

UoG / UESTC Joint School of Engineering **Engineering Project Management & Finance**



University of Glasgow

Lecture contents

- What is a Company?
 - Types of companies
 - Ownership of companies
 - What is a company worth?
 - Comparing different companies
- Why engineers need to know about company structures



What is a Company

Limited Company Definition:

A legal entity, allowed by legislation, which permits a group of people, as shareholders, to apply to the government for an independent organisation to be created, which can then focus on pursuing set objectives, and empowered with legal rights which are usually only reserved for individuals, such as to sue and be sued, own property, hire employees or loan and borrow money.

Note: Definitions of a company and types of company have been taken from UK and US sources. These definitions are fairly generic in use throughout the world but there may be minor local differences.

China appears to have similar regulations but you should take advice. HK rules are very similar to UK.



Types of Companies : Sole Trader

- If you start working for yourself, you're classed as a self-employed Sole
 Trader -even if you've not yet told HM Revenue and Customs (HMRC)
 [UK Tax Authorities].
- As a sole trader, you run your own business as an individual. You can keep all your business's profits after you've paid tax on them.
- You can employ staff. 'Sole trader' means you're responsible for the business, not that you have to work alone.
- You're <u>personally responsible</u> for any losses your business makes.

This is the <u>simplest</u> of company structures but also can be <u>risky</u> for the owners.

This structure is often adopted by plumbers, electricians, small shop keepers



Type of Companies: Limited

- A Limited Company is an organisation that you can set up to run your business it's responsible in its own right for everything it does and its finances are separate to your personal finances.
- Any profit it makes is owned by the company, after it pays <u>Corporation Tax</u>. The company can then <u>share its profits</u>.

Ownership

- Every limited company has 'members' the people or organisations who <u>own shares</u> in the company.
- Directors are responsible for running the company. Directors often own shares, but they don't have to.

Legal responsibilities

• There are many <u>legal responsibilities</u> involved with being a director and running a limited company.

This is the most normal structure for a technology company; either one you will work for or start yourself



Types of Limited Company

Limited by shares

- <u>Most</u> limited companies are 'limited by shares'. This means that the shareholders' responsibilities for the company's financial liabilities are limited to the value of shares that they own but haven't paid for.
- Company directors are <u>not personally responsible</u> for debts the business can't pay if it goes wrong, as long as they haven't broken the law.

Private company limited by guarantee

 Directors or shareholders financially back the organisation up to a specific amount if things go wrong. Sometimes used for social enterprises.

Public limited company

 The company's shares are traded publicly on a market, such as the London Stock Exchange.



Business Partnerships

'Ordinary' business partnership

- In a business partnership, you and your business partner (or partners)
 personally share responsibility for your business.
- You can <u>share all your business's profits</u> between the partners. Each partner pays tax on their share of the profits.

Legal responsibilities

- You're <u>personally responsible for your share of:</u>
- any losses your business makes
- bills for things you buy for your business, like stock or equipment
- You can set up a <u>limited partnership or limited liability partnership</u> if you don't want to be personally responsible for a business' losses.
- A partner doesn't always have to be a person. A company (like a <u>limited</u> <u>company</u>) can also be a partner in a partnership because it is treated as a 'legal person' in law.

These are unusual in engineering except sometimes in consultancy firms.

Note: Partners only share the profits <u>AFTER</u> all company debts have been paid!!



Limited Company Ownership











Shares are divided according to the initial investment in the company



Limited Company valuation

- On the day of formation, the company valuation = investment by founders (800RMB in previous example)
- However,... as the company begins to operate and trade, the <u>value</u> increases (hopefully) through:-
 - Creation of IP (knowledge, designs, patents) or products
 - Acquisition of assets (equipment, materials, buildings)
 - Sale of services (i.e. the creation of a customer base)
- This valuation becomes important when:-
 - You need to attract more investment into the company
 - You want to sell the company to a buyer(trade sale)
 - You want to float the company on stock market (IPO)

Initial investors want to hold as much shares as possible; new investors want to do the same!!! [both are driven by the valuation]



Simple Valuation Explanation

N / a - a + la - O	10	X	9.5
Month 0	DE23701300 (100	rija V	

X 8 = 800CNY

Month 6

Designed product 1 (Valued at 1,200 CNY)

Month 12

Sold 100 Product 1

(cost =100, price=200 each)

Month 18

Sold 100 Product 1, Designed Product 2 (Prod 2 valued at 1,200 CNY) (Prod 1 valued at 600 CNY)

Costs	Sales	Cash in Bank	Valuation			
0	0	800	800			
600	0	200	1,400			
10,000	20,000	10,200	11,400			
10,600	20,000	19,600	21,400*			

^{*} Our original 800CNY investment is now worth 21,400 CNY (Valuation increase of 20,600 CNY)

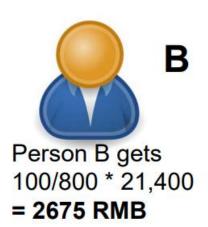
This is a very simple example BUT easy enough to explain the principles

University of Glasgow Company after month 18 for 21,400RMB...

