

Putting the Pin in Net Working Capital: Important Value Implications for M&A Transactions

Prepared for the 2013 Ian R. Campbell Research Initiative
of the Canadian Institute of Chartered Business Valuators

September 25, 2013

Blair Roblin, LLB, MBA, CBV, CF



Putting the Pin in Net Working Capital: Important Value Implications for M&A Transactions

Introduction

As M&A practitioners can attest, the level of working capital transferred on the closing of a transaction can become one of the most contentious issues between a buyer and a seller. Since it pertains to immediate cash needs and resources of the business, working capital has tremendous implications for the value of the business purchased and sold. However, determination of the appropriate level can be neglected in going concern valuations and, in the transaction context, it is often deferred until late-stage negotiations with arbitrary or unfair results. This is typically due to oversight, though I have witnessed instances where a party consciously avoids the issue until after a letter of intent has been struck, based on the faulty logic that dealing with the minutiae of working capital at too early a stage will delay or complicate the transaction.

Ignoring the issue of working capital is a risky proposition for both parties. A case in point is the seller who conducts a competitive sale process and experiences diminishing negotiating leverage as the auction progresses. At some stage, the seller will likely agree to deal exclusively with one buyer, concurrent with signing a letter of intent (“LOI”). As advisors experienced in running a sell-side processes will know, the seller’s ability to dictate terms is lessened as soon as the other competing bidders are ushered away.

Most going concern valuations concentrate on valuing the operating cash flows of the business and translating these into a value at the valuation date. In most formal valuations, working capital issues are less complicated, since notional adjustments can be made and there are often no changes contemplated or assumed as a result of changes in control, management or business practices. In the transaction setting, though, working capital accounts can fluctuate until the closing date and may wind up at a level that is not “normal” for the existing business or not expected by one of the parties at the time the transaction price was settled. These discrepancies may be due to seasonality or lumpiness of the business, changes in business practices that are

planned by the purchaser, or even efforts by the seller to “manage” working capital prior to closing.

This paper is primarily concerned with settling working capital accounts in the transaction context, particularly in the case of going concern entities. However, it is worthwhile starting the inquiry from a somewhat broader perspective in order to consider the appropriate working capital metrics for the business in general, i.e., before deal issues enter the picture. These matters are addressed in Section 1, which analyzes typical working capital structure by industry sector, and then in Section 2, which considers the task of adjusting industry metrics to a particular business.

Section 3 goes on to examine the link between business valuation methodology and the right levels of working capital that going concern methodologies imply. This connection is critical as it establishes certain ground rules for the level and structure of working capital that follow from the valuation assumptions. Section 4 looks at issues of agency and the implications of diverging interests between buyer and seller in the transaction context. Section 5 develops the methodology for determining and structuring the working capital to be conveyed on closing of the transaction and Section 6 lays out a template that incorporates this determination into the transaction documentation, including the purchase and sale agreement (“PSA”).

Section 1: Examining appropriate working capital for the industry sector

There are numerous studies and statistical compilations that provide industry ratios and metrics for financial statement comparison, including working capital accounts. These sources include the RMA Annual Statement Studies (“RMA”), Statistics Canada, Dun & Bradstreet Canada and Standard and Poor's Corporation.

The RMA data are compiled from 2,500 members that are primarily financial institutions. Contributing institutions are mostly US banks, though RMA states that they represent financial centers throughout North America, Europe and Asia/Pacific. The analyses in this paper reference primarily RMA statistics as these data represent a high response rate and greater statistical significance than other sources. The RMA’s presentation and analysis also provides the most

detailed breakdown by sector, business size, working capital account and ratio, as well as segregation by quartile.

Mention should also be made of other commonly cited sources of Canadian data. Financial Performance Indicators, which is a Statistics Canada publication, provides financial operating and balance sheets of Canadian businesses. These indicators are developed from the income tax returns of approximately one million corporations, along with data from Statistics Canada's quarterly and annual programs of financial statistics for enterprises. For smaller businesses, Statistics Canada also publishes Small Business Profiles, which provides the detail of selected revenue, expense, profit and balance sheet items as well as financial ratios and employment data for Canadian enterprises. The target population for this data is small businesses, defined as those having annual revenue between \$30,000 and \$5,000,000. The information is presented by industry sector using the North American Industrial Classification System (NAICS) to the six-digit level.

The data in Table 1 are compiled from RMA's 2012-13 Annual Statement Studies and compare working capital amounts and ratios across selected industry sectors. The data also show the difference in working capital ratios and measures as between smaller and larger enterprises within the same sector. In this case, a comparison is drawn between the reported financial statistics of enterprises with less than \$1 million in sales and those with over \$25 million in sales.

A few explanatory notes are in order regarding the data in Table 1. First, RMA includes as part of working capital, both cash (and equivalents) and current debt, which comprises short-term notes and the current portion of long-term debt. RMA does not "net" the debt against the cash in calculating ratios, nor treat any portion of the cash or debt as redundant. In this respect, some of the calculations can be misleading. The issue of redundancy is considered in Sections 2 and 3 of this paper. However, the differences in cash and debt levels, particularly between the large and small enterprises within a sector, are instructive as to the correlation between sales and capital structure, i.e., what is typical cash or debt for a large company may be quite different, even in relation to sales, than for a small company. Second, what falls into the category of current assets and liabilities from an accounting point of view is not always what one would consider true

Table 1
Selected Working Capital Statistics by Industry Sector and Annual Sales

Industry Sector	NAICS (1)	% of Total Assets				% of Total Liab + Equity			Ratios				
		Cash	Trade A/R	Inventory	Current Assets	Current Debt	Trade A/P	Current Liab	Current	Days A/R	Days Inv	Days A/P	
Agricultural - Wheat Farming	111140												
Annual sales \$ 0-1 million		10.2	3.1	6.7	21.4	16.3	2.8	20.3	0.6	0.0	na	na	
Annual sales \$ 25 million +		11.0	31.5	22.1	67.9	15.8	18.5	40.2	1.4	53.0	na	na	
Mining - Construction Sand and Gravel	212321												
Annual sales \$ 0-1 million		6.9	8.2	20.3	40.8	14.7	8.7	36.7	2.2	24.0	73.0	13.0	
Annual sales \$ 25 million +		7.4	19.9	11.2	40.7	8.6	8.8	22.3	2.2	50.0	30.0	24.0	
Utilities - Water Supply and Irrigation	221310												
Annual sales \$ 0-1 million		16.8	3.5	3.6	26.3	8.7	2.4	16.8	1.9	17.0	na	na	
Annual sales \$ 25 million +		4.8	13.1	8.4	29.7	10.0	7.3	20.7	1.8	33.0	na	na	
Manufacturing - Structural Metal	3312312												
Annual sales \$ 0-1 million		16.7	21.5	9.5	49.1	39.8	26.5	76.9	1.7	31.0	5.0	60.0	
Annual sales \$ 25 million +		9.2	32.0	19.7	68.2	13.3	16.2	41.5	1.6	58.0	45.0	33.0	
Wholesale - Sporting, Recreational Goods	423910												
Annual sales \$ 0-1 million		18.9	20.6	41.8	81.8	21.2	17.1	49.3	2.0	22.0	146.0	19.0	
Annual sales \$ 25 million +		5.7	30.3	42.3	81.4	17.5	19.6	46.8	1.9	41.0	94.0	33.0	
Retail - Hardware Stores	444130												
Annual sales \$ 0-1 million		7.2	6.4	52.1	68.2	10.5	10.6	30.5	3.2	9.0	215.0	3.0	
Annual sales \$ 25 million +		4.9	11.4	48.9	67.4	11.9	17.1	35.7	1.8	15.0	135.0	36.0	
Transportation -Freight, Trucking, Local	484110												
Annual sales \$ 0-1 million		13.1	12.8	0.6	28.7	22.1	7.4	48.0	0.7	0.0	na	na	
Annual sales \$ 25 million +		8.0	32.9	2.3	47.2	17.2	12.3	39.3	1.2	39.0	na	na	
Information - Data Processing, Hosting	518210												
Annual sales \$ 0-1 million		22.6	16.6	2.8	48.1	10.5	9.4	49.6	1.1	27.0	na	na	
Annual sales \$ 25 million +		16.4	25.6	1.8	50.2	6.7	13.8	39.5	1.2	40.0	na	na	
Finance - Consumer Lending	522291												
Annual sales \$ 0-1 million		7.7	59.5	0.3	71.2	32.9	1.2	40.3	1.9	608.0	na	na	
Annual sales \$ 25 million +		6.8	66.6	3.3	80.9	32.3	2.5	39.7	1.8	332.0	na	na	
Professional Services - Advertising Agencies	541810												
Annual sales \$ 0-1 million		20.1	19.7	0.9	45.1	33.0	12.5	70.6	0.7	2.0	na	na	
Annual sales \$ 25 million +		20.1	41.7	1.3	67.6	5.2	32.3	56.5	1.1	51.0	na	na	
Healthcare - Medical Laboratories	621511												
Annual sales \$ 0-1 million		25.0	8.1	0.1	35.4	19.2	20.7	59.6	0.5	0.0	na	na	
Annual sales \$ 25 million +		15.0	21.4	3.0	43.9	10.2	6.2	33.8	1.7	47.0	na	na	
Entertainment - Fitness/Recreation Centers	713940												
Annual sales \$ 0-1 million		14.8	1.8	2.2	20.6	17.5	5.9	38.9	0.6	0.0	na	na	
Annual sales \$ 25 million +		13.4	5.3	1.3	22.9	6.5	4.8	25.5	0.8	10.0	na	na	
Other Services - Funeral Homes/Services	812210												
Annual sales \$ 0-1 million		12.0	11.6	4.6	31.3	13.2	5.8	30.8	1.2	14.0	na	na	
Annual sales \$ 25 million +		14.9	11.8	10.8	40.4	0.7	2.1	10.2	5.3	19.0	na	na	
Construction - Indust Buidling % Completion	236210												
Annual sales \$ 0-1 million		18.6	38.1	2.7	72.6	7.6	25.6	52.9	1.3	48.0	na	38.0	
Annual sales \$ 25 million +		23.1	38.8	2.3	79.9	5.2	30.0	55.1	1.5	51.0	na	42.0	

