APPRAISAL PRACTICES BOARD
THE APPRAISAL FOUNDATION
America's Valuation Resource

TO: All Interested Parties

FROM: Rick Baumgardner, Chair
Appraisal Practices Board

RE: Exposure Draft – *The Measurement and Application of Market Participant Acquisition Premiums*

DATE: September 1, 2015

The Appraisal Practices Board (APB) was officially formed by The Appraisal Foundation Board of Trustees on July 1, 2010. The APB has been charged with the responsibility of identifying and issuing voluntary guidance on recognized valuation methods and techniques, which may apply to all disciplines within the appraisal profession. As applied to valuation for financial reporting purposes this responsibility has been extended to best practices. The APB has prioritized topics to offer guidance in areas that appraisers and users of appraisal services have identified as the most pressing issues facing the profession.

Originally facilitated by The Appraisal Foundation, the work of the Valuation for Financial Reporting Work Groups is now formally adopted and published through the APB.

The Working Group on Control Premiums has developed this exposure draft on *The Measurement and Application of Market Participant Acquisition Premiums*.

The APB is seeking public comment in response to this exposure draft and, based on the comments received, may make revisions to the guidance and issue subsequent exposure drafts. Once the Board believes it has received all relevant comment on this topic, it may vote to adopt the material as official guidance from the APB.

All interested parties are encouraged to comment in writing to the APB before the deadline of November 1, 2015. Respondents should be assured that each member of the Working Group will thoroughly read and consider all comments.

Written comments on this exposure draft can be submitted by mail, email and facsimile.

Mail: **Working Group 3 – The Measurement and Application of Market Participant Acquisition Premiums**
c/o Staci Steward
The Appraisal Foundation
1155 15th Street NW, Suite 1111
Washington, DC 20005

Fax: **202.347.7727**

Email: VFRcomments@appraisalfoundation.org

If you have any questions regarding this Exposure Draft, please contact Staci Steward at (202) 624-3052 or staci@appraisalfoundation.org

<u>IMPORTANT NOTE:</u> All written comments will be posted for public viewing, exactly as submitted, on the website of The Appraisal Foundation. Names may be redacted upon request.

The Appraisal Foundation reserves the right not to post written comments that contain offensive or inappropriate statements.

The Appraisal Practices Board and The Appraisal Foundation wish to express our utmost gratitude to the *Working Group on The Measurement and Application of Market Participant Acquisition Premiums* for volunteering their time and expertise in contributing to this document. Specifically, sincere thanks to the following individuals:

Working Group on

The Measurement and Application of Market Participant Acquisition Premiums

Manish Choudhary

Deloitte Financial Advisory Services LLP – New York, NY

Andrew S. Fargason

Stout Risius Ross, Inc. – Atlanta, GA

Travis W. Harms

Mercer Capital – Memphis, TN

Dayton D. Nordin

Ernst & Young – Boston, MA

BJ Orzechowski

KPMG LLP – Philadelphia, PA

Carla G. Glass, Oversight & Facilitator for The Appraisal Foundation

Hill Schwartz Spilker Keller LLC – Dallas, TX

Subject Matter Expert Group on Best Practices for Valuations in Financial Reporting

Jay E. Fishman, Co-Chair - Financial Research Associates

Carla G. Glass, Co-Chair - Hill Schwartz Spilker Keller LLC

Anthony Aaron - Ernst & Young LLP

Paul Barnes - Duff & Phelps, LLC

John Glynn - PricewaterhouseCoopers LLP

Matt Pinson - PricewaterhouseCoopers LLP

Contributors & Special Thanks

Chad Arcinue - Ernst & Young, New York, NY

The Appraisal Foundation Staff

David Bunton, President

John S. Brenan, Director of Appraisal Issues

Paula Douglas Seidel, Executive Administrator

The views set forth in this exposure draft are the collective views of the members of this Working Group and do not necessarily reflect the views of any of the firms that the Working Group members are associated with.

The Appraisal Foundation served as a sponsor and facilitator of this Working Group. The Foundation is a non-profit educational organization dedicated to the advancement of professional valuation and was established in 1987 by the appraisal profession in the United States. The Appraisal Foundation is not an individual membership organization, but rather, an organization that is made up of other organizations. Today, over 110 non-profit organizations, corporations and government agencies are affiliated with The Appraisal Foundation. The Appraisal Foundation is authorized by the U.S. Congress as the source of appraisal standards and appraiser qualifications.

Exposure Draft

The Measurement and Application of Market Participant Acquisition Premiums

Date Issued: September 1, 2015

Application: Business Valuation, Intangible Assets

Background: In recent years there have been increased requirements in the identification and recognition of assets and liabilities measured at fair value in financial statements. These requirements, promulgated by the Financial Accounting Standards Board (FASB), include:

- Statement of Financial Accounting Standards No. 141(R), predecessor to Accounting Standards Codification (ASC) 805 *Business Combinations*; and

- FASB Statement No. 142, predecessor to ASC 350 *Intangibles - Goodwill and Other* (ASC 350) and Accounting Standards Update (ASU) 2011-08.

Moreover, there has been increased focus on fair value measurement since the FASB issued Statement No. 157 (predecessor to ASC 820 *Fair Value Measurement)* in 2006 and ASU 2011-04 in 2011.

Furthermore, the FASB and the International Accounting Standards Board (IASB) have been working on a convergence project with an objective of having a consistent set of accounting standards that can be used globally. In that regard, the IASB has issued International Financial Reporting Standards 3 (revised) (IFRS 3R) *Business Combinations* and *IFRS 13 Fair Value Measurement*, both of which are largely similar to the same statements issued by the FASB. During the creation of this document, members of the International Valuation Standards Council (IVSC) have participated in certain discussions.

Because of the need for financial statements to be both reliable and relevant, valuation practices must provide reasonably consistent and supportable fair value conclusions. To this end, it is believed that guidance regarding best practices surrounding certain specific valuation topics would be helpful. The topics are selected based on those in which the greatest diversity of practice has been observed. To date, four Working Groups have been sponsored by The Appraisal Foundation and its Appraisal Practices Board (APB). The products of these Working Groups are referred to as APB Valuation for Financial Reporting (VFR) Advisories. The first Working Group addressed the topic of contributory assets and charges in APB VFR Advisory #1, *The Identification of Contributory Assets and Calculation of Economic Rents* dated May 31, 2010. A second Working Group is addressing the general topic of customer-related assets. This third Working Group is addressing the topic of the control premiums as applied in valuations done for financial reporting purposes. A fourth Working Group was recently formed to address the topic of valuing contingent consideration.

This document is intended to present helpful guidance for those that are preparing fair value measurements; however, this paper is not intended to be an authoritative valuation standard. It is the belief of the Working Group that the valuation of assets is a complicated exercise that requires significant judgment. The Working Group believes that consideration of the facts and circumstances related to the asset(s) that are being valued may sometimes support a departure from the recommendations of this document. This paper seeks to present views on how to approach and apply certain aspects of the valuation process appropriate for measuring the fair value of controlling interests.

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BACKGROUND

Premiums for control have long been a focus in business valuation.

Through the early 1990's, it was generally accepted that the publicly traded price of a company's shares represented the value of a minority interest and that, if the goal was to value a control interest, a "premium for control" would be added to the value of equity indicated by that publicly traded price. That premium generally came from market evidence in which the price paid to acquire an entire company was compared to the publicly traded price of that same company's shares prior to the acquisition.

However, in the late 1990's, this concept came into question and views have since been changing. Various points have been made regarding why the control value of an entity might be no greater than that indicated by its publicly traded price.

In any case, it has become widely accepted that the market evidence supplied by comparing the acquisition price to the publicly traded price does not represent a premium for conceptual control but, rather, represents a premium linked to actual changes that can be made by exercising that control. Control, and whether one has it, is not really the focal point. What matters is that, after an acquisition, the acquired company is now under different management/stewardship. A price higher than the publicly traded price might be reasonable if the new management and/or combined entity expect(s) improved cash flow or growth; or reduced risk. If no improvements or risk reduction could reasonably be expected, there may be little ability for an acquirer to pay a price higher than the publicly traded price and still generate a reasonable return on its investment. In such cases, the control value may approximate the publicly traded price.

INTRODUCTION AND SCOPE

This *VFR Advisory* document sets forth best practices for certain issues encountered in measuring the fair value of controlling interests in business enterprises for financial reporting purposes. When valuing controlling interests in business enterprises, valuation specialists often reference the concept generally referred to as the control premium. The Appraisal Foundation's Subject Matter Expert Group on Best Practices for Valuations in Financial Reporting has identified the use of control premiums in fair value measurement as an area of considerable diversity in appraisal practice.

The most common instances of such fair value measurements include Step 1 of the goodwill impairment test, portfolio valuation for investment companies, and application of the acquisition method of business combinations for step acquisitions. Of these, the Working Group believes Step 1 of the goodwill impairment test is most prevalent.

In a 2008 Securities and Exchange Commission (SEC) speech, the topic of control premiums was raised. It was stated that, in cases where higher control premiums are used, the level of documentation required to support the control premium would also increase.[1]

In fulfilling its mandate to provide best practices in the context of measuring fair value for financial reporting purposes, the Working Group has elected to introduce the term Market Participant Acquisition Premium (MPAP). The purpose of introducing this new term is twofold: (1) to emphasize the importance of the market participants' perspective when measuring fair value, and (2) to distinguish this premium from the more general (and occasionally controversial) notion of the control premium. The best practices presented in this VFR Advisory have been developed for measuring fair value for financial reporting and are not intended for other valuation contexts.

This VFR Advisory is the result of deliberations by the Working Group and input received from interested parties.

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[1] Robert G. Fox III, Speech by SEC Staff: Remarks before the 2008 AICPA National Conference on Current SEC and PCAOB Developments, Goodwill Impairment, December 8,2008

MARKET PARTICIPANT ACQUISITION PREMIUM

Concepts

Valuation specialists have long believed that the value of a business ownership interest is influenced by the degree of control available to the subject interest's owner. *The International Glossary of Business Valuation Terms*[2] defines control as "the power to direct the management and policies of a business enterprise."[3] Both intuition and empirical observation suggest that the presence (or absence) of the so-called prerogatives of control may influence the value of a business ownership interest. In short, one would usually prefer to exercise control than not. As a result, investors might be willing to pay more for a controlling interest than for an otherwise comparable non-controlling interest in the same enterprise.

To induce a rational investor to pay more for a controlling interest, the prerogatives of control must give rise to the potential for incremental economic benefits. In other words, the prerogatives of control have little inherent value, but rather have value to the extent that their exercise enhances the economic benefits available to the owner of the subject controlling interest. Control may be valuable if the exercise of control will enhance the enterprise's cash flows and/or reduce the enterprise's risk. *The International Glossary of Business Valuation Terms* defines a control premium as "an amount or percentage by which the pro rata value of a controlling interest exceeds the pro rata value of a non-controlling interest in a business enterprise, to reflect the value of control."

Historically, the concept and/or measurement of the control premium has proven to be vexing and contentious to valuation specialists. Those of a more empirical disposition point to the range of premiums observed in closed transactions as a starting point for analysis, while others observe that the much larger population of public companies that are not acquired each year supports the theory that control premiums for most publicly traded companies either do not exist or are too small to justify the costs and uncertainties associated with an attempted acquisition. In the context of fair value measurement, the Working Group desires to reorient discussion and analysis to the reasonable expectations of the relevant pool of market participants regarding cash flow enhancement and risk reduction at the measurement date.

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[2] The *International Glossary of Business Valuation Terms* contains valuation terms and definitions adopted by five North American professional organizations that recognize business valuation as a professional discipline: American Institute of Certified Public Accountants, American Society of Appraisers, National Association of Certified Valuation Analysts, The Canadian Institute of Chartered Business Valuators, and The Institute of Business Appraisers.

[3] The Working Group believes that this definition is consistent with instances where definitions of control appear in U.S. Generally Accepted Accounting Principles.

Definition

In this VFR Advisory the Working Group has introduced the (MPAP, defined as the difference between (1) the *pro rata* fair value of the subject controlling interest and (2*) its foundation.* Foundation is measured with respect to the current stewardship of the enterprise. In other words, the foundation contemplates that the prerogatives of control will continue to reside with the existing controlling shareholder or group of shareholders. The Working Group believes that valuation specialists most commonly associate the *foundation* with the *pro rata* fair value of marketable, non-controlling interests in the enterprise. Therefore, for publicly traded companies, the foundation is equal to the quoted market price for the company's shares.

Foundation value does not give consideration to discounts for lack of marketability.

Also, while the preceding describes an MPAP Equity Foundation concept, later in this document the Working Group introduces an alternative way to think about the MPAP. It proposes that instead of utilizing the Equity Foundation to determine an MPAP, usage of a Total Invested Capital (TIC) Foundation may be more appropriate. (For clarity and emphasis, this use of the word "Foundation" will be capitalized in subsequent sections.)

