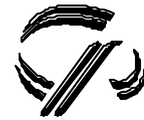
BUSINESS VALUATION COMMENTARY



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Fair Value Determinations Pursuant to Accounting Standards Dealing with Business Combinations, Goodwill and Other Intangibles

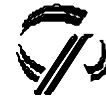
Executive summary

Investors have become increasingly skeptical of North American financial reporting. The Enron and Worldcom situations that have arisen in 2001 and 2002 are two examples of corporations that, based on audited financial statement results, appeared at one time to be viable going concerns that ultimately instantaneously failed with little or no prior warning as a result of a compilation of undisclosed critical problems. As a result of highly publicized matters such as Enron and Worldcom:

- auditors, directors[1] and management of publicly and privately held companies inevitably will come under greater public and possibly litigious scrutiny with respect to financial reporting; and,
- investors increasingly are perceiving accounting firms as not being independent with respect to providing consulting advice (including valuation advice) to companies whose financial statements they also audit.

Having these things in mind, it is important that auditors, directors and management understand business valuation issues as they relate to the recently released accounting standards dealing with Business Combinations (GAAP Handbook Section 1581 and

[1] With respect to directors, see report prepared by the Joint Committee of Corporate Governance (headed by Mr. Purdy Crawford) in November 2001.



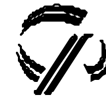
FASB Statement 141) and Goodwill and Other Intangibles (GAAP Handbook Section 3062 and FASB Statement 142). These standards collectively are referred to hereinafter as the 'Standards'.

The Standards, among other things, require estimates of *fair value* when:

- determining the cost of a purchase to an acquirer in a business combination;
- allocating the cost of a purchase in a business combination to and subsequently measuring intangible assets; and,
- testing goodwill for impairment.

While the Standards do not mandate that companies seek independent valuation advice with respect to estimating *fair value* they do provide guidance suggesting that '*all aspects of a business combination, including negotiations, are to be considered <u>and independent appraisals may be used</u> as an aid in determining fair value.*'

It is the responsibility of auditors, directors and management to decide whether or not independent valuation advice is required when estimating *fair value* pursuant to the Standards. When making this decision, parties are well advised to assume that the Provincial Securities Commissions (the 'PSCs'), litigation lawyers and other parties likely will view internally prepared valuations that are not vetted by an independent valuation expert with a greater deal of skepticism than otherwise would be the case. If nothing else, engaging an independent valuation expert to conduct or oversee a company's *fair value* determinations will imply stronger corporate governance than otherwise will be the case.



This article is not to be interpreted as providing advice with respect to compliance with the Standards. This article deals only with the measurement of fair value (as that term is referred to in the Standards) with respect to:

- ***determining the cost of a purchase to an acquirer in a business combination;***
- ***allocating the cost of a purchase to and subsequently measuring intangible assets; and,***
- ***testing goodwill for impairment.***

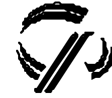
Other aspects of the Standards are beyond the scope of this article.

Definition of fair value and concept of intrinsic value

The Standards define:

- *fair value* as '*the amount of the consideration that would be agreed upon in an arm's length transaction between knowledgeable, willing parties under no compulsion to act*'; and,
- a *business combination* as occurring '*when an enterprise acquires net assets that constitute a business, or acquires equity interests of one or more other enterprises and obtains control over that enterprise or enterprises*'.

The Standards refer to *fair value* in the context of a control position in an entity, which control position may be represented by 100% or less than 100% of the outstanding shares of a company. The term *fair value* as adopted in the Standards should not be confused with the term *fair value* commonly used in connection with minority shareholder dissent and oppression rights pursuant to the *Business Corporations Act*, which by way of contrast often imputes an 'en bloc' value to a minority position.

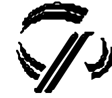


In this article, fair value is referred to in the context of its definition pursuant to the Standards.

Instrinsic value is defined as '*a notional market value based upon rates of return required by investors given economic and business conditions existing at the valuation date, without consideration of possible synergistic (or economies of scale) benefits that might accrue in differing degrees to arm's length purchasers*'. The Standards do not refer to the term *intrinsic value* but do state that '*where a present value technique is adopted, estimates of future cash flows should incorporate assumptions that marketplace participants would use in making estimates of fair value, whenever that information is available without incurring undue costs*'. Thus, it would appear that when determining *fair value* using a present value technique:

- post-acquisition synergies can not simply be assumed away and should be considered when information is available indicating that '*special interest purchasers*'[2] for the business or entity subject to valuation may have existed in the marketplace at or near the valuation date. For example, an entity (either a company or a business unit thereof) may be an acquisition target of specific corporate acquirers that have a recent history of acquiring companies in the industry in which the subject entity operates. Further, those corporate acquirers may be known to have paid for what they perceive to be post-acquisition synergies in those previous transactions. In this example, so long as meaningful data could be obtained, it may be appropriate to take into account post-acquisition synergies when determining *fair value*; and,

- assumptions that marketplace participants would use cannot simply be assumed away and should be considered when information is available indicating that marketplace participant assumptions might be different than the operating assumptions inherent to the entity subject to valuation under its current ownership and existing use. For example, a company may have a transfer-pricing policy whereby one of its reporting units purchases materials from another reporting unit at cost where information is available in the marketplace suggesting an arm's length



transfer price to be cost plus a significant margin. In this example, so long as meaningful data can be obtained, it may be the case that an arm's length transfer price should be taken into account when determining *fair value.*

In the event directors and management conclude that it is unnecessary (i.e. *undue*, as the term is used in the Standards) to incur the costs required to investigate marketplace assumptions (including assumptions with respect to post-acquisition synergies), they are well advised to carefully document their reasons for such a conclusion. This is because, prospective events may cause the PSCs, litigation lawyers or other parties to incur costs to investigate marketplace assumptions, the results of which may demonstrate that it was in fact necessary to incur the cost to conduct such an investigation.

Fair value techniques

With respect to measuring *fair value*, the Standards do not endorse any one particular valuation technique as being appropriate in all circumstances. The Standards do, however, provide guidance with respect to the following valuation techniques:

- estimating *fair value* based on quoted market share prices;
- estimating *fair value* based on value relationships (i.e. multiples of revenue, multiples of earnings etc.) imputed based on comparable company operating results (referred to herein as 'Value Relationships'); and,
- estiminating *fair value* based on a present value of forecast cash flows.

