E - B - I - T - D - A  
It Doesn’t Spell “Cash Flow”

by Dev Strischek

How do I fault EBITDA? Let me count the ways. While Elizabeth Barrett Browning is not quoted herein, Dev Strischek quotes many others in his reasons why EBITDA should be approached with caution. It ignores a company’s tax obligation, it assumes that fixed assets don’t require capex replenishment, it’s not a good tool for firms whose assets have shorter lives...and that’s only the beginning.

Cash Flow Definitions over the Years: They Didn’t Add Up

Short-term asset conversion cycle. We bankers are always looking for a reliable measure of the borrower’s repayment ability. As we moved from the seasonal credit model of the short-term-inherently-self-liquidating loan (STIL) to longer-term lending, we had to shift our focus on the circulation of cash from working capital’s asset conversion cycle (ACC) to operating performance’s bottom line. Conversion of cash to inventory to receivables back to cash just didn’t cut it in the measurement of cash available to repay long-term obligations. Current...

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assets were financed by current liabilities, and the excess proceeds represented by net working capital (NWC = current assets less current liabilities) ultimately worked their way through the operating statement to net income. By adding back the non-cash charges of depreciation and amortization, analysts reckoned that this figure was the cash flow that repaid debt, funded capital expenditures, and paid dividends.

Traditional cash flow. The traditional cash flow (TCF) method proved adequate for the stable, mature borrowers who qualified for long-term debt. It was implicit in this mature-borrower model that the balance sheet would expand seasonally but contract to its original levels by the end of the fiscal year. What growth occurred in assets was in step with sales growth, say, 4-6%, or roughly the rate of inflation. Therefore, there wasn’t much need for financing working capital growth, just minimal fixed asset replacement, and relatively little debt to repay in the illusory world of the stable, mature firm.

Of course, the mature-borrower model doesn’t offer much of a lending opportunity for the banker, so naturally, the opportunistic banker is more attracted to fast-growing companies with their expansive credit requirements as well as their non-credit service needs. Traditional cash flow may work for the static model, but it isn’t well suited for firms experiencing rapid growth and banks looking for more loan volume and fee income.

This weakness made traditional cash flow the poster child of the analytical community’s crusade for operating cash flow. Academic careers and analytical reputations were assured in the aftermath of such infamous lending disasters as the W.T. Grant and Penn Central bankruptcies.

The clear successor to traditional cash flow was operating cash flow, advocated, among others, by Robert Morris Associates, now the Risk Management Association.

Cash flow from operations. RMA’s crusade ended in victory with the implementation of FAS95 in 1987, and today corporations must reconcile their changes in cash flow from operations, investing, and financing, and then they may disclose them by the indirect or direct method. Some analysts watch the trends of net income and cash flow from operations for signals of potential problems.

When cash flow from operations (CFO) begins to lag behind net income, it is usually a red flag. Oxford Health Plans, Inc., saw its stock drop 62% on a single day in October 1997 after the HMO said it would report a loss, but some investors had exited before October because of the sharp decline in CFO months earlier.

The same month, an investment analyst noted a widening gap between cash flows and book earnings of FPA Medical Management, and subsequent events ultimately culminated in bankruptcy. CFO is less subject to accounting distortions than net income. Now financial periodicals like CFO track the net income-CFO gap for its readers.

The major computer spread vendors use FAS95’s cash flow model to calculate cash available to service debt. Projections are based on these methodologies, and any user survey would provide enough anecdotal satisfaction with FAS95 cash flow to validate its reliability as an indicator of repayment ability. So why bother with EBITDA? What is it? What more does it offer?

EBITDA Spelled Out

$$\text{EBITDA} = \text{TCF} + \text{I}$$

EBITDA is shorthand for earnings (E) before (B) interest (I), taxes (T), depreciation (D), and amortization (A), or actually, traditional cash flow (TCF) plus interest (I) and taxes (T).

