

Use excess free cash

Reduce tax on the combined company due to tax losses of the acquired company

Other

### 3. Valuing a business acquisition opportunity

#### a. Terminology for valuation

- i. Market capitalization
- ii. Enterprise value

#### b. Valuation techniques

- i. Intrinsic valuation (DCF analysis)
- ii. Relative valuation
  - a) Comparable companies market multiples method
  - b) Comparable transactions method

	DCF Method	Market Multiples Method
Major Steps	<ul style="list-style-type: none"><li>• Free Cash Flows in the forecast period</li><li>• Terminal value (after the forecast period)</li><li>• Discount FCFs in the forecast period &amp; terminal value with WACC</li></ul>	<ul style="list-style-type: none"><li>• Identify the target firm's comparable companies</li><li>• Convert their market values into standardized values using a common variable (e.g. earnings), which creates market multiples (e.g. P/E ratios), and take the average of comps' multiples</li><li>• Multiply the average multiple by the common variable (e.g. earnings) of the target firm, resulting in the estimate for its market value (e.g. market cap)</li></ul>
Strengths	<ul style="list-style-type: none"><li>• Forward looking and focuses on cash flows not on profits</li><li>• Allows operating strategies/synergies to be built into a model</li><li>• Valuation tied to underlying fundamentals</li></ul>	<ul style="list-style-type: none"><li>• Very common, convenient market-based method</li><li>• Provide an alternative way to perform terminal value estimation</li></ul>
Weaknesses	<ul style="list-style-type: none"><li>• Only as accurate as assumptions and projections used</li><li>• Need to forecast managerial behavior (unless you're in control)</li><li>• Need to estimate the discount rate using a theory (e.g., CAPM) that may be imprecise or tricky in some cases</li></ul>	<ul style="list-style-type: none"><li>• Subject to distortions due to market misvaluation and accounting policy</li><li>• Not directly incorporate the operational improvements and other synergistic efficiencies that the acquirer intends to implement</li><li>• Identifying closely comparable firms is challenging</li><li>• Choice of dates for comparing multiples can be arbitrary</li></ul>

#### iii. Contingent claim valuation (real option analysis)

- troubled firm
- natural resource company
- start-up firms or high growth firms

## Classic Questions/Calculations

### 1. SEOs

#### a. Private placement:

	Pre		Post		
Issued Shares:	(m)	(%)	(m)	(%)	
• old s'holders	10	100	10	90.9	$(10/11)*100$
• new s'holders	0	0	1	9.1	$(1/11)*100$
Total	10	100	11	100	

\*new share price  
 $= 10/11 * \$10 + 1/11 * \$9 = \$9.909$

Value of Equity:	(\$m)	(\$m)	
• old s'holders	\$100	\$99.09	$\leftarrow \$9.909 * 10m$
• new s'holders	0	\$9.91	$\leftarrow \$9.909 * 1m$
Total	\$100	\$109	

#### b. Rights issue:

##### • Notations:

- Subscription price ( $S$ )
- Pro-rata entitlement ( $1:N$ )
- $M$  is the market price of the share *cum-rights*
- $X$  is the theoretical price of the share *ex-rights*
- $R$  is the value of the right

##### • Trading *cum-rights* and *ex-rights*



- exercise the rights
- sell the rights (if renounceable)
- do nothing

#### c. DRP

### 2. Finance Lease Value

#### 1) Calculate incremental cash flow: leasing – borrow to buy

Leasing (1)			
①	Lease payments	-\$21,300	From year 0
②	Tax-shields from lease payment	$0.34 \times \$21,300 = +\$7,242$	From year 0
Borrow-to-Buy (2)			
③	Cost of asset	-\$78,000	In year 0
④	Tax-shields from asset depreciation	$0.34 \times (\$78,000/4) = +\$6,630$	From year 1
⑤	Residual asset value	+\$20,600	In year 4
⑥	Tax on gain from sale of asset*	$-(\$20,600 - 0) \times 0.34 = -\$7,004$	In year 4

\*Gain on sale = Residual Value - Book Value

Book value = Historical cost - Accumulated depreciation = \$0

If pay in advance