Introduction to Merger and Acquisition & Valuation

April 2022
M&A: The Process and Key Considerations
<table>
<thead>
<tr>
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<th>Agenda</th>
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<tr>
<td>1</td>
<td>Reasons for M&amp;A</td>
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<td>2</td>
<td>M&amp;A Process</td>
</tr>
<tr>
<td>3</td>
<td>M&amp;A Considerations</td>
</tr>
</tbody>
</table>
Why understanding of Merger & Acquisition is vital for businesses in Cambodia?
Introduction to M&A

**M&A** (merger and acquisition) refers to the consolidation of companies or assets through various types of financial transaction.

### What is M&A?

**MERGER**
- Corporate strategy of combining two separate entities into a single company

**ACQUISITION**
- The purchase of all or a portion of a corporate asset or target company

### 4 Types of Mergers and Acquisitions

1. **Horizontal**
   - When the two companies are in direct competitions and share the same product lines and markets.

2. **Vertical**
   - When the two companies are in different production stages (e.g., the merger between a company and its supplier).

3. **Concentric**
   - When the two companies have the same customer base but different products.

4. **Conglomerate**
   - When the two companies have different businesses.
CEOs are committed to global expansion

KPMG US’s 2019 Global CEO Outlook Survey found majority of CEOs are committed to expanding into emerging market:

- **74%** Of US CEOs surveyed continue to express interest in expanding to emerging markets
- **85%** are prioritizing countries and regions that form part of China’s Belt and Road Initiative (85% US vs. 65% globally)

Many CEOs see new partnerships or alliances are a preferred means of accelerating growth:

- **93%** View building their presence in emerging markets as building resiliency as a business (93% US vs. 87% globally)
- **81%** Are planning to pursue inorganic growth (i.e., through M&A, Strategic alliances and Joint Ventures)

Which of the following strategies will be most important for achieving your organization’s growth objectives over the next 3 years?
Recent M&A Transaction in Cambodia

<table>
<thead>
<tr>
<th>Acclime</th>
<th>BSE Accounting Co., Ltd.</th>
</tr>
</thead>
<tbody>
<tr>
<td>SBILH</td>
<td>SBI LY HOUR Bank</td>
</tr>
<tr>
<td>KB</td>
<td></td>
</tr>
<tr>
<td>ANZ</td>
<td></td>
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<tr>
<td>Pi Pay</td>
<td></td>
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<tr>
<td>J Trust Bank</td>
<td></td>
</tr>
<tr>
<td>RBK</td>
<td></td>
</tr>
<tr>
<td>Alliance Pharma Cambodge</td>
<td>More than just a partner</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>National Bank of Canada</td>
<td>ABA</td>
</tr>
<tr>
<td>ANK</td>
<td></td>
</tr>
<tr>
<td>ANK</td>
<td></td>
</tr>
<tr>
<td>CIA</td>
<td>First International School</td>
</tr>
</tbody>
</table>
Emerging market corporations are now more confident in their pursuit of M&A. Chinese, Indian and Russian companies have been prolific in venturing outside their domestic markets to do deals, demonstrating that they are well-managed, efficient and globally competitive.

Source: IMAA Institute
Reasons for M&A
Fundamental Reasons for M&A

1. Synergies

Combining business activities, overall performance efficiency tends to increase and overall costs tend to drop, due to the fact that each company leverages off of the other company’s strengths.

2. Increase Supply – Chain Pricing Power

By buying out one of its suppliers or distributors, a business can eliminate an entire tier of costs. Specifically, buying out a supplier, which is known as a vertical merger which usually let a company save on the margins that the supplier previously add to its costs. By buying out a distributor, a company often gains the ability to sell their products at a lower cost.

3. Eliminate Competition

Many M&A deals allow the acquirer to eliminate future competition and gain a larger market share. On the downside, a large premium is usually required to convince the target company’s shareholders to accept the offer.

4. Growth

Mergers can give the acquiring company an opportunity to grow market share without doing significant heavy lifting. Instead, acquirers simply buy a competitor’s business, usually referred to as a horizontal merger.

