

2011 Volume 1

JOURNAL

of Business Valuation



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LETTER FROM THE EDITOR

This edition of *The Journal of Business Valuation* features the winning paper from the 2010 Ian R. Campbell Research Competition. It also includes papers presented at the 2010 CICBV-ASA Joint Business Valuation Conference in Miami.

The topics included in this edition are at the forefront of the North American valuation profession both in theory and in practice. Readers are reminded that the papers contained in *The Journal of Business Valuation* are not the opinions of our association but rather of the authors who submitted the papers for this journal.

I would like to thank all of the authors who have submitted papers to our Journal, and also the volunteers and staff who made this edition possible.

Robert Doran, CBV
Chair, Editorial Committee

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ARE WE IN FOR A MARKET SHOCK?*

by Liisa Atva, CA, CBV**

Introduction

During the 1970s Canada joined the ranks of the international majority and converted from the imperial to the metric system of measurement. This was a significant change to the way we measured everything; height, weight, volume, distance, speed, and even temperature. The conversion process required Canadians to, almost overnight, learn a new system with new terminology, and even to calculate some things in a different way. A similar change in Canadian accounting will take place on January 1, 2011, when public companies convert from GAAP to International Financial Reporting Standards (“IFRS”). This move to IFRS is the most significant regulatory change in Canadian accounting history, unprecedented by the sheer number of accounting rules changing at one time. Accountants, analysts, and the entire investment community will need to learn a new accounting “measurement” system.

The Accounting Standards Board of Canada (“AcSB”) stated that adopting IFRS will help Canadian companies remain competitive within global capital markets. IFRS should provide more transparent and comparable financial information resulting in improved financial reporting in an increasingly international business environment.¹ IFRS and GAAP are both sets of accounting rules or standards that dictate how business transactions should be accounted for and reported. Although IFRS and GAAP are conceptually similar, there are a number of significant differences in how transactions are recognized, measured and disclosed. However, the use of one accounting standard over another has no impact on the underlying transactions, and does not change the cash flows associated with the transactions.

The transition to IFRS is not limited to finance and accounting departments, and affects many other areas of an organization including IT, investor relations, legal and human resources. Most IFRS pronouncements stress the potential impact on companies, in terms of transition time and costs, and many even go on to suggest that the scope of the changes could *impact share values or price*. Will this in fact be the case? Will the adoption of IFRS have an impact on share values of Canadian public companies? Canadian Chartered Accountants (“CAs”) seem to think so. In a 2008 survey, 46% of CAs polled said organizations should expect some impact on share prices.²

A 2006 survey in Europe found that the adoption of IFRS had changed fund managers’ perceptions of company value, with 52% of fund managers stating that IFRS had an impact on their investment decisions.³ But

* Winning paper from the Ian R. Campbell Research Initiative, written August 2010.

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1 Canadian Performance Reporting Board (2010), “The IFRS Changeover: A Guide for Users of Financial Reports.”

2 *CAMagazine*, December 2008, from a poll of 273 CAs from public practice, government and industry conducted by Resources Global Professionals.

3 PricewaterhouseCoopers (2006) European Survey. The results were based on responses from 187 fund managers. The Institute of Chartered Accountants in England and Wales (“ICAEW”) study in 2007 posed a similar question and, based on responses from 51 investors, 41% stated that IFRS had influenced their investment decisions, although 31% stated by just a little. I have quoted the PricewaterhouseCoopers result as their survey was conducted closer to the adoption date and was based on a larger sample size.

if IFRS is an accounting change with no impact on cash flows, how can IFRS impact share values? If an investor's perception of value has changed, but there has been no underlying change in the company, then the investor must have acquired new information about the company's existing conditions, expected future results or risks. For the adoption of IFRS to have an impact on share value or price, IFRS must in some way provide new information.

Accounting standards can provide information in at least two ways: by how the transactions are measured and recorded on the actual statements (balance sheet, etc.) and by additional information disclosed in the notes to the financial statements. Another key source of financial information is the Management Discussion and Analysis ("MD&A") that Canadian securities regulators require public companies to provide on a quarterly basis. While IFRS does not dictate the content of the MD&A, the Canadian Securities Administrators ("CSA") has incorporated IFRS disclosure expectations into its MD&A guidance.

Differences between IFRS and GAAP accounting standards can bring to light information in a more timely or transparent way. For example, IFRS provides an option to account for investment properties at their fair value instead of historical cost. A company in the real estate industry, with an investment property that has increased in value since acquisition, could record the higher current value of the property in their financial statements. Under GAAP, the company would not have been able to record the increase in value until the property was sold. This revaluation option under IFRS can provide information to investors that, to the extent it is new information, may change the investor's assessment of risk.

Another example of a difference in accounting standards is in the determination of impairment. Under IFRS, if an indication of impairment is identified, the asset's carrying amount is compared to the asset's discounted cash flows. If the discounted cash flows are less than the carrying value, the asset is considered impaired. Under GAAP, the carrying value is compared to *undiscounted* cash flows. For longer term assets discounting can have a significant impact and, as a result, an impairment may be recognized sooner under IFRS than it would be under GAAP, resulting in a more timely recognition of loss. The required note disclosures under IFRS are generally considered to be more extensive than GAAP and, therefore, may also provide new information.

An often cited economic benefit from adopting IFRS includes a potentially lower cost of capital for Canadian companies. To the extent IFRS facilitates cross-border investment, perhaps by expanding a company's following by international analysts or facilitating listings on other IFRS country's stock exchanges, a lower cost of capital may be possible. The potential is, however, universal for Canadian companies and would not likely affect an individual company's share value until the company actually seeks a listing on another exchange or succeeds in attracting new foreign investment. IFRS may facilitate the process, but the adoption of IFRS in itself, especially when it is mandatory, would not likely impact value. It is also unlikely that when IFRS becomes mandatory, all Canadian public companies will enjoy an across-the-board increase in share value for a potential lower cost of capital. A report by the ICAEW noted that previous research on reductions in the cost of capital for EU countries, after the adoption of IFRS, was inconclusive.⁴

The AcSB stated that "IFRS will ultimately prove more efficient and cost effective by eliminating the need for reconciliations of information reported under separate national standards."⁵ While that may be the case for companies that already report in other countries, it is unlikely that the cost savings would be of such a magnitude as to have an impact on share value. As well, any cost savings would need to be considered in light of the costs incurred in transitioning to IFRS, which also are unlikely to be so significant as to impact share values.

There are likely a number of other possible advantages and disadvantages of adopting IFRS that could have an impact on share values of individual companies over a longer term. Any impact long after the adoption date will be difficult to attribute to IFRS alone as other factors may also have had an effect by then. Since IFRS has no impact on cash flows (other than the costs and cost savings associated with adoption as discussed above), the

⁴ The research commissioned by the ICAEW focused on the short-term impact of IFRS at the time of transition and commented that further longer-term study would be required in order to reach a conclusion on the cost of capital issues.

⁵ The CICA's Guide to IFRS in Canada.

“value relevance” of IFRS is attributable to the new information it provides. The impact of this information will be easier to discern at the time it is provided to the market, during or prior to the adoption of IFRS.

For companies with a December 31st year-end, the first financial statements prepared under IFRS will be the first quarter interim results, due by mid-May 2011. Given the prevalence of December year-ends, thousands of companies will release their first IFRS financial statements at the same time. How will analysts and investors react to this sudden influx of financial statements prepared under a new set of accounting rules? While we cannot know with any certainty what will happen when the majority of Canadian companies adopt IFRS in 2011, we may find a hint of what to expect by studying the experience of those that have already done so. Companies in Canada can voluntarily elect to adopt IFRS early and some did. However, to see what happened upon a mandatory IFRS adoption, affecting the majority of public companies, we must look at what happened in other countries.

Comparable Countries

Canadian companies will certainly not be the first to adopt IFRS; 18,000 companies⁶ throughout the world have already done so. Of the 153 jurisdictions with stock exchanges, 63% of these already require the use of IFRS for domestic listed companies.⁷ Included in this group are several of the world’s major economies: Australia, Brazil, China,⁸ the European Union countries, GCC countries,⁹ Hong Kong, Russia and South Africa. With India, Mexico and Korea scheduled to adopt IFRS by 2012 and Japan by 2016, every major economy in the world, with the exception of the United States,¹⁰ will be using IFRS. It is interesting to note that the U.S. is also one of only four countries in the world that have not adopted the metric system of measurement.¹¹

Studying the effect on share prices for those countries that have already adopted IFRS (“other IFRS countries”), may provide some insight into what to expect in Canada in 2011. Nonetheless, the relevance to Canada of these other IFRS countries’ experiences depends on several factors, including the following:

1. the capital market structure of other IFRS countries in comparison to that of Canada,
2. the degree of convergence of the other IFRS countries’ prior national GAAP with IFRS, prior to the adoption of IFRS, in comparison to that of Canada, and
3. the specific information that was required to be disclosed upon the conversion to IFRS, and the timing of such disclosures, in comparison to the Canadian requirements.

First, I identify the other IFRS countries that are most comparable to Canada for the first two criteria; capital market structure, and degree of convergence of prior national GAAP and IFRS (“comparable countries”). The IFRS adoption experience of the comparable countries will likely be more relevant to Canada than other IFRS countries. Secondly, based on a review of the available literature, I discuss the effect on share prices from adopting IFRS, for the comparable countries. Lastly, I consider the potential impact of the third point, the specific disclosures and their timing.

6 From Appendix 1. Total 21,698 less 3,700 for Canada =17,998.

7 IAS-Plus, “Use of IFRS by Jurisdiction.”

8 Substantially converged in 2007.

9 Gulf Cooperation Council including Bahrain, Kuwait, Qatar, Oman, Saudi Arabia, and the United Arab Emirates.

10 The United States is working to substantially complete the convergence of U.S. GAAP to IFRS by June 2011; however, an IFRS adoption date has not been officially set.

11 Wiki.answers.com. The U.S., Liberia, Myanmar and the UK use the imperial system of measurement, although the UK is officially metric.

Comparable Capital Markets

A study by Nichols (2006) examines the “distinctive characteristics of Canada’s capital markets (or, more precisely, Canada’s equity markets)” and identifies the principal features to include, among others,¹² the following:

1. Canadian issuers constitute a small fraction of total world market capitalization.
2. The market capitalization of Canadian public companies is high relative to GDP, a measure indicative of relatively well developed capital markets.
3. Canada’s public equity markets are characterized by a small number of large issuers and a far greater number of small issuers.
4. A significant percentage of Canada’s public companies operate in a handful of key sectors, specifically mining, oil and gas and financial services.

With respect to the first characteristic above, the market capitalization of Canadian issuers of U.S. \$1.68 trillion represented 3.5% of total world market capitalization at the end of 2009.¹³ Excluding countries with a market capitalization greater than 100% (U.S. \$3.36 trillion), or less than 50% (U.S. \$0.84 trillion) of that of Canada, a relatively broad range, as not comparable leaves only seven countries; Australia, France, Germany, Hong Kong, Spain, Switzerland and the UK.¹⁴ (See Appendix 1 for additional details.)

For the second characteristic, the market capitalization of Canada relative to GDP was 125%, indicating a relatively well developed capital market. Excluding countries with a market capitalization relative to GDP greater than 100%, or less than 50% of that of Canada, as significantly different eliminated France and Germany¹⁵ as comparable countries. For the 3rd characteristic, Canada has over 3,700¹⁶ listed companies, more than any other IFRS country. Excluding countries that did not have a significant number of listed companies,¹⁷ eliminated Hong Kong and Switzerland.

With respect to industry sectors, none of the remaining three countries (Australia, UK and Spain) are as heavily concentrated in the same sectors as Canada; specifically mining, oil and gas and financial services, comprising in total 77% of the Canadian market capitalization. Still as shown in Table 1, these industry sectors do comprise, from 52% to 71% of these three countries’ respective market capitalizations.

12 The Nichols study identified three other principal features: larger and smaller public companies vary by region, significant number of issuers also listed on U.S. exchanges, and a significant percentage of non-financial public companies with controlling shareholders. I have made the assumption that excluding consideration of these three features would not have a significant impact on the countries that I consider to have comparable capital markets, for this purpose.

13 See Appendix 1, footnote 47.

14 Applying this criterion, the only country with a market capitalization greater than Canada that was excluded was China which had a market capitalization of U.S. \$3.57 trillion, significantly larger than that of Canada. China also failed to meet the criteria for the 3rd and 4th characteristics.

15 France and Germany also failed to meet the criteria for the 3rd and 4th characteristics.

16 See Appendix 1.

17 Market capitalization/number of listed companies greater than 100% or less than 50% of that of Canada’s.

Table 1**Determination of Comparable Countries**

Country	IAS Convergence Score ¹⁸	Market Cap. \$U.S. Trillions ¹⁹	Market Cap. as a % of GDP ²⁰	Number of Listed Companies ²¹	Sector % Energy/ Materials/ Finance ²²
Canada	5	\$1.676	125%	3,700	27/20/30=77
Australia	4	\$1.262	127%	1,966	7/25/39=71
UK	1	\$2.796	128%	2,792	18/12/22=52
Spain	16	\$1.435	98%	3,472	22/9/35=66

GAAP Comparability

The Bae et al. (2008) study examined the degree of convergence between the prior national GAAP and IFRS of 49 countries. The study identified a list of 21 important accounting rules and benchmarked the local accounting standards in the various countries against IFRS, focusing on rules in place as of December 31, 2001.²³ Of the 49 countries examined in the study, 30 of these have already adopted IFRS. Appendix 1 shows the convergence score for these 30 countries, and for comparative purposes, Canada. With one point assigned for each accounting standard for which the country differs from IFRS, the lower the score, the higher the degree of convergence. For example, a score of zero would imply that the respective country's national GAAP was identical to IFRS, with respect to the accounting standards benchmarked. The minimum and maximum convergence score possible would be zero and 21 respectively. The convergence score for Canada in 2001 was 5 points.

As the Bae et al. (2008) study is based on accounting standards as of 2001, it is reasonable to assume that the various countries' national GAAP may have changed between 2001 and their respective IFRS adoption dates. As the adoption date for the majority of these countries was four years later in 2005, it is likely that any changes to their prior national GAAP would have been to bring it closer to IFRS. The convergence score for each country could, therefore, have been even lower at the IFRS adoption date. Canadian GAAP has moved closer to IFRS since 2001 and a current convergence score would be approximately 3 points.²⁴

Comparable Countries

After applying the capital markets criteria only three countries remain, Australia, the UK and Spain. As shown in Table 1, the GAAP/IFRS convergence scores for Australia (4 points), the UK (1) and Canada (5) are less than the average of 9 points for other IFRS countries. Spain with 16 points is significantly higher than the average and,

18 See Appendix 1.

19 See Appendix 1.

20 See Appendix 1.

21 See Appendix 1.

22 Canada, S&P TSX Composite Index; Australia, S&P ASX 300; UK, S&P United Kingdom Index—all as of June 2010. For Spain the data is as of December 2009 and classification categories differ; energy includes power and materials includes construction. The percentages for Spain were calculated excluding foreign shares.

23 The study relied on "GAAP 2001: A Survey of National Accounting Rules Benchmarked against IFRS." In this survey, partners in large accountancy firms from more than 60 countries benchmarked the local accounting standards in their country against IFRS, focusing on rules in place as of December 31, 2001. The Bae et al. (2008) study goes on to study the impact on financial analysts from international GAAP differences. Although our focus is different, the degree of convergence with IFRS portion of the Bae et al. (2008) study provides information useful for our purposes.

24 An updated convergence score of 3 points was arrived at by excluding the use of LIFO for inventory as a GAAP/IFRS difference since the use of LIFO in Canada is rare. In addition goodwill and long lived intangibles are required to be tested for impairment. Other GAAP/IFRS differences appear to remain valid.

therefore, less comparable to Canada in this regard. As a result, the impact of the adoption of IFRS on share prices in Spain may be less relevant for Canada, and Spain has been excluded from further study.²⁵

Other Country Experience

Australia

Australian public companies were required to adopt IFRS for annual reporting periods *commencing* on or after January 1, 2005. The majority of Australian companies have June 30th year-ends and are required to report interim results half-yearly. For companies with a June 30th year-end, the IFRS reporting period commenced on July 1, 2005 (the first annual period commencing after January 1, 2005) and companies prepared their first IFRS financial statements for the six-month period ended December 31, 2005.

Prior to the adoption of IFRS, companies were subject to Australian Accounting Standard AASB 1047. Under AASB 1047, for reporting periods ending on or after June 30, 2004 (one year prior to adoption), companies were required to include, in their financial statements, a narrative description of the key differences in accounting policies that were expected to arise from adopting IFRS. The intent of this *qualitative* narrative was to provide information to users of financial reports to enable them to make judgments on the impact that adopting IFRS would likely have on the future financial performance and position of the company.

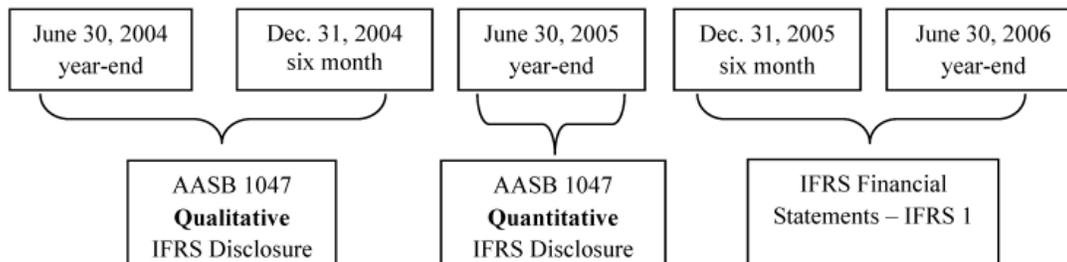
For interim or annual reporting periods *ending on* or after June 30, 2005 (the last period prior to adoption), AASB 1047 required companies to disclose the *quantitative* effect on the financial results and position had the financial statements been prepared using IFRS. As companies' June 30, 2005 year-end financial statements would have still been prepared under GAAP, this requirement was generally met with a reconciliation of net income under GAAP to what net income would have been under IFRS (a "GAAP/IFRS reconciliation").

Upon the adoption of IFRS, Australian companies were no longer subject to AASB 1047 and instead applied accounting standard IFRS 1 "*First-time Adoption of IFRS*". IFRS 1 requires GAAP/IFRS reconciliations of total comprehensive income and equity for the latest period in the entity's most recent annual financial statements. The first IFRS financial statements, for the six-months ended December 31, 2005 would have included GAAP/IFRS reconciliations for June 30, 2005 (the latest period in the most recent annual financial statements). These reconciliations were effectively the same GAAP/IFRS reconciliations already required under AASB 1047 for the June 30, 2005 financial statements. Therefore, the effect of AASB 1047 was to require companies to provide quantitative GAAP/IFRS information several months prior to the adoption of IFRS.

25 While there were a few studies of the effect on share prices from adopting IFRS for EU countries as a group, and for Australia and the UK, I did not come across any for Spain alone.

Figure 1

Timing of IFRS Reporting in Australia
(For a company with a June 30th year-end)



The disclosure requirements above resulted in a qualitative disclosure period from June 30, 2004 to December 31, 2004, and a quantitative disclosure period from January 1, 2005 onwards. During the qualitative disclosure period it is possible that some sophisticated investors and analysts *may have* been able to determine the impact that IFRS would have on companies' financial results. However, it is during this latter quantitative disclosure period that ordinary investors, and the market in general, would have first received information that explicitly detailed the impact of IFRS on Australian public companies.

Becis, Tan and Welker (2006) ("the Becis study") studied the effect of IFRS on Australian public company share prices. The Becis study sample of 113 companies was drawn from the Australian Stock Exchange ASX 300²⁶ as at September 28, 2005.²⁷ Based on GAAP/IFRS reconciliations provided for June 30, 2005, 65% of sample companies reported a large increase in net income (after tax) under IFRS in comparison to GAAP ("IFRS winners"), with the balance reporting small increases or decreases ("IFRS losers").²⁸

The short-term window test of the Becis study focused on the 22 trading days (approximately one calendar month) following the sample companies' release of this quantitative IFRS information. As shown in Figure 2, *despite the adoption of IFRS having no cash flow impact*, IFRS winners produced a cumulative average abnormal return ("CAAR")²⁹ averaging 2.0%. In order to produce a positive abnormal return, a company's share price would need to increase by an amount sufficient to produce a return greater than the market (assuming no dividends). With the sample further stratified, the highest CAAR observed was 3.7% on days 16 and 17 for the biggest IFRS winners (IFRS increases in the fourth quartile). As shown below, although IFRS losers also produced a positive CAAR averaging .76% during the 22 trading day period, with the exception of the 22nd day, this was consistently less than the CAAR of the IFRS winners.

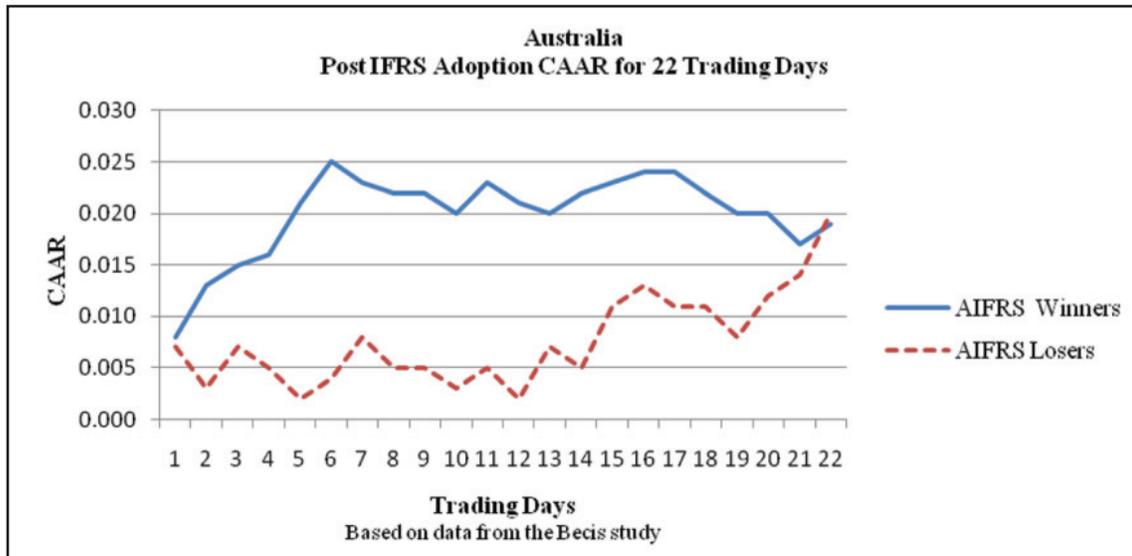
26 The ASX 300 includes the 300 largest companies in Australia based on market capitalization and as at that date represented 95% of the total market capitalization of the ASX.

27 Excluded from the study sample were newly listed or restructured companies (10), non-AGAAP reporters (15), companies that did not have a June 30 year-end (102) and those that did not provide the GAAP/IFRS reconciliation (60). It is interesting to note how many companies did not comply with the AASB 1047 requirement to provide the reconciliations.

28 The median and mean increase in net income after tax (as a percentage of GAAP) for the IFRS winners was approximately 4.2% and 7.1%. With respect to equity, 29% of sample reported higher equity, 65% lower equity and the balance unchanged. The median and mean decrease in equity was approximately 1.1% and 5.3%.

29 The cumulative abnormal return (CAR) is the sum of the differences between the expected return on an individual stock (systematic risk multiplied by the realized market return) and the actual return and is often used to evaluate the impact of news on a stock price. CAAR is the average of the CARs for a group of stocks.

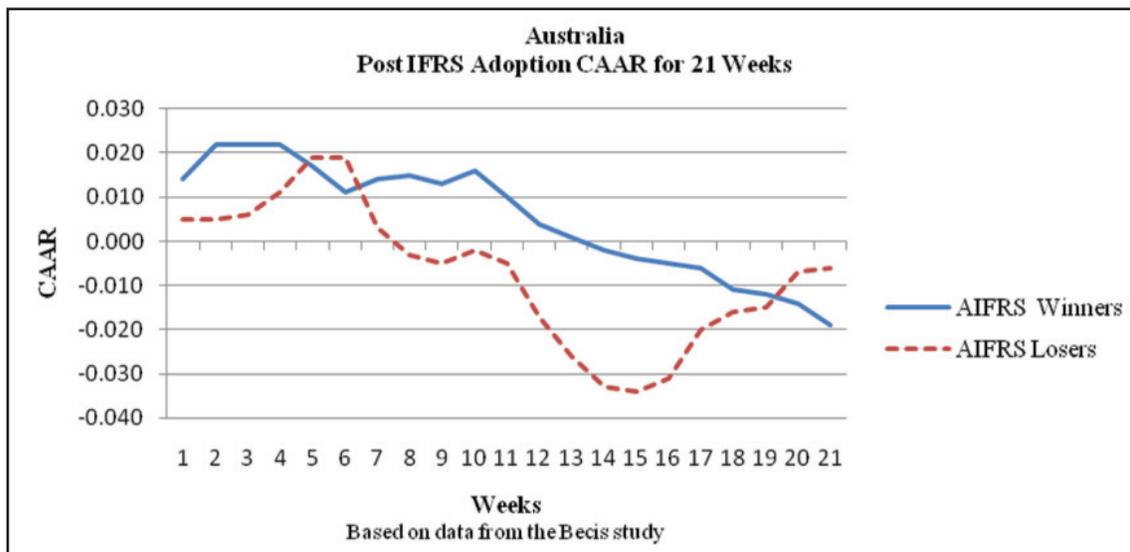
Figure 2



The average CAAR of the IFRS winners as a whole peaked at 2.5% on the sixth trading day, 2.0% higher than that of the IFRS losers. The efficient market hypothesis states that new information is immediately reflected in share prices. The results of the Becis study challenge this hypothesis and suggest that the market reaction was not immediate, instead taking six trading days to fully react to the IFRS information.

The intermediate-term window test of the Becis study focused on the 21 weeks following the sample companies' releases of IFRS quantitative information. As shown in Figure 3, the CAAR of the IFRS winners exceeded that of the IFRS losers for all but two of the 21 weeks, peaking at a difference of 3.1% in the 14th week. Nonetheless, the advantage enjoyed by the IFRS winners gradually eroded after the 14th week. The Becis study suggests that quantitative IFRS information did have an impact on share prices in the short and intermediate term (up to 14 weeks post-announcement), but not over the longer term. The IFRS winners experienced a positive CAAR for up to 13 weeks, followed by a negative CAAR to the end of the 21-week period. It is possible that the effect of a period of negative CAAR would have returned the share price to a "normal" level. The IFRS losers experienced a negative CAAR from the eighth week, peaking at a low of negative CAAR of 3.4% in the 15th week, with a gradual improvement until the end of the 21-week period.

