

SHARING SYNERGIES

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COLE & PARTNERS

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EXECUTIVE SUMMARY

Synergies are the anticipated increases in competitiveness and cash flows resulting from the merger of two businesses over and above what the two businesses could accomplish independently. Combinations that successfully realize synergies, net of the premium paid for them, create shareholder value.

This article highlights different aspects of synergistic value and is organized as follows:

- Section I In Search of Synergies - how to recognize and quantify the timing of the anticipated incremental synergistic cash flows
- Section II What Are Synergies Worth? – how to value the synergies
- Section III Who Bears the Risk of Realization? - how to determine the sharing ratio and the impact on shareholder value when synergies are not properly valued

Realization of synergy value is elusive. Every business combination is different and quantum, timing, duration and cost factors directly impact on the net present value of the synergies attributable to a combination. When acquisition premiums are calculated based on rules of thumb or superficial analysis they can be excessive and may lead to dramatic loss of shareholder value.

Proper due diligence and sensitivity analysis will assist in determining a range of possible values for the synergies as well as the costs of achieving synergies, the costs of the integration of the two businesses and any negative synergies that might occur.

WHAT ARE SYNERGIES WORTH?

The value of the synergies depends on a combination of the following:

- Quantification of the synergistic cash flows,
- Determination of the probability that the combined entity will be able to achieve the anticipated synergies, and
- Identification of the expected timing of the inflows and outflows.

A discounted cash flow (DCF) analysis brings together the above to produce a value estimate. Almost all synergy valuation techniques are based, directly or indirectly, on discounted cash flow principles.

The range of value of a target business, inclusive of synergies, is best determined with various techniques including those noted below. There is no one right answer, but after reconciliation of the different perspectives, usually a clear range will emerge:

- (a) *Value synergies separately* – One can perform two discounted cash flow analyses and add them: one for the business on its own (intrinsic value) and one for the synergy value. Care should be taken to properly balance the probability of success of realizing the synergies with the discount rate used to convert the cash flows to a present value.
- (b) *Combine synergies with the intrinsic cash flows of the entity* – One can perform a single discounted cash flow analysis, adding the synergy cash flows to the intrinsic cash flows and converting it to present value using a single discount rate. Because synergistic cash flows are of a different risk than intrinsic cash flows, adjustments to the cash flows or discount rate need to be made to reflect this.

- (c) *Reducing the discount rate applied to the intrinsic value* – One simply uses the intrinsic cash flows of the business and converts this to a present value using a discount rate that has a lower risk component (or higher deduction for growth) than the intrinsic value would have had (causing the resulting value to be higher). This method is imprecise and should not generally be used as a primary method.
- (d) *Precedent transaction analysis* – One applies a multiple to revenues, EBITDA, or other financial measure based on multiples seen in other transactions in the industry. This method is not specific to the transaction at issue and should not be used as a primary method.
- (e) *Comparable public company trading price analysis* – One may apply various trading multiples for comparable public companies to the subject company's cash flows and then gross up that value for a control premium. The control premium applied is typically derived from studies of past M&A transactions and is assumed to incorporate a premium in respect of synergies. As with the precedent transaction analysis, this method is not specific to the transaction under consideration and is, at best, imprecise and at worst may be misleading.

WHO BEARS THE RISK OF REALIZATION?

Once it is determined that synergies are created when two businesses are combined, an acquirer must next determine what portion of the synergy value it will pay to the vendor and what portion will accrue to the acquirer after the transaction closes.

Synergies are rarely attributable solely to the acquirer or the target. In the course of negotiations, the parties must implicitly or explicitly resolve a sharing ratio. It is very much of a chicken and egg problem as the value is realizable only in the combination – you can't have one without the other.

Where the merger is the result of a market-based process with more than one bidder, the proportion of synergy value that should accrue to the vendor will be determined by the market or in the course of the auction process. In the alternative, there must be a determination of a reasonable sharing ratio between the parties. An allocation of synergies between the vendor and acquirer somewhere between “all” and “nothing” is usually appropriate because neither party can enjoy the synergistic benefits without the other. It is very much a matter of negotiation. Often a 50/50 ratio or 60/40 ratio is a good starting point and alternative allocation is typically a function of the specifics of the situation.

Even in situations where the vendor is being paid in the common stock of the acquirer, it is still necessary to determine the sharing of the synergies on a cash-equivalent basis.

CONCLUSION

Ignoring synergies, because they are difficult to determine, is not a reasoned approach and may work a significant hardship on the vendor. On the other hand, naïve optimism in estimating the value of synergies may result in an erosion of shareholder value for acquirers.

