CHAPTER II

LITERATURE REVIEW

2.1 Acquisitions

Over the last 20 years, mergers and acquisitions activity has been one of the chief methods for organizational growth (Gadiesh et al, 2005). Firms acquired or merger with other firms because of variety of reasons, the most prevalent in recent years being growth through external rather than internal means (Solovan, 2004). There are several ways in which a firm can be acquired by another firm (Damodaran, 2001):

1. Merged: Target firm becomes part of acquiring firm
2. Consolidation: Target firm and acquiring firm combine to become new firm
3. Tender Offer: Target firm continues to exist as long as there are dissident shareholders holding out.
4. Acquisition of assets: Target firm remains as a shell company, but its assets are transferred to the acquiring firm. Unlike tender offer, formal vote by the shareholders of the firm being acquired is still needed.

A firm could also be acquired by its own management or by a group of investors, with a tender offer mechanism. After this transaction, the acquired firm can cease to exist as publicly traded firm and become private business. These acquisitions are called management buyouts if managers are involved and leveraged buyouts if the funds for tender offer come predominantly from debt.

2.2 Reasons for Acquisitions

2.2.1 Profitability of Acquisitions

Drawing from many earlier studies using large samples of observations, it can be concluded that acquisitions does pay on average (Bruner, 2005). M&A clearly pays for shareholder of target firms. Most studies of targets and buyers combined indicate that these transactions create net value. For bidders alone, two-thirds of the studies conclude that value is at least conserved if not created. The reality appears to be that the bulk of all M&A transactions is associated with financial performance that at least compensates investors for their opportunity cost; buyers tend to earn an adequate return, but no more (Bruner, 2005).

2.2.2 Motivations for Acquiring

Acquisition strategies need to be based on following motives (Damodaran, 2001):

1. Acquire undervalued firms: The acquirer gain the surplus difference between the value and the purchase price, which is at discount because the firm is undervalued.
2. Diversify to reduce risk: In a private firm, the owner may acquire other firms in other businesses to diversify risks.
3. Create operating or financial synergy. Synergy is a stated motive in many acquisitions. The existence of synergy implies that the combined firm will become more profitable or grow at a faster rate after the merger than will the firms operating separately.

2.3 True Value of Acquisition

In today's market, the purchase price of an acquisition will nearly always be higher than the intrinsic value of the target company. An acquirer needs to be sure that there are enough cost savings and revenue generators –synergy value – to justify the premium so that the target company's shareholders don't get all the value that the deal creates (Eccles et al, 1999).

