process, not a single meeting.
- A typical sequence has seven stages.
- The first three gather the facts.
- Stage one is a screen, using numbers such as returns and risk, and qualities such as strategy and team, to cut a long list down.
- Stage two: Hollin reads the offering documents, the legal papers that set out the fund's terms, and sends a questionnaire.
- Stage three: it meets the principals, the people who run the firm, and visits their office on site.
- The last four stages check, decide and keep watching.
- Stage four is independent verification.
- Stage five is analysis of the track record, the risk and the operations.
- Stage six: Hollin's investment committee decides, and the terms are negotiated.
- Stage seven is ongoing monitoring.

8 Stage four: independent verification

- Background checks on the principals
- Off-list references, not only the manager's list
- Contact auditor, administrator, prime broker directly
- Use contact details Hollin found itself
- Manager-only information is not trusted by default

IN THE LESSON

- Stage four deserves a closer look.
- Independent verification means not taking the manager's word for anything.
- It starts with background checks on the principals: their careers, their qualifications, and any legal or regulatory history.
- Next come off list references, people who know the manager but were not on the list the manager supplied.
- Then Hollin contacts the auditor, the administrator and the prime broker directly.
- The prime broker is the bank that lends to the fund and holds its positions.
- Crucially, Hollin uses contact details it found itself, not the ones in the manager's pack, because a fraudster can supply a friendly voice on a fake number.
- The rule is simple: manager only information is not trusted by default.

9 Two teams, a hard stop, and no finish line

- Investment and operational diligence: often separate teams
- Refusal to allow verification: a reason to stop
- Diligence does not end at the investment date
- Monitoring repeats the checks on a schedule

IN THE LESSON

- Three more features of the process matter for the exam.
- First, investment due diligence and operational due diligence are often done by separate teams.
- The investment team judges the strategy and the edge, the operations team judges the machinery, and neither can wave the other through.
- Second, if a manager refuses to allow verification, for example by forbidding a call to its administrator, that is a reason to stop.
- A refusal to answer is itself an answer.
- Third, diligence does not end at the investment date.
- Monitoring repeats the key checks on a schedule, such as every quarter, and a big change at the manager reopens the full review.
- Here is what that looks like in practice.

10 Example 3: monitoring after the investment

A year after investing, Hollin's quarterly review finds three changes

Fund assets: 340 to 272	(340 − 272) ÷ 340	**down 20%**
Chief financial officer	resigns	**Key person lost**
Auditor	replaced by an unknown firm	**Warning sign**
Hollin's response	repeat the full diligence	**Re-review**

IN THE LESSON

- A year after investing, Hollin's quarterly review of Corvane finds three changes.
- Including Hollin's forty million dollars, the fund had held three hundred and forty million.
- First, fund assets have fallen from three hundred and forty million to two hundred and seventy two million.
- Sixty eight over three hundred and forty is a fall of twenty per cent, which raises the question of who left, and why.
- Second, the chief financial officer has resigned, the loss of a key person in operations.
- Third, the auditor has been replaced by an unknown firm, a warning sign in its own right.
- Together these changes tell Hollin to repeat the full diligence, including fresh calls to the administrator and the new auditor, before deciding whether to stay invested.

11 Five themes for judging a manager

Each theme comes with questions Hollin puts to Corvane

Theme	Key question
People	Who are they? Is the team stable?
Edge	Why should this strategy earn a return?
Process	Is the process disciplined?
Track record	Does it come from the process?
Incentives	Are interests aligned?

IN THE LESSON

- Each theme comes with questions Hollin puts to Corvane, about the manager as a person and as a business.
- People: who are the principals, and is the team stable?
- Edge: why should this strategy earn a return at all?
- Process: is the investment process disciplined?
- Track record: does the record actually come from that process?
- Incentives: are the manager's interests aligned with Hollin's?
- One idea runs through all five themes.
- Returns must be explained by a repeatable process, not simply observed.
- A great number with no explanation is a risk, not a comfort.
- The next two slides open up each theme, and then we test Corvane on three of them.

12 People and edge

- Principals: experience and past track record
- Team stability; succession plan for key people
- Edge: why should the strategy earn a return?
- Why does the edge persist?
- Capacity: how much capital before the edge fades?

