CHARTA LEARNING · LESSON NOTES

How equity is issued and traded

Equity Investments

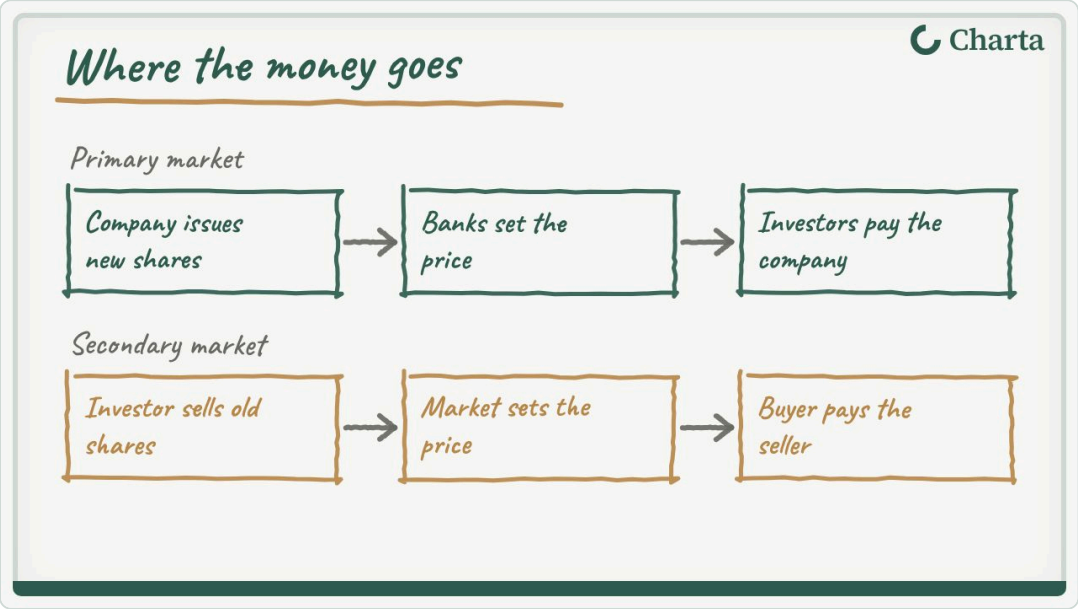
1 A story: Rosa and the second oven

- Rosa sells a quarter of her bakery to pay for an oven
- The cash goes into the bakery: a new issue
- A neighbour later sells her share to another neighbour
- The bakery gets nothing from that second trade

IN THE LESSON

- Imagine a baker called Rosa who runs a small bakery and wants a second oven.
- She does not have the money.
- So she sells one quarter of her bakery to some neighbours, and they hand over cash.
- That cash goes into the bakery, and Rosa buys the oven.
- Months later, one neighbour needs money for a holiday and sells her share to another neighbour.
- This time the bakery receives nothing.
- The cash simply moves from one neighbour to another.
- Those two moments are the heart of this first part.
- When a company sells new shares and keeps the cash, we call that the primary market.
- When investors trade shares that already exist, we call that the secondary market.

2 Where the money goes



IN THE LESSON

- Here is the same idea as a picture.
- Look at the top row first, the primary market.
- A company creates new shares and offers them.
- Underwriters, which are banks that run the sale, help set the price.
- Investors pay, and the cash goes to the company.
- That is the end of the row: the company has new capital and there are more shares in the world.
- Now the bottom row, the secondary market.
- An investor who already owns shares decides to sell.
- The market sets a price.
- Another investor buys and pays the seller.
- Follow the cash to the end of each row.
- In the bottom row the company never sees a penny, and the number of shares does not change.

3 Going public, and selling more later

- IPO: the first sale of shares to the public
- Follow-on (seasoned) offering: a later sale of new shares
- Underwriters (banks) gauge demand and set the price
- Underwriter's fee = the underwriting spread

IN THE LESSON

- Now some vocabulary.
- The first time a company sells its shares to the public is called an initial public offering, written I P O.
- Before that, the company is private and a small group owns it.
- Any later sale of new shares by a company that is already public is called a seasoned offering, or a follow-on offering.
- Most of these sales go through underwriters.
- An underwriter gauges how much demand there is and helps set the price.
- In a firm commitment, the underwriter buys the whole issue and resells it, so the underwriter carries the risk.
- In a best efforts deal, it only tries to sell as much as it can.
- Either way it earns a fee, called the underwriting spread.

4 Meet Pinewood Foods

Pinewood Foods today (made-up figures)

Pinewood Foods today	Figure
Shares in issue	80m
Founder holds	20m
Share price (example)	$15
Market value	$1,200m

IN THE LESSON

- To make this concrete we will follow one company through the whole lesson, a food maker called Pinewood Foods.
- All the figures are made-up round numbers for teaching.
- Pinewood has eighty million shares in issue.
- Its founder owns twenty million of them, which is one quarter of the company.
- Today the shares trade at fifteen dollars each.
- So the whole company, shares times price, is worth twelve hundred million dollars.
- That total is called the market capitalisation.
- Pinewood now wants money to build a new factory.
- It decides to sell new shares in a follow-on offering, so we are standing in the primary market.