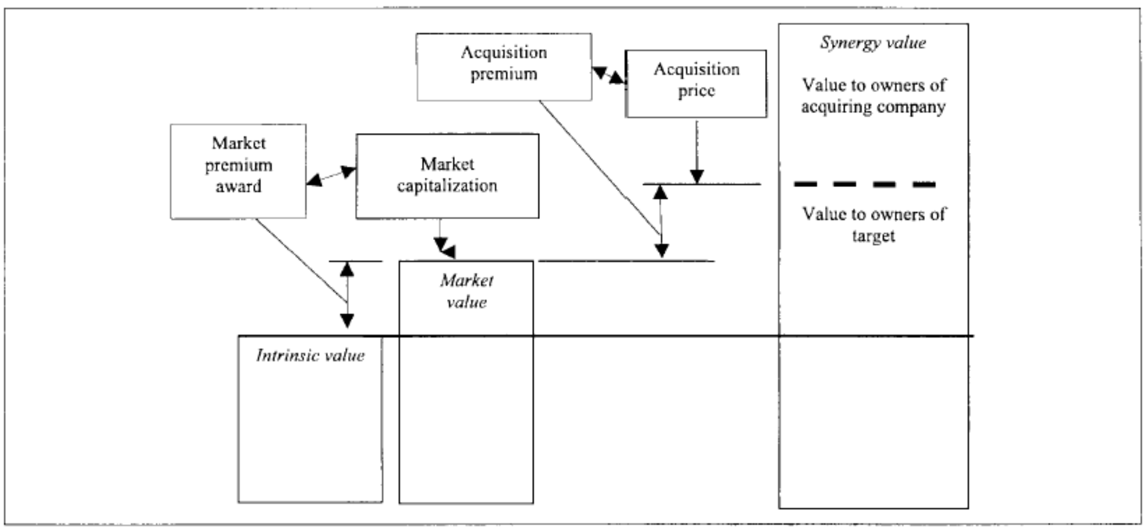

Figure 2.1: Value Sharing Among Shareholders of Acquiring and Target Company (Adapted from Eccles et al, 1999)

2.3.1 Intrinsic Value

The most basic value of the company, its intrinsic value, is based principally on the net present value of expected future cash flows completely independent of any acquisition. That assumes that the company continues under current management with whatever revenue growth and performance improvements have already been anticipated by the market.

2.3.2 Market Value

On the top of the intrinsic value, the market may add a premium to reflect the likelihood that an offer for the company will be made (or a higher offer will be tendered than one currently on the table). Market value –commonly called "current market capitalization" – is the same as the share price; it reflects the market participants' valuation of the company.

2.3.3 Acquisition Price

It's the price that a bidder anticipates having to pay to be accepted by the target shareholders. The difference between the intrinsic value and purchase price is value to the owners of target shareholders, also called Value Gap. In today's market, both the acquirer and the target company know that the purchase price will be higher than the intrinsic value –in other words, that the buyer will almost likely pay a premium, and that premium allocates some of the future benefits of the combination to the target shareholders. Absent a premium, most target shareholders would refuse to sell. The acquirer managers need to figure out just how large a value gap their company can bridge through synergies. The target, meanwhile, will second guess the acquirer, trying to calculate how high the price can be pushed. If there's more than one potential acquirer and the bidding gets competitive, that places even more upward pressure on the price.

2.3.4 Synergy Value

The net present value of the cash flows that will result from improvements made when the companies are combined. These are improvements above and beyond those the market already anticipates each company would make if the acquisition didn't occur, since those are already incorporated into the intrinsic value of each company. The gap between synergy value and acquisition price is the value that is earned by the shareholders of acquiring company.

2.4 Calculating Synergy Value

Two keys to success in pricing an acquisition are to make sure that the assumptions used for calculating a target's synergy value are realistic. The second is to ensure that the acquirer pays no more than it should (Eccles, 1999).

Successful acquiring companies know how to calculate synergy value, and they know how to walk away form a deal that seems fabulous until someone runs the numbers. Damodaran (2005) argues that synergy can be valued by answering two fundamental questions:

1. What form is the synergy expected to take? Will it reduce costs as a percentage of sales and increase profit margins (e.g., when there are economies of scale)? Will it increase future growth (e.g., when there is increased market power) or the length of the growth period? Synergy, to have an effect on value, has to influence one of the four inputs into the valuation process – higher cash flows from existing assets (cost savings and economies of scale), higher expected growth rates (market power, higher growth potential), a longer growth period (from increased competitive advantages), or a lower cost of capital (higher debt capacity).
2. When will the synergy start affecting cash flows? Synergies seldom show up instantaneously, but they are more likely to show up over time. Since the value of synergy is the present value of the cash flows created by it, the longer it takes for it to show up, the lesser its value.

The calculation for synergy value is based on the types of synergy itself (Damodaran, 2005):

2.4.1 Operating Synergy

Operating synergies are those synergies that allow firms to increase their operating income from existing assets, increase growth or both. Operating synergies could be categorized into four types.

1. *Economies of scale* that may arise from the merger, allowing the combined firm to become more cost-efficient and profitable. It usually happens in mergers of firms in the same business (horizontal mergers) –
2. *Greater pricing power* from reduced competition and higher market share, which should result in higher margins and operating income. This synergy is also more likely to show up in mergers of firms in the same business and should be more likely to yield benefits when there are relatively few firms in the business to begin with.
3. *Combination of different functional strengths,* as would be the case when a firm with strong marketing skills acquires a firm with a good product line. This can apply to wide variety of mergers since functional strengths can be transferable across businesses.
4. *Higher growth in new or existing markets,* arising from the combination of the two firms. This would be case, for instance, when a US consumer products firm acquires an emerging market firm, with an established distribution network and brand name recognition, and uses these strengths to increase sales of its products.