IN THE LESSON

- Start with people.
- Who are the principals, what is their experience, and what was their track record before this fund?
- Is the team stable, and is there a succession plan for key people, so the fund survives if the founder leaves or falls ill?
- Then the edge, the reason the manager should beat the market.
- Why should this strategy earn a return?
- Corvane says it finds mispriced mid sized companies that big funds ignore.
- Why does that edge persist, rather than being competed away by others?
- And capacity: how much capital can the strategy absorb before the edge fades?
- A strategy that works on three hundred million dollars may not work on three billion dollars.

13 Process, record and incentives

- Process: ideas, position sizing, entry and exit rules
- How are losing positions handled?
- Record: from the stated process? Behaviour in stress?
- Incentives: the manager's own capital in the fund
- Fees with a high-water mark; fitting liquidity terms

IN THE LESSON

- Next, the process.
- Hollin asks how ideas are generated, how positions are sized, and what the rules are for entry and exit.
- Then a revealing question: how are losing positions handled?
- A disciplined manager cuts or reviews losers by rule, while an undisciplined one hopes.
- On the record, Hollin asks whether the returns came from the stated process, and how the fund behaved in stress, in the worst markets it has lived through.
- Last, incentives.
- Does the manager have its own capital in the fund, so that it shares the pain?
- Do the fees have a high-water mark, a rule that performance fees are paid only on new gains above the previous peak?
- And do the liquidity terms fit the assets?

14 Example 4: does the record come from the process?

Corvane: 11% a year for 3 years; market 15% a year; beta 0.6

Return from market exposure	0.6 × 15%	**9%**
Left for stock picking	11% − 9%	**2%**
Market's worst quarter	from market data	**−20%**
Corvane's fall that quarter	0.6 × −20%	**−12%**

Ignoring the risk-free rate: mostly market, not stock picking

IN THE LESSON

- Corvane earned eleven per cent a year over three years, the market earned fifteen per cent a year, and Corvane's beta is zero point six.
- Beta measures how much a fund moves with the market, so zero point six means it tends to move six tenths as much.
- Market exposure explains zero point six times fifteen per cent, which is nine per cent a year.
- That leaves just two per cent a year for stock picking, the skill Corvane says is its edge.
- Now the stress test.
- In the market's worst quarter, the market fell twenty per cent.
- Corvane fell twelve per cent, which is exactly zero point six times minus twenty.
- Ignoring the risk free rate for simplicity, the record is mostly market exposure, not stock picking.

15 Example 5: how much capital can the edge absorb?

Assume Corvane's stock-picking profit is capped at about $6m a year

Stock-picking profit today	2% × $300m	**$6m**
Edge if the fund doubles	6 ÷ 600	**1.0%**
Edge at $1,000m	6 ÷ 1,000	**0.6%**
Corvane's management fee	for comparison	**1.5%**

Ask how much capital the edge can absorb

IN THE LESSON

- Assume Corvane's stock picking profit is capped at about six million dollars a year, because the mispriced mid sized companies it trades are limited in number.
- Today, two per cent of three hundred million dollars is exactly that, six million.
- If the fund doubles to six hundred million, the same six million is only one per cent of assets.
- At one billion dollars it is zero point six per cent, less than Corvane's management fee of one point five per cent.
- So the edge shrinks as the fund grows, even if the manager's skill does not change.
- Hollin therefore asks Corvane how large it plans to grow, and whether it will close the fund to new money before the edge fades.

16 Example 6: are incentives aligned?

Unit value 100 at start, 90 after year 1, 105 after year 2. Fee 20%

Year 1 fee	no gain: 90 is below 100	**0**
Fee with high-water mark	20% × (105 − 100)	**1.0 a unit**
Fee without one	20% × (105 − 90)	**3.0 a unit**
Partners' own money in fund	$9m ÷ $300m	**3%**
Liquidity terms	quarterly; liquid listed shares	**Fits**

IN THE LESSON

- A unit of the fund started at one hundred, fell to ninety after year one, and rose to one hundred and five after year two, and the performance fee is twenty per cent.
- Now test the incentives.
- In year one there is no gain, so no performance fee.
- With a high-water mark of one hundred, the year two fee is twenty per cent of one hundred and five minus one hundred, which is one per unit.
- Without a high-water mark, the fee is charged on the whole rise from ninety, twenty per cent of fifteen, three per unit, paying the manager again just for recovering losses.
- Corvane's partners also have nine million dollars of their own in the fund, three per cent of it.
- And its quarterly redemption terms fit a book of liquid listed shares.

