

FIN 325 Corporate Finance

L0: Introduction

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Who am I

- Graduate student.
- Ph.D. student in Financial Economics (4th year).
- My education:
 - M.S., Economics — UW, Madison.
 - M.Econ (First Class Honours) — University of Melbourne, Australia.
 - B.Comm (First Class Honours), Economics — University of Melbourne, Australia.
- Research interests: corporate finance, macroeconomics.
- Teaching experience (T.A.):
 - FIN 325: 5 semesters.
 - FIN 320, FIN 920 (Ph.D.), FIN 750 (MBA), FIN 727 (MBA).
- Worked for two years in the Australian equivalent of the Department of Justice (Antitrust Division).

What is corporate finance?

- Say we have a project we want to fund.
- How do we fund it?
- Corporate finance is about deciding on the best source of funding for the project.
- Why does it matter: **financial frictions**.
- Not all sources of financing are equal!
- E.g. a failing firm with close to zero stock price is unlikely to issue more equity to fund new investments.

Examples of financial frictions

- Transaction costs: e.g. fees, transportation costs.
- Taxes.
- Moral hazard: managers may waste investors' money.
- Asymmetric information: investors may not know the same things that insiders know.
- Bankruptcy costs: may need lots of collateral to borrow.

Firms

- Firm is an organisation that sells goods or services to make a profit (Investopedia).
- Legal entity.
- Investment decisions: relate to real assets that are productive.
- Financing decisions: portfolio management, needed to fund the upfront cost of investments.
- Mismatch: some people have ideas and others have money.
- Financial frictions can make it hard to match entrepreneurs up with investors.

Objectives of the firm

- Firm's objective is to maximise the value of **shareholders**.
- Shareholders are the firm's owners.
- The firm issues several different claims to its cash flows.
 - E.g. shares, bonds, preferred shares, etc.
- **Value** is what the market is willing to pay for these different claims.

Cash flows and firms (1)

- Value of an investment project is determined by the cash flows it generates.
- We view firms as a collection of projects.
- Discounted cash flow (DCF) method of valuation.
- We treat cash flows from a firm like a financial security.
- Holders of different types of securities have different claims to the cash flows generated by the firm.

Cash flows and firms (2)

- Some different types of claims:
 - Equity (shares): a proportional claim.
 - Debt (loans): a fixed claim.
 - Options and other contingent claims: only given some of the cash flows under certain circumstances.
 - Hybrid claims: can be convertible from fixed to proportional claim or other.

Equity

- Ownership stake in the company.
- A person who owns $\alpha \in [0, 1]$ fraction of the firm's equity will receive fraction α of dividends paid.
 - E.g. if dividend D is paid-out then the investor will receive αD payment.
- Limited liability: the firm can never **force** the shareholders to give the firm more money.
- Equityholders are **junior** to debtholders.
 - Debtholders have first claim to the firm's cash flows.
 - Equity referred to as the **residual claimant**.
- An equityholder's cash flow is bounded below by zero: just like a **call option**, (to be seen in a moment).

Debt

- Debtholders are the creditors of the firm.
- This is a blanket term that I'll use for all types of creditors: could be holder of the company's corporate bond, a bank, etc.
- The debtholder will loan the firm some money and receive the money back in the future with interest if the firm doesn't **default**.
- In the case of default, the debtholders take over control of the firm away from the equityholders.
- A company with a higher debt-to-equity ratio is considered to be riskier to new investors.
- Can have several debt instruments on issue with different degrees of seniority.

Preferred stock

- Are given a fixed payment like debtholders.
- Higher seniority than equity.
- Can be converted into common stocks.
- Usually have no voting rights.
- Logically a holder would convert when the firm is expected to generate high cash flows in future.



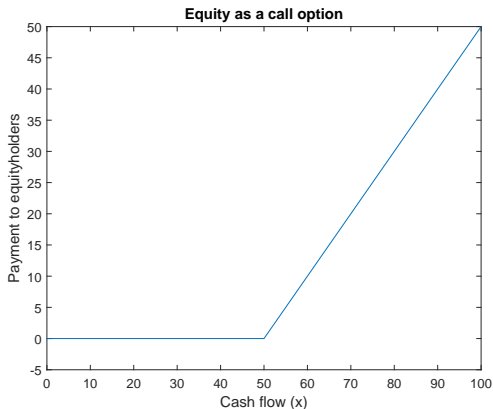
Stockholders' Equity			
Misc Stocks Options Warrants	-	-	-
Redeemable Preferred Stock	-	-	-
Preferred Stock	19,309,000	13,352,000	18,768,000
Common Stock	153,458,000	155,293,000	158,142,000
Retained Earnings	75,024,000	72,497,000	62,843,000
Treasury Stock	-	-	-
Capital Surplus	-	-	-
Other Stockholder Equity	(4,320,000)	(8,457,000)	(2,797,000)
Total Stockholder Equity	243,471,000	232,685,000	236,956,000

Other types of securities

- Call options: give the owner the right but not the obligation to **buy** shares at a certain price, (the strike price).
- Put options: give the owner the right but no the obligation to **sell** shares at a certain price.
- Convertible bonds: similar to preference shares.

Equity as a call option

- Assume that a firm has debt with a face value of 50.
- It generates cash flows of x for the period.
- Assume it doesn't retain any earnings; just pays everything out to stakeholders.
- Equityholders (collectively) will receive $\max(0, x - 50)$ for the period.



Summary of security types

- Firms will often have all of these types of securities on issue as well as other (strange) claims.
- Each help solve the issues associated with financial frictions in different ways.

Takeaways

- Corporate finance deals with finding the right way to finance productive investments.
- Firm's objective is to maximise value to shareholders.
- We use DCF analysis to determine value.
- Firms finance projects using several different types of securities; each help address issues surrounding financial frictions differently.