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The missing piece in liquidity calculations

Why calculating the “current portion of fixed assets” would provide a more accurate picture of financial health

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A fundamental flaw in U.S. GAAP and IFRS financial reporting standards distorts the calculation of working capital and the current ratio, resulting in a significant understatement in most companies' liquidity. This outcome is detrimental not only to the companies but also to the economy overall, because it reduces the amount of credit available to businesses.

A particularly negative consequence occurs when the flaw results in the reporting of a negative level of working capital—one of the stress alarms that auditors use to determine if they should report that a company is in danger of bankruptcy. Consider this common scenario: George has \$5,000 to start a business and \$200 in his pocket. He wins a lottery for a license to own and operate a taxi. He puts \$5,000 down on a \$25,000 car and borrows the difference, \$20,000, on a five-year loan.

His balance sheet is simple:

- One current asset = \$200 cash.
- One fixed asset = the car at full value of \$25,000.
- One current liability = the current portion of long-term debt (CPLTD) of \$4,000 (one-fifth of the \$20,000 loan balance).
- One long-term liability = \$16,000 (four-fifths of the loan balance).
- Equity = \$5,200.

What is George's “working capital”? According to conventional thinking, it would be defined as current assets (\$200 cash) minus current liabilities (\$4,000 CPLTD) or a negative \$3,800. Right from the start of his business, George has a negative level of working capital. Moreover, with no inventory and no accounts receivable (since even credit cards clear in a day), George will have a negative working capital for the next five years.

The common view of this situation based on this method of calculation is that George's business is illiquid and he won't be able to repay his loan. But that's not correct.

Conventional accounting reports CPLTD among current liabilities because, logically, it is a liability due in the current period. However, that approach implies that CPLTD will be repaid from the conversion of current assets into cash.

But, in reality, George will repay his loan with the revenue that he takes in using the taxi, which is a fixed asset.

Here is the problem: The standard balance sheet fails to match the CPLTD with the fixed asset that repays it—the taxi. To truly “balance” our balance sheet in terms of what is current and what is long term, a new concept is needed—the *current portion of fixed assets* (CPFA). The CPFA is the portion of the fixed asset—the taxi—that will be used up in the current period to generate revenue. A simple accounting definition, and calculation of this concept, would be: The portion of fixed assets that will be depreciated in the current (next) period.

In this example, if we assume the taxi has a five-year useful life, George will “use up” one-fifth of the taxi each year to generate cash revenue (a different expected life only changes the calculations, not the concepts). The “current portion” of the taxi, the CPFA, thus is \$5,000 (or \$25,000 divided by five years).

Notice that, when CPFA is added to the balance sheet, as seen in Exhibit 1, each liability is now properly matched with the asset that it finances and that will repay it.

Exhibit 1 The Current Portion of Fixed Assets Approach

Current asset: Cash	\$ 200	Current liabilities	\$ 0
Current portion of fixed assets (CPFA)	\$ 5,000	Current portion of long-term debt (CPLTD)	\$ 4,000
Fixed asset: Taxi value (long-term portion)	\$20,000	Long-term loan (long-term portion)	\$16,000
		Equity	\$ 5,200
Total assets	\$25,200	Total liabilities + equity	\$25,200

As this exhibit shows, George is not illiquid. He has \$200 (for an initial tank of gas and some food) and zero “current liabilities.” He will make his first loan payment from the cash revenue he collects this month, which is generated by using the taxi.

George is not the only victim of the conventional approach to calculating working capital. Companies that have a large quantity of fixed assets and long-term debt—and therefore a large CPLTD—often appear to be tight on working capital, sometimes even reporting a negative working capital. Take CPLTD out of the equation, and their true liquidity is much rosier.

DSCR VALIDATED

“Best practices” in commercial lending use the debt service coverage ratio (DSCR) to measure repayment of long-term loans. DSCR is calculated as: (Net profit + depreciation – distributions) ÷ CPLTD.

The DSCR is a powerful ratio. It correctly captures the concept that the use of the fixed asset generates revenue that is used to repay the CPLTD. The portion of the taxi that is “used up” (depreciated) in generating revenue is effectively converted into cash flow.