Control and Marketability

The MPAP definition does not ascribe a particular degree of marketability to the subject controlling interest. The issue of marketability for controlling interests is a source of diversity in practice, as some valuation specialists apply discounts for lack of marketability to derive the fair value of controlling interests in privately held companies, while others do not. The Working Group believes that it is usually inappropriate to apply discounts for lack of marketability when measuring the fair value of controlling interests. In most cases sellers would have access to a market as a forum to transact.

Among the prerogatives of control is the discretion to pursue an orderly sales process in order to realize the (undiscounted) value of the interest while enjoying the benefits of ownership. Although transaction costs would not be considered part of fair value, fair value contemplates the usual and customary marketing activities for such interests. Controlling interests should not be held to the same standard of marketability as publicly traded equities because the markets (and associated marketing periods) differ. For controlling interests in business enterprises, the usual and customary marketing activities may be time-consuming.

Illustrative Examples

Two examples serve to clarify the MPAP definition. First, consider a business enterprise that is not publicly traded. The company's founder owns 70% of the outstanding shares and continues to exercise control over the enterprise. The remaining 30% of the outstanding shares are held by a number of investors, none of whom own more than 5%. Despite the availability of numerous investment opportunities with indicated positive net present values, the founder demonstrates little interest in growth and is averse to the use of debt financing. The price per share paid by market participants for a controlling interest is likely to exceed that paid for a non-controlling (albeit hypothetically marketable) interest reflecting current stewardship of the company. In other words, there is likely to be an MPAP. Its magnitude likely will be influenced by the perceived ability of market participants to exercise the prerogatives of control to increase the cash flows and/or reduce the discount rate applicable to the subject interest. Available strategies include making investments to spur revenue and earnings growth (thereby potentially increasing cash flow), and employing a more typical financing mix for the industry (thereby reducing the weighted average cost of capital). Some market participants may also expect cost savings from eliminating redundancies. For privately held companies, much more so than publicly traded companies, there might also be cost savings from adjusting compensation and other costs to market rates.[4]

Second, consider a business enterprise that is publicly traded. The business is generally believed to be well-managed, reporting operating margins in line with industry peers. The company has created and marketed a unique technology and has generated significant historical revenue growth. In this case, opportunities to generate economic benefits by exercising the prerogatives of control are more limited. However, market participants may own complementary technologies that, if marketed alongside that of the subject entity, would increase revenue growth. Alternatively, market participants may have existing distribution networks capable of handling the subject entity's products that would enhance profit margins. Similar to the other example, market participants' perceptions of how prerogatives of control translate into value influence the investment decision.

In each case, the task of the valuation specialist is to identify and evaluate the feasibility of the available strategies from the perspective of market participants for the subject interest. The appropriate MPAP considers not only the magnitude of the available economic benefits, but also the degree to which such potential benefits will influence the price paid by market participants for the subject controlling interest in an orderly transaction at the measurement date. The Working Group is not stating that the economic benefits must be precisely quantified in each case. Rather, at a minimum, analysis should be performed to identify which form(s) of economic benefit market participants would reasonably expect to enjoy and some general magnitude of the effects of those benefits on value.

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[4] Whether such cost savings would contribute to the MPAP depends on how the above-market compensation and other costs were treated in measuring the ffoundation value. There is diversity of opinion in the profession as to where such "normalizing" adjustments are appropriate. The resolution of that controversy is beyond the scope of this Valuation Advisory.

Concluding Observations

The Working Group believes that MPAPs should be supported by reference to either enhanced cash flows or a lower required rate of return from the market participant perspective. The referenced economic benefits should be sufficient to provide market participants with an adequate return on the concluded fair value of the controlling interest. The Working Group anticipates that such benefits will not be reliably identifiable in all instances, in such cases resulting in either no, or a small, premium.

Notwithstanding the emphasis on cash flow and risk differentials in supporting MPAPs in fair value measurement, the Working Group acknowledges the merit of analyzing historical data regarding observed premiums from closed transactions. Such data might provide some examples of the extent to which buyers have expected improvement in cash flows or reduction of risk in specific transactions. However, to conform to best practices, valuation specialists should critically evaluate the quality and relevance of such benchmark premium data to assess its applicability to the valuation subject. It is inconsistent with best practices to rely solely on benchmark premium data to evaluate the reasonableness of the MPAP in a fair value measurement.

CONCEPTUAL CONSIDERATIONS

The Working Group believes that a persuasive fair value measurement for a controlling interest in a business enterprise should be supported by a clear explanation of the incremental economic benefits available to market participants. In this section of the VFR Advisory, we discuss the prerogatives of control that are the means for generating economic benefits and provide examples of the economic benefits typically associated with changing control of a business enterprise. The Working Group also discusses the characteristics of a business enterprise that are likely to influence the magnitude of the economic benefits available to market participants.

Prerogatives of Control

The prerogatives of control refer the rights possessed by the owner of a controlling interest in a business enterprise to direct the management and policies of a business enterprise. Following is a non-exhaustive list of the specific means by which such control is exercised[5]:

1. Appointing or changing operational management
2. Electing members of the board of directors
3. Determining management compensation and perquisites
4. Setting operational and strategic policy for the business
5. Acquiring, leasing, or liquidating business assets
6. Selecting suppliers, vendors, and subcontractors
7. Negotiating and consummating mergers and acquisitions
8. Liquidating, dissolving, selling, or recapitalizing the company
9. Selling or acquiring treasury shares
10. Registering the company’s equity securities for an initial or secondary public offering
11. Registering the company’s debt securities for public offering
12. Declaring and paying dividends
13. Changing the articles of incorporation or bylaws
14. Selecting joint venture and other business partners
15. Making product and service offering decisions
16. Making marketing and pricing decisions
17. Entering into licensing and other agreements regarding intellectual property
18. Blocking any or all of the above actions

The Working Group believes that the prerogatives of control noted above have no inherent value, but are rather the means through which market participants implement strategies designed to generate economic benefits. For example, the bare ability to select a company’s suppliers conveys no particular economic benefit to market participants, and therefore does not influence the fair value of a controlling interest. However, if selecting suppliers with whom market participants have existing relationships allows market participants to achieve a lower cost of sales, that economic benefit will potentially influence the MPAP.

[5] Most, if not all, of these items are based on a list appearing in Business Valuation Discounts and Premiums; by Shannon P. Pratt, CFA, FASA, MCBA, John Wiley & Sons, Inc., Second Edition, 2009, pg 17-18.

Economic Benefits that Support MPAP

The Working Group believes that the economic benefits that support MPAPs ultimately manifest in two ways: (1) enhanced cash flows or (2) lower required rates of return. The task of the valuation specialist is to identify the economic benefits available to market participants and support a magnitude of the amount by which such benefits may reasonably be expected to increase the price paid by market participants for the subject interest over its Foundation value. Usually cash flows and the applicable required rate of return (i.e., the discount rate) are interrelated. Therefore, any incremental risks associated with achieving cash flow enhancements should be appropriately reflected in the required rate of return.

Enhanced Cash Flows

Market participants contemplating purchase of a controlling interest in a business enterprise often anticipate implementing business strategies that are not currently being implemented, or are not available to be implemented, by the current owners. These strategies may increase cash flows or improve investment returns through other strategy revisions. As stated previously, the Working Group will refer to the concept of cash flow improvement to denote all forms of value-enhancing investment and operational strategies. In all cases, an acquisition premium would only be supported by changes believed to enhance the total return on investment. Potential improvements may include the following areas, which are illustrative and not intended to be an all-inclusive list:

- *Superior revenue growth.* Market participants may have greater financial capacity and/or willingness to invest more in positive net present value projects in order to fuel future revenue growth than the incumbent ownership group. Alternatively, market participants may have complementary products or services that are expected to increase sales of the subject entity, the market participants, or both. Market participants may anticipate enhanced pricing power following the acquisition of a competitor. They may have existing relationships with customers that have previously been inaccessible to the subject entity. In addition, market participants may have existing distribution networks that are broader than those of the subject entity that could contribute to superior revenue growth.

- *Increased operating margins.* Market participants may anticipate increasing operating margins by eliminating redundant operating costs or achieving economies of scale through the addition of incremental sales volume. Larger companies are often able to negotiate superior terms with suppliers, resulting in lower cost of sales. For privately held companies, market participants might expect increased margins through the normalization of compensation and contract amounts that had not been at market-based rates.[6]

- *Working capital efficiencies.* Relative to the subject entity under current stewardship, market participants may expect to maintain lower cash balances, negotiate more favorable payment terms or inventory delivery schedules with suppliers, or have tighter credit policies.

[6] Whether such cost savings would contribute to the MPAP depends on how the above-market compensation and other costs were treated in measuring the foundation value. There is diversity of opinion in the profession as to where such "normalizing" adjustments are appropriate. The resolution of that controversy is beyond the scope of this Valuation Advisory.

- *Capital expenditure efficiencies.* Market participants may have more favorable ongoing access to necessary capital equipment, or they may be able to consolidate production and distribution capacity.

Regardless of the source, to be relevant in differentiating the fair value of a controlling interest, the enhanced cash flows must be incremental to those expected by the subject entity under current stewardship. In other words, enhanced cash flows giving rise to an MPAP are incremental to prospective financial information that reflects the ongoing operations of the business enterprise absent a change of control transaction.

Furthermore, implementation of strategies expected to generate cash flow benefits may require the acquirer to incur significant costs. For anticipated revenue synergies, such costs may include investments in incremental production capacity and/or distribution infrastructure. Anticipated cost savings may be realized only after severance costs have been incurred. In all cases, the anticipated cash flow benefits that contribute to MPAP should be assessed net of required costs to implement the corresponding strategy.

Lower Required Rate of Return

When evaluating the purchase of a controlling interest in a business enterprise, market participants may have a lower required rate of return than investors contemplating the purchase of an otherwise comparable non-controlling interest in the entity under current stewardship. The Working Group believes there are several reasons market participants may have a lower required rate of return for a controlling interest, including:

- *Optimized capital structure.* If the subject entity employs a suboptimal mix of debt and equity financing, the weighted average cost of capital may be reduced by adjusting the subject entity's capital structure. While it may be more common for companies to use a less-than-optimal amount of debt financing, the costs of financial distress may also cause an over-leveraged company to have an unfavorable cost of capital. Judgments as to the optimal capital structure for the subject entity may be made with reference to the observed capital structures of companies in the subject entity's industry.

- *Company size benefits.* Most valuation specialists agree that, all else being equal, larger companies enjoy lower costs of capital than smaller companies. Often, market participants are larger than the subject entity and therefore have a lower cost of capital.

- *Reduced operating risk.* Market participants may perceive opportunities to reduce the operating risk of the business through strategies designed to reduce the volatility of raw material pricing, adopting a more variable cost structure, mitigating customer concentrations, or securing more long-term customer contracts, among others. Such measures may reduce the operating risk, and cost of capital, for the business enterprise.

Such effects will influence the magnitude of the MPAP only to the extent that market participants are willing to credit the subject entity with the economic benefits resulting from a lower cost of capital.

Many valuation professionals are unclear about market participants' views of the size of the target and how it influences the discount rate to be used in a valuation. Some believe that market participants use a cost of capital commensurate with the size of the target. Others believe that market participants use a cost of capital reflecting the benefits of the increased size and diversification of the combined entity post-transaction. Through the Working Group's outreach efforts, it was made clear that valuation professionals believe both perspectives are relevant in the determination of the appropriate discount rate.

When views about the applicability of the appropriate size premium differ, and thus result in a wide range of value indications, the importance of the valuation specialist's judgment increases. Valuation specialists might consider applying the following concepts in an effort to reflect the appropriate market participants' perspective when estimating a size premium.

- As a practical expedient, valuation specialists could bookend their income approach using the differing possible perspectives of market participants' risk to generate two valuation indications. One would reflect the size of the target. Another would reflect the size of the combined entity. The valuation specialist would select a point within the range, taking into account the accounting standards requiring the analysis.

- Apply other valuation techniques under the market or cost approaches. When this is done the point in a range where there seems to be the most consensus across approaches could provide relevant insights implying which is the stronger size premium case.

- The valuation specialist may be able to calibrate the risk measure by looking at the accounting exercise (e.g. business combination valuation) that recorded the subject.

- The valuation specialist may be able to calibrate the risk measure by looking at the accounting exercise (e.g. business combination valuation) that recorded investments in similar subjects.

Other Key Points

The Working Group cautions that it may not be appropriate to assume that market participants will always incorporate all economic benefits of control into the price paid for a controlling interest in a subject business, even if such benefits exist. In other words, market participants ordinarily do not give away all of their upside - the incremental economic benefits - that may arise from a transaction. How much of the upside is included in the transaction price depends, in part, on the competitive dynamics of the sale process.

