Agribusiness Deal Room at the AGRF 2021
Financial Modelling Webinar

August 2021
Agenda

1. Introduction
2. Financial Statements
3. Financial Modelling
4. Valuation Methodologies
Agenda

1. Introduction
2. Financial Statements
3. Financial Modelling
4. Valuation Methodologies
Upskilling webinars are instrumental in helping enterprises prepare for investor conversations and grow their businesses.

The team will conduct up to three webinars to upskill SMEs focusing on the following topics*:

1. Understanding financial statements, forecasting, and building valuation models
2. Overview of term sheets and key clauses
3. Investment readiness including coverage of key documents such as pitch deck and investment memorandum

*These are proposed sessions and are to be confirmed.
1. Introduction
2. Financial Statements
3. Financial Modelling
4. Valuation Methodologies
Investors commonly examine three financial statements to understand a company’s performance and financial health.

Financial statements are one of the **first things investors look for** when considering an investment in a company. Financial statements reflect a company’s performance and financial health.

There are three financial statements:

<table>
<thead>
<tr>
<th><strong>Income Statement</strong></th>
<th><strong>Balance Sheet</strong></th>
<th><strong>Cash Flow Statement (CFS)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Focuses on a company’s revenue and expenses during a particular period</td>
<td>• Provides an overview of assets, liabilities, and stockholders’ equity at a specific point in time</td>
<td>• Measures how well a company generates cash to pay its debt obligations, fund its operating expenses, funds its investments and returns capital to investors (dividends)</td>
</tr>
</tbody>
</table>

When assessing a company, investors look at all three statements to understand its financial viability and their return expectations.
The income statement presents the revenue and expenses a company generates over a period of time

- The income statement presents a company's sales over a period of time (usually a fiscal year or quarter). It also presents the expenses incurred to generate these sales.
- The purpose of the income statement is to match sales with their associated expenses. Thus, the income statement is the easiest and most direct measure of a company's profit.

For management, by looking at the I/S, management can make decisions such as expanding to new geographies, accelerating sales, increasing production capacity, increased utilization or outright sale of assets, or shutting down a department or product line.

Investors will be looking at operating efficiency and key ratios used for analyzing the income statement including gross margin, operating margin (EBIT margin), and net margin.

Credit investors (lender) may find limited use of income statements as they are more concerned about a company's future cash flows.

Why the I/S is not enough on its own?
The income statement alone will not tell you whether a company generates enough cash to stay afloat or whether it is solvent. You therefore require the balance sheet to inform whether the company can meet its future liabilities, and the cash flow statement to ensure it is generating sufficient cash to fund its operations and growth.

Sample income statement (FY16)

<table>
<thead>
<tr>
<th>Line Item</th>
<th>Example items</th>
<th>Value (US$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue/Sales</td>
<td>Sale of e.g. packaged raisins</td>
<td>500,000</td>
</tr>
<tr>
<td>Cost of Goods Sold (COGS)</td>
<td>Raw fruits, packaging materials, shipping costs, plant costs (depreciation, utilities, labour)</td>
<td>(380,000)</td>
</tr>
<tr>
<td>Gross profit/income</td>
<td>Revenue – COGS</td>
<td>120,000</td>
</tr>
<tr>
<td>Operating Expenses</td>
<td>Office lease, payroll of non-production staff including mgmt., meals and travel, marketing and advertising expenses, legal expenses, product development costs, depreciation of non-core assets</td>
<td>(80,000)</td>
</tr>
<tr>
<td>EBITDA</td>
<td>Gross profit – Opex (excl depreciation)</td>
<td>40,000</td>
</tr>
<tr>
<td>Depreciation and amortization</td>
<td>From wear and tear of fixed and intangible assets</td>
<td>(10,000)</td>
</tr>
<tr>
<td>EBIT</td>
<td>All incomes and expenses (operating and non-operating) excl. interest and taxes</td>
<td>30,000</td>
</tr>
<tr>
<td>Interest</td>
<td></td>
<td>(12,000)</td>
</tr>
<tr>
<td>EBT/PBT</td>
<td></td>
<td>18,000</td>
</tr>
<tr>
<td>Taxes</td>
<td></td>
<td>(5,000)</td>
</tr>
<tr>
<td>Net income/profit</td>
<td></td>
<td>13,000</td>
</tr>
</tbody>
</table>
### There are four key profit metrics on the income statement