However, DSCR measures last year’s depreciation expense against next year’s loan repayment. A superior DSCR would pit next year’s depreciation expense—calculated as CPFA—against next year’s loan repayment.

In George’s case, next year’s depreciation expense (CPFA) of \$5,000 will be adequate to repay the CPLTD of \$4,000. This equates to a DSCR of 1.25 ($\$5,000 \div \$4,000$) if we assume zero net profit and no distributions. At break-even (zero profit), the company generates exactly enough revenue to cover all expenses, including George’s cash expenses (fuel, repairs, interest expense and a salary) and depreciation expense.

To be clear, it is neither the depreciation expense nor the CPFA that repays the CPLTD. Revenue repays CPLTD. The depreciation expense only measures the portion of revenue that is available to repay CPLTD after all cash expenses are paid.

There is, of course, a business risk that revenue could fall short of break-even. If the company suffers a net loss, there may not be enough revenue to cover both cash expenses and CPLTD. Of course, any company that consistently loses money will have a hard time repaying its long-term debt. A policy that requires some minimum DSCR would preclude long-term loans to companies that cannot at least break even.

CURRENT RATIO CONSIDERED

If the premise is accepted that CPLTD is repaid from CPFA and not from current assets, it must follow that the current ratio is flawed by including CPLTD as a current liability that must be paid from current assets. The distortion arises from the failure to match CPLTD with its source of repayment, CPFA.

Two approaches could fix the distorted liquidity picture:

Solution 1: Focusing on the trading cycle. This approach would take CPLTD out of current liabilities, or at least adjust the calculation of working capital and current ratio accordingly. That would require inventing some new terms:

Replace working capital with: *Trading cycle capital* = current assets – (current liabilities – CPLTD).

Replace the current ratio formula with: *Trading cycle ratio* = current assets ÷ (current liabilities – CPLTD).

Solution 2: Developing a new “current ratio.” The alternate solution is to leave CPLTD with current liabilities, but calculate CPFA and report it with current assets.

Replace working capital with: *Current capital* = current assets (including CPFA) – current liabilities (including CPLTD).

Replace current ratio with: *Current period ratio* = current assets (including CPFA) ÷ current liabilities (including CPLTD).

Academics may debate whether the most appropriate treatment is (Solution 1) to move CPLTD from “current” back to long-term to match it with the fixed assets it finances; or (Solution 2) to take the portion of the fixed asset that is “current” and move it up with current assets. In either case, CPFA and CPLTD must match up.

Either approach would be an improvement over the traditional measures of liquidity, but since the approaches provide different information, taken together they provide a clearer understanding of liquidity than was previously possible. A look at how cash flows in cycles reveals the unique contributions of the approaches.

The “short-term cycle” only includes current assets and current liabilities that financed them and are repaid by them. Sometimes called “trading accounts,” these exclude CPLTD. By excluding CPFA and CPLTD from the formulas, Solution 1 provides a valuable analysis of the short-term cycle: Are current assets (traditionally defined to exclude CPFA) adequate to repay the short-term liabilities that financed them (excluding CPLTD)?

The “long-term cycle” matches fixed assets with the long-term liabilities that financed them. However, CPLTD and CPFA complicate the understanding of short-term and long-term cash flow cycles because they contain elements of both cycles, as their titles indicate: “The *current* portion of *long-term* debt” and “the *current* portion of *fixed* assets.” They are, in fact, the “the current portion of the long-term cycle,” which places them at the intersection of both time periods.

Notice that CPLTD appears in both the measure for the repayment of short-term debt—the current ratio—and the measure for the repayment of long-term debt—the DSCR. That is because the traditional current ratio encompasses both cycles, including both short-term liabilities and the current portion of long-term liabilities. The proposed “current period ratio” (Solution 2) shares this objective; however, it adds the missing piece—the CPFA—to the “current” assets, thereby pitting all assets that are converted into cash in the current period against all liabilities due in the current period.