Estimating fair value based on quoted market share prices

With respect to measuring *fair value* based on quoted market share prices the Standards state the following.

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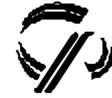
[2] A special interest purchaser is '*a purchaser who can, or believes it can, enjoy post-acquisition economies of scale (or synergies) or strategic advantages by combining the acquired business interest with its own.*'

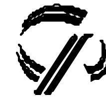


> '*Quoted market prices in active markets, if available, are the best evidence of fair value and are, therefore, used as the basis for fair value measurement, when available.'*
>
> *'The market price of an individual share (and thus the market capitalization of a business unit with publicly traded shares) may not be representative of the fair value of the business unit as a whole. Substantial value may arise from the ability to take advantage of synergies and other benefits that flow from control over another enterprise. Consequently, measuring the fair value of a collection of assets and liabilities that operate together in a controlled enterprise is different from measuring the fair value of that enterprise's individual equity instruments. An acquirer often is willing to pay more for shares that give it a controlling interest than an investor would pay for shares representing less than a controlling interest. This control premium may cause the fair value of a business unit to exceed its market capitalization. Therefore, the quoted market price of an individual share need not be the sole measurement of the fair value of a business unit.'*

At a conceptual level there is a circular argument in stating that quoted market prices in active markets are the best evidence of *fair value*. Quoted market prices are to some degree a function of financial reporting. Where a balance sheet item is a function of a quoted market price, it is possible for a misstatement to result (perhaps materially so) in circumstances where a quoted market price does not reflect a particular fact (possibly known to auditors, directors and management) that if known to the marketplace would have a negative impact on the quoted market price. *Fair value* determinations should take into account all facts existing at the valuation date, whether or not those facts are known to the public.

Further, where *fair value* is being determined for the purpose of testing goodwill or an intangible asset for impairment, there is an inconsistency between stating that quoted market prices in active markets are the best evidence of fair value and stating that marketplace participant assumptions should be incorporated when using a present value technique to estimate *fair value*. This is because:

- when determining *fair value* it may be appropriate to consider marketplace assumptions with respect to perceived post acquisition synergies; and,



- quoted market prices in active markets do not reflect post-acquisition synergies, except possibly in circumstances where the subject company is publicly known to be a take-over target.

In this regard, a company may find itself in a position where:

- the quoted market price for its shares (which are actively traded) imputes a market capitalization, which suggests a goodwill impairment; and,

- adopting a present value valuation methodology which incorporates properly supported marketplace participant assumptions with respect to post-acquisition synergies imputes a *fair value* which suggests a goodwill impairment does not exist.

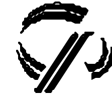
In such a circumstance directors and management may conclude that it is in their best interest to incur the cost of having an independent valuation expert objectively estimate (based on evidence available at the valuation date) *fair value* having consideration of post-acquisition synergies.

Further, it is possible for the 'en bloc' *fair value* of a public company to be higher or lower than an imputed market capitalization based on a quoted share price of actively traded shares in a public market. This is because there are fundamental differences between the 'en bloc' valuation of equity in a business or a unit thereof and the analysis of daily trading prices of public companies. In summary, these differences relate to:

- information availability. In the public stock markets, buyers and sellers generally act on a limited amount of available information[3]. Corporate acquirers or business valuators seeking to determine 'en bloc' price or notional value typically have access to greater amounts of information[4] that is of a better quality and is more timely than is available to 'normal course traders' of publicly held securities. It follows that corporate acquirers or valuators generally are in a better position to assess the prospective cash flows and the risk and opportunities for the subject business or unit thereof than are stock market analysts;

[3] Such as quarterly and annual financial reports, press releases, annual information returns, and analyst reports.

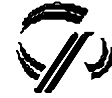
[4] Such as detailed financial and operating data, details of strategic plans, long-term forecasts, and open access to management and key operating personnel. This information normally is subject to either implicit or explicit confidentiality agreements that prevent it from being used except in either the notional context in which the valuation is required, or in the consummation of an open market transaction.



- liquidity. Liquidity can be viewed in the context of the number of willing acquirers for a particular asset at any given time, and the resultant ability of a seller to convert an asset into cash at a known price within a very short time frame. Most widely and actively traded public securities offer holders of 'normal sized' trading lots a high degree of liquidity due to the organization and regulation of public securities markets. The holder typically can crystallize that value in a very short period of time at relatively minor cost. A purchaser acquiring either a publicly or privately held business 'en bloc' accepts a different and normally greater degree of liquidity risk than does a purchaser of a normal sized trading block in a widely held public company whose shares are actively traded;

- public market participants having a wide range of time horizon objectives (from a few minutes to many years), whereas purchasers of a controlling interest in either a public or private company tend to be long-term holders. Investors with long-term perspectives generally are less influenced by near-term fluctuations in money and securities markets compared to those with short-term perspectives;

- the differences between the valuation of controlling as contrast to minority interests. Trades of publicly held securities typically reflect small blocks of shares, each of which constitutes a small minority shareholding. As such, individual shareholders of a public company usually have little or no direct influence on the management of the business. Conversely, the acquisition (or valuation) of a business 'en bloc', or of a controlling interest therein, offers the purchaser the benefits of control. Although a minority shareholder typically is not in a position to influence the management of a business, the risk associated with non-control is significantly mitigated in circumstances where the security is freely traded in the open market and is highly liquid. Simply put, if the individual shareholder is not satisfied with the company's direction, management, dividend policy, and so on, and holds only a normal sized trading block, then the shareholding can be readily sold. Publicly traded securities do not necessarily trade at prices that reflect 'minority discounts', nor do purchasers of a controlling interest in publicly held companies necessarily pay a 'premium for control'. In most cases where an acquisition premium over market price is paid, the premium is based on the purchaser's analysis of perceived post-acquisition financial results. Further, typically the potential transactions that were not consummated as a result of corporate acquirers offering prices that are less than the market capitalization of a company are not made publicly available. Accordingly, the public typically is not made aware of situations where a public company is shopped for



potential acquirers and the highest, available price in the marketplace is less than the market capitalization of that company based on its quoted market price.