<table>
<thead>
<tr>
<th>EBITDA</th>
<th>Earnings before interest, taxes, depreciation &amp; amortization</th>
</tr>
</thead>
<tbody>
<tr>
<td>+I</td>
<td>+interest</td>
</tr>
<tr>
<td>+T</td>
<td>+taxes</td>
</tr>
<tr>
<td>+D</td>
<td>+depreciation</td>
</tr>
<tr>
<td>+A</td>
<td>+amortization</td>
</tr>
</tbody>
</table>

EBITDA Spelled Out

$$\text{EBITDA} = \text{E} + \text{I} + \text{D} + \text{A}$$

Depreciation and amortization are often lumped together because they are both noncash charges and amortization is typically too small an item to track separately. That convention is observed in this article, so depreciation and amortization will be combined into one figure symbolized as D & A.
Meanwhile, have affairs changed so much that we have had to come full circle from ACC, to T CF, to CFO, and back to a modified T CF—more popularly called EBITDA? What prompted the genesis of this acronymic jaw-breaker?

EBITDA's loss origins. EBITDA has existed since the 1960s but came into its own during the leveraged buyouts of the 1980s. It was used as a means of incorporating goodwill amortization for companies that made purchases at much higher prices than their acquisitions' book values. During the recessions of the early 1990s, EBITDA found favor as a measure of cash flow in the extreme for companies in near bankruptcy. With time, the concept was increasingly applied to companies with long-lived assets. EBITDA became the method of choice for highly leveraged companies in cable and media, for which after-tax profits were infrequent and book losses were common. Investors, creditors, and analysts found negative numbers awkward in their evaluations.

Thus, they added back the enormous depreciation charges generated from the substantial investment in cable and broadcasting fixed assets. By pouring back into the cash pool the large interest charges incurred by the heavy debt financing of those assets, analysts could obtain a positive line that was not nearly so volatile, erratic, and negative as the GAAP income statement’s bottom line. EBITDA's smoother line tracked more neatly with revenues, and these stable revenue/EBITDA multiples helped the analysts value companies that otherwise were not comparable and were incomprehensible. Further, substituting EBITDA for after-tax profits in the P/E ratio creates the impression of a much lower and, of course, less volatile P/E ratio.

More recently, the Wall Street Journal has noted the growing confusion that EBITDA and other proxies for earnings have brought to the market's use of P/E ratios to measure and compare corporate performance. The real estate investment trust (REIT) industry focuses on funds from operations (FFO), a standard approved by the industry's main trade group, the National Association of Real Estate Investment Trusts. FFO allows REITs to add back real estate depreciation and ignore gains on sales of properties because their primary source of income is the rent from the buildings they own. Over the years, REITs have become more aggressive in what they exclude or include in FFO.

Some exclude technology-investment losses or foreign exchange losses, while others include gains from sales of property that has been depreciated. Meanwhile, other phrases have joined FFO as alternative profit and cash flow measures. Eonomic earnings, core earnings, ongoing earnings, operating earnings, and pro forma earnings all share one trait with FFO and EBITDA—they are larger than net income and result in lower P/E ratios. EBITDA and the other cash flow measures are larger because companies label certain "extraordinary" expenses as special, one-time exceptional, noncash, or nonrecurring. These expenses are deducted from after-tax profits to arrive at net income, the regular P in the P/E ratio, but they aren't subtracted from EBITDA and the other alternative profitability measures. There are no official guidelines for what goes into these alternative measures or what qualifies as extraordinary items. The Wall Street Journal reckons that 60 cents of every dollar reported as operating earnings by the S&P 500 would have disappeared if the 500 had treated their extraordinary items as ordinary business expenses.