5. Succession and retirement

One of the major drivers for M&A is when the owner is looking to retired and/or transfer the business to a successors/or a potential buyers. With this the owners might look more for a strategic buyers understand the business and ensure smooth transfer for the employees and related stakeholders.
Types of potential buyers

TRADE/STRATEGIC BUYERS

- Strategically driven
- Sector
- Synergies
- M&A appetite
- Financial capacity
- Geography

FINANCIAL BUYERS

- Financially driven
- Sector
- Deal size
- IRR
- Management
- Geography
M&A Process
Sell-side M&A cycle

**BD / Marketing**
- Weekly sector updates (for member firms)
- Sector newsletters for client circulation
- Conference presentations
- Asset sheets
- Potential client mapping

**Pitching**
- Pitch Preparation
  - Positioning themes
  - Industry analysis
  - Buyer/Target search
  - Buyer/Target profiling
- Indicative valuation
- Ad hoc research

**Preparation & Marketing**
- Teaser
- CIM preparation
  - Business analysis
  - Industry overview
  - Financial overview
- Financial Model
  - Comprehensive buyer search
  - Buyer logs
  - VDR assembling
  - Target valuation
  - LBO modelling
  - Merger modelling

**Post-mandate**
- Final Negotiation & Closing
  - Management presentation
  - VDR management
  - Finalization of valuation post discussion with member firms/clients
- Ad hoc research
- Ad hoc support on drafting schedules of SPAs
Buy-side - M&A Life Cycle

**M&A Strategy**
- Define M&A strategy and goals
- Create M&A executive member

**Target Screening**
- Organize search team and plan target screening
- Identify potential M&A targets
- Screen, select, and contact target candidate(s)
- Execute confidentiality agreement
- Analyze potential M&A synergies

**Due Diligence**
- Plan M&A due diligence
- Organize due diligence teams
- Define due diligence approach, methods and protocols
- Conduct M&A due diligence
- Compile and analyze due diligence

**Transaction Execution**
- Develop target valuation
- Develop M&A deal structure
- Present M&A deal offer
- Negotiate M&A deal terms
- Plan M&A integration
- Conduct M&A deal closing

**Integration**
- Establish M&A integration management office(s)
- Communicate M&A integration plan
- Integrate customers, markets, products, IT infrastructure, data and systems
- Integrate the organizations, workforce, functions, operations, locations and facilities
M&A considerations

What can go wrong

- Unrealistic timetable leads to lack of preparation time
- Lack of central understanding of the business being sold
- IM issued before supporting information is gathered & validated
- Lack of effective quality control over data room content
- Lack of robust financial data and adequate support/explanation
- Inadequate resourcing deflects management team from running the business

Bidder’s experience

- Inconsistencies in financial presentations
- Poor quality, inconsistent information in the data room
- A legal data room, no commercial information
- Inability to prepare basic analyses
- Lack of access to management
- Poor project management

Vendor’s experience

- Leakage of value during sales process
- Slow process
- Too many surprises
- Extended warranties & indemnities
- Too much disruption
- Initial value expectation not realised
Vendors are often disappointed by the price achieved

“It’s a legal data room, no commercial information”

“No information is available to assess synergies”

“The 2003 revenue forecast contains a €3.5 m error” Seller’s bank, one week before final offer is due”

“US research suggests average 25% erosion from bid to final price”

“I cannot understand the numbers”

“I didn’t think the SPA meant that”

“We should sack the MD, management presentation is inconsistent with the data room”

Good preparation is key to address these issues. For example, transaction readiness assessment or Vendor Due Diligence can be done to ensure you are really ready to embark on a transaction process and to demonstrate your readiness to buyers.
Introduction to valuation methods and requirements
# Agenda

1. Definition of Fair (Market) Value
2. Price vs. Value
3. Common Valuation Techniques and their requirements
   - Market approach
   - Income approach
   - Asset based approach
4. Case studies
5. When to use what?
6. Q&A
Definition
Definition of fair (market) value

Fair Market Value
The highest price available in an open and unrestricted market between informed, prudent parties acting at arm’s length and under no compulsion to act, expressed in terms of money or money’s worth.