SECTION I

IN SEARCH OF SYNERGIES

INTRODUCTION

Often, when a potential merger or acquisition is proposed there is a lot of talk about the synergies expected to result from the transaction – but the reality often falls short of expectations. Perhaps Warren Buffett said it best in the 1981 Berkshire Hathaway Annual Report when he noted, “we’ve observed many toads being kissed, but very few miracles.”

All too often, acquisition premiums are the product of superficial analysis. Expected synergies often do not materialize as planned. When acquisition premiums are excessive relative to the synergy value actually created there could be a dramatic loss of shareholder value.

In this Section, we will explore the following:

- What are synergies?
- How are specific synergies identified and quantified?
- Synergies and the new Annual Impairment Test required under GAAP¹

WHAT ARE SYNERGIES?

Synergies arise on the combination of two businesses where the combined entity can produce greater earnings than the two businesses could generate separately, *i.e.*, a situation where $1 + 1 = 3$. Synergies result in increases in incremental earning power and cash flow.

Increases in earnings that either of the businesses would have (or could have) generated on a stand-alone basis do not constitute synergies. Anticipated pre-combination growth in each business should be factored into their respective standalone values. To factor pre-combination growth into the synergies expected to result from the business combination would double-count the benefits and lead to overpayment.

Synergistic benefits fall into two broad categories:

- **Increased cash inflows (revenue gains)** – Increased cash inflows result, for example, from the ability to cross-sell products or services, better leverage of sales channels and marketing programs, higher selling prices, and other similar competitive advantages.
- **Reduced cash outflows (cost savings)** – Reduced cash outflows result, for example, from economies of scale, reduction in capital expenditures, production efficiencies, elimination of duplicate costs in areas such as R&D and administration, volume discounts on purchases and other efficiencies that come from a larger or better focused business. Cost savings are also sometimes called “efficiencies.”²

¹Generally Accepted Accounting Principles.

²Efficiencies is a term used in competition law related matters as a defense where the combination would otherwise give rise to a lessening of competition. See *Commissioner of Competition v. Superior Propane Inc.*, 2000 Comp. Trib. 15.

Costs and Negative Synergies

To achieve synergies it is often necessary to make some initial up-front investment and incur expenditures. The types of costs incurred include those related to: integration of sales forces, information, control and distribution systems; severance; a broad range of human resource-related costs; marketing and advertising to merge the businesses; moving costs; costs associated with assimilating the different business cultures; and, perhaps most importantly, costs associated with the time value of money. The successful melding of cultures, for example, often requires significant one-time advertising, communications, public relations and human resources costs, which must be deducted from the anticipated benefits.

An additional indirect and potentially devastating cost can emerge while acquirers are focused internally on integration – costs and lost opportunities that occur if the company takes its eyes off competitors and loses its ability to respond to changes in the competitive environment.

The greater the differences between the merging businesses, the higher the costs of integration are likely to be and the greater the risk of losing critical personnel, which in turn will reduce efficiencies and increase cost.

Costs incurred to realize synergies are different from negative synergies. Negative synergies can arise in a business combination on both the revenue side and on the cost side. For example, negative synergies can occur when there are overlapping customer bases and conflicts resulting in a loss of revenue following a merger.

Throughout this article, when we refer to “synergies” we mean the benefits expected to derive from the combination *net* of (i) costs associated with realizing the benefits and (ii) negative synergies.

HOW ARE SPECIFIC SYNERGIES IDENTIFIED AND QUANTIFIED?

To identify and quantify synergies, there is no substitute for a thorough understanding of the dynamics of each of the predecessor companies, their operations, personnel, customer bases, asset bases, culture, pricing and purchasing practices, logistics and the like.

Some synergies are easily realized, while others will only materialize after substantial nurturing. Some synergies will have a limited life; some will diminish over time; and some will increase over time. A strong understanding of the two combining businesses will result in better quantification of the synergies that can be realized, assessing the likelihood of achieving them, and estimating the timing of their realization.

Each of these – quantification, probability of achievement, and timing – are important in determining the value (or range of values) of synergies. Proper due diligence, sensitivity analysis and the use of probability models will assist in determining a range of possible values for the synergies.

QUANTIFICATION

The quantification of synergies is situation-specific; it depends on, among other things, what each merging party brings to the mix and on the degree of redundancy or overlap between the two operations.

The quantum of the synergies will vary based on how management intends to rationalize redundancies and manage the overall combination of the two businesses, as well as on post-merger business strategies and tactics.

Unfortunately, management may not be fully aware of all of the relevant issues until integration is well under way and perhaps not even until after the businesses are combined. In particular, integration costs and negative synergies may not initially be fully appreciated.

