The Stock Market

Why don't we start with an example?

Your friend has just started a company and needs more funding.

You decide to invest £100 of your hard-earned money into his company.

You receive a certificate saying that you now own 1% of his company.

What can you do?

Keep the shares

Sell the shares

Where do you sell your shares?

☞ The **stock market** allows people to buy/sell the shares they own with other people.

Your notes

Types of Securities

The first confusing term you'll hear is a security... What does it really mean?

☞ A **security** is a tradable certificate that has monetary value.

A **share certificate** is an example of a security.

☞ You will generally encounter 3 types of securities (as shown below)

Securities		
Equities	Fixed Income	Derivatives

Your notes

Asset Classes

Next up... Asset Classes? What are they?

☞ An asset class is a group of investments that behave similarly.

An **asset** is something that adds value to its owner

☞ You will generally encounter 4 types of asset classes (as seen below)

Asset Classes

Equities	Fixed Income	Cash	Real Assets

Your notes

Equities

What do we really mean by an equity?

☞ **Equity** is the ownership in a company.

☞ Investors purchase their equity into *public* companies through shares at an exchange.

☞ Investors pay for a share at its *market value*.

Market Value is the price that investors are currently paying to purchase an item e.g. a security.

Where does the trading of shares take place?

Your notes

Examples of exchanges

Trading of shares takes place at a stock exchange. What are they?

☞ A **stock exchange** facilitates the matching of buyers to sellers to trade stocks.

☞ An exchange *also* tracks the market value of the items that are traded on its platform.

☞ Stocks can also be traded **Over-The-Counter (OTC)**

☞ The trade is settled between the two parties, without the supervision of an exchange.

Your notes

Fixed Income

*Let's start getting a bit more specific. What are **fixed income** securities?*

☞ Securities that offer regular payments to investors over a given time period are **'fixed income'.**

☞ **Bonds** are a specific example, traded OTC.

Corporate Bonds

Treasury Bills

You lend Bobby £20,000 to buy a car and he agrees to pay 1% interest every year, over 5 years.

Bobby pays you £200 every year → fixed, coupon rate.

£20k is paid at the end of year 5.

5 years later, Bobby gives you back the *principal* £20,000. **This is a bond.**

You can sell the bond before the 5 year duration ends (i.e. trade it) → a 'security'.

Foreign Exchange

Cool. What's next... Ah, yes – what is Foreign Exchange (FX)?

☞ **Foreign Exchange (FX)** is the market where foreign currencies are traded.

☞ In FX trades, one currency is '*bought*' and another currency is '*sold*'.

☞ Currencies are paired e.g. **EUR/USD** → Euro/USD pair.

Why would we buy/sell?

☞ The first currency is the **BASE** currency, and the second currency is **QUOTE** currency.

☞ FX markets are OTC as the trades are not supervised.

☞ FX is open 24 hours a day.

Your notes

Commodities

Next, we have commodities. Let's discuss what they are with a useful example.

☞ Any item or substance for human use is a **commodity**.

Oil	Gas	Copper	Gold	Lithium	*and more...*

☞ Investors buy commodities through financial instruments known as '**Futures**' (see Lecture 4!)

The war in Ukraine resulted in prices of oil, gas and wheat to increase.

This is due to Russia taking over parts of Ukraine such as grain fields, resulting in sanctions.

Your notes

Industry Players

How many key players are in the market? Who are they? What do they do?

☞ There are 4 **key players** in the market, as shown below.

The Sell-side	The Buy-side
The Central Bank	Regulators

Your notes

Sell-side vs Buy-side

What exactly is the difference between the Sell-side and the Buy-side?

Buy-side	Sell-side
Asset Managers, Hedge Funds, Private Equity, Venture Capital	Financial services companies i.e. *Investment Banks*
Invest their own money/investors' money into different asset classes	'Sell' their services to the buy-side or corporates
Investment strategies define what kind of fund they are.	e.g. advice, lending, and/or carrying out transactions to raise money & acquisitions
KKR Kohlberg Kravis Roberts, BlackRock, Blackstone, SEQUOIA, TEMASEK	Goldman Sachs, Morgan Stanley, BNP PARIBAS, UBS, J.P.Morgan

Your notes

What is the role of the Central Bank?