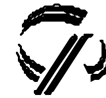
Based on the foregoing factors, unless it is clear that a quoted stock price itself satisfies the requirements of the Standards with respect to *fair value*, auditors, directors and management should be cautious when considering relying on *fair value* determinations that place excessive emphasis on quoted market share prices, regardless of whether those *fair value* determinations are prepared internally or by independent valuation experts.

Estimating fair value based on Value Relationships – comparable company analysis

With respect to measuring *fair value* based on Value Relationships, the Standards state the following.

> *'A valuation based on multiples of earnings, revenue or a similar performance measure may be used if that technique is consistent with the objective of measuring fair value. Use of multiples of earnings or revenues in determining fair value of a business unit may or may not be appropriate, for example, when the fair value of an enterprise with comparable and economic characteristics is observable and the relevant multiples of the comparable enterprise are known. Conversely, use of multiples is not appropriate in situations when the operations or activities of an enterprise for which the multiples are known are not of a comparable nature, scope, or size as the business unit for which fair value is being estimated.'*

Multiples of earnings, revenue or a similar performance measure are forms of what are often referred to as rules of thumb. Adopting one or more rules of thumb as a primary valuation approach is too simplistic an approach when determining fair value. A rule of thumb in isolation rarely will provide an appropriate base for a well-founded value conclusion. Reliance on rules of thumb normally should be restricted to deriving a rough estimate of value, or to testing in a general way the reasonableness of conclusions determined pursuant to other valuation methodologies. Where used to test valuation conclusions otherwise determined, 'comparative' multiples of earnings, revenue or similar performance measure derived from public market proxies seldom, if ever, can be appropriately adjusted for one-time items and redundant assets. Since these items will (or should) have been adjusted for pursuant to the application of one or more primary

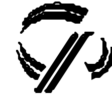


valuation methodologies, a 'multiple' comparison inherently may be flawed. Further, as is the case with other rules of thumb, 'industry standard' multiples of earnings, revenue or similar performance measures likely include an element of purchaser-perceived synergies that cannot readily be segregated and analyzed.

A so-called comparable company analysis generally is based on companies in the same industry under the assumption that all firms within a given industry segment are faced with similar risks and opportunities. Due to the limited amount of public information typically available for privately-held businesses, the search for 'comparables' normally is restricted to public companies, supplemented by whatever 'private company' information is known to, and (pursuant to time and conditions of prevailing confidentiality agreements) able to be used by those undertaking value/pricing analysis.

In order to qualify as truly comparable, a 'comparable' must be in the same business and undertake the same and only the same business functions as the subject business. When selecting 'comparables', consideration should be given to factors such as:

- company size;
- the nature of and mix of products or services offered;
- the degree of vertical integration;
- geographic coverage and market characteristics;
- market share;
- capital structure (i.e. mix of debt and equity financing);
- level of net tangible assets and sustaining capital requirements;
- financial structure;
- profitability and operating measurements (e.g gross profit as a percentage of sales, revenues to total assets, current and quick ratios etc.);
- historic growth in profitability and discretionary cash flow;

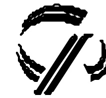


- stability and potential growth in profitability and discretionary cash flow;
- research and development; and,
- strategic direction and focus.

No two companies are exactly alike and judgment must be exercised when determining whether a basis for meaningful comparison exists. As a practical matter, sufficient information usually is not available (even for public companies) to reach an informed conclusion as to the degree of meaningful comparability between two businesses. As a result, comparative analysis rarely is used as a primary valuation methodology, but rather is used to test value conclusions otherwise determined. Further, even where applied as a test methodology, such tests may not be meaningful. Having said that, some industries lend themselves better to comparative analysis than others. Subject to availability of meaningful detailed information, in theory:

- a greater degree of comparability may be possible in commodity type industries than may be possible in industries with a high degree of propriety in their products;
- industries that are better defined in terms of the products they offer or markets they serve provide a better basis for comparison than those that do not; and,
- comparison may be more meaningful in mature industries than in emerging industries. The latter tend to have distorted operating ratios due to low or negative operating results. In addition, companies in emerging industries generally trade in the public equity markets on a greater degree on speculation than do companies in mature industries, and their resultant stock prices tend to be more volatile.

In addition to the foregoing, there are fundamental differences between the 'en bloc' valuation of equity in a business or a unit thereof and the analysis of daily trading prices of public companies – see commentary herein under the heading '*Fair value techniques - Measuring fair value based on quoted market share prices*'. The application of stock market data rarely is useful in the valuation of small, privately-held companies, and can often lead to inappropriate conclusions. Data based on 'comparables' may be of some use in the valuation of public companies and large privately owned business where meaningful or somewhat meaningful 'comparables' can be identified. Even where this is the case, the application of public equity market data generally is limited, at best, to



providing an understanding of the risk-reward dynamics of a given industry, and in assessing value conclusions derived pursuant to other valuation methodologies.

Based on the foregoing factors, auditors, directors and management should be cautious when considering relying on fair value determinations that place excessive emphasis on so-called comparable company analysis and rules of thumb, regardless of whether those fair value determinations are prepared internally or by independent valuation experts. In this regard, valuation methodologies based on discretionary cash flow[5] (including the capitalization of discretionary cash flow methodology and discounted cash flow methodology) arguably are the most theoretically sound of the valuation methodologies currently utilized – see commentary herein under the heading 'Measuring fair value based on present value techniques'.

Estimating fair value based Value Relationships – Precedent Transactions

When determining *fair value* it usually is beneficial to identify and analyze recent transactions where the acquired company in those transactions is perceived to be a 'comparable' company. The identification and analysis of such transactions may provide insight as to the:

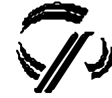
- relative degree of liquidity in a given industry. Where there have been numerous industry transactions and the industry is believed to be going through a consolidation phase, liquidity may be enhanced at that point in time which, all other things equal, may have an upward influence on open market price;

- perceived risks and rates of return of corporate acquirers. Depending on the parties involved, there may be sufficient information available with respect to transaction to enable some understanding of valuation parameters employed by them;

- most likely buyers and post-acquisition synergies that might be expected; and,

- price range competitors might bid for a business.