2.4.2 Financial Synergy

With financial synergies, the payoff can take the form of either higher cash flows or a lower cost of capital (discount rate) or both. Included in financial synergies are the following:

1. A combination of a firm with excess cash, or *cash slack*, (and limited project opportunities) and a firm with high-return projects (and limited cash) can yield a payoff in terms of higher value for the combined firm. The increase in value comes from the projects that can be taken with the excess cash that otherwise would not have been taken. This synergy is likely to show up most often when large firms acquire smaller firms, or when publicly traded firms acquire private businesses.
2. *Debt capacity* can increase, because when two firms combine, their earnings and cash flows may become more stable and predictable. This, in turn, allows them to borrow more than they could have as individual entities, which creates a tax benefit for the combined firm. This tax benefit usually manifests itself as a lower cost of capital for the combined firm.
3. *Tax benefits* can arise either from the acquisition taking advantage of tax laws to write up the target company's assets or from the use of net operating losses to shelter income. Thus, a profitable firm that acquires a money-losing firm may be able to use the net operating losses of the latter to reduce its tax burden. Alternatively, a firm that is able to increase its depreciation charges after an acquisition will save in taxes and increase its value.
4. *Diversification* is the most controversial source of financial synergy. In most publicly traded firms, investors can diversify at far lower cost and with more ease

than the firm itself. For private businesses or closely held firms, there can be potential benefits from diversification.

Clearly, there is potential for synergy in many mergers. The more important issues relate to valuing this synergy and determining how much to pay for the synergy.

2.5 Acquisition Valuation of Finance Company

The valuation of an acquisition is not fundamentally different from the valuation of any firm (Damodaran, 2002). The existence of acquisition and synergy premiums introduces some complexity into the valuation process. The safest way to value a target firm is in step, starting with intrinsic value; following with acquisition premium to determine acceptable acquisition price and a closure with synergy value (refer to figure 2.1)

2.5.1 Intrinsic Value Valuation

The valuation of the target firm starts by estimating the firm value with existing financial conditions, as if that there is no acquisition plan. This valuation, also termed status quo valuation, provides a base from which value to owners of target firm (acquisition premium) and value to owners of acquiring firm (synergy premium) can be estimated. In particular, the value of the firm is a function of its cash flows from existing assets, the expected growth in these cash flows during observation period, the length of the period, and the firm’s cost of capital.

According to Damodaran (2002), Financial Service Firms such as Finance Company (”Multifinance”) in Indonesia, have some unique characteristics that can have implications for valuation. They are:

1. Debt as Raw Material: Damodaran argues that debt take different conotation for financial service firms. Rather than source of capital, debt to a Bank or Multifinance Company is raw material. They molded it into financial products that can be sold at higher price and yield profit. Consequently, capital at financial services firms is more narrowly defined as only equity capital. Moreover, this definition of capital is reinforced by the regulatory authorities who evaluated the equity capital ratios of banks and other financial services firms.
2. The regulatory overlay: Damodaran stated that the fact that financial service firms need to maintain capital ratios so that they do not expand beyond their means and put the depositors at risk, constraints their growth. These regulations, together with other restrictions, may change overtime and could have effects on future growth assumptions in the valuation.
3. Reinvestment at Financial Service Firms: Damodaran also argues that measuring net capital expenditures and working capital in financial service firms could be problematic. Unlike manufacturing firms that reinvest a lot on plant, equipment or other fixed assets, Multifinance invest so little in these kind of assets. Thus, Multifinance show little in capex and low depreciation. With working capital (the difference between current assets and current liabilities) is not clearly defined in Multifinance financial statement, because the money is their commodities, it may have no relationship to reinvestment.