Furthermore, the Working Group believes that it is incorrect to assume that the public market has "underpriced" non-controlling interests in the subject entity in measuring the magnitude of an MPAP for a controlling interest. For example, stock analysts frequently publish price targets for the shares of publicly traded companies. The existence of price targets in excess of the prevailing stock price does not provide direct evidence of the MPAP. In such cases, the valuation specialist should investigate the investment thesis underlying the price target. If the price target is premised on the expectation that the company may soon be "in play" for a change of control transaction or an expectation that a controlling interest buyer would implement strategies to increase the economic benefits generated by the firm, such price targets may provide indirect support for an MPAP. If, on the other hand, the price target reflects an expected future change in market sentiment for non-controlling interests in the subject entity, the price target will provide only limited or no support for an MPAP.

BUSINESS CHARACTERISTICS INFLUENCING MARKET PARTICIPANT ACQUISITION PREMIUM

As valuation specialists evaluate the potential economic benefits that may be derived by market participants from exercising the prerogatives of control in a manner different from current ownership, it is important to assess the reasonableness of the assumed economic benefits in the context of the characteristics of the subject business enterprise and the industry in which it operates. The following discussion is not intended to be comprehensive, but is representative of the factors that valuation specialists should consider in estimating the price market participants would pay for the subject controlling interest.

Acquisition Activity in the Industry

The number of change of control transactions in a given industry fluctuates over time. When the frequency of transactions in an industry increases, it may signal that market participants perceive greater opportunities to generate economic benefits by exercising the prerogatives of control. For example, regulatory or other changes may favor a smaller number of larger industry players, prompting a round of consolidation. Alternatively, acquisition activity may increase because economic turmoil is causing the financially weaker members of the industry to seek to be acquired by more stable and less financially distressed companies.

Robust acquisition activity in the industry may increase the number of market participants that would contemplate acquiring a controlling interest in the subject entity. As a result, the selling shareholders may be able to realize a greater portion of the economic benefits available to market participants, thereby increasing the fair value of the controlling interest and, by extension, the MPAP.

As a consolidation trend for an industry is confirmed by an increasing number of announced transactions, the fair value of non-controlling interests in the subject entity may increase as investors come to expect that a change of control transaction on favorable terms is imminent. In such cases, the MPAP may be reduced as the difference between the fair value of controlling and non-controlling interests is compressed.

Stage in Company Life Cycle

Growth-stage target companies generally offer greater opportunities for realizing economic benefits than more mature companies. For example, market participants may be able to leverage existing distribution networks that growth-stage companies have not yet had the opportunity or financial resources to develop, providing opportunities for superior revenue growth and/or enhanced operating margins. Mature target companies, on the other hand, are likely to present fewer opportunities for enhanced cash flows or lower cost of capital. As a result, the appropriate MPAP may be lower for such companies.

Market Participant Attributes

Market participants are commonly classified into three general categories:

- *Strategic acquirers* already operate in the same business as the subject entity. Revenue synergies and cost savings tend to be the most important economic benefits available to strategic acquirers exercising the prerogatives of control. Strategic acquirers may be competitors of, suppliers to, or customers of the subject entity.

- *Financial acquirers* do not have any existing complementary business operations. Financial acquirers, such as private equity funds, are less likely to identify significant revenue synergies or operating cost savings than strategic acquirers. Financial acquirers may possess financing advantages relative to strategic acquirers.

- *Conglomerate acquirers* are operating companies that acquire the subject entity to increase the diversification of the acquirer's existing revenues and cash flows. While there may be some administrative efficiencies that are expected to contribute to enhanced cash flows, the expectation of diversification benefits, and thus lower risk, causes the benefits available to conglomerate acquirers to more closely resemble financial rather than strategic acquirers.

While this classification is helpful for evaluating the attributes of market participants and the nature and magnitude of economic benefits they will expect from owning control of the subject entity, the Working Group emphasizes that the boundaries between the categories are permeable. For example, financial acquirers often acquire controlling interests in companies to "bolt on" to existing portfolio investments, thereby resembling strategic acquirers in many respects. In addition, financial acquirers may anticipate significant cash flow enhancements from replacing what they perceive to be an inept management team, or from the eventual sale to a strategic acquirer, or through taking the entity public with favorable initial public offering pricing. Likewise, strategic or conglomerate acquirers may have access to financing arrangements on terms at least as favorable as financial acquirers.

Valuation specialists should identify market participants' attributes and correlate the expected economic benefits of control to the likely strategies of such acquirers. In many cases, strategic, financial, and conglomerate acquirers compete with one another for the same targets and the fair value of controlling interests could appear to encompass a mix of strategic and financial benefits.

Size of Market Participants Relative to Subject Entity

Market participants are often larger than the subject entity. This is unsurprising, as larger companies may be positioned to realize economic benefits that are not available to a smaller company on a stand-alone basis. For example, other factors being equal, larger companies are more likely to have favorable access to capital, existing distribution infrastructure and administrative capacity, and superior negotiating leverage with suppliers and customers. As a result, the larger market participants may be able to extract greater economic benefit from the subject entity than the current owner(s) – and in a shorter period of time. As a result, the MPAP may be positively related to the size of the market participants for the subject controlling interest.

Balance of Information

Market participants forecast the economic benefits to be realized from an acquisition on the basis of information discovered during due diligence procedures. Assuming the subject entity is a willing party to the selling process, the due diligence associated with acquisition of a controlling interest is likely to yield information not available to investors in non-controlling interests in the subject entity. The Working Group has identified three varieties of information asymmetry that can influence the fair value of a controlling interest, and by extension, the MPAP, in certain circumstances:[7]

1. *Information available to market participants for controlling interests, but not market participants for non-controlling interests.* In general, the subject entity's Equity Foundation reflects only publicly available information regarding the subject entity. However, at the measurement date, there may be relevant information regarding the results of operations or other factors that are disclosed to market participants for controlling interests but not yet publicly disseminated. For example, if the measurement date coincides with the end of the subject entity's reporting period, operating results for the period are likely known by the company with a considerable degree of certainty although the company may have issued only limited guidance to analysts and investors so that the publicly traded share price does not reflect the information. The existence of non-public information favorable to the subject entity may support a larger MPAP; if the non-public information is unfavorable, that may indicate a lower MPAP.

   Information known to the subject entity but not market participants. If the information is favorable to the subject entity, it is likely to be disclosed to the market participants during due diligence. Under the definition of fair value, market participants are assumed to be "knowledgeable, have a reasonable understanding about the asset or liability and the transaction based on all available information, including information that might be obtained through due diligence efforts that are usual and customary."[8] As a result, even if the subject entity would prefer that market participants not be aware of unfavorable information, such information is assumed to be known in measuring fair value resulting in a comparatively lower MPAP. The Working Group believes the *good news* scenario revealed to the market participants but not reflected in the Equity Foundation would increase the MPAP.

2. *Information known only to a single market participant, but not the subject entity.* A particular market participant may be able to take advantage of unique revenue synergies or cost savings. If this information is truly specific to a single market participant, the effect on the fair value of the subject controlling interest is likely to be modest as the market participant would be unwilling to pay more than the value of the economic benefits available to the next most advantageously positioned market participant. In other words, if such information constitutes a buyer-specific synergy, it should be excluded from the estimation of fair value.

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[7] This discussion is in the context of publicly traded entities.

[8] ASC 820-10-20.

In considering information asymmetries, the valuation specialist should be careful to not double count the impact of such items. For example, the impact of any information asymmetries discussed in the first and second situations might already be reflected in the typical inputs (i.e., cash flows and/or required rates of return). However, the information asymmetries discussed in the first and second situations may be useful in explaining a portion of the MPAP implied from the estimated fair value (e.g., in the process of reconciling to market capitalization). The Working Group cautions that the existence and magnitude of most information asymmetries is difficult to support. Further, the degree to which the balance of information contributed to historically observed transaction premiums will, in most cases, be impossible to discern.

Capital Structure of Subject Entity

Among the prerogatives of control is the ability to adjust the subject entity's capital structure. As discussed previously, shifting to a more optimal capital structure is one strategy for reducing the weighted average cost of capital. The farther the subject entity's capital structure is from the optimal financing mix, the greater the potential MPAP.

Management Objectives

Privately held companies often are managed with objectives that differ from those of publicly traded companies. This is not necessarily a matter of differing "quality" of management (addressed in the next section), but instead might be a matter of differing goals. Such differences might include above-market compensation paid to the private company owner, lease rates that do not reflect market conditions, avoidance of the use of debt financing, net working capital at levels above industry norms, and other similar factors.

Depending on how these factors are addressed in determining the Foundation value, the MPAP for such a privately held company might exceed that measured for many publicly traded entities.

Quality of Management

Another prerogative of control is the ability to change the subject entity's management team. If the quality of the incumbent management team is perceived by market participants to be less than optimal, it may be more likely that strategies to enhance cash flows or reduce the cost of capital can be successfully implemented. Such strategies might contribute to a larger MPAP. Conversely, if the quality of the management team is acknowledged to be high, opportunities to realize further economic benefits are likely to be limited, resulting in a smaller MPAP.

While the notion of management quality is inherently subjective, there are objective metrics that can provide insight regarding the effect of current management policies. Metrics such as growth, profitability, asset utilization, and cost of capital can be benchmarked against peer companies to provide insight regarding the quality of incumbent management. However, such measures must be interpreted in the context of the management team's tenure and firm-specific factors, such as contracts, facilities, and other assets that were inherited from prior management teams.

The Working Group observes that poor quality management is unlikely to be a factor cited in support of an MPAP since it rarely will be acknowledged by the management team responsible for the fair value measurement. Nonetheless, it is an important consideration and highlights the importance of comparative financial analysis when evaluating the economic benefits that may be available to market participants exercising control over a business enterprise.

Regulatory Factors

Regulatory factors can be significant considerations in business combinations. In addition, regulatory factors can mitigate or amplify the degree of control exercised by a particular ownership interest. Purchase prices and acquisition premiums in transactions outside the United States can differ significantly from those inside the United States because of different regulatory environments.

There are a variety of regulatory factors that may be relevant to the analysis of the MPAP:

- *Regulations governing merger and acquisition activity.* Some regulations, such as anti-trust provisions designed to limit the potential for monopoly power, may directly affect which market participants are potential acquirers of the subject entity. Regulatory provisions that significantly reduce the number of potential bidders for the subject entity may have a dampening effect on the MPAP.

- *Limitations on foreign direct investment.* As with anti-trust provisions, those aimed at limiting the ability of foreign market participants to acquire a controlling interest in the subject entity may reduce the MPAP applicable to the subject entity.

- *Investor protection measures.* Investor protection measures such as uniform accounting standards and corporate securities laws are generally designed to protect non-controlling investors. Some measures may even grant non-controlling shareholders in a business enterprise the right to block the controlling owner's ability to unilaterally exercise certain of the prerogatives of control. Since the MPAP measures the difference between the fair value of controlling and non-controlling interests, regulations that increase the fair value of non-controlling interests will, all else being equal, reduce the MPAP.

- *Industry-specific regulations.* Some industries, such as banking and telecommunications, are governed by a host of industry-specific regulations that govern the conduct of, and competition among, firms within the industry. Such industry regulations can shift with economic conditions and the political environment. Industry-specific regulations that are perceived to promote consolidation activity may increase the MPAP. If, instead, the prevailing regulatory stance is one of limiting acquisition activity, the MPAP may be lower.

The influence of regulatory factors should be evaluated relative to observed transaction activity in the subject entity's industry.

Corporate By-Laws and Governing Documents

Valuation specialists should consult the subject entity's corporate by-laws and other governing documents to determine whether there are any provisions that may restrict the ability of the subject interest to exercise control over the business enterprise.

The Working Group believes it is a mistake to conceive of control as being absolute; rather, control of the enterprise should be evaluated along a continuum extending from substantial minority investments to complete ownership of all equity share classes. For example, the subject entity's governing documents may grant preferred shareholders the right to vote as a class on certain corporate actions, or to elect a certain number of corporate directors. In other cases, a supermajority vote of the common shares may be required to approve a sale of the business.

Some companies issue both voting and non-voting shares with the economic rights of the non-voting shares being identical to the voting shares. Observed differences between trading prices for non-controlling interests in the two share classes are typically very small. Because this is based on a comparison of the prices of non-controlling interests, such data is of little use in the analysis of MPAP.

Transaction Structure

The structure of a transaction can exert a significant influence on the nominal price paid for a controlling interest. The tax characteristics of a transaction, including the availability of amortization benefits to the market participants, can affect the purchase price. The Working Group observes that ASC 350 requires consideration of whether fair value reflects a taxable or non-taxable transaction structure.

Controlling interest acquisitions often include contingent consideration arrangements. Depending on how the contingent consideration is measured, the nominal purchase price may be overstated or understated. Recent changes to the accounting for business combinations that include contingent consideration have – at least temporarily – increased the difficulty of interpreting market data from completed transactions.[9]

Valuation specialists should carefully consider the influence of transaction structure on both observed transaction multiples and control premiums, as well as fair value measurement of the subject controlling interest. Unfortunately, important details that would permit careful analysis of closed transactions are usually unavailable to the valuation specialist.