[5] Discretionary cash flow is defined as '*cash flow from operations less income taxes thereon, net trade working capital requirements, sustaining capital reinvestment and other capital additions, net of the related income tax shield. Normally, discretionary cash flow is determined prior to debt service costs*'.



Although data derived from an analysis of transactions involving 'comparables' may provide such insights, its direct application to any particular 'en bloc' valuation rarely is meaningful as a primary valuation technique because:

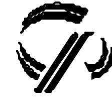
- sufficient information normally is not available to fully understand the valuation dynamics of the business acquired. This includes the segregation of non-evident redundant assets, undisclosed liabilities, long range plans, and so on. As a result, the level of disclosure in open market transactions generally is insufficient to formulate concrete conclusions regarding rates of return that can be directly applied to a given business;

- each open market transaction is unique. In the end the price and consideration paid are a function of purchaser and vendor knowledge, needs, negotiating skills, and bidding competition; and,

- an open market transaction price normally is comprised (either implicitly or explicitly) of the perceived intrinsic value of the acquired business plus, in varying degrees, purchaser perceived post acquisition synergies. Therefore, even where sufficient information exists to compute earnings and cash flow multiples in an acquisition, in the absence of direct involvement with the purchaser it is unusual that the underlying value components can be meaningfully analyzed.

The application of open market transaction multiples is further complicated where all or part of the consideration paid involves a non-cash component such as shares of the acquirer, vendor take-backs, or so-called 'earn-out' arrangements. Where this is the case, a cash equivalent price should be estimated for purposes of comparison. In many cases, insufficient detail regarding the fair market value of the non-cash components is available or determinable. Further, where open market transactions are stale-dated, important changes in the industry, business, and economic factors during the interim period must be considered.

Based on the foregoing factors, auditors, directors and management should be cautious when considering relying on *fair value* determinations that place excessive emphasis on so-called precedent transaction analysis, regardless of whether those fair value determinations are prepared internally or by independent valuation experts.



Measuring fair value based on present value techniques

With respect to measuring *fair value* based on a present value technique, the Standards states the following.

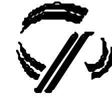
> *'A present value technique is often the best available technique with which to estimate the fair value of a group of items (such as a group of assets in a reporting unit) and generally includes the following elements:*
>
> *(a) an estimate of the series of future cash flows at different times;*
>
> *(b) expectations about possible variations in the amount or timing of those cash flows;*
>
> *(c) the time value of money, represented by the risk-free rate of interest; and,*
>
> *(d) the price of bearing the uncertainty inherent in the asset or liability.*
>
> *Other factors, if identifiable, include illiquidity and market imperfections.'*

With respect to the forgoing, the discounted cash flow ('DCF') valuation methodology arguably is the most theoretically sound of the valuation methodologies currently utilized. It is the preferred valuation methodology. This is because it forces detailed analysis of key forecast and valuation variables and hence facilitates an understanding of important external and internal business drivers, revenue and expense behavior, and business risks. Accordingly, where meaningful projections are available, the DCF methodology generally should be adopted, either by itself or in conjunction with other valuation methodologies.

When utilizing the DCF methodology, it is important that discretionary cash flows are believed to be neither overly aggressive nor overly conservative, assumptions are applied consistently within the DCF model, and the discount rates (i.e. rates of return) adopted are internally consistent within the DCF model.

The DCF methodology is premised on:

- continuing and increasing recognition that discretionary (after-tax) cash flow based analysis typically is more meaningful than earnings based analysis;



- recognition that DCF analysis forces separate and detailed analysis of variables that collectively dictate value. It is the rigor of the analysis that makes the DCF methodology particularly useful when developing 'en bloc' fair market value in either a notional or open market context; and,

- recognition that where the discount rate used is a weighted average cost of capital, 'financial risk' related to interest bearing debt is either largely or entirely accounted for in the valuation model. That is to say, the implications of financial risk arising from an existing over-levered financial structure are largely or entirely disregarded.

The validity of value determinations developed from the application of the DCF methodology, as with all other business valuation methodologies, is dependent upon the objectivity, quality of analysis, thought process, experience and judgment of those completing the analysis.

The mechanics of the DCF methodology[6] include the following components:

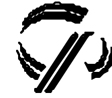
- annual prospective earnings before interest, tax, depreciation and amortization ('EBITDA') from operations is estimated, generally for a prospective period of three to seven years;

- income taxes at applicable rates are applied against annual EBITDA to derive net operating cash flows (before financing costs). Income tax loss carryforwards (where they exist) are applied in the year they are expected to be utilized;

- capital investment (net of the present value of the related capital cost allowance ('CCA') income tax shield) is deducted on an annual basis. When used in the discounted cash flow methodology, capital investment during the forecast period (as contrast to the post-forecast period) may include both sustaining capital and growth capital required to meet operating projections;

- annual increases (decreases) during the forecast period in net trade working capital are deducted from (added to) net operating cash flows;

[6] Where meaningful forecast cash flows are not available it may be appropriate to adopt a capitalization of maintainable after-tax discretionary cash flow valuation methodology. This methodology is similar to a DCF methodology but rather than discounting forecast cash flows to a present value, it capitalizes an estimate of maintainable prospective cash flows.



- the resultant annual forecasts net operating cash flow less capital investment (net of taxes) and the changes in net trade working capital represents the (unlevered) annual discretionary cash flow;

- the value of the cash flows beyond the forecast period are estimated using the capitalization of discretionary after-tax cash flow methodology. The resultant capitalized discretionary cash flow commonly is referred to as the 'terminal value'. Alternatively, where the business will be discontinued after the forecast period, an estimate of the residual value of the business' underlying net assets is made;

- the annual discretionary cash flows and terminal (or residual) value are discounted to present value at a rate which reflects an appropriate weighted average cost of capital. The discounted cash flows are then aggregated to determine total net present value;

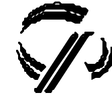
- where not accounted for during the forecast period, the present value of the tax shield on tax pools in existence at the valuation date is determined and added to the discounted discretionary cash flow;

- the net realizable value of redundant assets (if any) is added to the discounted discretionary cash flow. The total net present value of the cash flows during the forecast period and the terminal value, plus the present value of the tax shield and redundant assets, results in the 'enterprise value' of the business; and,

- because discretionary cash flows have been determined before debt servicing costs, and the discount and capitalization rates reflect weighted average costs of capital (being a blended rate of return on debt and equity), the amount of interest bearing debt and equivalents[7] outstanding is deducted to determine the 'en bloc' value of the equity (i.e. outstanding shares) of the business.