Figure 3



While the correlation between IFRS net income and CAAR was positive for the sample as a whole, the results by company size (as determined by market capitalization) differed, with a negative result for large companies, and a positive result for medium and small companies. The Becis study notes that the result for larger companies may be accounted for by the sophisticated analysis a larger analyst following provides, and that smaller and medium size companies may have reacted unduly to a cash flow neutral change.³⁰

Given the sample size of the Becis study, not all industry sectors were represented in a statistically meaningful way. Based on industries for which there were at least seven or more companies represented in the sample, the IFRS winners were Financials and Healthcare, and IFRS losers were Energy and Materials (includes mining). However, neither the Energy nor Materials sector net income was positively correlated with a change in share price, indicating that the IFRS information may not have had an impact on these sectors. This is consistent with valuations for these sectors often based on other factors, such as commodity reserves and prices.

The UK

European Union (“EU”) publicly listed companies, including those of the UK, were required to adopt IFRS for annual *and interim* reporting periods commencing on or after January 1, 2005. Upon the adoption of IFRS, UK companies were also required to comply with IFRS 1 and include with their first interim financial statements a GAAP/IFRS reconciliation for the latest period in the entity’s most recent annual financial statements. As UK public companies file interim financial statements half-yearly and the majority have December 31st year-ends, the first GAAP/IFRS reconciliations required would have been for the six-month period ended June 30, 2005. Unlike Australia, UK companies were not required by an accounting standard to provide a GAAP/IFRS reconciliation prior to their first IFRS reporting period. However, a directive from the Committee of European Securities Regulators did *recommend* that companies provide quantitative information before the publication of their first IFRS interim financial statements.

The time frame to do so was not specified and a study by Horton et al. (2008) (“the Horton study”) found that companies published their GAAP/IFRS reconciliations, on average, three months after their last annual UK

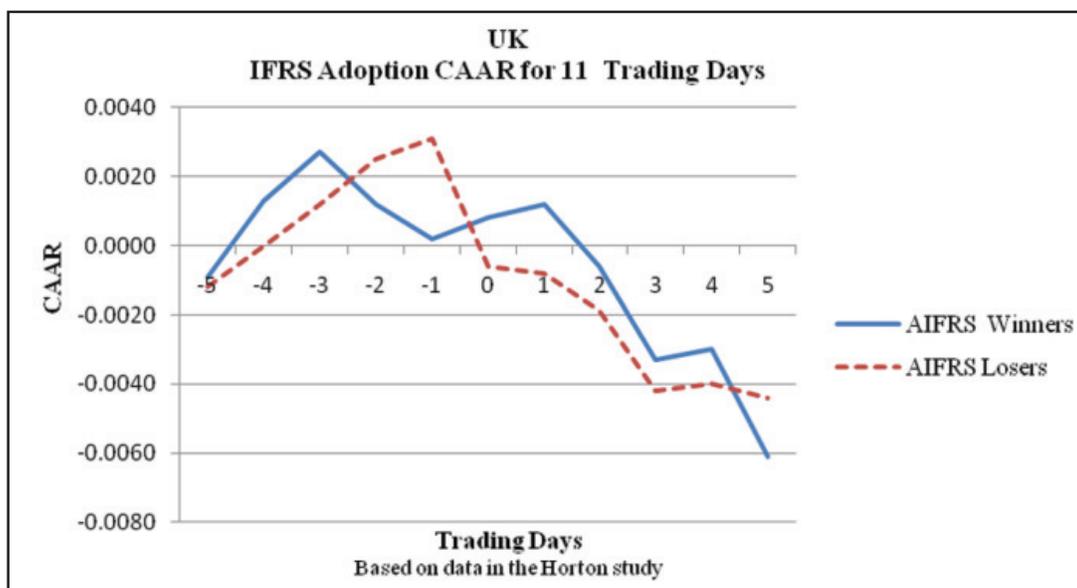
³⁰ The Becis study also notes that the inclusion of financial institutions in the sample may confound results by company size, but does not provide further analysis in this regard.

GAAP statements, which would be *before* their first IFRS interim reporting period. The reconciliations were generally published as a disclosure separate from financial statements or other announcements. This group of early reconciliation disclosing companies provides a unique opportunity to assess the “pure” impact of adopting IFRS on share prices, as the market would likely already have reacted to the previously issued financial results.

The Horton study sample was drawn from London Stock Exchange FTSE 350³¹ companies as at December 31, 2006 and was comprised of the 182 companies that published their GAAP/IFRS reconciliations separately. Of the companies in the study sample, 73% reported IFRS earnings that were higher than UK earnings (IFRS winners), and 27% reported IFRS earnings that were lower (IFRS losers).³²

The Horton study focused on an 11-day window; the five days preceding the companies’ disclosure of their UK GAAP/IFRS reconciliations, the day of, and the five days following. The study concluded that IFRS winners did not experience a statistically significant change in CAAR. The IFRS losers, on the other hand, experienced a negative³³ CAAR up to .44% on the fifth trading day following the disclosure. As shown in Figure 4, the CAAR of the IFRS winners is also negative commencing on the second trading day after the disclosure of the GAAP/IFRS reconciliation. Nonetheless for all but the last of the five trading days after the release of the GAAP/IFRS reconciliations, the CAAR of the IFRS winners exceeds that of the IFRS losers.

Figure 4



The Horton study suggests that “positive news embedded in positive earnings reconciliations had already been communicated to the market, bad news had not.” This is consistent with other studies indicating that managers delay communication of bad news relative to good news. The study also comments that “positive earnings adjustment may signal opportunistic behaviour and therefore investors are reluctant to trade upon it.” The market reacted to negative news conveyed by the IFRS losers but not to the positive news of the IFRS winners. IFRS losers also experienced an abnormal increase in trading activity of 10.8% on the date of disclosure, while IFRS winners did not experience a significant change in trading activity.

31 The FTSE 350 includes the 350 largest companies in the UK based on market capitalization.

32 The median and mean increases in earnings (as a percentage of UK GAAP) for the study sample as a whole (i.e. not separately by IFRS winners and losers) were 6% and 246%. The median and mean decreases in equity for the study sample companies were 1% and 3%.

33 If the market average performs better than the individual stock then the abnormal return will be negative.

Given the sample size of the Horton study, not all industry sectors were represented in a statistically meaningful way. However, based on industries for which there were at least ten or more companies represented, the IFRS winners were Financial Services, Industrial Goods and Services, Insurance, and Travel/Leisure. The only industry that was predominately an IFRS loser was Healthcare. However, given that the Healthcare industry was represented by only four companies this result may be valid but not statistically relevant.

The Horton study analyzed the impact on earnings resulting from changes in specific accounting standards. On average, earnings increases resulted from adopting IAS 38 (reversal of amortization of goodwill) and IAS 39 (financial instruments). On average, earnings decreased from adopting IFRS 2 (expensing stock options) and IAS 12 (deferred taxes). The changes in respect of goodwill and deferred taxes were found to be positively associated with changes to CAAR, with goodwill impairment significantly associated with a negative abnormal return. The study suggests that the market reaction to the GAAP/IFRS reconciliations, even though they were cash flow neutral, arose due to new information being released to the market that changed investors' beliefs about future cash flows. For example, a reversal of goodwill amortization may have revealed new information to the market; i.e. a reaffirmation that goodwill was not impaired.

Christensen et al. (2009) noted that with the disclosure quality of UK GAAP comparable to IFRS prior to adoption, it was unlikely that the adoption of IFRS in itself would provide information about future cash flows. Yet the Christensen et al. (2009) study also observed a market reaction to GAAP/IFRS reconciliation announcements, albeit more pronounced with smaller companies and companies with lower ratios of interest coverage. They attribute these findings to the greater likelihood that these types of companies may be affected by debt covenants. Increases in reported earnings ease restrictions in debt covenants and decreases in reported earnings increase the risk of technical default. Although lenders can waive defaults arising solely from the adoption of IFRS, Christensen et al. (2009) suggest that it may be costly for lenders to assess whether the violation is due to accounting changes or loan quality. Share price reactions to IFRS disclosures may be attributed to the inability of the market to fully assess the impact of IFRS on earnings and, in particular, on the technical changes to earnings calculations under debt covenants.

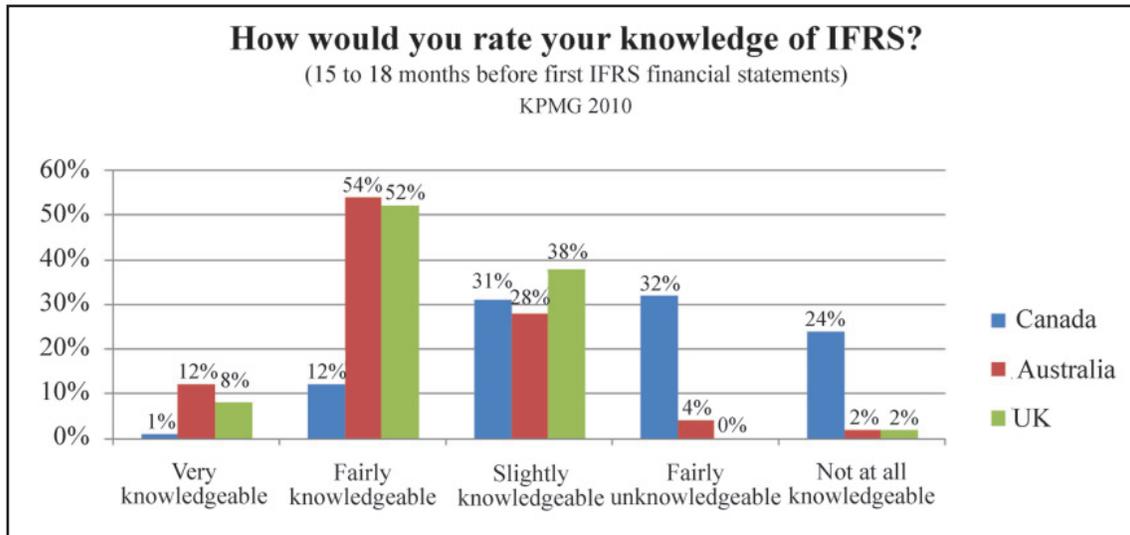
Conclusions from Other Countries' Experiences

What can we take from the experience of Australia and the UK? In both countries, researchers commented that analysts and investors found it difficult to assess the impact of IFRS prior to a company's disclosure of their GAAP/IFRS reconciliations. Christensen et al. (2009) noted that "if the equity market does not fully anticipate how IFRS will impact earnings ... then the stock price should react to announcements of IFRS reconciliations." With Canada adopting IFRS six years later than Australia and the UK, are analysts and investors better able to anticipate the potential impact?

KPMG (2010) commissioned a survey of financial analysts 18 months before the first IFRS financial statements will be issued by Canadian companies with December 31st year-ends. Of the 122 analysts surveyed, 56% rated their level of IFRS knowledge as *fairly unknowledgeable* or *not at all knowledgeable*.³⁴ Based on a similar KPMG survey prior to the adoption of IFRS in Australia and the UK, only 6% of Australian and 2% of UK analysts rated their knowledge level accordingly. It appears that Canadian analysts are not as well prepared for IFRS as were their counterparts in Australia and the UK.

³⁴ The PWC 2009 survey found that 5.5% of CFAs said that they had a very good to excellent knowledge of IFRS. The KPMG 2010 comparative of 13% suggests an improvement in the level of knowledge since 2009.

Figure 5



Studies from both countries concluded that the adoption of IFRS did have an impact on share prices; however, the results differed. In both Australia and the UK the majority of companies (65% and 73% respectively) were IFRS winners (increase in net income under IFRS). In Australia, IFRS winners as a whole experienced an increase in share price, indicated by the positive CAAR that prevailed for 14 weeks. This result was concentrated with the medium to smaller sized companies. In the UK, the IFRS winners did not experience a statistically significant increase in share price. However, the Horton study in the UK extended only to the fifth trading day following the release of the reconciliations. The Becis study in Australia observed the largest increases in CAAR for IFRS winners on the sixth trading day. Therefore, the results from both countries are not necessarily inconsistent with each other. We do not know what the result would have been if the Horton study had been extended for a longer period of time.

The different results observed for the IFRS winners could also be attributed to the size of companies included in the study sample for each of the countries. With the significantly larger UK capital market of U.S. \$2.90 trillion compared to U.S. \$1.26 trillion for Australia, all of the UK sample companies would likely have been “large” companies. If the UK sample had included a larger proportion of medium and small companies, the results may have been similar to Australia. With Canada’s public equity markets characterized by a small number of large issuers and a far greater number of small issuers, Canada is more similar to Australia than the UK in this regard.

In both Australia and the UK, IFRS losers experienced a statistically significant decrease in share price. In the UK, the Horton study observed a negative CAAR up to .44% by the fifth trading day. The Becis study in Australia did not observe a negative CAAR initially, but by the eighth week, the CAAR of the IFRS losers was negative, peaking at a low of negative 3.5% by the 15th week. While the time period studied in both countries differs, making comparisons difficult, in both cases *IFRS losers experienced a negative impact* from the adoption of IFRS and the CAAR of the IFRS losers was less than that of the IFRS winners for most of the period studied.

While Australia and the UK both required GAAP/IFRS reconciliations, the timing of the disclosure of the reconciliations differed. For Australian companies the first GAAP/IFRS reconciliations were for the June 30, 2005 year-end and were released concurrently with the results for the 2005 year. For UK companies the first reconciliations were for the December 31, 2004 year-end and were released, on average, three months after the results for

the year-end. It is possible that the UK market did not react as strongly to GAAP/IFRS reconciliations since they were in respect of results released three months previously rather than for the most current results.

In Canada, in accordance with IFRS 1, companies will be required to include in their first interim financial statements for 2011, GAAP/IFRS reconciliations for the latest period in their most recent annual GAAP financial statements. A company with a December 31 year-end would be required to include the reconciliations for December 31, 2010 with their first quarter March 31, 2011 financial statements. With a filing requirement of 90 days for annual financial statements and 45 days for interim ones, the first GAAP/IFRS reconciliations will be issued by mid-May, 45 days after the annual results. This would put Canadian companies' first releases of GAAP/IFRS reconciliations between those of Australia (concurrently with the annual financial statements), and the UK (three months after the annual financial statements). As discussed later, the Canadian Performance Reporting Board and the CSA recommend even earlier disclosure of the quantitative impact of IFRS, potentially moving the timing even closer to that of Australia.

It is interesting to note that in both Australia and the UK the market took five to six days to react to the IFRS reconciliations, challenging the efficient market hypothesis that new information is immediately reflected in share prices. It is reasonable to expect that investors need time to absorb the IFRS change. In Australia, Cotter, Tarca and Wee (2009) found that in the year prior to IFRS adoption ("the transition year"), analyst forecast error increased over prior years. However, in the year of adoption forecast error declined. The conclusion reached was that companies provided very limited information in the year prior to adoption with more disclosure of IFRS impact in the adoption year. However, the Becis study found that the majority of Australian companies provided GAAP/IFRS reconciliations at the end of their transition year. Another possible explanation is that analysts did not anticipate the IFRS impact, resulting in forecast errors in the transition year. The subsequent decline of forecast error in the year of adoption could be due to analysts having time to absorb and incorporate IFRS information into their forecasts.

The different result observed between Australia and the UK could also be attributed to the degree of convergence between the prior national GAAP and IFRS. Daske et al. (2008) found that "the effects of mandatory adopters are smaller in countries that have fewer differences between local GAAP and IFRS and a pre-existing convergence strategy towards IFRS." Australia's convergence score (4), compared to that of the UK (1), could explain, in part, the stronger market reaction experienced in Australia. Canada, with a current convergence score of approximately three, may be more similar to Australia.

Canada is more closely aligned to Australia than to the UK with respect to a number of the factors discussed above: more small and medium size public companies, GAAP convergence status, and the timing of release of quantitative disclosures. Canada is more likely to see a market reaction akin to that of Australia than the UK, i.e. an increase in share price for IFRS winners and a decrease for IFRS losers, primarily for small and medium size companies, for a period of 14 to 15 weeks. Where Canada differs significantly from both Australia and the UK is in the state of preparedness of analysts, potentially extending the period of impact for a longer time.

Early Adoption of IFRS in Canada

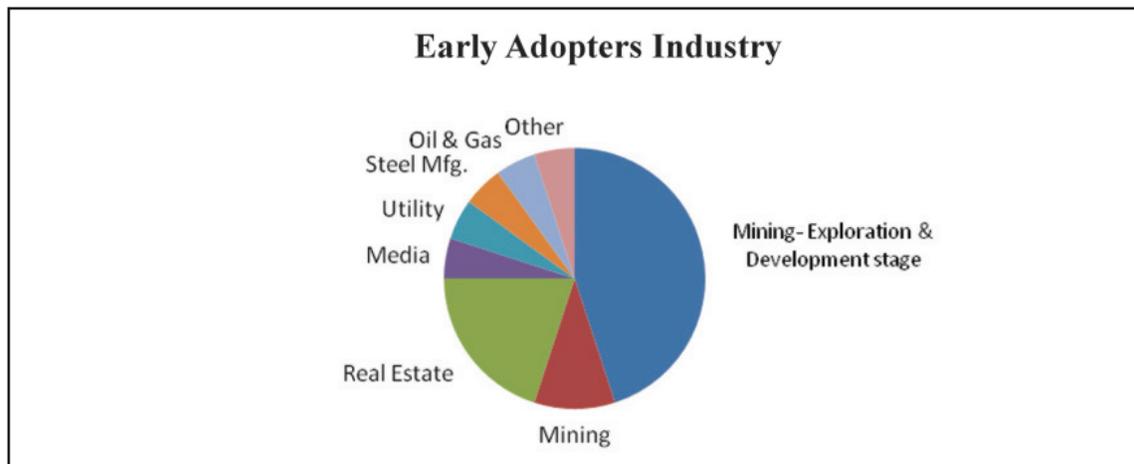
Canadian public companies, with the exception of financial institutions, were permitted to "early adopt" IFRS for financial years beginning on or after January 1, 2009, subject to the approval of securities regulators. By June 30, 2010 only 20 (See Appendix 2) of the 3,700 public companies in Canada had chosen to do so. Canada's early adoption rate is significantly less than that of some other IFRS countries. Daske et al. (2008) found that the average early adoption rate for other countries was 8.7%. Included in this average, however, are countries such as Germany that had a very high rate of adoption (36%). Canada's early adoption rate of .5% is between that of Australia (.9%) and the UK (.1%).

It appears that few Canadian companies found compelling reasons to early adopt. German public companies, on the other hand, had more incentive; German GAAP was significantly different from IFRS or U.S. GAAP as to hinder raising capital outside of Germany. Canadian public companies often raise money in the U.S. and are able to meet U.S. reporting requirements with Canadian GAAP financial statements (supplemented with a U.S. GAAP reconciliation). In Germany, regulatory bodies accepted financial statements prepared under IFRS for seven years prior to mandatory adoption, while in Canada early adoption has been permitted for only two years prior.

With a sample size of only 20 companies voluntarily adopting IFRS early, a statistically relevant conclusion cannot be drawn for Canadian public companies that will be subject to mandatory adoption. Nonetheless, even if not statistically relevant, the experience of the early adopters may shed some insight on what is to come for those companies yet to adopt. Companies that choose early adoption are by nature a self-selected group; they expect the benefits of doing so to exceed the costs. Their reasons for adopting early may indicate which types of companies will benefit most from the adoption of IFRS and whose share values may be most impacted.

Six of the 20 early adopters are large companies that are included in the S&P/TSX Composite Index, with the balance comprised of smaller companies. The predominate industry represented is mining (55%) including both operating and exploration and development stage (“E&D”) companies, followed by real estate (20%) and the balance in a variety of other industries (see Figure 6). Two of the companies have historically used IFRS, seven adopted IFRS in 2009, and the balance in 2010.

Figure 6



The reasons stated for early adoption include:

1. The option under IFRS to use fair values rather than historical cost for certain assets (4 companies)
2. Simplifying consolidation with a parent or subsidiary company already using IFRS (7)
3. Eliminating the need for a US GAAP reconciliation given the SEC's recent acceptance of IFRS financial statements (4)
4. Newly public and had not previously prepared GAAP statements (3)
5. IFRS statements required for existing or upcoming listings on other country's stock exchange (3)

With the exception of the first reason above, all of the other reasons serve to reduce accounting and reporting costs. However, it is unlikely that cost savings in these areas would be of such a magnitude as to have a significant impact on share values. The ability to list on another stock exchange, that only accepts IFRS financial statements,

could result in a lower cost of capital and have a positive impact on share value over the longer term. Adopting IFRS could facilitate the process; however, since a company could choose to prepare IFRS financial statements in addition to GAAP ones, it is essentially an accounting cost saving decision as well.

The option to use fair values for certain assets rather than historical cost may provide new information but also may increase costs involved to determine such fair values. For companies in certain industries such as real estate, where there can be a significant difference between current values and historical cost, the adoption of IFRS can provide new information to investors. One of the companies in the group, that adopted IFRS early for this reason, stated that net asset value per share is the most important metric for the company, and that IFRS accounting shows the appreciation in value of their investments that was not previously reflected in financial results until the assets were sold, if ever.³⁵ Although this company adopted IFRS in the first quarter of 2010, quantitative disclosure on the impact of IFRS was first disclosed with the year-end financial statements for 2008. Although the impact as noted in the first disclosure was significant, i.e. an increase of \$9 billion (274% increase) in equity, there was no discernable impact on share price. The market may not have reacted to the IFRS disclosures if they did not convey new information. The company, with a market capitalization of \$13.8 billion (as of June 30, 2010), has a large, sophisticated analyst following and a history of providing in-depth financial information. It is likely that analysts already had a good idea of the value of underlying assets based on their own forecasts of cash flow. For companies with a smaller analyst following and more limited previous financial disclosures, from which current values are not as readily determinable, the adoption of IFRS may have more impact on share values.

The GAAP/IFRS reconciliations included in either the financial statements or MD&A and share price history for 12 of the early adopters³⁶ (“sample companies”) were reviewed. Four of the seven E&D mining companies reported no significant difference in net income or equity under IFRS, three were IFRS winners (IFRS net income (after tax) 5% greater than under GAAP) and none were IFRS losers (IFRS net income 5% less than under GAAP). For one of the IFRS winners, the decrease in net loss of 15% and increase in equity of 143% was due to the company’s decision to capitalize, rather than expense, exploration costs upon the adoption of IFRS. Since Canadian GAAP also allows the capitalization of exploration costs, the change was not a requirement, but rather an opportunity for the company to change a significant accounting policy along with other more minor changes brought about by IFRS.

For the second E&D mining company IFRS winner a decrease in net loss of 115%, and an increase in equity of 565%, was attributable to the deconsolidation of its interest in a limited partnership. Under GAAP the partnership was considered to be a variable interest entity with the company as the primary beneficiary, whereas under IFRS the company was considered to have joint control and elected to apply the equity accounting method. As the partnership had significant accumulated losses, the impact of the change was to reduce current and accumulated losses in equity. This type of change is one that could potentially provide new information to the market. In this case, the company moved from reporting a loss to positive net income and from a deficit to positive equity. The company’s share price increased subsequent to the release of its first quantitative IFRS disclosures, but as the IFRS release was concurrent with the 2008 year-end information, which contained other positive information, it is not possible to ascertain if the adoption of IFRS had an impact on share price.

For the third E&D mining company IFRS winner, a decrease in net loss of 11% was attributable primarily to different rules under IFRS for the translation of foreign operations. This type of change was unlikely to have conveyed new information to the market, and therefore, have an impact on share values. In general, since E&D mining companies are typically valued based on the potential of their mining properties, the adoption of IFRS is not likely to have a significant impact on share values.

The two mining companies in the production stage were both IFRS losers. One of the companies reported an increase in net loss of 12% attributable primarily to the different treatment for the conversion option of a

³⁵ Brookfield Asset Management Inc., Annual Report 2009.

³⁶ I excluded those companies that were newly public, already using IFRS, using U.S. GAAP, or have only preferred shares publicly listed.

debt transaction. Under GAAP the conversion feature is recorded as a component of equity, while under IFRS a portion is fair valued each reporting period and recorded in income. The treatment under IFRS does have the potential to increase earnings volatility and could potentially impact share values if analysts do not look through the transaction to the non-cash flow impact.

The second production stage mining company reported a loss of \$226 million under IFRS compared to net income of \$13 million under GAAP. This significant difference is primarily attributable to recording an impairment of a mining property. An impairment charge would not have been required under GAAP as the undiscounted cash flows were greater than the carrying value. IFRS, however, requires the use of discounted cash flows, which were lower than the carrying value, resulting in the impairment. The quantitative impact of the impairment was reported prior to the adoption of IFRS in the MD&A for the prior year-end. Although, the impairment was significant, and this may have been new information to the market, the share price did not appear to react. The company explained in its MD&A that performance measured in accordance with IFRS is not indicative of future cash flow and also provided non-IFRS measures such as EBITDA (earnings before interest, tax, depreciation and amortization), and cash operating costs per ounce of metals produced. These additional disclosures may help explain why there was no impact on share price. The company adopted IFRS voluntarily in early 2009, at a time when markets had experienced a recent downturn. Recording an impairment at that time, rather than in 2011 upon mandatory adoption, may have been a strategic decision.

One of the non-mining companies reported a 6% decrease in net income attributable primarily to changes in accounting for employee benefit plans (“pension expense”). With the transition to IFRS the pension expense was significantly lower in the prior year; but was expected to be significantly higher in future years. As a result, the company may experience more volatility in future reported net income. The company also made several changes in presentation format that affected operating profit, some that may or may not have been required by IFRS.

With respect to the impact on reported net income from adopting IFRS, there was no clear trend for early adopters. The sample companies were almost evenly divided between IFRS winners, IFRS losers and those that had no significant change, often even within the same industry. For those companies for which IFRS did have an impact on net income, this was due to a variety of reasons, with no common thread. Given the small number of early adopters and the large number of changes brought about by IFRS, this is not surprising and highlights the enormous task facing analysts when they start to analyze IFRS financial statements.

None of the sample companies experienced a discernable impact on share price upon the adoption of IFRS. However, many were proactive in explaining that the changes brought about by IFRS did not impact cash flow. As well, with so few companies choosing early adoption, analysts would have had time to understand the changes. The early adopters may see some impact on share values after the mandatory adoption date. Horton et al. (2009) noted with respect to early adopters, “Before the mandatory adoption, these firms are the outliers in the economy but after they are leaders with an established record of IFRS numbers towards which analysts can evaluate the impact of IFRS.”