[9] The Working Group notes that contingent consideration arrangements are less common in acquisitions of public companies (the basis for observed transaction premiums).

Summary

In summary the Working Group believes this section illustrates many of the factors that valuation specialists would consider in estimating the price market participants are willing to pay for the subject controlling interest. The preceding listing and discussion of business characteristics and considerations is not intended to capture all factors that may influence an MPAP. Instead, the Working Group focused on topics that - based on its collective professional experiences - are encountered most often in practice. Consideration of these concepts may be helpful when performing original analysis to develop an MPAP. These concepts may also be useful in assessing the reasonableness of another party's MPAP analysis, such as in a peer or specialist review context.

Conclusions

A well-supported fair value measurement for a controlling interest in a business enterprise should include consideration, from the market participants' perspective, of the incremental economic benefits of control. The prerogatives of control may lead to economic benefits in many areas and the valuation specialist should review the typical business characteristics likely to influence the magnitude of the benefits available to market participants.

The Working Group believes that use of the framework discussed will provide an important context for review of the valuation results, and will increase the relevance and reliability of the associated fair value measurement.

ANALYTICAL METHODS

The remaining sections of this VFR Advisory address some of the important analytical methods involved in expressing MPAPs, analyzing observed premiums from historical transactions, and assessing the reasonableness of the concluded MPAP.

Expressing the Market Participant Acquisition Premium

Although the MPAP may be expressed as a dollar amount (the difference between the *pro rata* fair value of a controlling interest and its Foundation), valuation specialists customarily express valuation premiums and discounts as the percentage difference. This is intuitive and facilitates the comparison of premiums across companies of different sizes.

Valuation specialists have traditionally used the Equity Foundation to calculate the transaction premium as a percentage. This is consistent with the methodology for reporting premiums used by *Mergerstat Review* which the Working Group observes (based on its experiences) to be the most widely cited source of historical control premium data. It is also consistent with the way in which premiums are commonly reported in the financial press.

In deliberating the MPAP, the Working Group concluded that the traditional method of calculating transaction premiums is potentially misleading. This is because the economic benefits realized through exercising the prerogatives of control enhance the fair value of the enterprise as a whole, not just the fair value of the equity.[10]

Further, expressing the MPAP as a percentage of the Equity Foundation distorts the comparability of the MPAP among companies with different capital structures. For example, assume Foundation TIC value for both Company A and Company B is $100 million. Company A has $10 million of interest-bearing debt outstanding and Company B has $50 million of interest-bearing debt outstanding. Assume further that, from the perspective of market participants, the magnitude of economic benefits from exercising the prerogatives of control for Company A is identical to that for Company B, such that the MPAP applicable to each company is $20 million.

[10] When there is a change of control transaction, the debt typically is due at its face amount, and its book amount approximates or equals fair value.

As shown in the following table, the traditional method of expressing the premium as a percentage of the Equity Foundation will cause the MPAP for Company A to appear smaller than that of Company B. However, when expressed as a percentage of the TIC Foundation, the MPAPs – which are economically equivalent (the same dollar amount) – are identical.

	Company A	Company B
Fair Value of Interest-Bearing Debt	$10.0	$50.0
Fair Value of Equity	90.0	50.0
Fair Value of Total Invested Capital	$100.0	$100.0
(Marketable, Non-controlling Interest Basis)		
Fair Value of Total Invested Capital	$120.0	$120.0
(Controlling Interest Basis)		
Market Participant Acquisition Premium	$20.0	$20.0
Traditional Method		
Market Participant Acquisition Premium	$20.0	$20.0
Fair Value of Equity	90.0	50.0
(Marketable, Non-controlling Interest Basis)		
Market Participant Acquisition Premium (%)	22.2%	40.0%
Total Invested Capital Method		
Market Participant Acquisition Premium	$20.0	$20.0
Fair Value of Total Invested Capital	100.0	100.0
(Marketable, Non-controlling Interest Basis)		
Market Participant Acquisition Premium (%)	20.0%	20.0%

The Working Group believes that best practices include expressing as well as applying the MPAP in the context of a TIC Foundation.[11] The Working Group acknowledges that following this best practice will require the restatement of observed transaction premiums that have been traditionally expressed based on an Equity Foundation. Nonetheless, the Working Group believes that the benefits of doing so (alignment with the underlying economic benefits giving rise to the MPAP and greater comparability across firms with different capital structures) outweigh the incremental effort. The Working Group notes that since the observed transaction premiums relate to publicly traded companies, the information is ordinarily available to enable expression of the observed transaction premiums using a TIC Foundation.

[11] Concepts of TIC level premiums may not be applicable for certain industries (e.g., certain types of financial services entities).

Analyzing Historical Premium and Transaction Data

Transactions in which the buyer acquires a controlling interest in a publicly traded company afford opportunities to observe the magnitude of transaction premiums paid by acquirers. Valuation specialists often reference observed premiums when estimating or supporting the MPAP for the subject entity. Although similar transaction premiums presumably also exist in the acquisition of private companies, the absence of an observable Foundation price for the acquired company precludes calculating reliable premiums. However, such transactions may yield reliable multiples of revenue, earnings measures, or other relevant metrics that are indicative of the fair value of a controlling interest.

The Working Group cautions that exclusive reliance on observed transaction premium data provides, in most cases, insufficient support for a concluded MPAP. Nonetheless, observed transaction premium data may be valuable. The Working Group believes that observed historical premiums provide potentially relevant (albeit indirect) evidence of the appropriate magnitude of the incremental economic benefits anticipated by market participants. The observed premiums can be used to corroborate (or question) the reasonableness of the cash flow forecasts and discount rates underlying fair value measurements within the income approach. However, exclusive reliance on observed transaction premiums without careful analysis of the subject entity's relative financial performance, valuation multiples, and other metrics can result in an unreliable fair value measurement.

The Working Group believes that the valuation specialist may consider the qualitative factors discussed in the earlier section – *Business Characteristics Influencing Market Participant Acquisition Premium* – to narrow the range of observed premiums from the transaction data that may be applicable for the subject entity. Analysis of these factors may also support the incremental benefits assumed in a quantitative analysis of the MPAP.

Assessing the Underlying Data Set – Transaction Data

Valuation specialists should carefully analyze available transaction data, considering various factors specific to the acquired company, the seller, the acquirer, or the transaction that may warrant adjustments to the data. Factors valuation specialists should consider include the following:

- *Size of Interest Transacted.* The valuation specialists should attempt to ascertain whether the interest transacted represents 100% ownership of the company. As discussed previously, there is a continuum of control, and ownership interests of less than 100% may not be able to unilaterally exercise the prerogatives of control.

- *Financial Condition of Seller*. Transactions involving sellers motivated by financial distress or bankruptcy usually do not provide reliable evidence for fair value measurement.

- *Relationship of Buyer and Seller*. If the parties to the transaction have some pre-existing relationship, it may indicate that the transaction terms do not reflect arm's-length negotiation, which would limit the usefulness of the transaction data when measuring fair value.

- *Stated Rationale for Transaction.* When available, analysts should review press releases and other corporate announcements describing the transaction to determine if the price paid (and therefore the multiples and premiums observed) reflected any buyer-specific synergies, or if any other characteristics of the transaction render it unsuitable for use in a fair value measurement.

- *Changes in Market Conditions.* Unlike guideline public company data, guideline transaction data rarely lines up with the measurement date. Rather, some amount of time will have elapsed between the occurrence of the observed transaction and the measurement date. Depending on the length of the gap, analysis of changes in market, economic or industry conditions (as reflected in pertinent market indices or economic series) between the two dates may be appropriate to assess the relevance of the observed transaction data to the fair value measurement.

- *Stock Price and Volume Fluctuations Prior to Announcement.* In some cases, the stock of the target company may exhibit unusual volatility and/or increased trading volume prior to the formal announcement of the transaction. The existence of such phenomena may indicate that the implied acquisition premium should be calculated with reference to an earlier, unaffected, stock price.

- *Transaction Structure.* Especially for transactions involving private companies, an array of transaction structure concerns can distort the reported data. For example:

    - Acquirers may purchase either the stock or the assets of the target company.
    - Certain corporate assets such as cash or real estate may not be included in the transaction.
    - The consideration may include a note bearing interest at other than a market rate.
    - The fair value of contingent consideration arrangements is often difficult to measure at the transaction date (and may be excluded altogether from a reported price).

- *Transaction Process.* The valuation analyst should endeavor to ascertain whether the transaction was the culmination of a deliberate selling and marketing effort administered by competent investment bankers, a hostile takeover, a bidding war, or negotiation with a single acquirer.

- *Transaction Status.* Referenced transactions may have been announced, but not yet closed at the measurement date. In such cases, valuation specialists should carefully consider how much weight to give to such transactions.

Given the limited availability of data regarding most change of control transactions, it is unlikely that valuation specialists will be able to obtain a comprehensive understanding of the factors described above for each transaction relied on. Nonetheless, by considering these factors, valuation specialists might be able to exclude transaction data that is misleading for the subject fair value measurement.

Other Considerations – Historical Premium Data

Available data regarding observed premiums in historical transactions present additional challenges for valuation specialists.

In many cases, there will be a trade-off between the quantity of available premium data and the quality of the data (in other words, the data's relevance to the fair value measurement). Valuation specialists should evaluate the relevance of referenced premium data by considering the degree to which the target company is comparable to the subject entity, and whether the acquirer is representative of market participants for the subject entity at the measurement date.

The number of referenced transactions can be increased by considering those occurring during a longer window preceding the measurement date. However, transactions more proximate to the measurement date are generally preferable, especially when consolidation trends within the subject entity's industry have evolved. When evidence from transactions near the measurement date is limited or not available, valuation specialists may wish to consider industry premiums over a longer period, such as one, three, or five years prior to the measurement date. However, when doing so, valuation specialists should be careful to consider what effect, if any, changes in economic, market, or industry factors may have had on the level of observed premiums over the period analyzed.

The reported magnitude of the observed premium from a transaction is affected by the date selected to serve as the basis for expressing the premium (the date of the Foundation price). Valuation specialists should review the target company's public share trading volume and price fluctuations for the weeks leading up to the transaction announcement date to identify any unusual or unexplained market activity. For example, if the target company had retained a financial advisor to explore strategic alternatives, or negotiations with potential acquirers are known to the public, it is preferable to calculate the transaction premium using a price from a date before such information began to be incorporated into the target company's publicly traded stock price.

Valuation specialists routinely consider premiums calculated from public stock prices one to thirty days prior to the transaction announcement date. Valuation specialists may also calculate transaction premiums based on the average stock price over a period. The Working Group believes that, if applied consistently, such techniques can be used to improve the relevance and reliability of historical premium data.

Limitations Inherent in Observed Premium and Transaction Data

As noted in the previous sections of this VFR Advisory, valuation specialists considering observed premium and transaction data must be vigilant to ensure that the data has been evaluated for comparability and relevance to the subject entity.

Beyond these issues, valuation specialists should be aware of more fundamental concerns that may limit the usefulness of such data when measuring the fair value of a controlling interest, such as:

- *Selection bias.* Acquisition premiums and other transaction data may be subject to selection bias since the population of observed transactions is limited to those companies that have been acquired. Some valuation specialists emphasize that such companies typically represent only a small portion of the universe of companies available to be acquired. While not subject to empirical verification, one potential conclusion from this observation is that the control value of the much larger population of companies not acquired is not greater than the companies' market capitalization because control would offer no incremental economic benefits to induce an acquirer to seek control.

  In any case, since the premiums and transaction multiples applicable to the companies not acquired cannot be observed, application of observed premiums or implied transaction multiples to the subject entity may introduce an upward bias in the resulting fair value measurement. Stated alternatively, transaction data may be drawn from a sample limited to those companies for which the premiums would be highest. As a result, the valuation specialist must carefully assess whether the subject entity is comparable to acquired companies in the sample. The Working Group believes that the valuation specialist may consider the qualitative factors discussed in the earlier section – *Business Characteristics Influencing Market Participant Acquisition Premium* – to narrow the range of observed premiums from the transaction data that may be appropriate for the subject entity.

- *Acquirer-specific synergies.* Setting aside the potential for selection bias, data from closed transactions may reflect acquirer-specific synergies that are not available to the relevant pool of market participants. Specific synergies that are not available to market participants are excluded from the definition of fair value. In most cases, the specific considerations motivating the parties to the transaction cannot reliably be discerned from the available transaction data. As a result, it is difficult for valuation specialists to precisely determine the degree to which the observed premiums and transaction multiples are relevant when measuring the fair value of the subject controlling interest.