Based on the foregoing factors, auditors, directors and management should be cautious when considering relying on *fair value* determinations that do not consider either a DCF or capitalized cash flow methodology, regardless of whether those fair value determinations are prepared internally or by independent valuation experts.

[7] An example of an equivalent would be a non-interest bearing shareholder loan.



Fair value as it relates to determining the cost of purchase in a business combination

With respect to determining the costs of purchase in a business combination the Standards state the following.

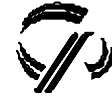
> *'The cost of the purchase to the acquirer should be determined by the fair value of the consideration given or the acquirer's share of the fair value of the net assets or equity interest acquired, whichever is more reliably measured…'*
>
> *'When the quoted market price of shares issued to effect a business combination is not representative of their fair value, the net assets received, including goodwill, and the extent of the adjustment of the quoted market price of the shares issued, are assessed to determine the amount to be recorded. All aspects of the business combination, including the negotiations, are considered, and independent appraisals may be used as an aid in determining the fair value.'*

When consideration in a business combination:

- is paid in full in cash at the time of closing, the cash amount paid would constitute the *fair value* of the consideration given and hence form the basis of the cost of the purchase for the purpose of financial reporting; and,

- is paid in full in the form of shares, estimating the *fair value* of consideration is somewhat more subjective than when cash is the sole consideration. Simply relying on the quoted market price as a basis for determining the fair value of shares issued in a business combination may not be appropriate. The following factors may indicate that the quoted market price is not representative of the *fair value* of shares issued in a business combination:

    - the shares issued are thinly traded. For example, assume that the cash equivalent *fair value* of an acquired company is $10 million where the quoted market price of the shares issued as consideration is $100 per share at closing.

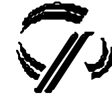


Also assume that the shares of the purchaser are thinly traded. In this example a vendor would not likely accept 100,000 shares of the purchaser (i.e. consideration with a stated value of $10 million based on the quoted market price) because accepting shares (especially thinly traded shares) inherently affords more risk (of not ultimately being able to liquidate those shares for $10 million or more) than accepting cash. Further, assume that the vendor in this example agrees to accept 150,000 shares, being an amount, which he or she perceives to put him or her in the same position as accepting $10 million in cash. Adopting a *fair value* of $15 million based on the quoted market price would arguably overstate the cost of the purchase to the acquirer,

- the shares issued represent a bloc of shares that is larger than 'normal sized' daily trading volume. A vendor would likely suffer a discount to the quoted market price if a relatively large trading bloc of shares were sold into the market over a short period of time. For example, assume the vendor accepted consideration of 15 million shares with a quoted market price of $1 per share at closing, where normal daily trading volume is 100,000 shares and where the company acquired had a cash equivalent value of $10 million. Under this scenario, the vendor likely would not be able to dispose of his or her shares into the public market without suffering some form of discount. Adopting a *fair value* of $15 million based on the quoted market price arguably would overstate the cost of the purchase to the acquirer; and

- the shares issued are subject to restrictions. For example, assume the vendor accepted consideration of 15 million shares with a quoted market price of $1 per share at closing, where a portion of those shares can not be sold for a period of 1 year and where the company acquired had a cash equivalent value of $10 million. Under this scenario, because of the restrictions placed on the shares issued to the vendor those shares would have a *fair value* that is less than the *fair value* imputed based on the quoted market price. Adopting a *fair value* of $15 million based on the quoted market price arguably would overstate the cost of the purchase to the acquirer.

The Standards do not provide guidance with respect to any of these factors. That said, where any one or more of these factors exist, auditors, directors and management must consider which of the following can be more reliably measured:



- the *fair value* of the shares issued as consideration where said *fair value* is appropriately discounted to reflect factors such as those identified above. The application of such discounts is a highly subjective task; or,

- the *fair value* of the net assets or equity interest acquired. In this regard, the best evidence of *fair value* may be set out in the pricing analysis that management may have prepared for the purpose of negotiating the transaction that resulted in the business combination.

Fair value as it relates to allocating the cost of a purchase to and subsequently measuring identifiable intangible assets

With respect to allocating the cost of a purchase to intangible assets, the Standards state the following.

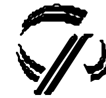
'*An intangible asset should be recognized apart from goodwill when:*

(a) the asset results from contractual or other legal rights (regardless of whether those rights are transferable or separable from the acquired enterprise or from other rights and obligations; or,

(b) the asset is capable of being separated or divided from the acquired enterprise and sold, transferred, licensed, rented, or exchanged (regardless of whether there is an intent to do so).'

Intangible assets that meet the aforementioned criteria are referred to herein as 'Identifiable Intangible Assets'. In addition to the aforementioned criteria, the Standards provide guidance (with examples) with respect to recognizing Identifiable Intangible Assets. Recognition of Identifiable Intangible Assets is a subjective task that requires judgment with respect to the facts in a given situation and requires the involvement and inputs of management. Recognition of Identifiable Intangible Assets in a manner that complies with the Standards is beyond the scope of this article. That said, the Standards require that:

- a portion of the acquirer's purchase cost in a business combination be allocated to Identifiable Intangible Assets based on an estimated or appraised *fair value*;



- intangible assets other than goodwill that are acquired either individually or with a group of assets should initially be recognized and measured at cost;

- an intangible asset that is afforded a carrying value (either pursuant to a business combination or a direct purchase) should be amortized over its useful life, unless the life is determined to be indefinite. When an intangible asset is determined to have an indefinite life, it should not be amortized until its life is determined to no longer be indefinite; and,

- an intangible asset that is afforded a carrying value (either pursuant to a business combination or a direct purchase) but is not be subject to amortization should be tested for impairment annually, or more frequently if events or changes in circumstances indicate that the asset might be impaired. The impairment test should consist of a comparison of the *fair value* of the intangible asset with its carrying amount. When the carrying amount exceeds its fair value, an impairment loss should be recognized in an amount equal to the excess.