Many companies took the opportunity to make other accounting policy or reporting changes under the “guise” of IFRS. This occurred in other IFRS countries as well with Daske et al. (2008) finding that voluntary adopters are more likely to make significant changes to their reporting practices, perhaps as part of a broader strategy. As a result, the impact on share values may in some cases be difficult to attribute to IFRS alone.

Pre-IFRS Disclosure in Canada

As shown in research from Australia and the UK, the critical date is not the IFRS adoption date, but the date on which the market is provided with information that enables investors to determine the potential impact of IFRS on future results. Prior to the release of quantitative information, investors have difficulty determining the impact

of IFRS. The first quantitative IFRS disclosures can, and often do, precede the release of the first IFRS financial statements.

The Canadian Performance Reporting Board (“CPRB”) suggests providing quantitative IFRS disclosures by the end of the third quarter of 2010. The CSA guidance suggests even earlier disclosures. CSA Staff Notice 52-320 issued in 2008 states that “if an issuer has quantified information about the impact of IFRS on the key line items in the issuer’s financial statements available when it prepares its interim and annual MD&A for the financial year beginning one *year before an issuer’s changeover date*, an issuer should include this information in its MD&A.” However, the directive does say “if” and is, therefore, guidance and not a requirement.

In February 2010, the CSA expressed some concerns regarding the quality of IFRS disclosures they had reviewed by that date. In a subsequent news release on July 23, 2010, the CSA noted an improvement in the quality of the disclosures with 82% of reporting issuers identifying significant accounting differences between GAAP and IFRS. Nonetheless, the CSA commented further that issuers could improve the disclosures to better help investors understand the implications of IFRS *specific to the issuer*. How well did the early adopters do in adhering to the suggested disclosure? Only two of the 12 sample companies met the suggested timing of providing quantitative disclosures in the third quarter prior to the adoption year. Six of the companies did so by the year-end prior to adoption and the remaining four in the first quarter of the adoption year.

With only a few months to go until 2011, what is the status of quantitative IFRS disclosures for the Canadian public companies that did not early adopt? Have investors received information that would enable them to determine the potential impact of IFRS? A review of the IFRS disclosures for a random sample of 143 of the S&P/TSX Composite Index companies³⁷ (“study sample”) as of June 30, 2010, uncovered only one company that provided quantitative disclosures.³⁸ This is not surprising given that the CPRB suggests providing quantitative disclosures in the third quarter, but does highlight how little quantitative information has been provided to date.

Based on the study sample 43% (see Figure 7) of the S&P TSX Composite companies stated that they expect IFRS to have a significant impact on reported financial results or position. As 29% have not yet determined the impact, the percentage of companies expecting a significant impact could be as high as 72%.³⁹ Only 18% of companies stated that they expect no significant impact. However, a significant impact on reported results does not necessarily lead to a significant impact on value, as the nature of the changes would need to be taken into consideration.

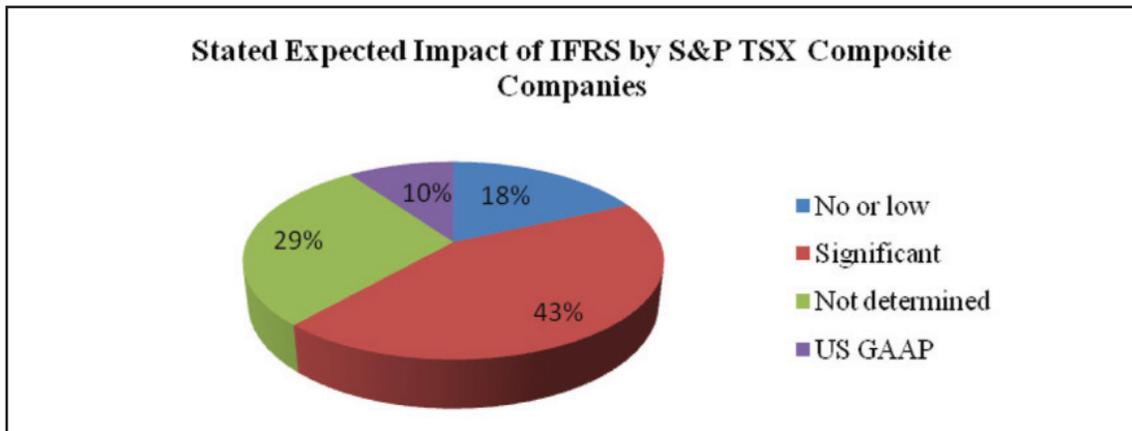
What is surprising is the number of companies that do not plan to adopt IFRS. CSA Staff Notice 52-321 retained the option for a domestic issuer that is also an SEC issuer to continue to use U.S. GAAP and 10% of companies plan to do so. With a significant number of Canadian companies not adopting IFRS, future comparisons among companies may be more difficult.

37 The S&P/TSX Composite Index comprises 95% coverage of the Canadian market based on market capitalization, as per the S&P/TSX fact sheet as of June 30, 2010. A sample size of 143 provides a 95% confidence level with a confidence interval of 5. The sample excludes early adopters.

38 I am aware of one other company that provided quantitative IFRS information but it did not fall into the random sample of companies selected.

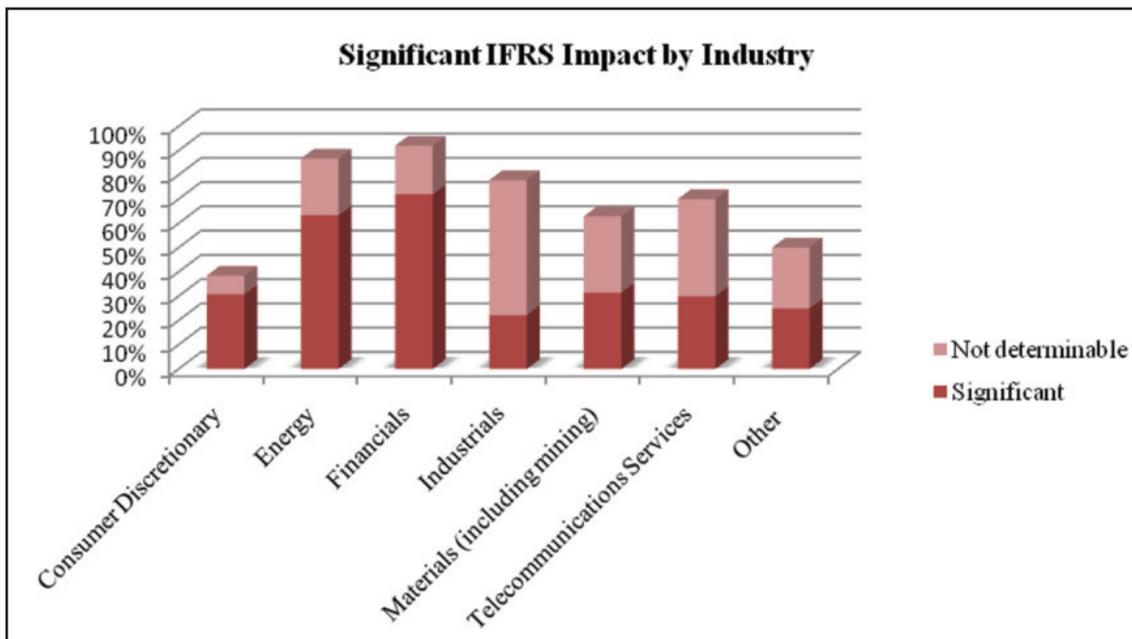
39 I note that a poll of 273 CAs from public practice, government and industry conducted by Resources Global Professionals found 87% of CAs surveyed believe that a company’s reported financial results will change due to IFRS. The results of the poll, however, do not differentiate between the magnitudes of change. In addition, the CAs surveyed were not limited to those in industry and their comments may be general rather than in respect of specific companies.

Figure 7



The breakdown, by industry, of companies expecting a significant impact is shown in Figure 8 below.⁴⁰ The industries that have the highest percentage of companies expecting a significant impact are energy (63%) and financials (72%). With a significant percentage of companies in some industries not yet having determined the impact, there may be other industries which could have percentages even higher. Information technology (included in “other”) is the only industry in which no company stated that there would be a significant impact. However, the sample is represented by only five information technology companies.⁴¹

Figure 8



⁴⁰ Included in the “other” category are the consumer staples, healthcare, information technology and utilities industries for which our sample had less than ten companies. See Appendix 3 for complete results.

⁴¹ Of the five, one stated the impact is not yet determinable, three will continue to use U.S. GAAP and one stated no impact is expected.

Accounting policies that were most frequently mentioned by the study sample as potentially having an impact were: property, plant and equipment, employee benefits, impairment testing, share-based payments, exploration and evaluation expense, depletion expense, asset retirement obligations, investment properties, financial instruments, and accounting for joint ventures and business combinations.

Based on the low level of early adoption and the limited IFRS quantitative information provided to date, the financial impact of IFRS for most public companies has not yet been communicated to analysts and investors. As a result, the impact of IFRS on share values of Canadian public companies is yet to come.

Conclusion

Will the adoption of IFRS have an impact on the share values of Canadian public companies? For 60% to 65% of public companies there will likely be little or no impact. This includes companies in the following categories;

- Continuing to use U.S. GAAP (10%)⁴²
- Have already adopted IFRS (.5%)
- Have already determined that there will be no significant impact (18%)⁴³
- Companies in the extractive industries (e.g. oil & gas and mining), excluding those already included above (30% - 35%)⁴⁴

Typically companies in the extractive industries are valued using discounted cash flow (“DCF”) models with reference to commodity reserves and prices. Net income is typically not a good proxy for cash flow in this type of industry nor is reported equity usually indicative of value. As IFRS does not affect cash flows, the impact on DCF models should be minimal. There are other industries for which this may also be the case that could have been included in the above percentage. As the industry categories in Appendix 3 are relatively broad, an attempt to estimate a percentage for these other industries was not done. By using the whole Energy and Materials sectors to represent the extractive industries, undoubtedly there will be companies in these sectors that could have been excluded.

For the remaining 35% to 40% of public companies there may be an impact on share price. There will be companies for which IFRS provides new information, either positive or negative, that has an impact on underlying value. For companies for which this is not the case, the impact will depend on how successful they are in telling their “IFRS story.” As noted in several CSA Staff Notices and news releases, “Reporting issuers that provide sufficient information about their conversion process and its effects *prior* to the changeover to IFRS will assist in reducing investor uncertainty as Canada transitions to IFRS in 2011.”

Even good explanations may not be enough if analysts do not have sufficient time or understanding to absorb the IFRS information. Based on research in Europe, Aubert & Dumontier (2009) noted that “analysts are not as precise as we could think when a switch to another conceptual framework occurs, even though that change in accounting rules is a major accounting evolution...analysts were not able to correctly anticipate the effect of IFRS adoption on earnings... ”

If IFRS reported financial results differ from expected results and analysts cannot distinguish between differences due to IFRS accounting changes and underlying business performance, there may be a tendency for analysts to assume the latter. As a result, even though there may have been no fundamental change in performance, until analysts can determine otherwise, they may react as if there has been. To the extent analysts rely on non-GAAP measures such as EBITDA as a proxy for cash flows, the impact may be exacerbated as there are several differences between IFRS and GAAP that could have an impact on EBITDA. IFRS winners may see an increase in share price

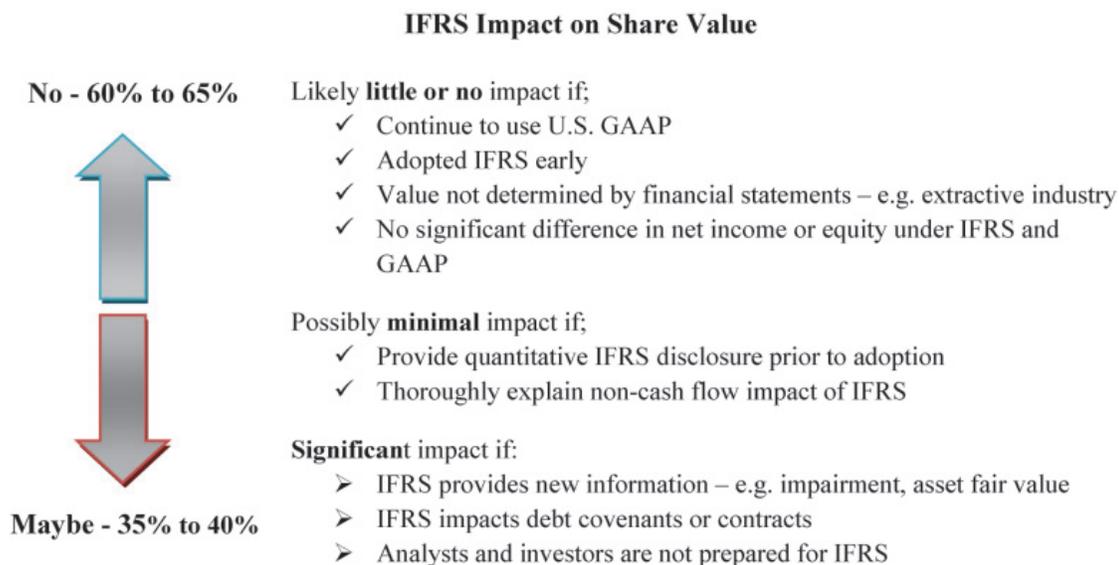
⁴² See Figure 7.

⁴³ See Figure 6, companies that stated they expected no or low impact.

⁴⁴ Calculated as the total of 47% (Energy (27%) and Materials (20%) sectors) as shown in Table 1, less the percentage in categories above of 12% (see Appendix 3) for a net of 35% .

and IFRS losers a decrease, with the degree of impact dependent on the magnitude of the differences between IFRS and GAAP reported results. Based on the Australian experience, changes in share prices could prevail for 14 to 15 weeks.

Figure 9



Undoubtedly, there will be a learning curve with IFRS and there may be some mishaps and misread signals by the market. However, they are unlikely to be as severe as an incident that occurred after the conversion to the metric system. In 1983 an Air Canada plane with 61 passengers ran out of fuel at an altitude of 7,920 metres (26,000 feet), halfway through its flight from Montreal to Edmonton, via Ottawa. The crew was able to glide the plane safely to an emergency landing in Gimli, Manitoba. The incident was attributed to a measurement error in fuel loading due to a misunderstanding of the recently adopted metric system.⁴⁵

The impact on share values from the adoption of IFRS should be no different than the conversion to the metric system; in the short term expect some misreading as companies and the investment community learn a new system. But in the long run it doesn't matter whether you take the temperature in Fahrenheit or Celsius, it's either hot or it's not. Just like some stocks.

⁴⁵ Wikipedia, "Gimli Glider," July 23, 1983.

Appendix 1

Other IFRS Countries

Country	Convergence Score GAAP/IFRS Differences ⁴⁶	Equity Market Cap. \$US Trillions ⁴⁷	Market Cap. as a % of GDP ⁴⁸	Number of Listed Companies ⁴⁹	Market Cap. as a % of Num. of Listed Co.
Australia	4	1.262	127%	1,966	.06%
Austria	12	0.114	30%	115	.10%
Belgium	13	0.172	37%	171	.10%
Canada	5	1.676	125%	3,700	.05%
Chile	13	0.231	143%	236	.10%
China	9	3.573	120%	1,700	.21%
Denmark	11	0.180	58%	125	.14%
Egypt	9	0.091	48%	313	.03%
Estonia	7	0.025	13%	92	.03%
Finland	15	0.188	79%	141	.13%
France	12	1.521	57%	673	.23%
Germany	11	1.292	39%	783	.17%
Greece	17	0.113	34%	288	.04%
Hong Kong	3	2.305	120%	1,319	.18%
Hungary	13	0.030	23%	46	.07%
Ireland	1	0.061	27%	64	.10%
Israel	6	0.189	97%	622	.03%
Italy	12	0.656	31%	296	.22%
Luxembourg	18	0.105	20%	267	.04%
Netherlands	4	0.402	51%	211	.19%
New Zealand	3	0.036	31%	165	.02%
Norway	7	0.227	59%	238	.10%
Peru	1	0.071	56%	241	.03%
Poland	12	0.151	35%	486	.03%
Portugal	13	0.057	25%	55	.10%
Slovenia	9	0.012	2%	76	.02%
South Africa	0	0.799	278%	396	.20%
Spain	16	1.435	98%	3,472	.04%
Sweden	10	0.441	109%	310	.14%
Switzerland	12	1.065	215%	339	.31%
UK	1	2.796	128%	2,792	.10%
Average or Total	9			21,698	

⁴⁶ Totals determined from the Bae et al (2008) study which indentified 21 key accounting standards. Each accounting item on the list to which the countries did not conform to IFRS received one point. The minimum and maximum points possible are zero and 21, with zero points indicating the closest match to IFRS.

⁴⁷ Equity market capitalization and number of listed companies are based on figures published by the World Federation of Exchanges for the 2009 year-end. For countries included in the NYSE Euronext (Europe) and the NASDAQ OMX Nordic Exchanges the market capitalization attributable to each individual country was calculated based on additional information published in 2009 statistics of the respective exchanges.

⁴⁸ Market capitalization column divided by GDP from Wikipedia (based on International Monetary Fund, World Economic Database for 2009).

⁴⁹ Refer to footnote above. The total number of NASDAQ OMX Nordic Exchange countries reported by the exchange was 668. The breakdown by country, Sweden, Finland, Denmark and Estonia was estimated based on information in Wikipedia.

Appendix 2

Canadian Public Companies Adopting IFRS Early

	Company ⁵⁰	Industry	Adoption Year	Adoption rationale ⁵¹
1	Almaden Minerals Ltd.	Mining-E&D	2010	Eliminate U.S. GAAP reconciliation
2	Anooraq Resources Corp.	Mining-E&D ⁵²	2009	Eliminate U.S. GAAP reconciliation, subsidiary uses IFRS
3	Brookfield Asset Management Inc.	Real Estate	2010	IFRS better reflects asset values, some subsidiaries use IFRS
4	Brookfield Office Properties Ltd.-Pref.	Real Estate	2010	IFRS better reflects asset values
5	Brookfield Properties Corp.	Real Estate	2010	IFRS better reflects asset values
6	Brookfield Renewable Power Ltd.-Pref.	Utility	2010	IFRS better reflects asset values
7	Eastern Platinum Ltd.	Mining	2009	Operating subsidiary uses IFRS
8	Everclear Capital Ltd.	Other	2010	Newly public
9	Gerdau Ameristeel Corp.	Steel Mfg.	2010	Parent company uses IFRS
10	Heatherdale Resources Ltd.	Mining-E&D	2010	Newly public
11	Homburg Invest Inc.	Real Estate	2005	Already using IFRS for other country listing
12	Jinshan Gold Mines Inc.	Mining-E&D	2010	Operating subsidiary uses IFRS
13	Nevsun Resources Ltd.	Mining-E&D	2010	Operating subsidiary uses IFRS
14	Northern Dynasty Minerals Ltd.	Mining-E&D	2009	Eliminate U.S. GAAP reconciliation
15	Orca Explorations Group Inc.	Oil & Gas	2004	Already using IFRS
16	Platmin Ltd.	Mining-E&D	2009	Operating subsidiary uses IFRS
17	SouthGobi Resources Ltd.	Mining	2009	IFRS required for secondary listing on Asian exchange
18	Tahoe Resources Inc.	Mining-E&D	2009	Newly public
19	Thomson Reuters Corp.	Media	2009	Eliminate U.S. GAAP and IFRS reconciliation
20	U308 Corp.	Mining-E&D	2010	Avoid the rush. No significant impact anticipated.

50 The list of companies is based on information provided by the various provincial securities regulators. An additional four companies were granted permission to early adopt but as of June 30, 2010 had not yet done so.

51 As noted in the MD&A or news release.

52 The company commenced mining production subsequent to the adoption of IFRS.

Appendix 3

S&P TSX Composite Pre-IFRS Disclosures Sample Companies⁵³ Stated Impact

S&P Industry Classification	Low or No IFRS Impact	Significant IFRS Impact	IFRS Impact not determined	Using U.S. GAAP not IFRS	Total
Consumer Discretionary	5	1	4	3	13
Consumer Staples			1		1
Energy	2	7	19	2	30
Financials	2	5	18		25
Healthcare			1	1	2
Industrials	2	10	4	2	18
Information Technology	1	1		3	5
Materials (includes mining)	11	11	11	2	35
Telecommunications Services	3	4	3		10
Utilities		2	1	1	4
Total number of companies	26	41	62	14	143

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⁵³ The sample size of 143 companies was randomly selected (using a random number generator) from the 223 S&P TSX Composite companies as of June 30, 2010 that had not already adopted IFRS. The sample size provides a 95% confidence level with a confidence interval of 5.

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2

FAIRNESS OPINIONS AND RELATED PARTY TRANSACTIONS: THE CANADIAN PERSPECTIVE*

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Fairness opinions are not generally a highly-charged, emotional subject in Canada. In fact, the most notorious fairness opinion court case in the last several years did not even involve a fairness opinion—it was the lack of a fairness opinion that was a point of contention.

In Canada, the securities regulators become more involved in related party issues than do the courts. Even the stock exchanges, through their rules for continued listing, play a larger role than the courts in this area. Two of the securities regulatory authorities (in Ontario and Quebec) have a rule governing related party transactions that involve more than just disclosure, in contrast to the Securities and Exchange Commission in the United States, which focuses almost exclusively on disclosure when it comes to related party transactions. The Ontario and Quebec rule, in addition to addressing disclosure, mandates “majority of minority” shareholder approval and independent valuations in certain cases.

In 1996, the Ontario Securities Commission (OSC) expressed the belief that standard fairness opinions are more noteworthy for what they do not contain than for what they do, and that they usually lack analysis to support the conclusion reached, leaving the reader to speculate. In formulating a rule to regulate related party transactions, the OSC decided that fairness opinions would play no part.

The HudBay Minerals Case

Issues relating to the payment of a success fee to a provider of a fairness opinion have been the subject of regulatory consideration from time to time. A particularly high-profile case in which this occurred involved HudBay Minerals Inc., which, in 2009, agreed on a proposed plan of arrangement to acquire Lundin Mining Corporation. A plan of arrangement is a legal process that Canadian companies often use to effect a merger, and requires court approval. One of the main reasons for going the plan of arrangement route is that if the merger involves a share exchange, the shares to be issued to the shareholders of the target company will be exempt from the U.S. registration requirements because the registration is court-approved. This is an important exemption in cases where a significant percentage of the target’s shareholders are in the United States.

The HudBay Minerals case involved a hearing before the OSC, the contested issue being whether the acquirer’s shareholders should have been given a vote on the transaction. This is one area in which the U.S. had been more regulatory than in Canada – if a public company is issuing shares to acquire another public company

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in the U.S., the U.S. stock exchanges require shareholder approval of the acquiring company's shareholders if the acquiring company is issuing more than 20% of its outstanding stock. Until recently, Canada had no such limit. If a company listed on the Toronto Stock Exchange (TSX) was issuing shares to acquire a private company, and issuing more than 25% of the number of its outstanding shares, then shareholder approval was required, but there was no limit if it was acquiring a public company. That recently changed so that for TSX companies the 25% threshold applies to the acquisition of both public and private companies. But at the time of the HudBay case, there was no automatic TSX shareholder approval requirement. However, the TSX did have the discretion to require shareholder approval on the basis of subjective factors. The TSX did not exercise that discretion in the case of HudBay, and a shareholder of HudBay applied to the OSC to have the TSX's decision reviewed.

The OSC overruled the TSX and required a vote of HudBay shareholders.¹ However, what attracted more attention than the decision itself was a comment that the OSC made in its reasons for the decision, regarding the success fee that was payable to the provider of the fairness opinion to the special committee of HudBay's board of directors. The OSC said that a success fee throws into question the entire fairness opinion, in light of the conflict of interest the success fee creates. In Canada, success fees are common, and the OSC's comments (which were not germane to the actual decision that the OSC was making) caused somewhat of a panic in the investment dealer community. In a subsequent speech to the Conference Board of Canada, the chair of the OSC panel that made the HudBay decision narrowed the application of the panel's comments on success fees to the facts of the HudBay case and stated that the HudBay reasons did not suggest that success fees must not be paid to providers of fairness opinions. However, the securities regulatory authorities in Ontario and Quebec do prohibit the payment of a success fee to providers of valuations that are required under the rule described below.

Regulation of Transactions Involving Public Companies and their Related Parties

There is a significant difference between Canada and the U.S. in terms of the percentage of public companies that are controlled by a single shareholder or shareholder group. According to the Canadian Institute of Chartered Accountants, 25% of the companies listed in the main Canadian stock exchange index, the S&P/TSX Composite Index, are controlled. For this purpose, a controlled company is defined as having a shareholder or shareholder group owning at least 25% of the outstanding voting shares. By comparison, approximately 8% of the companies listed on the New York Stock Exchange are controlled. In response to that situation, and to the high volume of related party transactions by public companies, the OSC introduced a policy in 1990 stipulating that certain types of related party transactions would be regulated by the OSC. This policy evolved into a rule in Ontario and Quebec which is now called Multilateral Instrument 61-101 (MI 61-101). The rest of the provinces did not follow suit because they believed that the rule was not suited to the smaller companies that were then listed on stock exchanges outside of Ontario and Quebec. However, at the present time, MI 61-101, for practical purposes, applies to most public companies across the country, because the TSX Venture Exchange has adopted it, and all Toronto Stock Exchange listed companies are bound by MI 61-101 by virtue of being "reporting issuers" in Ontario.

There are four types of transactions that are covered by MI 61-101: insider bids, issuer bids, business combinations and related party transactions. The rule requires an independent valuation, not just a fairness opinion. Also required are "majority of minority" shareholder approval (for a business combination or related party transaction) and enhanced disclosure.

As its name suggests, an insider bid is a takeover bid made by an insider of a target company (or in certain cases, a party related to the target company who is not technically an "insider" as defined by securities laws). An insider is generally someone who owns more than 10% of the voting shares of a company, directly or indirectly, or an officer or director of the company. If a takeover bid is an insider bid, there must be a special committee of

¹ *Re Hudbay Minerals Inc.*, 32 O.S.C.B. 3733, 2009 CarswellOnt 2219, 58 B.L.R. (4th) 249.

the board of directors established for the target. The special committee chooses the valuator and supervises the preparation of the valuation, and the bidder pays for the valuation. There are potentially tense moments if the bid is hostile and the special committee does not obtain a valuator or the valuation with due expediency as required by MI 61-101. The securities regulators are often asked to intervene in that situation.

An issuer bid is essentially a takeover bid by a company for its own shares. The regulatory requirements for issuer bids apply generally to the repurchase by the company of its common shares, rather than, for example, the redemption of preferred shares. In addition, MI 61-101 does not apply to normal course purchases on a stock exchange.

