

Working Capital and the Construction Industry

Fred Shelton, Jr., CPA, MBA, CVA

EXECUTIVE SUMMARY

- An understanding of working capital is crucial to understanding and analyzing the financial position of construction contractors.
- This article provides a basic primer in working capital concepts for the construction contractor.

An understanding of working capital is crucial to understanding and analyzing the financial position of construction contractors. The sureties base their bonding program to a great extent on the amount and quality of working capital available to the contractor.

Many contractors attempt to benchmark their key ratios to industry standards without understanding what the ratios or benchmarks mean.

The questions posed when examining this subject are:

- Why analyze working capital?
- What is working capital?
- How does it compare to current ratios?
- What are the concerns of the surety and the banker?
- How much working capital is enough, and how is that determined?
- Is there such a thing as too much working capital?
- Is there a consistent manner of computing working capital?
- How does a company enhance working capital?

The purpose of this article is to provide a basic primer in working capital concepts for the construction contractor.

ANALYZING WORKING CAPITAL

Why analyze working capital? Working capital, and current ratio analysis, are considered to be measures of liquidity.

Liquidity is one of the key financial statement analysis measures. The key financial statement analysis measures are generally considered to be as follows:

- Profitability
- Asset utilization and efficiency
- Liquidity
- Capital structure
- Return on invested capital

Liquidity refers to a company's ability to meet its short-term obligations. It is important that a company have sufficient working capital or access to funds to meet its short-term obligations.

WORKING CAPITAL DEFINED

Working capital is the excess of current assets over current liabilities. That leads to the obvious next question as to the definition of assets and liabilities.

Assets are defined as:

probable future economic benefits obtained or controlled by a particular

FRED SHELTON, JR. is Managing Director of Shelton & Company, CPAs, P.C., an accounting and consulting firm located in Central Virginia. The practice consists almost exclusively of audits and reviews of, and consulting with, contractors and their related businesses, including assistance with the special tax and financial problems faced by contractors. Mr. Shelton has taught courses in accounting and taxation for contractors for the Virginia Society of Certified Public Accountants, and other professional organizations, and has been a frequent guest speaker and lecturer for various trade and business groups.

entity as a result of past transactions or events.

Liabilities are defined as:

probable future sacrifices of economic benefits arising from present obligations of a particular entity to transfer assets or provide services to other entities in the future as a result of past transactions or events.

The above definitions are according to the Financial and Accounting Standards Board publication issued as Statement of Financial Accounting Concepts No. 6 titled *Elements of Financial Statements*.

Current in accounting terms does not mean imminent. It refers to the next accounting cycle, or next business year. That is usually assumed to be one year for most companies. In other words, current assets are those that can reasonably be expected to be realized in cash, or either sold, or consumed, in the accounting cycle.

CURRENT RATIO

The current ratio is computed by dividing current assets by current liabilities and is then expressed in mathematical terms.

Working capital, by contrast, is expressed as an absolute dollar amount. Both concepts are measurements or analysis of the same components of a balance sheet.

There is a mathematical oddity that occurs when comparing working capital and current ratio. One can improve the current ratio without changing the working capital.

For instance, assume a company has current assets of \$200,000 and current liabilities of \$100,000. This would result in a working capital of \$100,000 ($\$200,000 - \$100,000 = \$100,000$) and a current ratio of two to one ($\$200,000$ divided by $100,000 = 2$).

By paying \$50,000 on liabilities, the current ratio would change from two to one to three to one. Working capital would remain at \$100,000. ($\$150,000 -$

$50,000 = \$100,000$.) One must be very careful in interpreting financial ratios.

SURETIES AND BANKS

In the soft market of the 1990s, it was assumed that a contractor could obtain bid and performance bonds for almost any project. Also, credit lines and other debt were easily obtained from banks.

After the recession of last year, and post September 11th, the market has tightened. Sureties and lending institutions have instituted greater scrutiny of the key financial indicators of construction contractors. Of course, the current ratio and working capital are not the only financial indicators examined, but they have assumed a greater importance.

The sureties have a unique way of computing working capital. As part of their analysis, they will eliminate some items and add some items not considered by the accounting profession to be in accordance with generally accepted accounting principles.

Those items adjusted by the surety and not credited for the contractor are prepaid expenses, prepaid income taxes, and anything else that does not provide funds to meet a payroll. All of those items are subtracted from current assets before computing available working capital.

However, sureties will often allow one-half of the value of inventory, unless the inventory has been purchased for specific construction projects.

On the positive side, there are some items included by the surety but not normally included in working capital under traditional analysis. Those items are cash surrender value of life insurance, and marketable equitable securities not held for sale.

It is also important to keep working capital clear of bank liens. If the bank uses receivables and inventory as security, then the surety will not credit those amounts towards working capital.