The following matrix highlights the nature of different synergies arising out of the combination of various example businesses. For ease of explanation, assume that the acquirer is acquiring 100% of the target.

Nature of Acquirer's Business	Nature of Target's Business	Synergy
Pulp and paper mills, lumber mills and dwindling forest resources.	Old and inefficient mills but substantial forest resources.	Ability to raise prices due to larger market share. Closure of inefficient mills resulting in lower product cost. Closer proximity to harvested trees and, therefore, lower transportation costs to bring raw material to the mill resulting in lower product cost.
Distributor of home and industrial fuel oils and propane.	Identical.	Merger of routes to eliminate overlap; elimination of redundant distribution centers, truck servicing centers, IT systems, marketing, HR, head office and the like; improvement of purchasing power – all contributing to lower product costs. Negative synergies include loss of certain customers due to competitive and legislative considerations.
National bookstore chain.	Identical.	Improved pricing opportunities due to stronger market position. Improved sales per square foot due to leverage of those stores that remain open. Elimination of duplicate costs by closing stores, merging purchasing, systems, HR and the like. Significant negative synergies resulting in lost revenues and purchasing patterns. It turns out that frequently where two retail stores compete in the same geography, the elimination of one of them does not result in the acquirer capturing as much of the competitor's business as one would expect.
Large institutional fund manager with national presence and presence among high net worth individuals and foundations.	Boutique wealth manager servicing only a small number of high net worth foundations and families providing wealth management services and those services typically associated with a "family office."	Extensive research, analysis and institutional market presence. A great draw to increase high net worth wealth management revenue and client base. Elimination of redundant research and back office support systems costs.
National coffee house chain.	National baker of specialty pastries, cookies and muffins.	Negative synergies include loss of bakery revenue because competitive coffee houses will not now purchase from baker wholly owned by competitor.

Nature of Acquirer's Business	Nature of Target's Business	Synergy
Systems integrators and consultants with a particular industry specialty / vertical market.	Identical business in a different industry or vertical market.	Perceived size and stature likely to enhance revenue opportunities and the ability to attract better and more senior staff. Ability to leverage administrative and other non-professional systems.
Manufacturer of computer-assisted metering and measuring equipment, including related software based on a specific proprietary and patented technology where the distances measured are under 30 feet. Measurement accuracy to 1 million/inch.	Complementary business, except that the technology is based on laser technology and distances most efficiently measured range from 30 feet to 150 feet.	Leverage of acquirer's international marketing channels and cross-selling to existing customers. Higher profile presence and broader product range – all resulting in significant revenue increases. Elimination of numerous redundant and duplicate costs, particularly regarding marketing and administration.
Large North American laboratory with hundreds of pick-up stations and strategically placed North American labs to process patient blood and other tests outside hospitals.	Identical.	Greater lobbying strength and market presence to increase both price and volume. Elimination of redundant pick-up services, duplicate laboratories and IT systems costs.
Flight simulator manufacturer, including large software and engineering development teams.	Robotics and assembly line equipment manufacturer specializing in custom-engineered product to optimize manufacturing processes.	Research, software and product development teams and culture anticipated to bring much higher quality to manufacturer and a broader product range. Flight simulator's extensive experience with large contracts anticipated to make marketing and administrative systems at manufacturer much more efficient. Manufacturer could not, as a standalone business, afford the quality or depth the acquirer could provide.
Large-scale hog farming, including extensive grain and feed operations. Surplus feed supplies.	Competitor whose barns are in same region as feed operations.	Target business will have an ability to raise prices due to larger market share and access to lower feed costs and elimination of duplicate marketing costs.

PROBABILITY

Once the synergistic cash flows are quantified, the value of the synergies depends, in part, on the probability that the combined entity will be able to achieve them. Pricing and value negotiations should explore the range of possible synergies and the related probabilities. This type of analysis is often called “scenario planning” or “what if analysis.” No one answer is correct, but the probability-weighted ranges will be very useful in terms of negotiations or in terms of attaching a value to the synergies.

One must be careful not to be too optimistic in attaching probabilities to synergies. Too often, synergies are not realized as planned. In a 1999 study³, A.T. Kearney noted that, on balance “mergers hurt shareholders”. According to the study, only 42% of mergers create substantial returns for shareholders but 58% actually destroy value. The study also found that after three years profitability of the combined companies drops, on average, by 10% and within four years 50% of all combinations in the United States are deemed failures. As well, the study also concluded that 75% of companies fall short of meeting the strategic goals that inspired the merger or combination in the first place.

