CHARTA LEARNING · LESSON NOTES

Private capital: private equity, private debt, value creation and the J-curve

Alternative Investments

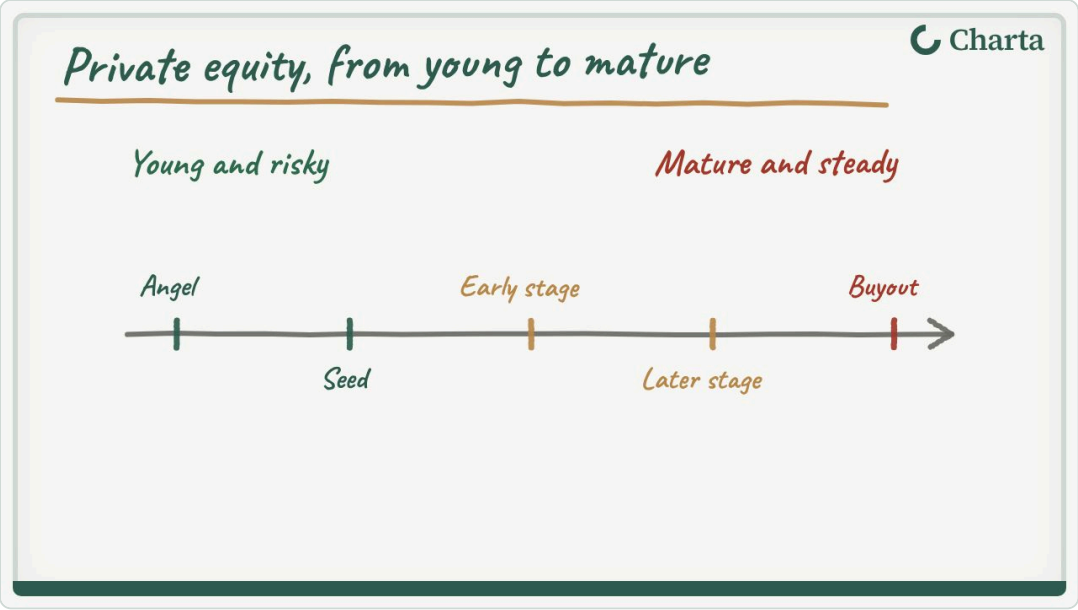
1 A story: money for firms off the stock market

- Private equity = owning firms not listed on an exchange
- No daily price; selling means finding a buyer
- Investors promise money, the manager calls it in stages
- Two families: venture capital and buyouts

IN THE LESSON

- Imagine your friend owns a bakery and wants to open three more shops.
- She does not sell shares on an exchange, so no price flashes on a screen each day.
- Instead a specialist fund buys a share of her business.
- That is private equity: owning shares in companies that are not listed on a public market.
- You cannot sell your holding in a minute.
- You must find a buyer and negotiate.
- Investors in a fund do not hand over everything at once.
- They promise a total, called the commitment, and the manager asks for the cash in instalments, called drawdowns, when it finds something to buy.
- There are two big families: venture capital for young firms, and buyouts for mature ones.

2 Private equity, from young to mature



IN THE LESSON

- Picture a line from the youngest company to the most mature.
- On the far left is angel investing.
- A wealthy individual backs an idea that may be little more than a sketch.
- Next is the seed stage, where money pays to test the concept and build a first prototype.
- Then early stage, where the company has a product and is starting to sell.
- Together these are the formative stages, and the money is usually taken in as shares because there is no cash flow to pay interest.
- Next comes later stage, also called expansion: the firm is already selling and needs money to grow.
- All of these are venture capital.
- At the far right is the buyout, a mature firm.
- Moving right, the risk of total failure falls.

3 Buyouts: borrowing to buy a steady firm

- Leveraged buyout (LBO) = mature firm bought with debt
- The firm's own cash flow repays the debt
- Management buyout: the current managers buy
- Management buy-in: an outside team takes over

IN THE LESSON

- Now the right hand end of the line.
- A buyout fund looks for a mature firm that makes steady cash.
- It buys the whole firm, and pays for part of the price with borrowed money.
- Borrowing to buy is called leverage, so this is a leveraged buyout, or L B O.
- The loans are then paid off from the firm's own cash over the years.
- That is why the target must have steady cash flow: the interest bill arrives whatever happens.
- Two variants are worth knowing.
- In a management buyout, the existing managers are the buyers.
- In a management buy in, a team from outside comes in and takes over.
- Venture investors rarely use much debt, but buyout funds depend on it.