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ures of operating performance. However, critics charged that highlighting performance measures before taxes and before such major expenses as depreciation and amortization was “just a lame excuse to get a lower multiple.” When the bottler was trading at an unattractive 90 times reported earnings, its price/Earnings ratio was a more pleasing 14 times EBITDA.10

The bigger concern for bankers is EBITDA’s false impression of more money to make interest payments. In its 1998 third quarter, Coinmach, a large operator of washing machines in apartment buildings, reported $6.8 million in operating income before $12 million in interest expenses. Lenders might have been concerned about interest coverage, but by adding back depreciation, amortization, and taxes, Coinmach could report a $24 million EBITDA, twice interest expenses, while claiming in its 10-Q report that “... an increase in EBITDA is an indicator of the company’s improved ability to service existing debt, to sustain future increase in debt.” Is a capital-intensive company really earning a profit if its assets are deteriorating from wear and tear? The ultimate test of EBITDA’s reliability as a cash flow debt service indicator may be the lengthening list of failures with positive EBITDA right up to the end—Texas Air, Quality Dining, Harcourt Brace Jovanovich, and FPA.11

The recent collapse of several movie theater chains reveals a particularly dark picture of EBITDA’s shortcomings as either a cash flow proxy or as an early warning signal of repayment problems.

The last picture show.
Despite a collective operating income loss of $37.1 million, five major theater chains had amassed an aggregate $4.8 billion in debt based on optimistic EBITDA cash flow projections. Still, by June 30, 2000, the five companies’ total debt was eight times their actual, aggregate EBITDA, high even for debt/EBITDA multiples where the rule-of-thumb gets twitchy above 4 times12 (see Figure 1).

What went wrong with the original upbeat box-office projections?
1. Overall movie attendance grew more slowly than expected, only 1-3% throughout the 1990s.
2. As the new megaplexes opened, the public abandoned the older facilities, so the new theaters cannibalized the old movie houses.
3. Low attendance forced exhibitors to keep ticket prices low.
4. Overhead costs rose sharply in the new amenities-laden theaters.
5. Multiple screens meant movies lost their “legs” and didn’t run for months anymore. Instead of six-month runs in one big movie theater, movies were now showing simultaneously on several screens and running out of audiences in weeks, not months. Unfortunately, the standard formula for sharing ticket revenues still rewarded long runs, not short sprints.
6. The film offerings in 2000 were lackluster to audiences, so box office receipts were even flatter, growing just 0.2% for the first 11 months.

Was it any surprise that this industry, laden with enormous debt and lease liabilities, would seek Chapter 11 relief? It’s hard to earn an economic profit by adding higher-cost seat capacity and selling fewer tickets.13

Of course, in 10-Q and 10-K disclosures, companies do tactfully remind readers that “EBITDA is not determined in accordance with GAAP and, as a result, is susceptible to varying calculations.” Unfortunately, these admissions come after touting EBITDA as a corporately sanctioned cash flow

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**Figure 1**

<table>
<thead>
<tr>
<th>Chain</th>
<th>Revenue*</th>
<th>Op Inc*</th>
<th>EBITDA*</th>
<th>Debt*</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMC</td>
<td>1,168.5</td>
<td>(14.5)</td>
<td>87.2</td>
<td>751.0</td>
</tr>
<tr>
<td>Carmike</td>
<td>490.7</td>
<td>42.2</td>
<td>145.8</td>
<td>492.5</td>
</tr>
<tr>
<td>Loew’s</td>
<td>933.9</td>
<td>19.0</td>
<td>145.1</td>
<td>933.0</td>
</tr>
<tr>
<td>Regal</td>
<td>1,082.8</td>
<td>(34.6)</td>
<td>196.1</td>
<td>1,918.7</td>
</tr>
<tr>
<td>United Artists</td>
<td>622.0</td>
<td>(49.2)</td>
<td>70.0</td>
<td>720.2</td>
</tr>
<tr>
<td>Total</td>
<td>4,297.9</td>
<td>(37.1)</td>
<td>607.1</td>
<td>4,815.4</td>
</tr>
</tbody>
</table>

*As of 6/30/00; $Millions of revenue, operating income, and EBITDA are “last 12 months.” Source: “Movie Theatres: The Sequel,” SunTrust Equitable Securities Loan Capital Markets Monthly Report, October 2000, pp. 16-25.
The Problems with EBITDA

Some of the problems. In a speech to the New York Society of Security Analysts, Moody's Pamela Stumpp summarized succinctly the pros and cons of EBITDA as a cash flow measure. She noted that EBITDA is a better measure for companies whose assets have longer lives, but it is not a good tool for firms whose assets have shorter lives or for companies in industries undergoing a lot of technological change. She warned that EBITDA works for cash flow measurement of low-rated credits at the bottom of the business cycle, but it doesn't work so well for higher-rated and investment-grade credits midway through or at the top of the cycle. She cautioned that EBITDA can be easily manipulated through aggressive accounting policies on revenue and expense recognition, asset writedowns and the related adjustments to depreciation schedules, excessive adjustments in deriving adjusted pro-forma EBITDA, and the timing of certain "ordinary course" asset sales.