<table>
<thead>
<tr>
<th></th>
<th>Gross Profit</th>
<th>EBITDA</th>
<th>EBIT</th>
<th>Net Income/Profit</th>
</tr>
</thead>
</table>
| 1 | Gross profit = Revenue – Cost Of Goods Sold  
• The metric represents an initial check on the fundamentals of the business model  
• Gross profit assesses a company’s efficiency at using its labor and supplies in producing goods or services.  
• Is an initial check on the business model | Stands for Earnings before Interest Tax and Depreciation and amortization  
• EBITDA = Revenue – COGS – Operating expenses  
• EBITDA = Net income + Interest + Taxes + Depreciation & amortization  
• EBITDA can be used a proxy for operating cashflow  
• EBITDA helps you analyze and compare profitability between companies and industries, as it eliminates the effects of financing, taxation or accounting decisions. This provides a clearer indication of your earnings | Stands for Earnings Before Interest and Tax  
• EBIT = Revenue – COGS – Opex– Depreciation & amortization or  
• EBIT = Net income + Interest + Taxes  
• EBIT is an important measure of a firm’s operating efficiency  
• The metric does not take into account indirect expenses such as taxes and interest due on debts, it shows how much the business makes from its core operations | Net profit = Revenue – COGS – Opex– Depreciation & amortization – interest - taxes  
• Net profit margin helps investors assess if a company’s management is generating enough profit from its sales and whether operating costs and overhead costs are being contained |
The balance sheet captures the assets, liabilities, and shareholder equity of a company at a particular point in time.

- Items in the balance sheet all fall under the categories of assets, liabilities, and shareholder equity. **Total assets must always equal total liabilities plus shareholder equity**.
- **Assets** are resources which are controlled by the company and are useful for generating an economic benefit.
- **Liabilities** are monetary obligations that the company owes.
- **Shareholder Equity** is the total amount of money invested by shareholders and management.

- **Balance sheet** tells investors about a company’s fundamentals: how much debt the company has, how much it needs to collect from customers (and how fast it does so), how much cash and equivalents it possesses and what kinds of funds the company has generated over time.

**Why the balance sheet is not enough on its own?**
The balance sheet alone will not tell you whether the company is profitable because it is only a snapshot on a particular date. A company with few liabilities and many valuable assets could be loss making.

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**Sample balance sheet (FY16)**

<table>
<thead>
<tr>
<th>Assets</th>
<th>Liabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Line Item</strong></td>
<td><strong>Example Items</strong></td>
</tr>
<tr>
<td><strong>Current Assets</strong></td>
<td></td>
</tr>
<tr>
<td>Cash</td>
<td></td>
</tr>
<tr>
<td>Accounts Receivable</td>
<td>Credit line extended to customers</td>
</tr>
<tr>
<td>Inventory</td>
<td>Raw fruit; processed fruit etc.</td>
</tr>
<tr>
<td>Prepaid services</td>
<td>Prepaid insurance</td>
</tr>
<tr>
<td><strong>Non-current assets</strong></td>
<td></td>
</tr>
<tr>
<td>PP&amp;E</td>
<td>Land, buildings, processing equipment, depreciation</td>
</tr>
<tr>
<td>Intangible Assets</td>
<td>Client list, trade name</td>
</tr>
<tr>
<td><strong>Total Assets</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Equity</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
There are three key line items in the balance sheet

<table>
<thead>
<tr>
<th></th>
<th>Assets</th>
<th>Liabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><strong>Companies can own tangible assets</strong> e.g., computers, machinery, money, and land</td>
<td><strong>Liabilities refer to a company’s obligations to a third party</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Companies can also have intangible assets</strong> e.g., trademarks, copyrights, or patents</td>
<td><strong>Ensuring longevity of the business is based on the management’s ability to manage the various liabilities that are part of its business</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Assets</strong> are split on the balance sheet depending on ease of converting to cash:</td>
<td><strong>Like assets, the company’s liabilities are divided in 2 parts:</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Current assets:</strong> Cash and other properties owned by the company, which can be converted into cash in one year.</td>
<td><strong>Current liabilities:</strong> Financial obligations of a company that are due in no more than one year in the future</td>
</tr>
<tr>
<td></td>
<td>• Typically includes inventory goods in various stages of manufacture (raw material to finished product)</td>
<td>• The company can liquidate some of its current assets to cover these expenses</td>
</tr>
<tr>
<td></td>
<td><strong>Non-current assets:</strong> asset owned by the company that needs over a year to convert to cash or that the company does not plan to convert to cash in next year</td>
<td><strong>Long-term liability:</strong> Financial obligations of a company that are due more than one year in the future e.g., long-term loans. Although these debts must not be paid immediately, investors pay attention to them when evaluating the company</td>
</tr>
<tr>
<td></td>
<td>• Typically includes fixed assets e.g., land, buildings, machinery</td>
<td></td>
</tr>
</tbody>
</table>