A business combination is a normal merger/acquisition type of transaction, where shareholders vote on the merger. MI 61-101 only covers transactions where a related party is involved. The obvious example would be a management buy-out, or a major shareholder buying out the other shareholders. But the rule could also come into play if a related party is obtaining a significant benefit from the transaction that is unavailable to the other shareholders. The board of directors or a special committee of the target must choose a valuator and supervise the preparation of the valuation for a business combination.

A related party transaction under MI 61-101 is essentially a significant transaction between a company and a related party to the company, such as an insider. If a related party transaction is also a business combination, the requirements for a business combination apply rather than the related party transaction requirements. An example of a related party transaction that would be subject to MI 61-101 is a significant property transaction between a company and its major shareholder. MI 61-101 only comes into play if the size of the transaction exceeds 25% of the company's market capitalization.

If a transaction comes under the ambit of MI 61-101, a formal, independent valuation is required unless one of a number of possible exemptions applies. The requirements for the contents of the valuation are set out in MI 61-101 in general terms. The detailed requirements are not specified, but the standards set by the Investment Industry Regulatory Organization of Canada or the Canadian Institute of Chartered Business Valuators are considered acceptable.

The required subject matter of the valuation depends on the type of transaction. For an insider bid, issuer bid or business combination, the target shares and any non-cash consideration being offered to the target shareholders must be valued. For a related party transaction, the valuation must cover the non-cash assets involved in the transaction. There are certain exceptions that may apply if the consideration being offered to shareholders, or involved in a related party transaction, consists of publicly traded securities having a liquid market (although the shares that would be surrendered by target shareholders in exchange for those publicly traded securities must still be valued).

If a valuation is required, either a summary or the full valuation must be contained in the main disclosure document for the transaction. For an insider bid or issuer bid, the main disclosure document is a bid circular sent to the shareholders. For a business combination or related party transaction, it is usually a management information circular for the meeting at which the shareholders are to vote on the transaction.

The valuator must be independent from the related party involved in the transaction. The valuator can have associations with the target, but it cannot have a material relationship with the acquirer of the target or with the entity transacting with the public company in the case of a related party transaction. Whether or not a valuator is independent is a subjective determination by the public company, but MI 61-101 lists certain circumstances in which a valuator is considered not to be independent. Included in the list is the circumstance where the valuator has a material interest in the completion of the transaction. This would preclude the payment of a success fee.

Magna — The Case of the Absent Fairness Opinion

The 2010 case² involving Magna International Inc. (Magna) dealt with an area that has generated considerable controversy in Canada over a period of at least three decades: dual class share structures.

Dual class share structures are fairly common in Canada and usually involve two classes of shares: either voting and non-voting shares or subordinate voting (carrying one vote per share) and multiple voting shares (carrying more than one vote per share). The shares with the inferior voting rights are publicly traded while the shares with the superior voting rights may or may not be publicly traded.

With calls from shareholder activists and some members of the financial media for a ban on the public trading of shares with inferior voting rights, dual class share structures were the subject of two major reviews and public hearings by Canadian securities regulators in the 1980s. (Among other things, the shareholder activists noted that stock exchanges in the U.S. did not list companies with dual class share structures, but the U.S. exchanges did eventually list them with certain restrictions.) Both of the reviews resulted in the conclusion that the dual class structures would be permitted but that they would be subject to certain rules relating mainly to disclosure.

In 1986, there was somewhat of a major scandal involving voting and non-voting shares. Canadian Tire Corporation, Limited (Canadian Tire) had a non-voting/voting share structure that had been introduced in 1983 when all of the common shares were converted into voting and non-voting shares, with shareholder approval. The meeting materials provided to the shareholders when they voted on this share restructuring disclosed that the non-voting shares would carry “coattails,” which referred to share conditions that were designed to ensure that a takeover bid for the voting shares would have to also be made for the non-voting shares. The shareholders approved the change, and three years later, under an agreement involving the major shareholders of Canadian Tire, a takeover bid was made for only the voting shares at an extremely large premium to the market price of the non-voting and voting shares. The coattail was insufficient to stop this bid. The controversy this created resulted in the OSC holding a hearing and stopping the takeover bid on public interest grounds.

Shortly after the Canadian Tire episode, the Toronto Stock Exchange introduced a rule requiring all newly listed classes of shares with inferior voting rights to carry coattails that met the Exchange’s standards. Classes of shares that were already listed were “grandfathered.” Prior to that time, a number of companies had coattails, but some did not. One of the grandfathered companies was Magna.

In May of 2010, Magna announced that it proposed to enter a plan of arrangement under which, among other things, it would eliminate its dual class structure. Magna’s share structure at the time was as follows:

- 112 million Class A Subordinate Voting Shares (Class A Shares)—one vote per share
- 727,000 Class B Shares—300 votes per share—all beneficially owned by a trust for the benefit of Frank Stronach, Magna’s founder and Chairman, and certain members of his family
- The outstanding Class B Shares represented 0.6% of the total equity of Magna and 66% of the votes.

Under the proposed share restructuring, Magna would purchase for cancellation all of the outstanding Class B Shares in exchange for 9 million newly issued Class A Shares and U.S. \$300 million, altogether representing an 1800% premium to the market price of the Class A Shares before the announcement. In addition, certain amendments would be made to existing consulting agreements with Mr. Stronach and his associated companies, and there would be a reorganization that would have the effect of giving an entity associated with the Stronach trust control over Magna’s vehicle electrification business.

2 *Re Magna International Inc.*, 33 O.S.C.B. 6013, 2010 CarswellOnt 4416, 72 B.L.R. (4th) 235; and 2010 ONSC 4123, 2010 CarswellOnt 5916, 101 O.R. (3d) 736, 72 B.L.R. (4th) 250 (Ont. S.C.J.), affirmed 2010 ONSC 4685, 2010 CarswellOnt 6651, 101 O.R. (3d) 721, 75 B.L.R. (4th) 163 (Ont. Div. Ct.).

A special committee of the Magna board was established, and Magna hired CIBC World Markets (CIBC) as its financial advisor. The terms of engagement with CIBC did not require a fairness opinion or a formal valuation. The transaction was a related party transaction, but of insufficient size to engage MI 61-101.

CIBC determined that the dilution to Magna's shareholders from the transaction would be significantly greater than was the case for 15 precedent transactions that CIBC analyzed in which dual class structures were collapsed. It was not customary for a fairness opinion to include an opinion regarding the likely trading price of a company's securities following the announcement of completion of a transaction. There was a potential for an increase in the trading price of Magna's shares following the transaction, but the amount, timing and duration of any improved trading performance was difficult to predict. Given that the primary rationale for the proposed arrangement was an increase in the trading price, any fairness opinion would require CIBC to opine on future trading prices which CIBC said were inherently unpredictable. On that basis, CIBC did not consider itself to be in a position to provide a fairness opinion.

The special committee decided to recommend to the board that the transaction be submitted to the Magna shareholders for their approval (including approval of the holders of Class A Shares voting separately as a class), but with no recommendation from the board to the shareholders as to how the shareholders should vote. The board adopted the special committee's recommendation.

There were objections in principle from some institutional investors. Many companies – about 15% of the companies in the TSX/S&P Composite Index – have dual class structures, and the objecting institutional investors believed that the Magna arrangement would be setting a bad precedent.

The OSC staff objected to the process that led to the proposed arrangement and the disclosure that was provided to shareholders in the management information circular that was distributed to the shareholders in connection with the shareholders' meeting to vote on the arrangement. As a result, the OSC called a hearing following which the OSC decided not to object to the transaction but to require improved disclosure in an amended management information circular. The enhanced disclosure was mandated in part because of the lack of a fairness opinion. One of the OSC's specific requirements for the amended circular was a clear statement of how CIBC assessed the proposed transaction from a financial perspective and the reasons why it concluded that it could not opine as to the financial fairness of the arrangement. Based on the evidence before it, the OSC was unable to come to a view as to whether the transaction was unfair to the holders of the Class A Shares.

At the shareholders' meeting, the arrangement was approved by 75.3% of the holders of Class A Shares who voted. The share price had risen in response to the announcement of the proposed arrangement, and securities analysts were virtually uniformly positive about the proposal, since in their view the dual class share structure had a discounting effect on the share price. Eliminating the structure, although expensive, would still provide a net benefit to the holders of Class A Shares, according to the analysts. A significant majority of the shareholders agreed, based on their votes.

Following the shareholder vote, it was still necessary for Magna to obtain the approval of the Superior Court of Justice (Ontario) before the arrangement could become effective. The main issue to be determined by the court was whether the transaction was fair and reasonable. Opposing institutional shareholders participated in the hearing, as well as two institutional shareholders that supported the arrangement.

The institutional investors retained Morgan Stanley Canada Limited (Morgan Stanley) as financial experts for purposes of the court hearing. Morgan Stanley expressed the view that the arrangement was capable of being the subject of a fairness (or unfairness) opinion. Precedent transactions where dual class shares were being collapsed did have fairness opinions, and Morgan Stanley noted that the premium paid for the Class B Shares under the proposed Magna arrangement was substantially higher than the median and highest premiums paid in the precedent transactions. On that basis, Morgan Stanley concluded that the consideration being paid in the Magna transaction was not fair, from a financial point of view, to the holders of the Class A Shares. The court noted, however, that Morgan Stanley did not address the subject of future trading prices in arriving at its conclusion. Nevertheless, the

essential question being asked by the opposing institutional shareholders was: How can a court conclude that the arrangement is fair and reasonable when Magna's own financial advisor could not provide a fairness opinion?

In arriving at its decision, the court stated that it could not draw an adverse inference from the absence of a fairness opinion. The court viewed the position of the opposing shareholders as implying that a fairness opinion or valuation must be required every time in which the analysis of the financial benefits to be received under an arrangement is at all complex. The court considered such a requirement to be unrealistic in two respects. Firstly, it gave undue credibility to fairness opinions and valuations, particularly insofar as they failed to address the actual values at which the consideration to be received in an arrangement would trade after the arrangement. Secondly, it ignored the reality that, ultimately, the shareholders must make their own decisions regarding the future market value of the consideration.

The court concluded that it could place reliance on three indicators of fairness in the case of the Magna arrangement: the outcome of the shareholder vote, the market's positive reaction to the announcement of the proposed arrangement, and the presence of a liquid market in which the shareholders who opposed the transaction could sell their shares at prices that had not been demonstrated to have been reduced as a result of the announcement of the arrangement. Based on these factors, the court approved the arrangement. The opposing institutional shareholders appealed the decision to the Ontario Divisional Court. The appeal was dismissed and the arrangement was completed.

Despite the comments that have been made by both the OSC and the court as to the limited utility of fairness opinions, it is expected that fairness opinions will continue to be obtained by companies undergoing merger transactions, particularly where conflicts of interest come into play. A fairness opinion is still often viewed as an essential component of the process a board undertakes to ensure that it is fulfilling its fiduciary duties in evaluating a merger proposal. Magna notwithstanding, an absence of a fairness opinion could in some circumstances be viewed in a negative light if a board's conduct in approving a merger is called into question.

3

MANAGEMENT BUYOUTS

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Overview

A management buyout (“MBO”) refers to the process of management acquiring a majority or significant minority stake in a company, generally as a means of providing an exit strategy for business owners. MBOs are also commonly used where a conglomerate is looking to spin off an operating division.

MBOs can provide a viable exit strategy alternative for business owners and an attractive opportunity for management, particularly where the company has good growth potential and financing can be secured.

In most cases involving companies of a meaningful size, MBOs involve one or more commercial lenders and/or private equity firms that provide financing to facilitate the transaction. The amount of financing required, and whether debt or equity financing is raised, depends on the size of the transaction, the financial resources available to management and the debt capacity of the company.

Where a private equity firm becomes involved, the MBO process becomes a dynamic among three parties, being: (1) the business owner; (2) the management team looking to acquire an equity interest; and (3) the private equity firm seeking a return on invested capital. The interests of the various parties involved in an MBO are naturally conflicting to some degree. The business owner wants the highest price for the company, management wants the ability to acquire the largest equity stake possible in the company, and the private equity firm is seeking to maximize its own return on invested capital. In order to be successful, an MBO must be structured to satisfy the collective, yet conflicting, interests of these parties.

MBO transactions are more likely to be consummated where the business owner has realistic expectations as to the value of their company and they are prepared to work with the management team and financial investors in terms of deal structuring and transitional assistance. A critical aspect of the MBO lies in the perception that the financial investors have with respect to the management team in terms of their abilities, depth, and commitment to the company. The business owner and the management team should seek the right private equity ‘partner’ in terms of their financial resources, alignment of interests and the value-added services that they offer.

MBOs as an Attractive Alternative

At the time of writing this paper (summer 2010), the North American economy is showing signs of life following a harsh recession. Prior to the recession (which commenced in the fall of 2008), there was unprecedented buoyancy in the financial markets, fuelled by easy access to low cost debt financing. This resulted in private equity firms bidding for target companies at valuations that rivaled strategic buyers, using excessive amounts of financial leverage.

It is unlikely that we will see the glory days of the mid-2000s return anytime soon. However, many private equity firms have re-entered the marketplace over the past year, eager to place the capital that they had raised during stronger economic times. Many private equity firms prefer management buyouts to venture capital type investments, because MBOs tend to involve established companies and are often viewed as comparatively lower risk.

We are entering an era where unprecedented amounts of wealth will change hands, due to the aging of the baby boom generation. From a business owner's perspective, an MBO can be an attractive exit alternative because it is generally a quicker process than selling to an outside buyer. Furthermore, an MBO avoids the risk of exposing confidential information to competitors.

MBOs can also be attractive from a deal structuring perspective. It should be remembered that there are three parties to every deal—the buyer, the seller and the government. Therefore, what should matter to the business owner is not just how much their company is sold for, but how much they get to keep in their pocket following the transaction. As a general rule, MBOs and private equity firms tend to offer more flexibility *vis-à-vis* deal structuring, as compared to strategic buyers.

MBOs offer the promise of lucrative upside for company management as well as the business owner who retains a residual equity interest. In this regard, many business owners are sentimental, and feel that management has earned the opportunity to participate in the future economic gains of the company. In fact, as will be illustrated later in this paper, management often stands to be the biggest winner in a successful MBO.

The MBO Process

MBOs can be thought of as comprising eight stages, which are set out below. However, it should be noted that these stages are not always distinct, and they may overlap or even change order, depending on the deal.

1. Initial discussions between owners and management
2. Initial valuation
3. Preparing the confidential information memorandum
4. Identifying financial investors
5. Preliminary due diligence
6. Negotiating the terms of the deal
7. The term sheet
8. Closing

1. Initial Discussions between Owners and Management

The business owner may approach management, or vice-versa, to determine their level of interest in acquiring (or selling) the company. In some cases, management approaches the business owner after the process has begun to sell to a strategic buyer. This can be problematic due to the conflict of interest that it can create. Management may want to downplay the value of the company to strategic buyers in favour of enhancing their own position. In order to avoid such a situation, business owners will sometimes offer management the opportunity to share in the upside that a strategic buyer will pay, in excess of what management has offered for the business. While this erodes the proceeds received by the seller, it is often a necessary tactic to ensure that the interests of the business owner and management are aligned.

2. *Initial Valuation*

The business owner and management should establish a reasonable estimate for the value of the company. Negotiating an MBO value can be an awkward experience. Unlike negotiations with a strategic buyer, in an MBO the business owner and management know each other, sometimes very well. In addition, management has the advantage of first-hand knowledge of the company, including its risk profile and growth prospects. This situation is particularly acute where the business owner was not active in the company prior to the sale and so management is better informed. Management may attempt to downplay the company's strengths and emphasize its risks in order to negotiate a better deal. In many cases, the parties agree to retain an independent valuator to help establish a fair price.

Whether the initial valuation represents the ultimate purchase price will be subject to management's ability to raise capital and the dynamics of negotiations with financial investors (where they are involved). However, the initial valuation exercise helps to ensure that the parties are reasonably aligned with respect to expectations prior to soliciting investor interest.

3. *Preparing the Confidential Information Memorandum*

Where financial investors (debt or equity) will be required in order to facilitate an MBO, management will need to prepare a confidential information memorandum ("CIM") to entice those groups. The CIM should contain sufficient information about the company, its product and service offerings, customer base, market position and financial results to allow prospective investors to assess their level of interest. In particular, the CIM should highlight management's capabilities, strategic plans and growth opportunities, which are key considerations for financial investors.

4. *Identifying Financial Investors*

Where external financing is needed to consummate the transaction, the business owner, management and their advisors will identify providers of debt and/or equity financing that may be interested in the deal. Financial investors can generally be categorized as senior debt lenders, mezzanine debt lenders and private equity firms. Senior debt is attractive due to the lower cost of interest payments (which generally are tax-deductible). However, it is important to remember that it is not just the cost of financing that needs to be considered, but also the restrictions that may be placed on the company as a condition of financing.

Where the financing gap can be satisfied by debt, that route usually is chosen as it does not result in any equity erosion for management or the business owner who retains a residual interest. However, equity financing may be required where adequate debt financing cannot be secured on reasonable terms. In either case, the business owner and management should endeavour to develop several good financing alternatives in order to create an auction among financial investors.

In order to successfully negotiate and structure the financing needed to support an MBO, both the business owner and management need to have an understanding of what the different types of financial investors consider when making an investment and how they behave. This topic is addressed later in this paper.

When searching for the right private equity partner (where one is required), management will begin by searching for those firms that have stated investment criteria that meet the profile of the company. This includes company size, industry, geographic location and whether the private equity firm desires a controlling or minority position. Most private equity firms set out their investment criteria on their website, which helps in identifying the firms that might have an interest.

5. *Preliminary Due Diligence*

Financial investors that express an interest in the opportunity are provided with a copy of the CIM. Those with a continuing interest following a review of the CIM will conduct further due diligence, including meetings with management and access to additional information (often provided through an online data room). In this regard, it is important to remember that these meetings should be viewed as a two-way street. Management and the business owner should strive to learn about the financial investors in terms of the reasons for their interest, operating style and decision making process. This will not only help in selecting the right financial partners, but such information is essential in negotiating the financing terms.

6. *Negotiating the Terms of the Deal*

While the value of the company may be initially negotiated at the outset of the MBO process, it will be subject to the dynamics of further negotiations with lenders and private equity firms (where they are involved). As with any transactions, the terms of the deal can be just as important as the stated purchase price. In the context of an MBO, some of the particular deal structuring considerations that often arise include the following:

- whether the owner intends to sell 100% of the company or retain a residual interest. An MBO transaction often is facilitated where the business owner agrees to retain a residual interest because it reduces the initial cash outlay required and often provides added comfort for financial investors that the owner continues to believe in their company. Properly structured, a residual interest can also provide some meaningful upside potential for the business owner. Business owners must be cautious however, as retaining a residual interest means that they become a minority shareholder in their company. Consequently, the terms of a shareholders' agreement become paramount. In particular, the provisions governing the liquidity of the residual equity interest are of primary importance;
- promissory notes are common in MBOs, particularly where sufficient commercial debt financing cannot be raised. However, the business owner must be cautious because, unlike strategic buyers that may have other assets to secure the note, management often has minimal security to offer;
- earnout arrangements can be a useful deal structuring tool. Earnouts sometimes are easier for business owners to accept in an MBO situation where they are comfortable with the capabilities and integrity of the management team. Further, there is less concern about the potential impact of changes than there would be with a strategic buyer, who may enact changes that will materially impact the company's financial performance post-closing. However, earnouts are still problematic and represent risk capital for the business owner; and
- the role that the business owner will play after the MBO is completed. Business owners who were active in the company should expect to remain active for a period of time following the transaction in order to ensure a smooth transition with employees, customers and suppliers. This transitional assistance may be of particular importance to financial investors.

7. *The Term Sheet*

Financial investors that are interested in the opportunity following their initial due diligence will submit a term sheet (similar to a letter of intent), which sets out the terms of financing the transaction. In this regard, it is common for financial investors to seek arrangement fees, 'stamping fees' and the recovery of legal costs in order to proceed with the transaction, which costs can be significant.

The financial investors offering the term sheet that best meets the needs of the business owner and management are provided a period of time to complete their due diligence and to negotiate the definitive agreements.

8. Closing

The closing of the transaction involves the financial investor's detailed due diligence (e.g. audit, legal, environmental), negotiating the lending agreement (in the case of senior debt and mezzanine lenders), the purchase and sale agreement and related shareholders' agreement (in the case of a private equity firm), and finally closing. The process of closing the MBO is similar to that of selling to strategic buyers, and the business owner should endeavour to ensure that no surprises arise during the closing period.

Financing the MBO

Senior Debt Financing

Senior debt financing refers to debt that ranks ahead of other creditors in terms of its claim on the assets of a business. In most cases, it is secured by specific assets, and is sometimes called asset-based lending. Senior debt lenders tend to have a risk adverse mentality since they are at risk of experiencing losses but are not rewarded for potential upside. They tend to prefer companies with quality assets (e.g., accounts receivable, saleable inventories and real property) and that generate stable cash flows.

Senior debt lenders will stipulate a maximum financing amount based on underlying assets, as well as a company's cash flow generating capability. In the current economic environment, senior debt levels for private companies often range from 2.0x to 2.5x EBITDA, depending on the quality of the earnings and the assets securing the debt.

Senior debt lenders usually will require that a company operates within the limits of various covenants and restrictions, which typically include specified financial ratios (e.g. current ratio, debt to tangible net worth), restrictions on capital spending, dividend payments and sale of assets, as well as financial reporting requirements. Depending on their nature, these covenants and restrictions can be quite onerous.

Subordinated Debt and Mezzanine Financing

Subordinated debt financing is not secured by specific assets and ranks behind senior debt in terms of its claims against the company. Mezzanine financing refers to financing that takes on characteristics of both debt and equity. Subordinated debt and mezzanine financing tend to be more common in larger size deals. The amount of sub-debt or mezzanine financing that a company can secure usually is in the range of 1.0x to 1.5x EBITDA (over and above senior debt lending).

Like senior debt, subordinated debt and mezzanine financing bind the company with a legal obligation to repay the loan amount. However, repayment terms can vary considerably, and sometimes are structured with 'balloon payments' whereby the entire principal amount is repayable at the end of the loan term.

In the current economic environment, mezzanine financiers usually seek an all-in return on investment of 20% or more. However, the structure of these loans often involves a cash coupon payment (commonly in the order of 12%) plus upside potential in the form of equity participation.

Private Equity Financing

Private equity groups refer to organizations that look to earn significant returns through equity participation in their portfolio companies. There are three financial levers that private equity firms use to generate a return on their invested capital. They are:

- growing the investee company, either organically or through acquisition;

- financial leverage—i.e. using debt instead of equity to magnify their returns. In most cases, some or all of the debt is repaid over the course of the holding period; and
- exit multiple expansion, meaning that the valuation multiple is higher when the private equity firm exits the investment (through a subsequent sale or public offering) than the multiple that was paid when the investment was made.

It follows that private equity firms typically seek investment opportunities that exhibit the following characteristics:

- strong business fundamentals. Private equity firms generally are more interested in companies having a sustainable differential advantage in the marketplace as opposed to those offering ‘me too’ type products and services. Companies that are leaders within a market niche may be particularly attractive. Private equity firms will emphasize a company’s ability to generate cash flow, both to reinvest for growth and to service debt;
- critical mass. While private equity firms have varying criteria in terms of investment size, more private equity firms tend to be attracted to larger companies (those having an EBITDA of \$5 million or more) given the size of most private equity investments. Fewer private equity firms are interested in smaller companies, except perhaps as ‘roll-up’ type opportunities or those with stellar growth prospects;
- excellent growth potential. Most private equity firms seek companies that can grow rapidly, either organically or through acquisition. This feature is consistent with their interest in exiting the investment within a few years;
- a strong management team. Private equity firms generally manage their investments through a presence on the company’s Board of Directors. They rely on management for both strategic input and daily operations. Therefore, private equity firms seek out dedicated management teams with a proven track record. They prefer companies with strong breadth and depth in their management ranks;
- management commitment. Many private equity firms will insist that key managers personally invest in the company in order to secure their commitment. In most cases, the absolute amount of the investment is not an issue, so long as it represents a meaningful commitment by the individual(s). Managers that do invest can realize lucrative upside potential where things turn out as planned;
- alignment of interests. Private equity firms are interested in backing a management team that is intent on growing the business over the next several years and then selling it within the expected investment horizon;
- ability to leverage. Private equity firms generally seek to place some amount of debt financing into their investee companies in order to reduce the size of their equity investment and magnify their returns. Therefore, private equity firms seek companies with good assets and strong cash flows, which can support debt financing at reasonable rates. However, it is important for business owners and managers to recognize that higher amounts of debt financing increases financial risk, and may result in cumbersome operating restrictions; and
- exit strategy opportunities. Private equity firms generally have a three- to seven-year time horizon to liquidate their investment. They seek companies that can either be sold to a strategic buyer or are believed to be good candidates for an initial public offering.

While threshold rates of return sought by private equity firms will vary depending on the nature of the investment, a range of 25% to 30% return on investment is not uncommon in today’s environment for established businesses having a defensible market position. Higher rates of return generally are sought for riskier ‘venture capital’ type investments. These returns represent ‘levered’ rates of return on equity, after debt servicing costs have been covered.

Private Equity Firms vs. Strategic Buyers

Dealing with a private equity firm is different from dealing with strategic buyers in many important respects. For the business owner, the advantages of dealing with a private equity firm often include the following:

- private equity firms usually will offer a cash deal, whereas strategic buyers (particularly smaller companies) may have to rely on other, less attractive, forms of consideration (e.g. a share exchange);
- private equity firms usually are quicker to react to investment opportunities and can consummate a deal more quickly than strategic buyers. This reduces the company's exposure to the market place;
- private equity firms usually are not direct competitors, which reduces the risk of exposing confidential information to those groups;
- strategic buyers normally seek to acquire a 100% interest in the company, whereas private equity firms usually prefer to have less than 100%. This can afford lucrative upside potential for both management and the business owner who retains a residual interest in their company; and
- private equity firms usually seek to retain existing management, which eliminates the integration issues and cultural shock faced by strategic buyers.

However, having a private equity firm as a partner also introduces a number of challenges. Among them are the following:

- given their investment time horizon, private equity firms tend to focus on short term results. This can place considerable pressure on management;
- private equity firms typically use greater amounts of debt financing, compared to strategic buyers. This can result in additional covenants and operating restrictions being imposed on the company post-closing;
- private equity firms will exercise control of the company through their participation on the board of directors. Therefore, the management team (and the business owner with a residual equity interest) must adopt a more formalized governance structure than they may have been used to;
- private equity firms usually have additional reporting requirements, such as more detailed periodic financial statements, as well as management and board presentations. Such requirements can represent a significant change from the way a company operated in the past, and may prove onerous for management; and
- fees and costs. The upfront fees from private equity firms and lending institutions, including 'stamping fees', 'loan arrangement fees' and other one-time expenses can be significant. In most cases, the company has to incur legal expenses on its own behalf and reimburse those incurred by the private equity firm.