Fair Value (in IFRS 13)
The amount for which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties in an arm’s length transaction.
Basic principles in valuation
Fair value measurement

Fair value measurement (guidance in IFRS 13)

Best evidence: quoted prices in an active market
- Bid/ask price
- Price of most recent transaction (maybe adjustment for change in conditions or distress)

If not available: valuation technique
- e.g. Discounted Cash Flow or Option Pricing Model
- “... would incorporate observable market data about the market conditions and other factors that are likely to affect the instrument’s fair value”
- Examples: risk free interest rate, credit risk, stock prices, volatilities, commodity prices etc.

Standards give no detailed guidance on FV measurement!
Price vs. Value
Price vs. Value

What has value to do with price?
“Price is what you pay, value is what you get”

Value is enduring, driven by fundamentals.
Price reflects (beside value)
— Market sentiment as of a particular moment in time
— Subjective interests and expectations of the transaction parties

Value is the price at which a typical, rational financial buyer would buy.
Price vs. Value

- Valuation errors?
- Negotiation position
- Performance improvement
- Synergies
- Stand-alone value
- Price
Common valuation techniques
Common valuation techniques

1) Market approach:
Value derived from observable market prices (of comparable assets)

2) Income approach:
Value derived from the asset’s ability to generate future economic benefits (cash flows, cost savings, etc.)

3) Asset-based approach:
Value derived from the costs for replacing the asset (exact replacement, replacement in function)

4) Option valuation models:
Black/Scholes, Binomial Trees etc.
Common valuation techniques - Market approach

**Market approach is used for**

— Listed shares

— Financial instruments for which quotes can be obtained (important: can one actually buy/sell to the quoted prices?)

— Financial instruments with recent transactions (how recent? Orderly?)

— Unlisted shares with listed comparable (how well comparable?)

— Generally, all assets for which market transactions are observable (carpets, airplanes, art, taxi licenses, …)
## Common valuation techniques - Market approach

### Example for market approach (equity)

<table>
<thead>
<tr>
<th>Market approach analysis</th>
<th>EV/Sales</th>
<th>EV/EBITDA</th>
<th>EV/EBIT</th>
<th>P/E</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>in VND million</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2019 financial numbers</td>
<td>101,060</td>
<td>18,027</td>
<td>17,685</td>
<td>16,362</td>
</tr>
<tr>
<td>Selected multiples</td>
<td>1.5x</td>
<td>7.2x</td>
<td>8.9x</td>
<td>8.2x</td>
</tr>
<tr>
<td><strong>Implied enterprise value</strong></td>
<td>152,361</td>
<td>130,510</td>
<td>157,186</td>
<td>133,638</td>
</tr>
<tr>
<td>Subtract: net debt/(cash)</td>
<td>(2,206)</td>
<td>(2,206)</td>
<td>(2,206)</td>
<td></td>
</tr>
<tr>
<td><strong>Equity value on a minority, marketable basis (round)</strong></td>
<td>155,000</td>
<td>133,000</td>
<td>159,000</td>
<td>134,000</td>
</tr>
<tr>
<td>Less: marketability discount</td>
<td>0.0%</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Equity value on a minority, non-marketable basis (round)</strong></td>
<td>155,000</td>
<td>133,000</td>
<td>159,000</td>
<td>134,000</td>
</tr>
<tr>
<td>Add: equity control premium</td>
<td>25.0%</td>
<td>38,750</td>
<td>33,250</td>
<td>39,750</td>
</tr>
<tr>
<td><strong>Equity value on a control, non-marketable basis (round)</strong></td>
<td>194,000</td>
<td>166,000</td>
<td>199,000</td>
<td>168,000</td>
</tr>
</tbody>
</table>
Common valuation techniques - Market approach

Example for market approach (equity) – cont.