☞ Each country has its own Central Bank (CB)

Federal Reserve
'Fed', USA

Bank of England
UK

☞ The CB is responsible for controlling **inflation** i.e. money supply.

Adjust Interest Rate
Federal Funds Rate

Quantitative Easing
& Tightening

The Fed has been aggressively increasing rate hikes in 2022.

This is to counter the COVID stimulus packages of 2020.

__Jerome Powell__, Chairman of the Federal Reserve

Your notes

Regulators

Why is there a need for regulators? Isn't the stock market a 'free' market?

☞ Regulators prevent market participants causing **market manipulation.**

Securities Exchange Commission **(SEC)** *USA*	Financial Conduct Authority **(FCA)** *UK*

☞ Market manipulation is the *artificial* changing of prices.

☞ This is achieved under false narratives by **market players.**

☞ Market players include banks, hedge funds, investors etc.

Jordan Belfort, *Wolf of Wall Street*

Your notes

The Sell-side: Investment banks

How is a typical investment bank structured?

Front Office

Private Side

Investment Banking Division (IBD)
Advisory (Mergers & Acquisitions)
Equity Capital Markets (ECM)
Debt Capital Markets (DCM)
Leveraged Finance
Project Finance

THE CHINESE WALL

Markets
Sales
Trading
Structuring

Equity Research

Public Side

Middle Office
Manages the risks (Risk Management) and ensures everyone is following rules (Compliance)

Back Office
Checks what's going on (Operations), Technology, checks the tills (Finance) and Administration

Your notes

Private vs Public

What's the difference and why are they separated?

☞ IBD exists on the *private side* so information on deals are not made public.

☞ Markets is on the *public side* so they only use *public* information to make trades or do research.

☞ **The Chinese Wall** separates the IBD and markets to prevent *conflicts of interest* i.e. **'compliance'**

You work as a trader at GS and Jess works in IBD. Jess is working on MSFT's acquisition of Blizzard.

Jess tells you this *private* information and you buy shares of MSFT to make a profit → '**insider trading**.'

Your notes

Advisory

Advisory is where the bank acts as advisor to corporates or governments.

☞ These are the Mergers & Acquisition (**M&A**) teams – often perceived as investment banking.

☞ Teams are split by sectors:

TMT | Healthcare | Industrials | and more...

☞ Your time as an analyst is split between origination and execution.

☞ Analysts in this area conduct financial valuations through 4 main methods

Discounted Cash Flow | Public Comparables | Precedent Transactions | Leveraged Buy Out

Your notes

Advisory

Let's look at an example walk-through of the process...

You are a Managing Director (MD) in the Jefferies Healthcare team looking to originate a deal.

Pfizer is in the market for cancer treatments.

Analyse immuno-oncology players in the market.

You narrow this down to a prime candidate, **RL Therapeutics**, value the company and pitch to Pfizer.

Pfizer is impressed and pick you as their advisors on the Buy-side.

On the other end RL Therapeutics is advised by **Lazard** on the Sell-side.

Your notes

What do we mean by Equity Capital Markets (ECM)?

☞ ECM helps raise capital for companies.

R&D

M&A

Internal

☞ ECM is ‘**Sector Agnostic**’.

☞ Focuses on 3 main products → **Product Team.**

☞ More markets facing than Advisory – projects are faster paced but with less valuation.

Capital is money that companies raise in order for them to either fund their strategy.

Underwriting is when a bank guarantees the capital a company sets out to raise in a transaction.

Your notes

What are the main ECM products?