- *Negative observed transaction premiums.* Referenced sources of transaction premium data often include negative premiums. Negative transaction premiums are observed when the price per share paid for a controlling interest is less than the contemporaneous Foundation price. The Working Group believes that negative observed transaction premiums should be disregarded when measuring fair value. The Working Group believes that, absent anomalous circumstances with respect to either the market for the subject entity's shares or the transaction process for the controlling interest (neither of which would be relevant in measuring fair value), market participants would be unwilling to sell to a controlling interest acquirer at a price less than the Foundation price.

Each of these concerns underscores the importance of careful analysis of the incremental economic benefits available to market participants through exercising the prerogatives of control in a manner different from the prior owners. The Working Group affirms the value of identifying and referencing observed historical transaction premiums and other transaction data; however, exclusive reliance on such data is not consistent with best practices for fair value measurement.

Assessing the Reasonableness of the Concluded Market Participant Acquisition Premium

A credible fair value measurement should include an assessment of the overall reasonableness of the measurement, including the MPAP applied or implied by the analysis. While premiums are conventionally expressed as a percentage of the Equity Foundation, or in some cases the TIC Foundation, the Working Group believes that the overall reasonableness of the fair value measurement should be assessed more broadly.

Defined as the difference between two measures of fair value (the controlling interest and Foundation), the MPAP is – strictly speaking – a byproduct of the valuation process rather than an exogenous input. While valuation specialists commonly estimate the MPAP as an input in measuring the fair value of a controlling interest (when using the guideline public company method, for example), the level of rigor of analysis would depend on the importance of the MPAP to the fair value measurement.[12] Valuation specialists may consider using the following techniques to evaluate the reasonableness of the fair value measurement of a controlling interest in a business enterprise:

- *Relative value measures.* When feasible, valuation specialists should calculate ratios of total invested capital to relevant performance measures, such as revenue, Earnings Before Interest, Taxes, Depreciation and Amortization ("EBITDA"), or other industry-relevant metrics. When an MPAP has been added to a Foundation value, comparison of the resulting relative value measures to transaction multiples observed from the available transaction data might assist the valuation specialist in confirming the reasonableness of the selected premium.

- *Prospective Return Analysis*. The MPAP is a function of the incremental economic benefits anticipated by market participants from exercising the prerogatives of control. If the guideline public company approach is the primary method used in measuring fair value, the valuation specialist might consider calculating the discount rate implied by the effective earnings multiple. Comparing the implied discount rate to the weighted average cost of capital for market participants can help confirm the reasonableness of the MPAP.

- *Calibration to prior transactions in the subject entity.* In some instances, transactions for debt or equity interests in the subject entity will have occurred during a relevant period of time leading up to the measurement date. Market transactions may include those involving the subject controlling interest, a non-controlling interest in the subject entity, or other debt or equity securities of the subject entity. The valuation specialist should carefully assess whether the market transactions were arm's-length and orderly, and if so, calibrate the fair value measurement to the terms of the market transaction, taking into account changes in the market since the transaction and fundamental differences between the subject controlling interest and the interest transacted.

[12] The Working Group believes that the discounted cash flow method (when using market participant cash flows and discount rates) and the guideline transaction method yield controlling interest indications; in such cases, application of a discrete market participant acquisition premium is inappropriate.

- *Comparison to public market capitalization.* When measuring the fair value of reporting units of public companies, the Working Group believes that the concluded aggregate fair value of the reporting units (on a controlling interest basis) should be compared to the market capitalization of the company on the measurement date. The MPAP for the entire company implied by such a comparison might be a barometer of the overall reasonableness of the fair value measurement. However, there are cases in which there would reasonably be a difference between the aggregate control value of the reporting units and the control value of the total company, such as a conglomerate for which the parts might be worth more or less than the whole or a company whose shares are not actively traded.

Valuation specialists may consider myriad value indications when several valuation methodologies are available and relevant for consideration in appraising a single valuation subject. ASC 350-20-35-22 states that “the market price of an individual equity security (and thus the market capitalization of a reporting unit with publicly traded equity securities) may not be representative of the fair value of the reporting unit as a whole.” ASC 350-20-35-23 further states that “measuring the fair value of a collection of assets and liabilities that operate together in a controlled entity is different from measuring the fair value of that entity’s individual equity securities…The quoted market price of an individual equity security, therefore, need not be the sole measurement basis of the fair value of a reporting unit.”

However, when the fair value of reporting units are estimated for ASC 350 purposes, whether for entities with one or several reporting units, the entity’s market capitalization has been commonly referenced as indirect value evidence even in cases where the unit of account prescribed by ASC 350 (i.e., the reporting unit) may be different from the quoted unit of measurement (i.e., the individual shares of the entity). In the case of multiple reporting units, additional adjustments have been made to present the best apples-to-apples comparison. In other words, the strength of quoted evidence was compelling enough to consider even with an understanding that the quoted price was not necessarily directly linked to the valuation subject.

In 2008, during the economic crisis, the market for, and fair value of, many assets and companies declined and the level of difficulty for measuring value increased. At the 2008 AICPA National Conference on Current SEC and PCAOB Developments, the SEC Staff offered its view of how market capitalization may be used when assessing goodwill impairment. In particular, the SEC staff indicated that they would expect objective evidence to support the reasonableness of implied transaction premiums, whether a quantitative or qualitative analysis (or both) was used. The SEC staff also indicated that while judgment may result in a range of reasonably possible premiums, they expect the rigor of documentation to increase as the magnitude of the premium increases.[13]

[13] Robert G. Fox III, Goodwill Impairment on December 8, 2008, AICPA National Conference on Current SEC and PCAOB Developments

Whereas the practice of referencing market capitalization was in place before the 2008 SEC speech, the Working Group believes the SEC staff's views increased the usage of the market capitalization reconciliation and it became more prevalent in audits of such entities. Since that time, the FASB issued FASB ASU 2011-08. In the Basis for Conclusions in that document, the FASB noted that the use of the qualitative screen will result in companies applying judgment on when and how to perform the market capitalization reconciliation.[14] Notwithstanding the potential difficulty, the Working Group believes it is a best practice to perform an analysis of the conclusion relative to the market capitalization.

The Working Group believes that, in most cases, for publicly traded entities it would be beneficial to perform a comparison of the estimated fair values of the reporting units in aggregate with the entity's market capitalization and analyze the implied MPAP, if any. In such cases, the reasonableness of the implied MPAP should be supported through quantitative and qualitative analyses. The rigor of the supporting analyses and documentation will depend upon the magnitude of the implied control premiums, particularly if the implied MPAP affects the conclusion regarding whether the reporting unit is impaired.

The Working Group believes that the majority of the implied premium will likely be supported through the enhancement in cash flows or reduction in risk (or both), as discussed previously. The illustrative examples presented in a subsequent section of this VFR Advisory provide a potential quantitative framework that may be considered to support the implied premium. Additionally, the qualitative factors discussed in the earlier section – *Business Characteristics Influencing Market Participant Acquisition Premium* – may be considered to support the implied MPAP relative to the range of observed premiums from the transaction data that may be applicable for the subject entity. In certain situations, albeit rare, what appears to be an implied MPAP may result from transactions in the company's stock that are not orderly; e.g., a distressed sale[15]. This would render the comparison between the market capitalization and the estimated fair value to be not very meaningful.

The Working Group believes that use of techniques like those described above is a vital part of measuring the fair value of controlling interests in business enterprises. These tests of reasonableness allow the valuation specialist to demonstrate to auditors, regulators, and other interested parties that the MPAP is grounded in identifiable incremental economic benefits available to the relevant pool of market participants, thereby increasing the relevance and reliability of the associated fair value measurement.

The Working Group has included an illustrative example for analyzing MPAPs (see *Selecting and Assessing Market Participant Acquisition Premiums – Example*; a subsequent section of this paper located on page 42).

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[14] BC34. The Board recognizes that many public entities reconcile the sum of the fair values of each reporting unit to the entity's market capitalization. The Board acknowledged that the amendments in this Update may result in entities applying more judgment about when and how to perform this evaluation; however, it concluded that this factor should not prohibit an entity from utilizing the qualitative assessment.

[15] ASC 820-10-35-54D

THE FAIR VALUE CONTEXT

Valuation is context dependent. Valuation specialists refer to standards of value to define the relevant context for valuation. The objective of this Working Group is to develop best practices for the valuation of controlling interests in business enterprises under the standard of fair value for financial reporting. The following sections of this VFR Advisory provide commentary on the definition of fair value and identify the most common instances in financial reporting requiring measurement of the fair value of controlling interests in business enterprises.

The Fair Value Definition

Accounting Standards Codification Topic 820, *Fair Value Measurement* (ASC 820) defines fair value (in its glossary) as "The price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date."

The definition of fair value and associated guidance create a unique lens through which to view the valuation of controlling interests in business enterprises. A comprehensive and detailed review of the fair value definition is beyond the scope of this VFR Advisory and the Working Group assumes that readers have a basic understanding of the standard. However, given the fundamental significance of fair value to the subject of this VFR Advisory, it is important to briefly review a number of key fair value concepts.

Exit Price

Fair value is defined as the price received to sell an asset; in other words, fair value is an exit price from the perspective of a market participant holding the asset. In contrast, an entry price would be the price paid to acquire an asset. Despite the conceptual distinction, entry and exit prices for a subject controlling interest in a business enterprise may often be indistinguishable. Nonetheless, valuation specialists should acknowledge that the objective of a fair value measurement is to determine the exit price as of the measurement date and be alert for situations in which the exit and entry prices may differ.

Principal (or Most Advantageous) Market

According to ASC 820, the assumed transaction underlying the fair value measurement occurs in the principal market for the subject asset. The principal market is the market with the greatest volume and level of activity for the asset. Further, the principal market is one to which the reporting entity has access at the measurement date. In the absence of a principal market, ASC 820 specifies that fair value should be measured as the price in the market in which the price received to sell the subject asset is maximized (the most advantageous market).

With respect to controlling interests in business enterprises, the Working Group believes that the principal market is that for mergers and acquisitions, in which strategic, financial, and conglomerate buyers evaluate controlling interests in business enterprises with a view toward the economic benefits expected from ownership of such interests in the context of the perceived risk and expected rewards of the investment.

Market Participants

ASC 820 defines market participants as buyers and sellers in the principal (or most advantageous) market for the subject asset. First, market participants are assumed to possess sufficient knowledge regarding the subject asset. In other words, market participants are competent to assess and understand information regarding the subject asset that would be obtained through usual and customary due diligence. This attribute of market participants also implies that the subject asset has had appropriate exposure to the relevant market.

Second, market participants have the ability, and/or financial wherewithal, to engage in a transaction involving the subject asset. In other words, market participants are not subject to external financial constraints that would impinge upon their ability to purchase the subject asset. Market participants are, however, subject to the internal financial constraint of rational economic behavior and the requirement that expected return be commensurate with perceived risk. Finally, market participants are willing to transact for the subject asset. Market participants are motivated to transact by potential financial returns, but are not under any external compulsion or force.

Fair value is to be measured from the perspective of market participants, and valuation inputs observed directly from the behavior of market participants are given greater weight than those that are unobservable. Even when specifying unobservable inputs, valuation specialists are required by the guidance in ASC 820 to make assumptions consistent with the assumptions market participants would make, not necessarily those of the reporting entity.

The Working Group elected to introduce the MPAP in this VFR Advisory, in part, to emphasize the importance of market participants' perspectives when measuring the fair value of a controlling interest in a business enterprise.

Highest and Best Use

The fair value of non-financial assets (such as controlling interests in business enterprises) is measured with respect to the highest and best use of the assets, as that use is evaluated from the perspective of market participants. ASC 820 states that the value of non-financial assets may be maximized by their use (1) in conjunction with other assets and liabilities (previously referred to as the "in use" valuation premise), or (2) on a standalone basis (previously referred to as the "in exchange" valuation premise).[16] ASC 820 stipulates that, when measuring the fair value of a non-financial asset, the asset's highest and best use should be evaluated from the market participants' perspective, even if such use differs from that intended by the reporting entity. The assumed highest and best use of the asset should be physically possible, legally permissible, and financially feasible.

[16] ASU 2011-04 clarifies that the concepts of "highest and best use" and "valuation premise" do not apply to financial assets or liabilities.

Asset Characteristics

Fair value measurement should incorporate those characteristics of the subject asset that market participants would consider in valuing the asset, such as condition and location. With respect to an ownership interest in a business enterprise, the degree of control vested in the interest is a relevant characteristic that would be considered by market participants and should, therefore, be reflected when measuring fair value. Transaction costs are not characteristics of the subject asset and, hence, should not be considered when measuring fair value, although transactions costs are considered when identifying the most advantageous market.

ASC 820 clarifies, however, that entity-specific assumptions that are not consistent with the market participants' perspective are in no case relevant to fair value measurement.