Despite the requirements of the Standards, a meaningful determination of the *fair value* of many types of intangible assets viewed in isolation is difficult. This is because, among other things:

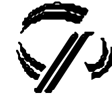
- many of the assumptions required when determining the *fair value* of an intangible asset typically are highly subjective;

- isolating cash flows that relate specifically to a particular asset may not be possible without one or more arbitrary assumptions; and,

- it is difficult, if not impossible to quantify in a meaningful way the impact that separating a specific intangible asset from an existing operation might have on the *fair value* of that intangible asset.

In general, there are four valuation approaches to valuing intangible assets. In general, those approaches are:

- the cost approach, which involves estimating the cost to reproduce the intangible asset or group of intangible assets subject to a *fair value* determination. This approach requires a review of the historic development of the intangible and an attempt to recreate a build-up of the costs (adjusted to current values) incurred to

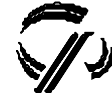


develop those intangibles. The high degree of subjectivity inherent in this approach and the general lack of available information to properly carry out this approach render it virtually meaningless in most instances. Further, this approach is not based on analysis of prospective discretionary cash flows attributable to the intangible asset being valued. Hence this approach fails to consider that value is forward looking, and does not consider either the specific risks associated with the ownership of intangibles or the ongoing costs associated with maintaining the value of same;

- the market comparison approach. This methodology is premised on the notion that two largely similar assets should be worth approximately the same amount. Difficultly arises with this methodology because there typically is a lack of 'comparable' transactions. Even where detailed information is available concerning transactions pursuant to which the 'comparable' intangibles were acquired (which there virtually never is) it is difficult, if not impossible to meaningfully segregate the value of the intangible from the value of other net assets acquired;

- royalty approach. Pursuant to this approach the value of the intangible is estimated by the royalty income that the owner could earn if the rights to exploit the intangible were licensed to arm's length parties. Difficulties arise in estimating the royalty that a third party would be willing to pay for the right and the level of revenue directly attributable to the right. Alternatively, an estimate can be made of the savings enjoyed by a company by not having to pay license fees for use of the intangibles; and,

- incremental cash flow approach. Pursuant to this approach the value of an intangible is determined by comparing the discretionary after-tax cash flow of the business with the intangible against the discretionary after-tax cash flow of the business without the intangible. The value of the intangible is then quantified by capitalizing or discounting the incremental discretionary after-tax cash flow by an appropriate rate of return. This approach is particularly useful where the intangible asset is related to a discrete stream of cash that can readily be extracted from a company's total cash flow. For example, assume that a Canadian based company licenses the right to produce its product in Mexico to an arm's length Mexican based company for a fee equal to $1 per unit sold in Mexico. It is likely that the stream of cash flow directly related to this license is tracked by the licensor separate from its other cash flows.



Based on the foregoing, auditors, directors and management should be cautious when considering relying on *fair value* determinations that place excessive emphasis on an intangible valuation approaches based on cost or market comparables, regardless of whether those *fair value* determinations are prepared internally or by independent valuation experts.

Fair value as it relates to testing goodwill for impairment

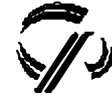
With respect to accounting for goodwill, the Standards state the following.

> '*Goodwill is not amortized. It is tested for impairment…at a level of reporting referred to as a reporting unit.*'

In general terms, to test goodwill for impairment, a company must:

- identify its reporting unit(s);
- assign assets and liabilities to reporting units in a meaningful way;
- assign all goodwill to reporting units in a meaningful way; and,
- test each reporting unit to which goodwill is assigned for impairment at least once per annum[8].

[8] In this regard, the Standards state that '*Goodwill of a reporting unit should be tested for impairment on an annual basis, unless all of the following criteria have been met: (a) the assets and liabilities that make up a reporting unit have not changed significantly since the most recent fair value determination; (b) the most recent fair value determination resulted in an amount that exceeded the carrying amount of the reporting unit by a substantial margin; and (c) based on an analysis of events that have occurred and circumstances that have changed since the most recent fair value determination, the likelihood that a current fair value determination would be less than the current carrying amount of the reporting unit is remote.*' In this regard, auditors, directors and management would be well advised to thoroughly document reasons for not conducting a test for goodwill impairment. This is because prospective events may cause the PSCs, litigation lawyers or other parties to investigate the reasons for not conducting such a test, the results of which may demonstrate that a test should have been conducted.



Identification of reporting units

The Standards define a reporting unit as '*the level of reporting at which goodwill is tested for impairment and is either an operating segment*[9,10]*, or one level below (referred to as a component). A component of an operating segment is a reporting unit when the component constitutes a business for which discrete financial information is available and segment management regularly reviews the operating results of that component. However, two or more components of an operating segment are aggregated and deemed a single reporting unit when the components have similar economic characteristics. An operating segment is deemed to be a reporting unit when all of its components are similar, when none of its components is a reporting unit, or when it is comprised of only a single component.*'

The identification of reporting units is a subjective task that requires judgment with respect to the facts in a given situation and requires the involvement and inputs of management. Identifying reporting units in a manner that complies with the Standards is beyond the scope of this article. That said, in general terms:

- an 'operating segment' is the highest level of a company that can be a reporting unit; and,

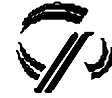
- a component of an 'operating segment' is the lowest level of a company that can be a reporting unit.

When determining whether a component *constitutes a business*, consideration may be given to many factors including guidance set out in GAAP and FASB standards which state, among other things, '*for a transferred set of activities and assets to be a business, it must contain all of the inputs and processes necessary for it to continue to conduct normal operations after the transferred set is separated from the transferor.'* Based on this statement:

- the existence of operating information, financial or otherwise, for a particular component does not in and of itself mean that the component is a business and

[9] An operating segment is a specific term adopted in the Standards – see GAAP Section 1701, Segment Disclosures and FASB Statement 131.