5 Example 1: the follow-on offering

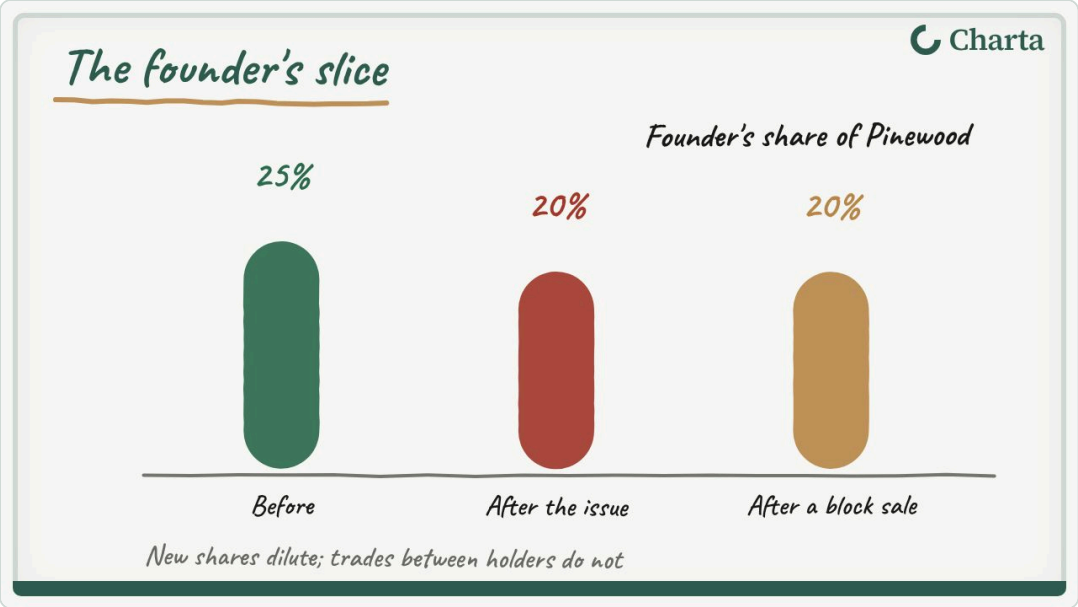
20m new shares at $15; underwriting spread 3%

Gross proceeds	20m × $15	**$300m**
Underwriting spread	3% × 300	**$9m**
Cash to Pinewood	300 − 9	**$291m**
Shares in issue	80m + 20m	**100m**
Founder's stake	20m ÷ 100m	**20%**

IN THE LESSON

- Example one.
- Pinewood sells twenty million new shares at fifteen dollars.
- Twenty million times fifteen is three hundred million dollars.
- The underwriters keep a spread of three per cent, which is nine million dollars.
- So the company receives two hundred and ninety-one million.
- Now look at ownership.
- Before the sale there were eighty million shares, and the founder held twenty million, which is twenty-five per cent.
- After the sale there are one hundred million shares.
- The founder still holds twenty million, but twenty out of one hundred is twenty per cent.
- She sold nothing, yet her percentage fell.
- That fall is called dilution.

6 The founder's slice



IN THE LESSON

- Here is the founder's slice as bars.
- The first bar is before the sale: twenty-five per cent, one quarter of the company.
- The second bar is after the follow-on offering: twenty per cent.
- The slice got smaller because the pie got bigger, not because she sold anything.
- The third bar will make sense in a few minutes.
- It is the founder's stake after a different kind of deal, one where an existing holder sells a block of old shares.
- Because no new shares are created, her slice stays at twenty per cent.
- Keep this picture in mind: new shares shrink everyone's percentage, but a trade between existing holders leaves the share count, and so the percentages, alone.

7 Example 2: is dilution a loss?

Fees ignored; fair price $15 against a cheap price $12

Fair issue: value per share	(1,200 + 300) ÷ 100m	**$15.00**
Founder's stake, either way	20m × $15	**$300m**
Cheap issue: value per share	(1,200 + 240) ÷ 100m	**$14.40**
Founder's stake after	20m × $14.40	**$288m**
Founder's loss	300 − 288	**$12m**

IN THE LESSON

- Example two.
- Does a smaller percentage mean a loss of value?
- Not if the price is fair.
- Ignore the fees for a moment.
- Before the issue Pinewood is worth twelve hundred million.
- Sell twenty million shares at fifteen and three hundred million of cash comes in.
- The firm is now worth fifteen hundred million, spread over one hundred million shares, which is still fifteen dollars a share.
- The founder's stake is worth three hundred million before and after.
- Now suppose the shares had been sold cheaply, at twelve dollars.
- Only two hundred and forty million comes in.
- The firm is worth fourteen hundred and forty million, so each share is worth fourteen dollars and forty cents.
- The founder's stake falls to two hundred and eighty-eight million, a loss of twelve million that went to the new buyers.