AT Kearney noted that conditions directly impacting successful realization include the following:

Conditions Necessary to Realize Synergies⁴

The following are some factors that will increase the chances of a successful business combination:

- 1) Having a clear vision of corporate goals and strategy throughout the merger process;
- 2) Strong focus and commitment to post-merger integration;
- 3) Striking a management team early with all merger-related responsibilities clearly allocated;
- 4) Being realistic in evaluating and developing ways to increase value through synergies;
- 5) Targeting some early wins that will foster a sense of security;
- 6) Managing and limiting risks that are functions of the complexity and uncertainty in the combination;
- 7) Breaking down cultural barriers by, for example, building a common culture rather than adopting one predecessor’s culture over another;
- 8) Developing and promoting a communication program;
- 9) Not overpaying for synergies. This factor in and of itself can destroy the value of combining the two entities; and
- 10) Prior to the business combination, careful due diligence, study and care in the recognition and measurement or quantification of specific synergies.

³ *Corporate Marriage: Blight or Bliss? A Monograph on Post-Merger Integration*, A.T. Kearney, 1999

⁴ Adapted from *Corporate Marriage: Blight or Bliss? A Monograph on Post-Merger Integration*, A.T. Kearney, 1999

TIMING

Once the quantum and probability of synergies is determined, the value of the synergies depends, in part, on the expected timing of the inflows and outflows. A dollar received earlier is, of course, worth more than one received later. Delays in realization will result in significant diminishment in value from that anticipated, particularly where there is significant leverage. Sensitivity analyses should be undertaken over a broad range of different integration and timing scenarios. The integration plan should drive the timing in any discounted cash flow (DCF) analysis.

PULLING IT ALL TOGETHER – DCF ANALYSIS

DCF analysis brings together quantum, probability and timing to produce a value estimate. Almost all synergy valuation techniques are based, directly or indirectly, on discounted cash flow principles.

DISCOUNT RATE IN DCF ANALYSIS

When doing a DCF analysis, the discount rate (or rate of return) used to translate the future cash flows to a present value today is interdependent with the cash flows. For example, if the figures used in the DCF analysis are probability weighted (i.e. a probability factor has been applied to the annual cash flows, which takes into account the risk of not achieving them), the discount rate used to present value the cash flows should not have a premium for risk as this would result in double counting. If, on the other hand, the cash flows being discounted have not been probability weighted, the discount rate needs to reflect the risk associated with realizing the cash flows.

SYNERGIES AND GAAP'S NEW ANNUAL IMPAIRMENT TEST

For fiscal years beginning on or after January 1, 2002, Canadian GAAP requires that:

- goodwill and identifiable intangible assets previously purchased be restated to their fair value;
- an allocation of the acquisition premium to all identifiable intangible assets. Acquisition premiums relating to intangibles were previously primarily allocated to goodwill;
- companies undertake an Annual Impairment Test to ensure that the carrying value of goodwill and identifiable intangible assets is not overstated. If the fair value has been impaired, a write-down is required and there must be a corresponding charge against the income statement. Synergies, by default, will be under much greater scrutiny. If anticipated synergies reflected in goodwill are not realized, goodwill may well need to be written down; and
- synergy value, incorporated in goodwill, must be allocated to appropriate reporting units. Synergy value will rarely be completely attributable solely to the acquirer or the target. Allocation logic is more fully discussed in Section III.

SUMMARY

An acquirer may pay a premium over what the target is worth as a standalone entity, because it knows that the combined entity will realize synergies - cash flows over and above what the two combining entities could do on their own.

If the acquiror does not perform careful analysis into the quantification, probability and timing of the synergistic cash flows, it may pay too much. The keys to realization are: focus on integration; simplicity and clarity of vision; patience and discipline in carrying out the due diligence, and the courage to walk away from an acquisition that is attractive in every way except price.

In Sections II and III of this article we examine what synergies are worth and how to factor them into value and price.

SECTION II

WHAT ARE SYNERGIES WORTH?

Generally, incremental synergistic cash flows are of a higher risk of achievement than the basic intrinsic cash flows of the predecessor firms. This Section assesses the methods used for determining risk adjusted synergistic value once the quantum, timing and related costs have been determined.

METHODS OF INCORPORATING SYNERGIES INTO VALUE

The synergies in each business combination are different and present unique factors impacting on value. Notwithstanding this, rules of thumb have evolved for the determination of acquisition premiums and synergies in various industries. They are usually misleading and, further, rarely are “comparables” comparable.

Rather than relying heavily on rules of thumb or comparable valuation techniques, it is better practice to consider more than one valuation approach and to then rank and weigh them appropriately. Usually, one method of valuation will stand out as being most relevant. An alternative is to take the weighted average of amounts determined under the different methods. However, the art is in selection of weightings. A weighting of misleading methods will only confirm the old adage, “garbage in, garbage out”.