Fair Value Measurements of Controlling Interests in Business Enterprises

As noted in the previous section, the relevance of a valuation adjustment such as the MPAP in measuring fair value is determined by the characteristics of the subject asset that would be considered by market participants in valuing the asset. The defining boundaries of the subject asset are delineated with respect to the unit of account, defined in ASC 820 (the glossary) as "the level at which an asset or liability is aggregated or disaggregated in a Topic for recognition purposes."

The Working Group has identified three instances where the value of a controlling interest might need to be estimated: goodwill impairment testing, portfolio valuation, and accounting for business combinations in step acquisitions (Step Transactions).

Goodwill Impairment Testing

The Working Group observes that goodwill impairment testing is the most common fair value measurement on a controlling interest basis. ASC 350 provides guidance regarding periodic goodwill impairment testing. The unit of account for such testing is the reporting unit, which is defined as an operating segment or one level below an operating segment (i.e., a component). One of the attributes of an operating segment is that it engages in business activities from which it may earn revenues and incur expense. In other words, the conduct of an operating segment can be measured in the form of discrete financial information that is regularly reviewed by the chief operating decision maker in assessing performance and allocating resources. In short, the unit of account is a business enterprise.

Consistent with the unit of account, ASC 350 acknowledges that the fair value of a controlling interest in a reporting unit may exceed the Foundation. ASC 350 explicitly acknowledges the relevance of valuation premiums when measuring the fair value of reporting units. Using the terminology adopted in this VFR Advisory, an MPAP may be appropriate when measuring the fair value of a reporting unit. ASC 350 states:

> "Substantial value may arise from the ability to take advantage of synergies and other benefits that flow from control over another entity. Consequently, measuring the fair value of a collection of assets and liabilities that operate together in a controlled entity is different from measuring the fair value of that entity's individual equity securities. An acquiring entity often is willing to pay more for equity securities that give it a controlling interest than an investor would pay for a number of equity securities representing less than a controlling interest. That control premium may cause the fair value of a reporting unit to exceed its market capitalization. The quoted market price of an individual equity security, therefore, need not be the sole measurement basis of the fair value of a reporting unit."

Portfolio Valuation

Investment companies such as private equity funds, hedge funds and venture capital funds are generally required to report the fair value of investment holdings in accordance with Accounting Standards Codification Topic 946, *Investment Companies* (ASC 946). The funds of these companies often own assets which would be valued using Level 2 or Level 3 inputs under the fair value hierarchy established by ASC 820 because current market prices are not readily available. As a result, in estimating the fair value of these assets, the issues of control and MPAP are often considered. Due to the often complex ownership structures of the underlying companies as well as relationships among the investors, the Working Group believes that understanding control and the related effect on fair value can be particularly challenging for these investments.

In addition to the guidance that is provided below, the Working Group would encourage the valuation analyst working in this area to read and understand the concepts outlined in the AICPA Guide "*Valuation of Privately-Held-Company Equity Securities Issued as Compensation.*" Although the Working Group notes that this guide has been published for a different purpose, the Working Group suggests that the valuation analyst refer to Chapter 7 "Control and Marketability" which discusses many of the issues encountered when studying control in a capital structure with multiple owners and classes of equity.

Consistent with the guidance in ASC 820, the Working Group believes that consideration of an MPAP is appropriate when measuring the fair value of a controlling interest owned by an investment company because (1) the application of an MPAP reflects the characteristics of the asset being measured (i.e., a controlling interest) and (2) market participants acting in their "economic best interest" would consider an MPAP when transacting for the asset. The Working Group also believes that the existence of an MPAP is not inconsistent with guidance found in ASC 946. In addition, the price at which an investment company acquires a controlling interest in a private company often implies a premium to the fair value of a minority interest in the subject entity under prior ownership. Upon exiting the investment through a sale to other market participants, the investment company generally expects the price received to reflect a comparable premium.

Even in situations where an investment company has a minority investment, the investment company often has different contractual rights, such as information rights, rights to a board seat, right of first refusal, tag-along and drag-along rights, which may not be available to the typical minority shareholder. In addition, the investment company typically has access to a principal market that is broader than that which is available to other minority holders. In other words, investment companies often view other investment companies as part of their principal market. These unique rights and privileges of an investment company often warrant special considerations in the application of an MPAP. For instance, the information rights of an investment company would allow it to take a potential buyer through a due diligence process that is typically not available to other minority shareholders. The MPAP may result from the difference in perspectives between the former and the latter.

In understanding control and the related MPAP in the context of an investment company, there are several unique items to consider. Some examples of these considerations are addressed by AICPA Technical Practice Aids, in particular TIS Section 6910.34, *"Application of the Notion of Value Maximization for Measuring Fair Value of Debt and Controlling Equity Positions"* and TIS Section 6910.35, "*Assessing Control When Measuring Fair Value*."

At the date of this writing, the AICPA Private Equity/Venture Capital Task Force was developing an Accounting & Valuation Guide for investment companies. This guide will reportedly describe leading practices regarding the valuation of equity and debt investments of privately held enterprises and certain enterprises with traded securities. The Working Group strongly recommends that readers monitor developments in this area.

Acquisition Method for Step Acquisitions

In certain transactions, control is gained and business combination accounting is required but some portion of the target equity is not acquired by the new controlling owner on the acquisition date. ASC 805 prescribes the accounting treatment for business combinations achieved in stages (referred to as step acquisitions), as well as for partial acquisitions where control is gained. For such transactions, the relevant guidance requires the acquirer to measure all of the identifiable assets and liabilities of the target, any non-controlling interest in the target that remains in the hands of the other owners, and any previously held equity interest.

For example, if in the initial step of the transaction, the acquirer purchases 60% of the outstanding shares of the target, the acquirer is required to measure the fair value of the non-controlling interest held by others (the 40% interest not acquired). The fair value of the non-controlling interest affects the amount of goodwill (or gain from bargain purchase) at the acquisition date.

When a non-controlling interest is present in a transaction, the fair value of that interest may reflect a potential reduction in value from the *pro rata* share of the value of the business on a controlling interest basis. As noted in ASC 805: "The acquirer usually is the combining entity that pays a premium over the pre-combination fair value of the equity interests of the other combining entity or entities." If the market participants for the non-controlling interest are not expected to have access to the full range of incremental economic benefits anticipated by the controlling interest acquirer, the fair value of the non-controlling interest should reflect the associated decrement to value. If applicable, incremental return requirements for market participants evaluating a non-controlling interest would likewise be expected to reduce the fair value of the non-controlling interest.[17]

Whether the fair value of the non-controlling shares is measured directly through a valuation model or through adjustment of the indicated fair value of the controlling interest acquired in the transaction, the difference between the two fair value measurements should be supported following the best practices for MPAPs set forth in this VFR Advisory.

[17] The Working Group notes that, if the pro rata fair value of the non-controlling interest differs from the pro rata value of the controlling interest, the sum of the two positions will be less than 100% of the enterprise value. In other words, the decrement to the fair value of the non-controlling interest does not accrue to the benefit of the controlling interest.

SELECTING AND ASSESSING MARKET PARTICIPANT ACQUISITION PREMIUMS – EXAMPLES

The following examples are provided to illustrate best practices in both estimating MPAPs and reviewing the reasonableness of MPAPs implied by a fair value measurement in accordance with ASC 820.[18] The level of analytical detail appropriate to support a given fair value measurement, and any related MPAP, is a matter of judgment, and should be selected with regard to factors relevant for the accounting measurement under consideration. Relevant factors for consideration under ASC 350, goodwill impairment testing would include:

- The magnitude of the premium implied by comparison of the fair value and the market capitalization (for publicly traded entities). The Working Group believes the higher the implied premium, the higher level of supporting analysis required.

- The magnitude of the difference between the fair value measurement and the carrying value of the reporting unit. Larger "cushions" between carrying value and fair value will generally require less analytical support for the MPAP (whether implied or directly applied). On the other hand, smaller cushions will generally result in greater scrutiny, indicating that more analytical detail is appropriate. In cases in which impairment would be indicated but for the MPAP, valuation specialists should anticipate that auditors will require the most substantive support of the MPAP.

- The magnitude of the premium implied by the difference between the indicated value under the discounted cash flow method (using market participants' control level cash flows) and the indicated value under the guideline public company method (prior to application of an MPAP). The greater the implied premium, the more detailed the procedures required to substantiate the implied premium.

The following examples address two similar fact patterns related to a Step 1 goodwill impairment test. The first addresses a case in which the MPAP included is critical to the pass/fail result of the test. The second addresses the same company and basic fact pattern, but assumes a significantly lower carrying value, resulting in a test for which the MPAP is not a determining factor. Note that in both examples, the tests are the same in terms of the fundamental methods considered. However, the level of detail provided in support of MPAP-related assumptions in the second example is reduced to reflect the lack of MPAP significance in relationship to the test result.

[18] The assumed fact pattern was selected to provide the greatest clarity and ease of exposition. Practitioners are unlikely to encounter such circumstances; however, the Working Group believes the presentation applies to a broad range of situations.

Conglomerate, Inc. and Subject Co. Reporting Unit

Conglomerate, Inc. (Conglomerate) comprises three wholly owned subsidiaries, each of which is a separate reporting unit for purposes of ASC 350 compliance. The shares of Conglomerate are listed on a public exchange. At the date of Conglomerate's goodwill impairment test, the shares of Conglomerate traded at $10.00 per share, with 105.0 million shares outstanding and total interest-bearing debt with a fair value of $817 million. Therefore, market value of invested capital (MVIC) for Conglomerate is established at $1.867 billion. The following discussion will address the analysis of one of the three reporting units, Subject Co., as well as the overall market capitalization reconciliation analysis for Conglomerate. The analyses of the second and third reporting units are not shown here but, for purposes of the market reconciliation discussion, are assumed to have been performed in a manner similar to that described for Subject Co.

Scenario One Example

Initial MPAP Consideration

As a first step in the analysis of the Subject Co. and other Conglomerate reporting unit fair values, the general facts and circumstances are reviewed to assess the likely level of importance of the MPAP to the overall test result. The following facts are observed:

- Conglomerate MVIC: $1,867 million

- The reporting unit carrying values:

	Subject Co. Reporting Unit	Reporting Unit 2	Reporting Unit 3	Conglomerate Total
Carrying Values (millions)	$690	$420	$870	$1,980

- Premium over MVIC if Conglomerate FV equals carrying value = $1,980/$1,867 - 1 = 6.1%

- Aggregate Conglomerate LTM Revenue and EBITDA are $1,750 million and $295 million, respectively

- Guideline public company information for Conglomerate as a whole indicates a range of multiples as follows:

  LTM Revenue: .59X – 1.23X

  LTM EBITDA: 4.5X to 7.0X

- Implied multiples if Conglomerate FV equals carrying value =

  Carrying value/LTM Revenue: $1,980/$1,750 = 1.13X

  Carrying value/LTM EBITDA: $1,980/$295 = 6.71X

As the minimum premium over MVIC required for Conglomerate to pass the ASC 350 Step 1 test is 6.1%, and the carrying value-implied LTM multiples are in the high end of the range of observed guideline company multiples, the MPAP is likely to require a substantial level of support if a passing conclusion is reached for the Step 1 test. Note that the MPAP and multiples required to pass all reporting units in a Step 1 test are likely to be higher than the "minimum required" levels calculated in this way as the aggregate company value is not likely to be distributed in exact proportion to the reporting unit carrying values.

Income Approach – Subject Co.

Following the initial MPAP considerations as described, a discounted cash flow analysis is performed to obtain a fair value indication for Subject Co. for use in Step 1 of the annual goodwill impairment test. Consistent with the guidance in ASC 820, the assumptions underlying this discounted cash flow analysis must reflect the perspective of market participants. Therefore, all available information is considered in assessing the appropriate cash flow forecast for use in the analysis. This information includes current management budgeting and forecasting processes, historical performance levels and historical performance vs. budget/forecast, guideline company performance metrics, and other specific facts and circumstances relevant to Subject Co.'s expected performance.

In assessing the appropriate controlling market participants' forecast, three specific areas of economic benefit are considered as possibly accruing to the control buyer of Subject Co. and gather the following information regarding each:

- Revenue Synergies: Research regarding the likely market participants for Subject Co. indicates that most of the buyers would benefit from revenue synergies related to inclusion of Subject Co.'s products in the broader, more well-marketed product offerings of the buyer companies. The estimated revenue increase related to this benefit is reflected in higher revenue growth rates in forecast years one through five of 2.5%, 2.5%, 2.0%, 1.5%, and 1.0%, respectively. These figures represent incremental growth above growth expected for Subject Co. on a standalone basis. As the market participant group is dominated by companies that would benefit from this synergy, it is appropriate to include the related cash flow benefits in the Subject Co. forecast. Note that for purposes of this example, the simplifying assumption is made that costs are fully variable in relation to the revenue synergy.