8 One phrase, two meanings

A secondary offering can be either of these

A secondary offering of...	Who is paid
New shares (a follow-on)	The company
Existing shares (a block sale)	The seller
Share count goes up?	Only the first
Existing holders diluted?	Only the first

IN THE LESSON

- Now the phrase that trips up many people: secondary offering.
- It is used in two senses.
- In the first, it means a follow-on offering, where the company sells new shares.
- The company is paid, the share count rises and existing holders are diluted.
- In the second, it means a large existing holder selling a big block of shares it already owns, perhaps a founder or an investment fund.
- Then the company raises nothing, the share count is unchanged and nobody is diluted.
- The phrase alone does not tell you which.
- Always ask two questions: who is selling, and who gets the cash?
- The table sets the two meanings side by side.

9 Example 3: the block sale

Fund sells 10m existing shares at $14

Shares sold by the fund	existing shares	**10m**
Cash to the fund	10m × $14	**$140m**
Shares in issue after	100m + 0 new	**100m**
Cash to Pinewood	not a party	**$0**

IN THE LESSON

- Example three.
- A private equity fund that owns ten million Pinewood shares decides to sell them all in one block, at fourteen dollars a share.
- Ten million times fourteen is one hundred and forty million dollars, and it goes to the fund.
- Pinewood receives nothing.
- The shares simply change hands, from the fund to new owners.
- Pinewood still has one hundred million shares in issue, and the founder still owns twenty per cent.
- Nothing about the company has changed, but the fund has turned its stake into cash.
- It could do this only because a secondary market was there to absorb ten million shares in one go.

10 Example 4: why a liquid market helps issuers

Made-up flat dividend of $1.20 a year; required return rises with illiquidity

Price, easy to sell (8%)	1.20 ÷ 0.08	**$15.00**
Price, hard to sell (9%)	1.20 ÷ 0.09	**$13.33**
Gap per share	15.00 − 13.33	**$1.67**
Less raised on 20m shares	20m × 1.67	**$33.3m**

IN THE LESSON

- The two markets also help each other.
- Investors will pay more for new shares if they know they can sell them later.
- Let us see that with a made-up example.
- Suppose a share pays a flat dividend of one dollar twenty a year forever.
- If investors are happy with an eight per cent return, they will pay one dollar twenty divided by zero point zero eight, which is fifteen dollars.
- But if the shares are hard to sell, investors ask for more, say nine per cent.
- Then the price is one dollar twenty divided by zero point zero nine, which is thirteen dollars thirty-three.
- That gap of one dollar sixty-seven a share, on twenty million new shares, means thirty-three million dollars less raised.
- A liquid secondary market lowers the cost of equity capital.

11 The trap: which secondary offering?

- Secondary market trades: the company gets nothing
- Secondary offering: ask who is selling, and who is paid
- Dilution cuts the percentage, not necessarily the value
- A cheap issue price moves value to the new buyers
- The underwriter resells: investors become the owners

IN THE LESSON

- Here are the traps in this first part.
- First, do not say that the secondary market raises money for the company.
- When investors trade among themselves, the company receives nothing, however large the trade.
- Second, remember that secondary offering can mean new shares.
- If the company is the seller, it is a follow-on, and the company is paid.
- If an existing holder is the seller, the company is not paid.
- Third, dilution lowers the percentage ownership of existing holders, but it does not by itself lower the value of their stake, unless the new shares are sold too cheaply.
- And fourth, the underwriter is not the buyer for life.
- It resells the shares, and the investors become the owners.