4 Example 1: Harlow Foods is bought and sold

Harlow Foods, $ million. Bought and sold five years apart

Price paid	debt 100 + equity 60	**160**
Sold after five years		**234**
Debt still owed	100 − 30 repaid	**70**
Equity paid out	234 − 70	**164**
Multiple of equity	164 ÷ 60	**2.73x**

IN THE LESSON

- Let's follow a made up company, Harlow Foods, which makes frozen meals.
- A buyout fund pays one hundred sixty million dollars for it.
- The fund borrows one hundred million and puts in sixty million of its investors' own equity.
- Over five years the company's cash pays off thirty million of the loan, leaving seventy owed.
- At the end of year five the fund sells Harlow for two hundred thirty four million.
- After repaying the seventy still owed, one hundred sixty four million is left for the owners.
- So sixty million went in and one hundred sixty four came out, a multiple of two point seven three.
- Notice what happened: the company's value rose by less than half, yet the equity grew by well over one and a half times.

5 The money multiple: MOIC

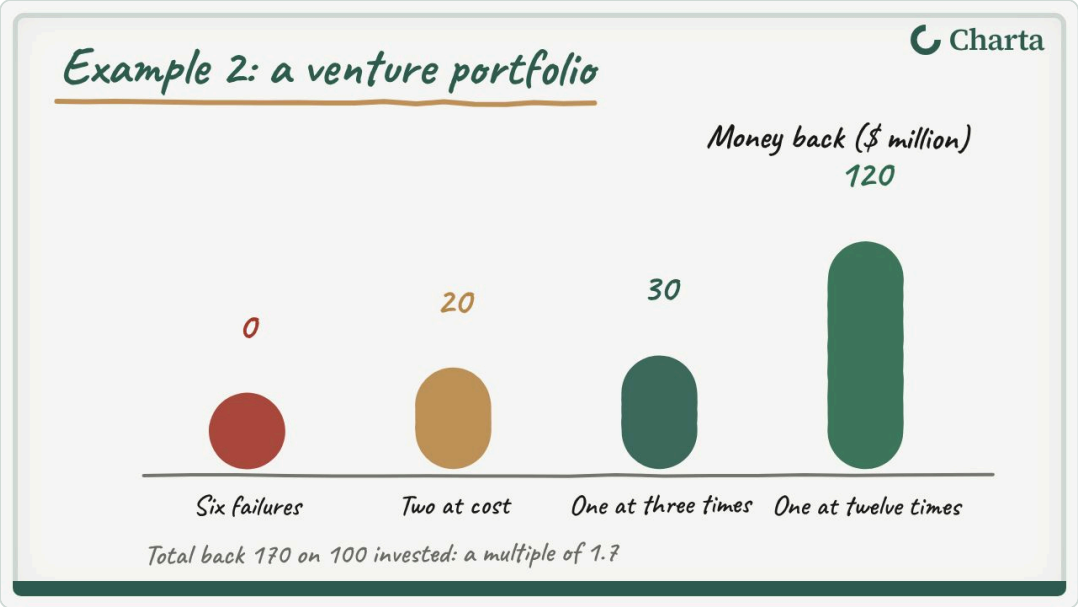
MOIC = Total proceeds ÷ Capital invested

MOIC	How many times the money came back
Total proceeds	Everything that came back
Capital invested	Money that went in

IN THE LESSON

- This yardstick has a name: the multiple of invested capital, or M O I C.
- It equals total proceeds divided by the capital invested.
- Taking the terms in turn.
- Total proceeds is everything that came back to the investor, and in many definitions it includes the value of any holdings not yet sold.
- Capital invested is the money that went in.
- The result is a simple count of how many times the money came back.
- A multiple of one means you got your money back and nothing more.
- Two means you doubled it.
- A warning, though.
- It ignores time.
- Two times in three years is far better than two times in fifteen, and that is why we also use the internal rate of return, which we meet at the end.

6 Example 2: a venture portfolio



IN THE LESSON

- Venture capital works differently, and a picture shows why.
- A fund makes ten equal investments of ten million dollars each, one hundred million in all.
- Here are the bars, showing the money that came back from each group.
- Read the figure above each bar, since the small ones are drawn as dots.
- Six companies fail and return nothing.
- Two return just their cost, ten million each, twenty in all.
- One does well and returns thirty.
- And one superstar returns one hundred twenty.
- Add them up: one hundred seventy million back on one hundred invested, a multiple of one point seven.
- Look how lopsided it is.
- Six of ten investments were worthless, yet the fund made money, because one winner supplied more than two thirds of everything.
- Venture investors expect most to fail and a few to pay for the lot.

7 How private equity gets its money back: the exits

Four exit routes (a failed company is written off)

Exit route	How it works
Trade sale	Sold to a company
Public offering	Shares listed
Secondary sale	Sold to a fund
Recapitalisation	New debt pays out

IN THE LESSON

- A private equity manager does not buy to hold forever.
- Exit is the whole point, and until it happens a gain exists only on paper.
- There are several routes.
- A trade sale means selling the company to another business, often a rival, called a strategic buyer.
- A public offering, or I P O, lists the company's shares on the stock market for the first time.
- A secondary sale means selling the company to another private equity fund.
- A recapitalisation means the company takes on new debt or new money and uses it to pay the owners a large dividend, so the fund takes cash out without selling.
- And if the company fails, the fund writes it off, or liquidates it, and gets little or nothing back.