Here are some methods by which synergy value can be factored into the value of a business:

- (a) *Value synergies separately.* One can perform two DCF analyses and add them: one for the business on its own (intrinsic value) and one for the synergy value. The annual incremental cash flow from the synergies can be capitalized at a rate appropriate to those cash flows⁵. That rate would reflect the unique risks appropriate to realizing the synergies. The resulting value of the annual synergies (plus one-time benefits net of one-time implementation costs) is added to the intrinsic value of the entity. For example, in preparing our fairness opinions, we noted that Griffiths McBurney Partners used this approach, in the valuation of Chapters and Indigo in connection with the 2001 takeover.
- (b) *Combine synergies with intrinsic cash flows of the entity* – One can perform a single DCF, adding the synergy cash flows to the intrinsic cash flows and converting it to present value using a single discount rate. Because synergistic cash flows are of a different risk than intrinsic cash flows, adjustments to the cash flows or discount rate need to be made to reflect this. RBC Dominion Securities took this approach in valuing Coca-Cola Beverages for its 1997 going private transaction.

Alternatively, one can add only a portion of the synergies to the cash flows. For example, if there was significant risk associated with realization of the synergies, rather than adjusting the multiple or discount rate, only a portion of the synergistic cash flows would be included in the DCF or capitalized cash flow. This method can be considered as a substitute for risk or probability adjusted techniques.

⁵ This rate would be distinct from the rate used for the standalone intrinsic cash flows of the target business.

- (c) *Reducing the discount rate applied to the intrinsic value* – One simply uses the intrinsic cash flows of the business and present values them using a discount rate that has a lower risk component than the intrinsic value would have had (causing the resulting value to be higher). This method is imprecise and should not be used as a primary method.
- (d) *Precedent transaction analysis* – One applies a multiple to revenues, EBITDA, or other financial measure based on multiples seen in other M&A transactions in the industry (“comparables” or “precedent multiples”). Rules of thumb have been developed for certain industries that implicitly reflect synergies historically anticipated for business combinations between strategic parties within the industry. These simple rules of thumb are based on anticipated or projected results at the date of purchase and not on actual historical outcomes.

In the valuation of Pacifica Papers Inc. in connection with the 2001 takeover bid by Norske, a precedent transaction analysis was considered and given significant weighting (an average of a few methods was used to determine the final value range). Industries for which rules of thumb have been developed include: the pulp and paper industry, in which purchase price is sometimes calculated as a multiple of tonnage capacity; the cable industry, in which purchase price is sometimes calculated based on a multiple of subscriber revenue; and the rubber compounding industry, in which purchase price is sometimes calculated based on a multiple of pounds of output.

The precedent transaction analysis method is a helpful technique, but it should be only one of several considered. It can be an important component of a weighted average but only where the comparables are truly comparable.

Where an industry is in the midst of a general consolidation, the multiples can change depending on the stage of consolidation the industry is in. So, while the proximity of the dates used for the comparable transactions and the valuation date for the subject company is always a consideration, it is even more relevant⁶ to know the stage of consolidation the industry is in. Care must be taken to apply only comparable indicators. Otherwise, the result will be an inaccurate valuation. Similar commentary is appropriate when considering comparable public company trading prices, as discussed below.

- (e) *Comparable public company trading price analysis* – One may apply various trading multiples derived from public companies to the subject company’s cash flows and then gross up that value for a control premium. The control premium applied is typically derived from studies of past transactions and considers the premium paid for the acquisition of control over the trading price of a target’s stock, and is also assumed to incorporate a premium in respect of synergies. The comparable public company trading method was considered by the valuers in the Norske/Pacifica transaction.

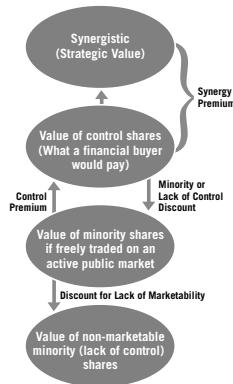
The comparable public company method differs from the precedent transaction method because it deals with public stock trading prices whereas the precedent transaction method looks at merger and acquisition buy-out prices. The control premium (which is often based on average takeover premiums in the marketplace) may include too much or too little for synergies. Because the control premium is based on data from many transactions, both those involving acquisitions by strategic buyers and those that do not (i.e. financial buyers), the amount of synergies that are incorporated in the control premium is really unknown. Further discussion on this is set out below.