17 Judging a risk management process

- Is risk identified, measured, limited, reported?
- Is it acted on?
- By a function independent of the portfolio manager
- Measure: VaR, stress tests, leverage, gross and net
- Also concentration, liquidity, counterparty risk

IN THE LESSON

- Now the risk management process.
- Hollin judges it on a chain of verbs.
- Is risk identified, measured, limited and reported?
- And the one most often missed: is it acted on?
- All of this should be done by a function independent of the portfolio manager, because the person taking the bets cannot also police them.
- Measurement should cover market risk through V a R, value at risk, a loss level that should be exceeded only on a small share of days, and through stress tests, which ask what happens in extreme scenarios.
- It should also cover leverage, and gross and net exposure.
- Then concentration, liquidity, and counterparty risk, the risk that a broker or trading partner fails.

18 Limits, independence and models

- Written limits, an escalation path, proof of enforcement
- Risk officer reports outside the trading line
- Authority to force position reductions
- Knows model limits and backtests the models
- Enough transparency for investors to see exposures

IN THE LESSON

- Next come limits and independence.
- There should be written limits, an escalation path that says who is told when a limit is breached, and evidence that limits are actually enforced, not just written down.
- The risk officer should report outside the trading line, for example to a risk committee, and not to the head trader.
- The risk officer should also have the authority to force position reductions.
- Then the models.
- Does the manager understand the limits of its models, and does it backtest them, comparing what each model predicted with what really happened?
- Finally, does the fund give enough transparency for investors to see the exposures for themselves?
- Let us test Corvane on limits and on its V a R model.

19 Example 7: checking exposure against limits

Corvane: $300m fund, longs $270m, shorts $90m, largest position $18m

Gross exposure	(270 + 90) ÷ 300	**120%**
Net exposure	(270 − 90) ÷ 300	**60%**
Largest position	18 ÷ 300	**6%**
Against the limits	gross 150%, net 75%, name 5%	**1 breach**

Test: was the breach escalated and cut?

IN THE LESSON

- Corvane's fund is three hundred million dollars, with longs of two hundred and seventy million, shorts of ninety million, and a largest single position of eighteen million.
- Gross exposure adds longs and shorts: three hundred and sixty over three hundred, one hundred and twenty per cent.
- Net exposure subtracts them: one hundred and eighty over three hundred, sixty per cent, which is roughly consistent with the beta of zero point six we found.
- The largest position is eighteen over three hundred, six per cent.
- Against Corvane's written limits of one hundred and fifty per cent gross, seventy five per cent net and five per cent in one name, there is one breach.
- The test is not the breach itself.
- It is whether the breach was escalated and cut.

20 Example 8: backtesting the VaR

Corvane reports a 99% one-day VaR of $4.5m; Hollin checks 250 days

VaR as a share of the fund	4.5 ÷ 300	**1.5%**
Expected days worse than VaR	1% × 250	**2.5**
Actual days worse	from daily profit and loss	**9**
Actual over expected	9 ÷ 2.5	**3.6 times**

A VaR number alone is not risk management

IN THE LESSON

- Corvane reports a ninety nine per cent one day V a R of four point five million dollars, and Hollin checks it over two hundred and fifty trading days.
- The V a R is four point five over three hundred, one point five per cent of the fund.
- At ninety nine per cent, losses should exceed the V a R on one per cent of days, which is two point five days out of two hundred and fifty.
- Corvane's daily profit and loss shows nine such days.
- Nine over two point five is three point six times the expected number, so the model understates risk.
- The common mistake is to accept a reported V a R number as proof of risk management.
- The exam point is independence, plus use in decisions, not the existence of a number.

