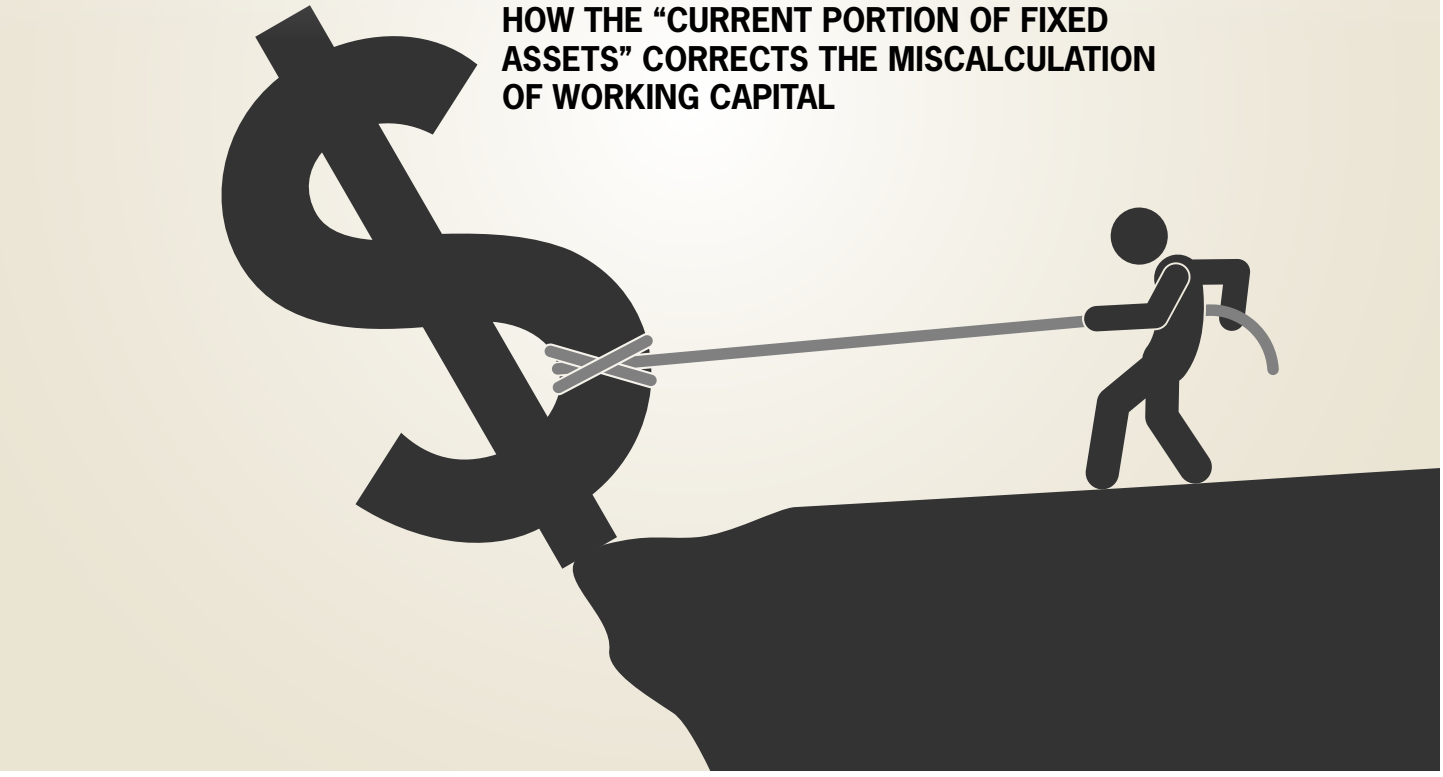
NEGATIVE WORKING CAPITAL IS *NOT* NEGATIVE—HERESY OR REVELATION?

HOW THE "CURRENT PORTION OF FIXED ASSETS" CORRECTS THE MISCALCULATION OF WORKING CAPITAL



SHUTTERSTOCK, INC.