Source: RMA Annual Statement Studies: Financial Ratio Benchmarks 2012/13
(1) National American Industry Classification System

working capital. Under the sector *Finance–Consumer Lending*, for example, days receivables stand at an average of 608 days for smaller enterprises and 332 days for larger enterprises. However, these receivables are in fact short term loans and, as such, they represent the productive assets of the business rather than simply sums owing for goods sold and services rendered.

A clear takeaway from Table 1 is the variability in working capital structure by industry sector. Some of this is intuitive, such as the fact that retail, wholesale and mining businesses carry substantially greater inventory than do utilities or medical labs. The relationship of trade receivables to payables, however, is not always as obvious and the difference between the time it takes to collect receivables and to remit payments to the trade can constitute a substantial cash flow deficit or float for the business. For the smaller medical labs and fitness centres, where receivables and inventories total less than trade payables, the prospect exists to grow these businesses without actually funding additional working capital. This contrasts with manufacturing, wholesale and retail firms that require heavy investment in current assets, or funeral homes and water utilities that have little in the way of trade payables to finance short-term needs.

What is also evident from the data in Table 1 is that the size of the business has a significant impact on working capital structure. There are several reasons for this, not all of which are obvious from the data profiled. Some of the size-related differences are the following:

- Trade receivables as a proportion of total assets are higher for the larger firms across all sectors. The same phenomenon is apparent in the days-receivables figures. It is unlikely that this is due to lax collection policies, as larger firms can be presumed to have both financial discipline and influence over customers at least equal to that of their smaller competitors. It is more likely that the larger firms have the financial wherewithal to extend customer credit and the ability to earn an implicit rate of return by virtue of their payment terms. Correspondingly, the larger firms may also have more corporate or creditworthy customers for whom terms can be extended.

- In 10 of the 14 sectors, trade accounts payable make up a larger proportion of the balance sheet for larger firms than for smaller firms in the same sector. A possible inference here is that larger firms have greater power over their suppliers to delay payment without repercussions to their businesses, unlike their smaller competitors.
- Cash resources as a percentage of total assets appear to be somewhat higher for smaller firms, particularly for the smaller utilities, manufacturers, wholesalers, truckers and laboratories. It is difficult to tell from the data whether this is due to less stringent cash management policies among small firms or whether the risks associated with a smaller enterprise (customer concentration, vulnerability to larger suppliers and customers, etc.) warrant additional cash reserves. However, the fact that the smaller firms appear to carry significant short-term borrowings (see below), suggests there is some redundancy in terms of the cash balances of the small firms.
- In 12 of the 14 sectors, current debt represents a higher proportion of the balance sheet for smaller firms than for the larger firms. What Table 1 does not show – but appears consistently throughout the RMA data – is that smaller firms tend to utilize both short and long-term debt more than larger firms do. Conversely, larger firms appear to hold substantially greater net worth as a proportion of their capital structure.

While the observations above apply to the specific industries profiled in Table 1, a closer look at the RMA data indicates that these same themes run through most other industry sectors tabulated. Were averages to be calculated for all 280,000 financial statements used to produce the composites in the RMA study (though this has not been undertaken here), it is suggested that the distinctions between large and small firms noted above would bear statistical significance. In fact, research has confirmed substantial differences in working capital structures and strategies between large and small firms, and public versus private firms. Gogineri, Linn & Yadav (2012) found cash holdings in UK-based private firms varied significantly depending on business size and cash flow volatility. In addition, research by Hill, Kelly & Highfield (2010) suggests that working capital strategies vary markedly depending on a firm's access to capital markets, certainty of sales, stage of growth, internal funding capacity and costs of external financing.

The relevance of this type of statistical analysis in the transaction setting is twofold. First, the statistical data available by industry sector and size are a logical starting point in assessing the working capital accounts of the acquisition target. Second, the size differences between large and small entities point to possible synergies for in-market transactions where a larger entity is contemplating the purchase of a smaller one. For example, the larger entity may have the leeway to stretch payments to suppliers, to offer credit terms to customers and to adjust short-term capital structure (cash and operating loans) of the target company post-acquisition. Synergies, or added value that the purchaser brings to the transaction are considered later in this paper in terms of their likelihood of being realized and paid for in a transaction.

Section 2: Adjusting industry metrics to the particular business

While industry data of the type compiled by RMA can provide a useful starting point for evaluating the structure and adequacy of working capital for a target acquisition, they have important limitations that should be addressed. One concern is the significant dispersion of results that go into the averages calculated. As an example, consider only the current ratio for each of the sectors listed in Table 1. These ratios are actually the *median* values for the large (over \$25 M in sales) and small companies (under \$1 M in sales) within each sector. But measures of central tendency, such as the median, are less representative of a sample when the data show wide variation. Table 2 presents the same current ratios as in Table 1 but also provides the values that delineate the bottom of the first, second and third quartiles. Taking *Agriculture–Wheat Farming* as an example, among those companies with sales of less than \$1 million, 25% had current ratios above 3.2, 50% were above 0.6 and 75% were above 0.1. This means that only half of all companies in the sector had current ratios between 3.2 and 0.1 – an enormous range, with the other half of companies falling above or below these thresholds. For the larger wheat farmers with sales greater than \$25 M, the corresponding current ratios were 2.4, 1.4 and 1.2 at the quartiles, a somewhat tighter range. However, even among the large utilities, for which relatively stable working capital might be expected, half had current ratios either above 2.3 or below 0.7. Clearly, this highlights the risk in using statistical data as a proxy for

Table 2
Selected Current Ratios by Industry Sector and Annual Sales

Industry Sector	NAICS (1)	Annual Sales			
		\$0-1 million		> \$25 million	
		Quartile	Current Ratio	Quartile	Current Ratio
Agricultural - Wheat Farming	111140	Q1	3.2	Q1	2.4
		Q2	0.6	Q2	1.4
		Q3	0.1	Q3	1.2
Mining - Construction Sand and Gravel	212321	Q1	5.8	Q1	3.3
		Q2	2.2	Q2	2.2
		Q3	0.4	Q3	1.4
Utilities - Water Supply and Irrigation	221310	Q1	4.2	Q1	2.3
		Q2	1.9	Q2	1.8
		Q3	0.8	Q3	0.7
Manufacturing - Structural Metal	3312312	Q1	2.8	Q1	2.4
		Q2	1.7	Q2	1.6
		Q3	0.4	Q3	1.2
Wholesale - Sporting, Recreational Goods	423910	Q1	6.1	Q1	2.9
		Q2	2.0	Q2	1.9
		Q3	1.1	Q3	1.2
Retail - Hardware Stores	444130	Q1	5.5	Q1	3.0
		Q2	3.2	Q2	1.8
		Q3	1.7	Q3	1.4
Transportation -Freight, Trucking, Local	484110	Q1	1.8	Q1	1.7
		Q2	0.7	Q2	1.2
		Q3	0.1	Q3	0.9
Information - Data Processing, Hosting	518210	Q1	5.3	Q1	2.1
		Q2	1.1	Q2	1.2
		Q3	0.4	Q3	0.8
Finance - Consumer Lending	522291	Q1	2.9	Q1	4.5
		Q2	1.9	Q2	1.8
		Q3	1.2	Q3	1.4
Professional Services - Advertising Agencies	541810	Q1	1.5	Q1	1.5
		Q2	0.7	Q2	1.1
		Q3	0.2	Q3	1.0
Healthcare - Medical Laboratories	621511	Q1	2.7	Q1	2.7
		Q2	0.5	Q2	1.7
		Q3	0.1	Q3	1.0
Entertainment - Fitness/Recreation Centers	713940	Q1	1.9	Q1	1.6
		Q2	0.6	Q2	0.8
		Q3	0.2	Q3	0.4
Other Services - Funeral Homes/Services	812210	Q1	4.1	Q1	10.7
		Q2	1.2	Q2	5.3
		Q3	0.4	Q3	2.4
Construction - Indust Buidling % Completion	236210	Q1	1.9	Q1	2.1
		Q2	1.3	Q2	1.5
		Q3	1.1	Q3	1.2

Source: RMA Annual Statement Studies: Financial Ratio Benchmarks 2012/13
(1) North American Industry Classification System

normal or representative working capital – let alone what it ought to be for a specific acquisition target.