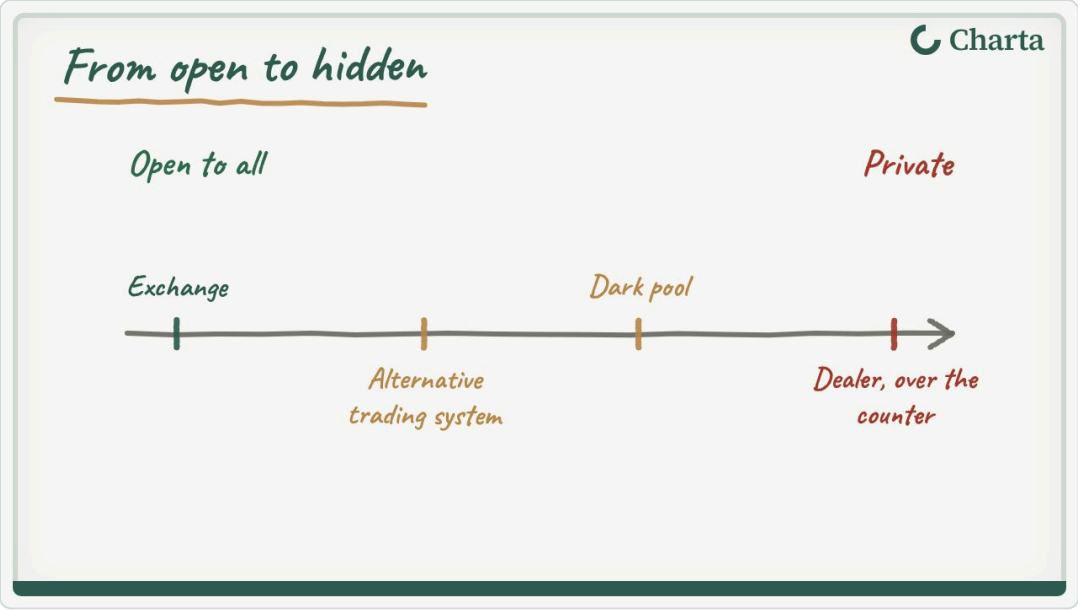
12 A story: three ways to sell a sofa

- Public market square: every offer and price is displayed
- Private room: matched quietly, seen only after the deal
- Phone a dealer: negotiate one price, in private
- Openness versus privacy is the trade-off

IN THE LESSON

- Suppose you want to sell a sofa.
- You could carry it to a busy public market square, where every price is chalked on a board and everyone can see what is offered and what buyers will pay.
- That is an exchange.
- Or you could use a private room where sellers and buyers are matched quietly, and nobody sees the offer until the deal is done.
- That is a dark pool.
- Or you could phone a dealer who buys sofas, haggle over the price on the telephone, and take whatever you agree.
- That is over the counter.
- Each way has a different mix of openness, price and privacy.
- Let us see how that works for shares.

13 From open to hidden



IN THE LESSON

- Here are the venues on one line.
- The left end is the most open, where everyone sees the orders.
- The right end is the most private.
- On the far left is the exchange, with a public order book.
- Next comes an alternative trading system, written A T S.
- It is an electronic venue that matches orders but is not a full exchange.
- Further right is the dark pool, a kind of A T S that hides orders until they have traded.
- At the far right, the over the counter market, where dealers negotiate prices one at a time, often in shares that are not listed at all.
- Moving right, you gain privacy for big traders, but the public sees less.

14 The exchange

- Central order book: everyone sees bids and asks
- Bid = best price to sell at; ask = best price to buy at
- Listing standards; prices are published
- Main place where prices are discovered

IN THE LESSON

- Start with the exchange.
- An exchange runs a central order book.
- Buyers post a bid, the highest price they will pay.
- Sellers post an ask, also called the offer, the lowest price they will take.
- The gap between them is the bid-ask spread.
- When a buyer's price meets a seller's price, a trade happens, and the price is published for everyone.
- An exchange also sets listing standards.
- A company must meet rules on reporting and size before its shares can be listed.
- Because every order is displayed, the exchange is the main place where prices are discovered.
- That is why the exchange price is the reference that other venues look at.

15 Off the exchange: trading systems and dark pools

- Listed shares traded away from the exchange
- Trading systems; brokers matching clients inside
- Dark pool: orders hidden until after the trade
- Aim: avoid market impact on large orders

IN THE LESSON

- Now off the exchange.
- Listed shares can also trade away from the exchange.
- One route is an alternative trading system.
- Another is a broker matching two clients' orders inside its own firm.
- The best known is the dark pool.
- Why would anyone want to hide?
- Think of a large pension fund that wants to sell hundreds of thousands of shares.
- If it posts that order on an exchange, other traders see a big seller, step back and let the price fall before the fund has finished.
- That harm is called market impact.
- In a dark pool the order is hidden until after the trade, so the fund can deal without announcing its plans.
- Trades are reported afterwards.

16 Example 5: a block in a dark pool

Bid $14.95 for 16,000, offer $15.05; sell 400,000; dark pool fills 250,000

Order size vs shown bid	400,000 ÷ 16,000	**25 times**
Dark pool midpoint	(14.95 + 15.05) ÷ 2	**$15.00**
Better than the bid, per share	15.00 − 14.95	**$0.05**
Saved on 250,000 shares	250,000 × 0.05	**$12,500**
Left for the exchange	400,000 − 250,000	**150,000**

IN THE LESSON

- Example five.
- An institution wants to sell four hundred thousand Pinewood shares.
- On the exchange, the best bid is fourteen ninety-five for sixteen thousand shares, and the best offer is fifteen oh five.
- Four hundred thousand divided by sixteen thousand is twenty-five, so the order is twenty-five times the size of the displayed bid.
- Shown openly, it would scare buyers away.
- The institution sends part of it to a dark pool, which matches at the midpoint of the displayed prices, fifteen dollars.
- Two hundred and fifty thousand shares fill there.
- Against the displayed bid, that is five cents better on each share, so twelve thousand five hundred dollars saved.
- The other one hundred and fifty thousand shares are worked on the exchange over time.

