Corporate Financial Decision Making – Detailed Notes

About these notes

These notes cover the eleven lectures of Corporate Financial Decision Making (FNCE20005, University of Melbourne): takeovers, free cash flow and valuation, capital budgeting, equity and debt financing, capital structure and WACC, payout policy and risk management.

Lecture	Topic	Pages
1	Takeovers	2–7
2	Free Cash Flow	8–9
3	Cash Flow Projection	10
4	Valuation	10–12
5	Advanced Capital Budgeting I	13–16
6	Advanced Capital Budgeting II	17–19
7	Equity	20–25
8	Debt	26–32
9	Capital Structure & WACC	33–40
10	Payout Policy	41–46
11	Risk Management	47–49

Lecture 1: Takeovers

1.1 Classification of takeovers

Basis	Type	Meaning
How the businesses are related	Horizontal	Target and acquirer are in the same industry
	Vertical	The target's industry buys from or sells to the acquirer's industry
	Conglomerate	Target and acquirer operate in unrelated industries
Reaction of the target	Friendly	Typically approved by the target's management
	Hostile	Typically resisted or not approved by the target's management
How the acquisition is paid for (target shareholders must be paid something)	Cash takeover	Target shareholders receive cash in exchange for their shares
	Share takeover	Target shareholders receive the acquirer's shares in exchange for their shares (fixed or floating)
	Other	For example collar deals, convertible securities and contingent payments

1.2 Market reaction to takeovers

- Most acquirers pay a substantial **acquisition premium**. Target shareholders will not sell at the pre-announcement trading price, so the acquirer must pay a premium to persuade them to sell.

Premium paid over pre-merger price	Target announcement price reaction	Acquirer announcement price reaction
About 43%	About 15%	About 1%

- The target's price jumps by less than the premium because the market doubts that the deal will complete (deal risk) and because part of the news may already be in the price.
- The acquirer's price can go up or down. It typically goes up if the merger makes sense and goes down if there is no good reason for it.

Maximum exchange ratio. Let a be the number of ABC shares offered per XYZ share.

- ABC issues 2m × a shares, so the combined firm has 5m + 2m × a shares.
- NPV = \$13m − \$113m × (2a / (5 + 2a)) = 0.
- Solving gives **a = 0.325**, the maximum exchange ratio ABC could offer in a stock swap.

1.7 Paying with stock

- Paying with common stock muddles ownership, and the synergy risk is shared in proportion to the combined company owned by the buyer and the target.
- Stock bids may be structured as follows:

Structure	What is fixed	Features
Fixed	The number of shares to be issued	The value of the offer may fluctuate; the proportional shareholding does not change; sellers are vulnerable to falls in the acquirer's share price
Floating	The dollar amount of the offer	The number of shares is not set until a date close to closing, based on prices then; the proportional shareholding is unresolved until the end; the buyer bears all the price risk on its shares between announcement and closing
Collar	A mix of fixed and floating	Limits how far the offer value or exchange ratio can move

- Payment can also be made with convertible securities, contingent payment schemes and so on.

1.8 Merger arbitrage (the investor's perspective)

- When a merger is announced, the acquirer offers to buy the target at a premium to its current price. The target's price jumps up, but typically not all the way to the offer price, because of **deal risk** and **selling pressure**.
- As an investor you can earn profits by:
    - Buying the merger target to earn the risk premium for providing deal-failure "insurance" and liquidity to sellers.
    - Hedging other risks so that only deal risk remains.
    - Diversifying across many deals.
    - Possibly trying to work out which deals will fail.
- Buying the target ahead of the announcement is not the typical merger arbitrage trade and is very difficult without inside information.

Lecture 5: Advanced Capital Budgeting I

- NPVs are only estimates, so we need to look at what happens when things work out and when they do not.

5.1 Scenario analysis

- Scenario analysis asks what happens to the NPV under different cash flow scenarios. At the very least, look at:
    - **Best case:** high revenues, low costs.
    - **Worst case:** low revenues, high costs.
    - Measures of the range of possible outcomes.
- The best and worst cases are not necessarily probable, but they are possible.
- The takeaway is to look at the worst case and ask, as a company, "can we handle the loss?" if it occurs.

