



# Reconciling Purchase Price and Working Capital

*Day-to-day and seasonal fluctuations in working capital investment is always the subject of debate when closing the sale of a privately held business.*

by Frank S. Buhler

One of the challenges in buying or selling a business can be reconciling the purchase price to the day-to-day and seasonal fluctuations in working capital investment that are necessary to sustain the operation. The enterprise value of a business is generally predicated on a projection of its expected future after-tax cash flow, after accounting for investments in capital assets and working capital. In exchange for paying the enterprise value purchase price, a buyer should reasonably anticipate receiving all of the assets, net of operating liabilities, required to generate the expected future earnings and cash flow of the business.

A deal price is often agreed to well in advance of determining the actual closing date. For a firm in which working capital needs vary from day-to-day and over the course of a seasonal operating cycle, a mechanism is needed to link the level of working capital to the agreed purchase price. This issue of “what is received for what is paid” is the subject of debate in virtually every sale of a privately held business.

When a buyer values a business, it is common to think in terms of “Enterprise Value,” which means the value of the operation exclusive of both capital structure and seasonal variations in working capital. In other words:

**Enterprise Value**

- Outstanding Indebtedness (buyer assumes or is paid from proceeds)
- + Excess Cash (seller retains)
- +/- The difference between actual working capital and target working capital
- = Shareholder Value

This article explores the relationship between purchase price and working capital in situations where the working capital level expands and contracts during an annual operating cycle. The objective is to suggest an approach to quantifying the appropriate level of working capital to support the ongoing business and a post-closing purchase price adjustment mechanism that assures that what has been bargained for

is received by both the buyer and seller.

**DEFINITION OF WORKING CAPITAL**

Accountants define working capital as the difference between current assets and current liabilities. Current assets are comprised of assets that will be converted into cash within the span of one year. Typically, these assets include accounts receivable, inventory, and prepaid expenses. Current liabilities are obligations that are due within one year, which generally include trade payables and accrued operating expenses (rent, wages, salaries and benefits, etc.). For the purposes of valuation, working capital excludes cash and interest-bearing debt (i.e. current portion of long term debt and the outstanding balance on a line of credit). These items are a reflection of capital structure, rather than the business’s normal cash cycle. Both are dealt with in the determination of shareholder proceeds.

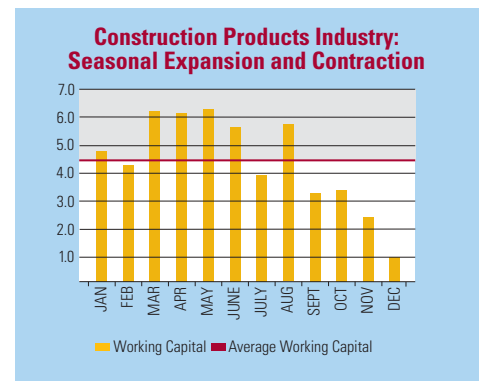
The total amount of working capital and its variability over an annual operating cycle is a function of the nature of the firm’s business. Companies obliged to extend long payment terms to customers or that have long production cycles require substantial working capital investment. Firms having the ability to demand favorable supplier terms, receive just-in-time inventory deliveries, or enjoy short production cycles require less working capital. In some cases, firms that have strong bargaining leverage with vendors and/or sell to customers on cash terms can actually have negative working capital. Weyerhaeuser and Boeing provide a good illustration of the difference between a working-capital-intensive business and a firm that can finance its current assets and more with vendor credit.

Weyerhaeuser requires about 11¢ of working capital for each dollar of annual revenue that it generates. This investment must be funded with a combination of debt and equity capital. Boeing, on the other hand, has an extra 13¢ of vendor credit for each dollar of revenue that it produces.

For many companies, the investment in working capital investment is not static,

\$ in Millions	WEYERHAEUSER	BOEING
Current Assets	5,424	19,126
Current Liabilities	2,914	26,116
Working Capital	2,510	(6,990)
<b>Total Revenue</b>	<b>22,732</b>	<b>53,955</b>

rather their requirements fluctuate seasonally, depending on production cycles and customer demand. The construction products industry is a classic example of seasonal expansion and contraction of working capital. Most companies in this industry follow the construction cycle, which is characterized by peak working capital requirements in the spring and summer months and excess funds in the winter months. The chart below



is an illustration of the seasonality of a building products firm, where working capital peaks in May and is followed by a trough in December.

**THE PURCHASE PRICE BARGAIN**

The average amount of working capital invested over the course of a full operating cycle (typically a year) is the best representation of the amount required to support the current level of sales and production. Therefore, when a buyer places a value on a business enterprise, one of the underlying assumptions is that, at closing, the balance sheet will contain that amount of working capital.

## Purchase Price Adjustment Example

The typical adjustment procedure works as follows:

\$ in Millions	CLOSING DATE	
	MAY	DEC
Enterprise Value	100.0	100.0
Actual Working Capital	6.1	1.0
Target Working Capital	4.4	4.4
Purchase Price Adjustment	1.7	(3.4)
Adjusted Enterprise Value	101.0	96.6
+ Excess Cash	-	3.4
- Debt	(1.7)	-
<b>Proceeds to Shareholders</b>	<b>100.0</b>	<b>100.0</b>

1. Contemporaneous with negotiating a price for the enterprise, a target level of working capital is agreed to by both parties;

2. At closing, the purchase price is determined based on an estimate of the balance of working capital at that time and an adjustment is made, to the extent it differs from the target level;

3. After the financial books are closed (60 to 90 days post-closing), the actual amount of working capital is determined. To the extent that actual working capital differs from estimated working capital, a final adjustment is made to the purchase price.

The bottom line is that the buyer and seller both get the value for which they bargained.

Using the hypothetical construction products business reflected in the chart, it is easy to see that a sale that closed in December would leave the business and the buyer with just \$1.1 million of working capital. Accordingly, the buyer would need to invest an additional \$5 million to fund the business through the annual cycle. Conversely, if the same transaction closed in May, the business would generate \$5.0 million of cash for the

buyer's benefit, as working capital drops to its seasonal low point. In the absence of an agreement between the buyer and seller to adjust the purchase price of the business as the amount of working capital changes, one party will be disadvantaged relative to the other. To avoid this dilemma, it is common to have a post-closing adjustment mechanism that resets the purchase price, usually on a dollar-for-dollar basis, to the extent that

actual working capital is more or less than the "target working capital" level.

Continuing the construction products business example, the average annual working capital of \$4.4 million would serve as a reasonable "target working capital." With that agreed upon, the actual timing of the sale closing has no impact on the value received by the seller or paid by the buyer, once the adjustment is made. ♦



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