21 The independent service providers

The largest share of failures starts in operations, so check every provider

Provider	What Hollin checks
Administrator	Calculates NAV; keeps investor register
Auditor	Suitable size and reputation
Prime brokers, custodians	Hold and finance the assets
Legal counsel	Fund documents and legal advice
Affiliated with manager?	Warning sign: weak independence

IN THE LESSON

- The largest share of failures starts in operations, so check every provider.
- Operational due diligence examines the infrastructure around the portfolio, beginning with the independent service providers.
- The administrator calculates the net asset value, the fund's value per unit, and keeps the investor register, the record of who owns what.
- The auditor should be of a suitable size and reputation for the fund.
- Prime brokers and custodians hold the fund's assets, and the prime broker also finances its positions.
- Legal counsel drafts the fund documents and gives legal advice.
- One question runs across all of them: is any provider affiliated with the manager?
- An administrator owned by the manager is a warning sign, because it weakens independence.

22 Valuation, controls and the rest

- Valuation policy, above all for illiquid positions
- Prices from independent sources
- Trade confirmation and reconciliation
- Front and back office separate; two signatures for cash
- Compliance, personal trading, IT, cyber, continuity

IN THE LESSON

- Then the processes.
- Hollin reviews the valuation policy, above all for illiquid positions, where there is no market price to read.
- It asks whether prices come from independent sources, rather than from the manager's own estimates.
- It tests trade confirmation, checking each trade with the other party, and reconciliation, matching the fund's records against those of the prime broker and the administrator.
- It checks that the front office, which trades, is separate from the back office, which settles and records, and that every cash movement needs two authorised signatures.
- Last come compliance and personal trading rules for staff, information technology, cyber security, and a business continuity plan for carrying on after a disaster.

23 Example 9: who sets the prices?

Corvane's $300m NAV by price source; a valuer re-prices the model book

Exchange prices	255 ÷ 300	**85%**
Broker quotes	30 ÷ 300	**10%**
Manager's own model	15 ÷ 300	**5%**
Model book, independent price	15 → 10.5	**– $4.5m**
Overstatement of NAV	4.5 ÷ 300	**1.5%**

IN THE LESSON

- Hollin splits Corvane's net asset value of three hundred million dollars by where each price comes from, and has an independent valuer re-price the positions marked by the manager's own model.
- Exchange prices cover two hundred and fifty five million, eighty five per cent.
- Broker quotes cover thirty million, ten per cent.
- The manager's own model covers fifteen million, five per cent.
- The independent valuer prices that model book at ten point five million, four point five million lower.
- So the net asset value is overstated by four point five over three hundred, one point five per cent.
- That is small, but it shows who controls the numbers.
- Hollin makes independent pricing of the model book a condition of investing.

24 Example 10: confirm the assets directly

Corvane reports equity of $250m at its prime broker, $50m at its custodian

Prime broker confirms	Hollin's own contact	**$250m**
Custodian confirms	Hollin's own contact	**$50m**
Confirmed total	250 + 50	**$300m**
Administrator's reported NAV	matches	**$300m**

Proves the assets exist; valuation is a separate check

IN THE LESSON

- Corvane reports account equity, meaning the net value held in each account, of two hundred and fifty million dollars at its prime broker and fifty million at its custodian.
- Hollin contacts the prime broker through a contact it found itself, and the prime broker confirms two hundred and fifty million.
- It does the same with the custodian, which confirms fifty million.
- The confirmed total is two hundred and fifty plus fifty, three hundred million, and it matches the administrator's reported net asset value of three hundred million.
- That proves the assets exist, but not that they are priced fairly, which is the separate valuation check of the last example.
- Had Hollin dialled numbers from Corvane's own pack, the same answers would prove nothing.
- The exam point is verification through direct contact with the third parties, not reliance on the manager's description.

25 Fraud risk: the warning signs

- Returns too smooth for the strategy
- Unknown auditor; no independent admin or custodian
- One person controls trading, valuation and cash
- Resists verification; undisclosed legal history
- Tools: background checks, third-party confirmation

IN THE LESSON

- Now fraud risk and business model risk, which are assessed differently.
- Fraud cannot be spotted from performance statistics alone, so the investor looks for warning signs.
- First, returns too smooth for the strategy.
- Second, an unknown or tiny auditor, and no independent administrator or custodian, so nobody outside the firm sees the assets.
- Third, one person controlling trading, valuation and cash, so one person could invent all three.
- Fourth, resistance to verification, and past legal or regulatory problems that were not disclosed.
- None of these proves fraud, but each demands an explanation.
- The main tools are background checks and independent confirmation from third parties, the same tools we met in stage four.