This degree of data dispersion should not come as a surprise to business valuers. After all, the context in which valuers appeal to industry financial statistics perhaps most often is in the use of comparable trading and transaction multiples. There, the object is to identify companies that most closely resemble or ‘compare’ with the company that is the subject of the valuation and to borrow from their multiples or capitalization rates (e.g., P/E, P/BV, P/CF, TEV/EBITDA¹) as a proxy to be used with the subject company. Experience tells us that it is fairly common in valuation opinions to lay out the multiples derived from the comparables and then conclude, based on examination of the other businesses, that few if any are directly comparable to the company being considered. Comparable multiples analysis, like the comparable working capital analysis considered here, is at best indicative.

Given the observed variability in working capital measures among companies in the same sector, an important focus of due diligence is to uncover those factors that explain why the target company appears to have a unique working capital profile and why its accounts might be maintained at levels that are appropriate for *its* business, despite discrepancies with industry averages. Examples abound, but here are a few that I have encountered:

- A company acts as a broker and a proprietary trader of grains – sourcing, marketing and transporting grain in Canada through several locations. The company consciously maintains inventories of grain that are well above industry averages. This is due to its desire and ability to make significant purchases in bulk at opportune times when prices appear attractive.²

¹ Respectively: price/earnings; price/book value; price/cash flow; total enterprise value/earnings before interest, taxes, depreciation and amortization.

² Fernandez (2011) argues that when inventories consist of liquid commodities such as grain or seeds, inventories in excess of working capital requirements are common and the failure to recognize the nature of these as ‘futures contracts’ can result in undervaluing the company.

- A public relations agency requires large up-front fees from its clients as good faith deposits towards professional services. It maintains this policy both for cash flow purposes and to ensure the commitment of its clients. As a result, its current liabilities show customer deposits that are well above those of its competitors.
- A tool and die manufacturer derives a significant portion of its income from SR&ED³ receipts from the Canadian government, as it spends appreciably more on R&D than its competitors and considers this a competitive advantage. It recognizes these receipts as accounts receivables as soon as the government confirms it will reimburse the expenditure.
- A firm that fabricates rail car parts also repairs and remanufactures rail cars and locomotives. The company carries a high parts inventory, including items that have been held for several years. Management does not consider these inventories to be obsolete, maintaining that there is considerable likelihood that they will be deployed for future repair and refurbishment contracts on older locomotives.

Section 3: Understanding the relationship between working capital and going concern valuation

M&A practitioners often miss the critical connections between going concern business valuation methods and the level of working capital implied by those assumptions. Litvak & Mathieu (2006, p. 42) state that working capital adjustment mechanisms in the transaction setting are intended “to ensure that the buyer will receive the amount of net assets that existed when the purchase price was determined”. With respect, this is only correct in instances where the purchase price is based entirely on the net assets of the company and not on cash flow, EBITDA, EBIT or earnings. For most going concern businesses, the current assets and liabilities transferred on the completion of a sale transaction should be as close as possible to those required to generate the ‘flows’ on which the valuation is primarily based. Ideally, the terms on closing should facilitate a seamless hand-off, such that the purchaser neither injects nor extracts

³ The Scientific Research and Experimental Development program is administered by the Canada Revenue Agency and offers federal tax incentives to encourage Canadian businesses to conduct R&D.

cash to keep the business going at the current level of activity. To do otherwise is effectively to adjust the purchase price unintentionally.⁴ Unfortunately, the level of net working capital required to maintain the business's cash flow stream is unlikely to be the exact level that existed either at the time the deal was struck or even at the time of closing. This is central to the challenge of determining the appropriate level of net working capital in an M&A deal.

Working Capital and TAB

As Table 1 showed, the level of net working capital required to run a business can vary greatly. Professional services and healthcare businesses may carry little in the way of inventory and sell on a cash basis with no receivables to finance. For these businesses, trade payables may actually represent negative net working capital. Here, an argument is often made that a sale transaction would unduly favour the seller if the transfer were done with negative working capital versus, say a manufacturing entity that must convey significant receivables and inventory to transition the business seamlessly. Doesn't the seller of the professional services firm burden the purchaser with an eventual liability should the company ultimately be liquidated? The answer is that this consideration is already incorporated into the valuator's concept of tangible asset backing ("TAB").⁵ As Campbell & Johnson (2001) explain, TAB is a factor to be considered in the risk measurement, such that a higher TAB, all considered, implies lower risk to the operating entity, warranting a lower capitalization rate (higher multiple). In essence, every business faces some risk of dissolution and the probability of that occurrence multiplied by the realization of TAB in such circumstances represents a put option to the equity holders of the firm. The point here is that the TAB, insofar as it is represented by working capital, should be incorporated in the risk assessment of the going concern being acquired – *not* into an assessment of the working capital necessary to run the business or to be transferred at closing.

⁴ In the transaction setting, as in notional valuations, there is a distinction between going concern valuations and those pertaining to distressed or insolvent situations where the realizable value of net assets is of immediate importance. In the latter, the object is not to convey or fund a continuing operation. Rather, the purchase price is based on the proceeds after wind-down, taxation and realization costs.

⁵ TAB is defined as the amount by which the fair market value of tangible and identifiable intangible assets of a business, determined on the basis of their value in continued use exceeds the fair market value of the liabilities of the business (Campbell & Johnson (2001), Glossary of Defined Terms).

Valuation versus financing decisions in working capital

Business valuation principles generally follow the tenets of corporate finance scholarship in separating valuation from financing decisions. Modigliani & Miller (1958) were among the first in the academic field to assert as “Proposition 1”, that a firm cannot alter the value of its total assets by simply splitting its cash flows into separate streams with different securities.⁶ This led Brealey, Myers & Franklin (2008) to conclude that the choice of capital structure is fundamentally a marketing problem by which issuers look for the optimal combination of securities to attract investors.

In business valuation methodology (and M&A practise) there is no better example of this principle than in the use of “enterprise value” (“EV”) to determine the value of an entity. EV is the total value of a business, including both its equity and its net interest-bearing debt. By “net”, it is implied that interest-bearing cash is first deducted from debt. Thus, among the most commonly used methods of valuing going concern entities are capitalization methods that compare EV to EBITDA and EBIT. Note that, in order to compare apples with apples, the numerator in the EV/EBITDA ratio includes all capital required to run the business, *less* redundancies that are adjusted to account for excess cash or debt, while the denominator correspondingly considers the flows that accrue to all financial stakeholders, without distinguishing between equity and debt income streams. The same principle is followed in the discounted cash flow methodology, where all cash generated in the forecast is notionally “extracted” from the forecast and present-valued, not to be held in the business. Capital structure issues are handled in the discount rate and are typically the subject of a weighting of the debt and equity.⁷

It is submitted that working capital in the M&A context should be viewed on the same basis, i.e., that the operating accounts such as receivables, inventories, payables and accrued liabilities

⁶ M&M of course conceded that matters such as tax-deductibility of interest and the risks of financial distress from heavy reliance on debt could have significant impacts on business value.

⁷ In some instances, a multiple-of-net-earnings methodology may incorporate cash flows from redundant cash, though an argument can be made that some notional adjustment is made for this redundancy in the capitalization rate to reflect the lower risk and lower return of maintaining excess cash in the company.

should be considered after excluding short-term debt or cash.⁸ The latter simply finance (or are financed by) the operating accounts. Arguably, the inclusion of cash and funded debt (e.g., by the likes of RMA) in tabulating current ratios tends to obfuscate the underlying relationships among working capital accounts in comparison to income statement flows. In this respect, it may be more useful to focus on days of receivables relative to sales and days of payable relative to COGS, both of which compare specific accounts levels directly to sales and cost of goods sold. Birnbaum (2007), in assessing the valuation impact of excess working capital, comments on the same concern, recognizing that “the RMA companies may have excess working capital, which would tend to skew the ‘normal’ level of working capital upward” (p. 16). Birnbaum’s solution is to follow the advice of Boer (1999) and concentrate on the “cash gap”, defined as the number of days of inventory and receivables minus the number of days of accounts payable.