The current period ratio (Solution 2) is therefore the closer substitute for the old current ratio. The trading cycle ratio (Solution 1)—which is a narrower measure of liquidity than the current-period ratio—can be thought of as a substitute for the old acid-test ratio (or quick ratio), which also was intended to give a narrower measure of liquidity by excluding less-liquid accounts such as inventory. However, the old acid-test ratio suffers from the same flaw as the old current ratio—it erroneously suggests that CPLTD, included as a current liability, is repaid by the current (acid) assets.

The decision going forward is not which of the two new ratios is more useful. Indeed, the greatest insight comes when the two ratios yield opposite indications. For example, a negative trading capital and a positive current-period capital would indicate that the short-term assets do not cover short-term liabilities, but the company is able to keep current because the long-term cycle is generating cash flow (CPFA) adequate to repay both the CPLTD and any shortfall in the short-term cycle. This situation may not be sustainable and may suggest that the mix of short-term and long-term debt is not optimal. Only by using the measures together is a more comprehensive understanding of liquidity possible.

SETTING THE STAGE FOR CHANGE

Discussion of these alternate approaches to assessing working capital is somewhat academic at this time because CPFA is not presently calculated and reported.

CPFA is a new concept, but it is easy to understand: It is the portion of the fixed assets that will be “used up” in the coming year to generate revenue. And it is easy to calculate: It is the scheduled depreciation for the coming year, just as CPLTD is the scheduled principal payments for the coming year.

CPFA should be part of standard reporting. Without CPFA, the traditional measures of liquidity routinely understate liquidity. AT&T, which reported a negative working capital of \$14 *billion* at year-end 2010 (\$20 billion current assets less \$34 billion current liabilities), “appears” to be illiquid, but only because CPLTD is not matched with CPFA. The “appearance” of illiquidity may not hurt AT&T, but lenders generally shy away from small and medium-size companies that “appear” to be illiquid. The suppression of credit resulting from incorrect indicators hurts not only certain companies but also the economy as a whole.

CPAs and auditors have an advantage over lenders and security analysts because they have access to the necessary raw data—the schedule of next year’s depreciation—needed to calculate CPFA and a correct current-period ratio. They should do so, because reporting a company to be illiquid or worse, near bankruptcy, based on faulty ratios is as detrimental as failing to identify a truly illiquid firm.

EXECUTIVE SUMMARY

- **A current flaw in U.S. GAAP/IFRS financial reporting standards** distorts the calculation of working capital and the current ratio, understating the liquidity of most companies.
- **Conventional financial reporting places the current portion of long-term debt (CPLTD)** among current liabilities because it is a liability due in the current period. That approach, however, incorrectly implies that CPLTD will be repaid from the conversion of current assets into cash.
- **The standard balance sheet fails to match the CPLTD with the fixed asset that repays it.** To truly “balance” a balance sheet in terms of what is current and what is long term, a new concept is needed—the current portion of fixed assets (CPFA). The CPFA is the portion of the fixed asset that will be used up in the current period to generate revenue. This year’s CPFA is next year’s depreciation expense.
- **The debt service coverage ratio, used in commercial lending, is an effective tool for measuring repayment of long-term loans.** It correctly captures the concept that the use of the fixed asset—measured by depreciation expense or CPFA—generates revenue that is used to repay the CPLTD.
- **Two possible approaches could fix the current distorted liquidity picture:** focusing on the trading cycle by taking CPLTD out of current liabilities; or developing a new “current ratio” that leaves CPLTD with current liabilities but calculates CPFA and reports it with current assets. The latter approach would require a change in financial reporting standards.

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Author bio: Senior banking adviser and trainer with a career spanning more than 30 years: 17 years in commercial banking with extensive experience in management and in commercial lending to small and medium-size enterprises (SMEs), followed by 15 years in development banking as a project manager and supervisor under contract to the World Bank and the European Bank for Reconstruction and Development. In that capacity, he supervised hundreds of millions of dollars in SME loans granted through more than 50 institutions in Eastern Europe and Central Asia, including the \$300 million Enterprise Support Project in Russia.

The Book: The concept of CPFA is only one of several discoveries that emerge from a new theory of cash flow based on *cycles*. The essence of this article is included in one of the chapters of a book on the principles of cash flow cycles, soon to be published. News of the book will be announced on www.sme-lending.com

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