BY STEPHEN BARTOLETTI

A CASH MANAGEMENT specialist structured a sophisticated package to reel in a major client from another bank. The package required a nominal $150,000 stand-by line of credit to cover daylight overdrafts. It would likely never be drawn. Nevertheless, the bank declined it because the company already had negative working capital of $1 million. Was this decision a correct one?

Our textbooks taught us that, in principle, negative working capital is a financial weakness, a sign of illiquidity. And yet AT&T and Walmart, with working capital of negative $5.3 billion and negative $2 billion, respectively, continue to pay their creditors and maintain top trade credit ratings.

Various explanations have been offered for the disconnect between principle and reality, but a recent discovery reveals that "negative working capital" is due to a flaw in how we calculate it.

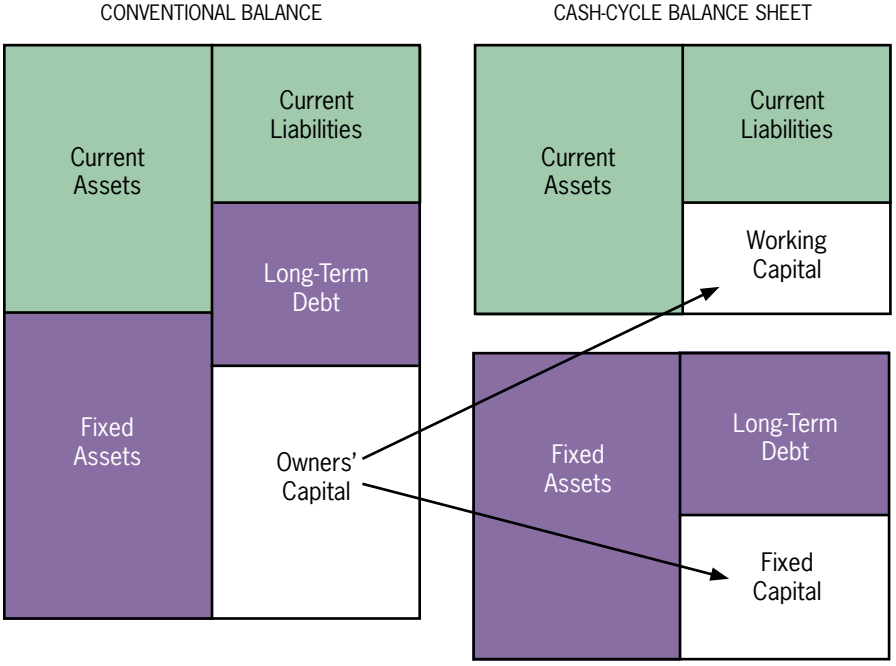
Rethinking Working Capital: The Missing Piece

Working capital has many meanings. The Cash Flow Statement isolates a small, select group of operating accounts—accounts receivable, inventory, and accounts payable—in reporting the changes in working capital. This narrow focus is appropriate and practical; nevertheless, the textbook definitions of working capital and its variant, the current ratio, continue to hold sway in banks' spreadsheets, scoring models, and loan policy manuals, and therefore they do affect lending decisions—as in the opening story. Unfortunately, the textbook definitions understate liquidity, leading to loans that are inappropriately declined.

The formulaic textbook definition—"working capital = current assets - current liabilities"—can be restated as a more practical financial concept: Working capital is the portion of owners' capital that is invested in current assets. If we extend that logic, the owners' capital not invested in current assets must be invested in fixed assets—or fixed capital—with a similar formulaic definition: fixed capital = fixed assets - long-term liabilities. The conventional balance sheet already divides assets and liabilities into short term (current) and long term (fixed). Figure 1 applies the same logic to owners' capital, dividing it into the portion invested in current assets and the portion invested in fixed assets.

