Corporate Finance: Mergers and Acquisitions

Acquisition: A company buying part of another company. Acquisition involves buying a business segment or subsidiary from another form.
When acquirer absorbs 100 percent of the target firm then the acquisition is **Merger**.

Forms of Integration:

Statutory merger: Acquiring Company acquires all of the target's assets and liabilities, there by the smaller target cease to exist.

Subsidiary merger: Target Company becomes subsidiary of the acquirer. When target have stronger brands associated with them acquirer may choose to continue target as a subsidiary than consolidating into acquirer's whole business entity.

Consolidation: Both companies cease to exist and form a different company. When two equal partners in size merge, they consolidate into one new company.

Types of Mergers:

Horizontal Mergers happen when two competitors in similar / same businesses merge together.

Vertical Merger is an acquirer moving upwards (towards consumer service) or downwards (towards Raw material supplier) in the supply chain to acquire target firm.

Conglomerate merger is merger between two companies from two different industries. Often synergies realized from these mergers are very little other than diversifying the revenue stream.

Motivations for mergers:

Synergies: combined Company worth more than individual companies. Cost reductions are major reason for horizontal mergers. Reduced competition, cross selling products, increased markers, and pricing power are parts of the synergies realized during mergers. In micro economic sense, reduction in fixed costs (eliminating duplicating costs like IT infrastructure, R&D, marketing, sales force reduction), average total cost per unit produced is reduced there by realizing economies of scale.

Rapid growth: Revenue growth can be achieved much faster through merger than organic growth. This is more common in the matured firms.

Increased Market Power: In horizontal mergers it is less competition after the merger and there by increased pricing power. In vertical mergers there is less reliance on suppliers and vendors, and increased product quality.

Acquire unique capabilities: best business practices can be learned from target resources and can leverage knowledge base associated with target firm.

Diversification of cash flow: this can be realized during conglomerate mergers, often not beneficial for share holders. Instead share holders can buy different company socks themselves.

Bootstrapping EPS: when high PE acquirer purchases low PE target firm with stock then PE for acquirer will go lower after the merger.

Personal benefits for agents: Executive salaries are highly correlated with size of the company, there by great incentive for mergers at the expense of shareholders and employees.

Tax benefits: When acquire with large taxable income acquires a target with carry forward tax liabilities, acquirer can use tax liabilities to offset taxable income.

Unlocking hidden value: Acquirer may buy struggling company and reorganize to take advantage of hidden value of assets.

International business Expansion:

To take advantage of market inefficiencies in the developing world.
To work around government policies towards foreign firms.
Product differentiation
International markets

Merger motivations and Industry life cycles:

Pioneer / Development phase: Products are still infant stage. Industry needs large capital to expand. May seek to merge with industry leaders for leadership, management skills needed to grow. Horizontal and conglomerate mergers are common at this stage.

Rapid growth phase: High profit margins and accelerated growth are common. Products are accepted by market, large capital is needed for expansion needs. Mergers with matured firms and conglomerates are common in this stage.

Mature Growth Phase: new competition reduces industry profits. Growth is above average. Mergers are motivated by operational efficiencies, economy of scale for pricing power. Horizontal and vertical mergers which increase synergies are common at this stage.

Stabilization phase: Competition eliminates growth potential; rate of growth is in line with rate of GDP. Mergers allow economy of scale to compete with lower cost of structure. Horizontal mergers are common where stronger acuire weaker for market share and lowest costs.

Decline phase: All three types of mergers make sense. Over capacity, declining margins, decline in product demand are characteristics of this stage. Horizontal mergers to survive, vertical mergers to increase operational efficiencies and conglomerate mergers with smaller firms for new growth opportunities are common in this stage.

Form of acquisition:

This could be stock purchase or asset purchase.
In stock purchase, the target share holders receive either cash or stock of the acquirer's stock. In asset purchase, payment is made to target and target pays any taxes associated with asset sale.

Pre-offer and post-offer defense mechanisms:

Pre-offer defense mechanisms:

Poison Pill: Highly effective pre-offer defense mechanism, where current share holders have right to purchase additional shares at extremely low prices which dilutes ownership and makes acquisition very expensive. In flip-in pill provision target share holders have right to buy target shares at discount and in flip-out provision target share holders have right to buy acquirer's shares at lower price. In friendly merger, target's directors redeem the poison pill.

States with restrictive laws: Certain state laws make harder for acquirer's to get into hostile bid for target companies.

Staggered Board: Board of directors were split into three groups and have staggered system, which reelects third of the directors every year. This will take at least two years for acquirer to get majority of the directors on the board.

Super Majority Provision: Simple majority is not enough to get approval.

Fair price amendment: Certain formula or independent appraisal is required to determine the fair price for target acquisition.

Golden Parachutes: Lucrative cash payouts to target company executive if they leave the target firms.

Post-Offer Defense Mechanism:

"**Just Say No**": Disagree with acquirer and make case for disapproval at proxy battle.