26 Example 11: returns that are too smooth

Fund B claims Corvane's strategy: 60 months of reported returns

Positive months	58 ÷ 60	**96.7%**
Fund B: return ÷ volatility	10% ÷ 2%	**5.0**
Corvane: return ÷ volatility	11% ÷ 12%	**0.92**
Market: return ÷ volatility	15% ÷ 16%	**0.94**

Too smooth: check auditor, administrator, custodian

IN THE LESSON

- A second manager pitched to Hollin, Fund B, claims the same strategy as Corvane and shows sixty months of reported returns.
- Fifty eight of the sixty months are positive, ninety six point seven per cent.
- Its return is ten per cent a year with volatility, the usual measure of how much returns swing, of only two per cent, a ratio of five.
- Corvane earns eleven per cent with volatility of twelve per cent, a ratio of zero point nine two.
- The market earns fifteen per cent with volatility of sixteen per cent, a ratio of zero point nine four.
- A fund holding shares should not show a ratio more than five times the market's.
- So Hollin checks Fund B's auditor, administrator and custodian before anything else.

27 Business model risk: the breakeven

Breakeven assets = Annual costs ÷ Management fee rate
Fee income = Fee rate × Assets

Breakeven assets	Assets where fees just cover costs
Annual costs	Salaries, systems, rent, controls
Management fee rate	Annual % charged on assets

IN THE LESSON

- Business model risk asks a different question: is the manager's firm viable as a business?
- A manager has costs, and its steady income is the management fee, a fixed percentage of the assets it manages.
- Management fees should cover operating costs, and the level of assets that does so follows from one ratio.
- Breakeven assets equal annual costs divided by the management fee rate.
- The second line is the fee income itself: the fee rate times assets.
- Read the terms.
- Breakeven assets are the assets where fees just cover costs.
- Annual costs are salaries, systems, rent and controls.
- The management fee rate is the annual percentage charged on assets.
- Below breakeven, the firm needs uncertain performance fees to survive.

28 Example 12: is Corvane a viable business?

Corvane: costs $6m a year, management fee 1.5%, fund $300m

Breakeven assets	6 ÷ 1.5%	**$400m**
Fee income today	1.5% × 300	**$4.5m**
Gap met by performance fees	6 − 4.5	**$1.5m**
If the 30% investor leaves	1.5% × (300 − 90)	**$3.15m fees**
Gap to the $6m costs then	6 − 3.15	**$2.85m**

Hollin's $40m would be 40 ÷ 340, 11.8% of the fund

IN THE LESSON

- Corvane's costs are six million dollars a year, its management fee is one point five per cent, and the fund is three hundred million.
- Breakeven assets are six million divided by one point five per cent, which is four hundred million.
- Fee income today is one point five per cent of three hundred million, four point five million.
- The gap of one point five million must be met by performance fees, so Corvane depends on good years.
- Worse, its largest investor holds thirty per cent, ninety million.
- If it leaves, fees fall to one point five per cent of two hundred and ten million, three point one five million, leaving costs uncovered by two point eight five million.
- And Hollin's forty million would be forty over three hundred and forty, eleven point eight per cent of the fund.

29 Other business risks, and stress

- Dependence on performance fees
- Investor concentration and redemption exposure
- Key-person dependence
- Stress: extra risk-taking, or cuts to controls
- Small, thinly funded firms are not safer

IN THE LESSON

- These numbers point to the wider concerns about the business.
- Dependence on performance fees means income can vanish in a single bad year.
- Investor concentration and redemption exposure mean one large exit can shrink the firm overnight, and Hollin itself would become a large investor.
- Key person dependence means the firm may not survive its founder leaving.
- And watch how economic stress changes behaviour.
- A manager under pressure may take extra risk, chasing a performance fee to stay alive, or cut spending on controls, which is operations, the largest source of failures.
- So the exam point is that small, thinly funded firms are not safer.
- Small does not mean careful.
- It can mean one bad quarter away from cutting corners.

