WEEK 1: INTRODUCTION

**Merger:** The *combination* of two or more entities, where one loses its corporate existence through the business transaction. Merger of equals requires greater compromise.

**Acquisition:** The shares or control of a company is taken over by an entity that did not previously possess that shareholding/control. Consider which firm has larger market cap, and the bargaining power they are afforded, and whether friendly or hostile.

- M&A is a means by which companies can respond to changing economic, industry and market conditions

**Corporate strategy: what are we trying to achieve?**
- Strategic objectives are the goals and purposes of the firm, which set its direction.
- Corporate strategy is the way a firm operates to fulfil its mission and strategic objectives (goals).
- The main objective of corporate strategy is *value creation* in the interests of shareholders. Companies create value through increased revenue, cost savings, stable cash flows (risk management), future growth, future strategic positions, financial, regulatory/tax considerations.
- The “build or buy” decision: *organic vs. inorganic growth* → creating value via *internal* investment; or investing in an *external* party’s resources and capabilities to create value.
- Strategic Growth: long term positioning of an organisation to create/maintain sustainable competitive advantage, not just for the sake of growth.

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<th><strong>Horizontal Merger:</strong> merger between firms in the same industry and compete within the same product space</th>
<th><strong>Rationale:</strong> Create efficiencies through basic economies of scale [reducing fixed costs]. Economies of scope [reducing per-unit costs] through greater distribution network</th>
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| Common in concentrated, oligopoly, mature markets where significant mergers involve a *loss of competition* and often *reduce consumer welfare* through anti-competitive nature [however, arguably, the reduced costs that may be passed on to consumers could mitigate this] | **Synergies:**
- Consolidation of facilities and reduction in inventory
- Savings from volume purchases – greater bargaining power
- Rationalisation of admin/corporate functions
- Exploit increases market power via ↑ prices |
| **Vertical Merger:** merger between firms that contribute to different parts of the supply chain | **Risks:**
- Anti-trust issues
- Consumer welfare |
| **Upstream:** backward integration: Company purchasing supplier of inputs, e.g. Apple acquiring FoxConn. | **Rationale:** create cost efficiencies/synergies through control over key components of the supply chain |
| **Downstream:** forward integration: Acquiring a distributor/supplier closer to end user, e.g. Mattel acquiring Toys R Us. | **Synergies:**
- Increased control over inputs, improved supply chain coordination – better adjust production, ability to capture upstream/downstream profit margins |
|  |
|  |
|  |
|  | **Risks:** loss of innovation and diverse supply choice |
Evaluating the Outcomes of Mergers and Acquisitions

- Evidence suggests that around the time of announcement, target shareholders benefit significantly from cash or scrip acquisitions, while acquirers tend to earn the cost of capital.
- Share price is used because it is a transparent measure of value over time, although query whether liquidity of the stock affects value created, and this presumes the market is rational.
- The impact of M&A on the firm can be isolated from external effects through event studies that determine abnormal returns.

**Residual analysis:** testing whether the returns to firms during M&A is greater or less than what regular risk-return analysis (CAPM) would predict.

Measuring returns from M&A: difficult to measure only the value of the deal and exclude other factors.

- Metric must be objectively measure increase (decrease) in value.
  - Value conserved: required return on equity = actual return; project breaks even – NPV = 0.
  - Value created: actual return exceeds RROE; NPV > 0.
  - Value destroyed: actual return is less than RROE; project has returned less than on an investment of similar risk even if it has not lost money.

| Conglomerate: bringing together companies with unrelated products and services | Rationale: usually about risk-management via diversification of risky cash flows (research issue surrounds whether it is better for investors to diversify themselves vs. investing in a diversified conglomerate like Westfarmers) Synergies: sharing infrastructure (cost reduction), leverage balance sheet to benefit from flexibility (invest in faster growing segments), access to greater distribution networks and customer bases, reduce corporate cost duplication (implement management best practice) Risks: query whether any real benefit from conglomeration accrues to firm |
| Cross-Border: corporate acquisitions across countries | Synergies: expand product distribution with existing networks, profit from access to emerging or new markets Risks: regulatory process may delay opportunity and anti-foreign investment sentiment may hinder ability to invest overseas |
| Blurred Mergers: companies in similar industries whose supply chains complement each other’s different product distribution | Synergies: cheaper cross-network distribution, access to different markets – leverage customer base Risks: difficult to measure tangible benefit from distribution synergies, tend to be revenue based which are more speculative than cost synergies |
To best isolate impact of M&A, examine abnormal returns around takeover using an event study. Measuring M&A in efficient markets:

1. **Weak form efficiency**: measure returns by considering *whether share price has improved* after the event. Does not control for external or internal factors, so it is highly subjective.
2. **Semi-strong form efficiency**: measure returns by considering *whether returns to shares have exceeded a benchmark*. More objective, but dependent on the validity of the benchmark.
3. **Strong-form efficiency**: measure returns by considering *whether returns to shares would have exceeded prices without the deal*. This is impossible to measure.

Longer period captures more of effect of takeover, but subject to more noise.

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**Expected return**: Take a clean period of normal returns for the firm to determine normal returns.
- Compare with returns from the event window period.

**Benchmarks**: A number of benchmarks can be used to estimate the return to the firm in a ‘normal’ period.

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<th><strong>Mean-Adjusted Return</strong></th>
<th>Comparing returns during the event period to the firm’s average daily returns during the <em>clean period</em> (on any given day in absence of event), that’s what company is expected to do.</th>
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<td>i.e. E(r) = the returns to the firm during the ‘clean’ period. This is suboptimal because historical performance may not be a true reflection of future performance, and obviously it does not take into consideration market sentiment or other events that affected the firm during either period. Also assumes beta = 1, and alpha = 0.</td>
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<th><strong>Market-Adjusted Return</strong></th>
<th>company where price is very volatile (hard to identify a <em>clean period</em>, mean adjusted return isn’t that meaningful). Use market adjusted return instead, what we expect company would have done is equal to what the market would have done (market up by 1% = company up by 1%).</th>
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<td>i.e. using CAPM, E(r) predicts the return of the firm during the event period, where ( \alpha = ) mean return unexplained by market. This takes into consideration the risk associated with market and mean returns.</td>
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**Other control samples**: Other companies can form industry-level benchmarks if the company does not match the movements of the market. For example, if
Consider volatility of stock across the history of M&A and multiple deals (average reaction)

- Mean-adjusted return = USYD event return – USYD clean return = 10% - 12% = -2%
- Market-adjusted return = USYD event return – market clean return = 10% - 15% = -5%
- Market-model return = USYD event return – [4% + 2*5%] = 10% - 14% = -4%

Calculating Abnormal Returns

- The residual is found by subtracting the actual realised return from the benchmark.

\[
\text{Residual} = \text{actual return} - \text{expected return}
\]

\[
r_{jt} = R_{jt} - \hat{R}_{jt}
\]

Average Residual Returns

\[
AR_t = \frac{\sum_{j} r_{jt}}{N}
\]
- Consider volatility of stock across the history of M&A and multiple deals (average reaction)
  - Find the average between the abnormal returns of each M&A deal
- Averaging across large numbers of firms mitigates noisy components of returns

Cumulative Average Residual (CAR)

\[
CAR = \sum_{t=1}^{t} AR_t
\]
- CARs for successive days over event period
- Shows average total effect of event across all firms over event period (aggregate M&A, not only one) - aggregate returns over time

Absolute Gains (ΔW)

- Calculate wealth creation from before M&A and after M&A
  - Absolute dollar gain or loss at time ‘t’ due to abnormal return during event period
  - Put $ figure on effect of M&A
- \( \Delta W_t = CAR_t \times MKTVAL_0 \)
  - \( MKTVAL_0 = \text{market value of firm at date } m \) (before event window interval)
  - \( CAR_t = \text{cumulative average residual returns } (%) \) to date ‘t’ for firm

Statistical Significance:

- Null hypothesis that \( CAR = 0 \); event does not affect returns; or
- Alternate hypothesis that \( CAR \neq 0 \); event affects returns.
  - Use standard deviation to check at 5%/1% levels of confidence.

Empirical evidence

CARs around takeover announcements:
- Target: Significant positive impact on share price/ Acquirer: Some loss for acquirer

United States, United Kingdom and Europe

- Target: in the short-term, targets make significant positive gains
- Acquirer: small or insignificant gains. Long term: loss of wealth.