Exhibit 1

Sample Income Statement and Working Capital Data

Assume the following simplified income statement of a sample electrical contractor:

Electrical Contractor—Income Statement

(data in thousands)

| | |
|--------------------------------------------------------------|---------------------|
| Revenues | \$5,000 |
| Cost of Revenues (includes 250 depreciation and 1,000 labor) | <u>4,250</u> |
| Gross Profit | 750 |
| G&A Expense | <u>545</u> |
| Operating Income | 205 |
| Less: Income Taxes | <u>72</u> |
| Net Income | <u><u>\$133</u></u> |

Assume the following balance sheet working capital data:

Electrical Contractor- Working Capital Data

(data in thousands)

| | |
|-----------------------------------|--------------|
| Cash | \$20 |
| Receivables | 600 |
| Ending inventory | 60 |
| Underbillings | 50 |
| Prepays | <u>5</u> |
| Total Current Assets | <u>735</u> |
| Current portion of long-term debt | (50) |
| Overbillings | (50) |
| Payables | (350) |
| Accruals | <u>(20)</u> |
| Total Current Assets | <u>(470)</u> |
| Working Capital | \$265 |

OPTIMUM WORKING CAPITAL

If one consults accounting textbooks, one will often find a statement that a current ratio of two to one is excellent. The Construction Financial Managers Association survey for all participating companies for the last year available, 2001, shows a current ratio of slightly over one to one (1.3 to 1).

It is important to remember that the optimum amount of working capital theoretically would be zero! If a company could

structure its finances so that the liquidity risk were somehow reduced to zero, there would be no need for working capital.

Funds invested in working capital are not as productive as operating assets.

If you can minimize working capital, you can maximize cash flow. The available cash can then be more profitably invested in the business.

However, the fact remains that working capital is needed to meet current obligations. So the question becomes, how much working capital does a business need to account for the liquidity risk, but

Exhibit 2
Computation of Asset Conversion Days

| Electrical Contractor—Asset Conversion Days <i>(data in thousands)</i> | | | | | |
|----------------------------------------------------------------------------------|-------|---------------------------|------------|------------------------------------------|-----------------------------------|
| Receivable turnover days | | | | | |
| $\frac{\text{Balance}}{600}$ | times | $\frac{\text{Days}}{365}$ | divided by | $\frac{\text{Sales}}{5,000}$ | equals $\frac{\text{Days}}{44}$ |
| Inventory turnover days | | | | | |
| $\frac{\text{Balance}}{60}$ | times | $\frac{\text{Days}}{365}$ | divided by | $\frac{\text{Mod Cost of Sales}}{3,000}$ | equals $\frac{\text{Days}}{4}$ |
| Payable turnover days | | | | | |
| $\frac{\text{Balance}}{(350)}$ | times | $\frac{\text{Days}}{365}$ | divided by | $\frac{\text{Mod Cost of Sales}}{3,000}$ | equals $\frac{\text{Days}}{(26)}$ |
| Net asset conversion days | | | | | 23 |

at the same time, not invest excess funds in the process?

COMPUTATION OF MINIMUM WORKING CAPITAL REQUIRED

There are some simple computations to be made to determine the required amount of working capital. Exhibit 1 presents a simplified income statement and balance sheet working capital data of a sample electrical contractor.

Primarily, working capital requirements of a company depend on its net asset conversion days. Or, phrasing it another way, determining its net trade cycle in days. They both mean the same thing. How long does it take to convert receivables and inventory, less trade payables, into cash?

Asset Conversion Days = Receivable turnover days (net of over/under billings), plus inventory turnover days, minus payable turnover days

Exhibit 2 presents a computation of asset conversion days. Note that the cost of revenues was adjusted to remove depreciation and labor. This is done

because depreciation and labor costs are not reflected in the trade accounts payable balances.

If the daily sales (annual sales of \$5,000 divided by 365) are \$13.7, then the required working capital would be \$315 (\$13.7 daily sales X 23 days). It appears that the company is not quite at the minimum working capital level required.

As a reasonableness check to our calculations, we can compare to a hypothetical bond program.

Many sureties will often grant a bonded program of ten to twenty times working capital. Therefore \$265 working capital times 15 would produce a bonded program of \$3,975, or close to \$4,000 in revenues. Twenty times working capital would produce a program of \$5,300. Since twenty times working capital is the maximum available, and not the norm, this surety "rule of thumb" indicates that the company is borderline, but has insufficient working capital.

IMPROVING WORKING CAPITAL POSITION

Some look for a magic bullet with which to solve problems. They think there must

be some simple formula to enhance working capital. Every element of working capital is the result of some function of the business process or cycle. All elements of a balance sheet are interrelated. If one pays down current payables, one has changed the ratio of days in cash and has also changed the current ratio.

It is important to remember that every dollar of cash spent, when expended on a non-current portion of the balance sheet, decreases working capital. Also, when cash is increased, working capital is increased, provided it does not come from current liabilities.

One of the primary ways to decrease the "need" for working capital is to decrease the number of asset conversion days.

Some other ways to improve the working capital or current ratio follow:

1. Increase cash balances with long-term debt. This is a strategy that is frequently employed in an industry that often has assets with a fair market value substantially in excess of the book value.
2. Invest in the business. This is for owners that have consistently taken large bonuses or loans from the company in the past.
3. Sell excess equipment. Many construction contractors have excess equipment that could be sold and converted into working capital. A sin worse than having excess resources in working capital, is having excess capacity in fixed assets. If the fixed asset is never used, the return on capital is zero.
4. To enhance the current ratio, without increasing working capital, pay down accounts payable.
5. Analyze inventory for slow-moving or obsolete items.
6. Have a manager hand deliver an invoice. If there are any disputes, they can be reconciled more expeditiously.

CONCLUSION

Working capital, an important liquidity indicator, has historically been a major benchmark of the surety and credit-granting institutions. In today's environment, because of the tight bond and credit markets, both institutions are scrutinizing the amount and quality of working capital more than ever. The fewer resources that need to be invested in working capital, after recognizing liquidity risk, the better. ■