Among EBITDA's critical failings, she criticized EBITDA's overstatement of cash flow in periods of working capital growth and its omission of required reinvestment, especially for companies with short-lived assets. Besides working capital and reinvestment, EBITDA is overstated by its treatment of taxes and dividends.

1. EBITDA ignores a company's tax obligation, which is a cash-absorbing expense. Remember its origins as a stable measure of performance in the early unprofitable days of cable TV, when the years of losses precluded any need to pay income taxes.
2. It assumes that fixed assets don't require capex replenishment, a stretch of credulity for fast-growing firms.
3. It overlooks the working capital requirements for more investing and accounts receivable to support growing sales.

4. Public companies are often committed to maintaining a steady record of declaring and paying dividends, and interruption of dividend payouts may hurt company market values.

Covenants. Maybe the investment community never intended for EBITDA to be confused with or mistaken for cash flow, but it is firmly entrenched as a cash flow measure in corporate banking. Its acceptance as a surrogate for cash flow has made it a commonly used variable in cash flow coverage and leverage covenants. Loan Pricing Corporation's Gold Sheets routinely reports on corporate banking syndications, and any casual perusal of this publication shows the widespread use of EBITDA to determine pricing and to set financial covenants. For example, popular leverage covenants include senior debt to EBITDA and total debt to EBITDA, and EBITDA is also used in various ratios to measure EBITDA's coverage of interest expense, principal repayment, and lease and rent expense.

Extraordinary items. But the use of EBITDA in covenants may lead to behaviors never intended. The abuse of one-time restructuring charges in recent years has been well documented in the cases of McDonald's kitchen equipment upgrades and Waste Management's repainting of its trucks. Yet, despite the investor outcry and some regulatory clampdown, companies still pursue the practice of shifting...
operating expenses down below the after-tax profit line. An obvious benefit is that reclassifying operating expenses as extraordinary charges enhances EBITDA.

Mergers and acquisitions also boost EBITDA, as M&A-related charges are treated as nonrecurring items. Breaking up isn’t so hard to do, either. As a part of its spin-off from AT&T in a 1996 public offering, Lucent took a big-bath charge, in which it set up a $2.8 billion reserve to cover restructuring costs. It arrived at the figure by estimating how much the restructuring would cost over several years, and the reserve was to cover severance for 20,000 employees and the cost of exiting businesses, such as AT&T’s Phone Center Stores. By writing off several years of costs all at once rather than taking them each year as the money is spent, Lucent eliminated future costs from its books. Even better for Lucent, it put aside more than was needed to cover the restructuring, and Lucent was able to recover some $382 million from reserves to add back to pretax income. Consequently, even as the reserve cut future expense recognition, the recovered income helped smooth out earnings.18

If there are no mergers or acquisitions on the horizon, internal restructuring can give EBITDA a shot in the arm. Even respected companies like Kellogg took a $126 million charge during one of its 1998 quarters for streamlining initiatives in Europe and other parts of the world. Write-offs make new management look good. IBM’s Lou Gerstner would have reported a loss of $19.72 a share in 1994 if his massive restructuring charges had been expensed as incurred instead of taken all at once.19

For the second quarter of fiscal 2001, Waste Management classified as an unusual expense the painting of its garbage trucks because the painting was done earlier than budgeted. This latest controversy follows Waste Management’s improper deferral of operating expenses two years before that led to $2.9 billion in charges and earnings restatements for fiscal 1999.20

Now that we know some of the problems with EBITDA, what can we do to improve on this imperfect cash flow measure and financial covenant variable? Let’s look at EBITDA-based covenants and some alternatives to them, and in the words of Teddy Roosevelt, “Do what you can, with what you have, where you are.”