THE "CURRENT PORTION OF FIXED ASSETS" IS AS MUCH A PART OF CURRENT ASSETS AS THE "CURRENT PORTION OF LONG-TERM DEBT" IS A PART OF CURRENT LIABILITIES.

FIGURE 1: DIVIDING OWNERS' CAPITAL



CPLTD and CPFA

Still, there is the meddlesome account called CPLTD, the "current portion of long-term debt," which, by name, includes both elements of "current" and "long term." CPLTD strips off a portion of long-term debt and moves it up into current liabilities on the correct logic that it is a debt due in the current period. The problem is that same logic was never applied to the left side of the balance sheet.

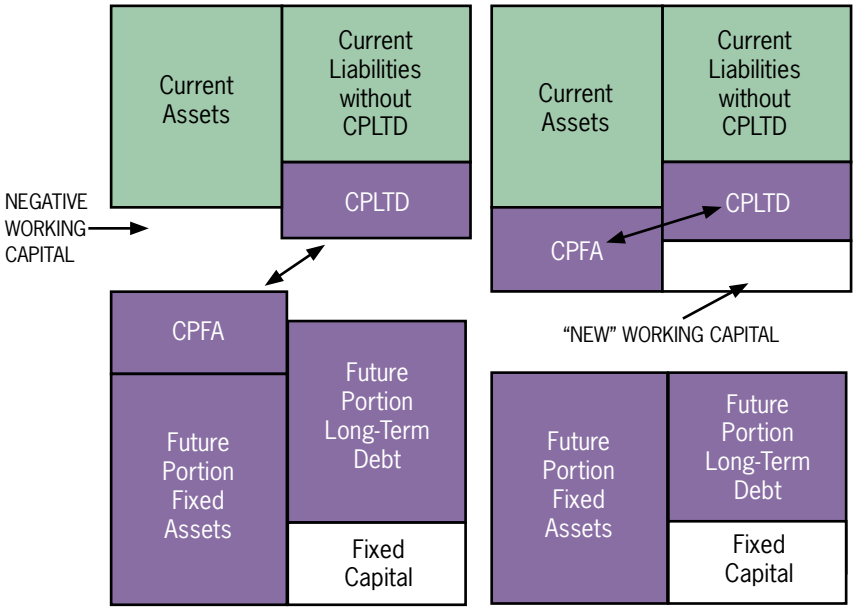
If we apply the same logic to the left side of the balance sheet, we would strip off the portion of fixed assets that will be used in the current period, giving rise to "the current portion of fixed assets," or CPFA. CPFA—the missing piece in liquidity calculations—was first revealed in the *Journal of Accountancy* in April 2012.[1]

The "current portion of fixed assets" is as much a part of current assets as the "current portion of long-term debt" is a part of current liabilities. The failure to recognize this explains the misreporting of working capital as negative. The graphic on the right side of Figure 2 illustrates that when CPFA is included among current assets, the negative working capital is eliminated.

An Illustration

Consider the simple case of Sam and Jim, who are movers. They pooled their

FIGURE 2: "NEW" WORKING CAPITAL: CORRECTING NEGATIVE WORKING CAPITAL BY INCLUDING CPFA IN CURRENT ASSETS



cash for a down payment on a truck and found a bank willing to make them a five-year loan to finance the balance. Aside from a few dollars in their pockets for gas, they have only one fixed asset: the truck. And they have one loan: a long-term loan. But conventional accounting reports one year of principal payments as a current liability (CPLTD).

With no inventory and no accounts receivable, Sam and Jim have negative working capital. They are illiquid. Are they destined to default? Of course not. They will use the truck, a fixed asset, to generate revenue to make their loan payments.

More precisely, they will "use up" one-fifth of the truck (assuming a five-year life) in the current period. This concept is already acknowledged in the income statement: The portion of the truck used up will be reported as depreciation expense at year-end. But we know at the beginning of the year what that amount is scheduled to be because all fixed assets are booked with a schedule of depreciation. Consequently, it is possible at the beginning of the year to distinguish between two portions of fixed assets: the portion that will be depreciated in the current period, and the future portion of fixed assets that will remain on the balance sheet at year-end.