Often, a purchaser will argue that a cash buffer of some magnitude should be included as part of the on-going working capital transferred on the sale of a company, without having to make an upward adjustment in the consideration paid for the business. The rationale put forward is that the buffer is needed to guard against the effects of volatility in cash in-flows and out-flows in the ordinary course of business. But the answer to this is simply to envision a company that borrows by way of overdraft. On any given day, the business will be in debt or in cash, but the average balance over time should still net to zero, as long as appropriate working capital is transferred on closing.⁹

An interesting case arises with businesses that collect regular deposits for work to be performed in the future. Sometimes these arrangements are accounted for as deferred revenues that appear in current liabilities. The purchaser of such a business may argue that the assumption of this liability to deliver goods after closing should be accompanied by a transfer of the cash that has already been collected for that contract. But the contrary argument can be made that the seller

⁸ In certain cases the line between operating accounts and financing accounts becomes blurred, for example where credit terms on trade receivables or payables constitute a significant source of financial income (or expense). The extreme case is that of financial institutions whose trade accounts are actually financial accounts, though this exception is beyond the scope of this paper.

⁹ Perhaps the one weakness in this position is that companies with very large swings from borrowing to lending will lose out on the spread between borrowing and lending rates in the market.

should likewise retain the right to collect all accounts receivable, which are really cash collections pertaining to work that was funded, performed and recognized as revenue while still under the seller's control. The real issue should be to determine what the on-going net working capital position is likely to be going forward. If the deferred revenue represents a one-time business transaction (i.e., of a type that is not likely to recur), it is reasonable that the cash should go to the obligor responsible for delivering on the obligation (i.e., the purchaser of the business). If, however, the business consistently carries a balance in deposits or deferred revenue, it is reasonable to assume that it will continue to be a source of financing in the purchaser's hands just as it was for the seller. In this case, the logic mirrors that of accounts payable, where remittances to regular suppliers are the responsibility of the purchaser of the business after closing, even though the supplies were used by the seller of the business prior to closing.

This is not to say that cash or debt should never be assumed as part of the actual transaction settlement – only that they should be accounted for by a direct adjustment to the value of the entity, otherwise determined. In effect, redundant cash that is transferred to the purchaser in an M&A transaction should be accounted for dollar-for-dollar. Fishman & Pratt (2006) posit that this logic holds for private companies, but that public markets tend not to value excess working capital fully, since small public investors have no control over changes to the capital structure. While this may be true in the case of public companies where control is dispersed, it is not so in the case of a takeover or acquisition of control with which we are concerned here – the purchaser in an M&A transaction generally assumes the ability to effect all strategies going forward, including working capital. In this regard, Smith (1990) examined the operating performance of 58 publicly-held companies following buyouts by management and found that increases in operating returns were due more to adjustments in working capital and operating efficiencies than to layoffs or reductions in expenditures for maintenance, R&D, advertising and property, plant and equipment.

Special interest purchasers and the valuation of synergies

As distinct from redundancies in working capital that can be adjusted for fairly easily, certain improvements may be available to the purchaser of the business's working capital that could not have been exploited by the seller alone. These could be of an operational nature in cases where

the purchaser is in the same industry as the seller and may, for example, pertain to preferred relationships with certain suppliers or customers, which affect trade terms. These synergies would be in addition to operational savings that impact the income statement through enhanced operating margins. Alternatively, working capital synergies could derive simply from a size advantage that a purchaser enjoys in negotiating with smaller trade partners. Hamlin & Heathfield (1991) found in their research that many firms possess a competitive advantage in their ability to retain flexibility in the time structure of their production and to competitively manage their working capital.

As is the case with all synergies that accrue to strategic purchasers, business valuation doctrine cautions us regarding economic benefits that are peculiar to ‘special interest purchasers’ if the effect might be to increase the fair market value of the target. As Campbell and Johnson (2000) point out, such purchasers should be ‘qualified’ in the sense that they can be shown to have the appetite and financial ability to effect a transaction, the value-added benefits accruing to them should be quantified (likely to different degrees, depending on the purchaser) and some probability should be assigned to the likelihood of purchasers actually pricing these benefits into a transaction based on competitive dynamics. In most cases, there are relatively few ‘qualified’ purchasers available with true sector-specific operating synergies, though there may be several buyers of sufficient size that can find working capital synergies based on lower capital costs, better financial management or greater influence over customers and suppliers.

Even in cases where the purchaser is willing (or required) to pay for synergies in working capital, it is more likely that the value of these synergies will be factored into the negotiation of the overall purchase price rather than being incorporated into specific adjustments on closing for anticipated improvements in working capital.

Section 4: Closing working capital and issues of agency

Public versus private company transactions

A business combination involving a publicly-traded target is normally structured either as a takeover bid or as a plan of arrangement. In either case, the company or the acquiror provides

information to the shareholders of record stipulating a purchase price for the shares of the corporation as well as the various terms of the transaction. Compared with private acquisitions, business combinations involving public companies follow more complex legal and regulatory procedures designed to provide information and financial protection to minority shareholders and culminating in a tender of shares or shareholder vote to implement the deal. However, the mechanics of the actual exchange itself are normally straight forward – the purchasing shareholder typically steps into the same shoes as the selling shareholder with all rights of ownership transferred.¹⁰ Extraordinary dividends prior to closing are normally not part of public deals. As such, the structure for a public company acquisition usually resembles a *closed system* from the point of view of working capital. Essentially, all daily business transactions that affect receivables, payables and inventory may impact the cash account of the business (generally dollar for dollar), but all of these accounts, including cash, are transferred together on the sale. As an example, if a large trade account receivable were to be collected the day before closing, the value of this would move from the accounts receivable account to the cash account, but the net effect to the purchaser would be negligible – the constituents of working capital might change but not the net balance.

Private deals often come with complexities in deal structure that are not features of public takeovers. The most obvious complexity is the prevalence of extensive representations, warranties and indemnities that the seller undertakes in favour of the purchaser. This added burden for the seller in private deals can sometimes be attributed to the disparity of information that exists between seller and buyer, since the seller is often an owner-manager, founder or corporate entity with special knowledge about the business, who is planning to exit. The parties to the deal recognize that some measure of responsibility should rest with the seller should the assets or prospects prove to be other than as represented. With public deals, where ownership is widely held, information disparity is less an issue. In addition, practically speaking, there is little means available to hold the retail and institutional owners of a widely-held company responsible and no incentive for them to sell their shares if they were to remain on the hook for any legally-enforceable undertaking.

¹⁰ Subject, of course, to the tax position of the shareholder.

Along with risk allocation are differences in what is actually being transferred in a private company deal. Redundant assets often remain with the seller, as may certain receivables, long-dated payables, warranty obligations or even fixed assets. Funded bank debt may be required to remain with the seller or be discharged prior to closing in a share sale. Perhaps most significant, net cash on closing often stays with the seller. In this sense, private deals often resemble *open systems*, since settlement of receivables and payables prior to closing impacts the cash account which the seller retains on closing.

“Managing” working capital up to closing

As discussed above, the analysis and valuation of working capital is best done by separating the operating accounts from the financial issues concerning cash and debt levels. Of course, the separate treatment of excess cash is not only a principle in valuing businesses, but is often a practice on closing M&A transactions, particularly in the case of private companies. Thus a typical transaction might utilize an EV/EBITDA valuation methodology to determine purchase price and then permit the seller to retain the cash on closing on the rationale that the interest on that cash was never part of the EBITDA on which the purchase price was based.

An unintended consequence of the having the seller retain the cash on closing is that it introduces a potential conflict of interest as to how the business is managed in the weeks or months prior to closing. A seller looking to retain the cash on closing will have no incentive to be hasty in remitting payment on trade payables and may be especially diligent in the collection of receivables, since both of these activities have a direct effect on the level of cash to be withdrawn. The seller’s gain is, understandably, the purchaser’s loss – if payables are artificially stretched and receivables shortened prior to closing, the purchaser will effectively have to fund this difference when the working capital accounts inevitably revert to their normal levels after the transaction has been completed. The risk of the seller managing the net working capital lower in the weeks before closing underscores the need to establish appropriate levels for all accounts ahead of time.

Section 5: Determining the appropriate or “reference” working capital for the transaction

As presented earlier, the level of net working capital to transfer on the sale of a going concern business should be what is needed to continue running the business as is— no more, no less. In addition to industry statistics that can serve as broad guidelines, evidence of what a particular business requires by way of working capital can be gleaned by reference to its historical financial statements. Analytical research by Fernandez (2011) demonstrated that, for seasonal companies in particular, examination of month-to-month patterns is critical.

For illustration, Table 3 introduces Home & Trade Inc. (“H&T”), a retailer and distributor of hardware and home renovation products. The company operates a network of 40 corporate-owned retail stores under the H&T banner as well as four distribution centres that focus on hardware and construction materials. Retail business makes up 75% of sales and distribution accounts for the balance of revenues. Sales in the months of October through March are typically weaker than sales in the period April through September, due to the lower level of activity in the renovation/construction sector in the winter. In addition, weather can impact sales, as can the price of lumber and other building materials. In total, H&T carries over 150,000 different products from almost 1,000 suppliers.