EBITDA-Based Covenants and Some Alternatives to Them

Typical EBITDA Covenants. Just as the price-earnings ratio is a simple way of relating value to a company’s earnings, the EBITDA definition for core cash flow is another tool that has been incorporated into the covenants of loan agreements. Despite the acknowledged shortcomings of both tools, the players in the financial markets are unlikely to discard them because they are easy to understand and easy to use. Nevertheless, variants of both are employed, and in the interest of living with EBITDA, there are some adjustments that render EBITDA a more accurate measure of cash flow. Some of the common EBITDA-related covenants include the leverage and coverage ratios seen in Figure 2.21

So what can we do to make these common covenant measures more effective? For starters, we can revise EBITDA into a more accurate measure of cash flow by taking into account the inevitability of taxes, capital expenditures, working capital expansion, and dividends. The result of this refinement process is sometimes described as free cash flow. Then we can think about how to deal with nonrecurring expenses and extraordinary charges.

Replace EBITDA with free cash flow. It was noted earlier that EBITDA is an inaccurate measure of cash flow, especially for debt repayment. In other words, it is not a surrogate for cash flow from operations. FAS95 calculates cash flow from operations first, and the implicit assumption is that operating cash flow is the pool of cash that nurtures capital investment and satisfies creditors. Consequently, investing cash flows and financing cash flows are depicted as the second and third cash flows, respectively, in the FAS95 model.

Free cash flow renders EBITDA into a proxy for cash available to service debt by assuming that taxes have to be paid, capital expenditures must occur just to maintain the present level of fixed assets, working capital investment must be made to support the company’s growth, and dividends often must be paid to meet market expectations. Deducting these items from EBITDA often doesn’t
leave as much cash for debt service (DS), the sum of principal (P), interest (I), and rent and lease expense (R). Just as interest expense is a pretax expense to be added back to arrive at the cash flow pool available to cover I, we also add back rent and lease expense to estimate the depth of the EBITDAR cash flow pool available to cover R as well as I.

As the borrower faces these financial facts of life, the company must make some hard choices. What sum of T, capex, DWC, and Div renders the firm unable to service its obligations of P, I, and R? The example for Runamok Corporation shown in Figure 3 illustrates the math of EBITDA, EBITDAR, and FCF.

Which of the three measures—EBITDA, EBITDAR, or FCF—is the best estimate of cash available to service debt? As you ponder the answer to that question, look at some additional, selected financial statistics for Runamok, seen in Figure 4.

Runamok has incurred some extraordinary charges for various items—inventory writedowns, store closings and openings, integration costs, etc. Its acquisition strategy has created substantial amounts of goodwill, and private investors have increasingly infused subordinated debt. Meanwhile, many of the new store locations have been sited in leased premises, and the annual lease and rent obligations have been capitalized by using a 6.0X multiple to derive an estimate of Runamok’s total obligations.
Multiples between 5X and 8X are typical, and the final number tends to reflect judgments about the average useful life of the leased assets, borrowing costs, residual values, and other variables.

When Runamok solicited creditors for financial support of its rapid growth plans, it advised them that most of its growth would be external through acquisitions while simultaneously building and leasing new outlets, which would also necessitate more inventory to stock the stores and some attractive credit terms to take market share from its competitors. The lead bank syndicated a very loose agreement that employed a senior debt/EBITDA ratio for both pricing and policing. The maximum senior debt/EBITDA ratio for covenant purposes was 3.50X, a little higher than average for its retail line, but not unreasonable. Runamok hit the 3.50 maximum at the 2000 fiscal year-end, but it dropped to a very comfortable 1.60X the following year. Yet Runamok was consistently overdrawn and complained of strained liquidity. Its new units were taking longer than planned to construct, stock, staff, and open, so sales were growing only 10-12% annually instead of the projected 15-20%. Finally, one of its larger acquisitions was Komanur, Inc., an organic fertilizer distributor well outside Runamok’s agricultural and industrial footwear line of business. Lacking much opportunity for synergies or scale economies for the combined enterprise, Runamok chewed up more cash because of its indigestible overhead.

