

## Let Us Count the Ways

# ONLY CASH PAYS LOANS

### s to Measure Cash Flow

This first article in a two-part series discusses the four most widely used approaches to defining cash flow and debt service. Each approach offers a different perspective on the borrower's ability to repay debt.

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**EVERY SUCCESSFUL LENDER** knows that only cash pays loans. The problem for all involved in the underwriting, approval, and review of business loans is that there is no unanimity on how to define cash flow and debt service.

Lenders also recognize that the business and personal affairs of small business owners are intertwined. It's not enough to analyze only business cash flow. Lenders must also analyze personal cash flow and integrate the personal cash flow with business cash flow to determine global cash flow. Another vexing and related issue is knowing when it is appropriate to term out a revolving line of credit.

This article—and another appearing in next month's issue—will compare and contrast eight approaches to cash flow, detail their strengths and weaknesses, and demonstrate the application of each approach using financial information contained in a case study. The two articles will demonstrate why lenders cannot use just one approach in determining a corporate borrower's ability to earn its debt service and assessing its ability to pay its debt service.

This article will discuss the four most widely used approaches to determining cash flow: traditional, EBITDA, EBIDA, and UCA. Next month's article will discuss the accountant's direct and indirect approaches, as well as core, personal, and global cash flow. The second article also will demonstrate how cash flow analysis can be used to gauge when it is appropriate to term out a revolving line of credit.

#### Case Study

XYZ Company will be used to present and interpret each approach to defining cash flow.

The company is organized as an S corporation. Hometown Bank offers the company a \$1.75 million asset-based line secured by accounts receivable and inventory, as well as several term loans secured by real estate and equipment. The amount currently outstanding on the company's line of credit is \$744,000. The company also has principal payments due this year on term debt of \$346,000. The company has four shareholders. The largest, Owner A, owns 70%. Owner A's income consists primarily of his salary (\$192,500) plus his share (70%) of the distribution from the company (\$179,600). He has annual principal payments on personal debt of \$131,000 and a personal tax liability of \$184,200, including taxes on his share of the company's income. (See Table 1.)

#### Quantifying Cash Flow Available for Debt Service

Often, the biggest source of contention among lenders is whether the borrower "cash flows." The conflict arises from the correct but different conclusions reached using the multiple approaches to quantifying cash flow and debt service.

- Traditional.
- EBITDA (Earnings before interest, taxes, depreciation, and amortization).
- EBIDA (Earnings before interest, depreciation, and amortization).
- UCA (Uniform Credit Analysis).
- Accountant's direct and indirect statement of cash flows.
- Core cash flow.
- · Personal cash flow.
- Global cash flow.

The first three—traditional, EBITDA, and EBIDA measure a borrower's ability to earn its debt service but say nothing about that borrower's ability to pay its debt service. This occurs because the cash the borrower has generated internally could be used to grow the business, support the lifestyle of the owner(s), or repay debt. That the borrower can earn its debt service does not necessarily mean that the borrower can or will pay its debt service. To determine what the borrower did with the earnings, the lender must use either the accountant's presentation of the statement of cash flows or the UCA approach.

Unfortunately, the statement of cash flows is available only in an accountant-prepared full disclosure compilation, review, or audit. Rarely do lenders get this quality of financial information from a small business borrower.

The alternative is the UCA approach generated by most vendor-provided financial analysis software. An issue with the UCA approach is that it assumes the first priority for the use of cash is working capital, with everything else (such as replacement capital expenditures, interest, and principal payments on debt) being discretionary. To properly assess cash flow available for debt service, the lender must use core cash flow (a.k.a. recurring or free cash flow) to determine the priorities for the use of cash and when it is appropriate to change the priorities. The "priorities" are multiple in nature: maintain the viability of the business through replacement capital expenditures, repay scheduled debt, make distributions in lieu of taxes (S corps/LLCs), grow the business through various means, support the owner's lifestyle, and amortize a line of credit used to fund a permanent investment in current assets.

Personal cash flow focuses on sources and uses of cash to support the owner's personal living expenses, lifestyle, personal investments, and personal debt service. Recognizing that the business and personal affairs of the owner and the business are often closely intertwined, a lender must integrate business and personal cash flow into global cash flow. The integration is particularly important when the owner has investments in multiple operating entities—for example, builders and developers or owners of convenience stores and hotel/motels.

Each approach provides an important perspective on cash flow. One should not be used to the exclusion of the others. In fact, in order to get an accurate assessment of the borrower's financial condition and ability to repay debt, all the approaches should be used.