8 Choosing an exit: what to remember

- Public offering: top price, but slow, costly, lock-up
- Trade sale: fast and private; rivals pay for synergies
- Secondary sale: another fund buys, when listing is hard
- Failure means a write-off; until exit, gains are paper

IN THE LESSON

- Each route has its own strengths.
- A public offering may bring the highest price, since many investors can bid, but it is slow and costly, with fees to the banks that sell the shares, and the old owners usually face a lock up, a period when they are not allowed to sell.
- It also depends on the stock market being open.
- A trade sale is often faster and private, and a rival may pay extra because it can save costs by combining the two, a gain called synergy.
- A secondary sale suits a company too big or too young to list when markets are weak.
- The trap: a gain on the books is not a gain in the bank.
- Until one of these exits happens, the profit is unrealised.

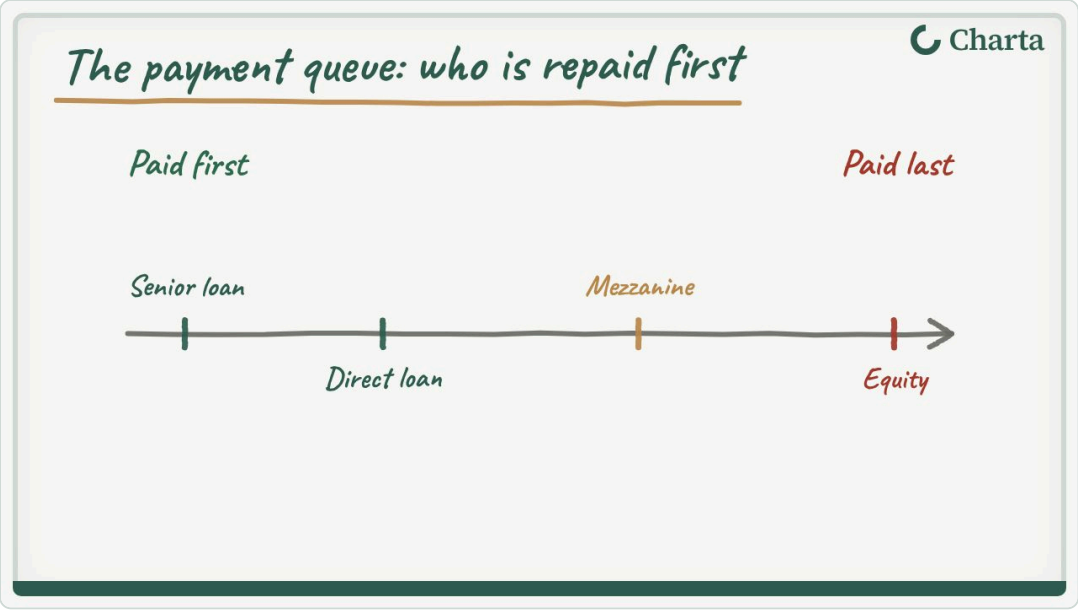
9 A story: the bank said no

- Private debt = loans outside public markets and big banks
- Negotiated one borrower at a time; hard to sell
- Return = a spread over a safe rate
- The spread pays for credit risk and illiquidity

IN THE LESSON

- Now to the other half of private capital, which is lending.
- Suppose a company wants to borrow forty million dollars.
- It is too small for the big syndicated loan market, where banks pool a loan and sell slices of it, or its story is too complicated for a bank's checklist.
- A specialist lender steps in and lends directly.
- This is private debt: loans made outside public bond markets and the traditional banks, negotiated one borrower at a time.
- Because the loan cannot be sold easily, the lender demands extra interest for being stuck with it.
- That extra, over a safe rate, pays for two things: the risk the borrower fails, called credit risk, and the cost of not being able to sell, called illiquidity.

10 The payment queue: who is repaid first



IN THE LESSON

- Here is the idea that explains every type of private debt: the payment queue.
- When a company is in trouble, its lenders and owners are paid in a strict order.
- At the front, on the left, are the senior lenders.
- They are paid first and often hold a claim on the company's assets, so they accept a lower interest rate.
- Next come direct lenders, many of whom also lend at the senior level, sometimes in one combined loan.
- In the middle sits mezzanine debt, which is paid after the senior lenders but before the owners.
- At the very end of the queue are the equity holders, the owners, paid last, with the highest possible reward and the greatest chance of getting nothing.
- Moving right, risk rises, and so must the expected return.