As the ratios in Figure 5 demonstrate, widening the definition of debt to include capitalized lease obligations and replacing EBITDA with EBITDAR and FCF reveals a far more alarming picture of Runamok that is much more revelatory of the cash flow problems than the EBITDA ratio snapshot.

Of course, if FCF had been used instead of EBITDA or even EBITDAR, Runamok would have probably been unsuccessful in obtaining a credit facility. To compound the EBITDA problem further, variations on the debt/EBITDA ratio are often employed in pricing grids that boost the borrowing rate as the ratios increase. Pricing grids perform a useful function of keeping the return commensurate with the rising credit risk; however, using the same ratio for both pricing and covenant control raises the issue of whether a covenant default waiver can be purchased by paying a higher rate. A simple solution is, first, to avoid using the same ratio as both a pricing ratio and a covenant control ratio, and, second, to make the debt component of the pricing measure as broad as possible. After all, the point of the ratio is to keep the return representative of the risk. Further, using only senior debt motivates a borrower to avoid more senior debt in favor of subordinated debt or leases.

**Figure 4**

<table>
<thead>
<tr>
<th>Selected Runamok Data (SM M)</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenues</td>
<td>568</td>
<td>636</td>
<td>702</td>
</tr>
<tr>
<td>Extraordinary Charges</td>
<td>-7</td>
<td>-5</td>
<td>-2</td>
</tr>
<tr>
<td>Net Worth</td>
<td>176</td>
<td>179</td>
<td>201</td>
</tr>
<tr>
<td>Tangible Net Worth</td>
<td>148</td>
<td>85</td>
<td>22</td>
</tr>
<tr>
<td>Total Senior Debt</td>
<td>49</td>
<td>140</td>
<td>109</td>
</tr>
<tr>
<td>Total Subordinated Debt</td>
<td>+38</td>
<td>+54</td>
<td>+124</td>
</tr>
<tr>
<td>Total Funded Debt</td>
<td>87</td>
<td>194</td>
<td>233</td>
</tr>
<tr>
<td>Capitalized Lease Obligation (CLO)</td>
<td>+30</td>
<td>+60</td>
<td>+120</td>
</tr>
<tr>
<td>Total Funded Debt and CLO</td>
<td>117</td>
<td>254</td>
<td>353</td>
</tr>
</tbody>
</table>

**Figure 5**

<table>
<thead>
<tr>
<th>Runamok’s Leverage and Coverage (X)</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sr Dbt/EBITDA (X)</td>
<td>49/45=1.09</td>
<td>140/40=3.50</td>
<td>109/68=1.60</td>
</tr>
<tr>
<td>Total Dbt/EBITDA (X)</td>
<td>87/45=1.93</td>
<td>194/40=4.85</td>
<td>233/68=3.42</td>
</tr>
<tr>
<td>EBITDA/(P+I)</td>
<td>45/17=2.65</td>
<td>40/16=2.50</td>
<td>68/30=2.27</td>
</tr>
<tr>
<td>EBITDAR/(P+I+R)</td>
<td>50/22=2.27</td>
<td>52/28=1.86</td>
<td>88/50=1.76</td>
</tr>
<tr>
<td>(Tot Dbt +CLO)/EBITDAR</td>
<td>117/50=2.34</td>
<td>254/52=4.88</td>
<td>353/88=4.01</td>
</tr>
<tr>
<td>(Tot Dbt + CLO)/FCF</td>
<td>117/2=2.22</td>
<td>254/95=4.84</td>
<td>353/48=4.01</td>
</tr>
<tr>
<td>FCF/(R+P+I)</td>
<td>-2/-2=n.m.</td>
<td>-95/-28=n.m.</td>
<td>-48/-50=n.m.</td>
</tr>
<tr>
<td>n.m.=not meaningful</td>
<td></td>
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</tr>
</tbody>
</table>
variables relative to one another; as one changes, however, so can the other. Anchoring one of the variables to an absolute number can stop this ratio drift, and the most logical answer for a leverage ratio is some form of minimum equity. \(^{22}\) If the lender is concerned about the borrower paying too much for its acquisitions, then minimum tangible net worth offers a way to curtail pricey purchases. If the lender also wants to encourage spreading the risk among tiers of lenders, a minimum tangible capital funds requirement could be the answer.