- Operating Expense Savings: The possibility of a control acquisition generating cost savings from elimination of duplicative support functions and/or economies of scale in purchasing is considered. However, a high percentage of these expenses are variable in nature and the fixed portion, which could give rise to acquisition synergies, is insignificant in relation to the value of the Company. Regarding potential economies of scale, the materials and services required by the Subject Co. operations are substantially different from those required in the operations of all but one of the market participant group. Therefore, no operating expense-related market participant synergies are included in the Subject Co. forecast.

- Cost of Capital: The Company's credit rating is below that of the market participants, resulting in a higher cost of debt. It is determined that market participants would approach pricing decisions regarding Conglomerate or the separate reporting units using cost of debt assumptions in line with their own long-term financing costs as the target operations would be closely integrated with the buyers' existing operations and financial risk would be reduced. Therefore, in estimating the appropriate Weighted Average Cost of Capital (WACC) for use in the Subject Co. analysis, the cost of debt is reduced to the observed market participants' level to reflect the economic benefits of acquisition relative to financing synergies.

As shown in Exhibit A (see appendix), the indicated fair value of the Subject Co. total invested capital indicated by the discounted cash flow analysis is $740 million. This analysis has been simplified for the purposes of this VFR Advisory, and it is assumed that commonly accepted valuation methods and procedures would be followed in the determination of fair value.

Market Approach – Subject Co.

Where meaningfully comparable market information is available, it should be included in the fair value analysis. The following exhibit includes a form of market approach analysis, which is included in the determination of the final value conclusion for Subject Co. on a controlling basis. The income and market approaches should be used in a detailed, quantitative manner in instances where the MPAP is significant to the accounting outcome (assuming sufficient and reliable information is available to perform both approaches). In instances where the MPAP is not significant to the accounting outcome, the Working Group believes that best practices would still include consideration of both income and market value concepts, but would allow for a less detailed, qualitative application of one or more portions of the analysis. This fact pattern is discussed in the Scenario Two example in a subsequent section. Note that where guideline transaction data is available, it should be used in line with standard valuation practices. However, for purposes of simplification of this VFR Advisory, the transaction method has been omitted and only the guideline public company method of the market approach is shown.

The following table summarizes relevant performance and valuation measures for the group of guideline public companies and the resulting TIC Foundation Value for Subject Co.

Guideline Public Company Data	LTM Revenue	LTM EBITDA	Projected EBITDA Margin	Est. 5-Yr Revenue Growth	Market Value (Invested Capital)	MVIC / Revenue	MVIC / EBITDA
Company A	$29,000	$5,220	18.0%	5.0%	$31,320	1.08	6.0
Company B	$5,100	$893	17.5%	6.0%	$6,248	1.23	7.0
Company C	$13,200	$2,508	19.0%	5.0%	$13,794	1.05	5.5
Company D	$2,400	$408	17.0%	4.5%	$2,040	0.85	5.0
Company E	$9,000	$1,170	13.0%	-2.0%	$5,265	0.59	4.5
MEDIAN	**$9,000**		**17.5%**	**5.0%**		**1.05**	**5.5**
AVERAGE	**$11,740**		**16.9%**	**3.7%**		**0.96**	**5.6**
Selected Multiple			17.1%	6.1%		**1.10**	**6.5**
Subject Company							
LTM Revenue	$600					$660	
LTM EBITDA		93				$605	
Concluded Value - Marketable, Non-control basis (TIC Foundation Value)						**$630**	
Note: All in US$ Millions							

Using this information, additional analysis of the guideline company characteristics, and other traditional market approach considerations not shown, it is determined that revenue and EBITDA multiples appropriate for application in the fair value analysis of Subject Co., as indicated by the guideline public company analysis, are 1.10X and 6.5X, respectively. A Subject Co. TIC Foundation Value indication of $630.0 million is concluded. The application of an MPAP to this Foundation Value is then considered to obtain a market-derived value indication on a controlling basis.

MPAP Estimation – Cash Flow Value

A first step in determining the MPAP for application to the market-derived Foundation Value, is a review of the market participants' acquisition synergies included in the cash flow analysis, as described in the Income Approach section above. The range of market premiums paid in recent control acquisitions of public companies is also reviewed.

To quantify the premium implied by the market participants' synergies included in the cash flow analysis, a second cash flow analysis is run excluding these benefits. This analysis, shown in Exhibit B (see appendix), eliminates the revenue growth enhancements described for years one through five related to inclusion of Subject Co.'s products in the broader, more well-marketed product offerings of the market participants. This analysis also shows an increase in the discount rate from 10.0% to 10.5%, reflecting the elimination of the debt financing benefits attributable to acquisition.

The following table compares the metrics underlying the cash flow based fair value measurement of Subject Co. with those underlying the Foundation Value cash flow analysis, as derived from comparison of the market participants' and Foundation cash flow analyses (Exhibits A and B).

	Foundation Value	Fair Value
Expected 5-yr Compound Annual Revenue Growth	**6.1%**	**8.0%**
Gross Profit Margin	60.0%	60.0%
Operating Expenses:		
Research & Development	5.0%	5.0%
Distribution Expenses	13.5%	13.5%
Selling Expenses	17.5%	17.5%
Other General & Administrative	7.0%	7.0%
EBITDA Margin	17.0%	17.0%
Weighted Average Cost of Capital	**10.5%**	**10.0%**
Total Invested Capital Value	**$657**	**$740**
TIC / Trailing Revenue	1.1	1.2
TIC / Trailing EBITDA	7.1	8.0
MPAP implied by the Cash Flow Analyses		**12.7%**

Based on the results shown, the MPAP indicated by the cash flow analyses described is 12.7% on a TIC basis (22.7% on an equity basis at Conglomerates' actual debt/equity ratio of 44/56)[19].

Observed Transaction Premiums

Consideration of premiums observed in guideline transactions is often appropriate; however, such comparisons should be made very carefully.

Observed transaction premiums (using an Equity Foundation, as traditionally stated) for three guideline transactions range from 25.0% to 58.7%, as shown below.

Guideline Control Premiums

	Transaction Price Per Share	Shares Outstanding	Transaction Value (Equity)	Interest Bearing Debt	Transaction Value (TIC)	Unaffected Price Per Share	Observed Transaction Premium (Equity)	Observed Transaction Premium (TIC)
Company F	$37.50	53.7	$2,013	$3,500	$5,513	$30.00	25.0%	7.9%
Company G	$61.00	153.4	$9,360	$0	$9,360	$45.00	35.6%	35.6%
Company H	$25.00	280.8	$7,020	$0	$7,020	$15.75	58.7%	58.7%
MEDIAN							**35.6%**	**35.6%**
AVERAGE							**39.8%**	**34.1%**

Note: All in US$ Millions Except Per Share Amounts

[19] Equity Premium% = (TIC Premium%)/(Equity%) = 12.7% / 56.0% = 22.7%

This fact pattern demonstrates that relying only on observed transaction premiums to support a concluded or implied MPAP is potentially misleading. Since such premiums have traditionally been expressed as a percentage of Equity Foundation, differences in leverage between Subject Co. and the acquired companies can produce unreliable fair value measurements. For example, Company F is highly leveraged, causing the observed premium using an Equity Foundation to be materially higher than when expressed as a percentage TIC Foundation. When sufficient data is available to permit the calculation, expressing premiums as a percentage of total invested capital provides a more reliable basis of comparison across companies and is consistent with best practices. When expressed on a total invested capital basis, the implied premium for Subject Co. is 12.7%.

If an analyst compared the equity-based MPAP for Subject Co. (22.7%) to the range of observed equity-based premiums for the guideline transactions (25.0% to 58.7%), the analyst might conclude that the fair value of Subject Co. is understated. However, on a total invested capital basis, the implied MPAP for Subject Co. falls within the range of the guideline premiums.

Each acquiree presents a different set of potential economic benefits that may or may not be comparable to those of Subject Co. For example, assume Company H reported a historical EBITDA margin of 13%, below that of Subject Co. and at the low end of the public peer group. The relatively low margins of Company H may correspond to superior cash flow enhancement opportunities, and therefore a higher MPAP. In this instance, applying an MPAP equal to the transaction premium observed for Company H to Subject Co. would potentially result in an overstatement of fair value.[20]

However, as discussed earlier, observed transaction premium data may be informative. The observed transaction premiums provide a composite view of the control benefits of cash flow enhancements and/or lower required rates of return perceived by the acquirers in the observed transactions. This may help to establish the reasonableness of the cash flow benefits assumed (or implied) by the fair value measurement under consideration. However, exclusive reliance on observed transaction premiums without careful analysis of relative financial performance, valuation multiples, and other metrics can result in an unreliable fair value measurement.

MPAP Conclusion

Multiple cash flow and cost of capital sources of MPAP for Subject Co. were reviewed, as well as the range of premiums observed in relevant recent transactions. Based on this analysis, a TIC-basis MPAP of 13% is selected for application in the guideline company market approach. This determination is supported primarily by the cash flow synergies that market participants would be expected to consider in pricing an acquisition of Subject Co. Additional supporting evidence was shown in the effects on the WACC as well as recent market transaction premiums paid for similar companies.

[20] The Working Group observes that it may be appropriate to augment such analysis with a multi-year perspective on financial results.

Subject Co. FV Conclusion

Based on the income and market analyses described, a fair value of $730.0 million is concluded for Subject Co., which passes the Step 1 ASC 350 test, as follows:

Control Value Indication: Income Approach		**$740.0**
Minority, Non-Control Indication: Market Approach		$630.0
Concluded MPAP, TIC Basis		13.0%
Control Value Indication: Market Approach		**$711.9**
Concluded Fair Value of Subject Co.		**$730.0**
Carrying Value: Subject Co.		$690.0
ASC 350 Pass/(Fail)	**Pass**	**$40.0**
Note: All in US$ Millions		

Reconciliation to Market Capitalization

Conglomerate is a publicly traded company comprising three reporting units. Following the procedures described for the Subject Co. reporting unit, Fair Values have been estimated for each of the three units. The total concluded value of all three of the Conglomerate reporting units is $2,080,000 and all three units are concluded to have passed the Step 1 test. A critical step in the valuation specialist's review of the reasonableness of the initial conclusions is a reconciliation of the results to Conglomerate's market value.

The MVIC of Conglomerate as of the testing date, as described in the Initial MPAP Consideration section above, is $1,867 million. Therefore, the premiums implied by the initial value conclusions are as shown in the following table.

Concluded Fair Value of Conglomerate TIC (sum of reporting units)	**$2,080.0**
Test date price of Conglomerate shares	$10.0
Outstanding Conglomerate shares (millions)	105.0
Conglomerate Equity Market Capitalization	**$1,050.0**
Fair Value of Conglomerate Debt	$817.0
MVIC of Conglomerate	**$1,867.0**
MPAP Implied by Fair Value Conclusion	$213.0
MPAP Implied by Fair Value Conclusion (Equity Foundation basis)	20.3%
MPAP Implied by Fair Value Conclusion (TIC Foundation basis)	**11.4%**
Note: All in US$ Millions	

The reconciling 11.4% TIC Foundation MPAP (20.3% on an Equity basis) is shown to be reasonable based on the following:

- Specific cash flow benefits analysis (the cash flow benefits seen in the value differential supported in Exhibits A and B)

- Cost of capital benefits of acquisition described for Subject Co.

Note that the economic benefits described for the Subject Co. reporting unit are also assumed to be present at the same approximate level in the other reporting units not shown.

Scenario Two Example

As discussed above, the level of detail appropriate to support MPAP-related assumptions is related to the significance of the MPAP in relationship to the test result. For example, if it is unlikely that the MPAP will be a determining factor in the pass/fail result of an ASC 350 step one test, then the level of detail may be reduced from that included in the analysis shown in the Scenario One example in the prior section. To illustrate this concept, the Scenario One example is reconsidered with revision to the carrying values of the reporting units. The carrying value revisions, which represent the only change to the Subject Co. fact pattern described previously, are shown in the following table:

	Subject Co. Reporting Unit	Reporting Unit 2	Reporting Unit 3	Conglomerate Total
Carrying Values (millions) Revised for Scenario Two	$440	$350	$500	$1,290

Initial MPAP Consideration (revised carrying value example)

With the lower carrying values shown, the Specialist's first step assessment of the likely level of importance of the MPAP to the overall test result provides the following revised fact pattern:

- Conglomerate MVIC: $1,867 million (unchanged)

- The reporting unit carrying values:

	Subject Co. Reporting Unit	Reporting Unit 2	Reporting Unit 3	Conglomerate Total
Carrying Values (millions)	$440	$350	$500	$1,290

- Premium over MVIC if Conglomerate FV equals carrying value = $1,290/$1,867 - 1 = -30.9%

- Aggregate Conglomerate LTM Revenue and EBITDA are $1,750 million and $295 million, respectively (unchanged)

- Guideline public company information for Conglomerate as a whole indicates a range of multiples as follows (unchanged):

LTM Revenue: .59X – 1.23X

LTM EBITDA: 4.5X to 7.0X

- Implied multiples if Conglomerate FV equals carrying value =

Carrying value/LTM Revenue: $1,290/$1,750 = 0.74X

Carrying value/LTM EBITDA: $1,290/$295 = 4.37X

In this revised example, given the lower carrying values, the minimum premium over MVIC that would be required for Conglomerate to pass the ASC 350 Step 1 test shows a large cushion of over 30%, indicating that there is a reasonable possibility that each unit could pass the test before consideration of the MPAP. Additionally, the carrying value-implied LTM multiples are at or below the bottom end of the range of observed guideline company multiples. Therefore, the MPAP is unlikely to have any bearing on the outcome of subject impairment test and the initial analysis of the reporting unit fair values is run with minimal supporting detail for the MPAP included.