17 Over the counter: dealers

- No central order book: trades negotiated with dealers
- Dealer buys at its bid, sells at its ask, using own money
- Usually shares that are not listed
- Less transparency and often wider spreads

IN THE LESSON

- Now the third venue.
- In the over the counter market there is no central order book.
- Trading is negotiated through dealers.
- A dealer is a firm that stands ready to buy from you at its bid and sell to you at its ask, using its own money.
- You call, the dealer quotes a price, and you accept or look elsewhere.
- The shares traded this way are usually not listed on an exchange at all, often smaller or newer companies.
- Because few people see the trade, there is less transparency.
- And because there are fewer buyers and sellers, dealers protect themselves with a wider bid-ask spread.
- The next example puts a number on how much wider.

18 Example 6: the cost of a wider spread

Pinewood 14.95 / 15.05 on exchange; Lakeside 9.70 / 10.30 with a dealer

Pinewood spread	15.05 − 14.95	**$0.10**
As a share of midpoint	0.10 ÷ 15.00	**0.67%**
Lakeside spread	10.30 − 9.70	**$0.60**
As a share of midpoint	0.60 ÷ 10.00	**6.00%**
Round trip, 10,000 shares	Pinewood $1,000; Lakeside $6,000	**6 times**

IN THE LESSON

- Example six.
- Compare two shares.
- Pinewood is listed.
- Its exchange quote is a bid of fourteen ninety-five and an ask of fifteen oh five, so the spread is ten cents.
- Against a midpoint of fifteen dollars, that is point six seven per cent.
- Now Lakeside Mills, a small unlisted firm, is traded over the counter.
- A dealer quotes a bid of nine seventy and an ask of ten thirty.
- The spread is sixty cents, and against a midpoint of ten dollars that is six per cent.
- Buy ten thousand shares and sell them straight back, and you lose the spread.
- On Pinewood that costs one thousand dollars.
- On Lakeside it costs six thousand, on a smaller position.

19 The three venues side by side

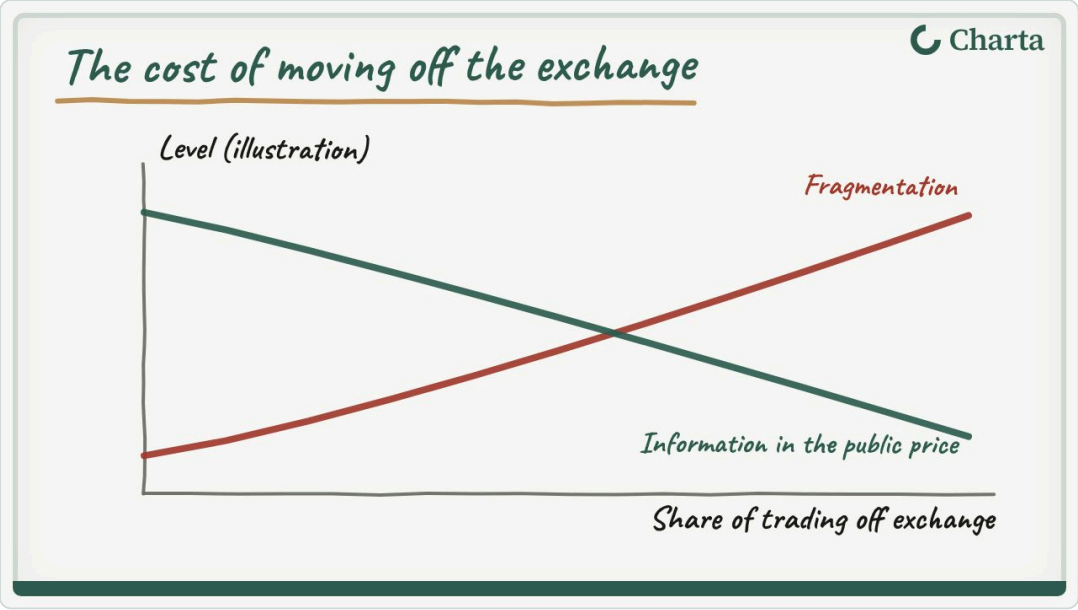
Where does the price come from?

Venue	The price is
Exchange	Discovered
Dark pool	Borrowed
OTC dealer	Negotiated

IN THE LESSON

- Let us put the three venues side by side.
- On an exchange, the order is seen by everyone, the price is discovered by the buyers and sellers meeting in the open, and the shares are listed.
- In a dark pool, the order is seen only by the pool, and the price is usually borrowed from the displayed market, often the midpoint, so the pool depends on the very price discovery it takes volume away from.
- The shares are usually listed too.
- With an over the counter dealer, the order is seen by the dealer, and the price is negotiated one deal at a time, usually for shares that are not listed.
- The table shows how the price arises in each case.

20 The cost of moving off the exchange



IN THE LESSON

- Here is the trade-off as a picture.
- The bottom axis is the share of all trading that happens away from displayed markets.
- The side axis is a made-up level, just to show direction.
- The rising line is fragmentation.
- When trading is spread over many venues, liquidity is split into pieces, and no single place shows the full picture.
- The falling line is how much information the public price contains.
- With little volume off the exchange, the displayed price reflects almost everyone.
- As more volume goes dark, the displayed price rests on fewer trades and carries less information.
- Each big trader gains privacy, but everyone else gets a blurrier price.
- Regulators keep an eye on this balance.