#### Traditional, EBITDA, and EBIDA Approaches to Cash Flow

These approaches to cash flow represent cash available for debt service only if accounts receivable, inventory, fixed assets, payables, and accruals remain exactly the same from period to period—in short, nothing on the balance sheet changes except cash, fixed assets to the extent of depreciation, and retained earnings. Obviously, this scenario is totally unrealistic. To the extent that anything on the balance sheet changes, it represents a source of cash or a use of cash. As such, these approaches measure the borrower's ability to earn its debt service but say nothing about its ability to pay its debt service.

Banks use these three approaches in underwriting because lenders want to loan money to borrowers who can earn their debt service. Lenders also employ debt service coverage (DSC) ratios in loan agreements so they can confront the borrower if deterioration starts to occur in the borrower's ability to earn its debt service. It's important to do this while

#### Table 1

XYZ Company, Selected Financial Information (\$000s)

Balance Sheet	2009	2010	2011
ASSETS			
Cash	65	141	84
Accounts Receivable	623	785	709
Inventory	265	435	291
Total Current Assets	953	1,361	1,084
Net Fixed Assets	3,941	4,143	4,726
Due from Stockholders	597	701	1,035
Other Assets	155	59	175
Total Assets	5,646	6,264	7,030
LIABILITIES			
Notes Payable—Banks	511	947	744
CMLTD	379	346	319
Accounts Payable	664	645	634
Accruals	89	187	89
Total Current Liabilities	1,643	2,125	1,786
Long-term Debt	2,969	2,624	3,307
Total Liabilities	4,612	4,749	5,093
Total Net Worth	1,034	1,575	1,937
Total Liabilities and Net Worth	5,646	6,264	7,030
Tangible Net Worth	445	814	902
Working Capital	(690)	(764)	(702)
Income Statement	2009	2010	2011
Sales	8,665	10,522	11,229
Gross Profit	3,634	4,394	4,684
Operating Expense	2,991	3,304	3,714
Operating Profit	643	1,090	970
Other Income	23	53	56
Interest	352	341	348
Net Income	314	802	678
Depreciation	276	269	327
Distributions	0	320	257
Additions to Fixed Assets	79	471	920
New Long-term Debt	17	1	1,002

the borrower is still reasonably cooperative and retains a viable core business and before the bank's collateral position is eroded. Meanwhile, DSC, leverage, and liquidity ratios are employed in loan agreements to give lenders the opportunity to restructure or demand payment on existing debt before the borrower defaults. The challenge is in defining the components of cash flow and debt service:

- Do we use this year's current maturities of longterm debt (CMLTD) or last year's? The choice depends on the objective of the analysis. Use last year's CMLTD if the objective is to measure the borrower's ability to earn this year's debt service, generally when monitoring compliance with covenants in a loan agreement. Use this year's if the bank is underwriting a new loan request.
- Do we assume a line of credit is fully funded for purposes of calculating interest? Generally, yes.
- If we add back depreciation to determine cash flow available for debt service, should we include an estimate of replacement capital expenditures (CAP X) in the calculation? The bank should include an estimate of replacement CAP X, or be prepared to fund replacement CAP X when the borrower has to replace fixed assets. Unfortunately, very few banks consider replacement CAP X when calculating a DSC ratio.
- Many of our borrowers are organized as S corporations or LLCs, and the owners are responsible for the taxes on the income of the business. Should we assume a distribution in lieu of taxes? Yes. Assume 34% of the net income of the business as a required distribution in lieu of taxes. These distributions are not discretionary.
- When using EBITDA, we add back taxes to the numerator. The denominator contains a pre-tax payment—interest and an after-tax payment—principal. Should we tax-effect (principal payment ÷ 1 – tax rate) the principal portion of the payment? Failing to do so could significantly overstate the borrower's ability to earn its debt service, depending on the principal portion of the payment. Unfortunately, very few banks tax-effect the principal portion of the payment. To address the issue, more and more banks are turning to EBIDA to define the numerator, recognizing that taxes are a required payment.
- Should we subtract replacement CAP X and taxes from the numerator, or add them to the denominator? The answer will result in two different DSC ratios. Adding the items to the denominator is more conservative.

Each approach provides an important perspective on cash flow. One should not be used to the exclusion of the others.