In such a calculation, check especially the following

— Are the appropriate multiples used?
— How are the multiples derived?
  - Have a look at the comparable companies
— How is the multiple basis derived?
  - Are normalizations necessary?
  - Trailing or forward multiples?
— Is the debt correctly deducted?
  - Sales, EBITDA, EBIT multiples give Enterprise Value → deduct debt to obtain Equity Value
  - P/E gives directly Equity Value
— Are the outcomes of the methods consistent?
Common valuation techniques - Income approach

Income approach is used for

— All sorts of bonds
— Unlisted shares if a cash flow projection for the company is available (projection reliable?)
— Generally, for all assets which (potentially) generate cash flows (real estate -> rent, trade marks -> license ...
... )
Common valuation techniques - Income approach

**Income approach: discounting a cash flow**

What is the value today of a cash flow in future? Depends on
- (Expected) amount of the cash flow
- (Expected) timing of the cash flow
- Time value of money (=> base rate)
- Risk of the cash flow (and the risk aversion of the investor)

Risk = country risk + specific risk

Base rate may depend on the timing => interest rate curve
Common valuation techniques - Income approach

**Income approach: two ways to factor in risk**

Imagine:

in 1 year time we flip a coin:

- head – you get 100 (50%)
- tail – you get 0 (50%)

Expected value = 50, but most people are risk averse

Assume observable market price of this coin-flipping exercise is 40.3, then discount rate should be 24% so that:

\[ PV = \frac{50}{(1 + 24\%)} = 40.3 \]

Say: Base rate = 3%, therefore, risk premium = 24% - 3% = 21%

Other way: assume people would pay 41.5 = 50 x (1-17.0%) for a 50% chance to get 100

Then

\[ PV = \frac{41.5}{(1 + 3\%)} = 40.3 \]

=> Risk can be reflected in cash flow or in discount rate
Common valuation techniques - Income approach

Income approach: VND government bond yield curve as of 11 Aug 2020

Source: Asian Bonds Online (Asian Development Bank)
Common valuation techniques - Income approach

Example for income approach: fixed bond

Principal: 1,000 million VND
Coupon 5%, paid yearly
3 years to maturity
Base rate 1.0%, credit spread of issuer 4.0%, factoring of COVID-19 into corporate bond valuation 1.0% -> discounted at 1.0% + 4.0% + 1.0% = 6.0%

Present value at beginning of 1st year:

\[ PV = \frac{50}{(1 + 6\%)} + \frac{50}{(1 + 6\%)^2} + \frac{1,050}{(1 + 6\%)^3} = 973.27 \]

Present value at middle of 1st year (“dirty price”):

\[ PV = \frac{50}{(1 + 6\%)^{0.5}} + \frac{50}{(1 + 6\%)^{1.5}} + \frac{1,050}{(1 + 6\%)^{2.5}} = 1,002.04 \]

How to derive credit spread of issuer?

— Bonds issued recently by the same issuer
— Recent transactions
Common valuation techniques - Income approach

Example for income approach: fixed bond

Remarks: All example calculations and case studies presented are for illustration of the methodology only. They are not meant to have implications on values of or valuation methodologies applicable for real entities or businesses. Likewise, any parameter choices adopted in the example calculations are just examples and cannot construed as views of KPMG.
Common valuation techniques - Income approach

Example for income approach: floating bond

Principal: 1,000 million VND
Coupon = 1y interbank rate + spread, paid yearly
3 years to maturity
Base rate 1.0%, credit spread of issuer over gov’t rate 3.5%, risk premium for COVID-19 1.0%
→ discounted at 1.0% + 3.5% + 1.0% = 5.5%

Present value at beginning of 1st year:
PV = 1,000 → per definition

Present value at mid of 1st year:
First year coupon fixed at 5.88%

\[ PV = \frac{58.8}{(1 + 5.5\%)^{0.5}} + \frac{1,000}{(1 + 5.5\%)^{0.5}} = 1,030.83 \]

*Works like this only if the issuer’s credit quality is still the same!!*
Common valuation techniques - Income approach

Crucial points
In such a calculation, check especially the following

— Cash flows consistent with the bond terms?
— Risk-free rate/Base rate consistent in currency and duration?
  - Usually derived from government bond yields
— Support for credit spread:
  - Issuer’s actual financing conditions – on arm’s length
  - Issuer’s rating
  - Shadow rating based on fundamentals
— Is the bond really that simple? – how about
  - Prepayment options
  - Conversion options
  - Callable by issuer?
— Take into account the impact of COVID-19
## Common valuation techniques - Income approach