**Note:** Current assets are an important indicator of the company’s financial status because they are used to cover the short-term commitments of the company’s operations. If the company suffers from a decline in its current assets, then it needs to find new means to finance its activities (such as working capital). In general, an increase in the company’s current net assets (current assets – current liabilities) means an increase in the company’s ability to maintain its growth.

<table>
<thead>
<tr>
<th></th>
<th>Equity</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td><strong>Shareholder’s equity refers to the money that was invested by shareholders plus any undistributed profits, reinvested in the company by management</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Undistributed profits are also known as retained earnings, i.e., net income held, not distributed in dividends</strong></td>
</tr>
</tbody>
</table>
The cash flow statement breaks down how much cash a company generates or uses within a given timeframe

- The cash flow statement (CFS) tracks how much actual cash a company generates within a given timeframe.
- The CFS is essential because companies need enough cash to perform their daily operations; losing sight of the cash flow statement can lead to bankruptcy.
- The cash flow statement is broken down into three different categories depending on sources (and uses) of cash: operating activities, investing activities, and financing activities.

Why the CFS is not enough on its own?
- The cash flow statement will not tell you whether a company is solvent because it could have large long-term liabilities which dwarf its cash generating capabilities.
- It does not reveal whether the company’s ongoing operations are actually profitable. Cash flow in any given period could look strong or weak due to timing rather than the underlying strength of the company’s business.

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**Sample cash flow statement (FY16)**

<table>
<thead>
<tr>
<th>1. Operating</th>
<th>Example Items</th>
<th>Value (US$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Income</td>
<td>Net income from IS</td>
<td>13,000</td>
</tr>
<tr>
<td>Depreciation</td>
<td>Depreciation of e.g. plant equipment</td>
<td>4,000</td>
</tr>
<tr>
<td>Accounts Receivable</td>
<td>Increase in AR from last BS</td>
<td>(6,000)</td>
</tr>
<tr>
<td>Inventory</td>
<td>Decrease in inventory from last BS</td>
<td>9,000</td>
</tr>
<tr>
<td>Accounts Payable</td>
<td>Decrease in AP from last BS</td>
<td>(5,000)</td>
</tr>
<tr>
<td>Operating Cash Flow</td>
<td></td>
<td>15,000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2. Investing</th>
<th>Example Items</th>
<th>Value (US$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CapEx</td>
<td>Purchase of new processing machine</td>
<td>(28,000)</td>
</tr>
<tr>
<td>Asset sales</td>
<td>Sale of office furniture and equipment</td>
<td>7,000</td>
</tr>
<tr>
<td>Investing Cash Flow</td>
<td></td>
<td>(21,000)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3. Financing</th>
<th>Example Items</th>
<th>Value (US$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Payment of long-term debt</td>
<td>Bank loan repayment</td>
<td>(2,000)</td>
</tr>
<tr>
<td>Cash dividends</td>
<td>Pay equity holders</td>
<td>(1,000)</td>
</tr>
<tr>
<td>Financing Cash Flow</td>
<td></td>
<td>(3,000)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>4. Overall</th>
<th>Value (US$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net increase in cash</td>
<td>1,000</td>
</tr>
<tr>
<td>Cash at beginning of year</td>
<td>1,200</td>
</tr>
<tr>
<td>Cash at end of year</td>
<td>2,200</td>
</tr>
</tbody>
</table>
There are three key sections in a cash flow statement

**Cash from operating activities**
- Cash flow from operating activities (CFO) indicates the amount of money a company brings in from its ongoing, regular business activities, such as manufacturing and selling goods or providing a service to customers. It is the first section depicted on a company’s cash flow statement.

  \[
  \text{Cash flow from operating activities} = \text{EBIT} + \text{Depreciation} - \text{Tax paid} + \text{changes in working capital*}
  \]