11 Four main types of private debt

Where each type sits and what it is

Type of private debt	Key feature
Direct lending	Senior, floating
Mezzanine	Middle, warrants
Venture debt	Young firms
Distressed debt	Bought at a discount

IN THE LESSON

- Let's meet the four main types.
- Direct lending is a loan made straight to a company, usually a mid sized one, by a fund rather than a bank.
- It is often senior, and its interest rate usually floats.
- Mezzanine debt sits between the senior loans and the equity.
- It pays a higher rate for the extra risk and often comes with warrants, which are rights to buy shares cheaply later, so the lender shares in the upside.
- Venture debt is lent to young, venture backed companies, usually alongside an equity round.
- The lender relies on the investors behind the firm, and also takes warrants.
- Distressed debt is the debt of a company in or near trouble, bought at a deep discount, in the hope of gain when it is restructured.

12 The floating rate coupon

Coupon = Benchmark rate + Spread

Coupon	Interest paid each period
Benchmark rate	Market rate; moves over time
Spread	Fixed extra for risk

IN THE LESSON

- Most direct loans pay a coupon that changes.
- The coupon equals a benchmark rate plus a fixed spread.
- The benchmark rate is a short term market interest rate that moves over time.
- The spread is a fixed extra amount agreed when the loan is made, to pay for credit risk and illiquidity.
- Say the benchmark is three per cent and the spread is six per cent, then the coupon is nine per cent.
- If the benchmark rises to five, the coupon rises to eleven, with no change to the spread.
- This matters for the lender's risk.
- Because the coupon resets, the loan's price stays near its face value, so the lender has almost no duration risk, which means no loss from rising rates on the price.
- What remains is credit risk.

13 Example 3: the floating loan when rates rise

$100m direct loan at benchmark + 6%. Benchmark rises 2% to 5%

Year 1 coupon	2% + 6%	**8%**
Year 2 coupon	5% + 6%	**11%**
Interest bill, year 1 to 2	8 up to 11	**+3**
Rise in the interest bill	3 ÷ 8	**37.5%**

IN THE LESSON

- Let's put numbers on it.
- A direct lender lends one hundred million dollars at the benchmark plus six per cent.
- In year one the benchmark is two per cent, so the coupon is eight per cent, and the borrower pays eight million in interest.
- In year two the benchmark has risen to five per cent.
- The coupon is now eleven per cent, and the borrower pays eleven million.
- The lender's income rose, and the loan's price barely moved, because the coupon reset.
- So the lender took no hit from rates.
- The borrower did.
- Its interest bill rose by three million, more than a third.
- The risk did not disappear.
- It moved onto the borrower, and if the borrower cannot cope, the lender faces credit risk instead.

14 Example 4: seniority decides who loses

Assets sell for 70. Senior owed 60, mezzanine owed 30. $ million

Senior lender, paid first	gets 60 of 60	**100%**
Mezzanine, paid next	gets 70 − 60 = 10 of 30	**33.3%**
Equity holders, last	nothing is left	**0**
Mezzanine loss	30 − 10	**20**

IN THE LESSON

- Now the payment queue in action.
- The company fails, and its assets are sold for seventy million dollars.
- It owes sixty million to the senior lender and thirty million to the mezzanine lender.
- The senior lender comes first and gets all sixty, so it recovers every dollar it was owed.
- That is a recovery rate of one hundred per cent.
- Recovery rate is the amount received divided by the amount owed.
- Only ten million is left for the mezzanine lender, who was owed thirty.
- Its recovery rate is ten divided by thirty, which is thirty three point three per cent.
- Equity holders get nothing.
- Same company, same disaster, very different results.
- That is exactly why mezzanine pays a higher rate, and often comes with warrants.

15 Example 5: distressed debt bought at a discount

Face value 100 bought at 40. Return = (recovered − paid) ÷ paid

Price paid	40% of 100 face	**40**
Recovered in restructuring		**52**
Profit	52 − 40	**12**
Return if 52 comes back	12 ÷ 40	**30%**
Return if only 30 comes back	(30 − 40) ÷ 40	**−25%**

IN THE LESSON

- Last, distressed debt.
- A distressed investor does not make a new loan.
- It buys an existing one, from someone who wants out.
- Suppose a company in trouble owes a hundred million face value, and the investor buys the loan at forty cents on the dollar, so pays forty million.
- After a restructuring, in which the debts are reorganised, the investor receives fifty two million in cash and new securities.
- The profit is fifty two minus forty, which is twelve million.
- The return is twelve divided by forty, which is thirty per cent.
- But think about the other side.
- If the restructuring only returns thirty million, the investor loses ten on forty, minus twenty five per cent.
- The return depends on what is recovered, not on the interest rate.

16 Mistakes to avoid so far

- A paper gain is not a realised gain
- Venture: a few winners pay for many failures
- Mezzanine ranks behind senior, ahead of equity
- Floating loans: no duration risk, but credit risk remains
- Distressed debt: bought cheap, repaid by recovery

IN THE LESSON

- Time to stop and collect the traps.
- First, a gain on paper is not a gain in the bank.
- Until an exit happens, the profit is unrealised.
- Second, venture capital is a few big winners, not an even spread.
- Judging it by the typical investment misses the point.
- Third, mezzanine is not senior.
- It ranks behind the senior lenders, above equity.
- Fourth, a floating rate loan has little duration risk, but it is not risk free.
- Its danger is credit risk, because the borrower's interest bill rises with rates.
- Fifth, distressed debt is bought at a discount, not newly lent, and its return comes from recovery rather than interest.
- If you hold these five points, you are ready for the next question.

