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TRADING CAPITAL VS. WORKING CAPITAL

TWO TIERS OF LIQUIDITY

The author follows up his earlier article on the paradox of negative working capital by discussing negative trading capital—and his view that textbook measures routinely understate liquidity.

BY STEPHEN BARTOLETTI

YEAR AFTER YEAR, AT&T reports a substantial negative working capital, and yet year after year it manages to pay its suppliers and receive top credit ratings. Clearly, negative working capital in this case fails as a predictor of illiquidity and imminent default.

In "Negative Working Capital Is Not Negative: Heresy or Revelation?" (December 2015–January 2016 issue), I proposed the following solution to this paradox. Working capital is routinely understated because it fails to include a critical current asset: the current portion of fixed assets (CPFA). When CPFA is included among current assets, a seeming "red flag" for illiquidity—negative working capital—is proven to be a false indicator. For example, when AT&T's substantial CPFA is counted among current assets, its working capital becomes positive.

This article discusses what I call negative *trading* capital. Trading capital is a tighter measure of liquidity than working capital. Indeed, it is a subset of working capital. Taken together, the measures distinguish two tiers of liquidity to provide a deeper understanding than previously possible. So what is included in working capital that's not included in trading capital?

AT&T's "working capital" as of December 31, 2016: *Negative $12 billion*

Introducing the Current Portion of the Long-Term (Fixed Asset) Cycle

The balance sheet attempts to distinguish between short-term accounts and long-term accounts, but a better understanding would be provided by adding a third part—where the short-term cycle overlaps the long-term cycle. This is the current portion of the long-term cycle.

Pause for a moment to reflect on that paradox: the *current* portion of the *long-term* cycle. Some accounts are, at once, both current and long term. Other current accounts are strictly short term. Understanding that

there are two fundamentally different types of current accounts is what gives us a two-tier understanding of true liquidity.

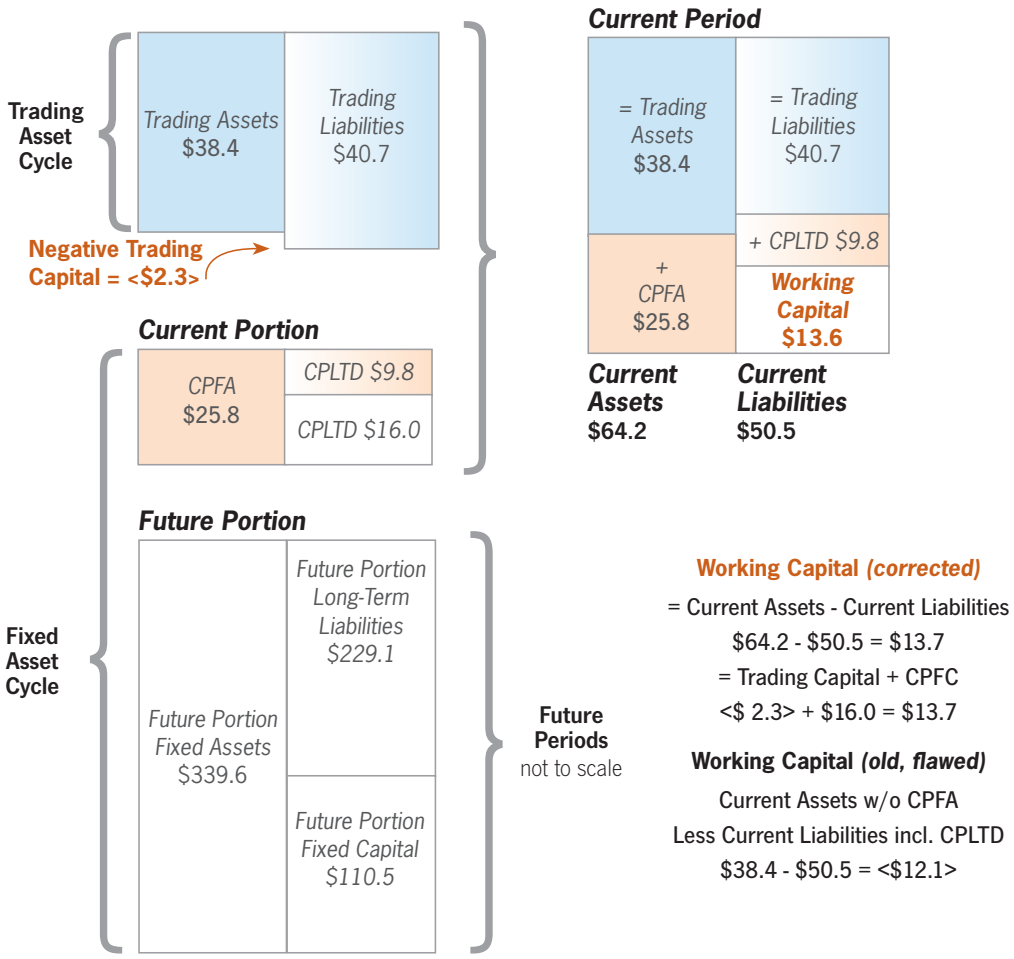
The figure below illustrates a three-part balance sheet for AT&T, segregating the hybrid accounts from other current accounts. Let's start with "current" liabilities:

Current Liabilities of $50.5B = Trading Liabilities of $40.7B + Current Portion of Long-Term Debt of $9.8B

Conventional accounting strips off the portion of long-term debt due in the current period and reports it as a current liability: the current portion of long-term debt, or CPLTD. CPLTD differs from other current liabilities because it is just a *portion* of long-term

THE FIGURE IDENTIFIES this subgroup of short-maturity liabilities as *trading liabilities* and isolates CPLTD below the trading liabilities to highlight its unique hybrid nature as both current and long term.

FIGURE: AT&T'S THREE-PART BALANCE SHEET 2016 ($ BILLIONS)



Working Capital *(corrected)*

= Current Assets - Current Liabilities

$64.2 - $50.5 = $13.7

= Trading Capital + CPFC

<$ 2.3> + $16.0 = $13.7

Working Capital *(old, flawed)*

Current Assets w/o CPFA

Less Current Liabilities incl. CPLTD

$38.4 - $50.5 = <$12.1>

On Previous Page: Shutterstock.com

debt, whereas all other current liabilities, such as accruals, accounts payable, and short-term bank debt, are due in full in one year or less.

The figure identifies this subgroup of short-maturity liabilities as *trading liabilities* and isolates CPLTD below the trading liabilities to highlight its unique hybrid nature as both current and long term.

Current Assets of $64.2B = Trading Assets of $38.4B + Current Portion of Fixed Assets of $25.8B

The concept of CPFA—the *current portion* of fixed assets—follows the same logic as the concept of CPLTD. If a portion of long-term debt should be stripped off and reclassified as a current liability, the same logic should be applied to the left side of the balance sheet.

Fixed assets are not totally fixed. A portion is used up—depreciated—each year. CPFA is defined and calculated as the portion of fixed assets scheduled to be depreciated in the coming (current) period.[1]

Counting the current portion of *fixed* assets among current assets is uncomfortable for us because "current assets" has always meant "short-life assets," such as pre-paids, accounts receivable, and inventory. In contrast, CPFA is derived from *fixed* assets. The left side of the figure maintains this distinction by identifying short-life assets as *trading assets* and isolating CPFA between the short term and long term, alongside its complement, CPLTD.

CPFA is a new concept and, although not yet reported, it is known. All fixed assets are booked with a depreciation schedule; CPFA is the depreciation scheduled for all fixed assets for the coming (current) period. Until it is reported, a good surrogate for CPFA, which is *next* year's depreciation, would be *last* year's depreciation expense, because depreciation expense does not tend to fluctuate significantly from year to year.

The number in the figure for AT&T's CPFA, $25.8 billion, is actually the previous year's depreciation expense. (It is assumed that depreciation properly reflects the economic life and realistic decline in the value of fixed assets—a bold assumption that confounds all financial analysis.)

Fixed Capital vs. Trading Capital

The same logic can be applied to owners' capital. Assets are generally financed by a combination of debt and owners' capital. The portion of owners' capital invested in trading assets is *trading capital,* equal to trading assets less trading liabilities. The owners' capital invested in fixed assets can be called *fixed capital*.[2]

Logically, the portion of owners' capital invested in the *current portion* of fixed assets can be called the *current portion of fixed capital* (CPFC), which divides owners' capital into three parts—first distinguishing between the owners' capital invested in trading assets and the capital invested in fixed assets, and then dividing the latter into current and future portions.

The Three-Part Balance Sheet

The three accounts placed together in the center of the figure form a mini-balance sheet: CPFA = CPLTD + CPFC. They are unique because they are current accounts derived from long-term accounts, as is evident from their names: the *current* portion of *fixed* assets and the *current* portion of *long-term* debt. The hybrid nature of these accounts allows them to be paired with the trading accounts or reunited with the long-term accounts.

Look first at the bracket labeled Fixed Asset Cycle in the lower left of the figure. On the liabilities side, the *current portion* of long-term debt (CPLTD) is separated from the portion of long-term debt that will remain on the balance sheet at year-end. Conventionally reported as long-term debt, this residual should more accurately be called the *future portion* of long-term debt, the logical complement to the *current portion* of long-term debt. The same logic can be applied to the fixed assets. Stripping off the current portion of fixed assets from total fixed assets leaves the *future portion* of fixed assets—the portion that is *not* scheduled for depreciation in the current period but will remain on the balance sheet at the end of the year. It is important to emphasize that the concept of CPFA neither increases nor decreases total fixed assets; it simply divides fixed assets into current and future portions.