5.2 Sensitivity analysis

- Sensitivity analysis analyses the effect of changing one input variable while holding all else constant ("what if we changed…?"). We want to determine what the NPV is most sensitive to (for example, selling price or volume).
- **Benefits:**
    - It highlights where cash flow risk can materialise. Managers can collect more data and do further analysis before the project begins, leading to a more accurate NPV. Once the project begins, they know where to focus managerial attention to prevent or mitigate bad outcomes.
    - It acts as a checklist that forces managers to think about the downside. By human nature we tend to believe what we want to believe; this analysis forces us to examine what we do not want to see.
- **Downside:** it does not consider how the variables are interrelated. The analyst can only reflect interrelationships by choosing which values are likely to occur together (for example, assuming that when the pessimistic selling price occurs, volume lies between the best and optimistic numbers). The interrelatedness is not built into the model directly (for example, through covariance).

5.3 Break-even analysis

- Break-even analysis is a form of sensitivity analysis. It asks how bad things can become before the project decreases shareholder wealth. Break-even is when NPV = 0.

5.4 Simulation analysis

- In sensitivity analysis it is up to the analyst to choose values for the different variables. In reality, the variables come from underlying probability distributions and covariances. Using these (simulation) lets you answer questions such as the probability that the NPV will be positive and a 95% confidence interval for the NPV.

Lecture 6: Advanced Capital Budgeting II

6.1 Corporate restructuring

- **Corporate restructuring** is materially changing the structure of the corporation (ownership, organisational, operational, financial and so on). It has a balance sheet focus.

Type	What it involves
Business (operational) restructuring	Expansion: mergers, acquisitions, joint ventures. Contraction: divestitures, spin-offs, equity carve-outs. Business restructuring usually means contraction, not expansion
Financial restructuring	Improvements in the capital structure and/or ownership and control of the firm; leveraged transactions (LBOs and MBOs) and debt restructuring
Organisational restructuring	Significant changes in the organisational structure; divisional redesign and employment downsizing

6.2 Why restructure?

- **Corporate governance (agency problems):**
    - To give a sharper focus to management who may lack the skills to manage different types of business.
    - To transfer assets to owners or managers who can better use them.
    - To prevent cross-subsidisation.
- **Information asymmetry:** restructuring reflects new information about the value of various parts of the company to another party.
- Breaking up business lines can sometimes create value, almost as if there were negative synergies in grouping assets together. Studies show conglomerates are worth less than the estimated sum of their parts. Restructuring is often described as **unlocking the diversification discount**.

6.3 Divestitures

- A divestiture is the simplest way to make a company's business simpler and more focused: the sale of assets (or a business segment) to a third party who can manage them most effectively.
- The funds from the sale are retained by the firm, and the firm has no control over the assets after the sale.
- Divestitures occur because of:
    - Negative synergy from poor decisions on past acquisitions.
    - Management's lack of expertise to run the company in its current state.
    - Needs for funds (for example, to pursue other investments or to pay off existing debt, particularly after LBOs).
    - Regulators (for example, the ACCC) demanding divestiture, for example to create competition.

Lecture 9: Capital Structure & WACC

9.1 Capital structure decisions

- Debt–equity ratio and capital restructuring (changing the mix of debt and equity, for example by issuing debt to repurchase shares).
- How should a firm choose its debt–equity ratio? What is the best capital structure for the firm?

9.2 Financial leverage: an illustration

Assume a company with total assets of $8,000,000 and 400,000 shares outstanding (so a share price of $20). Compare an all-equity structure with one that replaces $4,000,000 of equity with debt at 10% interest ($400,000 per year).

Company without debt

Item	Recession	Expected	Expansion
EBIT	$500,000	$1,000,000	$1,500,000
Interest	0	0	0
Profit	$500,000	$1,000,000	$1,500,000
ROE	500,000 / 8,000,000 = 6.25%	12.5%	18.75%
EPS	500,000 / 400,000 = $1.25	$2.50	$3.75

Company with $4,000,000 of debt

Item	Recession	Expected	Expansion
EBIT	$500,000	$1,000,000	$1,500,000
Interest	$400,000	$400,000	$400,000
Profit	$100,000	$600,000	$1,100,000
ROE	100,000 / 4,000,000 = 2.5%	15%	27.5%
EPS if the number of shares stays at 400,000	$0.25	$1.50	$2.75
EPS if shares are repurchased at the unchanged $20 price (200,000 shares remain)	100,000 / 200,000 = $0.50	$3.00	$5.50

- The EPS–EBIT lines for the two structures cross at the **break-even EBIT of $800,000** (EPS of $2 in both cases): EBIT/400,000 = (EBIT − 400,000)/200,000. This is where the return on assets (800,000 / 8,000,000 = 10%) equals the interest rate on debt. Below the break-even point there is a disadvantage to debt; above it, an advantage.