17 Where do the profits come from?

- Operational improvement: the firm earns more
- Financial engineering: leverage magnifies the result
- Multiple expansion: sold at a higher price per $ of earnings
- Attribution = how much came from each lever

IN THE LESSON

- Back to Harlow Foods.
- The fund turned sixty million into one hundred sixty four.
- Was that skill, or luck?
- Suppose three different managers all report a multiple of two and a half.
- One of them improved the business.
- One simply borrowed more.
- One bought just before the whole market rose.
- Those are not the same achievement.
- Private equity returns come from three levers.
- First, operational improvement: the company earns more, through lower costs, higher prices, or buying smaller rivals, called add on acquisitions.
- Second, financial engineering: using leverage to magnify the result.
- Third, multiple expansion: selling at a higher price relative to earnings than was paid.
- The question of how much came from each is called attribution.

18 Value from earnings and a multiple

EV = EBITDA × Multiple
Equity = EV − Debt

Enterprise value	Whole business: lenders + owners
EBITDA	Rough yearly operating cash profit
Multiple	Times EBITDA that buyers pay
Debt	What the lenders are owed

IN THE LESSON

- To split the gain we need two tools.
- The first values a company.
- Enterprise value equals EBITDA times a multiple.
- Enterprise value is the whole business, owned by lenders and owners together.
- E B I T D A is earnings before interest, taxes, depreciation and amortisation, a rough measure of the cash profit from operations.
- The multiple is how many times EBITDA buyers will pay.
- If EBITDA is twenty and the multiple is eight, the value is one hundred sixty.
- The second tool splits that value between lenders and owners: equity equals enterprise value minus debt.
- The lenders are owed a fixed amount, so every dollar of change in the business lands on the equity, which is the smaller slice.

19 Example 6, step 1: Harlow at entry and exit

Harlow Foods, $ million. Entry multiple 8, exit multiple 9

Value at entry	20 × 8	**160**
Value at exit	26 × 9	**234**
Equity at entry	160 − 100 debt	**60**
Equity at exit	234 − 70 debt	**164**
Equity gain	164 − 60	**104**

IN THE LESSON

- Here is Harlow again, with the earnings revealed.
- At entry, E B I T D A was twenty million and the fund paid eight times, so enterprise value was one hundred sixty million.
- Debt was one hundred, so equity was sixty.
- Five years later, E B I T D A has grown to twenty six million, and the buyer pays nine times, so enterprise value is two hundred thirty four.
- Debt has fallen to seventy, so equity is one hundred sixty four.
- The equity gain is one hundred sixty four minus sixty, which is one hundred four million.
- That matches Example one.
- Now the question: how much of the one hundred four came from earnings growth, how much from the higher multiple, and how much from paying down debt?

20 Example 6, step 2: splitting the gain

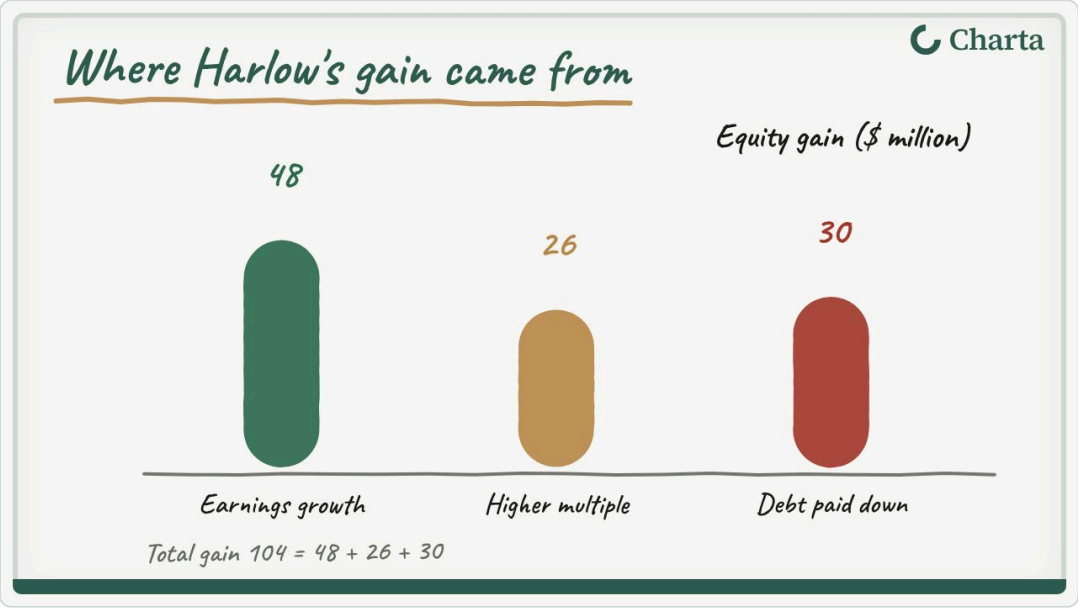
Gain of 104 split into its three sources. $ million