21 Common mistakes so far

- Dark pool trades listed shares; OTC is usually unlisted
- Dark pool price is borrowed from the displayed market
- Off exchange is regulated, just less visible before the trade
- Big sellers gain; the public price carries less information

IN THE LESSON

- Time to check the traps in the venues.
- First, a dark pool is not the same as over the counter.
- A dark pool trades listed shares.
- Over the counter usually means unlisted shares, negotiated with dealers.
- Second, a dark pool does not discover prices itself.
- Its price is borrowed from the displayed market, so it depends on exchanges.
- Third, off the exchange does not mean illegal or unregulated.
- These are regulated venues.
- They are simply less visible before the trade.
- And fourth, remember who gains and who loses.
- The big seller gains by avoiding market impact, but the more volume leaves displayed markets, the less information the public price carries, which hurts everyone else.

22 A story: the crowded stadium

- A stadium holds 50,000, but not all are free to leave
- Count only those free to walk out, and the flow per minute
- Shares: how many are free, and how many trade a day
- Liquidity = trading without moving the price

IN THE LESSON

- Imagine a stadium after a match.
- The stadium holds fifty thousand people, but only some of them are heading for the exit at any moment.
- A few are staff who stay behind.
- A few are players.
- Others are sitting in a box that stays locked until later.
- If you want to estimate how fast the crowd can leave, you do not count everyone inside.
- You count the people actually free to walk out, and how many pass through the gates each minute.
- Shares work the same way.
- A company may have many shares in issue, but only some are free to trade, and only a fraction change hands on a typical day.
- Liquidity is about those two numbers.

23 Float: the shares free to trade

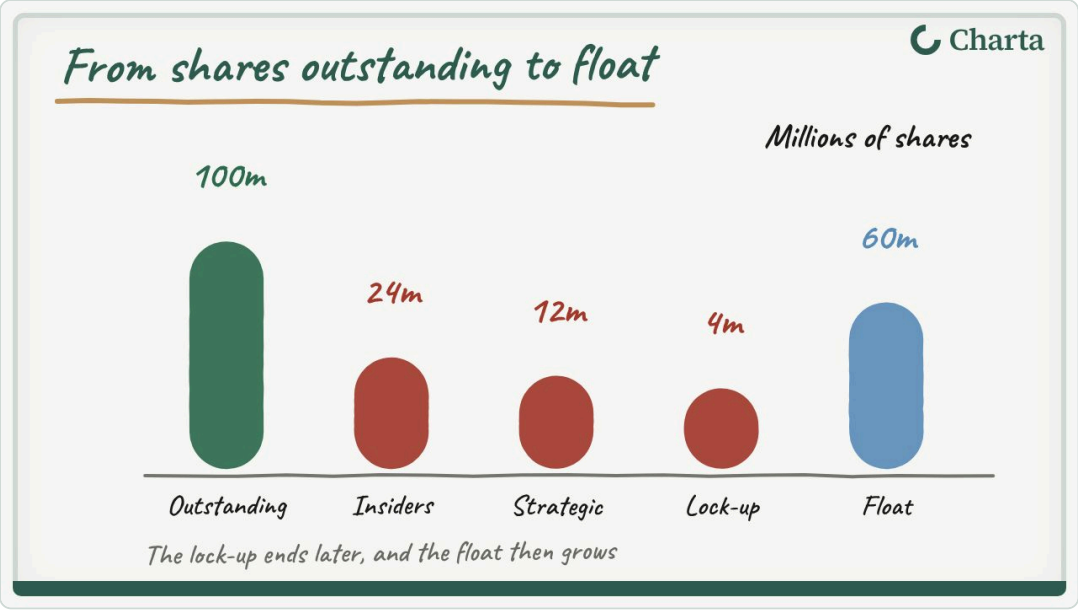
Float = shares outstanding − shares held and not for sale

Shares outstanding	All shares issued, held by anyone
Held and not for sale	Insiders, state, partners, lock-up
Float	Shares free to trade

IN THE LESSON

- Liquidity means how easily a position can be bought or sold without moving the price.
- The first ingredient is the float.
- Shares outstanding are all the shares the company has issued.
- But some of those are held by people who are not going to trade them: directors and founders, a government, a strategic partner who holds for the relationship, or investors under a lock-up.
- A lock-up is a period after a new listing, during which certain holders agree not to sell.
- Take those away and what is left is the float, the number of shares actually available to trade.
- Index providers often weight companies by float for this reason.