The analysis of the Subject Co. fair value follows the same general process in this revised scenario as that shown in the Scenario One example. The differences in the details of the various steps in the analysis are summarized as follows:

- Income Approach: In establishing the forecast for use in the cash flow analysis, the same areas of potential acquisition synergy are considered as those described in the Scenario One example. However, the objective in doing so is only to establish that the types of synergies included represent appropriate market participants' assumptions. No specific quantification of the market participants' synergies is needed as these will not be used to quantify the MPAP.

- Market Approach: The guideline public company analysis is performed in the same manner as shown in the Scenario One example through the point of estimation of the Foundation Value.

- MPAP Estimation: The estimation of the MPAP for application to the Foundation Value is then based only on a review of the guideline transaction premium information. The cash flow based MPAP estimation process shown in the Scenario One example is eliminated as unnecessary, pending review of the fair value results for each reporting unit relative to its respective carrying value.

The results of the test under this revised scenario are shown in the table below. A fair value of $750.0 million is concluded for the Subject Co. reporting unit, and Subject Co. passes the Step 1 ASC 350 test, as follows:

Control Value Indication: Income Approach		**$740.0**
Minority, Non-Control Indication: Market Approach		$630.0
Concluded MPAP, TIC Basis		20.0%
Control Value Indication: Market Approach		**$756.0**
Concluded Fair Value of Subject Co.		**$750.0**
Carrying Value: Subject Co.		$440.0
ASC 350 Pass/(Fail)	**Pass**	**$310.0**
Note: All in US$ Millions		

The cushion of $310 million represents a wide (70%) margin over the Subject Co. carrying value. Therefore, results shown for Subject Co. clearly indicate that further, more detailed support for the MPAP is unnecessary for purposes of this analysis as the reporting unit passes the test by a margin well in excess of the 20% premium included.

Regarding this more simplified analysis, the Working Group notes the following observations:

- The control value concluded for the market approach in this example ($756) is higher than that concluded in the Scenario One, more detailed, example ($711.9).

- The 20% MPAP, while within the range of market evidence from the exhibit on page 49, is lower than the average or median, reflecting consideration of the challenges regarding the transaction premium data discussed elsewhere in this paper.

- If the indicated average or median transaction premium from the market evidence on page 49 were simply used, the spread between the conclusion from the "detailed analysis" and the "simplified analysis" would be even greater. This suggests that the "simplified analysis" could be overstating fair value.

- This provides further evidence of the need for precaution in relying exclusively on the historical transaction premium data. Use of this data should be supported conceptually by characteristics of the subject entity that would influence the extent of a reasonable MPAP such as the qualitative factors discussed in the earlier section – *Business Characteristics Influencing Market Participant Acquisition Premium* – to narrow the range of observed premiums from the transaction data that may be applicable for the subject entity.

Reconciliation of Market Capitalization (revised carrying value example)

The MVIC of Conglomerate as of the testing date is unchanged at $1,867 million. The fair value conclusions for each of the reporting units have all been derived in the same manner as that described here in the Scenario Two revised carrying value example for Subject Co. and all three units are concluded to have passed the step one test. The resulting total concluded value of the Conglomerate TIC is $2,150,000. Therefore, the premiums implied by the value conclusions are as shown in the following table.

Concluded Fair Value of Conglomerate TIC (sum of reporting units)	**$2,150.0**
Test date price of Conglomerate shares	$10.0
Outstanding Conglomerate shares (millions)	105.0
Conglomerate Equity Market Capitalization	**$1,050.0**
Fair Value of Conglomerate Debt	$817.0
MVIC of Conglomerate	**$1,867.0**
MPAP Implied by Fair Value Conclusion	$283.0
MPAP Implied by Fair Value Conclusion (Equity Foundation basis)	27.0%
MPAP Implied by Fair Value Conclusion (TIC Foundation basis)	**15.2%**
Note: All in US$ Millions	

The reconciling 15.2% TIC Foundation MPAP (27.0% on an Equity basis) is shown to be reasonable. This determination is based on the general level of premiums observed in recent transaction premiums. While this type of support would not be sufficient in a case where a premium is necessary to the support the test results, the fact that no premium is required to establish a passing result for any of the Conglomerate reporting units allows for this more efficient, less detailed approach in this case.

SUMMARY

Because this VFR Advisory is intended to address best practices for the valuation of controlling interests in business enterprises under the standard of fair value for financial reporting, certain commentary is provided regarding this context.

In fulfilling its mandate to provide best practices in the context of measuring fair value for financial reporting purposes, the Working Group introduced the term Market Participant Acquisition Premium, or MPAP. MPAP is defined here as the difference between (1) the *pro rata* fair value of the subject controlling interest and (2) *its foundation.* The Working Group believes that valuation specialists most commonly associate the *foundation* with the *pro rata* fair value of marketable, non-controlling interests in the enterprise. While this describes an MPAP Equity Foundation concept, a TIC Foundation may be more appropriate. The Working Group believes that best practices include expressing as well as applying the MPAP in the context of a TIC Foundation.

The Working Group believes that MPAPs should be supported by reference to either enhanced cash flows or a lower required rate of return from the market participants' perspective. The Working Group anticipates such benefits will not in all instances exist or be reliably identifiable; in such cases resulting in either no premium or a small premium. Notwithstanding the emphasis on cash flow and risk differentials in supporting MPAPs in fair value measurement, the Working Group acknowledges the merit of analyzing historical data regarding observed premiums from closed transactions when reliable data is available.

However, the Working Group cautions that exclusive reliance on observed premium data from completed transactions provides, in most cases, insufficient support for a concluded MPAP. Exclusive reliance on observed transaction premiums without careful analysis of the subject entity's relative financial performance, valuation multiples, and other metrics can result in an unreliable fair value measurement.

Various business characteristics are discussed that influence an MPAP, including characteristics of the market and industry, as well as both the subject entity and market participants. The exercise of prerogatives of control by acquirers may lead to economic benefits in many areas and the valuation specialist should review the typical business characteristics likely to influence the magnitude of the benefits available to market participants. The Working Group believes that use of the framework discussed will provide an important context for review of the valuation results and will increase the relevance and reliability of the associated fair value measurement.

A credible fair value measurement should include an assessment of the overall reasonableness of the measurement, including the MPAP applied or implied by the analysis. The level of rigor of analysis would depend on the importance of the MPAP to the fair value measurement. Factors - along with examples - are offered to evaluate the reasonableness of the fair value measurement of a controlling interest in a business enterprise.

EXHIBITS A AND B

EXHIBIT A
Market Participant Perspective - Controlling Interest
(in US$ millions)

Compound Annual Growth Rate (Revenue, Through Year 5): 8.0%

	Trailing		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Residual
Revenue	$600		$660	$719	$777	$831	$881	$925	$962	$996	$1,026	$1,057	$1,088
Revenue Growth			*10.0%*	*9.0%*	*8.0%*	*7.0%*	*6.0%*	*5.0%*	*4.0%*	*3.5%*	*3.0%*	*3.0%*	*3.0%*
Gross Profit	360	60.0%	396	432	466	499	529	555	577	598	616	634	653
Operating Expenses:													
Research & Development	30	5.0%	33	36	39	42	44	46	48	50	51	53	54
Distribution Expenses	87	13.5%	89	97	105	112	119	125	130	134	138	143	147
Selling Expenses	105	17.5%	116	126	136	145	154	162	168	174	180	185	190
Other General & Administrative	45	7.0%	46	50	54	58	62	65	67	70	72	74	76
Total Operating Expenses	267	43.0%	284	309	334	357	379	398	413	428	441	455	467
EBITDA	**93**	**17.0%**	**112**	**123**	**132**	**142**	**150**	**157**	**164**	**170**	**175**	**179**	**186**
Depreciation & Amortization	25		25	26	29	32	35	38	40	43	45	47	49
EBIT	68		87	97	103	110	115	119	124	127	130	132	137
Taxes	27	40.0%	35	39	41	44	46	48	50	51	52	53	55
Debt Free Net Income	41		52	58	62	66	69	71	74	76	78	79	82
Incremental Working Capital		30.0%	18	18	17	16	15	13	11	10	9	9	9
Depreciation & Amortization			25	26	29	32	35	38	40	43	45	47	49
Capital Expenditures			25	26	29	32	35	38	40	43	45	47	49
Debt Free Cash Flow			34	40	45	50	54	58	63	66	69	70	73
Residual Value													1,000
				105.6%	111.6%	111.9%	109.3%	109.5%	106.0%	107.3%	105.3%	104.1%	103.4%
Discounting Periods			0.5	1.5	2.5	3.5	4.5	5.5	6.5	7.5	8.5	9.5	9.5
PV Factor	10.0%		0.9535	0.8668	0.7880	0.7164	0.6512	0.5920	0.5382	0.4893	0.4448	0.4044	0.4044
PV DFCF			33	35	35	36	35	34	34	32	31	28	404

Total Invested Capital Value	**740**
Interest-Bearing Debt	289
Equity Value	$451
MPAP (Equity)	22.7%
MPAP (TIC)	12.7%

<u>Residual Value Calculation</u>

Residual Debt Free Cash Flow		73
Cost of Capital	10.0%	
Estimated Residual Growth Rate	3.0%	
Residual Capitalization Rate		7.0%
Residual Value		1,000

<u>Relative Value Measures</u>

TIC / Trailing Revenue	1.2
TIC / Trailing EBITDA	8.0

EXHIBIT B
Forecast Under Current Stewardship
(in US$ millions)

Compound Annual Growth Rate (Revenue, Through Year 5): 6.1%

	Trailing		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Residual
Revenue	$600		$645	$687	$728	$768	$807	$847	$881	$912	$939	$967	$996
Revenue Growth			*7.5%*	*6.5%*	*6.00%*	*5.50%*	*5.00%*	*5.0%*	*4.0%*	*3.5%*	*3.0%*	*3.0%*	*3.0%*
Gross Profit	360	60.0%	387	412	437	461	484	508	528	547	563	580	598
Operating Expenses:													
Research & Development	30	5.0%	32	34	36	38	40	42	44	46	47	48	50
Distribution Expenses	87	13.5%	87	93	98	104	109	114	119	123	127	131	134
Selling Expenses	105	17.5%	113	120	127	134	141	148	154	160	164	169	174
Other General & Administrative	45	7.0%	45	48	51	54	56	59	62	64	66	68	70
Total Operating Expenses	267	43.0%	277	295	312	330	346	363	379	393	404	416	428
EBITDA	**93**	**17.1%**	**110**	**117**	**125**	**131**	**138**	**145**	**149**	**154**	**159**	**164**	**170**
Depreciation & Amortization	25		25	26	29	32	35	38	40	43	45	47	49
EBIT	68		85	91	96	99	103	107	109	111	114	117	121
Taxes	27	40.0%	34	36	38	40	41	43	44	44	46	47	48
Debt Free Net Income	41		51	55	58	59	62	64	65	67	68	70	73
Incremental Working Capital		30.0%	14	13	12	12	12	12	10	9	8	8	9
Depreciation & Amortization			25	26	29	32	35	38	40	43	45	47	49
Capital Expenditures			25	26	29	32	35	38	40	43	45	47	49
Debt Free Cash Flow			37	42	46	47	50	52	55	58	60	62	64
Residual Value													900
				105.6%	111.6%	111.9%	109.3%	109.5%	106.0%	107.3%	105.3%	104.1%	103.4%
Discounting Periods			0.5	1.5	2.5	3.5	4.5	5.5	6.5	7.5	8.5	9.5	9.5
PV Factor	10.5%		0.9513	0.8609	0.7791	0.7051	0.6381	0.5774	0.5226	0.4729	0.4280	0.3873	0.3873
PV DFCF			35	36	36	33	32	30	29	27	26	24	349

Total Invested Capital Value	**$657**
Interest-Bearing Debt	289
Equity Value	$368

Residual Value Calculation		
Residual Debt Free Cash Flow		64
Cost of Capital	10.5%	
Estimated Residual Growth Rate	3.0%	
Residual Capitalization Rate		7.5%
Residual Value		900

Relative Value Measures

TIC / Trailing Revenue	1.1
TIC / Trailing EBITDA	7.1