The Shareholders' Agreement

A key document in any deal involving a private equity firm is the shareholders' agreement among the private equity firm, management and the business owner (where they retain a residual equity interest). The shareholders' agreement sets out the rights, privileges and obligations of each equity investor. Even where the private equity firm holds a minority stake in the company, it will require that the shareholders' agreement set out certain major decisions for which the private equity firm has a veto right (e.g. sale of the business, significant capital expenditures, capital injections).

The provisions dealing with shareholder liquidity are also very important. In most cases, the individual shareholders do not have the ability to dispose of their shares outside of a liquidity event for all shareholders. There are some exceptions (such as death, disability, and termination), but in many cases these early exits result in a discount to fair value.

Selecting the Right Private Equity Firm

Private equity financing should not be viewed as a one-way street. The management team (and business owners who retain a residual interest in their company) should expect to receive more from the private equity firm than just a lump sum of cash on closing. Other important considerations include:

- the ability of the private equity firm to accommodate follow-on financing (commonly referred to as “dry powder”) that may be needed to support growth through acquisition or an unexpected shortfall in cash flow;
- alignment of interests with those of management in terms of investment horizon, growth strategies, participation in upside potential (e.g. through an employee share ownership plan or “ESOP”) and their level of patience or tolerance for shortfalls from plan; and
- value-added service offerings. Financial investors should be expected to provide things such as sound business advice, business contacts, and other services that help the company to grow and prosper. In this regard, many private equity firms have begun to specialize in certain industry sectors in order to accomplish these things.

Example of an MBO

As a simplified example of how an MBO might work, assume the following for Company X:

- the business generates \$5 million in annual earnings before interest, taxes, depreciation and amortization (“EBITDA”) on revenues of \$50 million;
- the business owner wants to divest of, and the management team would like to buy an equity interest in the company. Following their analysis, the parties agree that an enterprise value of \$25 million would be fair, which effectively equates to a multiple of 5x EBITDA;
- Company X has no debt currently outstanding. The management team collectively can only raise \$1 million. Therefore, it seeks one or more financial investors for the remaining funds; and
- a private equity firm is found and that firm assists in raising an additional \$10 million of senior debt from third party lenders to finance a portion of the transaction, at an interest rate of 7%. Therefore, the equity value of Company X following the deal will be \$15 million (calculated as \$25 million of enterprise value less \$10 million of debt).

Of the \$15 million equity value, \$1 million comes from management and the remaining \$14 million from the private equity firm. Accordingly, the capital structure of Company X immediately following the transaction is as follows:

Management	\$ 1 million	6.7%
Private equity firm	<u>\$14 million</u>	<u>93.3%</u>
Total equity	\$15 million	100.0%
Senior debt	<u>\$10 million</u>	
Enterprise value	<u><u>\$25 million</u></u>	

In addition, assume that management is granted options that afford them the opportunity to earn an additional 10% equity in the company (through an ESOP) if certain performance criteria are met. While the granting of management options erodes the equity interests of the private equity firm, it incentivizes management to perform well.

The financial projections for Company X are as follows:

- revenues will grow at a rate of 10% per year in each of the next 3 years;
- the EBITDA margin will remain constant at 10% of revenues;
- annual capital spending is 2% of revenues, which approximates depreciation;
- working capital requirements are at 12% of incremental revenues;
- the income tax rate is 30%; and
- net cash flow at the end of each year (net of interest and taxes) will be used to reduce the amount of debt outstanding (commonly referred to as a “cash sweep”).

Assume that, once the growth plan has been achieved by the end of Year 3, it is expected that Company X will be an attractive acquisition target for a strategic buyer who likely will pay a price that effectively equates to 6x EBITDA.

Schedule 1 illustrates the net cash flow that Company X is expected to generate over the next three years:

		Schedule 1				
		Projected Cash Flows				
		(\$'000)				
		Current	Year 1	Year 2	Year 3	Exit
Revenues		50,000	55,000	60,500	66,550	66,550
annual growth rate	10%					
EBITDA	10%	5,000	5,500	6,050	6,655	6,655
Depreciation / capex	2%		1,100	1,210	1,331	
Interest Expense	7%		700	561	397	
Pretax income			3,700	4,279	4,927	
Income taxes	30%		1,110	1,284	1,478	
Incremental working capital	12%		600	660	726	
Debt Repayment			1,990	2,336	2,723	
Residual cash flow to equity			0	0	0	

The valuation parameters for Company X, at the initial transaction date and upon the subsequent liquidity event in Year 3 are illustrated in Schedule 2:

Schedule 2
Valuation Parameters
(\$'000)

	Current	Year 1	Year 2	Year 3	Exit
Valuation					
EBITDA	5,000				6,655
Multiple	<u>5x</u>				<u>6x</u>
Enterprise Value	<u><u>25,000</u></u>				<u><u>39,930</u></u>
Financed by					
Debt	10,000	(1,990)	(2,336)	(2,723)	2,952
Equity	<u>15,000</u>				<u>36,978</u>
	25,000				39,930

The cash flows accruing to management and the private equity firm, and the rates of return that they expect to achieve, are illustrated in Schedule 3:

Schedule 3
Economic Returns
(\$'000)

	Current	Year 1	Year 2	Year 3	Exit
Equity Participation					
Management	1,000				6,163
PE Firm	<u>14,000</u>				<u>30,815</u>
	<u><u>15,000</u></u>				<u><u>36,978</u></u>
Ownership					
Management	6.7%		(add 10% ESOP)		16.7%
PE Firm	<u>93.3%</u>				<u>83.3%</u>
	<u><u>100.0%</u></u>				<u><u>100.0%</u></u>
Return on Investment					
Management					83%
PE Firm					30%

Note that the management team is expected to fare considerably better than the private equity firm in terms of their return on equity because of the ESOP that allows the management team's proportionate interest in Company X to increase to 16.7%. Private equity firms purposefully design this type of payoff structure in order to incentive management to perform well, while still allowing the private equity firm to realize their desired rate of return (30% in this case).

Common Obstacles to an MBO Transaction

Despite the potential attractiveness of an MBO, business owners should also weigh the challenges in consummating the transaction and realizing value in any residual interest component. In addition to the challenges of dealing

with private equity firms as noted above, there are further challenges in consummating the MBO transaction itself, including:

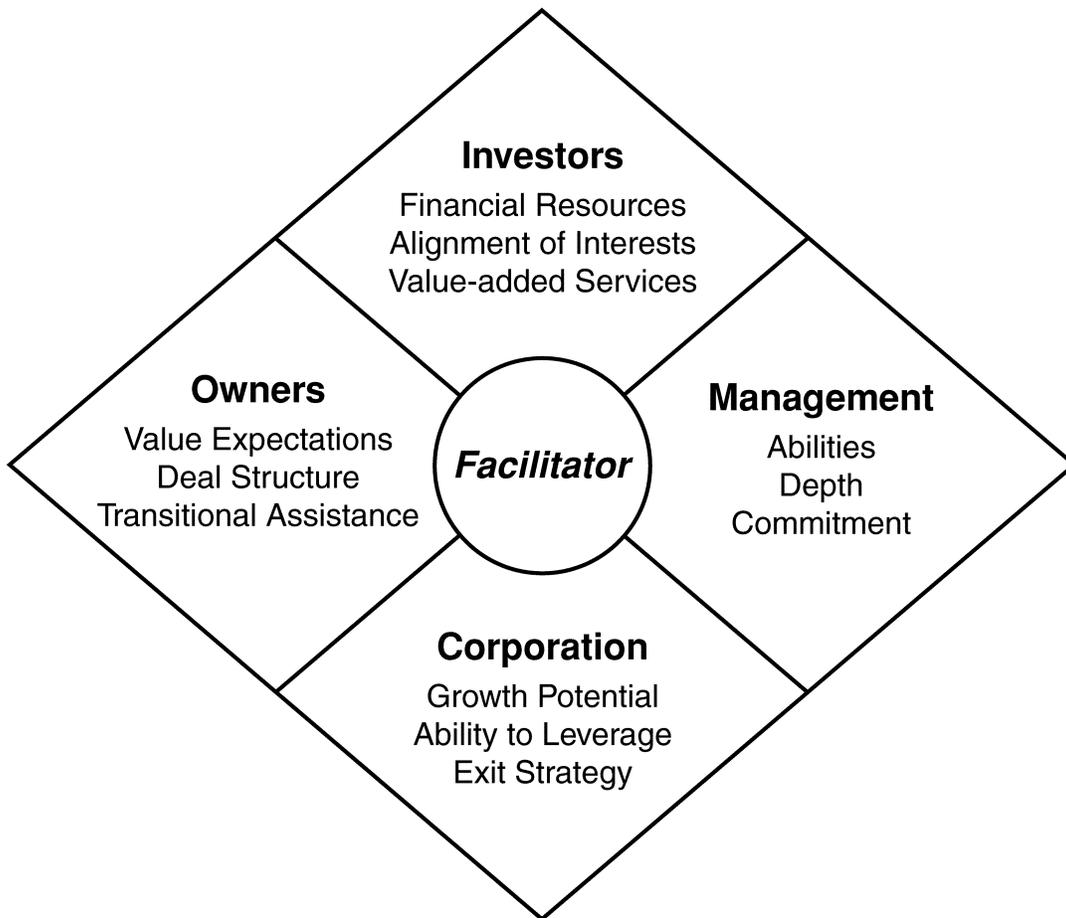
- the conflict of interest it creates for the management team, who want a lower valuation in order to get a bigger equity stake in the company for their investment. Management's conflict of interest can also thwart opportunities with strategic buyers;
- getting key managers to commit capital. Managers may not have the same entrepreneurial spirit as the business owner, and they may be reluctant to commit capital, or have limited ability to do so. Financial investors may be wary of making a significant investment where key employees have not made a meaningful monetary commitment;
- management does not have the ability to realize synergies, unlike a strategic buyer. This can reduce the purchase price. The value impact is somewhat less where a private equity firm is involved which owns a similar business in their portfolio, and can integrate the operations of the two entities; and
- financial investors generally prefer MBOs where the business owner retains a residual interest and remains active in the company following the transaction. This may not be consistent with the objective of the business owner. Further, where the business owner does retain a residual equity interest in the company, there is no assurance as to when, or whether, value from that residual interest will be realized. Not only is the nature and timing of the exit strategy outside of their control, but there is the risk of changes in the company's performance, industry conditions or the collapse of potential liquidity events (due to a weakening M&A market), that can significantly erode shareholder value during the interim period.

The MBO Value Matrix™

The interests of the various parties involved in an MBO are naturally conflicting to some degree. The owner wants the highest price for their company, management wants the ability to acquire the largest equity stake possible and the financial investors are seeking to maximize their own return on invested capital. For an MBO to be successful, all parties must make compromises and structure a deal that creates a three-way beneficial scenario. In order to do so, it is critical to engage a facilitator to assist in bringing the parties together.

The facilitator normally is a financial advisor (supported by other consultants, such as legal and tax advisors) who not only understands the workings of an MBO, but who also can offer the parties objective advice on the pros and cons of various alternatives. The principal role of the facilitator is to assist both the owner and the management team in identifying and attracting the right financial investor 'partners' and in helping to develop the terms of a deal that satisfies the collective interests of all parties. In doing so, the facilitator helps the various parties to identify ways in which they can reconcile their respective positions and preserve a sense of 'value fairness' to each. The role of the facilitator within the MBO process is captured in the *MBO Value Matrix™*, illustrated in the exhibit below.

The MBO Value Matrix™



Conclusions

MBOs can provide a viable exit strategy alternative for business owners, particularly where the company has strong growth potential, financing is available and attractive exit alternatives exist. The financial payoffs in an MBO can be substantial where forecasted operating results and exit strategy expectations are realized.

MBO transactions are more likely to occur where the business owner has realistic expectations as to the value of their company and they are prepared to work with the management team and the financial investors in terms of deal structuring and transitional assistance. A critical component to a successful MBO is the financial investor's perception of the management team in terms of their abilities, depth and commitment. The business owner and the management team should seek the right financial investor 'partners' in terms of their financial resources, alignment of interests and the value-added services that they offer.

The *MBO Value Matrix*™ serves as a framework for illustrating how the facilitator plays a pivotal role in bringing the various parties together and in helping to develop a deal structure that allows all participants the opportunity for value realization.

4

THE USE OF “BUSINESS VALUE” AS A MEASURE OF LOSS IN LITIGATION CONTEXTS: DECIDING WHEN IT IS APPROPRIATE, METHODOLOGY, AND ISSUES TO CONSIDER*

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*“Nothing is more difficult, and therefore more precious, than to be able to decide”
Napoleon Bonaparte*

*“For everything there is a season, and a time for every purpose under heaven”
Ecclesiastes 3:1*

Introduction

The purpose of loss quantification is most often to restore an injured party (a “plaintiff”) to the position he or she would have been in had an alleged wrongful act or breach not occurred. In many corporate commercial litigation contexts, this requires an analysis of the cash flows that would have been earned by a plaintiff “*but for*” an alleged wrongful act or breach and comparing these to the “*actual*” cash flows that were earned by the plaintiff, with the difference representing the quantum of business loss.

In some contexts, as an alternative to the “but for” versus “actual” *lost cash flow*¹ analysis, business valuers (“valuators”) may consider employing a *business value* approach to quantify loss. Namely, valuers may decide to calculate loss as the “*fair market value*” (or the diminution in fair market value) of a business, contract, stream of income or other specified asset as a result of the wrongful act or breach.

For instance, assume a plaintiff business pursues legal action against a former employee of the company who resigned from the business, improperly solicited customers of the plaintiff and set up a competing business. As a result, the plaintiff was forced to shut down one of its operating divisions. After examining the facts of the situation, a valuator may establish that, “but for” the alleged improper solicitation, the customers that were “lost” would otherwise have continued on with the plaintiff, the division in question would have continued to operate indefinitely, and mitigation was not feasible. Therefore, a valuator might consider calculating the plaintiff’s loss as the fair market value of the plaintiff’s shut-down division at a particular loss assessment date.

Ultimately, the use of business value as a measure of loss requires a careful consideration of the facts of each loss quantification context. There are a number of key assumptions that underlie whether a business value approach is appropriate to use in a particular context. Indeed, using a business value approach versus a lost cash flow approach can have a material impact on the calculated loss.

* The author is grateful to Tylar St. John of Cohen Hamilton Steger & Co. Inc., for her assistance in researching this paper. This paper is dedicated to the memory of Adam Pete Lobo.

1 Also referred to as “lost profits.”

The purpose of this paper is to explore and understand the following:

1. What is meant by a “business value” approach to quantifying loss versus a “lost cash flow” approach?
2. In what litigation contexts might it be appropriate/inappropriate to use a business value approach to quantifying loss?
3. What are the underlying assumptions behind using a business value approach to quantify loss and when are these assumptions valid?
4. What is the methodology behind the calculation of business value for loss quantification purposes (and, how is the methodology different from that used in the lost cash flow approach, and when calculating business value in *non-litigation* contexts)?
5. What discount rate/capitalization rate should be used to arrive at business value?
6. What are some of the special issues that need to be considered when applying a business value versus lost cash flow approach to quantify loss?

This paper is divided into three parts. Part I discusses the difference between a business value and lost cash flow approach. Part II discusses the appropriateness of using a business value approach. Part III discusses the methodology for performing a business value versus a lost cash flow analysis and special issues to consider.

PART I — THE DIFFERENCE BETWEEN A BUSINESS VALUE AND LOST CASH FLOW APPROACH

Lost Cash Flow Approach vs Business Value Approach

Often, the quantification of loss requires the determination of the cash flows that a plaintiff business or individual would have earned “but for” the alleged wrongful actions of another party (the “defendant”) and compare these to the “actual” cash flows that the plaintiff did generate. The difference between the two represents the quantum of loss. As such, this approach will be referred to as the “lost cash flow” approach herein.

A lost cash flow approach is appropriate when a plaintiff has experienced lost cash flow, but the loss is *not* expected to continue *indefinitely* into the future.

Alternatively, there may be circumstances whereby a plaintiff has experienced lost cash flow, and the cash flow loss *is* expected to continue indefinitely into the future. In such a case, the loss is more “permanent” in nature, and the quantification of loss may require the valuation, on the basis of fair market value, of a division of or an entire business, contract, stream of income or other specified asset.

A business value approach is similar to a lost cash flow approach in that a projected/estimated stream of “foregone cash flow” is the conceptual foundation upon which the calculation is based. However, under the lost cash flow approach, the foregone cash flow tends to be temporary, and does not relate to an entire business or business segment as a whole. In contrast, under the business value approach, the foregone cash flow tends to be longer in duration or is expected to continue indefinitely, and relates to an entire business or segment. In a sense, the lost cash flow approach is a “subset” of the business value approach.

In addition to the above conceptual considerations, the methodology by which a business value versus a lost cash flow approach is carried out (for instance, the discount rate to use to present value, future income or cash flow amounts, and whether pre-tax or after-tax cash flows should be used) differs for each approach. These methodology differences are discussed in Part III below.

Now that the distinctions between the business value and lost cash flow approaches have been discussed, the identification of circumstances where it is appropriate to use one versus the other can be explored.

PART II – THE APPROPRIATENESS OF USING A BUSINESS VALUE APPROACH

Permanent Loss of Business or Cash Flow

The *permanence* of the loss in question is an important criterion to justify the use of a business value approach in a loss quantification context. Permanence can manifest itself in the following scenarios (among others):

- i. There is a *complete* business shut down or cash flow loss;
- ii. The business *winds down* initially, and then there is a complete shut down or cash flow loss (the so called “slow death” scenario); and,
- iii. A *portion or segment* of a business shuts down (or there is a *partial* cash flow loss), but the rest of the business carries on operations.

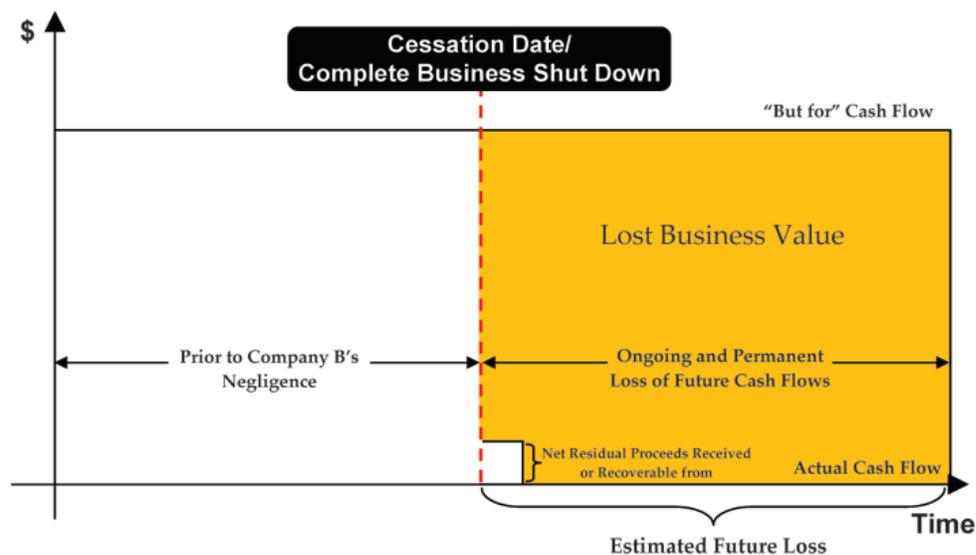
Complete Business Shut Down or Cash Flow Loss

A business value approach is applicable in situations where a business has been permanently and completely shut down or destroyed as a result of the actions of a defendant.

For example, assume that Company A was a successful manufacturing business operating from owned premises. Company A hired Company B to carry out roof and structural repairs at its premises. During the process, some of Company B’s staff were negligent in their work. As a result, the roof at the premises collapsed, destroying Company A’s equipment and inventory, and forcing manufacturing operations to cease. Company A’s customers were greatly inconvenienced and chose to purchase from a competitor. Customers have indicated that they have signed contracts with the competitor and they will not return to Company A, destroying any hope of Company A rebuilding its business. In this situation, Company A can likely seek to recover its lost business value against Company B.

This scenario is illustrated in Exhibit 1. The shaded area represents the permanent and complete loss of business, which is to be quantified using a business value approach.

Exhibit 1 – Complete Business Shutdown



The concept of quantifying loss using business value where there is a permanent and complete loss of business is cited in a number of legal cases. In *Jim's Hot Shot Service Inc. v. Continental Western Insurance Co. and Sun West Insurance Agency*,² the court indicated that “when, as in this case, the claim is that a business was destroyed by negligence, the measure of damages is the difference in fair market value immediately before the negligence caused damage and the fair market value that remained when the business stopped...”.

Similarly, in *Taylor v. B. Heller and Co.*,³ the court recognized that “the action for damages for destruction of a business [should be] measured by the difference between the value of the business before and after the injury or destruction.”

In either case, the value of the business after a complete business shut down would either be negligible or represent any net residual proceeds received or recoverable from the liquidation of any remaining assets.

Other notable cases that echo the same concept include *Indu Craft, Inc. v. Bank of Baroda*,⁴ and *Aetna Life & Casualty Co. v. Little*.⁵

Business Winds Down Initially, and then Completely Shuts Down

A business value approach is also applicable in situations where a business has been harmed, carries on operations for a period of time during which it experiences lost cash flows, and then is forced to cease operations as a result of the harm (sometimes described as the “slow death” scenario).

For example, assume that Company A was a food service business involved in supplying meals for airlines. Company A obtained the necessary licences, permits and approvals from government regulators to allow it to operate as a food service business. Company A also obtained comprehensive insurance coverage from Company B, an insurance provider. In January 2009, Company B erroneously filed a statement with government regulators indicating that Company A's insurance coverage had been terminated for non-payment of premiums. Company A's licences were suspended for two months, and then reinstated when the erroneous insurance statement was rectified. However, in that time, many of Company A's airline customers stopped purchasing from Company A, and, over the course of 2009, others also followed. Company A experienced ever-increasing operating losses as 2009 proceeded, before shutting down operations in December 2009.

In pursuing legal action against Company B for its erroneous insurance statement which led to the company's demise, Company A can seek to recover lost cash flows for the one-year period January to December 2009 during which it attempted to continue to operate, as well as lost business value with respect to lost cash flows beyond January 2010.

This scenario is illustrated in Exhibit 2 below. The first shaded area represents the lost cash flows that Company A is entitled to claim, while the second shaded area represents the permanent and complete loss of Company A's business, which is to be quantified using a business value approach.

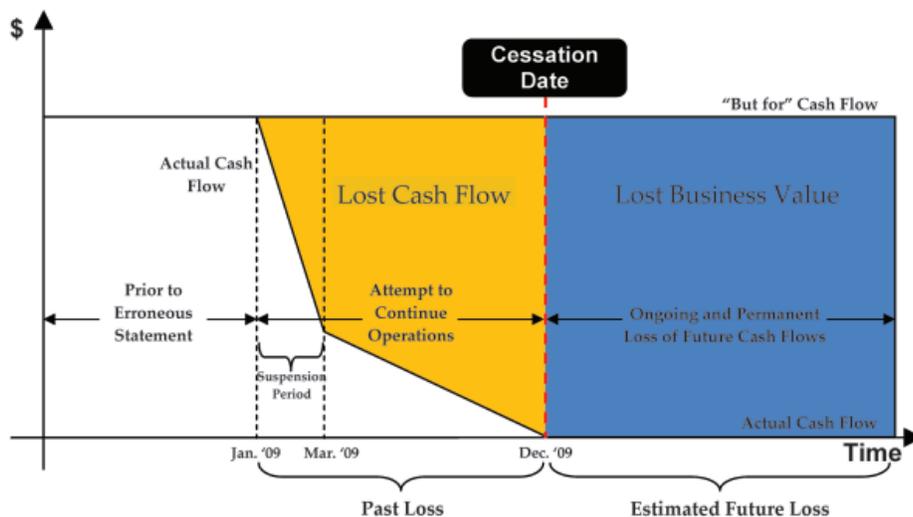
2 353 N.W.2d 279 (ND 1984).

3 364 F.2d 608, 612 (6th Cir. 1966).

4 47 F.3d 490 (2d Cir. 1995).

5 384 So.2d 213 (Fla. Dist. Ct. App. 4th Dist. 1980).

Exhibit 2 – “Slow Death” Scenario



The concept of quantifying lost cash flows during a business wind down and lost business value for lost future value is cited in *Jim's Hot Shot Service Inc. v. Continental Western Insurance Co. and Sun West Insurance Agency*.⁶ In this case, the court indicated that “loss of profits prior to cessation of a damaged business is properly allowable as an element of damages in addition to an allowance for a market value diminution because the interim profit losses experienced prior to liquidation of the business are not reflected or compensated for in the market value determination.”

This quotation is instructive as it highlights the fact that a quantification of lost business value on its own would not restore a plaintiff to a condition of “wholeness,” as a strict quantification of business value would not normally consider the operating losses occurring prior to the date that the business in question shut down.

A Portion or Segment of a Business Shuts Down

A business value approach is also applicable in situations where a segment of a business, or a distinct stream of cash flow, has been permanently lost as a result of some harm done, but the overall business continues to operate.

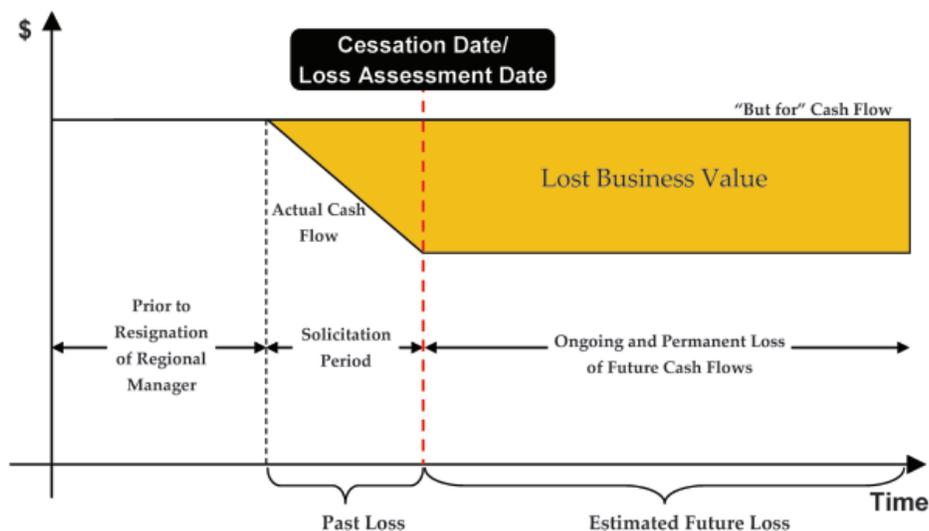
For example, assume that Company A sources and sells promotional merchandise such as embossed pens, golf balls, calculators and USB keys to businesses. The company is organized into three geographical divisions—Eastern, Central and Western Canada—each of which is headed by a sales manager. As the head office is in Europe, Company A relies on each manager to effectively run their division and manage customer relations. Assume that the manager for Eastern Canada resigns, sets up a competing business and improperly solicits all or most of the Eastern Canada customers away from Company A. Company A is unable to mitigate, and as a result is forced to terminate Eastern Canada operations and divest its remaining assets.