Earnings growth	(26 − 20) × 8	**48**
Higher multiple	(9 − 8) × 26	**26**
Debt paid down	100 − 70	**30**
Total equity gain	48 + 26 + 30	**104**

IN THE LESSON

- Now we split it.
- First, earnings growth.
- EBITDA rose by six, from twenty to twenty six.
- Valued at the entry multiple of eight, that is forty eight million.
- Second, the multiple.
- It rose by one, from eight to nine, applied to the new earnings of twenty six.
- That is twenty six million.
- Third, debt paydown.
- The company's cash cut the debt from one hundred to seventy, so thirty million moved from the lenders to the owners.
- Add the three: forty eight plus twenty six plus thirty is one hundred four.
- It matches.
- Notice the order: the multiple change is measured on the bigger, exit, earnings.
- This is the standard way, and the pieces always add to the total gain.

21 Where Harlow's gain came from



IN THE LESSON

- Here is the same split as a picture.
- Three bars, in millions of dollars.
- The first, in green, is the business growing: forty eight.
- That is operational improvement, the firm simply earning more.
- The second, in gold, is the higher multiple: twenty six.
- The company did not change, but the market was willing to pay a higher price per dollar of earnings.
- The third, in red, is debt paid down: thirty.
- That came from the firm's own cash flow, so it still needed the business to perform.
- Together they make one hundred four.
- Roughly, less than half of the gain came from the manager making the firm better.
- The rest came from the market, and from the structure of the deal.

22 How leverage magnifies the result

Equity return ≈ Asset return + (Debt ÷ Equity) × (Asset return − Cost of debt)

Equity return	Return to the owners
Asset return	Gain or loss on the whole firm
Debt ÷ equity	Borrowed per $1 of equity
Cost of debt	Interest rate on the loan

IN THE LESSON

- Now the second lever.
- Borrowing multiplies results in both directions.
- The equity return is roughly the asset return, plus the debt to equity ratio times the gap between the asset return and the cost of debt.
- Take the terms.
- The asset return is how much the whole business gains or loses.
- Debt over equity says how much is borrowed for each dollar of the owners' own money.
- The cost of debt is the interest rate on the loan.
- The gap in brackets is the key.
- If the business earns more than the loan costs, each borrowed dollar adds to the owners' return.
- If it earns less, each borrowed dollar subtracts.
- Leverage adds nothing if the business earns exactly the cost of debt.

23 Example 7: leverage cuts both ways

Buy at 100: debt 60 at 6%, equity 40. Value moves 10%

Debt ÷ equity	60 ÷ 40	**1.5**
Value up 10%	10 + 1.5 × (10 − 6)	**+16%**
Value down 10%	−10 + 1.5 × (−10 − 6)	**−34%**
No debt, value down 10%		**−10%**

IN THE LESSON

- Let's test it.
- A fund buys a business for one hundred, with sixty borrowed at six per cent and forty of equity.
- So debt over equity is one point five.
- If the business value rises ten per cent, the equity return is ten plus one point five times ten minus six, which is sixteen per cent.
- A ten per cent rise became a sixteen per cent gain.
- Now the other way.
- If the value falls ten per cent, the return is minus ten plus one point five times, minus ten minus six.
- That is minus thirty four per cent.
- A ten per cent fall became a thirty four per cent loss.
- With no debt, the loss would have been just ten.
- Leverage did not create value.
- It only stretched the outcome.

24 Skill or luck? Reading a track record

- Operations: the manager's own skill; can be repeated
- Leverage: magnifies, but creates nothing alone
- Multiple expansion: mostly the market, not the manager
- Same MOIC does not mean the same skill

IN THE LESSON

- So which lever matters most to an investor?
- Operational improvement is the one most clearly down to the manager.
- Cutting costs, raising prices, or buying smaller firms is hard work, and a good manager can do it again in the next fund.
- Financial engineering magnifies whatever the business delivers, and delivers nothing by itself.
- Cheap borrowing also depends on lenders, not on the manager.
- Multiple expansion depends largely on the market.
- A fund that bought in a gloomy year and sold in a cheerful one gets a higher multiple without lifting a finger.
- The trap: two funds with the same multiple of invested capital can have very different skill.
- Always ask which lever supplied the return, and whether it can happen again.