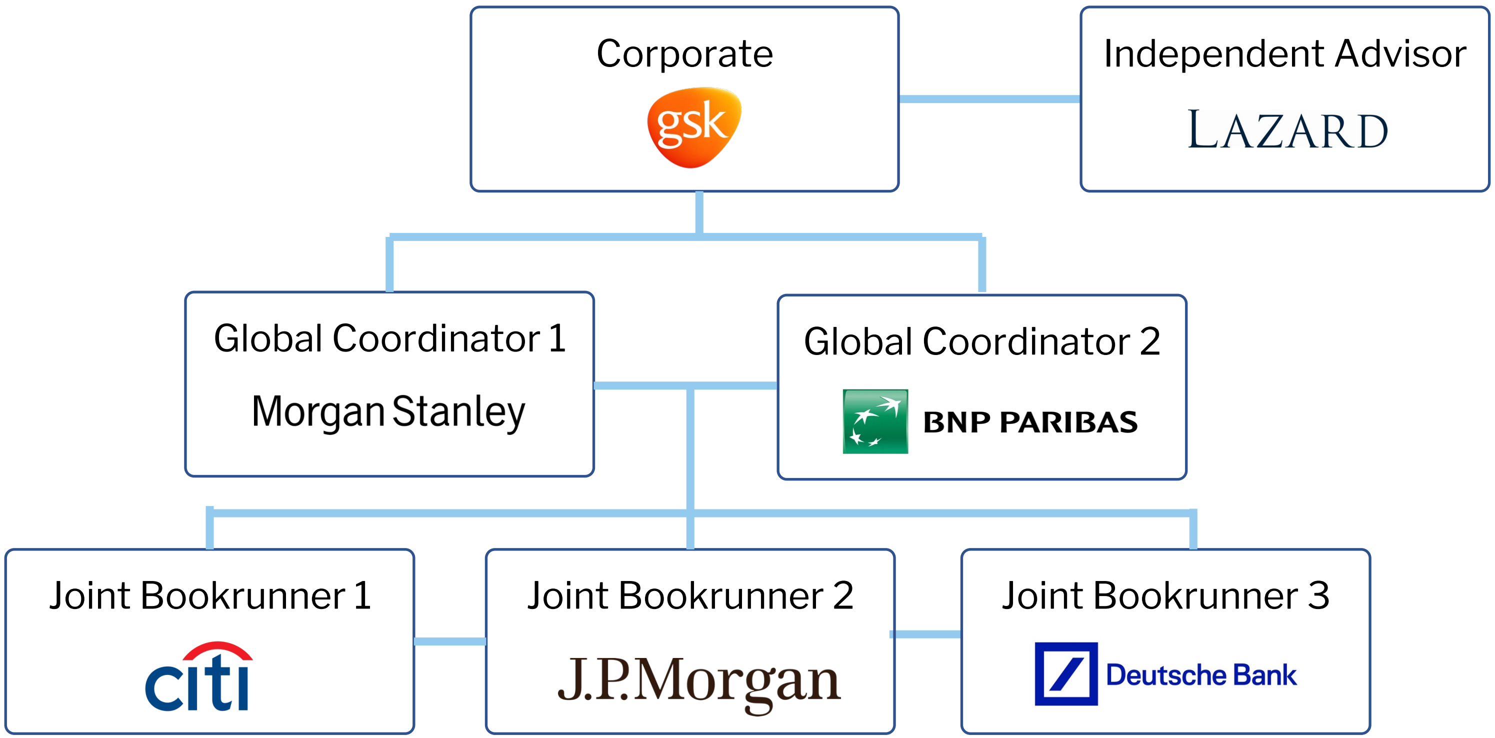
Private	Initial Public Offering (IPO)	Listing a private company on to a stock exchange to raise capital.
Public	Rights Issues	Provides each current shareholder with a proportionate number of rights to purchase additional shares at a **discount**.
Public	Accelerated Bookbuilding (ABB)	Very fast processes that result in shareholder dilution.

Bookbuilding is the process of finding groups of investors to invest in companies.

Your notes

Equity Capital Markets

How exactly do banks work together in an ECM deal?