24 From shares outstanding to float



IN THE LESSON

- Let us find Pinewood's float.
- After the follow-on, there are one hundred million shares outstanding, the first bar.
- Take away the shares in the next three bars.
- The founder and directors, the insiders, hold twenty-four million.
- A strategic partner, a company that holds for the commercial relationship, owns twelve million.
- And four million shares from the new issue are under a lock-up for a few months.
- Together that is forty million shares that your order will not meet.
- One hundred minus twenty-four, minus twelve, minus four leaves sixty million.
- The last bar is the float, sixty per cent of the shares in issue.
- At fifteen dollars, that float is worth nine hundred million dollars.

25 Average daily volume and turnover

ADV = total volume ÷ trading days
Turnover = ADV ÷ float

Total volume	Shares traded in the window
Trading days	Open days, not calendar days
Average daily volume	The typical day's volume
Float	Shares free to trade

IN THE LESSON

- The second ingredient is how much trades on a normal day.
- Average daily volume, written A D V, is the total number of shares traded over a window, divided by the number of trading days in it.
- Trading days are the days the market was open, not calendar days.
- Analysts often leave out unusual days, such as a day when index funds all rebalance at once, because that one huge day would make the share look easier to trade than it normally is.
- Relating the two gives turnover: A D V divided by the float.
- It tells you what fraction of the tradable shares changes hands on a typical day.

26 Example 7: ADV and turnover

20 trading days, 27m shares, of which 8m on one rebalancing day

ADV, all 20 days	27m ÷ 20	**1.35m**
ADV, rebalance day removed	(27 − 8) ÷ 19	**1.00m**
Float	100 − 24 − 12 − 4	**60m**
Turnover per day	1.00m ÷ 60m	**1.67%**

IN THE LESSON

- Example seven.
- Over the last twenty trading days, twenty-seven million Pinewood shares changed hands.
- But eight million of those went through on a single day, when an index provider rebalanced.
- Using all twenty days, A D V is twenty-seven million divided by twenty, one point three five million.
- That is flattered by the rebalancing day.
- Take that day out.
- The other nineteen days traded nineteen million shares, so A D V is nineteen million divided by nineteen, exactly one million.
- That is the typical day.
- Turnover is one million divided by the float of sixty million, which is one point six seven per cent a day.

27 Days to trade

Days to trade = position ÷ (participation rate × ADV)

Position	Shares you hold or want to trade
Participation rate	Share of ADV you trade a day
Average daily volume	The typical day's volume
Days to trade	Days to get in or out

IN THE LESSON

- A very practical figure is days to trade.
- It answers: how long would it take me to buy or sell my whole position?
- You cannot trade a whole day's volume, because your own order would swamp the market and push the price against you.
- So you choose a participation rate: the fraction of A D V you are willing to trade each day, perhaps ten, twenty-five or fifty per cent.
- Multiply that by A D V to get the shares you can trade each day.
- Then divide your position by that number.
- A larger participation rate means fewer days, but more price impact.
- A smaller rate is gentler on the price, but you stay exposed to news for longer.

28 Example 8: how long to sell?

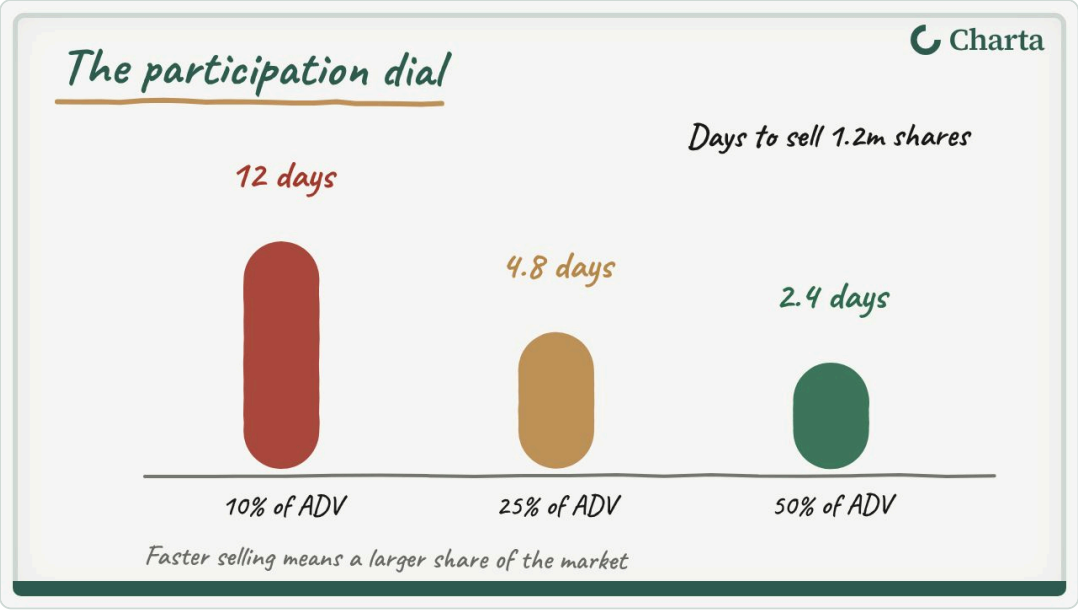
Position 1.2m shares; trade at most 25% of ADV; ADV 1.00m