*Working capital:
  Typical components include:
  - Receivables: Cash not yet received from customers
  - Inventory: Cash that is tied up in goods/stock, work in progress and finished goods not yet sold
  - Other current assets: e.g., prepayments
  - Payables: Cash owed to suppliers
  - Other current liabilities: e.g., deferred interest

\[
\text{WC} = \text{Current Assets} - \text{Current Liabilities}
\]

**Cash from investing activities**
- Cash flow from investing activities is the cash that has been generated (or spent) on non-current assets that are intended to produce a profit in the future. Types of activities may include capital expenditures, lending money, and sale of investment securities.

  \[
  \text{Cash flow from investing activities} = \text{Purchase/sale of long terms assets (CAPEX)} + \text{Purchase/sale of other businesses (M&A)} + \text{Purchase/sale of marketable securities}
  \]

**Cash from financing activities**
- Cash flow from financing activities (CFF) is a section of a company’s cash flow statement, which shows the net flows of cash that are used to fund the company. Financing activities include transactions involving debt, equity, and dividends.

  \[
  \text{Cash flow from financing activities} = \text{Issue of new capital} + \text{Issue of new debt} - \text{repayment of debt and interest} - \text{dividend payments}
  \]
Each of the three statements are tied and flow into each other.

### Sample income statement (FY16)

<table>
<thead>
<tr>
<th>Line Item</th>
<th>Value (US$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>500,000</td>
</tr>
<tr>
<td>Cost of Goods Sold (COGS)</td>
<td>(380,000)</td>
</tr>
<tr>
<td>Gross Profit</td>
<td>120,000</td>
</tr>
<tr>
<td>Operating Expenses</td>
<td>(80,000)</td>
</tr>
<tr>
<td>EBIT</td>
<td>40,000</td>
</tr>
<tr>
<td>Interest</td>
<td>(12,000)</td>
</tr>
<tr>
<td>EBT</td>
<td>28,000</td>
</tr>
<tr>
<td>Taxes</td>
<td>(5,000)</td>
</tr>
<tr>
<td>Net Income</td>
<td>23,000</td>
</tr>
</tbody>
</table>

### Relationship between income statement and balance sheet:

- Revenue
- Expenses
- Net income

**Shows how well assets from the balance sheet are used in operations.**

**Shows the returns to capital providers (equity/liabilities) from their investment.**

### How the income statement and balance sheet flow to the cash flow statement:

**Income Statement**
- Revenue
- Expenses
- Net income

**Balance Sheet**
- Assets
  - Current assets
  - PPE
- Equity & Liabilities
  - Equity
  - Liabilities
  - A/P & Accruals
  - Debt & loans

**Statement of Cash flows**
- Cash from operating activities
- Cash from investing activities
- Cash from financing activities
There are three key groups of ratios that an enterprise should track:

**Profitability ratios**

**Profitability**: A company’s ability to generate earnings compared to its expenses

- **Gross Margin (%)**
  \[ \text{Gross Margin} = \left( \frac{\text{Sales} - \text{Cost of Sales}}{\text{Sales}} \right) \]
  - The % sales that the company retains after incurring the direct costs associated with producing the goods and services it sells.
  - Gross Margins should be calculated for each product sold by the company.

- **EBITDA Margin (%)**
  \[ \text{EBITDA Margin} = \frac{\text{EBITDA}}{\text{Sales}} \]
  - Company's profitability before deductions that are not part of the operating costs.

- **Net Profit Margin (%)**
  \[ \text{Net Profit Margin} = \frac{\text{Net Profit}}{\text{Sales}} \]
  - Bottom line view of how profitable the business is, considering both operational and additional expenses (interest, tax, depreciation/amortization).

- **Return On Equity, ROE (%)**
  \[ \text{ROE} = \frac{\text{Net Profit}}{\text{Shareholder Equity}} \]
  - ROE calculates how many dollars of profit a company generates with each dollar of shareholders' equity.

**Liquidity ratios**

**Liquidity**: A company’s ability to pay off its short-term obligations

- **Current ratio** (at least 1.0x to ensure solvency)
  \[ \text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}} \]

- **Quick ratio**
  \[ \text{Quick Ratio} = \frac{(\text{Current Assets} - \text{Inventory})}{\text{Current Liabilities}} \]
  - Refers to the ability of the company to pay for its short-term obligations (i.e., supplier invoices etc.).