What is immediately apparent from the monthly data in Table 3 is the extent of seasonality experienced by H&T in the level of its working capital accounts, driven by the higher sales activity during the warmer months of the year when the renovation and construction markets are more active. Inventories build noticeably during the spring months and net working capital (excluding cash and operating loans) remains high until receivables balances decline in the fall. The monthly history illustrates how the June 2013 balances return to those of June 2012, subject to some growth in the business during the year, and that the ratios are quite similar on a year-over-year basis (e.g., June-over-June). The far, right-hand column of Table 3 shows the averages of all working capital accounts over the 12 month-ends from July 2012 to June 2013. It can be seen that the averages of the 12 month-ends are considerably lower than the balances at June 2013 for all of the trade related accounts, including receivables (\$39.9 M versus \$49.0 M at line 2), inventories (\$138.4 M versus \$164.2 M at line 3) and payables (\$61.6 M versus \$72.3 M at line 8). Notice, however that net working capital (including all current accounts) remains

Table 3
Home &Trade Inc. (H&T) Monthly Working Capital

Line	\$ in 000s	2012						2013						12-month ave(1)	
		June 30	July 31	Aug 31	Sep 30	Oct 31	Nov 30	Dec 31	Jan 31	Feb 28	Mar 31	April 30	May 31		June 30
<u>Current Assets</u>															
1	Cash	-	-	-	-	22,473	22,647	25,772	24,859	10,542	-	-	-	-	8,858
2	Trade and other receivables	48,027	46,592	44,377	42,338	38,532	35,007	34,708	31,748	32,997	35,758	41,221	46,143	49,032	39,871
3	Inventory	160,998	155,437	146,579	135,437	125,487	115,648	103,765	110,648	135,073	146,753	159,884	162,002	164,165	138,407
4	Prepaid expenses	20,785	20,785	21,647	22,554	19,776	20,739	22,647	23,776	23,776	22,642	21,862	20,963	21,287	21,871
5	Total Current assets	<u>229,810</u>	<u>222,814</u>	<u>212,603</u>	<u>200,329</u>	<u>206,268</u>	<u>194,041</u>	<u>186,892</u>	<u>191,031</u>	<u>202,388</u>	<u>205,153</u>	<u>222,967</u>	<u>229,108</u>	<u>234,484</u>	209,007
<u>Current Liabilities</u>															
6	Bank Overdraft and Operating loans	30,178	26,869	15,792	3,967	-	-	-	-	-	11,538	26,472	26,997	32,187	11,985
7	Current portion of long-term debt	12,167	12,167	12,167	12,167	12,167	12,167	12,167	12,167	12,167	12,167	12,167	12,167	12,167	12,167
8	Trade payables	71,032	68,735	65,431	62,487	57,426	50,563	47,435	52,113	62,179	65,838	66,557	68,548	72,256	61,631
9	Warranties payable	16,473	15,747	18,536	17,583	17,231	18,426	15,475	16,389	16,413	15,775	16,443	17,447	16,416	16,823
10	Current taxes payable	1,564	1,537	1,546	1,636	1,538	1,643	1,554	1,633	1,534	1,753	1,625	1,598	1,531	1,594
11	Dividends payable	-	-	-	-	-	-	2,000	2,000	2,000	2,000	2,000	2,000	-	1,000
12	Provisions and contingencies	2,600	2,654	2,758	2,645	2,579	2,597	2,698	2,721	2,660	2,549	2,648	2,859	2,587	2,663
13	Total Current Liabilities	<u>134,014</u>	<u>127,709</u>	<u>116,230</u>	<u>100,485</u>	<u>90,941</u>	<u>85,396</u>	<u>81,329</u>	<u>87,023</u>	<u>96,953</u>	<u>111,620</u>	<u>127,912</u>	<u>131,616</u>	<u>137,144</u>	107,863
<u>Net working capital</u>															
14	Incl all current accounts	95,796	95,105	96,373	99,844	115,327	108,645	105,563	104,008	105,435	93,533	95,055	97,492	97,340	101,143
15	Excl cash and funded debt	138,141	134,141	124,332	115,978	105,021	98,165	91,958	91,316	107,060	117,238	133,694	136,656	141,694	116,438
16	Excl cash, debt, taxes, dividends, provisions	142,305	138,332	128,636	120,259	109,138	102,405	98,210	97,670	113,254	123,540	139,967	143,113	145,812	121,695
<u>Current Ratio</u>															
17	Incl all current accounts	1.71	1.74	1.83	1.99	2.27	2.27	2.30	2.20	2.09	1.84	1.74	1.74	1.71	1.94
18	Excl cash and funded debt	2.51	2.51	2.41	2.37	2.33	2.34	2.33	2.22	2.26	2.33	2.50	2.48	2.53	2.39
19	Excl cash, debt, taxes, dividends, provisions	2.55	2.56	2.45	2.42	2.38	2.39	2.46	2.33	2.36	2.44	2.60	2.58	2.57	2.47

Source: RMA Annual Statement Studies: Financial Ratio Benchmarks 2012/13

(1) National American Industry Classification System

fairly stable at around \$100 M throughout the year (line 14), since the cash and debt tend to balance out these fluctuations, as long as the system remains “closed”.

If we assume that a sale of H&T is set for an effective closing date of June 30, 2013, the balances reported on the balance sheet at that date will be the basis of the accounts transferred to the purchaser. However, assuming cash and debt balances are not transferred on the sale, the net working capital transferred by the seller at June 30, 2013 will be considerably higher than the purchaser will need to run the business during most of the coming year. This can be seen at line 15 of Table 3 – the net working capital (excluding cash and debt) at June 30, 2013 stands at \$141.7 M, compared with an annual average of only \$116.4 M. In essence, the seller would be transferring \$25.3 M in value to the purchaser in the form of excess net working capital, which can be viewed as a permanent excess to the extent that average balances follow the same pattern each year. Conversely, a sale with an effective date in January would leave the purchaser with a working capital shortfall of \$25.1 M (i.e., \$91.3 M versus \$116.4 M), which would require funding from the purchaser during the balance of the year.

Because the difference between the average annual net working capital and the balance at a specific date has a lasting effect on the funding needs of the business, it should be the basis of a price adjustment to the extent of the difference. An assumption here is that the historical monthly balances are representative of the ongoing business that is being purchased and that the averages from this data are appropriate to use as a “reference period”. For some companies, month-end balances may be atypical of balances *during* the month – Isidore (2005) cites the example of General Motors, which purportedly pays its suppliers on the second day of each month, resulting in net cash and accounts payable hitting their highest points at month end.

In addition to the pattern of cash flows, there may be unusual events or practices that have occurred during the reference period. If so, it will be necessary for the parties to agree on adjustments to the data, the addition of other periods to the averages, or the development of other reference data as representative. As Lawlor (1992) points out, there is no “standard” purchase price adjustment provision that will work in all cases. It may be, for example, that the seller took advantage of special ‘one-time’ discounts in the last year as a result of early payments to

one of its key suppliers. This could result in average net working capital during the reference period being overstated and a downward adjustment would be required to reflect more normal levels. In effect, normalization adjustments can be made to the historical working capital to arrive at reference working capital in the same way that valuers normalize historical earnings to arrive at maintainable earnings before applying a capitalization rate to arrive at value.

For businesses that are growing quickly, a concern may be raised as to whether a backward-looking reference period accurately depicts the working capital needs of the business currently and into the future. As Lepkowski (1980) points out, failure to account for the working capital drain caused by business expansion may lead to increased debt financing with accompanying financing costs. In the acquisition scenario, though, it is helpful to distinguish between working capital needs for future growth and needs at the time of closing. As regards *projected* requirements, there may never be a meeting of the minds between the purchaser and seller on the growth scenario for the business, particularly if corporate strategies are set to change with control.¹¹ However, there is logic to suggest that a reference working capital number based on 12 months of history may understate the *current* needs of a growing business. If, for example, the target business has been growing at 20% per annum (as reflected in both sales volumes and working capital requirements), a reference working capital requirement based on the previous 12 months may warrant a lift of 10% to account for half a year's growth.¹²

It should be noted that all of these considerations that go into determining the “normal” working capital to transfer on the closing of an M&A transaction should apply equally in determining the appropriate level of working capital to use in a discounted cash flow valuation of a business. In other words, (i) whether month-end balances are representative of working capital during the month, (ii) whether year-end balances, if used, are representative of average balances through the year, (iii) whether unusual events or practices have occurred during the period examined, and (iv) whether the growth trajectory of business activity requires additional working capital

¹¹ Query also whether the purchaser, in valuing the business, may have already factored future working capital requirements into its discounted cash flow analysis and therefore into the price paid for the business.

¹² Based on the fact that the reference period is on average six months old.

resources in the future, may all require normalization adjustments that impact the usage of cash in the future and therefore figure into the present value of the business itself.