Tangible capital funds is defined as the sum of senior and subordinated debt minus goodwill and other intangibles. Runamok is typical of fast-growth firms in the diminution of its tangible net worth, and requirements of a positive tangible net worth are as good as it gets for many of these firms. Of course, that is also a tacit admission that in the event of a monetary meltdown, there’s probably not much margin for error in finding enough asset liquidation value to pay off all the creditors.

\textbf{Subordinated debt.} To control the mix of senior and subordinated debt, lenders typically set limits using both a total debt ratio and a senior debt ratio. Subordinated debt is a misleading term; most subordinated debt today receives principal and interest along with the senior debt and it is subordinated to senior debt only after an event of default. Further, subordinated debtholders usually can declare default on their debt, too, and given that this riskier debt typically is more expensive, its debt service can be a painful competitor with the senior debt.

\textbf{Capex.} Sometimes lenders choose to budget the minimum level of capital expenditures needed to maintain the company’s current fixed-asset investment. Advocates of this approach argue that “maintenance capex” protects the long-term earning assets of the borrower by forcing the borrower to budget enough capex to properly maintain its existing plant and equipment. Critics point out that using an estimated maintenance capex instead of the actual capex tends to overstate the FCF available to repay lenders. In the case of Runamok, using an annual maintenance capex of $10 million instead of the actual $23 million for the 1999-2001 period would have overstated FCF by $200 million ($(37 + $102 + $91) - ($10 + $10 + $10) = $200)).

\textbf{Nonrecurring expenses and extraordinary charges.} Abuses abound in the accounting for nonrecurring expenses and extraordinary charges. For one thing, they are awkwardly and erroneously named, since they seem to occur year after year in corporate financials. Technically speaking, these items are not cash expenses in the year recognized, but they are tacit admission that expenses were understated in prior years, so the previous years’ profits and the EBITDA figures derived from them were overstated. One way to discourage this behavior and add

\begin{table}[h]
\centering
\begin{tabular}{|c|c|c|c|}
\hline
\textbf{Runamok’s NCAO, NCI, & CADA (SMM)} & \textbf{1999} & \textbf{2000} & \textbf{2001} \\
\hline
Cash collected from sales & 566 & 616 & 666 \\
- production costs & -460 & -526 & -537 \\
- operating costs & -82 & -104 & -123 \\
- other income (expenses) & 5 & 22 & 25 \\
\hline
Net cash after operations (NCAO) & 29 & 8 & 31 \\
- interest expense & -7 & -11 & -16 \\
- dividends & -3 & -4 & -8 \\
\hline
Net cash income (NCI) & 19 & -7 & 7 \\
- principal repayment & -10 & -5 & -14 \\
\hline
Cash after debit amortization (CADA) & 9 & -12 & -7 \\
- capital expenditures (CAPEX) & -37 & -102 & -91 \\
NCAO cash surplus/(deficit) & -28 & -114 & -98 \\
FCF cash surplus/(deficit) & -24 & -123 & -98 \\
NCAO & 29 & 8 & 31 \\
EBITDA & 45 & 40 & 68 \\
\hline
\end{tabular}
\caption{Figure 6}
\end{table}

\begin{table}[h]
\centering
\begin{tabular}{|c|c|c|c|}
\hline
\textbf{Cash Flow Ratios (X)} & \textbf{1999/(7+10)=} & \textbf{8/(11+5)=} & \textbf{31/(16+14)=} \\
\hline
NCAO/(P+I) & 1.71x & .50x & 1.03x \\
\hline
CADA/(P+I) & .53x & -7/30= & n.m. \\
\hline
n.m. = not meaningful
\end{tabular}
\caption{Figure 7}
\end{table}
some cushion to the EBITDA, EBITDAR, and FCF measures is to “adjust” these various cash flow indicators by deducting these nonrecurring, extraordinary items. The result will be an understated cash flow estimate, an error on the positive side for the lender.