Shares per day	25% × 1.00m	**250,000**
Days to trade	1.2m ÷ 250,000	**4.8 days**
With flattered ADV 1.35m	25% × 1.35m	**337,500**
Misleading days to trade	1.2m ÷ 337,500	**3.6 days**

IN THE LESSON

- Example eight.
- A fund holds one point two million Pinewood shares, two per cent of the float, and wants to sell them all.
- It will trade no more than twenty-five per cent of A D V.
- Use the typical day, one million.
- Twenty-five per cent of one million is two hundred and fifty thousand shares a day.
- One point two million divided by two hundred and fifty thousand is four point eight days.
- Now see the trap.
- If the fund had used the flattered figure of one point three five million, it would trade three hundred and thirty-seven thousand five hundred shares a day, and think it needs only three point six days.
- That busy rebalancing day will not be there when the fund really needs to sell.

29 The participation dial



IN THE LESSON

- The participation rate is the dial the trader controls.
- Here are three settings for the same fund, with a typical A D V of one million.
- At ten per cent, the fund can trade only one hundred thousand shares a day, so the sale takes twelve days.
- At twenty-five per cent, it is four point eight days, as we found.
- At fifty per cent it takes two point four days, but the fund is now half of all the trading, and the price will probably move against it.
- The bars fall as the rate rises, yet the price impact rises.
- There is no right answer, only a choice between speed and cost, and days to trade turns that choice into a number.

30 Other ways to measure liquidity

What each gauge says when a share is liquid

Gauge	When liquid
Bid-ask spread	Narrow
Depth at best prices	Deep
Turnover	High
Price impact of a big order	Small

IN THE LESSON

- Turnover and days to trade are not the only gauges.
- The table shows other ones and what each says when a share is liquid.
- The bid-ask spread should be narrow, because the cost of an immediate round trip is small.
- Depth is the number of shares offered at the best prices.
- A deep market can absorb a big order without the price moving much.
- Turnover should be high, since a large part of the float trades each day.
- And the estimated price impact of a large order should be small.
- Days to trade, which we met a moment ago, is a gauge too.
- No single gauge tells the whole story, so analysts look at several together.

31 The trap: liquidity measures

- Float is not shares outstanding
- Turnover = ADV ÷ float
- Drop one-off busy days from ADV, or it flatters liquidity
- Days to trade depends on the participation rate you choose
- A bigger company is not automatically more liquid

IN THE LESSON

- Here are the traps in liquidity.
- First, float is not shares outstanding.
- Always take off the shares that are held and not for sale.
- Second, turnover is A D V divided by the float, not divided by shares outstanding.
- Third, check the volume window.
- A single unusual day, such as an index rebalancing, flatters A D V and makes days to trade look shorter than it really is.
- Fourth, days to trade depends on the participation rate you choose.
- A larger rate gives fewer days but a bigger price impact, so do not compare two answers without checking the rate.
- And last, a bigger company is not automatically more liquid.
- What matters is float and trading.

32 Recap: the formulas to remember

Float = outstanding − not for sale
Turnover = ADV ÷ float
Days to trade = position ÷ (rate × ADV)

Float	Outstanding less not for sale
Average daily volume	Total volume ÷ trading days
Turnover	ADV ÷ float
Days to trade	Position ÷ (rate × ADV)

IN THE LESSON

- Let us pull the lesson together.
- The primary market is where a company sells new shares and gets the cash.
- The secondary market is where investors trade existing shares, and the company gets nothing.
- Venues run from open to private: the exchange, the dark pool and the dealer, trading transparency against market impact.
- Then the four liquidity figures.
- Float is shares outstanding less the shares held and not for sale.
- Average daily volume is the total volume divided by the trading days, with unusual days removed.
- Turnover is A D V divided by float.
- And days to trade is your position divided by the participation rate times A D V.

33 Try three quick questions

1. 40m shares in issue; investor owns 8m; company issues 10m new shares. New stake?
   Answer: 8 ÷ 50 = 16%, down from 20%.
2. Which venue trades listed shares but hides the order until after it trades?
   Answer: A dark pool.
3. Position 600,000 shares; ADV 400,000; trade 20% of ADV. Days to trade?
   Answer: 600,000 ÷ (20% × 400,000) = 7.5 days.

IN THE LESSON

- Now try three quick questions yourself.
- Pause after each one.
- Question one.
- A company has forty million shares, and an investor owns eight million.
- The company sells ten million new shares.
- What is the investor's new percentage?
- Eight divided by fifty is sixteen per cent, down from twenty.
- Question two.
- Which venue trades listed shares but hides the order until after the trade?
- A dark pool.
- Question three.
- A fund holds six hundred thousand shares.
- A D V is four hundred thousand, and the fund will trade twenty per cent of it.
- How many days to trade?
- Twenty per cent of four hundred thousand is eighty thousand a day, and six hundred thousand divided by eighty thousand is seven point five days.
- Well done.