Your notes

Debt Capital Markets

What is Debt Capital Markets (DCM)?

☞ DCM helps companies raise capital by releasing bonds into public markets.

☞ *Teams are split by **Geography** or **Sector**.*

☞ *Bonds are **rated** through ratings agencies like Moody's/S&P.*

Debt Capital Markets

High Yield Bonds (Junk Bonds)			Investment Grade Bonds		
CCC	B	BB	BBB	AA	AAA

Your notes

Leveraged... what now?

☞ **Leveraged Finance** services Financial Sponsors i.e. Private Equity (PE) firms.

☞ Financial Sponsors acquire companies through a mixture of debt and equity.

What does this mean?

☞ These companies acquire others through borrowing money and investing their own money.

☞ As an analyst, you focus on how much the bank should lend out.

But, how is this done?

☞ Leveraged-Buy-Out (LBO) models are created to analyse the sponsors' ability to pay the loan back.

Your notes

Markets

Let's return to the typical structure of an investment bank.

Front Office

Private Side

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Advisory (Mergers & Acquisitions)
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Project Finance

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Your notes

Sales & Trading

Sales and Trading share what is called a symbiotic relationship.

☞ Sales people must have comprehensive and detailed knowledge of the products the bank offers.

☞ Traders must be able to set optimum bid-ask spreads to Sales people.

Brevan Howard (BH) wants to place a large order for APPL.

The salesperson must communicate between BH and the trader to communicate bid-ask spreads.

☞ Two types of trading exist in banks:

Agency Trading

Market Making

Your notes

Agency Trading

What do we mean by Agency Trading?

☞ **Agency Trading** executes trades on behalf of the Buy-side.

Why is this needed?

☞ These orders are big enough to cause drastic changes in a security's price.

☞ Must be executed such that price remains steady and client pays **lowest** price.

You are an analyst at Citadel, and want to place an order of 500 shares of TSLA.

The order is much bigger than from a typical retail investor.

So what do you do?

Your notes

Agency Trading

What problem is agency trading exactly trying to solve?

Think about the effect on share prices. TSLA trades at $700.

Each time you place an order of 100 shares, the prices increases.

To ensure you pay the lowest price, you go to an Investment Bank to put in your order.

Agency traders use market outlook and algorithms to place the order

☞ The buyer gets the best deal without affecting market prices.

Your notes

Market Making

What is this? Well, imagine…

You want to buy 10 shares of TSLA → You go to your Trading 212 account and click “Buy”.

Immediately, the transaction is completed.

How is this possible?

☞ Implication: There MUST always be a person taking the opposite side of the trade.

☞ The goal of market making is to ensure **liquidity** in the stock market.

Liquidity refers to how easy it is to buy or sell an asset in a market.

Your notes

Market Making

Let's tackle an important but often badly learnt idea... The bid-ask spread!

☞ The trader will always quote a 2-way price called the **bid** and **ask**.

Always from the **Bank's** Perspective

☞ The Market Maker profits from the **Bid-Ask Spread.**

Bid-Ask Spread = Ask – Bid

☞ You want to provide the tightest spread whilst still profiting from your view of the market.

APPL	Bid (You sell)	Spot (Actual Price)	Ask (You buy)
JP Morgan	92.49	92.53	92.55
Goldman Sachs	92.54	92.60	92.72
BNP Paribas	91.70	92.00	92.40

Your notes

An example walkthrough...

Bobby is a trader at ARK Capital and wants to sell 1000 shares of AAPL.

He calls Sophie, a trader at GS, who quotes a two way price.

Why would Bobby choose Sophie?

Bobby sells his shares to Sophie → Sophie now holds 1000 APPL shares.

But Sophie does not want to hold on to these shares!

Sophie needs to **hedge** her position by **unwinding** it.

Hedging refers to managing your risk to movements in an asset you hold. **Unwinding** means selling.

☞ *Check out the Challenging Case study in the notes to understand how these spreads might be adjusted in real life!*

Structure... what?