The end solution. If adjusting EBITDA to EBITDAR to FCF is too much fiddling with the figures for your taste, then there is always the real complicated cash flow alternative that started us down this path. RMA’s Uniform Credit Analysis® (UCA) model for constructing business cash flow became widely accepted by bankers in the late 1980s and early 1990s. It introduced lenders to a whole new set of terms for computing debt-service coverage, such as net cash after operations (NCAO), net cash income (NCI), and cash after debt amortization (CADA). NCAO is the firm’s cash position after accounting for revenues collected, costs paid for producing goods and services, payments for operating expenses, and other recurring items. CADA represents the cash—after DSC and dividends have been paid—that is available for capex.

Runamok’s three years of results in Figure 6 illustrate and compare the NCAO-CADA approach to FCR and provide two coverage ratios based on these measures.

Runamok’s NCAO has been insufficient to cover interest expense, principal, dividends, and capital expenditures, and the result has been three years of NCAO cash deficits totaling $240 million. Using EBITDA instead of NCAO grossly overstates Runamok’s cash flow, but FCF comes much closer to the NCAO cash deficit figure.

The objective of the first ratio is to compare earnings adjusted for noncash items (NCAO) with working capital changes as the basis for testing the ability to repay. It is unrealistic to expect the company to reduce its working capital investment and potentially restrict sales growth in order to repay borrowings partly incurred to finance the company’s growth strategy. If NCAO exceeds debt service (P + I), then CADA will be positive. The second ratio reflects the effect of dividends, which, as mentioned earlier, are generally necessary to maintain the value of a publicly traded stock. The drawback to these two ratios is that the UCA model’s NCAO and CADA are not as easy to calculate manually as is EBITDA, EBITDAR, or even FCF. Further, although bankers may prefer the accuracy of NCAO and CADA, borrowers and investors are less inclined to use them because they are a reshuffling of the FAS95 presentation that results in lower, less appealing cash flow estimates.

Closing and Summary

This article has surveyed the literature critical of EBITDA and offered some alternatives on how to improve its usefulness, if not its pronunciation. For better or for worse, EBITDA is a popular tool used in the financial services industry to structure deals. Despite the advent of the FAS95 cash flow statement in 1987, the financial community prefers the simpler EBITDA to the more complicated CFO. An income statement is all that’s necessary to calculate EBITDA, but CFO requires the two balance sheets bracketing the income statement to yield the changes in assets, liabilities, and equities.

It is that very avoidance of the changes in the balance sheet that causes EBITDA to be an imperfect measure of cash flow. In their search for core cash flow earnings, analysts relying on EBITDA to measure debt-carrying and repayment capacity overlook the cash requirements for working capital, capital expenditures, dividends, and taxes. The ultimate irony is that EBITDA is most accurate for companies that do have any growth requiring working capital expansion or fixed plant additions, do not pay dividends to their stockholders, and do not have any income on which to pay taxes. Who wants to lend to a stagnant, unprofitable firm? Euripides was right, “None can hold fortune still and make it last.”

If the financial community doesn’t want to spend the time doing the math to derive cash flow from operations, it can try FCF as a much more accurate alternative to EBITDA. FCF’s advantage is that it does take into account working capital changes, CAPEX, dividends, and taxes. EBITDA does not spell cash flow, but FCF is sufficiently close to being a letter-perfect version of the real thing. To quote Euripides again, “Sufficiency’s enough for men of taste.”

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**EBITDA: It Doesn’t Spell Cash Flow**

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### Endnotes


2. Ibid., p. 238.


11. Ibid.


23. Hamm, op. cit., p. 56.

24. Ibid.

### Bibliography


