**Chapter 14 Suggested answers to discussion questions in class**

1. **What is process setting up M&A model?**

Table 14.2

 *Step 1*: Construct historical financials for both Acquirer and Target and determine key value drivers

* Collect and analyze historical data to understand the key determinants (“key value drivers”) of each firm’s historical financial performance
* “Normalize” (i.e., remove anomalies) historical data for forecasting purposes
* Build historical financial accounts including income statement, balance sheet, and cash flow statements

*Step 2:* Project Target and Acquirer financials and estimate stand-alone values

* Determine assumptions for each key input variable to the model
* Input assumptions into the model to project financials
* Select appropriate WACC and terminal period assumptions to estimate stand-alone values

*Step 3:* Estimate value of Newco, including synergy and deal terms

* Estimate synergy and investment required to realize synergy
* Project Newco financials, including the impact of synergy and deal terms
* Select appropriate WACC and terminal period assumptions to value Newco

*Step 4:* Determine appropriateness of Target offer price and Newco’s posttransaction capital structure

* Compare the offer price with the estimated value of synergy and recent comparable deals
* Compare projected credit ratios with industry average ratios
* Determine impact of the deal on Newco’s EPS d. Determine if the deal allows Newco to meet or exceed required financial returns
1. **Second step is to estimate stand alone value. What is that?**

The stand-alone value of Target is theoretically what the business would be worth as a going concern (i.e., in the absence of any takeover bid); Acquirer’s standalone value represents a reference point against which the value of the combined businesses (Newco) must be compared. It makes sense to Acquirer shareholders to do the deal only if the value of Newco exceeds the value of Acquirer as a stand-alone (or going concern) business. The valuation of the combined businesses should reflect not only the sum of their stand-alone values but also the incremental value of synergy and the deal terms.

1. **How to determine the offer price?**
* The offer price is considered appropriate if the net present value (NPV) of the investment is greater than or equal to zero. NPV is defined as the difference between the present value of Target plus anticipated synergy and the offer price including any transaction-related expenses.
* Acquirer’s post transaction capital structure is suitable only if it can be supported by the future cash flows, if it does not result in a violation of current loan covenants or desired credit ratios, if it does not jeopardize the firm’s credit rating, and, for public companies, if EPS is not subject to sizeable or sustained dilution.
1. **What is a merger transaction?**

A merger transaction is similar to a stock purchase in that the buyer will acquire all of Target company’s assets, rights, and liabilities (known and unknown) and will be unable to specifically identify which assets and liabilities it wishes to assume. In contrast, in an asset purchase, the seller retains ownership of the firm’s shares and only assets and liabilities that are specifically identified in the purchase agreement are transferred to the buyer. All other assets and liabilities remain with the seller.

A merger involves the mutual decision of two companies to combine to become a single legal entity and generally involves two firms relatively equal in size, with one disappearing. All Target assets and liabilities, known and unknown, automatically transfer to Acquirer. Target shareholders usually have their shares exchanged for Acquirer shares at some negotiated share-exchange ratio (SER), for cash, or some combination.

1. **What is a stock purchase?**

A stock purchase usually involves the purchase of all the shares of another entity for cash or stock. However, Acquirer may purchase less than 100% of Target’s outstanding shares as all shareholders may not agree to sell their shares. As in a merger, Target’s assets and liabilities effectively transfer to Acquirer without interruption. However, unlike a merger, Acquirer may be left with minority Target shareholders and Target may continue to exist as a legal subsidiary of acquirer.

1. **What is deal term?**

Deal terms refer to the amount and composition of the form of payment (usually cash, stock, or some combination) for Target, whether Acquirer is purchasing the stock or assets of Target (form of acquisition), the number of shares being acquired, and how it is being financed. The amount of the purchase price will affect what has to be financed by borrowing, using excess cash balances, or issuing some form of equity consideration (i.e., common stock, preferred stock, or warrants). Such factors will impact interest expense on the income statement and goodwill, cash balances, and shareholders’ equity on the balance sheet

1. **Synergy examples**
* Common sources of value include potential cost savings resulting from shared overhead, elimination of duplicate facilities, better utilization of existing facilities (i.e., economies of scale), and minimizing overlapping distribution channels (e.g., direct sales forces, websites, agents).
* Other sources of value include cross-selling of Acquirer’s products to Target’s customers and vice versa.
* Potential sources of value also include land and “obsolete” inventory and depreciated equipment whose value has been written down to zero. Such inventory can still be discounted and sold to raise cash and fully depreciated equipment can still have a useful life.
* Underutilized borrowing capacity or significant excess cash balances also can make an acquisition target more attractive.
* The addition of Target’s assets, low level of indebtedness, and strong cash flow from operations could enable the buyer to increase substantially the borrowing levels of the combined companies.
* Other sources of value include access to intellectual property (e.g., patents and trade names), new technologies, and new customer groups. Likewise, income tax losses and tax credits also may represent an important source of value by reducing the combined firms’ current and future tax burden.
1. **Examples of “negative synergy”**
* Factors destroying value include poor product quality, excessive wage and benefit levels, low productivity, high employee turnover, and customer attrition.
* A lack of or badly written contracts often result in customer disputes about terms, conditions, and amounts owed.
* Verbal agreements made with customers by the seller’s sales representatives may become unprofitable obligations for the buyer.
* Environmental issues, product liabilities, and unresolved lawsuits are also major potential destroyers of value for the buyer.
1. **After completing the model, you also need to check credit ratio. How?**

Investors often use such comparisons to assess a firm’s solvency and liquidity.

* Check Newco’s project debt burden (debt-to-total capital ratio).
	+ The higher the debt-to-total capital ratio relative to the industry average, the more investors will become concerned about the potential insolvency of the firm
* Check Newco’s ability to repay its debt (interest coverage ratio). (i.e., the likelihood the firm will be unable to pay its outstanding debt if liquidated).
	+ Investors could view the liquidity of a firm with a low interest coverage ratio compared to the industry as problematic.
1. **What is share exchange ratio (SER)?**

The exchange of Acquirer’s shares for Target’s shares requires the calculation of the appropriate SER. The SER can be negotiated as a fixed number of shares of Acquirer’s stock to be exchanged for each share of Target’s stock. Alternatively, SER can be defined in terms of the dollar value of the negotiated offer price per share of Target stock (POP) to the dollar value of Acquirer’s share price (PA).

1. **Total target shares include marketable target shares outstanding and what else?**

The number of new Acquirer shares that must be issued to complete a deal also is affected by such derivative securities

* as options issued to Target’s employees (check 10k for details)
* Warrants (check 10k for details)
* convertible securities (check 10k for details)

----- Refer to WSP chapter 8 video clip #18

1. **What is the definition of “fully diluted shares outstanding”?**

 The number of Target’s “basic” shares outstanding (i.e., pre-transaction shares outstanding) plus the number of shares represented by the firm’s “in-the-money” options, warrants, and convertible debt and preferred securities.

Basic shares are found on the cover of a firm’s most recent 10Q or 10K submission to the SEC. Options and convertible securities information can be found in the firm’s most recent 10K.

1. **How much is the transaction cost?**

Transaction expenses often approximate 3%–5% of the purchase price, with this percentage generally decreasing for larger deals.

* Financing-related expenses for M&As can equal 1%–2% of the dollar value of bank debt and include fees for arranging the loan and for establishing a line of credit.
* Fees for underwriting nonbank debt can average 2%–3% of the value of the debt.
* Non-financing related fees often represent as much as 2% of the purchase price and include investment banking, legal, accounting, and other consulting fees.
1. **Asset purchase ---- Skipped**