⁶ M. Dietrich, “Understanding The Difference Between Strategic Value and Fair Market Value in Consolidating Industries,” *Business Valuation Review*, June 2002.

DISTINGUISHING CONTROL PREMIUM FROM SYNERGISTIC INCREMENT TO VALUE

Many studies of transactions have shown that a higher price per share is paid for control positions in companies than for minority positions (minority price being stock trading price). The difference between the two values is called a “control premium” (the excess of control value over stock trading price) or a “minority discount” (the discount inherent in the stock price relative to the control value).

The control value of a company is not the same as the company’s strategic or synergistic value. A financial buyer (in other words, someone not expected to achieve synergies after an acquisition) might reasonably pay more per share in acquiring 100% of a business than for a minority position in the same business. However, a synergistic buyer (one who is buying to take advantage of synergies expected to result from the combination) might pay more than the financial buyer because the synergistic buyer expects to obtain value from the synergies, as shown in the chart below.



Based on studies, like the Mergerstat/Shannon Pratt Control Premium Study, many business valuations that use a precedent transaction analysis or a public company trading analysis gross-up the trading multiple by a premium of approximately 30%. But what is this 30% measuring? Is it the value of “control” only, or does some portion of it reflect the anticipated value of synergies arising out of the proposed business combination?

The problem with grossing-up a trading multiple by a factor based on an average premium derived from studies like the Control Premium Study is that one cannot tell from a review of summarized data whether the acquirers that made up the data were synergistic buyers or financial buyers, nor can you tell the extent to which synergies may have been factored into price (although it is possible to sort the data by type of buyer).

The Mergerstat/Shannon Pratt Control Premium Study sets out data from actual transactions, showing the control premium paid in each. It is the results from this and previous studies that have led to a “30% to 35%” rule of thumb. In 2002, the median control premium taken from this ongoing study was 28.2%. Excluding negatives from the study, this increases the median premium to 42.2%.⁷

⁷ *Business Valuation Resources*, December 2002, summarizes the results of the study.

When using data from sources like the Control Premium Study, it is important to understand whether the premium is measuring the benefits of control alone or the benefits of control and synergies. In theory, control premiums paid by financial buyers (i.e., those buying are not expecting to take advantage of synergies) should be related only to control benefits and not synergistic benefits. This conclusion was supported in a study by Steve Garber presented at the American Society of Appraisers mid-year conference in 1998 that showed that the premiums paid by financial buyers were lower, on average, than the premiums paid, on average, for all transactions in the study⁸.

Suffice it to say that relying on an approach that simply grosses-up a trading multiple by some amount (e.g., 30%) to account for synergies is at best imprecise and at worst it may be misleading. However, the major attribute of such an approach is that it very quickly provides a rough “ballpark” estimate of the combined benefits.

SUMMARY

The focus of the first two Sections of this article has been on what synergies are and how to factor them into value. We make no pretense that synergies can be precisely valued. Successfully estimating the value range within which synergies will fall is more than sufficient for most purposes and, in particular, it is sufficient to negotiate the price and terms of synergistic acquisitions and business combinations.

The most important result of endeavoring to value synergies is not coming up with a precise or specific number. Rather, it brings to the forefront many of the issues that need to be addressed to ensure successful integration of the businesses in question – in other words, the valuation process enriches the parties’ knowledge of the businesses, and enhances the probability for success of the merger and the creation of shareholder value.

Section III looks at what can happen to shareholder value when synergies are realized and when they are not.

⁸ Business Valuations Discounts and Premiums, Shannon Pratt, page 60.

SECTION III

WHO BEARS THE RISK OF REALIZATION?

CEOs and Boards of Directors often consider acquisitions and business combinations strategic alternatives to building a business from the ground up - and may pay significant premiums in the process.⁹

If the companies fail to thoroughly consider the myriad of relevant risks, alternatives and the long-term impact on the wealth of the shareholders of the acquiring company, the payment of a premium amounts to a gamble. A premium should not be paid unless the acquirer has focused on the performance already imbedded in pre-acquisition share price and the improvements in performance that will be required to legitimize the proposed premium. It is only after the acquirer grapples with these issues that the precise competitive nature of the expected synergies will be truly understood and appreciated.¹⁰

Ignoring synergies because they are difficult to determine may result in underpayment to the vendor. On the other hand, naïve optimism in estimating the value of synergies will result in an erosion of shareholder value for acquirers.

The focus of this Section III is “who bears the risk of realization?” and what happens to shareholder value when the synergies are not realized as planned - in both a notional valuation of the business and in a live transaction situation. Before discussing the risks, we will briefly discuss factoring synergies into a notional valuation as distinct from an actual negotiated transaction.