Litigation: Law suit against acquirer to delay the process while getting ready for other defense mechanisms.

Greenmail: Payoff potential acquirer to terminate hostile takeover.

Share repurchase: tender offer for its own targets shares, forces acquirer to raise the bid. Acquiring own shares with debt decreases the equity and target may look less attractive to acquirer.

Leveraged recapitalization: Target acquire large portion of debt and buy its own shares.

Crown Jewel defense: Target may sell it's a subsidiary or major asset to third party to avoid acquisition. This process may create legal issues after hostile bid is announced.

Pac-man defense: Target turns around and tries to buy the acquirer itself. BHP Billiton tried to buy the acquirer Rio Tinto is a classic example.

White-Knight defense: Third party gets into bidding war with acquirer to acquire the target company. Often it is called "Winners Curse".

White-Squire Defense: A friendly third party acquires minority stake in the target firm make it harder for acquirer to get majority share holders votes.

Herfindahl-Hirschman Index (HHI): Sum squared market share in the industry is called Herfindahl Hirschman Index (HHI) .

$$\textbf{HHI} = \sum_{i=1}^{n} (MS_i x 100)^2$$

MS_i = Market share of firm i.
n = Number of firms in the Industry.

HHI < 1000 Competitive Industry; No regulatory issues

HHI between 1000 and 1800; Industry is moderately competitive
If change in post merger HHI is more than 100 then merger may likely challenged.

IF HHI $\geq$ 1800; Industry is highly concentrated
If change in post merger HHI is greater than 50 then merger is scrutinized by regulatory authorities.

How to value a Target?

1. Discounted cash flow analysis
2. Comparable company Analysis
3. Comparable transaction Analysis

Discounted free cash flow Analysis:

1. Determine type of free cash flow analysis like two step or three step analysis:
2. Develop pro-forma financial estimates.
3. Calculate free cash to firm (FCFF) using adjusted WACC due to merger.
   FCFF = NI + DEP + INT (1-t) + Deferred taxes – changes working capital – Capital Expenditures.
4. Calculate terminal free cash flow using estimate constant growth.
   Terminal Value = $\frac{FCFF_T(1+g)}{(WACC_{adj}-g)}$ also be calculated as $FCFF_T * \frac{P}{FCF}$
5. Calculate value of the firm by discounting all future cash flows including terminal value with adjusted WACC.

Comparable company Analysis:

1. Identify a group of comparable firms in the industry
2. Measure equity multiple such as P/E, P/B and P/S for all those companies and get average ratios.
3. Now multiply with target firms EPS with average P/E, book value with and average P/B and target sales with an average P/S and get average of all three values to asses the appropriate pre acquisition value of the target.
4. Then estimate average recent take over premium in the industry.
   Take over Premium TP = (DP-SP) / SP
   Where DP = Deal price, SP = Stock price prior to the deal.
5. Multiply target appropriate value (from step 3) with average take over premium.

Post Merger value, Gains to acquirer and Target:

Value of the combined company after Merger

$V_{AT} = V_A + V_T + S - C.$

V_{AT} = Post merger company (Acquirer and Target)

V_A = Value of Acquirer
V_T = Value of target
S = Synergies created by merger
C = Cash paid to target holders

Gains accrued by Target
Take over Premium (TP) = Price paid to Target - V_T Value of Target.

$TP = P_T - V_T$

Gains Accrued by Acquirer = Synergies – TP

$= S - (P_T - V_T)$

When acquisition is with stocks then target share holders do not get cash but shares from ***combined company.***

Here the price of the Target is $P_T = (N * P_{AT})$

N = Number of new shares target gets.
P_{AT} = Share price after the transaction

Effect of Payment methods:
Cash Offers: Acquirer assumes all risks and rewards; gain from take over is limited to premium paid for target share holders and unchanged. While acquirer enjoys the reward from synergies also suffers if estimated synergies are not realized.

Stock offer: When stock is paid to target' share holders Target share holders also bear the risk associated with merger. If expected synergies are certain and when acquirer has confidence in the merger, acquirer prefers cash transaction and target negotiate for share purchase.

Empirical evidence: Historically target gains 30 % after the merger announcements, and target loose 3%, and in long run 60 % of acquirers lag their peers three years after the merger. This is due to over estimation of future realized synergies and winners curse due to bidding wars.

Divestitures: Liquidating, spinning off a division or a subsidiary.

Equity Carve out: Create a new independent company by giving equity interest to outside share holders. Shares of the subsidiary issued in IPO and will be an independent company.

Spin-offs: Similar to Carve outs, but shares not issued to public. However shares proportionately distributed to parent share holders. Spin-off Company operates separately from parent company.

Liquidations: Break up the firm and sell assets individually, often happen during bankruptcy.

Reasons for divestitures:
Division is no longer core competencies, lack of profitability, cash generated by non productive divisions, and some times broken parts are worth more than one .