CPFA CAN BE DEFINED AND CALCULATED AS THE PORTION OF FIXED ASSETS THAT IS SCHEDULED TO BE DEPRECIATED IN THE COMING (CURRENT) PERIOD.

The result is a balance sheet that better matches the duration of the assets and liabilities, as illustrated below on Sam and Jim's balance sheet.

True or false? "CPLTD must be covered by current assets because it is a current liability."

False. Sam and Jim's case illustrates that revenue does not have to flow through current assets like inventory and accounts receivable. Sam only needs to use his truck, a fixed asset, to generate cash revenue, with which he can repay his loan (CPLTD).

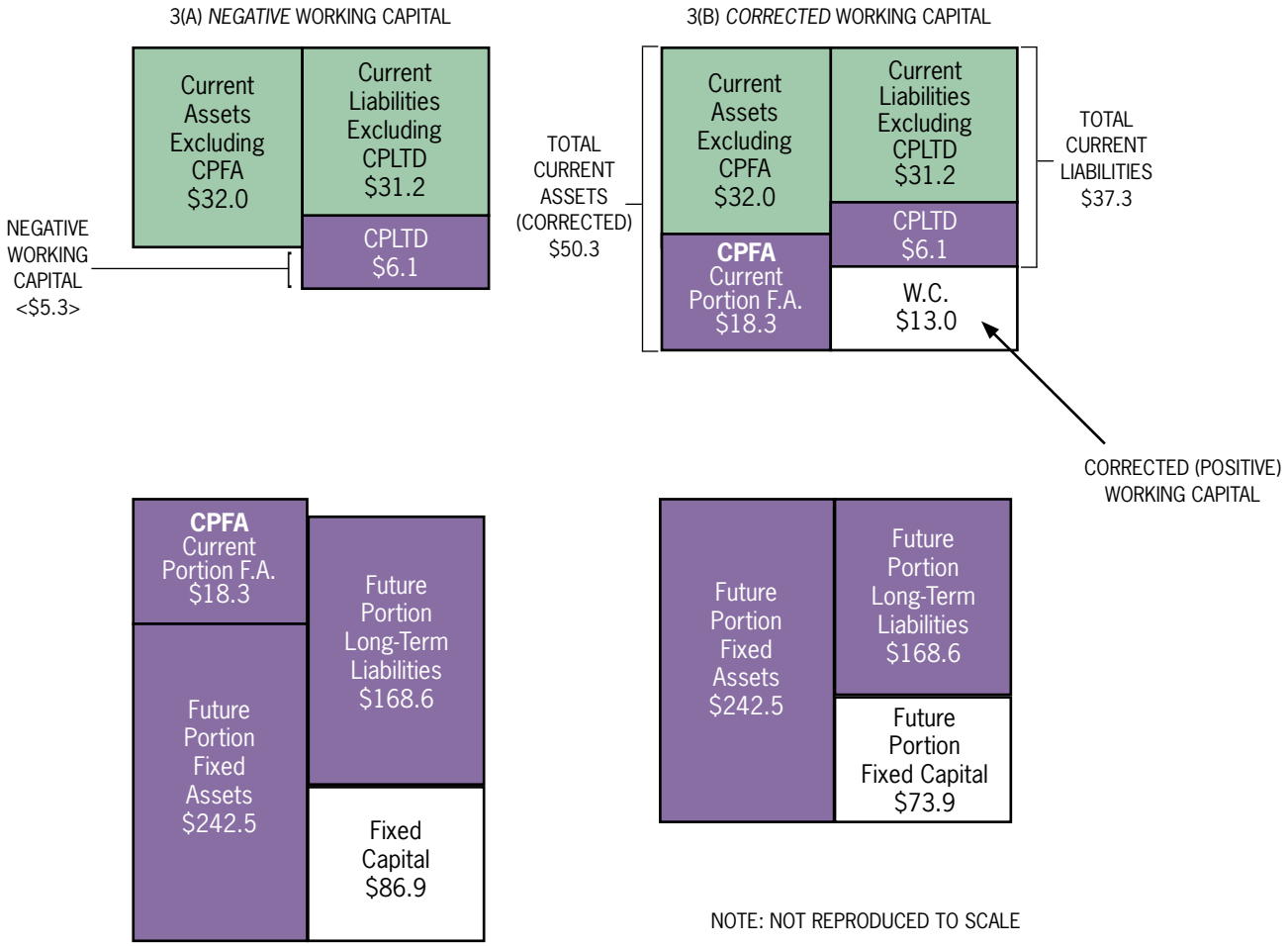
This is intuitive; it is also validated in our accounting. In the first month, Sam uses the truck to generate revenue, then makes two journal entries. First, he credits (increases) revenue and debits (increases) cash. Applying accrual accounting, he will also debit (increase) depreciation expense and credit the contra-asset accumulated depreciation: the truck. Now, if we combine these two steps, the net effect on the balance sheet is a reduction in the fixed asset (the truck) and an increase in the current asset (cash). In effect, a portion of the fixed asset has been converted into cash! This is fundamental to understanding CPFA:

If the definition of a "current asset" is an asset that is converted into cash in the current period, then the portion of the fixed assets that is converted into cash must also be reported as a current asset.

Sam and Jim's Balance Sheet – with Current Portion Fixed Assets

Current Assets: Cash	$200	Current Liabilities:	$0
Current Portion Fixed Asset: (1/5 of $25,000 truck)	$5,000	Current Portion Long-Term Debt (1/5 of $20,000 loan)	$4,000
Fixed Asset: Future portion (4/5 of $25,000 truck)	$20,000	Long-Term Loan (future portion) (4/5 of $20,000 loan)	$16,000
		Sam and Jim's Owners' Equity:	$5,200
Total Assets:	**$25,200**	**Total Liabilities and Equity:**	**$25,200**

FIGURE 3: AT&T - CORRECTING WORKING CAPITAL (in Billions)



True or false? "CPLTD must be repaid with cash, and 'cash' is a current asset." True. Sam will write a check on his cash account—a current asset. But it is not necessary to have enough cash on hand to cover the entire 12 months of CPLTD.

CPLTD differs from other current liabilities because it aggregates a full year's payments—unlike, say, accounts payable, which only reports what is due in the next couple of months, not what will be paid over the course of a year. The loan payments are scheduled monthly for a reason: to coincide with the collection of cash revenue. On a monthly basis, it is only necessary to have enough cash to cover one loan payment (plus cash expenses such as interest expense and gas), in which case, at any given time during the year, CPLTD—12 months of payments—will generally exceed "cash," which is trickling in month by month. Working capital appears to be negative.

To correct this imbalance in reporting, we could apply the same logic to the left side of the balance sheet: Sam will pay the loan with monthly cash revenue from using the truck. The use of the truck is measured as monthly depreciation expense. If we aggregate the depreciation expense for the entire 12 months, the aggregate is the portion of the truck that will be depreciated in the current period—that is, the current portion of fixed asset (truck). This is the portion of the truck that will be converted into cash in the current period and, as such, should be included among current assets. Including the CPFA for the truck in current assets aligns with the CPLTD of the truck loan, rebalancing the equation and eliminating the negative working capital, as illustrated in Figure 2.

The logic of matching a full year of depreciation expense to a full year of principal payments (CPLTD) is not new; it is precisely the logic behind the debt service coverage ratio.