☞ Structuring is the process of creating bespoke products for clients.

☞ Usually involves combining 2 or more 'Vanilla' products to match what the client wants.

☞ 2 main types:

Fixed Income

Equity Derivatives

You are a credit structuring analyst at Morgan Stanley and an insurance company comes to you.

It wants to hedge the bonds it holds.

You have to combine products and price them.

Your notes

Equity Research

What's Equity Research (ER)?

☞ ER teams cover a select few companies in different sectors:

TMT

Oil & Gas

and more...

☞ The main idea is to sell research to clients.

Analysing companies

Talking to clients

Writing reports

☞ Analysts are involved in IPO roadshows to educate investors on the IPO company.

Joe works ER at GS and covers Deliveroo.

Vera works in ECM at GS, working on Deliveroo's IPO.

Joe knows what Vera is working on and knows he will be sent on the investor roadshow for the IPO.

Joe does not think too highly of Deliveroo's current strategy.

But if he says anything bad, it'll kill the IPO!

This is a potential conflict of interest!

Types of Investment Banks

We know what happens at investment banks... but, how is each one different?

Bulge Brackets	Middle Market	Elite Boutiques
Largest banks working the largest deals	Work on smaller deals & smaller corporates	Smaller firms that work on largest deals
Rank highest in IB league tables	Typically Universal Banks that provide full suite of services.	Independent advisory, no underwriting or S&T whatsoever. Less biased.

Your notes

The Buy-side: Asset Management

What's Asset Management (AM)?

☞ AM manages large pools of money on behalf of clients, investing into different asset classes

Who are the clients?	Insurance companies	Pension Funds	Charities

☞ Asset Management strategies are **Long-only** and are longer term i.e. years rather than months.

☞ Different to private banking which services wealthy individuals.

BlackRock Fidelity INVESTMENTS J.P.Morgan UBS PIMCO

Your notes

Hedge Funds

What are Hedge Funds?

- ☞ More extreme version of Asset Management.
- ☞ Typically trade investors' money, but **family offices** trade their founders' money.
- ☞ Shorter timeframes and take **long and short** views on stocks.

***Bobby Axelrod**, Billions*

Going **short** means you believe that the stock price will drop in the future.

How can you profit?

You are short on TSLA, which trades at $700 → You borrow a share at $700 and sell off.

TSLA now drops to $600 → You buy back 1 TSLA share and return it to your broker.

You've now made a profit of $700-$600 = $100!

Why is going short riskier?

You are short on TSLA which trades at \$700 → You borrow a share at \$700 and sell off.

TSLA **rises** to \$800.

There is **no** limit to how high the stock can rise → unbounded losses

☞ GameStop (NYSE: GME) is a great example of a **short squeeze.**

A group of Reddit traders realised that hedge funds were shorting GME.

So, what did they do?

They teamed up and bought large quantities of GME → GME share price soared.

Hedge funds had no choice but to close their positions causing more upwards pressure.

What is Private Equity (PE)?

☞ PE funds take on debt (in the form of loans from banks and bonds) to acquire companies.

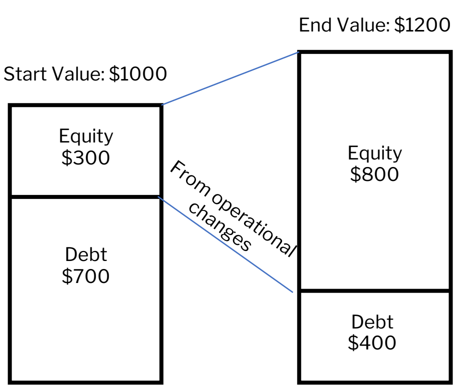
☞ They aim to improve the company to pay down their debt.

What makes a company a good candidate?

Strong brand recognition

Undervalued

Market position



How much debt?

☞ 50-70% Debt

How much return?

☞ 20-30% per year, 5 years holding.

How do PE funds exit their position?

☞ At the end of the holding period, the PE fund either IPOs the company or sells it.