4. As a result in this difficulities in measuring reinvestment, the standard equations for measuring cash flow which requires net capex and changes in working capital can not be used. The second is that estimating future growth becomes more difficult as there are no clear reinvestment rate.

Given the unique characteristics, Damodaran suggested that it makes far more sense to value equity directly at financial service firms (Free Cash Flow to Equity rather than Free Cash Flow to the Firm), and redefine reinvestment in Multifinance case to make it more meaningful.

The standard equations for Free Cash Flow to Equity (FCFE) is:

FCFE = Net Income – Net Capex – Change in noncash working capital – (Debt repaid-New Debt Issued).

As stated above that Capex and working capital cannot be measured for Multifinance, so there are two choices:

1. Using dividends as cash flows, assuming that the Multifinance pay out dividends over time, or
2. Using excess return models.
    a. In this model, the value of the firm can be written as the sum of capital invested currently in the firm and the present value of dollar excess returns that the firm expects to make in the future.
    b. As discussed earlier, in Multifinance case, it makes sense to focus on equity only.

c. The equity capital invested currently is measured as the book value of equity in the firm. Even though the book value depends very much on accounting method, in Multifinance case, the assets mostly are account receivables of car loan, which has no deviations with market value, unlike fixed assets such as plant or equipment, and has negligible depreciation.

d. The excess returns can be formulated as:

   = (ROE –Cost of Equity)* Equity Capital invested

   = (ROE* Equity Capital invested) – (Cost of Equity* Equity Capital invested)

   = Net Income – Equity Cost

e. Cost of Equity can be calculated using CAPM (Capital Asset Pricing Model). In CAPM, Beta of an investment is the risk that the investment adds to a market portfolio. The estimation of beta could be done using historical data on market prices, that is, only applicable for assets that have been traded (Damodaran, 2003). For a private company, beta could be estimated from the fundamental characteristics of the investment which can be localized in the business where the firm operates, a method called"bottom-up betas".

   i. Identify the business where the firm operates

   ii. Find other publicly traded firm in the business –the firm's comparables– and obtain their regression betas

   iii. Unlever each beta by their debt to equity ratio

   Unlevered $\text{beta}_{\text{comparable}} = \text{Beta}_{\text{comparable}}/[1+(1\text{-}t)(\text{D/E ratio}_{\text{comparable}})]$

   Where t is tax rate for the firm.

iv. Estimate the unlevered beta for the firm being analyzed; taking a weighted average of the unlevered beta for each of comparables, using the proportion of operating income or revenues as weights. This weighted average is called the bottom-up unlevered beta

v. Estimate the current market values of debt and equity at the firm and use this debt to equity ratio to estimate a levered beta.

f. Terminal Value on excess return model is calculated using following formula:

$= (\text{Net Income}_n – \text{Equity Cost}_n)/ (\text{Cost of Equity} – \text{Expected Growth Rate})$

Where n is the year beyond forecasted period.

g. In measuring the growth of rate of investment, there is a method called Compound Annual Growth Rate (CAGR). Investopedia.com defines CAGR as the year-over-year growth rate of an investment over a specified period of time. It is calculated by taking n th root of total percentage growth rate, where n is the number of years in the period being considered.

CAGR = ((ending value/beginning value)^(1/n))-1

CAGR isn't the actual return in reality. It's an imaginary number that describes the rate at which an investment would have grown if it grew at a steady rate, as a way to smooth out the returns.

2.5.2 Acceptable Acquisition Price

Also known as control value, that is the price that acquirer have to pay to control the target firm. The approach used for calculating acceptable acquisition price is not different with calculating intrinsic value, however, the future cash flows used in this calculation are the one predicted after the new firm is acquired, under better management.

2.5.3 Synergy Value

By calculating synergy value, one can estimate the value to the shareholders of acquiring firm, which is it's gap from acquisition price. Synergy value could be valuated using the same approach with intrinsic value or acceptable acquisition price, but the future cash flows used is the one resulted from improvement based on type of synergy planned in the future.