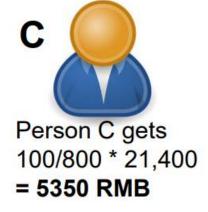


Person A gets 300/800 * 21,400

= 8025 RMB









The valuation is divided according to the initial fraction of shares they own in the company



Starting Point:

- Initial investment = 100,000 RMB
- Each share = 100 RMB
- So, **1,000 shares** exist (100,000 ÷ 100)
- These are owned by the founders or early investors.







Company grows:

Now, the company is worth 200,000 RMB (value doubled).

You want to bring in new investors.

What to do:

You have 2 options:



- **✓** Option 1: Keep share price the same (100 RMB)
- → Sell **new shares** to new investors.

Let's say new investors want to invest **50,000 RMB**.

They would get:

 $50,000 \div 100 = 500$ new shares

Now total shares = 1,500

- Old investors: 1,000 shares = 66.7% ownership
- New investors: 500 shares = 33.3% ownership
- Company gets extra 50,000 RMB to grow.



Option 2: Increase share price based on new value

Now that the company is worth **200,000 RMB**, new share price = **200 RMB**

If new investors invest 50,000 RMB:

 $50,000 \div 200 = 250$ shares only

Now total shares = 1,250

- Old investors: 1,000 shares = 80% ownership
- New investors: 250 shares = 20% ownership
- Old investors are diluted less.



Top 10 Hi tech Companies in China

Rank Brand		Category	Brand Value 2024 (US\$ M)	
1	Tencent	Media and Entertainment/Business Technology and Services Platforms	129,039	
2	Moutai	Alcohol	87,298	
3	Alibaba	Retail	68,482	
4	Douyin	Media and Entertainment	56,882	
5	Huawei	Consumer Technology and Services Platforms	41,039	
6	China Mobile	Telecom Providers	35,276	
7	Haier	IoT Ecosystem	32,414	
8	ICBC	Financial Services	28,521	
9	Ping An	Financial Services	20,514	
10	Pinduoduo	Retail	20,257	

Kantar BrandZ top 10 most valuable Chinese brands 2024



PwC | Global Top 100 companies - by market capitalisation

Top Global Companies

Top 100 global companies 1-20 (by market capitalisation)

Î				31 March	1 2023	31 March 2022	
Rank	Company Name	Location	Sector	Rank +/- (vs 2022)	Market capitalisation	Rank	Market capitalisation
1	APPLE INC	United States	Information Technology	0	2,609	1	2,850
2	Microsoft Corporation	United States	Information Technology	0	2,146	2	2,311
3	Saudi Arabian Oil Company	Rest of the World	Energy	0	1,893	3	2,297
4	ALPHABET INC	United States	Communication Services	0	1,330	4	1,842
5	AMAZON.COM INC	United States	Consumer Discretionary	0	1,058	5	1,659
6	NVIDIA Corporation	United States	Information Technology	2	685	8	684
7	Berkshire Hathaway Inc.	United States	Financials	0	676	7	780
8	TESLA INC	United States	Consumer Discretionary	-2	659	6	1,114
9	META PLATFORMS	United States	Communication Services	0	550	9	605
10	Visa Inc	United States	Financials	3	464	13	464
11	Tencent Holdings Limited	China and its regions	Communication Services	3	462	14	456
12	LVMH Moët Hennessy - Louis Vuitton, Société Européenne	Europe	Consumer Discretionary	7	460	19	363
13	Taiwan Semiconductor Manufacturing Company Limited	Rest of the world	Information Technology	-3	453	10	540
14	Exxon Mobil Corporation	United States	Energy	7	446	21	350
15	UnitedHealth Group Incorporated	United States	Health Care	-4	441	11	480
16	Johnson & Johnson	United States	Health Care	-4	405	12	466
17	WALMART INC	United States	Consumer Staples	-2	398	15	410
18	JPMorgan Chase & Co.	United States	Financials	-2	384	16	403
19	Novo Nordisk A/S	Europe	Health Care	17	356	36	254
20	The Procter & Gamble Company	United States	Consumer Staples	-2	351	18	366

https://www.pwc.co.uk/services/audit/insights/global-top-100-companies.html



Compare Companies

• The PwC list is based only on <u>Market Capitalisation</u>; which represents the value of the company to investors.

Market capitalisation = Number of Shares x Share Price

 Market capitalisation can change overnight due to market sentiment. It is opinion based.





Why do Engineers need to know?

- 1. Professional engineers often hold director level positions; they <u>must</u> be aware of the responsibilities
- 2. Engineers are often entrepreneurs; they need to understand the principles of company formation and the options available
- 3. If you are working for a company, it is important to understand the structure and how/you/can influence success
- 4. Finally, business is just 'engineering with money' it is not as complicated as you might think.



Summary of Lecture

- We have discussed companies
 - Types of companies
 - Ownership of companies
 - Why engineers need to know about company structures
- What is the difference between a "sole trader" and a "limited company by shares"?