Change of ownership adjustments to reference working capital

The final category of adjustments required in the determination of reference working capital relates to the very event of the business changing ownership. First, certain current accounts may be left with the seller rather than transferred on the sale due to issues of risk allocation. For example, there may be long-overdue trade receivables that the purchaser is not prepared to assume (or to pay for as part of the acquisition), or unusual warranties or guarantees for which the particulars are best known by the seller. In each of these cases, the seller has specific knowledge of the history or relationship underlying the receivable or payable that makes the seller better able to value or discount the risk associated with the payment. Second, there may be accounts that do not relate to the on-going business and therefore do not form part of the normal working capital. As an example, if certain premises are no longer required as a result of consolidating operations, prepaid expenses for rent may not be relevant to the purchaser going forward. In addition, current liabilities might include payables to settle certain legal disputes for which the purchaser cannot be expected to assume or understand the risk. Another payable account that is often treated as the seller's responsibility is income taxes payable and this may apply whether the sale transaction is structured as an asset or a share sale. The rationale here is sometimes that of risk allocation, i.e., that the buyer should not be expected to understand the intricacies of the seller's tax filings or have to negotiate any reassessments. Also, the buyer's tax status may be quite different from that of the seller, as would be the case in the sale of shares of a Canadian-controlled private corporation ("CCPC") to a large US-based purchaser.

Where the practice is to remove certain accounts from the ones transferred on closing, logic dictates that these accounts should also be removed from the calculation of reference working capital, since they are not part of the transaction. However, as demonstrated in the following illustration with H&T, the exclusion of accounts from both reference working capital and closing working capital has consequences in terms of the funding needs of the business going forward.

Calculation of H&T's reference working capital

Coming back to the case of Home & Trade Inc., we can see that net working capital averages \$101.1 M based on the average of the 12 month-end balances from July 2012 to June 2013 (line 14 of Table 3). Let's assume that these month-ends do not require 'normalizations' for unusual events, such as unplanned inventory bulges or stretched payables. This average includes all current accounts as reported on H&T's balance sheet and in accordance with their normal seasonal patterns. Table 3 shows that H&T's current ratio including all current accounts averages 1.94 for the 12-month period, reaching a low of 1.71 in June (line 17). Table 4 shows that these values are similar to the RMA industry averages for retail and wholesale establishments involved in the hardware, lumber and home centre sectors. However, as Table 4

		Current			
		Ratio	Days A/R	Days Inv	Days A/P
<u>RMA Ratios for Companies over \$25M Sales</u>					
Retail	<u>NAICS (1)</u>				
- Home centers	444110	1.5	28.0	65.0	22.0
- Hardware stores	444130	1.8	15.0	135.0	36.0
Wholesale					
- Lumber, plywood, wood panel	423310	1.7	34.0	55.0	15.0
- Hardware	423710	2.0	42.0	101.0	33.0
<u>H&T Ratios (2)</u>					
- Based on closing balances at June 30, 2013		1.9	37.3	169.3	74.5
- Based on 12-month average account levels		1.7	30.3	142.7	63.5
<u>Memo: H&T Current Ratio excluding cash and short-term debt</u>					
- Based on closing balances at June 30, 2013		2.5			
- Based on 12-month average account levels		2.4			
Source: RMA Annual Statement Studies: Financial Ratio Benchmarks 2012/13					
(1) National American Industry Classification System					
(2) Assumes sales of \$480 million for the 12-months ended June 30, 2013 and cost of goods sold of \$354 million					

also illustrates, H&T's days of receivables, inventories and payables are all considerably higher than the RMA comparables. This demonstrates the importance of looking behind the simple current ratio and inquiring as to why H&T carries balances that exceed others in the industry.

Following our earlier rationale, the cash and short-term debt accounts can be excluded so that only operating accounts are included, resulting in the net working capital average of \$116.4 M for the trailing 12-month period (line 15). Now consider that the purchaser may wish to exclude certain current liability accounts from the transaction based on issues of risk allocation or relevance to the way the new owner will run the business. In particular, the purchaser may want to exclude H&T's dividends payable (line 11), provisions and contingencies (line 12, current taxes payable (line 10) and warranties payable (line 9).

- (i) *Dividends payable*: This account represents the payment of amounts to the selling shareholder for profits earned and is a return of capital unrelated to the on-going operations. Clearly, this should not be part of reference working capital nor assumed by the purchaser. Typically this will be paid to the seller on closing, out of the excess cash that the seller would otherwise be entitled to anyway.

- (ii) *Provisions and contingencies*: H&T has liabilities related to various legal actions in process that are expected to be paid in the next year. Although legal disputes are a feature of H&T's business, the purchaser may argue that the seller has a better knowledge of these actions and their likelihood of success than the purchaser can be expected to understand through normal due diligence. Therefore, as a matter of risk allocation, these liabilities are probably best left with the seller. Consistent with this, the purchaser and seller will likely have "normalized" the expense associated with these lawsuits, i.e., in determining maintainable earnings or EBITDA, the legal expense will have been added back before applying the relevant multiple or capitalization rate to determine transaction value. In effect, the purchaser will have paid for a business that did not have this legal liability or expense and should therefore not have to inherit it.

(iii) *Warranties payable*: H&T offers certain limited warranties to its trade customers that go beyond the warranties of its suppliers. These warranties are provided as incentives to building contractors and they have proven to be a competitive advantage in driving business. From a valuation perspective these warranties can be viewed as a feature of the on-going business and the expense associated with them should reduce the maintainable earnings and the price that purchaser is paying for the business. On this basis, the warranty obligations reflected in working capital should be assumed by the purchaser and be included in reference working capital.

(iv) *Taxes payable*: H&T remits its income taxes each month but carries a liability at the month-end. The purchaser might assert that this liability should not be considered in the calculation of reference working capital or transferred on closing. Practically, this view often prevails. In asset transactions, this is a logical result, since the entity that owes the taxes is not being purchased. But if the purchaser of H&T is buying shares, the rationale is not as clear. In regard to risk allocation, the purchaser may argue that it cannot be responsible for the details of taxes filed previously by the seller. However, the finance personnel most familiar with H&T's taxes are likely remaining with the business and the seller is probably providing reps and warranties on taxes, both current and historical, as part of the PSA. The better argument to exclude taxes payable may be based on relevance, i.e., it could be that the tax profile of the business going forward is set to change so significantly that reference to historical taxes payable are irrelevant in determining the business's working capital accounts.

This discussion of taxes payable raises important issues regarding the exclusion of working capital accounts on transfer. The suggestion is often made that taxes payable relate to earnings periods that precede the closing of the transaction and therefore should be for the seller's account. But this logic could be extended to virtually all receivables and payables for which the business transaction has already occurred and for which the revenue or expense has been accrued in an earlier period. The point here is that all payables accounts represent expenses that are recognized in one accounting period but not paid until the next. As such, they constitute a source of cash for the business – the converse is that receivables are a use of cash. Consider the

extreme case where all working capital accounts are eliminated from the transaction and from reference working capital and left for the seller to settle. Assuming the business requires positive net working capital to function, the effect will be for the purchaser to fund all of these accounts after closing in order to continue the business as a going concern. In the case H&T, this would result in the purchaser having to fund over \$100 M in working capital after closing the deal. This outcome would be fair to the purchaser only if it were part of the negotiations regarding the transaction price. If not, the cash outflow by the purchaser to fund working capital represents an investment cost in addition to the purchase price of the business.

In the case of H&T, we noted earlier that reference working capital after adjusting only for net cash, would be \$116.4 M, compared with a June 30, 2013 balance of \$141.4 M, resulting in a net payment to the seller of \$25 M on closing (line 15). The effect of removing dividends payable, provisions and contingencies, and taxes payable from both the reference working capital and from the June 30th closing numbers is to reduce the net payment to the seller from \$25 M to \$24.1 M, i.e., \$145.8 M balance at June 30th versus a 12-month average of \$121.7M (line 16).

These adjustments make sense only if the accounts removed will not form part of the sources and uses of working capital after closing. The connection here to the maintainable earnings used to arrive at transaction value cannot be overlooked. We concluded above that the warranty practices of H&T would be continued by the purchaser after closing and that they should be included in reference working capital and closing working capital. This turned, in part, on the assumption that they were also treated as an expense in determining the maintainable earnings upon which the price was negotiated. Unfortunately, the income statement assumptions upon which the buyer and seller estimate value is often not disclosed to one another (much less agreed upon) in the course of price negotiations. This makes it very difficult to assert late in the transaction process that certain working capital accounts should or should not form part of the closing adjustments. It again shows the necessity of negotiating the components and reference measures for the working capital accounts at the same time other material deal points are being settled.

Section 6: Building working capital into the transaction documentation

The final task in the deal process is to incorporate the financial and accounting matters related to working capital into the transaction documents. The basic tasks here are to lay out (i) the definition and components of what reference working capital should be, (ii) the calculation of what actual working capital is on closing (and therefore what adjustments need to be made to the purchase price) and (iii) a mechanism to true up the adjustment in cases where the actual working capital transferred is not known until sometime after the transaction has closed.