The Logic of the Debt Service Coverage Ratio Validates CPFA

Bankers have traditionally measured the cash flow available to repay long-term loans by adding depreciation expense back to net profit. The logic is that de-

preciation is a noncash expense, which means that the revenue against which it is charged is cash inflow that is not matched to a cash expense, so the portion of revenue equal to depreciation expense is cash available for other uses—notably, for repayment of the long-term loans.

There are variations of the debt service coverage ratio, but the foundation is as follows:

DSCR = (net profit less distributions + depreciation expense)/CPLTD.

It would make more sense to pit CPFA—next year's depreciation expense—against CPLTD—next year's loan payment. But CPFA has not been reported, so we have traditionally used last year's depreciation expense as a surrogate in the DSCR. This has worked well because depreciation expense is not subject to wild swings; it tends to increase incrementally over last year's depreciation expense.

Consistent with the logic of the DSCR, Sam and Jim's balance sheet (portrayed earlier) matches CPFA with CPLTD: Depreciation expense at year-end will be $5,000 (one-fifth of the truck), which exceeds the CPLTD of $4,000 (one-fifth of the loan): a DSCR of 1.25.

A Real-World Illustration: AT&T's Chronic "Negative Working Capital"

By textbook definition, AT&T is illiquid. Its current liabilities exceed its current assets. AT&T's December 2014 balance sheet reports total current assets of $32.0 billion and total current liabilities of $37.3 billion, which equates to negative working capital of $5.3 billion.

Although AT&T has had negative working capital for years, it nevertheless pays its creditors and maintains top credit ratings. Clearly, "negative working capital" fails as a predictor of imminent default.

Figure 3 illustrates that when AT&T's substantial CPFA is included among current assets, the working capital is a positive $13.0 billion. AT&T is liquid. All of AT&T's negative working capital is attributable to the flaw in how we calculate it—to the missing piece: CPFA. (Since AT&T does not report CPFA, Figure 3 uses last year's depreciation expense as a surrogate.)

Conclusion: CPFA *Is* a Revelation

A recent study of the BSE 200 in India revealed that the 23 companies that report negative working capital had higher returns on capital and higher dividend payouts![2] So negative working capital must be good, right?

The discovery of CPFA finally resolves such paradoxes: The calculations for working capital and the current ratio are flawed, routinely understating liquidity.

The companies hurt most by the flaw are those heavily invested in fixed assets, such as Sam and Jim's small business and AT&T. Both will use up a portion of their fixed assets each year (CPFA) to generate revenue and cash available to repay their liabilities.

AT&T gets away with reporting negative working capital because capital markets discount its importance. Small and middle-market companies dependent on banks for financing are not so fortunate. Banks routinely reduce or deny credit to "illiquid" companies that report negative working capital—as in the story at the beginning of this article. That company was a very successful retail chain, a "mini-Walmart," with substantial investment in fixed assets and therefore a substantial CPFA. It deserved—but did not receive—the same treatment as Walmart.

Appropriate Action

Using flawed measures is both a disservice to worthy clients and a lost lending opportunity for a bank.

Banks should immediately review their automated spreadsheets, scoresheets, and written credit policies to correct the calculation of working capital and the current ratio by adding CPFA to current assets. Until CPFA is reported, last year's depreciation expense is a good surrogate, as has been the practice in the DSCR. ®

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Notes

1. Stephen Bartoletti, "The Missing Piece in Liquidity Calculations: Why Calculating the Current Portion of Fixed Assets Would Provide a More Accurate Picture of Financial Health," *The Journal of Accountancy*, April 2012. Available at www.sme-lending.com/cpfa-article.
2. Ashok Kumar Panigrahi and Suman Kalyan Chaudhury, "Negative Working Capital: Sign of Managerial Efficiency or Possible Bankruptcy (A Case of Hindustan Uniliver Limited)," *Journal of Management Research and Analysis*, January-March 2015. Available at http://www.innovativepublication.com/article-detail.php?jid=22&volume_id=48&issue_id=80.