- In income property lending, we use net operating income (NOI) as a measure of cash flow available for debt service. Is this the functional equivalent of EBITDA in C&I lending? It is the functional equivalent with two caveats:
  1) There are limited working capital (inventory and receivables) considerations in income property lending, and
  2) responsible income property investors make a provision for maintenance capital expenditures (CAP X) in the operating statement. Unfortunately, many income property lenders are making the transition to C&I lending without being sensitive to the multiple moving parts in a C&I borrower's operating company.
- Many of our lines of credit (LOC) are renewed annually and at some point they will need to be termed out. Should we assume an amortization of the LOC in determining debt service? The first question is if the LOC is funding a temporary investment in current assets, generally for seasonal or liquidity purposes, or a permanent investment in current assets that are constantly turning over. If the borrower can reduce the LOC to zero periodically and does not extend payables or artificially reduce receivables and inventory to accomplish the cleanup, an assumed amortization is not necessary. If the LOC is not significantly reduced periodically, the facility is funding a permanent investment in current assets and can only be repaid from future earnings, which will require a term out of the line of credit. The alternative is to find another lender/investor or liquidate the permanent investment in current assets, which will put the borrower out of business. To avoid loaning too much money, the bank should assume a three- to five-year amortization of the line of credit with

Table 2

#### Calculations for XYZ Company (\$000s)

Traditional Cash Flow Net income + Depreciation — Distributions in lieu of taxes (34% of net income)

Last year's CMLTD

EBITDA Earnings before interest, taxes, depreciation, and amortization

Interest + Last year's CMLTD

#### EBIDA EBIDA — Distributions in lieu of taxes

Interest + Last year's CMLTD + Assured 4-year amortization of outstanding on LOC (\$744k)

#### <u>2011</u> <u>678 + 348+327-231</u> = 1.28 348 + 346 +186

control exercised over the current assets—for example, the borrowing base, controlled account, or lock box. In the absence of control, the line should be secured with a longer-lived asset or SBA guaranty to justify a longerassumed amortization. The assumed amortization does not suggest the bank will immediately term out the line. It only demonstrates whether the bank could term out the line over a reasonable period of time and maintain an acceptable DSC ratio—for example, 1.25X. (See Table 2.)

- Table 2 shows the calculations for XYZ Company. It illustrates the importance of making a provision for distributions in lieu of taxes and assuming an amortization of the line of credit. The line of credit offered to XYZ has not been reduced significantly for the past three years. The reduction in the most recent year is the result of a temporary decline in inventory and receivables. Since the line is structured as an asset-based line, the reduction in the line.
- This example highlights some of the weaknesses of EBITDA as a measure of cash flow available for debt service. EBITDA suggests strong debt service coverage. EBIDA indicates

XYZ can barely earn the debt service, including the assumed amortization of the line of credit over a reasonable period of time. The EBIDA calculation suggests it may be appropriate to term out the line of credit.

**Caution:** The issues outlined above demonstrate why lenders can disagree about whether a borrower "cash flows." Ideally, the bank's loan policy should clearly define the bank's approach to addressing each of these issues. Exceptions to the bank's definition of cash flow and debt service would be a variance from procedure and should require a higher level of approval.

#### Uniform Credit Analysis (UCA)

Developed in the late 1970s, the UCA approach to cash flow analysis is embedded in all of the most widely used financial statement models. This approach also unwinds the timing differences introduced by accrual accounting.

When reviewing the UCA cash flow, a lender should focus on four key items:

- *Cash from trading activities.* A positive number indicates the company could internally fund its working capital requirement.
- *Cash after operations*. A positive number indicates the company could internally fund its working capital requirement and operating expenses.
- *Cash after financing costs.* A positive number indicates the company could internally fund its working capital requirement, operating expenses, cash taxes, interest, and distributions to the owner.
- *Cash after debt amortization (CADA).* A positive number indicates the company could internally fund its working capital, operating expenses, taxes, interest, distributions, and scheduled debt service.

The framework accounts for capital expenditures and other long-term investments to determine if the company has a financing surplus or requirement. The UCA approach then summarizes changes in short-term debt, long-term debt, capital, and cash.

A number of issues arise when interpreting a UCA cash flow statement:

- Implicitly, the UCA approach says the first priority for the use of cash is working capital; everything else is discretionary, including debt service. While this may accurately reflect the flow of cash in a business, it does not accurately reflect the priorities for the use of cash and when it is appropriate to change the priorities (for example, term out a line of credit).
- From 2002 to early 2007, many borrowers had a posi-