- **Fixed asset cover** (at least 1.0x; ideal >1.5x)
  \[ \text{Fixed Asset Cover} = \frac{\text{Book or Market Value of Tangible Fixed Assets}}{\text{Total Debt Outstanding}} \]

**Solvency ratios**

**Solvency**: A company’s ability to meet its long-term obligations

- **Interest Coverage Ratio** ( > 1.25; ideally > 1.50 )
  \[ \text{Interest Coverage Ratio} = \frac{\text{EBIT}}{\text{Interest Expenses}} \]
  - Determines the ability of a company to pay interest expenses on outstanding debt.

- **Debt Service Coverage Ratio (DSCR)** ( > 1.25; ideally > 1.50 )
  \[ \text{DSCR} = \frac{\text{Free Cash Flow}}{\text{Total Debt Service}} \]
  - Free Cash Flow = EBITDA – CAPEX – Tax
  - Determines the ability of a company to service its total outstanding debt.

- **Net Profit Margin (%)**
  \[ \text{Net Profit Margin} = \frac{\text{Net Profit}}{\text{Sales}} \]
  - Bottom line view of how profitable the business is, considering both operational and additional expenses (interest, tax, depreciation/amortization).

- **Return On Equity, ROE (%)**
  \[ \text{ROE} = \frac{\text{Net Profit}}{\text{Shareholder Equity}} \]
  - ROE calculates how many dollars of profit a company generates with each dollar of shareholders' equity.
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3. Financial Modelling
4. Valuation Methodologies
Financial models are important decision making and negotiating tools

A financial model is a representation in numbers of a company’s operations in the past, present, and the forecasted future.

Why build a financial model?

**Decision Making**

1. A financial model is a powerful tool to inform management, strategic and budgeting decisions.
2. Decision makers can estimate the impact of their decision on the company’s financial performance.

**Scenario and sensitivity check**

1. A financial model allows for sensitivity or scenario analysis, assessing shocks on key variables.
   - These may include movement in variables such as interest rate, exchange rate, inflation, commodity price etc.

**Investor negotiation**

1. Allows the company to reflect the project or transaction accurately to investors.
2. Serves as a tool to negotiate.
3. Allows the company to quantify the value (or safety) of a debtors claims against the firms assets.
Financial modelling best practices

When building a financial model, make sure to capture the following:

**Assumptions**
1. Clearly define each assumption and group assumptions together

**Computation**
1. Keep formulae simple
2. Apply one formula per row
3. Break down calculations into bite size pieces
4. Do not use hard coding

**Presentation**
1. Keep inputs, calculations and outputs separate and ensure that they flow (Ensure that all model tabs flow from left to right, top to bottom)
2. Apply purposeful and consistent formatting
3. Present key outputs clearly in a concise output sheet

“The best financial models are simple enough for anyone to understand, yet dynamic enough to handle complex situations”
~Tim Vipond
Modelling revenue

- Sales/revenues are **key** in determining the profitability of the investment
- It is important to accurately forecast this line item as it is the anchor for several other line item forecasts

The main assumptions affecting sales/revenue forecasts include:

**Product price**

Future prices could be modelled based on:
- **Inflation adjustments** - Prices in local currency can be increased by annual inflation factor
- **Price escalation** – Prices could also be raised based on an escalation factor derived from factors such as historical trends, or other price considerations e.g. brand power

Market / historical price research is needed
Potential data sources include: Country central bank database, FAO, World Banks, **RATIN**

**Quantities sold**

- Forecasting quantities sold would be informed by factors such as
  - Yields of different crop varieties e.g., biennial yields in avocados
  - Market dynamics (market size, market share, customer segmentation etc.)
  - Production capacity depending on the nature of the business and/or product

**Seasonality of crops**

- High / low season pricing or crop fruiting may cause significant variability in monthly volumes sold hereby affecting the WC requirements and cash flow position of the business
Modelling costs

Costs are broken down into:

1. **Cost of goods sold (COGS)**
   - This refers to the direct costs of producing the goods sold by a company. It includes the cost of the materials and labor directly used to create the good.

2. **Overhead costs**
   - Refers to the amount it costs to run the business, including rent, insurance, and utilities.
   - These expenses cannot be directly traced to the production of a product or service.