2.6 Common Errors in Valuing Synergy

1. Subsidizing Target Firm Stockholders: Acquiring firm should not render unto target firm stockholders premium for items or strengths that these stockholders had no role in creating. For example: Using acquiring firm's cost of debt in computing cost of capital of target firm when the acquiring firm has better credit rating. The lower cost of capital will result in higher value for target firm, while the stockholder of target firm has no involvement in maintaing acquirer's good credit rating.

2. Using wrong discount rate: Synergy usually generates incremental cash flows over future periods, and valuing these cash flows requires a discount rate. Using wrong discount rate on synergy cash flows will result in synergy being misvalued. The general principle that governs the estimation of discount rates, which is that they should reflect the non-diversifiable risk in the cash flows, and it continous to hold when it comes to cash flows from synergies. For example: if after the acquisition, it requires the combined firm to achieve the incremental cash flows (horizontal mergers), then the discount rate used should be the combined firm's cost of capital/equity.

3. Mixed control and synergy valuation: While synergy is used as a reason for many mergers, the other widely used reason is control. The value of control derives from changing the way a company is run and will be higher at poorly managed or run firms. In other hand, synergy requires the two entities to work together. Mixing the two will confuse the value of control and synergy. In order not to confuse the two, the value of control should be estimated first by valuing the target firm twice, once on a status quo basis and once with the changes/restructuring that is intended in how the company is run. After that, the valuation of synergy should follow the method discussed earlier in this chapter.

2.7 Acquisition Stages

Each sub-process of the acquisition need to be ensured to capture value (Chanmugam et al, 2006) and is often viewed for analytical purposes as five stage procedure (Solovan, 2004):

1. Goal and strategy definition

   In the first stage the acquiring company must set forth its goals, objectives and strategic plan which should include alternatives to the proposed acquisition. This is done during the strategic planning process when the firm attempts to match its organization which the changing environment. As the business environment changes, the organization is exposed to a variety of threats to its economics stability and opportunities to expand its markets. Some organizations adapt to their changing environment by implementing changes in their structure. These changes may influence the firm’s relationship to its environment and have an impact on the firm’s effectiveness; or, the changes might instead relate to the external operations of the firm and effect its efficiency (Armitage, 1990). The goal is to develop superior strategies that will enable the firm to gain a sustainable competitive advantage.

2. Selection and review of targets

The second stage of the process involves screening of target companies. The selection may be based on the acquisition motives, for example identifying firms with undervalued assets if the motive is to acquire undervalued firms.

Growth potential and market share of its products are obvious criteria to consider when a company is a takeover candidate. The marketing department of the acquiring company assesses the relative market share of the target’s products.

3. Forecast evaluation

The third stage of the process involves the evaluation of the target company’s financial forecasts. To make the effectiveness of the forecasts, they must be carefully analyzed, especially if the necessary data to formulate the forecasts has been provided by the target firm. All assumptions inferred from the data must be identified and assessed as to their elements of risk, accuracy, and reasonableness (Allison, 1984, and Richards, 1986).

The forecasted income statements must be analyzed as to the legitimacy of projected revenues and growth in sales with consideration of the economy, industry conditions and inflationary expectations.

4. Analysis

This step consists of the analysis of the financial projections and the subsequent evaluation of the acquisition relative to other investment opportunities. Its internal rate of return is calculated by the management and then compared to any internal financial requirements (Richards, 1986).

5. Management review and decision

6. Negotiating the acquisition

Once a decision has been made, the manner in which negotiations are conducted will have significant implications upon the successful integration of the two companies. The individuals who are involved in the negotiations are the same people who must accept responsibility for attaining the benefits projected in the valuation process. Many merger partners treat pre-deal and post-deal processes as discrete, often using different teams before and after the transactions have been completed (Chanmugam et al, 2006). This results in disconnection between the valuation and the financial goals set in the first step. Instead, one should treat the M&A transaction as a lifecycle.