30 The due diligence questionnaire

- A standard list sent to the manager; templates exist
- Firm, ownership, people, key-person terms
- Assets under management and investor base
- Strategy, process, performance and attribution
- Risk management, operations and valuation

IN THE LESSON

- Last, the due diligence questionnaire, or D D Q.
- It is a standardised list of questions sent to the manager, and industry bodies publish templates for it.
- It normally starts with the firm and its ownership, and with personnel, including key person arrangements, meaning what happens if a named person leaves.
- Then assets under management and the investor base, which reveals any concentration of investors.
- Then the investment strategy and process, and performance with its attribution, meaning a breakdown of where the returns came from.
- Then risk management, and operations and valuation, the areas we have just examined in Corvane's case.

31 The rest of the questionnaire, and its limits

- Service providers, with contact details
- Fees and liquidity terms
- Legal, regulatory and litigation history
- Compliance, insurance, business continuity
- Value: written, dated answers. Weakness: self-reported

IN THE LESSON

- The questionnaire continues with the service providers, with contact details, which Hollin checks against details it finds itself.
- Then fees and liquidity terms.
- Then legal, regulatory and litigation history, the record of any lawsuits or sanctions.
- Then compliance, insurance and business continuity.
- So what is the questionnaire worth?
- Its value lies in forcing consistent, written, dated answers that can be compared with the offering documents, the audited statements and what the manager says in meetings.
- A written answer that turns out false is far harder to explain away than a remark over lunch.
- Its weakness is that it is self reported, and a standard template may not fit the specific strategy.

32 Example 13: cross-checking Corvane's answers

Hollin compares Corvane's questionnaire with its other sources

Fund assets	DDQ $300m; administrator $300m	**Consistent**
Redemption terms	DDQ quarterly; memo adds a gate	**Gap**
Auditor	same firm in DDQ and accounts	**Consistent**
Decision makers	DDQ says 3; meetings show 1	**Gap**

Starting point only: verify every answer independently

IN THE LESSON

- Hollin compares Corvane's questionnaire with its other sources, row by row.
- Fund assets: the questionnaire says three hundred million dollars, and so does the administrator.
- Consistent.
- Redemption terms: the questionnaire says quarterly, but the offering memorandum adds a gate, a clause that lets the fund limit withdrawals.
- That is a gap, a term the questionnaire left out.
- Auditor: the questionnaire and the audited accounts name the same firm, so that row is consistent too.
- Decision makers: the questionnaire lists three portfolio managers, but the meetings show that one person makes every decision.
- Another gap, and a key person risk.
- The questionnaire is a starting point only, and every answer must be verified independently.

33 Mistakes to avoid

- Trusting a strong record as proof of safety
- Accepting a VaR number as risk management
- Using contact details the manager supplied
- Stopping diligence once the money is in
- Thinking a small, thin firm is safer

IN THE LESSON

- Before the quiz, here are the mistakes to avoid.
- First, trusting a strong record as proof of safety, when operational failure is the largest single cause and the record says nothing about operations.
- Second, accepting a V a R number as risk management, when what matters is independence and use in decisions.
- Third, using contact details the manager supplied, which makes verification worthless.
- Fourth, stopping diligence once the money is in, when monitoring must carry on for as long as the investment lasts.
- Fifth, thinking a small, thinly funded firm is safer, when stress pushes it to take risk or cut controls.
- Each mistake has the same cure: verify independently, and keep verifying.

34 Try three quick questions

1. Costs $9m a year, management fee 2%. Breakeven assets?
   Answer: 9 ÷ 2% = $450m.
2. Unit value 100, then 80, then 110. Fee 20%, high-water mark 100. Year-2 fee?
   Answer: 20% × (110 − 100) = 2 a unit.
3. The manager will not let you call its administrator. What do you do?
   Answer: Stop: refusing verification is a reason to stop.

IN THE LESSON

- Now try three quick questions.
- Pause the video, think, then listen to the answers.
- Question one.
- A manager's costs are nine million dollars a year and its management fee is two per cent.
- What level of assets breaks even?
- Nine million divided by two per cent is four hundred and fifty million dollars.
- Question two.
- A unit's value goes from one hundred to eighty, then to one hundred and ten.
- The performance fee is twenty per cent, with a high-water mark of one hundred.
- What is the year two fee per unit?
- Twenty per cent of one hundred and ten minus one hundred, which is two per unit.
- Question three.
- A manager refuses to let you call its administrator directly.
- What do you do?
- Stop.
- A refusal to allow verification is a reason not to invest.