In pursuing legal action against the manager arising from breach of fiduciary duties and solicitation of customers, Company A may be able to claim lost business value due to the permanent loss of Eastern Canada operations.

⁶ 353 N.W.2d 279 (ND 1984).

This scenario is illustrated in Exhibit 3 below. The chart represents Company A's total Canadian cash flows, while the shaded area represents the permanent and complete loss of Eastern Canada cash flows, which is to be quantified using a business value approach.

Exhibit 3 – Portion/Segment of Business Shuts Down



Inability to Fully Mitigate Loss of Business or Cash Flow

What is implicit in the “permanence” criterion discussed above is the assumption that the business in question is unable to fully mitigate its lost business or cash flow. Stated another way, in order to be able to claim “business value” as a measure of loss, a plaintiff usually needs to demonstrate that it was unable to recapture or replace lost business, or restart business operations, or somehow alleviate its “permanent” loss.

For example, take the case of the promotional merchandising company, Company A, whose Eastern Canada manager resigned, started a competing business and solicited its Eastern Canada customers. In order to successfully claim the business value of its Eastern Canada division as its loss, Company A will likely have to demonstrate that it was unable to recapture the solicited customers, or if it attempted to do so, why its efforts were unsuccessful. Perhaps the location of Company A's head office in Europe, and its reliance on local managers to run Canadian operation might be a factor that lends weight to its inability to mitigate the Eastern Canada loss. Or, perhaps Company A made reasonable efforts to hire another Eastern Canada manager with the intent to rebuild operations, but was unable to find a suitable candidate.

With respect to mitigation, a plaintiff is expected to make “reasonable” attempts to minimize its losses; a plaintiff will usually not be faulted where mitigating would necessitate taking on excessive risks, or pursuing financially or operationally infeasible or uneconomical alternatives.

Breach of Contract

The use of business value as a measure of loss in breach of contract scenarios is a topic deserving of some attention. The term of a contract and the clauses in a contract are usually very important in determining whether a lost cash flow approach or business value approach is applicable in a particular scenario.

Contract Clauses or Term of a Contract

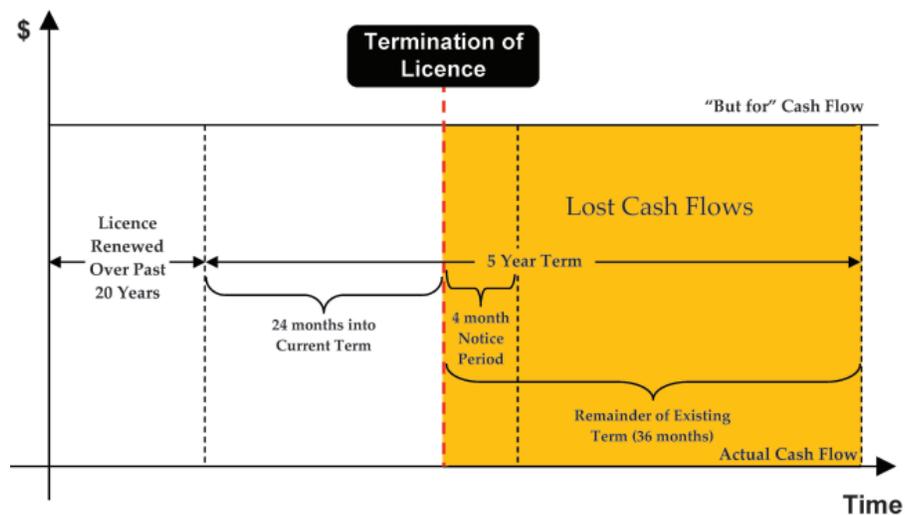
To illustrate the importance of contract clauses, assume that Company B licenses Company A to manufacture shoes under a designer brand owned by Company B. Company A pays a royalty to Company B, but otherwise keeps the profits from sales of licensed apparel. The license is a “contract” that stipulates various terms, conditions and responsibilities of both parties. The licence renews automatically every five years, but can be terminated at the option of either party with four months’ notice. The licence had been renewed continuously since it was awarded 20 years ago.

Assume that Company B is dissatisfied with the marketing and sales performance of Company A and decides to terminate the licence two years into the current five-year term, effective immediately. The licence in question is crucial for Company A’s survival, and without it, it is forced to cease operations.

Company A pursues legal action against Company B alleging breach of contract. If Company A successfully proves a breach of the contract by Company B, the question is whether it will be able to claim lost business value or lost cash flow, and, if the latter, over what period of time. Contractual terms indicate that either party could terminate the contract with four months’ notice. Notwithstanding the fact that the licence contract was renewed over the past 20 years, Company A may only be entitled to receive its lost cash flows for a four-month period from the date of termination. As an alternative, at most, Company A might be entitled to claim its lost profits for the remainder of the current contract term (i.e. for three years). Given the clear “out” clause in this particular contract, or, at most, the remaining three-year contract term, a quantification of lost business value would not seem to be appropriate in this context.

This scenario is illustrated in Exhibit 4 below. The first shaded area represents the lost cash flows that Company A is entitled to claim. The dotted lines identify the four-month notice period and the three-year remaining term of the contract.

Exhibit 4 – Contract Clauses



One of the leading Canadian authorities on contractual damages is *Hamilton v. Open Window Bakery Ltd.*⁷ In this case, the plaintiff, Hamilton had entered into a 36-month contract with the defendant, Open Window Bakery (“OWB”) to market and sell baked goods in Japan. The contract could be terminated immediately without notice

7 (2003), [2004] 1 S.C.R. 303, 2004 SCC 9.

if Hamilton acted in a manner that was “detrimental to the reputation and well being of OWB,” or could be terminated with three months’ notice after commencement of the 19th month of the contract.

OWB proceeded to terminate the contract 16 months into its term, effective immediately, alleging that Hamilton had indeed acted in a manner that was detrimental to the reputation and well being of OWB.

Initially, the trial judge held that OWB had wrongfully terminated the contract and awarded damages representing the remaining payments that would have been made over the remaining 36-month term, less a factor of 25% to reflect the risk that OWB may have exercised its right to terminate at some point before the end of the term of the contract.

The Court of Appeal, however, held that the three-month notice period clause in the contract represented the “minimum guaranteed benefits” under the contract, and, therefore, the maximum amount of damages that could be payable to the plaintiff.

On appeal before the Supreme Court of Canada, the court noted that where a contract has alternate modes of performance (for example, the ability to terminate upon notice, or the ability to terminate based on other clauses), the mode that is least burdensome to the defendant should be awarded. Based on this, the Supreme Court dismissed the appeal regarding damages, agreeing with the three-month notice period as the basis for damages.

The importance of contractual clauses is also outlined clearly in *Mark Seitman & Associates, Inc. v. R.J. Reynolds Tobacco Co.*⁸ In this case, R.J. Reynolds had entered into a five-year contract with Mark Seitman & Associates to advertise in a tabloid to be published by Seitman. The remaining period of the contract could be terminated on or before March 1 of each publishing year. Reynolds terminated the contract in December 1984, i.e. midway through the 1984-85 publishing cycle. Without Reynolds’ advertising revenue, Seitman’s tabloid failed. In pursuing legal action against Reynolds, Seitman claimed its lost business value. On appeal, the court ruled that pursuant to the terms of the contract, Reynolds could cancel the contract for future years provided it gave notice by March 1, 1985. Therefore, because the contract had been cancelled in December 1984, Reynolds would at most be liable only for the profits Seitman lost over the remainder of the 1984-85 publishing cycle, but not beyond. The court noted “Seitman’s business, as such, was a solely a creature of the contract with Reynolds. The business therefore had value only to the extent that Reynolds elected to renew the contract, which it chose not to do.”

In both *Open Window Bakery* and *R.J. Reynolds*, the alternative damages periods that were considered ranged from a contractually stated notice period to the remaining term of the contract in question. Given the clear contractual clauses in each of these cases (and, potentially, contextual factors, such as the lack of past contract renewals), a claim for ongoing contract losses/business value was not advanced or considered.

Exceptions

From the examples above, it therefore follows that if contractual “exit” clauses or the contract term are *not* clearly specified or defined, then a claim for business value might be an option, given the particular contextual factors of a loss quantification scenario. For instance, in the example of the shoe manufacturer in Section 5.1 above, assume that the licence in question did not specify a term, or did not specify any clear notice period for termination. In this case, a valuator might consider that the contract in question would continue to be valid and enforced by both parties indefinitely into the future, supporting the use of a business value approach.

8 837 F.2d 1527, 1531 (11th Cir. 1988).

Additionally, in some cases, business value may be claimed if the breach of contract was particularly egregious or in particular bad faith. For example, in *United Roasters, Inc. v. Colgate-Palmolive Co.*,⁹ the plaintiff was awarded compensation for loss of business value in a breach of contract case. In this case, the defendant had contractually agreed to manufacture and distribute a food product developed by the plaintiff. The defendant terminated the contract during a period when its right to do so was unchallenged. However, in the months preceding the termination, the defendant had ceased production and marketing of the product and sold its inventory. Upon terminating the contract, the defendant refused the return of the plaintiff's assets putting the plaintiff out of business. In effect, although the defendant terminated the contract pursuant to the contractual terms, its actions before and after the termination were egregiously harmful such that the plaintiff was put out of business. In this case, awarding the plaintiff its lost cash flows over a normally reasonable notice period would not have been "fair."

Similarly, in *Indu Craft Inc. v. Bank of Baroda*¹⁰ the plaintiff company had a credit agreement with the Bank of Baroda. The credit agreement was administered by a loan officer at the bank. When the plaintiff failed to make an investment for the benefit of the loan officer's son, the loan officer reduced the plaintiff's line of credit and took other steps that effectively drove the plaintiff out of business. The actions of the loan officer were particularly egregious such that they "result[ed] in the complete destruction of a business enterprise." Again, in this case the plaintiff was awarded damages representing lost business value.

Overall, the primary test is to look first to contractual clauses and the term of the contract in order to determine if a business value approach applies. Where the primary test is not clear or definitive, a consideration of the nature of the alleged breach in question and a consideration of the past contractual context and relationship between the contracting parties may need to be examined in order to decide if a business value approach or lost cash flow approach would be most applicable.

PART III – METHODOLOGY AND SPECIAL ISSUES TO CONSIDER

Methodology

Generally speaking, the methodology behind a business value approach has many similarities to that used in a lost cash flow approach. However, there are also subtle differences that should be noted, particularly with respect to the quantum of the discount rate to use, whether or not hindsight can be used, and the inclusion of post-purchase synergies, among others.

A conceptual illustration of the respective methodologies is presented in Exhibit 5 below.

For ease of comparison, assume that the scenario depicted in Exhibit 5 represents a business that has completely ceased operations due to an alleged harmful act, and the question with respect to damages is whether the business is entitled to lost business value or lost cash flows for a defined period of time.

⁹ 649 F.2d 985 (4th Cir. 1980), 454 U.S. 1054, 102 S.Ct. 599, 70 L.Ed2d 590 (1981).

¹⁰ 47 F.3d 490 (2d Cir. 1995).

Exhibit 5 – Business Value Methodology vs. Lost Cash Flow Methodology

Business Value							Lost Cash Flow							
Year	0	1	2	3	4	5	Beyond	Year	0	1	2	3	4	5
Revenue		X	X	X	X	X		Revenue		X	X	X	X	X
Operating expenses		(X)	(X)	(X)	(X)	(X)		Operating expenses		(X)	(X)	(X)	(X)	(X)
Cash flow		X	X	X	X	X		Cash flow		X	X	X	X	X
Interest		n/a	n/a	n/a	n/a	n/a		Interest		(X)	(X)	(X)	(X)	(X)
Capex net of tax shield		(X)	(X)	(X)	(X)	(X)		Capex net of tax shield		(X)	(X)	(X)	(X)	(X)
Income taxes		(X)	(X)	(X)	(X)	(X)		Income taxes		n/a	n/a	n/a	n/a	na/
Net cash flow (after tax)		X	X	X	X	X	X	Net cash flow (pre tax)		X	X	X	X	X
After tax capitalization multiple							*5	Discounted present value		After tax discount rate X%				
Capitalized terminal value							5X							
Discounted present value (business value)		After tax discount rate X%												

The following observations can be drawn from a comparison of the above methodologies:

- The business value and lost cash flow approaches use the same basic revenue and operating expense cash flow projections.
- The business value approach excludes interest expense as the first objective is to arrive at enterprise value.¹¹ Meanwhile, the lost cash flow approach includes interest expense as the objective is to arrive at the incremental cash flow that would have been received “but for” an alleged harm.
- The business value approach uses after-tax cash flows, as the objective is to value the discretionary after-tax cash flows that an owner of the business would be entitled to receive. The lost cash flow approach uses pre-tax cash flows as the objective is to quantify an amount that the business would have otherwise received from its operations. Any amount actually awarded as damages is assumed to then be taxed as business income in the hands of the recipient (i.e. the business) whereas the business value amount would likely be taxed as a capital gain as it represents the diminution in capital value as a result of the alleged harm.
- The business value approach forecasts cash flows indefinitely into the future (as reflected in the terminal value). However, the lost cash flow approach forecasts cash flow for a defined period of time.
- Both approaches use after-tax discount rates.¹² However, the actual quantum of the discount rates will differ between business value versus lost cash flow approaches (as discussed below).

Discount Rates

Overview

A discount rate is a rate of return that is applied to a stream of estimated future cash flows to adjust those cash flows for:

1. The time value of money; and,
2. The risk associated with whether the future cash flows will be realized as estimated or forecasted.

Therefore, a discount rate reflects two basic components:

1. A rate of return reflecting the time value of money; and

¹¹ Alternatively, interest expenses could be included in cash flows, which, when discounted using equity rates of returns, would result in equity value.

¹² With respect to the lost cash flow approach, using after-tax discount rates with pre-tax lost cash flows will result in a quantification of loss that will place a plaintiff in the approximate same *after-tax* position as if an alleged harmful act had not occurred. Refer to “Finance Theory and Loss Quantification Reality – Establishing a Discount Rate in a Litigation Context” by Farley Cohen and Prem Lobo (*Journal of Business Valuation*, February 2009).

2. A premium for risk (i.e., the risk associated with whether the future cash flows will be realized as estimated or forecasted).

There are many methods to establish a discount rate, including a risk adjusted build-up approach, the weighted average cost of capital, rate of return on equity and rate of return on a comparable investment of similar risk. However, irrespective of what method is chosen, conceptually a discount rate is ultimately supposed to reflect the same basic two components above.

In theory, some of the risks that a discount rate might need to reflect (i.e., over and above the rate of return reflecting the time value of money) include:

1. A risk premium for external risks such as:
 - a. Variability in macro-economic fundamentals such as interest rates, commodity prices, GDP growth and the cost of raw materials.
 - b. Changes in technology.
 - c. Changes in government policies, rules and regulations, including environmental regulations.
 - d. Changes in the competitive environment.
 - e. Demographic trends.
 - f. Changes in customer demand.
 - g. The stage of development of the industry.
2. Premium for internal risks such as:
 - a. The experience, dedication and qualifications of management and staff.
 - b. The existence and effectiveness of policies and procedures.
 - c. The existence of ongoing training programs for management and staff.
 - d. The risk of obtaining required short-term working capital financing, and long-term equity and debt financing.
 - e. The risk of financial distress and the availability of contingency financing.
 - f. Dependence on key parties.
 - g. A company's stage of development.
 - h. A company's size relative to competitors in the market, and the resulting ability to compete effectively and obtain required raw materials/operating resources on a cost effective and timely basis.

The key question is whether a particular discount rate should reflect *all* of the risks that impact the operations of a particular business, or whether the discount rate should reflect a particular “subset” of risks. This question is addressed below.

Relevant Risks — Business Value Versus Lost Cash Flow Approach

The answer to the question above depends on whether a business value approach or a lost cash flow approach has been selected, and also on the particular facts of the loss quantification context.

For example, assume that the plaintiff, Company A, operates a night club from a two-storey, leased building in downtown Toronto. The night club was opened one year ago, and there are six years remaining on the lease. There are no renewal terms specified in the lease. However, the lease can be terminated without notice by the landlord if Company A fails to make lease payments on time, fails to adhere to city by-laws in operating the night club, or commits other actions that represent a specified “cause for termination.”

Recently, the landlord abruptly terminated the lease, alleging by-law infractions by Company A. Shortly thereafter, the landlord changed the locks, seized all equipment and assets on premises, and forcibly evicted Company A. Company A's night club operations have completely ceased and opening at another location is not

seen as a viable possibility. Company A alleges that the landlord had ulterior motives in evicting them in that the landlord wanted to sell the property for development into residential condominiums. Company A has initiated legal action against the landlord. A valuator has been retained to quantify Company A's financial loss, and is considering a calculation of Company A's lost cash flows for the remainder of the lease period (approximately six years), or a business value of Company A.

For illustrative purposes, assume that, based on the contract terms, case facts and legal principles, either approach is possible. If a lost cash flow approach is chosen, the valuator would need to present value the forecasted lost cash flow to the current loss assessment date using a discount rate. The discount rate (in addition to a return reflecting the time value of money) might reflect various internal and external risks (among others) as follows:

- The risk associated with Company A's management being able to operate the night club successfully;
- Changes in the competitive environment for night clubs;
- Demographic trends; and,
- The night club's ability to comply with government by-laws and other regulations.

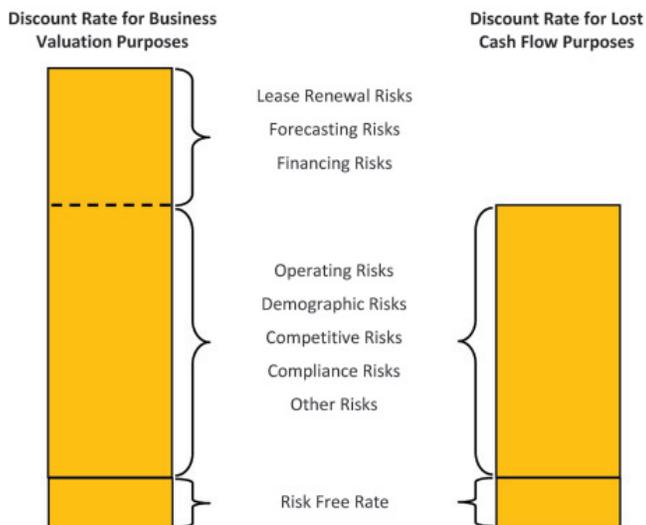
If a business value approach is chosen, the assumption is that the business would continue in operation beyond the remaining six-year lease term. Therefore, it is assumed that Company A would either renegotiate its lease after six years or relocate to a similar location where it could continue in operation. A valuator would need to present value the forecasted cash flow for the remaining lease term *and* also present value the terminal value (representing forecasted ongoing future cash flows). In *addition* to the risks considered above, a discount rate for business value purposes would need to reflect the following risks (among others):

- The risk associated with Company A being able to renew or find an alternate lease beyond the current one;
- The additional uncertainty associated with forecasting cash flow beyond the remaining six-year lease term (given that many night clubs have a finite, five- to seven-year operating life before shutting down for various reasons); and,
- Company A's ability to continue to find short- and long-term financing beyond six years.

In short, in *this example*, a discount rate when quantifying loss for business value purposes would incorporate a larger spectrum of risks as compared to a discount rate for lost cash flow purposes. Note that in this example, there was an "apples to apples" analysis wherein the cash flows from the *entire* business were subject to either a business value or lost cash flow analysis. Note also that the total cash flows are greater under the business value approach, as this approach assumes terminal cash flows into perpetuity. Therefore, despite a higher discount rate, the business value approach may still result in a larger quantification of loss than the lost cash flow approach.

A visual illustration of the difference in risks and discount rates from the example above is as follows:

Exhibit 6 – Example of Discount Rate and Relevant Risks – Business Value vs. Lost Cash Flows



Relevant Risks — Business Value of Overall Business Versus Lost Cash Flow of a Business Segment

It may be, in some cases, that the lost cash flow represents a *portion* of the overall cash flow of the business. Care must be taken in these cases to identify the risks associated with the particular lost cash flow and select the discount rate accordingly, rather than using a discount rate that reflects the risks of the *overall* business, which may be higher or lower than that for the lost cash flow.

Using the same night club example as in Section 7.2 above, assume the night club in question is one part of a larger food service and hospitality business. If using a lost cash flow approach, the risks that might be considered are as outlined in Section 7.2 and, repeated for ease of reference, as follows:

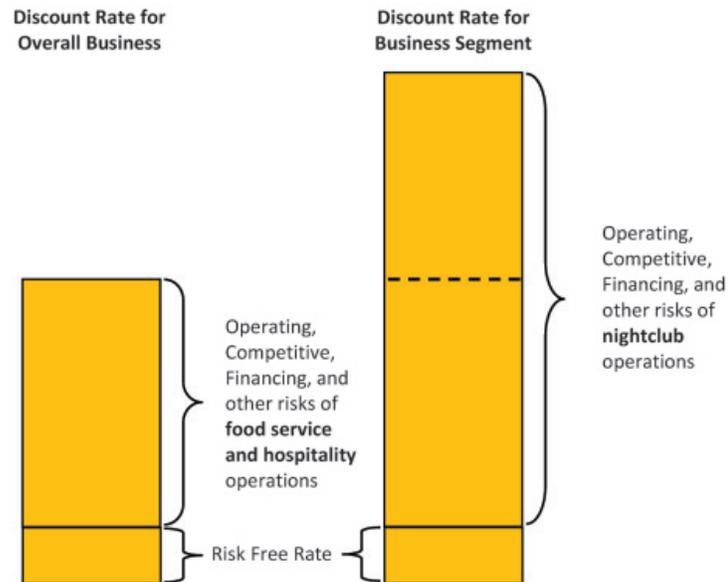
- The risk associated with Company A’s management being able to operate the night club successfully;
- Changes in the competitive environment for night clubs;
- Demographic trends; and,
- The night club’s ability to comply with government by-laws and other regulations;

However, it may be that the risks associated with the overall business (foodservice and hospitality) is lower than that for night-club operations. For example, as compared to night clubs, Company A’s restaurants cater to an older, family oriented target market. As a result of this, restaurant operations once established, have a longer life span and are generally “less risky.”

If a valuator obtains valuation multiples for companies in the food service business and uses these without adjustments to arrive at a discount rate for use in presenting valuing lost cash flows from night club operations (or to calculate the business value of night club operations), this may understate the risk and discount rate that ought to be associated with those operations. Of course, in a different example, if the overall business is inherently riskier than the segment for which loss is being quantified, the opposite would hold true.

A visual illustration of the difference in risks and discount rates from the example above is as follows:

Exhibit 7 – Example of Discount Rate and Relevant Risks – Overall Business Risks vs. Business Segment Risks



Relevant Risks — Business Value in Loss Quantification Contexts Versus Non-Litigation Contexts

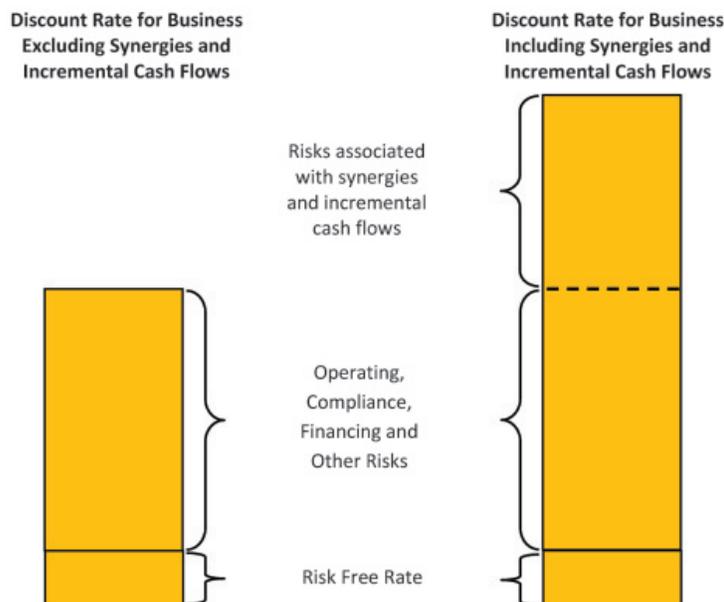
A related question that arises is whether the discount rate used in calculating business value in loss quantification contexts should be different from that used in non-litigation contexts. Again, the answer to this question lies in the particular facts of the loss quantification scenario.

It is possible that the cash flows and risks that need to be considered in a loss quantification scenario are different from that in a non-litigation scenario. For example, assume business value needs to be calculated to determine the fair value of Company A's shares for the purpose of buying out some minority shareholders. The shareholders have dissented to the acquisition of Company A by a competitor, a purchase which the majority believe will result in operating synergies (cost savings) and additional cash flow from new initiatives. A court has ruled that the dissenting minority need to be bought out by Company A for the fair value of their shares (i.e. pro-rata en bloc value, without a minority or marketability discount).

Given that the minority have dissented to the acquisition, one approach might be to value the shares of Company A *excluding* any acquisition-related benefits from synergies or new business initiatives (i.e. to value Company A *prior* to the acquisition). If acquisition-related benefits are excluded, the business risks considered and the discount rate used for the valuation might be different (in this case, probably lower) than the risk and discount rate used for the company after the acquisition.

A visual illustration of the difference in risks and discount rates from the above example is as follows:

Exhibit 8 – Example of Discount Rate And Relevant Risks – Risks in Loss Quantification vs. Non-Loss Quantification Contexts



Summary — Discount Rates

In summary, there are differences in the discount rates to apply when quantifying loss using a business value approach versus a lost cash flow approach, and when quantifying business value in loss contexts versus non-loss contexts. Care needs to be taken to fully understand the facts of each circumstance and the methodology used to quantify loss in order to ensure that the chosen discount rate reflects the “relevant” risks.