Expression of Interest and Letter of Intent

As is the case with all material deal terms, only limited precision can be achieved at the Expression of Interest (“EOI”) stage of a transaction. M&A negotiations are typically iterative processes, where the terms crystallize gradually as information exchange, due diligence and detailed analysis progress and the parties develop a trust with one another. However, it should be possible to establish at an early stage the *methodology* for determining working capital. The EOI should refer to the working capital accounts that are likely to be included or excluded (e.g., cash, operating loans, taxes payable), *or* that accounts will be those maintained in the ordinary course of business, *or* that reference working capital is to be determined according to averages based on 12 months of historical balance sheets. This discussion can be informed by the preliminary due diligence and financial statement information. As distinct from the EOI, the LOI is inclined to be more detailed and, depending on the course of negotiations, may even resemble the terms in the final PSA.

Purchase and Sale Agreement

The Appendix to this paper lays out a set of key provisions addressing working capital, which can be incorporated into the PSA. These provisions are not comprehensive of all the working capital issues in a transaction but are intended to be helpful as to structure. Capitalized terms are those requiring definition within the agreement, though not all are defined in the Appendix. H&T is used as an example, with the “NWC Reference Amount” set at \$121,695,000, which was the 12-month average of net working capital excluding cash, short-term debt, contingencies and provisions, and taxes payable (line 16 of Table 3).

In the discussion earlier, a simplifying assumption was made that the transaction had a closing date of June 30, 2013 and that the account balances were known as of that time. In practise, of course, the closing working capital balances are generally not ascertained until several weeks later when the books are completed for the closing date. Thus, in the more realistic scenario, closing working capital would be estimated at the time of closing based on the latest monthly statements at the time and a preliminary cash settlement would be made based on this estimate. In this example, we will assume that our sale of H&T is scheduled to be a simultaneous “sign-and-close”¹³ on July 31, 2013, such that the balance sheet as of June 30th is the most up-to-date at the time of closing and is therefore our best estimate to use. Following closing, the parties will still require a final “true-up” adjustment once the correct balances as of July 31st are determined.

Section 2 of the Appendix defines Purchase Price to include the adjustments in Section 4. Section 4 describes the calculation by which the Net Working Capital Adjustment (“NWC Adjustment”) is determined and paid. Essentially, if Net Working Capital at closing exceeds the reference working capital (“NWC Reference Amount”), the Seller is “credited” with this overage toward the Purchase Price and the reverse occurs if the closing Net Working Capital is less than the NWC Reference Amount. Schedule 1 to the Appendix sets out the estimate of NWC Adjustment at the closing date based on the June 30th statement. The result is that the NWC Adjustment at closing is \$24.1M in favour of the Seller, since the Seller is transferring \$145.8 M of Net Working Capital against a requirement to provide only \$121.7 M (the NWC Reference Amount). Since the actual closing date is July 31st and since the final Net Working Capital Amount will not be determined until even later, a final NWC Adjustment will need to be paid “within 10 Business Days following the date at which the Settlement Statements are final” (Section 4).

Schedule 1 is an essential component that serves several purposes. First, it is the basis of the definition of Net Working Capital, i.e., the definition section refers directly to Schedule 1. In this regard, it is important that the names given to the balance sheet accounts on Schedule 1 are the

¹³ Alternatively, transactions can be effected as a “sign-and-then-close”, where the PSA is executed some weeks or months ahead of closing. While this can make the process more manageable, it can result in some of the financial references in the PSA being more outdated at the time of closing.

same ones as used in the company's financial statements. Second, it lays out the calculation unequivocally in a way that sometimes eludes even the best attempts at legal drafting. Thirdly, the dollar values in the schedule allow the parties a means to confirm exactly what items are to be included in the accounts referred to. Note that it is the *Buyer* who is responsible for preparing and delivering the draft Closing Date Balance Sheet and Settlement Statements to the Seller (Section 3.1), since the company will have changed hands at the time the July statements are finalized. If there is any confusion over what items ought to be included in, say, accounts payable, the parties can refer to the items that made up the \$72.3 M figure in the June 30th statements. Thus, even in deals where the PSA is signed well in advance of closing and the schedule is quite dated at the time of closing, the schedule can still be used to tie dollar amounts to specific accounts for reference.

Most documents will refer to GAAP or IFRS in determining the working capital accounts. It is helpful to have the definition of net working capital include the words "consistent with past practice", since there is considerable leeway in how GAAP and IFRS conventions are applied and the addition of these words creates greater assurance that the final settlement will be done on the same basis as the reference working capital was.

The accounts listed in Schedule 1 include only those that the parties have agreed should be components of reference working capital. The assumption with H&T is that the warranties payable are included in the calculation and the dividends payable, provisions and contingencies, and taxes payable have been excluded. Also, although cash and short-term loans were excluded from the calculation of reference working capital, they are included as items on Schedule 1 in the event amounts remain in these accounts at closing, e.g., if the transaction results in a transfer of some residual cash in a bank account to which the company is entitled, the seller should receive credit for this.

Concluding Summary

This paper explores a number of issues relevant to the calculation, negotiation and documentation of working capital in the M&A context. Some of the key points discussed are:

- For going concern entities being sold, the goal should be to transfer that level of net working capital necessary to maintain the cash flow of the business on which the value or price was negotiated. As such, the purchaser should be placed in a position that is, on balance, cash neutral during the period after closing, subject to ebbs and flows of seasonality and other expected cash flow variability in the ordinary course.
- Some businesses need net working capital that is substantial while others can operate on negative working capital. This is a valuation issue that concerns the TAB of the business and therefore the risk of loss should the going concern encounter financial distress. However, this risk is not relevant in determining the appropriate level of working capital to run the going concern business and should not be the basis of a working capital adjustment on closing if the plan is to continue running the business in the ordinary course.
- Cash and short-term operating debt are best excluded from an assessment of working capital needs – they simply finance or are financed by working capital. In private deals, the seller typically retains the redundant cash on closing or else the purchase price is adjusted upwards for the amount of cash transferred. Where cash is withdrawn or credited to the seller on closing, there is an incentive for the seller to manage the business toward a lower working capital level, since this generates cash. This highlights the need to agree on appropriate levels for all current accounts rather than default to the actual levels at closing.
- In order to agree on what level of working capital is needed to run the subject business, the parties can appeal to statistical databases for guidance, though the data tend to show wide dispersion and there can be substantial differences between small and large entities even within the same sector. The real value in these statistics is to inform the due diligence inquiry.
- Transferring the appropriate level of net working capital requires that the buyer and seller agree on a reference level required to run the business and that any overage or underage

from this amount on closing will be the subject of a purchase price adjustment. Often historical monthly statements are valuable in establishing reference working capital provided this analysis is “normalized” for seasonality, extraneous events or practices.

- Sometimes issues of risk allocation cause the parties to leave certain current assets or liabilities with the seller, though care must be taken to ensure that these adjustments do not distort or alter the make-up of working capital from what is needed to run the business.
- The basic tasks in documentation are to lay out (i) the definition and components of what reference working capital should be, (ii) the calculation of what actual working capital is on closing (and therefore what adjustments need to be made to the purchase price) and (iii) a mechanism to true up the adjustment in cases where the actual working capital transferred is not known until sometime after the transaction has closed.
- Among the recommendations discussed regarding documentation, it is helpful to specify a value for reference working capital in the PSA. In addition, it is urged that the parties include a schedule laying out the working capital calculation for closing and inserting either the closing working capital values or the most recent illustrative values that can be tied directly to the accounts to be included.

Working capital is integral to the operation of the business being transferred and the settlement of current assets and liabilities in an M&A transaction directly affect the quantum of cash on closing with significant implications from a valuation perspective. Inclusions and adjustments of the working capital accounts cannot properly be negotiated outside the context of the other material deal points regarding value and transaction structure. They should therefore be dealt with as early in the process as possible.

APPENDIX

Definitions

“**Net Working Capital**” means, as of a particular date of determination, (a) the value of the categories of current assets of the Corporation listed on Schedule 1, (b) less the value of the categories of current liabilities of the Corporation listed on Schedule 1, in each case determined in accordance with [GAAP/IFRS], consistent with past practice;

“**NWC Adjustment**” has the meaning given to it in Section 4;

“**NWC Reference Amount**” means \$121,695,000;

1.0 Purchase and Sale

Upon fulfilment of the Closing Conditions but in no event later than the Closing Date, the Seller shall sell and the Buyer shall purchase, effective as of the Closing Date, the Purchased Shares on the terms and subject to the conditions of this Agreement (the “**Transaction**”).

2.0 Purchase Price

The purchase price for the Purchased Shares shall be \$ ■ (the “**Purchase Price**”) as adjusted in accordance with Section 4.0.

3.0 Settlement

3.1 Preparation. The Buyer shall prepare (or cause to be prepared) and deliver to the Seller the Closing Date Balance Sheet and Settlement Statements, in draft form within 60 days of the Closing Date.

3.2 Draft Statements. The draft Closing Date Balance Sheet and Settlement Statements will be final and binding upon the Parties unless the Seller gives notice to the Buyer of its objection thereto within 20 Business Days of its receipt. A notice under this Section shall specify in reasonable detail the disputed items and its motives.