Alternatively, the hybrid accounts—the *current* portion of the fixed asset cycle—can be combined with the other current accounts—the trading asset cycle—producing a complete "current period," illustrated by the mini-balance sheet at the upper right of the figure.

Whether it is wiser to include these hybrid accounts in the calculations of liquidity, or to focus more narrowly on short-life assets and short-maturity liabilities, is itself the lesson: *There are two tiers of liquidity.*

Overall Liquidity and the True Meaning of Working Capital

If we retain the original intention of the word "current" to be inclusive, then "current liabilities" must include *all* debt due in the current period, including CPLTD, and "current assets" must include *all* assets that will be converted to cash in the current period, including CPFA.

The traditional calculation of working capital included CPLTD but failed to include CPFA, which suggested that CPLTD must be covered by short-life assets (called current assets, but renamed here as trading assets). The simple case below proves this wrong.

Sam's Moving Co. has one asset, a truck, financed by a long-term loan. Current liabilities include CPLTD, but aside from a couple of hundred dollars for lunch and gas, Sam has no "current assets"—there is no inventory and all sales are in cash. Working capital therefore appears negative. But that is a false negative: *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's CPLTD. The portion of the truck that he will use up (depreciate)

in the current period is the current portion of his fixed asset. When Sam's CPFA is correctly counted as a current asset, working capital is positive, not negative. Fixed assets are working assets, too.

AT&T's True Working Capital
By traditional measures, AT&T was seriously illiquid: (in billions)

Negative Working Capital Current Assets* of $38.4 – Current Liabilities of $50.6 = <$12.2>

Current Ratio <1 Current Assets* of $38.4 / Current Liabilities of $50.6 = 0.76

*Traditional definition of current assets, without CPFA

However, when we define "current" to be inclusive, including CPLTD among "current liabilities" and CPFA among "current assets," we gain a meaningful measure of working capital.

Corrected Current Assets = Current Assets (old) + CPFA
AT&T: $64.2 = $38.4 + $25.8
Current Liabilities = unchanged because CPLTD is already included
AT&T: $50.5

Working capital is still defined as "current assets minus current liabilities," but including CPFA among current assets effectively means that working capital was understated by CPFA.

AT&T: *Corrected* Current Assets $64.2
– Current Liabilities $50.5
Corrected Working Capital $13.7

The current ratio, still defined as "current assets / current liabilities," is similarly augmented with the inclusion of CPFA among current assets.

AT&T: *Corrected Current Ratio:*
Corrected Current Assets $64.2
Current Liabilities $50.5
= 1.27

IN THE PAST, the borrowing base calculation could indicate strong support for a credit line even when working capital was negative because the calculation of working capital was flawed.

This was the message in the earlier article: Companies heavily invested in fixed assets will often report a negative working capital because, while CPLTD is reported as current, the substantial amount of fixed assets that is depreciated each year—the CPFA—was not reported. CPFA is the missing piece in liquidity calculations.

Still uncomfortable with CPFA? Then leave it out. But also leave out CPLTD. The formula for working capital can be corrected either by including CPFA and CPLTD, or by removing both.

Trading Liquidity – First-Tier Liquidity

There is much to be gained by removing the influence of the long-term cycle to focus narrowly on short-life trading assets and short-maturity trading liabilities. Much of the discussion today about working capital focuses narrowly on the three main trading accounts that constitute the *cash conversion cycle:* accounts receivable (A/R), inventory, and accounts payable (A/P). These are the accounts we scrutinize when judging how well a company "manages its working capital."

Furthermore, these are the accounts we scrutinize when evaluating the need and capacity for a revolving line of credit. The cash conversion cycle reveals the need for financing to supplement the A/P. The capacity for borrowing is often calculated in a borrowing base, derived from these same accounts.

In the past, the borrowing base calculation could indicate strong support for a credit line even when working capital was *negative* because the calculation of working capital was flawed. Taking CPLTD out of the calculation (alternative to including CPFA) resolves the conflict and produces new, precise measures of liquidity:

Trading Assets = Short-life Assets = old definition of current assets that excluded CPFA

Trading Liabilities = Short-maturity Liabilities = Current Liabilities with CPLTD removed

Trading Capital = Trading Assets – Trading Liabilities

Trading Ratio = Trading Assets / Trading Liabilities

AT&T's Trading Capital
In 2016, AT&T's trading liabilities exceeded its trading assets. Its trading capital was negative.