Hindsight

The question of whether and how to consider hindsight when quantifying loss using a business value versus lost cash flow approach is an important one. Hindsight in valuation and loss quantification contexts refers to the use of “actual” information (financial data, facts, economic data and so on) known after a particular valuation date or loss assessment date.

The general rule is that hindsight is *not* admissible in business value contexts except to test the reasonability of assumptions or projections made at the valuation date, while hindsight *is* normally admissible in loss quantification contexts. However, what is less clear is which approach to take when business valuations and loss quantifications *intersect*, as in the case of business valuations that are prepared for loss quantification purposes?

It is generally accepted that a valuation is prepared at a specific point in time, and, therefore, should reflect facts, information, and expectations known at that time. For instance, the court in *Ford Motor Co. of Canada v. Ontario Municipal Employees Retirement Board*¹³ summarized the accepted approach to hindsight when it stated “the established legal principle is that, in the process of valuing shares at a particular date, hindsight information is generally inadmissible.” The court went on to note

¹³ O.T.C. LEXIS 2992 (Ont SCJ 2002).

it would appear that two general exceptions to the principle have been recognized in Canadian case law. The first exception would appear to be that factual hindsight information – but not opinions or mixed facts and opinions – may be used for two purposes: firstly, to compare actual results achieved after the valuation date against projected or forecasted corporate results said to be reasonably foreseeable on the valuation date; and secondly, to challenge the reasonableness of assumptions made by the valuers. The second exception to the general principle would appear to be that hindsight information may be used to determine the correct value as of the valuation date of an unchanged component...in existence as of the valuation date.

It is also generally accepted that the objective of loss quantification is to restore an injured party to the position they would have been in had an alleged wrong not been committed or had a contract been fulfilled. In restoring a plaintiff to a condition of “wholeness,” an examination of actual facts and events arising after the date of the alleged wrong is needed in order to forecast what would have happened “but for” the alleged wrong, and compare with what actually happened as a result of the alleged wrong.

The challenge arises when valuations are prepared for the purpose of quantifying loss. In most cases, hindsight will not be permissible. However, in some instances, in order to restore a plaintiff to a position of “wholeness,” there might be compelling arguments to use hindsight in a valuation. Put another way, in some situations, if hindsight were not to be used, this would result in either a windfall gain or unfair penalization of a plaintiff.

For instance, assume a scenario whereby Company A, which is in the business of developing and operating hotel properties as long-term investments enters into a contract to purchase raw land from Company B with the intent to build and operate a hotel property on the land. After entering into the contract, Company B then decides to sell the land to someone else, and breaches the contract with Company A. Company A initiates legal action against Company B, seeking to recover the fair market value of the hotel that it could have developed on the land had the contract been fulfilled. Assume that the property was unique, and mitigation on the part of Company A (by way of acquiring alternate but similar land) was not possible.

The contract in question was entered into in 2007 and the contemplated hotel would have been built and operational before the end of the year. Assume that the years leading up to and including 2007 represented “watershed” years with respect to the hotel industry in the region, with occupancy rates and average room prices at historical peaks. However, the years 2008 and since have witnessed an unprecedented (and unexpected) downturn in the hotel industry, and the slump is expected to continue for the foreseeable future. Operating forecasts for the contemplated hotel were based on data for the years leading up to 2007.

One approach with respect to the calculation of fair market value might be to utilize information at the 2007 valuation date and to exclude hindsight information subsequent to that date. This would result in a valuation of the hotel business opportunity at a point in time, being 2007. However, the question is, if a court were to award Company A the fair market value of the investment as at 2007, would this unfairly benefit or penalize Company A? Given that the hotel industry experienced a substantial downturn after 2007, a downturn which is expected to continue, a valuation based on “watershed” projections as at 2007 may seem unreasonable and may overcompensate Company A. Moreover, in this context, the plaintiff, Company A, is a developer and *long-term* operator of hotel properties. Therefore, Company A was likely not seeking to “crystallize” the fair market value of the hotel in 2007 by *selling* the property as soon as the contemplated hotel was built, but, rather, intended to hold the hotel property for the long term. Therefore awarding Company A the fair market value of the hotel property that reflects hindsight information up to 2010 might result in a value that better reflects the economic position that the plaintiff would have been in “but for” the breach of the contract. Further, given that Company A was expected to hold the investment long term, possibly a combination of lost profits and business value might be considered.

Courts have support the limited use of hindsight in contexts similar to that described above. For example, in *Sinclair Refining Co. v. Jenkins Petroleum Process Co.*,¹⁴ in attempting to determine the value of a patent in a breach of contract case, the court noted “an imaginary bid by an imaginary buyer, acting upon the information available at the moment of the breach, is not the limit of recovery where the subject of the bargain is an undeveloped patent.” The court noted that when time has elapsed since the valuation date in question “experience is then available to correct uncertain prophesy. Here is a book of wisdom that courts may not neglect. We find no rule of law that sets a clasp upon its pages and forbids us to look within.”

In short, while not permissible in most valuation scenarios, hindsight may be permissible in particular contexts where valuations are prepared for the purpose of quantifying loss in order to make plaintiffs “whole” again.

Conclusion

In this paper, we have distinguished between a business value approach and lost cash flow approach to quantifying loss; we have discussed the appropriateness of using a business value versus lost cash flow approach in particular loss quantification contexts; and, we have compared and contrasted the methodology used for either approach.

Given the discussions above, a summary of the differences and similarities between a business value and lost cash flow approach is set out in Exhibit 9 below:

Exhibit 9 – A Comparison of Business Value and Lost Cash Flow Approaches

Lost Cash Flow Approach	Business Value Approach
1. Assumes “temporary” loss of cash flows.	Assumes “permanent/perpetual” loss of cash flows.
2. Often associated with the scenario where there is a temporary or partial business shut down, or a temporary or partial shut down of a segment of a business.	Often associated with the scenario where there is a complete business shut down, or a complete shut down of a segment of a business.
3. Actual cash flows assumed to eventually recover to “but for” levels.	Assumes inability of plaintiff to fully mitigate lost cash flows.
4. Usually applicable in breach of contract contexts with notice periods or contract termination provisions.	Usually applicable in breach of contract contexts where business destroyed or contract termination provision not specified.
5. Calculations based on pre-tax cash flows.	Calculations based on after-tax cash flows.
6. Uses after-tax discount rates.	Uses after-tax discount/capitalization rates.
7. Discount rates reflect the risks associated with the shorter “lost cash flow” time period in question.	Discount rates used reflect long-term operating, competitive and financing risks.
8. Hindsight usually is admissible.	Hindsight usually not admissible; some exceptions do exist.

¹⁴ 289 U.S. 689 (1933).

What is clear from our discussions above is:

- There are certain similarities between a business value and lost cash flow approach; for instance, a projected/estimated stream of “foregone cash flow” is the foundation upon which either calculation is based; indeed, a lost cash flow approach may be seen as a “subset” of the business value approach.
- There are also differences between the two approaches; aside from the fact that the lost cash flow and business value approaches encompass shorter and longer time periods respectively, there may be differing risks and discount rates, and differing treatments of hindsight as between the approaches, among other differences.
- There are specific circumstances when a business value approach is appropriate versus a lost cash flow approach, and vice versa.

Napoleon once noted that “nothing is more difficult, and therefore more precious, than to be able to decide.” Indeed, the decision as to whether a business value approach is appropriate in a particular loss quantification scenario is an important and, sometimes, difficult one. Valuers need to carefully consider the facts of each specific context with due diligence and independence in order to choose the method which, at the end of the day, will be true to the objective of loss quantification—namely, to restore a plaintiff to the position he or she would have occupied if an alleged harm had not been committed or if a contract had been fulfilled.

5

GUIDELINE COMPANIES IN VALUATION: A CAREFUL VIEW OF THE MARKET APPROACH

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One of the standard methods of valuation is termed the market approach. This method generally involves finding a representative multiple of value to a financial measure from a set of guideline (or peer or comparable) companies and applying that multiple to the financial measure of the company being valued. While there are many circumstances in which the market approach works well, careful appraisers recognize that there may be market conditions under which particular care is needed in applying the method. This paper provides an overview of those types of situations and shows how a careful approach to the market method can yield more defensible valuations that are also more in line with the Daubert criteria for expert testimony.

Overview of the Market Approach

Business valuation techniques are often characterized as being based on one of three approaches: the cost or asset approach, the income approach, and the market approach.¹ In this paper, I focus on the market approach, in which an appraiser estimates the value of a company² by reference to market data on the value of other companies. My goal is to show how a careful appraiser can bring tools to bear on this type of valuation, particularly in cases of complex commercial disputes, which can help distinguish reliable from unreliable uses of the market approach to valuation.

While there are no definitive guidelines on how to implement the market approach, the generally accepted series of steps can be listed as follows: first, the appraiser selects publicly traded companies that she believes are similar in nature to the company being valued. In addition to selecting companies, the appraiser may also examine transactions in which a company was purchased. Next, the appraiser selects relevant financial measures for the reference or guideline companies, such as revenues, earnings, or EBITDA. She then finds the multiple for each financial measure (i.e., the ratio of company value to the level of the financial measure for that company) for each guideline company. This process gives the appraiser a dataset of multiples, from which she can select a representative multiple, such as the mean or median of the guideline companies' multiples.

1 See, for example, *Caracci v. Commissioner of Internal Revenue, No. 02-60912, Fifth Circuit Court of Appeals*. ("The expert witnesses for both the taxpayers and the Commissioner agreed that traditional valuation methodology uses three approaches: (1) income; (2) cost; and (3) market." Similarly, USPAP Standard 10-2a(ix) states that "exclusion of the market approach, asset-based (cost) approach, or income approach must be explained." See also the American Institute of Certified Public Accountants' June 2007 *Statement on Standards for Valuation Services: Valuation of a Business, Business Ownership Interest, Security, or Intangible Asset*, p. 16: "the valuation analyst should consider the three most common valuation approaches: • Income (Income-Income-based) approach • Asset (Asset-based) approach . . . • Market (Market-based) approach.")

2 Any of the valuation approaches can also be applied to divisions or individual projects. For ease of exposition, I refer to company valuations throughout this paper.

The appraiser then takes this representative multiple and applies it to the financial measure of the company being valued. If necessary, she adjusts that financial measure to account for extraordinary or one-time events. Finally, the appraiser considers whether any premiums or discounts, such as control premiums or discounts for lack of marketability, are warranted.

In the following sections, we review some of these choices, focusing on areas where a well-trained appraiser's understanding of markets and statistics may help assess or improve a valuation based on the market approach. The same economic or statistical understanding can be especially useful for reviewing an appraisal, allowing the reviewer to focus on areas where she has a comparative advantage and can find an overlooked, and incorrect, assumption or conclusion.

The Selection of Guideline Companies or Transactions

As noted above, the selection of guideline companies or transactions is often considered the first step in a market approach to valuation. In practice, the guideline companies are generally chosen by an appraiser using his or her knowledge of the company to be valued, any knowledge they have about the industry, and a great deal of subjective decision-making.³ As one academic article notes, "Some practitioners even suggest that the selection of comparable firms is essentially 'an art form' that should be left to professionals. Yet the degree of subjectivity involved in their application is discomfoting from an academic perspective."⁴

On the one hand, if there is no reason to believe that the appraiser is biased and we are simply interested in getting the best possible appraisal, then it may make sense to allow the appraiser to use her own judgment and subjective considerations. There may be little point in trying to formalize and document a procedure when everyone trusts the results. Unfortunately, these circumstances are generally not present in complex commercial disputes, in which each party may legitimately fear that the other side may be attempting to push the appraised value up or down. In those circumstances, subjective decisions on the choice of guideline companies and transactions may be subject to attack, with little to defend them other than the word of the appraiser. In particular, choices that are made by the appraiser on her own with no support from outside factors are neither replicable nor governed by any known controlling standards, and have unknown error rates.

Appraisers with experience in collecting and analyzing data should generally be comfortable creating rules that will allow them to develop a guideline group for valuation purposes. For example, an appraiser could start with all companies in the same industry according to SIC or other classification codes. It has been noted that, "[o]f course, companies are not completely comparable merely because they are in the same industry, and other factors such as product and geographic markets, size, growth rates, profit margins, and other industry and economic considerations warrant adjustments."⁵ While this citation suggests adjustments, a simpler method could be to narrow the list of guidelines by, for example, limiting the guideline group to those with a financial measure, such as revenues that were within 50% of the revenues of the company to be valued in each of the last three years. There are obviously numerous ways to narrow the list, including looking at different financial measures such as revenues, cash flows, or earnings; looking at growth rates in addition to levels; and allowing for different degrees of closeness between the financial measure of the potential guideline group members and that of the company to be valued.⁶ In that sense, there is still some subjectivity in the process for selecting guideline group members, but the subjectivity has been pushed back to the selection of rules (where it will often be unclear how a different rule

3 Some appraisers have adopted the convention of calling these companies guideline companies because they provide guidance for the valuation even if they are not truly peers or in all ways comparable to the company being valued.

4 Sanjeev Bhojraj and Charles M. C. Lee, "Who Is My Peer? A Valuation-Based Approach to the Selection of Comparable Firms," *Journal of Accounting Research* 2002, at 408. (Internal citations omitted.)

5 *Lippe v. Bairnco Corp.*, 2003 U.S. Dist. LEXIS 1133 (S.D. N.Y. Jan. 28, 2003) at 693.

6 Qualitative rules on products or operations can also be implemented by establishing rules on words that would either have to be in or have to be excluded from company descriptions. Moreover, sometimes there will be an interplay between the allegations in a complex commercial dispute and the selection of guidelines, whereby, for certain types of disputes, one may want to select guidelines to what a company would have been in the absence of a dispute rather than guidelines to the company that actually existed.

will affect the ultimate valuation) from the selection of actual guideline companies (where it is more clear how including or excluding potential guideline members with high or low multiples will affect the valuation).

The existence of these rules means that the actual selection of guideline companies can be replicated by an opposing party, and in fact an opposing party could also create their own set of guideline selection rules to provide an alternative valuation. Examples of such rules exist in the peer-reviewed literature and serve as controlling standards for the guideline company selection. Ultimately, the use of rigorous selection rules will help the appraiser provide evidence on the suitability of the guideline companies.⁷

The Selection of Multiples

Once they have selected the guideline companies or transactions, appraisers often next turn to the selection of the relevant financial measures for computing multiples. There is often little discussion of the process for selecting the financial measures, and some or all of the usual suspects—revenue, earnings, and EBITDA—tend to appear in most valuations. Once the financial measures and the representative multiples (discussed in the next section) are selected, appraisers typically derive valuations for each of those measures. For example, there may be an estimate of value based on revenue multiples, one based on earnings multiples, and one based on EBITDA multiples. The final valuation conclusion is often drawn by examining the individual valuations, either taken as a range or, with the selection of a central measure of those individual valuations (e.g., the mean or the median, or a weighted average), as the point estimate of the valuation.

One of the more useful instruments in an appraiser's toolbox is regression analysis. At its heart, regression analysis is a statistical procedure that examines how one variable, such as the market value of a publicly traded firm, can be statistically explained by other variables, such as revenues and earnings. Consequently, when sufficient data are available, an appraiser can use regression analyses to determine which financial measures actually had a statistically significant correlation with market values for the guideline companies.⁸ But the benefits of regression analysis go beyond that. One result of the regression analysis is the calculation of a representative multiple with desirable statistical properties, meaning that one does not have to blindly rely on the mean, median, or other measure.⁹ And the statistical analysis can go beyond just finding a simple multiple that assumes that value is directly proportional to a financial measure; it can also test and determine the proper coefficients for a model in which there is another form of relationship.¹⁰ Finally, regression analysis allows for an objective means of combining the data from different financial measures. For example, by running a regression comparing the guideline com-

7 The selection rules are thus a form of the type of care required in the selection of guideline companies. See, for example, *Estate of Josephine T. Thompson v. CIR, T.C. Memo. 2004-174*. (“In utilizing, however, public companies to estimate the value of private, closely held companies, care must be taken to ensure that the public companies used are sufficiently comparable to the private companies being valued. In this regard, Rev. Rul. 59-60, 1959-1 C.B. 237, 242, cautions as follows: ‘Although the only restrictive requirement as to comparable corporations specified in the statute [sec.2031(b)] is that their lines of business be the same or similar, yet it is obvious that consideration must be given to other relevant factors in order that the most valid comparison possible will be obtained. * * *’ Courts recognize that a comparable company valuation may be rejected where the companies relied on are not sufficiently similar to the company being valued.”) See also *Eckelkamp v. Beste*, 315 F.3d 863 (8th Cir. 2002), in which the appellate court affirmed the exclusion of an appraiser based in part on the district court’s finding that the appraiser used guideline “companies that in many ways were not comparable to” the company being valued.

8 The amount of data needed depends on the analyses being performed. In the valuation context, one should be careful of the argument that a regression on a small number of data points is not reliable if the alternative is calculating a mean or median on the same number of data points. Because a small number of data points may affect the reliability of most analyses, one must be careful that this criticism is not used to discard the regression analysis in favor of something even less reliable.

9 Appraisers often make subjective adjustments to these measures of the representative multiple. However, as noted by one court, “the more the appraiser deviates from the medians the more biased and subjective the analysis arguably becomes.” (*Gotham Partners, L.P. v. Hallwood Realty Partners, L.P.*, 2003 WL 21639071, n. 31 (Del. Ch. July 8, 2002)). The advantage of the regression approach is that any deviation from a median or other measure is based on objective standards rather than just the say-so of the appraiser.

10 One example of this procedure is in Exhibit 11-2, “Correlation between Price/Revenues and Return on Revenues,” in Shannon P. Pratt, Robert F. Reilly, and Robert P. Schweihs, *Valuing a Business: The Analysis and Appraisal of Closely Held Companies*, Fourth Edition, 2000.

panies' market values to their revenues and earnings, an appraiser might find that the values are best represented by an expression such as two times revenues plus five times earnings. Thus, rather than weighting the valuations based on the two individual representative multiples equally or by some subjective weighting, the regression analysis provides an objective basis for combining the two measures.¹¹

Overall, the use of regression analysis to determine the relationship between value and financial measures is more beneficial than examining a number of valuations based on individual financial measures. As discussed above, a regression analysis allows for a statistical estimation of the representative multiple and also for an objective method for combining the information in various financial measures. As a statistical procedure, regression analysis brings with it a large quantity of peer-reviewed literature discussing controlling standards to its operation and the potential error rate from its implementation.

Selecting the Representative Multiple

A blind selection or use of multiples can often produce bizarre results. For example, consider three firms, each with a market value of \$100 per share: Firm A has earnings of \$1 per share, Firm B has earnings of \$0.50 per share, and Firm C has earnings of \$0.02 per share.¹² Their price:earnings ratios are thus 100, 200, and 5,000, respectively. As shown in Row (1) of Table 1, the mean multiple across the three companies is 1,767; the median multiple is 200; and the harmonic mean multiple is 197.4.¹³

First, consider what happens if there is a slight decrease in earnings at Firm C, such that its earnings drop to \$0.01, meaning that its multiple rises to 10,000, as shown in Row (2) of Table 1. The mean multiple across the three companies is now 3,433; the median multiple is still 200; and the harmonic mean multiple is now 198.7. The mean multiple gets nearly cut in half by this one cent (or alternatively, 50%) change in the earnings of only one of the three companies, while the median multiple is completely unresponsive to this change. Neither one of those results is terribly appealing.

Next, suppose, as in Row (3A) of Table 1, that the earnings at Firm C further decrease by another \$0.02, so that Firm C now is showing a loss. Its naïvely calculated multiple is -10,000. If one just plugs this value into the standard equations, the mean multiple is now -3,233; the median multiple is now 100; and the harmonic mean multiple is now 201.3. The mean multiple has suddenly become dramatically negative. The median multiple also moves in a strange way, dropping from 200 to 100, despite the fact that Firms A and B have not changed, and Firm C is being rewarded with the same valuation even though it is making even less money.

11 See, for example Sanjeev Bhojraj and Charles M. C. Lee, "Who Is My Peer? A Valuation-Based Approach to the Selection of Comparable Firms," *Journal of Accounting Research* 2002, at 411. ("The advantage of a regression-based approach is that it allows us to simultaneously control for the effect of various explanatory variables. For example, some firms might have higher current profitability, but lower future growth prospects, and higher cost-of-capital.") More complicated analyses could allow for a combined estimation of the relevant financial measures and the guideline companies. For example, once the financial measures are selected, one can test whether potential guideline companies' stock prices moved with changes in the financial measures.

12 We assume that the earnings have been adjusted or normalized if there are any reasons that the reported figures do not represent the true economics of the companies.

13 The harmonic mean is the average of the reciprocals of the multiples. The reciprocals of the multiples of 100, 200, and 5,000 are 0.01, 0.005, and 0.0002, respectively, and their mean is 0.00507. The reciprocal of the mean is 197.4. The use of harmonic means is advocated by Malcolm Baker and Richard Ruback, "Estimating Industry Multiples," a Harvard Business School working paper, available at <http://www.people.hbs.edu/mbaker/cv/papers/Multiple.pdf>. See also Shannon P. Pratt, *The Market Approach to Valuating Businesses, Second Edition*, p. 140 ("Although the harmonic mean is not used frequently, probably because it is unfamiliar to most readers of valuation reports, it is conceptually a very attractive alternative measure of central tendency").

Table 1

		Firm A	Firm B	Firm C	Mean	Median	Harmonic Mean
	Earnings (Base case)	1.00	0.50	0.02			
(1)	P:E	100	200	5000	1767	200	197.4
	Earnings (C higher)	1.00	0.50	0.01			
(2)	P:E	100	200	10000	3433	200	198.7
	Earnings (C lower)	1.00	0.50	- 0.01			
(3A)	P:E (naïve median)	100	200	- 10000	- 3233	100	201.3
(3B)	P:E (without Firm C)	100	200	nmf	150	150	133.3
(3C)	P:E (proper median)	100	200	- 10000	- 3233	200	201.3

Some appraisers attempt to fix these problems by simply dropping firms with negative multiples from consideration, as in Row (3B). But this tactic results in the mean multiple dropping from 3,433 when all three firms are considered and Firm C was earning \$0.01 a share to 150 when Firm C's revenues turn negative. The result is even more bizarre when we realize that if we measured Firm C's earnings to fractions of a penny, the average multiple would shoot up toward infinity as Firm C's earnings fell toward zero, but would then suddenly jump to 150 the moment we discarded Firm C's multiple. Similarly, the median multiple would suddenly jump from 200 to 100 the moment Firm C's earnings became negative.¹⁴ Thus, simply dropping negative values leads to perverse results.

A familiarity with the statistical issues created by discontinuous variables gives an appraiser an ability to recognize and deal with these issues, helping them to avoid creating valuations that are not sensible. Moreover, by knowing the types of errors that can arise when a faulty selection methodology is employed, appraisers can intelligently assess and comment on other parties' selection of the representative multiple, pointing out instances where the selected representative multiple is unduly biased because of the mathematical procedure used to make that selection. In some cases, this is as simple as showing the biases from dropping firms with negative multiples; in others, it may require digging deeper into the appraiser's toolbox.

Selecting the Representative Multiple: Potential Problems With Making Subjective Adjustments

Another issue that arises in the selection of representative multiples is what to do when the appraiser wishes to depart from some measure, such as the mean, median, or harmonic mean, of the "centre" of the distribution of guideline company multiples. For example, the well-known appraiser Z. Christopher Mercer states,

Quite often, . . . an appraiser may believe that a private company should be valued at a discount to the measures of central tendency of a peer group. . . . One way to accomplish this task would be to select a statistical measure other than the median as the base multiple. For example, an appraiser might, based on comparisons of revenues, growth, margins, leverage, or other factors, conclude that a private company should most appropriately be compared with a specific portion of the entire guideline group, for example, the lower half of the group's multiples, rather than the entire group.¹⁵

¹⁴ Interestingly, the proper way to deal with this is to recognize that negative multiples are actually the largest possible show of support for a company, because the multiple has in effect grown beyond positive infinity, as shown in Row (3C). Of course, one must first check whether the market capitalization of the firm is based on its future earnings ability, as opposed to, for example, an expected distribution to shareholders should the firm declare bankruptcy, a situation in which the calculated multiple does not reflect the cash-generating ability of the company's operations.

¹⁵ Z. Christopher Mercer, *Valuing Enterprise and Shareholder Cash Flows: The Integrated Theory of Business Valuation*, 2004, pp. 189-190.

While such a procedure may be useful in certain circumstances where one is not disputing the valuation (e.g., when the parties trust the appraiser to bring her best unbiased efforts to bear on the problem), this type of approach should and could face serious criticism in the context of a complex commercial dispute. Because a representative multiple derived from the bottom half of the multiples will result in a lower valuation than taking the median multiple, there should be a good justification for ignoring half the data. This also begs the question of why the appraiser is focused on the bottom 50% of the multiples, as opposed to the bottom 75% or the bottom 25%. Ultimately, in this case how far the appraisal will be pushed down depends on how much or how little of the bottom of the set of guideline companies the appraiser uses in her calculation of the representative multiple.

Moreover, statisticians recognize that making guideline company selections based on the observed multiples rather than on the characteristics of the firm itself is a form of statistical error known as sample selection bias. For example, suppose that there are six essentially identical firms that should all have a price:earnings multiple of 5.0. Because earnings are measured with error, let's assume that the calculated multiples of the six companies are 4.7, 4.8, 4.9, 5.1, 5.2, and 5.3. These fluctuations in earnings still leave the mean and median multiple as 5.0, so we have not created a biased set of multiples by introducing those fluctuations. However, if one just selects the bottom half of the multiples, the revised mean or median is only 4.8. Because in this example the variations in the multiples are due to random fluctuations and not any true difference between the companies, selecting the set of guideline multiples based on the observed multiples can lead to a change in the representative multiple even though this change does not reflect the selection of companies that were any more representative of the firm being valued. This is simply an example of one of the maxims of statistical analysis: data should be selected on the basis of the inputs (i.e., the financial measures) and not the output (i.e., the multiple) being studied.

In response to the concerns about what financial measures to examine, appraisers could use accepted statistical measures to see if the financial and other measures such as revenues, growth, margins, or leverage do affect multiples in the guideline group. If so, then an objective statistically-based adjustment could be made to the representative multiple, based on the measures of those characteristics in the company to be valued. This type of procedure would dramatically reduce the subjectivity of the adjustment, and because it would be performed under the controlling standards of a statistical analysis, it would yield potential error rates.