[10] It is possible for a company to have only one operating segment that would constitute its only reporting unit. In such circumstances, goodwill is to be tested for impairment by estimating the *fair value* of the entity viewed as a whole.



hence qualified to be a reporting unit. For example, a component may include the production and sale of a particular type of heavy equipment (say, a bulldozer) while another component may include the production and sale of a different type of heavy equipment (say, a forklift). While there may be separate financial information available for each component, it may be the case that each product line is so interdependent (i.e. a single sales force, single brand name, shared showrooms, same warranty programs etc.) and so economically similar that neither component could be said to constitute a stand-alone business. That said, the two components combined may constitute a single reporting unit; and,

- an important factor to consider when identifying components as reporting units is the extent to which a component shares assets and other resources within a corporate entity and the extent to which a component could readily be segregated as a stand-alone business for the purpose of divesting. In this regard, the greater the degree of asset and resource sharing among components of a business:

  - the more difficult it would be to separate a component for the purpose of divestiture than otherwise might be the case,

  - the greater the number of arbitrary assumptions required to assign assets and liabilities to a component than otherwise might the case, and

  - hence the less meaningful would be the resultant assignment of assets and liabilities and related goodwill impairment test.

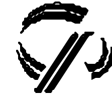
If it is found that specific assets and liabilities cannot be assigned to a component in a meaningful way, it may be the case that the component:

- does not constitute a business and hence should not be a reporting unit; and,

- is economically similar to another component, in which case those components may constitute a business and hence a reporting unit.

The term *discrete financial information* as set out in the definition of a reporting unit:

- indicates that it is necessary that meaningful operating results must be available for a particular component for it to be eligible to be a reporting unit; and,



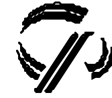
- is a specific term of reference in GAAP and FASB standards that does not necessarily include balance sheet information. In this regard, where a component of an operating segment is determined to be a reporting unit, in order to assess the *fair value* of that reporting unit, it is necessary for assets and liabilities to be assigned to reporting units in a meaningful way.

Assigning assets and liabilities to reporting units

With respect to assigning assets and liabilities to reporting units the Standards state the following.

> *'For the purpose of testing goodwill for impairment, acquired assets and assumed liabilities should be assigned to a reporting unit, as of the date of acquisition, when:*
>
> *(a) the asset is employed in, or the liability relates to, the operations of a reporting unit; and,*
>
> *(b) the asset or liability is considered in determining the fair value of a reporting unit.'*
>
> *'Some assets or liabilities may be employed in or related to the operations of multiple reporting units. The methodology used to determine the amount of those assets and liabilities to assign to a reporting unit is reasonable and supportable and applied in a consistent manner.'*

The assignment of assets and liabilities to reporting units is a subjective task that requires judgment with respect to the facts of a given situation and requires the involvement and inputs of management. The assigning of assets and liabilities to reporting units in a manner that complies with the Standards is beyond the scope of this article. That said, from a *fair value* point of view, it is critical to be consistent with respect to determining *fair value* and the assignment of assets and liabilities. For example, a company may own a building that houses four different operating units. Two possible ways of treating the building for the purpose of testing goodwill for impairment might include:



- allocating the carrying value of the building to each of the reporting units in a rationale manner (perhaps by square feet employed) and not charging any rent to the reporting units; or,

- establishing a separate reporting unit for the owned building (i.e. a real estate reporting unit) and have that reporting unit charge each reporting unit that employs space in the owned building a market lease rate per square foot.

Each of the foregoing allocation methodologies, in theory, would result in the same quantum of imputed goodwill to be compared to the 'carrying value' of goodwill. That said, the latter alternative better reflects marketplace assumptions. This is because, if one of the reporting units in the above example were divested in the open market to a purchaser that intended to continue to operate that reporting unit in its existing facility, as part of the transaction, a rent likely would be negotiated between the vendor and the purchaser, which rent would likely be reflected in the purchase price ultimately negotiated. If the *fair value* quantification of the reporting units in this example include a notional adjustment to reflect market rent in the prospective cash flows of the reporting unit it would be inconsistent to also include a portion of the carrying value of the owned building in the asset base of that reporting unit.

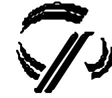
To better ensure consistency, it is important for those responsible for assigning assets and liabilities to reporting units to understand how balance sheet items are considered when determining the *fair value* of a reporting unit.

Assigning goodwill to reporting units

With respect to the assigning of goodwill to reporting units the Standards state the following.

> *'For the purpose of testing goodwill for impairment, all goodwill acquired in a business combination should be assigned to one or more reporting units as of the date of acquisition.'*

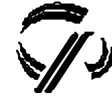
> *'The total amount of acquired goodwill may be divided among a number of reporting units. The methodology used to determine the amount of goodwill to assign to a reporting unit is reasonable and supportable, and applied in a consistent manner. In concept the amount of goodwill assigned to a reporting*



unit is determined in the same manner as the amount of goodwill to be recognized in a business combination. In essence, the fair value representing a 'purchase price' is determined for each reporting unit, and this 'purchase price' is allocated to the assets and liabilities of the unit. When the 'purchase price' is assigned to those net assets, the excess is the goodwill assigned to that reporting unit. Goodwill is assigned to reporting units of the acquiring enterprise that are expected to benefit from the synergies of the combination even though other assets or liabilities of the acquired enterprise may not be assigned to that reporting unit. When goodwill is assigned to a reporting unit that has not been assigned any of the assets acquired and liabilities assumed in the acquisition, the amount of the goodwill to be assigned to the reporting unit might be determined by applying a 'with and without' computation so that the difference between the fair value before the acquisition and its fair value after the acquisition represents the amount of goodwill assigned to the reporting unit.'

The assignment of goodwill to reporting units is a subjective task that requires judgment with respect to the facts in a given situation and requires the involvement and inputs of management. The assigning goodwill to reporting units in a manner that complies with the Standards is beyond the scope of this article. That said in order to assess *fair value* in a meaningful way, it is important to allocate goodwill to those divisions that benefit from the goodwill. For example, assume that on a post acquisition basis, a company has two reporting units, one that is involved in road construction where all of its contracts are subject to a highly competitive bid process, and one that quarries and sells gravel to a large number of customers across a broad number of industries. Given the fact that the quarry is a finite resource subject to environmental and other regulations and the fact that the construction business is dependant on a contract bid process (i.e. no repeat work), it is likely that most if not all of the company's stated goodwill relates directly to the quarry operations.

An issue to consider when allocating goodwill to reporting units is the allocation of the component of goodwill that is a result of an acquirer paying for perceived post acquisition synergies. Some of those synergies paid for may relate to reporting units of the acquirer that existed prior to the acquisition but to which no tangible assets or liabilities of the acquired company are to be allocated. For example, assume that as a result of acquiring a major supplier, a company's existing reporting unit is perceived to be able to sell product to its end customers for 10% more than prior to the acquisition. Further assume that as a direct result of that anticipated 10% price increase, the acquirer paid $1 million more for the company acquired than it otherwise would have.