SYNERGIES IN A NOTIONAL CONTEXT

Fair market value in the context of a notional value determination is often required in shareholder disputes, in damage quantification situations, and in reorganizations for income tax purposes. A valuation in a “notional context” means in a situation other than an open market/live transaction where two or more parties actually negotiate. Even in the preparation of a fairness opinion in respect of a proposed live transaction, a notional fair market value is often required. Very often, neither the process of sale nor the process of preparing a fairness opinion results in a genuine auction process and, hence, notional value becomes the benchmark for fairness.

In the notional marketplace (often called the hypothetical marketplace), the definition of fair market value is **the highest price available in an open and unrestricted market** between informed, **prudent parties** acting at arm’s length, under no compulsion to act expressed in terms of money or money’s worth. Determining “the highest price” in an “open and unrestricted market” means that all buyers must be considered, including synergistic purchasers, albeit prudent ones. The number of synergistic purchasers actively engaged in a bidding process will ultimately determine what amount, if any, such purchasers may be willing to pay. To maximize the synergy values there must be more than one possible synergistic purchaser. One synergistic purchaser in a pool of financial buyers (who cannot realize synergies) need only pay \$1 more than the highest price the other bidders are willing to pay. Where there are at least two or more potential synergistic purchasers, the thought is they will bid against each other.

⁹ Mark L. Sirower, “The Synergy Trap, How Companies Lose the Acquisition Game”, The Free Press, New York, 1997.

¹⁰ *Supra*.

Recent American writing and court decisions are beginning to use specialized terminology for what would otherwise have been fair market value so as to distinguish as to when synergies are included and when they are not. For example; “investment value” is often defined as value to a specific purchaser and can include synergies that arise from the acquisition. In contrast, “intrinsic value” usually does not consider any synergistic value.¹¹

IN A NOTIONAL VALUATION, WHAT ARE THE DIFFICULTIES IN DETERMINING THE SYNERGY VALUE?

In a notional or hypothetical marketplace it is often difficult to identify the pool of notional buyers, synergistic buyers in particular, and the hypothetical premium they would be willing to pay. Fee and timing constraints and, perhaps most importantly, confidentiality often restrict valuers from undertaking comprehensive market searches. Even when strategic buyers have been identified, notional simulation of the auction process would be a complex exercise even with the cooperation of both parties, let alone without it.

Because of these difficulties, business and securities valuation reports concerning business valuations often do not consider synergies. Users of such qualified reports should be aware the impact of not properly estimating synergistic value.

WHO BEARS THE RISK?

Synergies are created when two businesses are combined, but what contribution does each company make to these synergies? More importantly, what portion of the synergy value will the buyer pay to the vendor and what portion will accrue to the buyer after the transaction closes?

Where the merger is the result of a market-based process with more than one bidder, the proportion of synergy value that should accrue to the vendor will be determined by the market or in the course of the auction process. In the alternative, there must be a determination of a reasonable sharing ratio between the parties. It is very much a matter of negotiation. Often a 50/50 ratio or 60/40 ratio is a good starting point and alternative allocation is typically a function of the specifics of the situation. An allocation of “all” or “nothing” is rarely appropriate because neither party can enjoy the synergistic benefits without the other.

Even in situations where the vendor is being paid in the common stock of the acquirer, it is still necessary to determine the sharing of the synergies on a cash-equivalent basis. For example, if a target has been valued without including an amount attributable to the synergies expected on the combination, and the acquirer’s stock reflects the full benefit of the anticipated synergies, the target will have given up all the value of the synergies.

¹¹ Mercer Capital, “Valuation For Impairment Testing” Peabody Publishing, L.P. 2001. Pg. 10.

A “STOCK-SWAP” STORY

To illustrate the impact of the allocation of synergies in a stock-swap situation consider both the upfront exchange ratio that might be negotiated and the post-merger value of the shares obtained as a result of the stock swap.

Assume facts as follows:

- An acquirer purchases all of the shares of a target and, as consideration, the shareholders of the target receive shares in the merged entity.
- The exchange ratio (target shares for merged company shares) will depend on the respective values of the two entities, the value of the anticipated synergies, and the allocation of the value of the synergies as between target and acquirer.
- Pre-merger standalone value of target \$10 million
- Pre-merger standalone value of acquirer \$20 million
- Post-merger value of anticipated synergies \$20 million

It follows from the above that the combined value of the two businesses pre-merger, without regard to the synergies, is \$30 million and, following realization of the synergies, the combined value of the business will be \$50 million.

Let’s look at what happens to value after completion of the merger in a situation where the target shareholders have taken stock as consideration and where the synergies **are** and **are not** realized.