25 A story: why a good fund looks bad at first

- Commitment = total promised; drawdown = cash called
- Paid-in capital = drawdowns so far
- Distributions = money returned to investors, usually later
- Money out first, back later: the J-curve

IN THE LESSON

- Imagine you plant an orchard.
- In the first years you pay for land, trees, and a gardener, and you pick no fruit.
- If you totalled your accounts then, you would show a loss, though the orchard is healthy.
- A private equity fund is like that.
- Investors commit a total, say one hundred million dollars.
- The manager calls it over several years, the drawdowns, and pays fees from day one.
- Money coming back, the distributions, only starts when companies are sold, often in year five or later.
- The total paid in so far is called paid in capital.
- Because so much goes out early, and so little comes back until later, the fund's results trace a shape like the letter J.
- That is the J curve.

26 Example 8: a ten year fund

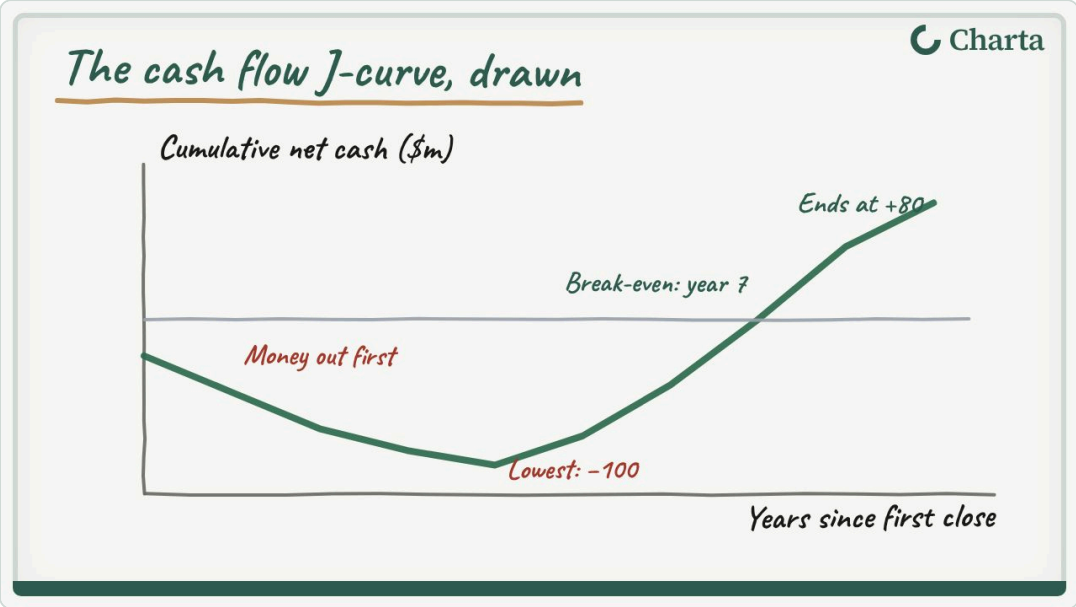
Commitment 100, in $ million. Years counted from first close

Total paid in	25+25+25+15+10	**100**
Of which fees	2% × 100 × 5 years	**10**
Total distributed	20+35+45+50+30	**180**
Money multiple	180 ÷ 100	**1.8x**

IN THE LESSON

- Here is our fund.
- Investors commit one hundred million dollars.
- Over the first five years the manager calls twenty five, twenty five, twenty five, fifteen and ten.
- That adds up to one hundred, paid in.
- It includes fees of two per cent of the commitment each year, two million a year for five years, ten million in all, so ninety million is invested in companies.
- Then the sales begin.
- In years five to nine, the fund distributes twenty, thirty five, forty five, fifty and thirty, a total of one hundred eighty million.
- The investors put in one hundred and get back one hundred eighty, a money multiple of one point eight.
- Now let's draw what happens to the cash along the way.

27 The cash flow J-curve, drawn



IN THE LESSON

- Here it is drawn.
- Along the bottom are the years since the fund's first close.
- Up the side is the investors' cumulative net cash: all the money received so far, minus all the money paid in.
- The grey horizontal line is zero, where they are exactly even.
- Follow the green line from the left.
- In the early years the line falls, because money goes out every year and almost nothing comes back.
- It bottoms out in year four, at minus one hundred, when everything has been called.
- Then sales begin, distributions arrive, and the line climbs.
- It crosses zero in year seven, the break even point, and ends at plus eighty, which is the profit.
- The dip and the climb together draw the letter J.

28 The internal rate of return

$$0 = CF_0 + CF_1/(1+IRR) + CF_2/(1+IRR)^2 + \dots + CF_n/(1+IRR)^n$$

IRR	Rate that makes the sum zero
Cash flow, CF	Paid in (−), paid back (+)
Year, t	Years since the start

IN THE LESSON

- To judge a fund we need a yearly rate of return that respects the timing of every payment.
- That is the internal rate of return, or I R R.
- It is the single yearly rate at which the present value of the money going in equals the present value of the money coming out.
- Put another way, it is the rate that makes the total of all the discounted cash flows equal zero.
- The terms: a cash flow is money going in, negative, or coming out, positive, in a given year.
- The year, t, says when.
- The I R R is the unknown we solve for, by trial and error or with a calculator.
- For private capital and real estate funds, the standard measure is the I R R, since the manager, not the investor, decides the timing of the cash flows.