Arguably, $1 million of the goodwill that arose from the acquisition should be allocated to the reporting unit expected to benefit from the 10% price increase even though no other assets or liabilities of the acquired company are allocated to that reporting unit.

When assigning goodwill to reporting units, it is important to fully understand:

- how the goodwill arising from the transaction relates to each of the reporting units of the purchaser and the acquired company;
- the quantum of anticipated post-acquisition synergies that were paid for in the transaction; and,
- which reporting units were expected at the date of acquisition to reap the benefits of anticipated post-acquisition synergies that were reflected in the purchase price.

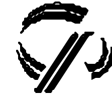
A possible source for this information may be the pricing analysis prepared by management of the acquirer for the purpose of negotiations. In the event such information is not adequately documented, those responsible for assigning goodwill to reporting units should interview those involved in a particular acquisition and should carefully document their findings. Based on this information, a 'with and without'[11] series of analysis may provide the best support for allocating goodwill to reporting units.

Testing goodwill for impairment

With respect to testing goodwill for impairment, the Standards state:

> '*A two-step impairment test should be used to identify potential goodwill impairment and measure the amount of a goodwill impairment loss to be recognized, if any:*
>
> *(a) the fair value of a reporting unit should be compared with its carrying amount, including goodwill, in order to identify a potential impairment. When the fair value of a reporting unit exceeds it carrying amount, goodwill of the reporting*

[11] A 'with and without' series of analysis means determining *fair value* of a reporting unit under two scenarios, one assuming post-acquisition synergies accrue the reporting unit and one assuming that they do not.



unit is considered not to be impaired and the second step of the impairment test is unnecessary; and,

(b) when the carrying amount of a reporting unit exceeds its fair value, the fair value of the reporting unit's goodwill should be compared with its carrying amount to measure the amount of impairment loss, if any. The fair value of goodwill is determined…When the carrying amount of reporting unit goodwill exceeds the fair value of goodwill, an impairment loss should be recognized in an amount equal to the excess.'

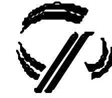
With respect to determining *fair value* for the purpose of testing goodwill for impairment, see commentary herein under the headings '*Definition of fair value and concept of intrinsic value*' and '*Fair value techniques*'. When determining *fair value* for the purpose of testing goodwill for impairment, the following issues are not addressed in the Standards and require consideration:

- whether an acquisition of shares or assets is to be assumed when determining the *fair value* of a reporting unit. The essential difference being that where a business is valued on an 'asset basis' a step-up of undepreciated capital cost to current value is made, whereas such a step-up is not available where a 'share equivalent basis' is adopted. In this regard, where:

    - a reporting unit is not a legal entity, there would be no shares available to divest, and hence only the *fair value* of the assets and liabilities could be assessed, and

    - a reporting unit is a legal entity, there would be both shares and assets (net of liabilities) available to divest and hence it may be appropriate to determine *fair value* on either an 'asset basis' or a 'share basis' depending on the fact specific circumstances;

- the treatment of contingent liabilities. For example, a reporting unit may be exposed to a contingent environmental liability that did not exist at the date of acquisition but which is concluded to have a material negative impact on its *fair value.* In circumstances where said contingent liability is not recorded in the financial statements of the company it would not be allocated to a reporting unit. In this example, the *fair value* of a reporting unit would appropriately reflect the negative impact of the contingent liability whereas the carrying value of the reporting unit



would not reflect any such amount. Accordingly, it is conceivable that the development of a contingent liability after the date of acquisition could result in an impairment of goodwill in the subject reporting unit;

- the treatment of unallocated head office costs. In many multi-divisional business, the operating businesses are centrally managed. Combined with support staff and general and administrative expenses involved in business management, such costs often are referred to head office costs. Often it is impossible to allocate head office costs to specific divisions or operating entities in a meaningful way. Accordingly, where the *fair value* of a reporting unit is being determined:

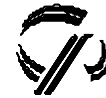
  - on an intrinsic basis, it is necessary to reasonably estimate the head office costs that would be required to operate the reporting unit on a stand-alone basis. In this regard, it may be possible, based on industry benchmarks or other analysis, to estimate an arm's length equivalent management fee related to the benefits that a reporting unit reaps from head office personnel, and

  - it may be the case that it is appropriate to assume a special interest purchaser would acquire the reporting unit without incurring incremental head office costs. In this case, the *fair value* determined for the reporting unit would include an element of perceived post-acquisition synergies;

- the treatment of income tax loss carry-forwards. In this regard, where:

  - a reporting unit is not a legal entity, there would be no shares available to divest, and hence the income tax loss carryforwards available to the legal entity would not be available to a purchaser of the subject reporting unit. Accordingly, when applying a present value technique to determine *fair value* it would be inappropriate to apply corporate level income tax loss-carryforwards to the subject reporting unit's prospective cash flows, and

  - a reporting unit is a legal entity, there would be both shares and assets net of liabilities available to divest and hence it may be appropriate to determine *fair value* on either an 'asset basis' or a 'share basis' depending on the fact specific circumstances. In this regard, where *fair value* is determined on a share basis, it may be appropriate to apply corporate level income tax loss-carryforwards to the subject reporting unit's prospective cash flows; and,



- where the market capitalization of a company (viewed as a whole) is considered to be a reliable measure of *fair value,* it typically is difficult to meaningfully allocate said market capitalization to its business units (where more than one exists) without reviewing, understanding and analyzing the risk profiles and hence, relative *fair values*, of each of the subject company's business units.

Conclusion

The preparation of a fair value determination is a complex process and generally is not susceptible to partial analysis or summary description. Failure to consider one or more factors in a given situation could result in a misstated (perhaps materially so) fair value determination, which in turn could result in a company's financial statements being offside with the Standards. Auditors, directors and management should:

- objectively assess whether their expertise affords the preparation of a proper, supportable and defendable *fair value* determination; and,

- seek independent expert advice concerning *fair value* determinations required pursuant to the Standards in any circumstance where they believe 'wrong valuation conclusions' could lead to materially misstated financial statements.