### Example for income approach

#### Discounted Cash Flow Analysis

<table>
<thead>
<tr>
<th>in VND million</th>
<th>Forecast</th>
<th>Terminal</th>
</tr>
</thead>
<tbody>
<tr>
<td>For 12 months ending 31 December</td>
<td>2020</td>
<td>2021</td>
</tr>
<tr>
<td>Total sales</td>
<td>5,074</td>
<td>5,461</td>
</tr>
<tr>
<td>Growth rate</td>
<td>6.9%</td>
<td>7.6%</td>
</tr>
<tr>
<td>Cost of goods sold</td>
<td>(4,011)</td>
<td>(4,304)</td>
</tr>
<tr>
<td>Gross profit</td>
<td>1,063</td>
<td>1,157</td>
</tr>
<tr>
<td>Gross margin</td>
<td>20.9%</td>
<td>21.2%</td>
</tr>
<tr>
<td>Operating expenses</td>
<td>(857)</td>
<td>(887)</td>
</tr>
<tr>
<td>EBIT</td>
<td>206</td>
<td>270</td>
</tr>
<tr>
<td>EBIT margin</td>
<td>4.1%</td>
<td>4.9%</td>
</tr>
<tr>
<td>Tax on EBIT</td>
<td>20.0%</td>
<td>(41)</td>
</tr>
<tr>
<td>After-tax operating income</td>
<td>165</td>
<td>216</td>
</tr>
<tr>
<td>Change in working capital</td>
<td>90</td>
<td>44</td>
</tr>
<tr>
<td>Capital expenditure</td>
<td>(131)</td>
<td>(90)</td>
</tr>
<tr>
<td>Depreciation</td>
<td>107</td>
<td>108</td>
</tr>
<tr>
<td>After-tax free cash flows to the firm (&quot;FCFs&quot;)</td>
<td>231</td>
<td>278</td>
</tr>
<tr>
<td>Discounted period (Mid-year convention)</td>
<td>3.0%</td>
<td></td>
</tr>
<tr>
<td>Discounted period</td>
<td>0.5</td>
<td>1.5</td>
</tr>
<tr>
<td>Present value factor</td>
<td>11.0%</td>
<td>0.949</td>
</tr>
<tr>
<td>Present value of FCFs</td>
<td>219</td>
<td>238</td>
</tr>
</tbody>
</table>

### Remarks

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Common valuation techniques - Income approach

Example for income approach (equity) – cont.

## Indication of value

<table>
<thead>
<tr>
<th>Present value of FCFs</th>
<th>1,942</th>
<th>38%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Present value of TV</td>
<td>3,174</td>
<td>62%</td>
</tr>
</tbody>
</table>

### Indicated enterprise value

<table>
<thead>
<tr>
<th>Value</th>
<th>Indicated equity value, minority and marketable basis</th>
<th>4,763</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less: net debt</td>
<td></td>
<td>(354)</td>
</tr>
<tr>
<td>Less: marketability discount</td>
<td>0.0%</td>
<td>-</td>
</tr>
<tr>
<td>Indicated equity value before control premium</td>
<td>4,763</td>
<td></td>
</tr>
<tr>
<td>Add: control premium</td>
<td>25.0%</td>
<td>1,191</td>
</tr>
<tr>
<td>Indicated equity value after control premium</td>
<td>5,953</td>
<td></td>
</tr>
<tr>
<td>100% equity value, control and non-marketable basis (rounded)</td>
<td>6,000</td>
<td></td>
</tr>
</tbody>
</table>