29 Example 9: the fund two years in

Two years in. 100 committed, 50 called. $ million

Paid in so far	25 now + 25 a year later	**50**
Fees on the commitment	2% × 100 × 2 years	**4**
Invested, held at cost	50 − 4	**46**
One weak company written down		**−6**
Reported value	46 − 6	**40**

IN THE LESSON

- Now look at our fund after two years, and see what its reports would show.
- One hundred is committed.
- Twenty five was called at the start and twenty five a year later, so fifty is paid in.
- Fees of two per cent on the commitment, charged on the full one hundred, not on what has been called, come to two million a year.
- Over two years that is four.
- So forty six is invested, and carried at cost.
- One weak company is written down by six, since bad news shows up quickly.
- Good news does not, because winners stay at cost until a sale or a new funding round proves a higher value.
- The fund's reported value is forty six minus six, which is forty million, against fifty paid in.

30 Example 9: early IRR against the true one

Same fund, judged at two ages

IRR two years in	−25, −25, then 40	**−14.0%**
IRR over the whole life	ten years of cash flows	**11.1%**
Money multiple at the end	180 ÷ 100	**1.8x**
Right yardstick	same-vintage peers	**same age**

IN THE LESSON

- Now compute the I R R.
- Two years in, the cash flows are minus twenty five today, minus twenty five a year later, and the reported value of forty received at the end of year two, as if sold.
- Solving, the I R R is minus fourteen per cent.
- That looks like a disaster.
- But the fund has done nothing wrong.
- Fees were charged on a large commitment, the holdings are at cost, and one dud has been marked down.
- Now take the whole life of the fund, with the full cash flows we saw.
- The I R R is eleven point one per cent a year and the multiple is one point eight.
- The same fund went from minus fourteen to plus eleven.
- The early number said almost nothing about its quality.

31 Reading the J-curve: the common traps

- Early dip: fees, holdings at cost, write-downs
- Do not judge a fund on its early IRR
- Compare with funds of the same vintage at the same age
- Appraised values smooth the risk; real risk is higher

IN THE LESSON

- So how should you judge a private equity fund?
- Not by its early return.
- The dip comes from timing, not talent: fees are charged on committed capital from the start, holdings are carried at cost, and weak holdings are written down before strong ones are marked up.
- Later, as companies are sold, real prices arrive, distributions flow, and the return turns positive.
- The standard remedy is vintage year comparison.
- A vintage year is the year a fund made its first investments.
- You compare a fund only with other funds of the same vintage, at the same age, because they all sit at the same point on the J.
- Also remember that reported values are appraisals, so measured volatility looks lower than the true risk.

32 Recap: the main ideas

- Stages: angel to buyout; exit makes gains real
- Private debt: queue position sets risk, floating coupon
- Gain = earnings growth + multiple change + debt paid down
- J-curve: judge by vintage peers at the same age

IN THE LESSON

- Let's pull it together.
- Private equity runs from young venture companies, angel, seed, early and later stage, to mature buyouts bought with debt.
- Value is only real at exit: a trade sale, a public offering, a secondary sale, a recapitalisation, or a write off.
- Private debt is direct lending, mezzanine, venture debt and distressed, ranked by the payment queue, with floating coupons that leave credit risk but little duration risk.
- Managers add value through operations, leverage and a higher multiple, and attribution tells skill from luck.
- The jay curve shows a fund's return dips first because of fees and cost valuation, so judge it against peers of the same vintage.

33 Try three quick questions

1. 10 venture bets of 10 each: 6 lose all, 2 return 10, one 30, one 120. MOIC?
   Answer: 170 ÷ 100 = 1.7x. One bet gave most of it.
2. Assets sell for 70; senior owed 60, mezzanine owed 30. Mezzanine recovery?
   Answer: 10 ÷ 30 = 33.3%. Senior is paid in full first.
3. A fund's IRR is −14% two years in. Is it a poor fund?
   Answer: Not necessarily: the J-curve. Compare same-vintage peers.

IN THE LESSON

- Now try three quick questions yourself.
- Pause after each one.
- Question one.
- Ten venture bets of ten million each: six lose everything, two return ten, one returns thirty, one returns one hundred twenty.
- What is the multiple?
- One hundred seventy divided by one hundred is one point seven.
- Question two.
- Assets sell for seventy.
- Senior debt is owed sixty and mezzanine is owed thirty.
- What is the mezzanine recovery?
- Ten divided by thirty is thirty three point three per cent.
- Question three.
- A fund shows an I R R of minus fourteen per cent two years in.
- Is it a poor fund?
- Not necessarily.
- This is the jay curve, so compare it with funds of the same vintage at the same age.