UCA Cash Flow, XYZ Company (\$000s)				
	Dec. 31			
Net Sales	11,229			
Change in Current Receivables	76			
Cash from Sales	11,305			
Cost of Goods Sold (Less Depreciation)	(6,545)			
Change in Inventories	144			
Change in Accounts Payable	(11)			
Cash Production Costs	(6,412)			
CASH FROM TRADING	4,893			
Selling, General & Admin. Expenses	(3,167)			
Other Operating Expenses	(206)			
Changes in Prepaids	0			
Change in Accrued Expenses	(98)			
Changes in Other Cur/ Assets/Liabilities	0			
Cash Operating Costs	(3,471)			
CASH AFTER OPERATIONS	1,422			
Other Income (Expense)	56			
Income Tax Expense	0			
Change in Income Taxes Payable	0			
Taxes Paid & Other Inc. (Exp.)	56			
NET CASH AFTER OPERATIONS	1,478			
Dividends or Owner Withdrawals	(257)			
Interest Expense	(348)			
Cash Financing Costs	(605)			
CASH AFTER FINANCING COSTS	873			
Current Portion Long-term Debt	(346)			
CASH AFTER DEBT AMORTIZATION	527			
Capital Expenditures	(920)			
Change in Long-term Investments	0			
Change in Intangible/Other Assets	(464)			
Cash Used for Plant/Invest	(1,384)			
FINANCING SURPLUS/REQUIREMENT	(857)			
Change in Short-term Debt	(203)			
Change in Long-term Debt	1,002			
Change in Contributed Capital	0			
Other Changes in Retained Earnings	1			
Total External Financing	800			
CHANGE IN CASH	(57)			

tive EBITDA but a negative cash after operations (CAO), primarily because they were growing and all the internally generated cash plus additional borrowings on a line of credit were used to support growth. By definition, there was insufficient cash flow to pay existing interest and principal payments, much less distributions to the owner, unless the bank was willing to continue to lend money and not ask to be paid.

- From late 2007 to the present, many borrowers have had a negative EBITDA or insufficient EBITDA to service debt, primarily because of reduced profitability or operating losses. Cash after operations has been positive primarily because borrowers have been liquidating accounts receivable and inventory as sales fell, in addition to forgoing replacement capital expenditures. Borrowers have used the positive CAO to maintain their lifestyles and to make current debt service payments (positive CADA).
- Typically, borrowers with a positive EBITDA and a positive CADA are mature companies in mature industries. If the company is growing, it can generate a positive CADA because it has a large gross margin reflecting a significant source of competitive advantage and a short operating cycle. Very few borrowers fit this profile. In fact, many will pursue strategies that are diametrically opposed for example, cutting prices, offering extended terms, or carrying a broader range of inventory—which exponentially increases the borrower's financing need if sales grow. Compounding the problem, the borrower will begin to take a large salary or distributions to enhance his or her lifestyle, creating significant financing needs often funded with a line of credit.
- Interpreting a UCA cash flow statement requires a comprehensive assessment of the sources and uses of cash as outlined in the UCA cash flow framework.
- The UCA cash flow will highlight the increasing reliance on short-term debt, but will not provide guidance on when it is appropriate to term out the line of credit.

The UCA cash flow helps the lender determine where cash came from and where cash went in a borrower's business. It is critically important in assessing a loan request if the borrower does not provide an accountant-prepared statement of cash flows. (See Table 3.)

Some Lenders use Cash After Operations (CAO) or Net Cash After Operations (NCAO) as the numerator in calculating a debt service coverage ratio. CAO is the equivalent of EBITDA and NCAO is the equivalent of EBIDA *if accounts receivable, inventory, accounts payable, prepaid and accruals do not change.* Using CAO and NCAO in the numerator of a debt service coverage ratio implicitly assumes the borrower will internally fund working capital requirements. Many Lenders incorporate debt service coverage ratios in a loan agreement. It is impractical to hold a borrower responsible for a ratio he or she cannot calculate without access to a UCA cash flow model.

The UCA cash flow demonstrates that XYZ in 2011 was able to internally fund its working capital requirement, operating expenses, interest, and the distribution in lieu of taxes, as well as its scheduled debt service. The company could not internally fund the addition to fixed assets or the loan to stockholders. It was able to reduce its line of credit primarily because it reduced inventory and accounts receivable even though sales grew. The company covered the shortfall in internally generated cash by increasing its long-term debt and drawing down its cash balance. The cash flow further highlights an issue the lender must investigate—why the owners have to take so much out of the business in the form of loans to shareholders.

**Caution:** The UCA approach to cash flow analysis may accurately reflect where cash comes from and where cash goes in a business, but it doesn't help the lender determine the priorities for the use of cash. The borrower may use the cash to grow sales, enhance his or her lifestyle, or amortize a line of credit. Also, the UCA approach does not address when it

is appropriate to change the priorities (for example, to term out a line of credit).

#### Conclusion

This article discussed the four most widely used approaches to defining cash flow and debt service. Each approach offers a different perspective on the borrower's ability to repay debt. Next month's article will discuss four more approaches to defining cash flow, offering additional insights from the accountant's statement of cash flows and core, personal, and global cash flow. The core cash flow approach will determine the maximum amount to be made available on a line of credit used to fund a permanent investment in current assets. The article also will compare all eight approaches to cash flow using financial information from the XYZ case study.

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