**TV is a large % of Value**

**Control Premium**

### Discounted Cash Flow Analysis

<table>
<thead>
<tr>
<th>Year</th>
<th>After-tax free cash flows to the firm (“FCFs”)</th>
<th>Terminal</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>231</td>
<td>8,555</td>
</tr>
<tr>
<td>2021</td>
<td>278</td>
<td>3,174</td>
</tr>
<tr>
<td>2022</td>
<td>181</td>
<td>0.949</td>
</tr>
<tr>
<td>2023</td>
<td>213</td>
<td>0.885</td>
</tr>
<tr>
<td>2024</td>
<td>267</td>
<td>0.770</td>
</tr>
<tr>
<td>2025</td>
<td>349</td>
<td>0.694</td>
</tr>
<tr>
<td>2026</td>
<td>359</td>
<td>0.625</td>
</tr>
<tr>
<td>2027</td>
<td>460</td>
<td>0.563</td>
</tr>
<tr>
<td>2028</td>
<td>534</td>
<td>0.507</td>
</tr>
<tr>
<td>2029</td>
<td>598</td>
<td>0.457</td>
</tr>
<tr>
<td>2030</td>
<td>684</td>
<td>0.412</td>
</tr>
</tbody>
</table>

### Indication of value

<table>
<thead>
<tr>
<th>Year</th>
<th>Present value factor</th>
<th>Present value of FCFs</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
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<tr>
<td>2021</td>
<td>0.949</td>
<td>238</td>
</tr>
<tr>
<td>2022</td>
<td>0.855</td>
<td>140</td>
</tr>
<tr>
<td>2023</td>
<td>0.770</td>
<td>148</td>
</tr>
<tr>
<td>2024</td>
<td>0.694</td>
<td>167</td>
</tr>
<tr>
<td>2025</td>
<td>0.625</td>
<td>196</td>
</tr>
<tr>
<td>2026</td>
<td>0.563</td>
<td>182</td>
</tr>
<tr>
<td>2027</td>
<td>0.507</td>
<td>210</td>
</tr>
<tr>
<td>2028</td>
<td>0.457</td>
<td>220</td>
</tr>
<tr>
<td>2029</td>
<td>0.412</td>
<td>222</td>
</tr>
<tr>
<td>2030</td>
<td>0.371</td>
<td>3,174</td>
</tr>
</tbody>
</table>
Common valuation techniques - Income approach

Example for income approach (equity) – cont.

Variants: DCF Entity Method vs. DCF Equity Method
- Free Cash Flow to Firm: discounted with the WACC
- Free Cash Flow to Equity: includes interest payments and debt repayments, discounted with the Cost of Equity

Dividend Discount Model
- Discount expected dividends with Cost of Equity

Terminal value
- Sustainable cash flow / (discount rate – growth rate)
- For example: terminal cash flow 684.4, growth 3%, discount rate 11% => terminal value 684.4 / (11% - 3%) = 8,555
- With growth 5%: terminal value 11,407
Common valuation techniques - Income approach

Example for income approach (equity) – cont.

Discount Rate Calculation

Cost of Equity

\[ k_e = R_f + \beta \times ERP + \alpha \]

or

\[ k_e = R_f + \beta \times (R_m - R_f) + \alpha \]

WACC

\[ WACC = k_e \times \frac{E}{D+E} + k_d \times (1-t) \times \frac{D}{D+E} \]
Common valuation techniques - Income approach

Note
1. 10-year VND government bond yield
2. Based on average beta of comparable companies
3. Normally, we adopted equity risk premium of 6% for the VN market by referring to the ERP for the U.S, based on various research reports.
   Currently, we increased equity risk premium to 7% to reflect the impact of COVID-19
4. Company specific risk premium reflecting industry risk and other risk factors such as small size and high debt/capital structure
5. The cost of debt of 10% is based on the current average interest rate of VND loans of most local commercial banks for local companies in Vietnam, based on SBV’s Weekly Bulletin on Banking Operations
6. Corporate tax rate in Vietnam as at Valuation Date
7. Based on median debt-to-equity ratio for comparable companies as a proxy for long-term optimal capital structure

<table>
<thead>
<tr>
<th>Cost of equity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base rate</td>
</tr>
<tr>
<td>Unlevered beta</td>
</tr>
<tr>
<td>Levered beta</td>
</tr>
<tr>
<td>Equity risk premium</td>
</tr>
<tr>
<td>Company specific risk premium</td>
</tr>
<tr>
<td><strong>Cost of equity</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cost of debt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-tax cost of debt</td>
</tr>
<tr>
<td>Tax rate</td>
</tr>
<tr>
<td>After-tax cost of debt</td>
</tr>
<tr>
<td>Proportion of debt</td>
</tr>
<tr>
<td>Proportion of equity</td>
</tr>
<tr>
<td><strong>WACC</strong></td>
</tr>
<tr>
<td><strong>Rounded</strong></td>
</tr>
</tbody>
</table>
Common valuation techniques - Income approach