1. **Cost of Goods Sold (COGS)**

   There are 2 commonly used approaches to modelling costs:
   
   i. **Absolute**
      - Breakdown **cost categories** and focus on the fundamentals of the 2-3 cost items that form 80-90% of cogs (per unit). Non-material costs can be bundled together as other direct costs.
      - Use historical pricing, inflation factors, currency devaluation dynamics, price escalation factors etc. to forecast future costs per unit.
   
   ii. **Relative**
      - Use **historical gross margins** to back calculate cost of goods sold (COGS).
      - Apply factors such as improvement in cost synergies through bulk discounts, economies of scale, etc. for accurate projections.
      - You may use gross margin data from **comparable companies** to sense check your projections.
Modelling costs

2. Overheads

- Similar to COGS absolute approach, overheads can be modelled using historical or relative approach as well, for example:
  - Marketing expense, sales and distribution can be forecasted as a % of revenue
  - Staff costs (forecast new hires, and average salary and then grow these at the inflation rate)
  - G&A (historical costs, grow at inflation)

- Ensure the following are properly captured in order to model your overheads accurately:
  
  - **Direct Costs of Sales** in overhead
    - Any costs directly related to production, processing, and selling of goods should **not** be allocated as overhead.
    - If these costs remain in overhead, they will distort the gross margin result and mislead on the profitability of the products sold

  - **Scalability** of overheads
    - If the model begins with a start-up phase, it is essential to **size up** the overhead to meet the growing operations.

  - **Currency** of overhead – Identify the overhead costs that are in local currency vs those that are in hard currency (i.e. USD). This will reflect the impact of local currency **movements** into the overhead
Overview

The goal of CAPEX and Depreciation modelling is to present in the Financial Statements the following:

i. Depreciation → P&L/Income statement
ii. Capex → Cash Flow Statement
iii. Gross PPE and Accumulated Depreciation → Balance Sheet
iv. Calculate related metrics

1. Modelling CAPEX:

The aim is to model **CAPEX** maintaining a **dynamic** model, and avoiding hard coded figures

- Inputs should be driven by fundamental figures e.g.

  - **Land**
    - Break this into number of acres, price per acre, target purchase date etc

  - **Motor Vehicles**
    - If a substantial line item, break it down into number of vehicles, price per vehicle, target purchase date, etc

- Another approach to modelling CAPEX would be using **historical ratios** e.g., ROA, CAPEX as % of revenue

- A simplistic approach is assuming that capex is **spread out over the year**, but this can lead to an underestimation of monthly cash requirements
2. Modelling Depreciation:
- The simplest assumptions is using the **straight-line** method and **fully depreciated** (nil disposal value)
- Key inputs are:

  **i. Asset costs (gross PPE)**
  - Refers to total asset expenditure before depreciation, calculated using historical costs (assets are reported at the original purchase cost)
  - **Current gross PPE = Previous Period Gross PPE + Period Capex – Period Disposals**

  **ii. Asset category useful life in years**
  - Is an accounting estimate of the **number of years** an asset is likely to remain in service for the purpose of cost-effective revenue generation
  - It is used to calculate **% depreciation per period** e.g., 5-year useful life translates to 20% depreciation per annum

  **iii. Period Depreciation**
  - This is the amount of depreciation charged in the income statement
  - **Period depreciation = (Previous period Gross PPE + Capex current period – fully depreciated assets)*Asset % depreciation**
Modelling debt and interest

- The goal of debt modelling is to present in the Financial Statements the following:
  i. Outstanding balance → Balance sheet
  ii. Interest costs → Profit or loss/ Income statement
  iii. Principal drawdown and principal and interest repayment → Cash flow statement

- Considerations for debt modelling:

<table>
<thead>
<tr>
<th>Item</th>
<th>Considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principal</td>
<td>• Number of disbursements          • Seasonal vs equal repayment</td>
</tr>
<tr>
<td></td>
<td>• Grace periods</td>
</tr>
<tr>
<td>Tenor</td>
<td>• Start date                       • End date</td>
</tr>
<tr>
<td>Coupon/interest</td>
<td>• Compounding frequency           • Interest</td>
</tr>
<tr>
<td></td>
<td>• Grace periods</td>
</tr>
<tr>
<td>Other</td>
<td>• Fees (Arrangements, commitment, legal fees, other)</td>
</tr>
<tr>
<td></td>
<td>• Debt Service Reserve Account (DSRA)</td>
</tr>
<tr>
<td></td>
<td>• Covenants (Gearing, DSCR, etc.)</td>
</tr>
</tbody>
</table>
Overview

Working capital refers to the operating liquidity available to a business

\[
\text{Working Capital} = \text{Current Assets} - \text{Current Liabilities}
\]

The strength of a company's working capital can be calculated using the current ratio

\[
\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}
\]

The higher the ratio, the greater a company's flexibility to expand operations.