2016 Trading Assets $38.4 = *old definition of* Current Assets
Trading Liabilities $40.7 = *old* Current Liabilities ($50.5 *minus* CPLTD $9.8)

Negative Trading Capital <$2.3> = $38.4 – $ 40.7
Trading Ratio 0.95 = $38.4 / $ 40.7

Negative trading capital could be a new red flag, but before we sell AT&T short (literally), let's consider how AT&T can pay its short-term, trading liabilities without having adequate trading assets.

Tolerant creditors: The short answer is that it does not need to. As long as

the short-term creditors are comfortable rolling over the short-term debt, there is no *net* decrease in trading liabilities, so there is no net "use of cash." Debt replaces debt. As long as trading liabilities are rolled over, trading capital can continue to be negative.

The risk of negative trading capital is that the short-term creditors could at some point stop rolling over the short-term debt and demand faster repayment, which would force a use of cash to reduce short-term liabilities.

Restructure liabilities: AT&T and other companies with a negative *trading* capital are essentially cross-cycle financing: financing fixed assets with the excess of trading liabilities less trading assets. Cross-cycle financing is not uncommon and not necessarily unwise. Short-term credit is often cheaper than long-term credit. Credit facilities that continually roll over are, in effect, long-term financing with annual "put" options.

The simplest solution would be for AT&T to "rebalance" its balance sheet in terms of *duration*—matching the maturities of assets and liabilities. Issuance of a new long-term bond specifically for the purpose of paying down short-term debt would move some of the debt from the trading cycle to the long-term cycle, better matching the maturities of liabilities to assets.

Cross-cycle repayment: Correcting the calculation of AT&T's working capital to include both CPFA and CPLTD reveals a positive $13.6 billion and a comfortable current ratio of 1.27. But AT&T's trading capital is negative. What does it mean to be illiquid in the trading cycle but liquid overall?

Looking back at the figure on p. 42, notice how AT&T's CPLTD of $9.8 billion is eclipsed by its CPFA of $25.8 billion. Just as Sam's truck contributes to revenue—cash flow that can repay the current portion of his long-term loan—AT&T's substantial fixed assets (90% of total assets) contribute far more to revenue than is necessary to cover the long-term debt financing those assets. AT&T's strength, in terms of both assets and cash flow, stems from its substantial fixed assets, which could, if necessary, be tapped to supplement the inverted trading cycle.

There is significant discussion today about the proper measure of sustainable cash flow available for long-term debt service, a discussion that merits a separate article (or book!). The narrow—and urgent—objective of this article is to address the textbook measures of liquidity.

Conclusion

Every textbook that discusses balance sheet liquidity compares current assets to current liabilities, either subtracting to get working capital or dividing to produce the current ratio. The discovery that there is a current account, a current asset, missing from the balance sheet indicates that the textbook measures routinely understate liquidity.

The first solution, explained in my previous article, included both the *current portion of fixed assets* and *the current portion of long-term debt* in the calculations, producing a useful measure of overall liquidity. For practitioners, this approach may be uncomfortable at first because it introduces a previously unknown current asset that represents cash flow from fixed assets. Moreover, it eliminates the traditional red flag of illiquidity: negative working capital.

This article described the second solution. Omitting these two accounts removes the influence of the long-term cycle—fixed assets and long-term debt—to focus narrowly on short-life *trading* assets and short-maturity *trading* liabilities. This is what the old formula for working capital was intended to do, but it failed because it included CPLTD—which need not be covered by trading assets. The new measure, *trading capital,* provides a far more accurate measure of liquidity.

The case of AT&T shows how the two tiers of liquidity add depth to the analysis. AT&T is illiquid when measured by its trading capital, which is negative. But the corrected formula for working capital reveals that AT&T's strength in assets and cash flow comes from its substantial fixed assets and relatively low debt-financing of them.

Is negative trading capital the new red flag of illiquidity? It may just indicate a dubious mix of debt—too much short-term debt, too little long-term debt—which can be corrected by restructuring the maturity of liabilities to match the assets. But restructuring is not possible if the fixed assets are also highly leveraged, in which case working capital, even corrected to include CPFA, will be tight, confirming that the red flag is valid.

While the capital markets have largely discounted AT&T's negative working capital, bank credit can still be reduced or denied to small and midsized enterprises that report negative or tight working capital. This is a disservice to worthy clients and a lost lending opportunity for a bank. And this could apply to your bank, given that working capital and the current ratio are probably in your bank's spreadsheets, scoring models, loan covenants, and policy manuals. R

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Notes

1. For a complete explanation of CPFA, see "Negative Working Capital Is Not Negative: Heresy or Revelation?" in *The RMA Journal,* December 2015 –January 2016.
2. This was discussed in the article referenced in the footnote above.