Crucial points

Many crucial issues, for example

— Is the projection reasonable and consistent?
— Cash flows adequately derived?
  - Consistent with discount rate (WACC vs. CoE)
— Discount rate well supported?
  - Build up approach for Cost of equity: risk-free rate/base rate + risk premium (CAPM: beta factor x market risk premium)
  - WACC calculated correctly?
— Terminal value calculation correct?
  - Cash flows adjusted?
  - Terminal growth rate makes sense?
— Cross-checks performed?
— Discounts/premia adequate (reason and magnitude)?
Common valuation techniques - Income approach

Special variants for intangible assets

“Relief from Royalty Method”
— The value of intellectual property (e.g. brand, patent) reflects the savings realized by owning the IP
— If the IP were licensed to an unrelated party, the unrelated party would pay a percentage of revenue for the use of the intellectual property
— Only used for to value intangible assets that could actually be licensed

“Excess Earnings Method”
— Economic returns can be derived from certain intangible assets (e.g. customer relationship, brand) of a business
— Reflects the fact that some intangible assets use other assets of the business to generate income
— Isolates the excess return, which is attributable to the intangible assets being valued
## Common valuation techniques – Asset-based approach

### Example for asset-based approach (for equity)

<table>
<thead>
<tr>
<th>Valuation conclusion summary</th>
<th>Book value</th>
<th>Adjustments</th>
<th>Fair market value</th>
</tr>
</thead>
<tbody>
<tr>
<td>in VND million</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Assets</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash</td>
<td>10,063</td>
<td>-</td>
<td>10,063</td>
</tr>
<tr>
<td>Accounts receivable</td>
<td>108 (108)</td>
<td>-</td>
<td>108</td>
</tr>
<tr>
<td>Other receivables</td>
<td>17,515 (372)</td>
<td>17,143 (372)</td>
<td></td>
</tr>
<tr>
<td>Advance to suppliers</td>
<td>118,265 (2,110)</td>
<td>116,155 (2,110)</td>
<td></td>
</tr>
<tr>
<td>Subsidy receivable</td>
<td>275</td>
<td>-</td>
<td>275</td>
</tr>
<tr>
<td>Inventory</td>
<td>41,227 (2,110)</td>
<td>43,240</td>
<td></td>
</tr>
<tr>
<td><strong>Current assets</strong></td>
<td>187,453 (577)</td>
<td>186,876</td>
<td></td>
</tr>
<tr>
<td>Fixed assets</td>
<td>43,265 (2,110)</td>
<td>45,300</td>
<td></td>
</tr>
<tr>
<td>Buildings and structures</td>
<td>20,140 (3,180)</td>
<td>23,320</td>
<td></td>
</tr>
<tr>
<td>Machinery and equipment</td>
<td>23,145 (1,165)</td>
<td>21,980</td>
<td></td>
</tr>
<tr>
<td>Land use right</td>
<td>1,759 (1,319)</td>
<td>3,078</td>
<td></td>
</tr>
<tr>
<td><strong>Total assets</strong></td>
<td>232,497 (2,757)</td>
<td>235,254</td>
<td></td>
</tr>
<tr>
<td><strong>Liabilities</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Short-term loan</td>
<td>68,500</td>
<td>-</td>
<td>68,500</td>
</tr>
<tr>
<td>Other current liabilities</td>
<td>7,366</td>
<td>-</td>
<td>7,366</td>
</tr>
<tr>
<td>Long-term loan</td>
<td>40,000</td>
<td>-</td>
<td>40,000</td>
</tr>
<tr>
<td><strong>Total liabilities</strong></td>
<td>115,866</td>
<td>-</td>
<td>115,866</td>
</tr>
<tr>
<td><strong>Net asset value</strong></td>
<td>116,631 (2,757)</td>
<td>119,388</td>
<td></td>
</tr>
<tr>
<td>Disposal costs</td>
<td>(1,832)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Net asset value after disposal</strong></td>
<td>117,556</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deferred tax liability</td>
<td>(551)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Adjusted net asset value</strong></td>
<td>117,004</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Common valuation techniques – Asset-based approach