Table 1 shows the percentage of ownership in the new merged entity for the vendor and acquirer under various scenarios where the \$20 million attributable to synergies is allocated between the target and acquirer.

TABLE 1

	Ownership Percentages in Merged Company		
	Target	Acquirer	Total
Alternative Scenarios for Sharing \$20 million of Synergistic Values			
(1) Proportionate to Pre-Merger Values	33%	67%	100%
(2) Shared Equally - 50/50	40%	60%	100%
(3) Allocated Exclusively to the Acquirer	20%	80%	100%
(4) Allocated Exclusively to the Target	60%	40%	100%

Line 1 is the situation where the value of the synergies is considered to have been contributed in proportion to the pre-merger values of the companies (in other words, 1/3 and 2/3).

Line 2 is the situation where the synergy value is considered to have been contributed equally by the two entities, *i.e.*, 50% of the synergies are allocated to the target and 50% to the acquirer. It follows that of the value of the merged entity, 40% will accrue to the target shareholders and 60% to the acquirer shareholders. (Target pre-merger value of \$10 million *plus* 50% of synergy value of \$20 million *equals* a total value of \$20 million. This is 40% of the total merged entity value of \$50 million.)

Lines 3 and 4 show the situation where 100% of the value of the synergies is considered contributed by one of the parties (in the case of Line 3, 100% is attributed to the Acquirer; in the case of Line 4, 100% is attributed to the Vendor.)

Table 2 (below) shows what happens in a share swap (*i.e.* where the purchase consideration is in the form of shares in the acquiring company) to the value of the equity in the merged entity held by the shareholders of the former target (*i.e.*, the vendor) and the value of the equity in the merged entity held by shareholders of the acquirer, under the same scenarios considered in Table 1, when the anticipated synergies are actually realized and when they are not.

TABLE 2

Basis of Sharing \$20 million of Synergistic Value	Value of Merged Entity Owned by Shareholders of					
	Target	Acquirer	Total	Target	Acquirer	Total
	<i>Where Anticipated Post-Merger Value Assuming Synergies are Realized (in \$ millions)</i>			<i>Where Post-Merger Value Assuming None of the Anticipated Synergies are Realized (in \$ millions)</i>		
Alternative Scenarios for Sharing \$20 million of Synergistic Values						
(1) Proportionate to Pre-Merger Values	17	33	50	10	20	30
(2) Shared Equally - 50/50	20	30	50	12	18	30
(3) Allocated Exclusively to the Acquirer	10	40	50	6	24	30
(4) Allocated Exclusively to the Vendor	30	20	50	18	12	30

This chart demonstrates the unfairness of skewed allocations of synergy value. For example, Line 3 is the situation where none of the synergies are attributed to the target. If synergies are not realized the vendor shareholders have received consideration worth \$6 where the value of the target pre-acquisition was \$10 million. The vendor shareholders get their intrinsic value only if synergies are realized.

By comparison, the affect on the acquirers and target is very different where the purchase consideration is in the form of cash and the synergies are not realized, as shown in Table 3, below.

TABLE 3

	Where Synergies are Not Realized, Value of Holdings of					
	Target	Acquirer	Total	Target	Acquirer	Total
	<i>In a Share Swap (in \$ millions)</i>			<i>In a Cash Transaction (in \$ millions)</i>		
Alternative Scenarios for Sharing \$20 million of Synergistic Values						
(1) Proportionate to Pre-Merger Values	10	20	30	17	13	30
(2) Shared Equally - 50/50	12	18	30	20	10	30
(3) Allocated Exclusively to the Acquirer	6	24	30	10	20	30
(4) Allocated Exclusively to the Target	18	12	30	30	–	30

As is evident from the above comparison, the sharing of the synergies needs to take into consideration which parties are taking on the risk that the synergies are not achieved. For example, in a Share Swap, Scenario 3 would not be acceptable to the target shareholders as they are taking on a position of the risk without any compensation. Similarly, in a cash transaction, Scenario 4 would not be acceptable to the acquirer shareholders for the same reason.

Clearly, the sharing ratio must consider the nature of the consideration. To prevent the cannibalization of value – or a clear windfall to one side – careful mutual consideration of the allocation of synergies should be made before final pricing is resolved.

SUMMARY

While merging entities may share a strong vision of tremendous synergistic value, the realization of this vision must be premised on a process of identifying, valuing and attributing those synergies to the respective entities, a focus on the specifics of the entities, assessment of their leaders and detailed consideration of probability adjusted discounted cash flow models reflecting alternative scenarios. Realization of synergies depends on common sense, the successful merging of cultures, good communications and properly planned and executed integration.

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