The ideal ratio depends on your industry and particular circumstances. If it is less than 1:1, this usually means a company is struggling to pay its bills. Even when the ratio is higher than 1:1, you may have difficulty, depending on how quickly you can sell inventories and collect accounts receivable.

A ratio of 2:1 usually provides a reasonable level of comfort.
Modelling Working Capital

- The change in opening / closing balances of each WC element represents the **movements in working capital**
- These changes are linked to the **cash flow movements** in working capital discussed earlier

**How to think about movements in working capital**

<table>
<thead>
<tr>
<th>Payables</th>
<th>Receivables</th>
<th>Inventory</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Payables</strong> is a <strong>current liability</strong> and is the cash not yet paid to suppliers</td>
<td><strong>Receivables</strong> is a <strong>current asset</strong> and is the cash not yet received from customers</td>
<td><strong>Receivables</strong> is a <strong>current asset</strong> and is the cash not yet received from customers</td>
</tr>
<tr>
<td>An <strong>increase</strong> in payables results in an <strong>increase</strong> in cash available and vice versa</td>
<td>An <strong>increase</strong> in receivables results in a <strong>decrease</strong> in cash available and vice versa</td>
<td>An <strong>increase</strong> in inventory results in a <strong>decrease</strong> in cash available and vice versa</td>
</tr>
<tr>
<td><strong>Payables</strong> = (payable days/360) * COGS</td>
<td><strong>Receivables</strong> = (receivable days/360) * credit sale (Revenue may be used as a proxy)</td>
<td><strong>Inventory</strong> = (inventory days/360) * COGS</td>
</tr>
</tbody>
</table>

- A simplistic approach to modelling working capital is looking at the **historical** receivables period, payable period and inventory period and using these to **inform forecasts**
Agenda

1. Introduction
2. Financial Statements
3. Financial Modelling
4. Valuation Methodologies
Intrinsic and relative valuation approaches provide a comprehensive perspective to a company’s value

- Valuation is the process of determining the current worth of a business, using objective measures, and evaluating all aspects of the business
- There are 2 main valuation methodologies: **Intrinsic and Relative valuation**
- While intrinsic valuation is derived from the fundamental analysis of the company’s cash flow generation potential, relative valuation (comparables) is derived by comparing a company and comparable peers

### Relative Valuation
- Public listed companies (Trading comparables)
- Precedent transactions (Transaction comparables)
- Supplemented by research into industry valuation trends in relevant geographies and sectors

### Intrinsic Valuation
- Discounted Cash Flow (DCF)
- Net Present Value (NPV) of Earnings

Assume you want to buy a car, to decide a fair price to pay, you could compare with the relative value of comparable cars on the market

...or you could determine a price based on a cash flow analysis that considers the present value of all rental income the property can generate.
# An overview of the different valuation methodologies

<table>
<thead>
<tr>
<th></th>
<th>Relative valuation</th>
<th>Intrinsic valuation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Public listed companies</td>
<td>Precedent transactions</td>
</tr>
<tr>
<td>Core approach</td>
<td>Use valuation multiples of similar companies that trade publicly</td>
<td>Use valuation multiples from PE transactions in similar regions and industries</td>
</tr>
<tr>
<td><strong>Overview</strong></td>
<td>Simple to employ</td>
<td>Directly leverages future expectations</td>
</tr>
<tr>
<td><strong>Benefits</strong></td>
<td>Firms often operating at a much later stage in more developed markets, trading at higher multiples</td>
<td>Difficult to find sufficient information on comparable transactions, esp. for smaller ticket-size deals</td>
</tr>
</tbody>
</table>
Go ye forth and model!
Discussion
Supplementary knowledge resources

- **SMART** Principles ([http://www.corality.com/smart](http://www.corality.com/smart))
Q&A Session
Please email dealroom@agra.org if you have any follow up questions