3.3 Disputes. If the Seller objects to the draft Closing Date Balance Sheet and Settlement Statements, the Parties shall use their reasonable commercial efforts to resolve the dispute within 30 Business Days. If unresolved, the dispute shall be submitted for resolution by any Party to an independent accounting firm selected by mutual agreement of the Parties, or in the absence of agreement, to ■, Chartered Accountants (the “**Independent Accounting Firm**”),

4.0 Net Working Capital Adjustment. If the Net Working Capital at Closing is less than the NWC Reference Amount, then the Purchase Price shall be reduced by an amount equal to the amount by which the NWC Reference Amount exceeds the Net Working Capital or if the Net Working Capital at Closing exceeds the NWC Reference Amount, then the Purchase Price shall be increased by an amount equal to the amount by which the Net Working Capital exceeds the NWC Reference Amount (the “**NWC Adjustment**”). On the Closing Date, the Net Working Capital for the purposes of estimating the NWC Adjustment shall be as shown on Schedule 1. Any further NWC Adjustment payable to the Buyer shall be paid to the Buyer by Seller within 10 Business Days following the date at which the Settlement Statements are final and not subject to disputes by the Parties. Any further NWC Adjustment payable to the Seller shall be paid to the Seller by the Buyer within 10 Business Days following the date at which the Settlement Statements are final and not subject to disputes by the Parties.

5.0 Conduct of Business Before Closing

During the period from the date of this Agreement to the Closing Date, the Seller shall cause Corporation to, and the Corporation shall conduct the business in the ordinary course of business and continue to operate and maintain the business in substantially the same manner as currently operated and maintained;

6.0 Representations of Seller

6.1 Financial Statements. The balance sheets and statements of income of the Corporation for the financial years ended December 31 2010, 2011 and 2012 (the “**Annual Financial Statements**”) and the balance sheet and statements of income for the Corporation as at and for the interim period ended June 30, 2011 (the “**Interim Financial Statements**”) were prepared in accordance with [GAAP/IFRS] and fairly present the financial condition of the Corporation at the respective dates indicated and the results of operation of the Corporation for the periods covered thereby.

6.2 Liabilities of the Corporation. There are no liabilities (fixed, contingent or otherwise) of the Corporation required to be disclosed in accordance with [GAAP/IFRS], other than liabilities that have been disclosed, accurately reflected or provided for in the Financial Statements or incurred since the Interim Financial Statements in the ordinary course of business.

6.3 Debt Obligations. Except as disclosed in the Interim Financial Statements, the Corporation has no outstanding Indebtedness or Guarantee and is under no obligation to create or issue Indebtedness or a Guarantee other than liabilities incurred in the ordinary course of business. Except as disclosed in Schedule X, neither the Seller nor any other Person has outstanding Indebtedness or Guarantee in favour of or for the Corporation’s benefit.

6.4 Tax

6.4.1 The Corporation has duly prepared, and duly and on a timely basis filed, all Tax Returns required to be filed and such Tax Returns are complete and accurate.

6.4.2 The Corporation has paid on a timely basis all Taxes that are due and payable by it on or before the Closing Date.

6.4.3 With respect to any period ending on or before the Closing Date and for which Tax returns have not yet been filed or for which Taxes are not yet due and payable, the Corporation has made full provision in the Financial Statements for all Taxes that are not yet due and payable. The Corporation has made adequate and timely instalments of Taxes required to be made.

6.4.4 All relevant Tax or other Governmental Entities have issued their tax assessments to the Corporation covering all past periods up to and including the fiscal year ended December 31, 2012. No Proceeding is pending or, to the knowledge of the Seller or the Corporation, threatened against the Corporation in respect of Taxes.

6.4.5 There is no agreement, waiver or other arrangement providing for any extension of time with respect to the filing of Tax Returns, the payment of Taxes by the Corporation or the period for any assessment or reassessment of Taxes.

6.4.6 The Corporation has withheld or collected from each amount paid or credited to a Person the amount of Taxes required to be withheld or collected therefrom and has remitted those Taxes to the proper Tax or other Governmental Entity within the time required under Law.

Schedule 1
Net Working Capital

June 30, 2013 in dollars
(Closing Date Estimates)

ADD:

Categories of Current Assets

Net cash and cash equivalents	0
Trade and other receivables	49,032,000
Inventory	164,165,000
Prepaid expenses	<u>21,287,000</u>
Subtotal current assets	234,484,000

LESS:

Categories of Current Liabilities

Bank Overdraft and operating loans	0
Trade payables	72,256,000
Warranties payable	<u>16,416,000</u>
Subtotal current liabilities	88,672,000

Net Working Capital	145,812,000
---------------------	-------------

References

- Albo, W.K., Bryk, A., Pigott, A.D. (2000). *Purchase and Sale of Privately-Held Businesses*. Canadian Institute of Chartered Accountants: Toronto.
- Boer, G. (1999) Managing the cash gap. *Journal of Accountancy*, 118(4), 27.
- Birnbaum, G.E. (2007). Views on value: Excess working capital. *Valuation Strategies*, 11(2), 12-19
- Brealey, R.A., Myers, S.C. and Allen F. (2008). *Principles of Corporate Finance*. Northwestern University: McGraw-Hill/Irwin.
- Campbell, I.R. & Johnson, H.E. (2001). *The Valuation of Business Interests*. Toronto, ON: Canadian Institute of Chartered Accountants.
- Dun & Bradstreet Canada website. Retrieved June 28, 2013 from <http://www.dnb.ca/business-credit/credit-policy-portfolio-manager.html#.UcmTmMJzbmI>
- Fernandez, P. (2011). How to value a seasonal company's discounting cash flows. *European Research Studies*, 14(2), 27-52. Retrieved from <http://search.proquest.com.ezproxy.library.yorku.ca/docview/1017896019?accountid=15182>
- Financial Performance Indicators for Canadian Business, 2010 (Statistics Canada). Released April 17, 2012 and Retrieved from <http://www.statcan.gc.ca/daily-quotidien/120417/dq120417f-eng.htm>
- Fishman, J. & Pratt, S. (2006). *PPC's Guide to Business Valuations*. Practitioner's Publishing Company: Fort Worth, TX.
- Gogineni, S., Linn, S. C., & Yadav, P. K. (2012). *Evidence on the determinants of cash holdings by private and public companies*. Rochester, Rochester: doi:<http://dx.doi.org/10.2139/ssrn.2022689>
- Hamlin, A. P., & Heathfield, D. F. (1991). Competitive management and working capital. *Managerial and Decision Economics (1986-1998)*, 12(3), 207-207. Retrieved from <http://search.proquest.com.ezproxy.library.yorku.ca/docview/230050409?accountid=15182>

- Hill, M. D., Kelly, G. W., & Highfield, M. J. (2010). Net operating working capital behavior: A first look. *Financial Management*, 39(2), 783. Retrieved from <http://search.proquest.com.ezproxy.library.yorku.ca/docview/750563962?accountid=1518>
- Isidore, C. (2005). *Holes in GM's Pockets?* CNNMoney.com. Retrieved from: http://money.cnn.com/2005/12/06/news/fortune500/gm_balancesheet/
- Lawlor, W. G. (1992). How to fine-tune the purchase price without killing a deal. *Mergers and Acquisitions*, 27(1), 28-28. Retrieved from <http://search.proquest.com.ezproxy.library.yorku.ca/docview/215909195?accountid=15182>
- Lepkowski, J. K. (1980). Those illusory cash flows. *Management Accounting*, 58(10), 26-26. Retrieved from <http://search.proquest.com.ezproxy.library.yorku.ca/docview/195651333?accountid=15182>
- Litvak, J., & Mathieu, K. (2006). Key sources of post-deal bitterness. *Mergers and Acquisitions*, 41(3), 42-45. Retrieved from <http://search.proquest.com.ezproxy.library.yorku.ca/docview/215898414?accountid=15182>
- Modigliani, F. & Miller, M.H. (1958). The cost of capital, corporation finance and the theory of investment. *American Economic Review*, 48, 261-297.
- Small Business Profiles, 2010 (Statistics Canada). Released Dec 6, 2012, Retrieved from http://www23.statcan.gc.ca/imdb/p2SV.pl?Function=getSurvey&SDDS=5028&Item_Id=95788&lang=en
- Smith, A. J. (1990). Corporate ownership structure and performance: The case of management buyouts. *Journal of Financial Economics*, 27(1), 143-143. Retrieved from <http://search.proquest.com.ezproxy.library.yorku.ca/docview/231734622?accountid=15182>
- Standard and Poor's Canada website. Retrieved June 28, 2013 from <http://www.standardandpoors.com/ratings/international-public-finance-canada/ratings-list/en/eu/?subSectorCode=201§orId=1221186707758&subSectorId=1221187348157>
- The Risk Management Association (RMA) (2012) *Annual Statement Studies: Financial Ratio Benchmarks 2012/13*. Philadelphia: RMA.