Crucial points
In such a calculation, check especially the following:

— Does the value of the company mainly come from the assets on the balance sheet?
— Any important self-generated intangibles?
— Any off-balance sheet liabilities / contingencies?
— For which assets / liabilities book value and fair value should differ (depends also on GAAP)?
— Is the valuation of assets / liabilities reliable?
Common valuation techniques

**Equity valuation – which approach is appropriate?**

<table>
<thead>
<tr>
<th>Stage of valuation methodology</th>
<th>Seed Capital</th>
<th>Start-Up</th>
<th>Launch</th>
<th>Growth phase I</th>
<th>Growth phase II</th>
<th>Stable growth</th>
<th>Mature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>none</td>
<td>minimal</td>
<td>rapid growth</td>
<td>strong growth</td>
<td>strong growth</td>
<td>stable growth</td>
<td>DCF growth</td>
</tr>
<tr>
<td>Earnings</td>
<td>none</td>
<td>loss</td>
<td>loss</td>
<td>break even</td>
<td>break even</td>
<td>profit</td>
<td>profit</td>
</tr>
<tr>
<td>Free cash flow</td>
<td>none</td>
<td>negative</td>
<td>negative</td>
<td>negative</td>
<td>zero</td>
<td>positive</td>
<td>positive</td>
</tr>
<tr>
<td>Customers</td>
<td>none</td>
<td>none</td>
<td>early adopters</td>
<td>&lt;50% of target</td>
<td>&gt;50% of target</td>
<td>target market</td>
<td>target market</td>
</tr>
<tr>
<td>Marketing</td>
<td>none</td>
<td>market research</td>
<td>awareness</td>
<td>brand building</td>
<td>brand building</td>
<td>rebranding</td>
<td>rebranding</td>
</tr>
<tr>
<td>Product</td>
<td>conceptual ready for market</td>
<td>niche</td>
<td>popular</td>
<td>widely used</td>
<td>main stream</td>
<td>commodity</td>
<td>commodity</td>
</tr>
<tr>
<td>Technology</td>
<td>unproven</td>
<td>testing</td>
<td>in use</td>
<td>scale up</td>
<td>improve</td>
<td>generic</td>
<td>obsolete</td>
</tr>
<tr>
<td>Management</td>
<td>founders</td>
<td>founders</td>
<td>key roles filled</td>
<td>most roles filled</td>
<td>fully staffed</td>
<td>fully staffed</td>
<td>fully staffed</td>
</tr>
<tr>
<td>Back office</td>
<td>bedroom</td>
<td>garage</td>
<td>temporary HQ</td>
<td>permanent HQ</td>
<td>permanent HQ</td>
<td>permanent HQ</td>
<td>permanent HQ</td>
</tr>
<tr>
<td>Cost to date</td>
<td>+++</td>
<td>+++</td>
<td>++</td>
<td>++</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Replacement cost</td>
<td>+++</td>
<td>+++</td>
<td>++</td>
<td>+++</td>
<td>++</td>
<td>++</td>
<td>+++</td>
</tr>
<tr>
<td>Net asset approach</td>
<td>+</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
<td>+</td>
<td>+</td>
<td>++</td>
</tr>
<tr>
<td>Real options/decision trees</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
<td>++</td>
<td>++</td>
</tr>
<tr>
<td>Discounted cash flow</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
</tr>
<tr>
<td>Sales multiples</td>
<td>+</td>
<td>+</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
</tr>
<tr>
<td>Earnings multiples</td>
<td>+</td>
<td>+</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
</tr>
<tr>
<td>User multiples</td>
<td>+</td>
<td>+</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
</tr>
</tbody>
</table>

In Vietnam, **DCF is usually the standard approach! If possible, use different methods for cross-check**
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