Finally, the same tools, such as regression analysis, can be employed by appraisers to evaluate subjective adjustments to multiples made by other parties. For example, some appraisers will make adjustments to the baseline representative multiple due to factors such as the size, leverage, or profit margin of the company being valued. Here knowledgeable appraisers can bring both statistical and economic evidence and reasoning to see if the adjustments are reasonable. If size, for example, has a negative effect on multiples, then one can test statistically whether larger guideline companies have smaller multiples than larger ones. By looking at the exact guideline group in the same time period used by the appraiser making the adjustment, the well-trained appraiser can go beyond simply citing literature that discusses size premiums in general and provide evidence on the reasonableness of the adjustment.¹⁶

Appraisers familiar with valuation theory can also help explain why certain subjective adjustments may or may not make sense. For example, profit margin was given earlier as a reason for adjusting the representative multiple. Yet, if an appraiser uses a low profit margin as a justification for adjusting both price:earnings and price:revenue ratios down by the same amount, they would be making a mistake because the lower profit margin

¹⁶ As an example of the failure to distinguish a disagreement from evidence of error, see *In re Omnicom Group, Inc. Securities Litigation* 2007 WL 2375170 (S.D.N.Y.) at *14. (“...the parties’ valuation experts differ in their assessment of how to value these assets, just as they differ markedly in their assessment of an independent valuation done by Murray Devine consultants in December 2001. Although plaintiffs’ specialist criticizes the Murray Devine methodology, it appears that he is, in large measure, simply offering an alternative set of assumptions without demonstrating that the Murray Devine approach is necessarily incorrect. In contrast, defendants’ valuation specialist notes that the Murray Devine approach is consistent with professional standards, and points out (without contradiction in the record) that plaintiffs’ expert misstates certain key facts and fails to follow all steps of the approach he purports to apply and that courts have approved as appropriate for these purposes.”) (Internal citations omitted. For purposes of full disclosure, we note that the author of this paper was defendants’ valuation expert in this case.)

already affects earnings and thus is already accounted for in the price:earnings ratio.¹⁷ To illustrate, suppose that a firm consistently had revenues of 100 and a profit margin of 10% each year. The company then changes strategy in such a way that it will consistently have revenues of 200 but a profit margin of only 5% each year. Because the annual profit available for shareholders is 10 both before and after the strategy shift, the value of the firm should not be expected to change. If the value of the firm was, and remains at, 100, then the price:earnings ratio starts at 10 and ends at 10, indicating that there is no need to adjust this multiple for the profit margin. On the other hand, the price:revenue ratio falls from 1.0 to 0.5, which shows that price:revenue multiples are sensitive to, and ideally should be adjusted for, differing profit margins.

Valuation Ranges

As one court noted, “Common sense and the authorities in the area suggest that an opinion as to the value of a business should be expressed as a range of values rather than as a single number.”¹⁸ This may be exaggerating the state of actual practice, in which valuations are often given as ranges, with a particular value presented as the best estimate within the range.¹⁹ The question is then how that range should be generated and what it means. In some appraisals, a range of valuations using different techniques is presented, while in others ad hoc sensitivity tests, including adjusting terminal values up or down by a factor such as 10%, are employed. Yet it is often unclear how meaningful these ranges are to the case at hand or whether they in fact have any true meaning at all. After all, one can always turn a single estimate into a range by assuming that the valuation could be as much as 10% lower to 10% higher. Among the benefits that statistically savvy appraisers bring to the analysis of ranges is their familiarity with statistical confidence intervals, in which ranges have a meaningful interpretation. For example, a 95% confidence interval is defined as a range applied around an estimate such that if we were to calculate numerous estimates, we would expect 95% of the ranges to include the unknown true value. One benefit of using statistical confidence intervals is that they convey information about the precision of the valuation: a tight statistically-based confidence interval indicates that we likely have a good estimate of the true value, while a wide statistically-based confidence interval indicates that we have less certainty in the result.²⁰ Thus, using a broad toolkit, ranges that have some useful meaning can be presented when appropriate, instead of simply presenting an arbitrary range around an estimate.

Conclusion

It is well known that “when it comes to valuation issues, reasonable minds can and often do disagree.”²¹ However, the sources of that disagreement can either be based on subjective disputes or on testable hypotheses. As discussed above, an understanding of market analysis and statistics can help appraisers define many valuation disputes in the market approach in terms of testable mathematical hypotheses about the comparability of guideline companies or multiples. This lets them both prepare more defensible valuations and examine the reasonableness of the valuation of another professional.

17 At best one could argue that the low earnings add an additional form of risk that still requires an adjustment to the price:earnings ratio. But if a non-zero adjustment is made, it should still be smaller for the price:earnings ratio than for the price:revenue ratio.

18 *Lippe v. Bairnco Corp.*, 2003 U.S. Dist. LEXIS 1133 (SDNY Jan. 28, 2003) at 690.

19 In complex commercial disputes often the end result will be a payment from one party to another, thus ultimately requiring the selection of a particular value and not just a range.

20 For example, the greater the spread in the multiples of the guideline companies, the wider the confidence interval would be, displaying the fact that we are less sure about the level of the multiple to apply to the company being valued. The important thing to note is that for any given degree of confidence (e.g., the 95% level) the width of the confidence interval is driven by the amount of variance in the data and thus is neither fixed across all valuations nor is it simply a subjective choice for the appraiser.

21 *Peltz v. Hatten*, 279 B.R. 710 (D. Del. 2002) at 737.

6

MEASURING LOST PROFITS ECONOMIC DAMAGES ON A PRETAX BASIS*

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Introduction

Investors typically estimate the market value of a business after adjusting for income taxes payable by the business. In other words, investors typically value the after-tax cash flow available to them. In a business valuation, to calculate value using either a direct capitalization method or a yield capitalization/discounted cash flow method, the valuation analyst typically discounts after-tax cash flow by an after-tax rate of return.

In some situations, the valuation analyst may discount before-tax cash flow by a before-tax rate of return. However, the after-tax analysis is performed more commonly. This is because after-tax rates of return can be more readily observed in the marketplace.

Either way, in a business valuation, the income tax status of the cash flow should match the income tax status of the discount rate or the direct capitalization rate.

The judicial award of economic damages related to lost profits, on the other hand, often includes an amount equivalent to the income taxes payable on the award. Because many judicial damages awards are taxable to the plaintiff, in order to restore the after-tax economic condition of the damaged party, the damages award should include both:

1. the present value of the lost profits and
2. the taxes payable (if any) on the award.

In other words, lost profits–related economic damages analysis typically should be prepared on a pretax basis.

Although there are some complications that we will discuss, the general procedure of including the taxes payable (if any) as part of the damages award is appropriate no matter which of the following generally accepted methods are used to measure the lost profits–related economic damages:

1. the before and after method
2. the yardstick (or “benchmark”) method
3. the projection method

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Regardless of the economic damages method applied, the damages analyst's objective is to measure the award amount that would be required to put the plaintiff in the economic position that the plaintiff would have occupied "but for" the defendant's alleged misconduct.

In this discussion, we will consider several perspectives on the application of income taxes in measuring economic damages that are based on the projection method.

One procedure that arrives at the present value of lost profits is to "mismatch" the income tax status of cash flow and the discount rate. In other words: "discount before-tax cash flow by an after-tax rate of return." While this procedure may appear to be counter-intuitive, we will see that it produces the mathematically correct damages conclusion.

The Projection Method

The projection method involves the use of a forecast model for the subject company, complete with growth and return estimates. Using this model, operating results for the subject company are projected during the damages period absent the effects of the defendant's alleged misconduct.

The results of operations projected by the model are then compared with the actual results realized by the company during the damages period.

The extent to which projected results exceed actual results represents one measure of the plaintiff's lost profits.

When lost profits are used to measure the plaintiff's economic damages, the use of a pretax measure of income is one generally accepted procedure for the damages analyst to perform.

There are two reasons why a lost profits-related economic damages analysis may be performed on a pretax basis. The first reason relates to the measurement of historical lost profits (i.e., lost profits that occurred prior to the analysis date). The second reason relates to the measurement of future lost profits (i.e., lost profits that are expected to occur in the future, after the analysis date).

First, with regard to historical lost profits, the judicial award of lost profits-related economic damages is typically a taxable event to the damaged party. That is, the judicial award of lost profits represents taxable income to the plaintiff. If the lost profits damages were measured on an after-tax basis, the plaintiff would be subject to double taxation.

And, therefore, the plaintiff would not be made "whole" as a result of the economic damages award. That is, the damages award would not return the plaintiff to the same economic condition it would have occupied if the damages event had not occurred.

Second, with regard to expected future lost profits, the actual taxation basis (i.e., pretax or after-tax) is not particularly important to the calculation of the future value component of the damages analysis (although lost profits should be measured on a pretax basis for the other reasons described below).

The present value (i.e., as of the analysis date) of the estimate of future pretax lost profits is normally presented by applying an after-tax present value discount rate to the future pretax lost profits.

A Simple Example

Let's consider a plaintiff that would have earned \$200 a year (pretax) for five years, "but for" the damages event. The damaging party wrongfully caused the plaintiff to lose that \$200 a year of pretax income. Let's assume that the plaintiff paid tax at a 40 percent income tax rate.

Absent the damages event, the plaintiff would have earned \$1000 over the five-year period (i.e., \$200 per year, ignoring, for now, the time value of money during those five years) and paid \$400 in income taxes.

“But for” the damages event, the plaintiff would have earned \$600 in total after-tax income after five years (i.e., \$200 per year in pretax income less 40 percent in income taxes).

Let’s assume that the damages analyst erroneously calculates lost profits on an after-tax basis. That is, the damages analyst calculates that the damaged party experienced \$120 per year of lost profits for five years (i.e., \$200 pretax profits less 40 percent income taxes).

Based on this erroneous damages analysis, the total lost profits economic damages conclusion is \$600 (i.e., \$200 pretax profits less 40 percent income taxes for five years).

If the court awards a \$600 damages judgment, the plaintiff will then have to pay income tax on the \$600 damages award. The plaintiff will then pay \$240 in income taxes (i.e., \$600 damages award taxable income times a 40 percent tax rate).

After paying income taxes, the damaged plaintiff will be left with \$360 in total after-tax income (i.e., \$600 damages award less \$240 income tax expense).

However, absent the damages event, the plaintiff would have earned \$600 in total after-tax income during the five-year damages period.

Alternatively, let’s assume that the damages analyst correctly calculates lost profits on a pretax basis. That is, the analyst calculates that the damaged party experienced \$200 per year of pretax lost profits for five years.

In this case, the court awards a \$1000 damages judgment. The plaintiff will then pay \$400 in income taxes (i.e., \$1,000 damages award taxable income times a 40 percent tax rate).

After paying taxes, the damaged plaintiff will be left with \$600 in total after-tax income. Based on this economic damages analysis, the plaintiff is made “whole.” That is, after the judicial award based on pretax lost profits, the plaintiff is in the same economic condition it would have been in if the damages event had not occurred.

In summary, a pretax lost profits analysis results in an economic damages award that restores the damaged party to its same economic condition “but for” the damages event.

In contrast, an after-tax lost profits analysis results in an economic damages award that exposes the damaged party to the economic effect of double taxation. That is, the damaged party is unfairly penalized by the amount of the income tax expense—and is never restored to the same economic condition it would have enjoyed “but for” the damages event.

Consistently Use Either Pretax or After-Tax Lost Profits

When the lost profits that resulted from the alleged misconduct are expected to continue after the trial date, future lost profits may be calculated. Preferably, future lost profits will also be measured on a pretax basis. An after-tax measurement, however, will reach the same conclusion.

To illustrate, let’s slightly modify our simple example. In this case, the damaged party expected to earn \$200 a year in pretax income indefinitely in the future (again, for now, ignoring the time value of money). However, the party was damaged and will now lose the \$200 a year indefinitely in the future.

The indefinite time period avoids, for purposes of this example, the use of complicated present value calculations for a shorter time period.

The plaintiff still pays income taxes at a 40 percent income tax rate. Let’s assume that the appropriate pretax capitalization rate is 10 percent.

The calculation of lost profits economic damages on a pretax basis is presented as follows:

$$\begin{aligned} \text{damages} &= \$200 \text{ (pretax lost profits per year)} \\ &\div 10\% \text{ (pretax capitalization rate)} \\ \text{damages} &= \$2000, \text{ the total present value of expected future pretax lost profits} \end{aligned}$$

The calculation of lost profits economic damages on an after-tax basis is presented as follows:

$$\begin{aligned} \text{damages} &= \$120 \text{ } (\$200 \text{ pretax lost profits} - \$80 \text{ income taxes} = \text{after-tax lost profits}) \\ &\div 6\% \text{ } (10\% \text{ pretax capitalization rate} \times (1 - 40\% \text{ tax rate})) \\ \text{damages} &= \$2000, \text{ the total present value of expected future pretax lost profits} \end{aligned}$$

As this simple example illustrates, the calculation of the present value of lost profits is insensitive to the selection of an income tax rate. In fact, the present value calculation does not change whether (1) a pretax lost profits measure is used or (2) an after-tax lost profits measure is used.

What is important is that both the lost profits measure and the discount rate are both calculated on either a pretax basis or an after-tax basis.

This example is based on several simplifying assumptions, one of which is that the lost profits each period are not available to the plaintiff for reinvestment during the damages period.

Discount Before-Tax Cash Flow by an After-Tax Rate of Return

In some cases, the economic damages period has not ended as of the trial date.

It is common for the damages analyst to present the economic damages that have been suffered since the beginning of the damage period until the trial without any adjustment for the time value of money. That procedure separates the analysis of “prejudgment interest” from the analysis of the pretax economic damages.

Prejudgment interest may be calculated based upon various rates: statutory, risk-free, prime, commercial paper, cost of capital, and so forth.

When the return that the plaintiff would have earned during the future portion of the damages period is taken into account, the damages analyst may follow this rule: “discount before-tax cash flow by an after-tax rate of return.”

Let’s assume that one year after the trial date, the C corporation plaintiff projected lost profits before tax equal to \$100. If income taxes will be paid at a tax rate of 40 percent at the end of the year, the after-tax lost profits will equal \$60.

Next, let’s assume that the company’s lost profits were expected to earn an after-tax rate of return of 6 percent. This is equivalent to a pretax rate of return of 10 percent.

Now, what before-tax amount should be awarded at today’s trial to reimburse the plaintiff for the \$60 after-tax loss that will be suffered one year after trial? The answer is that \$94.34 should be awarded.

Income taxes will be paid immediately on the award at a tax rate of 40 percent, resulting in a net after-tax award of \$56.60 (i.e., \$94.34 times (1 minus the 40 percent tax rate)). In turn, this amount will be invested at a before-tax reinvestment rate of 10 percent to produce \$62.26 before tax at the end of the year.

At the end of the year, income taxes are only paid on the increase in value from \$56.60 to \$62.26 (40% x (\$62.26 – \$56.60) = \$2.26).

The judicial award amount that remains after income tax at the end of the year is \$60 (\$62.26 – \$2.26). This \$60 remaining amount is equal to the loss to be reimbursed: the projected after-tax loss at the end of the year.

If we name the variable in the place of the previous amounts, we can solve for the before-tax amount of the award. In our example, if income tax rates do not change during the period, then the before-tax amount of the award equals the amount of the future before-tax loss discounted by the after-tax rate of return (i.e., \$100 times 0.9434—the one-year present value factor for the after-tax rate of 6 percent).

So, one common procedure for calculating the present value of expected future lost profit economic damages is: “discount before-tax cash flow by an after-tax rate of return.”

Complications to the Common Procedure

Depending on the facts and circumstances, the court may weigh evidence concerning the actual economic effect of income taxes. And, legal counsel may want to consider the opportunity to argue for exceptions to the above-described procedure.

First, an award of expected future lost profit economic damages based on the “discount before-tax cash flow by an after-tax rate of return” procedure resembles the actual economic loss, plus actual income taxes payable, only when permanent income tax rates remain constant over time. However, tax laws and income tax rates sometimes change.

In *Polaroid Corporation v. Eastman Kodak Company*,² Kodak presented the argument that the plaintiff’s damage calculations overcompensated Polaroid for its actual economic loss. This was because of the reduction in income tax rates during the damage period.

The Kodak experts pointed out that the plaintiff’s pretax losses were calculated at higher income tax rates than the rates that existed at the trial date. The plaintiff actually would have paid less in income tax than the amount of tax included in the pretax award, providing Polaroid with a windfall of approximately \$80 million.

The court rejected the Kodak argument in that case. However, this exception to the tax-affect procedure should be considered, particularly when large amounts are at stake.

Second, to complicate the procedure further, economic damages awards are not always taxable. Damages awards for personal physical injuries are exempt from income tax. And, for businesses, in those rare instances where the taxpayer can support the treatment of damages as a recovery of capital, then damages are exempt from income tax to the extent of the taxpayer’s basis in the damaged capital asset.

Third, these calculations are based on the assumption that the plaintiff was a C corporation. When the plaintiff is a C corporation, the after-tax rates of return are the same ones used in a typical business valuation assignment. In other words, the rates of return are those returns available to investors in the financial markets after the corporation has paid corporate income taxes.

However, if the plaintiff is an individual, a partnership, or an S corporation, the rates of return earned on investments in the market may be viewed as before-personal-tax rates of return. The true after-tax rate of return for an individual may best be expressed after deducting personal income taxes as well as C-corporation-level income taxes.

Fourth, not all areas of law treat taxes in this same way. For example, damages for personal injury may be treated differently if brought under a federal statute than if brought under state statute. And, in some jurisdictions, the personal injury awards may be exempt from federal income tax. However, the interest income accumulating on the award may or may not be taxable under state law.

¹ All of the exhibits presented in this discussion are reproduced from *The Handbook of Advanced Business Valuation*, Robert F. Reilly and Robert P. Schweihs, eds. (New York: McGraw-Hill, 2000), Chapter 14.

² *Polaroid Corporation v. Eastman Kodak Company*, 16 U.S.P.Q. 2d 1481 (D. Mass. 1990, as corr. 1991).

When income taxes are payable on the judicial award, the award should be increased to account for the taxes payable on the lost profits and, perhaps separately, on the prejudgment or post-judgment interest on the award.

If the damages analyst is using the procedure of applying an after-tax rate of return to lost profits, then the analyst may have a few extra computations to consider.

Finally, another way to insure that a plaintiff is made “whole” would be to:

1. estimate all of the projected cash flow on an after-tax basis,
2. use an after-tax discount rate to bring the cash flow to a present value, and
3. “gross up” the after-tax lost profits damage amount to a pretax lost profits damage award using the current income tax rate of the plaintiff.

A Typical Lost Profits Claim

As demonstrated above, we know that it is not always correct to assume that if the economic damages award should be pretax in order to make the plaintiff whole, the damages analyst can:

1. completely ignore income taxes by using expected future pretax cash flow and
2. discount the cash flow at a pretax present value discount rate.

The plaintiff will not be in the same economic condition after the plaintiff pays income taxes on the judicial damages award as the plaintiff would have been if the alleged misconduct had never occurred.

For the typical expected future lost profits claim, the damages award is taxable. Typically, the court should follow the procedure, “discount before-tax cash flow by an after-tax rate of return.” Given these assumptions, what is the correct way to define both the pretax lost income and the after-tax rate of return?

Exhibit 1**Lost Project Economic Damages Example**

Statement of Cash Flow	Damages Analysis Assumptions	For the Period Ending at the Date of	
		Trial	Future Loss
Cash Flow from Operating Activities:			
Revenue		\$	10,000
Cash operating costs			(7,001)
Depreciation expense			<u>(750)</u>
Earnings before tax			2,249
Interest expense			<u>(24)</u>
Earnings before tax			2,225
Income taxes	$t_c = 40\%$		<u>(890)</u>
Net income			1,335
Add back: depreciation expense			750
(Increase) decrease in working capital			<u>-</u>
Subtotal—cash flow from operations			<u>2,085</u>
Cash Flow from Investing Activities:			
Proceeds from the sale of fixed assets			-
Investment in fixed assets			<u>(750)</u>
Subtotal—cash flow from investing activities			<u>(750)</u>
Subtotal			<u>1,335</u>
Cash Flow from Financing Activities:			
Debt	$k_d = 8\%$	\$	300 (300)
Equity	$k_e = 15\%$		<u>900 (1,035)</u>
Subtotal—cash flow from financing			<u>1,200 (1,335)</u>
Net Cash Flow		<u>\$</u>	<u>1,200 \$ -</u>

Exhibit 1 presents an income and cash flow statement for a hypothetical lost profits analysis. In this example, the company's capital structure includes a combination of debt and equity. The lost profits are assumed to occur in a single period, one year after the trial date.

The example is constructed so that the after-tax net present value of the project at the date of trial is \$1,200. The cost of debt is 8 percent, and cost of equity is 15 percent.

We can answer the question by starting with the after-tax definitions of cash flow and the after-tax cost of capital used in a typical business valuation.

There are several possible definitions of cash flow corresponding to its cost of capital counterpart that will produce a correct after-tax value. We begin with the most commonly used definitions.

First, for the definition of the after-tax rate of return, we will apply the after-tax weighted average cost of capital ($WACC_{AT}$).

Written in symbols, we combine the cost of debt (k_d), the cost of equity (k_e), the market value of debt (D), and the market value of equity (E), in the formula for $WACC_{AT}$:

$$WACC_{AT} = \left[k_d(1 - \text{tax rate}) \times \frac{D}{D + E} \right] + \left[k_e \times \frac{E}{D + E} \right]$$

Valuation analysts typically use the after-tax definition of net cash flow—that is, the earnings before interest and tax (EBIT) times (one minus the income tax rate), plus depreciation expense, minus the increase in working capital, and minus expected future capital investments.

Below, written in algebraic symbols, we combine EBIT, depreciation expense ($depr$), the decrease (increase) in working capital (WC), and future investments (I), in the formula for after-tax net cash flow:

$$\text{After-tax net cash flow} = (\text{EBIT}(1 - t)) + \text{depr} \pm WC - I$$

However, for lost profits economic damages purposes, we need a definition for the before-tax net cash flow in order to follow the tax-treatment procedure. To create this definition, we divide both sides of the equation by one minus the income tax rate ($1 - \text{tax rate}$).

The result of this division is the equation for before-tax net cash flow.

$$\text{Before = tax net cash flow} = \text{EBIT} + \frac{\text{depr}}{(1 - t)} \pm \frac{WC}{(1 - t)} - \frac{I}{(1 - t)}$$

If we assume that the lost profits encompasses a complete operating cycle, then the net change in working capital is equal to zero. If we also assume that the amount of depreciation expense is equal to the amount of expected future investments, then these terms cancel one another and the expected investment is also equal to zero.

After making these assumptions, all that remains of the formula above is:

$$\text{Before-tax net cash flow} = \text{Earnings before interest and tax (EBIT)}$$

Now we can apply these formulas to our example in Exhibit 1 and demonstrate that they work.

Exhibit 2

Present Value of Future Lost Profits

Calculation of Lost Profits Economic Damages Award	Economic Damages Assumptions	For Period Ending at Date of	
		Trial	Future Loss
Before-Tax Lost Profits			
Earnings before interest and tax		\$	2,249
Add depreciation expense / (1 - t _c)			1,250
Decrease (increase) in working capital / (1 - t _c)			-
Less cash flow for future investing activities / (1 - t _c)			(1,250)
Before-tax net cash flow		<u>\$</u>	<u>2,249</u>
After-Tax Discount Rate			
Weighted average cost of capital (WACC)			
= k _e [Equity / (Debt+Equity)] + k _d (1 - t _c) [Debt / (Debt+Equity)]	WACC =	12.45%	
Amount of the Damages Award			
Less income taxes on damages award	t _c = 40.00%	\$	2,000
			<u>(800)</u>
After-tax proceeds from damages award			1,200
Repay debt			(300)
Repay equity			<u>(900)</u>
Net gain (loss) from lost profits and from the damages award		<u>\$</u>	<u>-</u>

In Exhibit 2, we discount future earnings before interest and tax (\$2,249) by the weighted average cost of capital (12.45 percent). The result is the present value of a before-tax damages award (\$2,000).

After income taxes are paid on the damages award at 40 percent, the after-tax proceeds from the damages award (\$1,200) exactly match the after-tax present value of the lost profits on the project at the trial date in Exhibit 1.

In other words, given our illustrative assumptions, the plaintiff achieves the same economic condition as if the alleged misconduct had never occurred.

This is not the only way that the damages award may be computed. In the example above, we assumed that the marginal capital for the lost profits project was comprised of both debt and equity.

Under different facts and circumstances, a damages analyst may find that the marginal capital for the lost profits project was comprised entirely of the lost market value of equity.

The choice of an equity value versus an enterprise (or invested capital) value is a question of fact to be determined by the damages analyst. If an equity value is appropriate, then the after-tax cost of capital is equal to the cost of equity (k_e) alone.

The definition of the before-tax loss will remain the same. Of course, when discounted by the cost of equity alone, the amount of the economic damages award will usually be lower.

In addition, we could have started with different definitions for the cost of capital and the after-tax net cash flow that, after adjustment to a before-tax basis, produce the same amount.

Examples of possible matched pairs of definitions for the cost of capital and the after-tax net cash flow are presented in Exhibit 3. These factors can be easily adjusted to a before-tax basis.

Exhibit 3

Alternative Definitions of Cash Flow and Cost of Capital

Definition of Cash Flow	Definition of Weighted Average Cost of Capital
ASSUMING LOST PROFITS ARE REALIZED AT OR BEFORE THE TRIAL DATE	
[Earnings before Interest and Tax (EBIT) x (1 - tax rate)] + Depreciation +/- Investment	$k_d (1 - t) [D / (D + E)] + k_e [E / (D + E)]$
Net Income + Depreciation +/- Investment + [(1 - tax rate) x Interest Expense]	Same as above
Net Income + Depreciation +/- Investment + Interest Expense	$k_d [D / (D + E)] + k_e [E / (D + E)]$
Net Income + Depreciation +/- Investment +/- Debt Principal	k_e
ASSUMING LOST PROFITS ARE UNREALIZED	
Earnings before Tax + Depreciation +/- Investment	k_e

"Investment" includes both capital expenditures and working capital

Description of Symbols: k_d = marginal cost of debt, market yield to maturity
 k_e = marginal cost of equity
 D = market value of debt
 E = market value of equity
 t = marginal income tax rate

Summary and Conclusion

In summary, one common procedure to measure the lost profits–related judicial award recommendation is to perform the historical lost profits analysis on a pretax basis. And, the same income tax basis of lost profits (typically pretax) should be used in the historical lost profits damages analysis and in the expected future lost profits damages analysis.

The selection of the income tax basis (i.e., pretax or after-tax) should not affect the present value calculation of the economic damages analysis—as long as all components of the present value analysis are calculated on the same income tax basis.

When applying the sales projection method of calculating economic damages (which includes a periodic return on the future expected lost profits), the damages analyst may use the procedure “discount before-tax cash flow by an after-tax rate of return.”

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