

EBITDA as an indicator of earnings quality

This widely used financial measure has received some bad press and scepticism. However, **ROBERT LUCIANO** says EBITDA does have its uses.

Earnings before Interest, Tax, Depreciation and Amortisation (EBITDA) is a financial measure that has become widely accepted and utilised in financial markets for many purposes including financial statement analysis, credit analysis and valuation.

The proliferation of the use of EBITDA has occurred despite numerous weaknesses and potential flaws associated with using EBITDA as an analytical and valuation metric. It therefore comes as no surprise that, in the wake of a tide of corporate malfeasance, the validity of using EBITDA has been placed under increased scrutiny and criticism by various parties, including credit rating agencies, management consultants, shareholder advocacy groups, and media commentators.

The recent criticism of EBITDA is nothing new and merely reiterates the concerns raised by a number of astute investors and analysts over the past decade or so.¹

There is no question that EBITDA does not constitute an all-encompassing measure of corporate earnings or financial performance. Furthermore, EBITDA does not reflect the actual cash flow generation capacity of a business as it fails to capture capital requirements.

Notwithstanding these issues, EBITDA can supply analysts and investors with a useful analytical tool. The purpose of this article is to illustrate how EBITDA can be used in order to assess the quality of a

company's reported earnings by undertaking a reconciliation of EBITDA to gross operating cash flow (GOCF)².

Background

The notion of EBITDA was spawned in debt markets and came into widespread use during the late 1980s amid the leveraged buy-out (LBO) boom. The proliferation of EBITDA as a financial metric was encouraged by LBO promoters, and other parties with vested interests in the issuance of high-yield securities (otherwise referred to as junk bonds).

During the LBO boom, the primary usage of EBITDA was focused on highlighting to prospective investors in high-yield securities that the debt servicing capacity of highly leveraged companies was more accurately reflected in an EBITDA cover ratio than other traditional interest cover ratios such as EBIT/Interest.

This was based on the view that non-cash charges, being depreciation and amortisation, could be added back to EBIT, given the assumption that adequate investment had been made in long-lived, fixed assets prior to a company being targeted as an LBO candidate.

As a result, it was argued that negligible capital expenditure (Capex) would be required over the intermediate period post the LBO and thus depreciation expense would overstate underlying maintenance Capex.

On this basis, high-yield investors gravitated towards EBITDA-based liquidity ratios as a key measure of solvency for LBO bond issues. In spite

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of its original purpose to assess LBOs, EBITDA and EBITDA-based liquidity ratios became widely accepted and used throughout credit markets.

During the 1990s, when LBOs returned to financial markets as initial public offerings (IPOs), the promoters of these offerings, once again, focused investor attention on EBITDA. At this stage, the rationale supporting EBITDA as a measure of financial performance by the promoters of IPOs, was that it supplied a superior measure of operating earnings versus the traditional measure of EBIT, as it excluded non-cash charges (especially goodwill amortisation which was particularly relevant for goodwill laden LBOs).

Furthermore, it was argued by IPO promoters that EBITDA provided equity investors with a more accurate reflection of not only a company's debt servicing capacity but also its underlying operating earnings, operating margins and return on invested capital.

Over the 1990s EBITDA evolved into a commonly used and widely referred to financial metric in capital markets. Today EBITDA and its derivative ratios are a standard feature in a wide variety of financial market information sources, including fixed income research, equity research, company annual reports and media reports.

Why is EBITDA used?

EBITDA is used for a variety of analytical purposes; however, the primary rationale for its application in each instance stems from the notion that EBITDA provides a measure of the raw operating earnings of a business, which excludes asset diminution charges, financing costs and tax expense. Furthermore, its usage is underpinned by the fact that, if adjusted correctly, EBITDA may constitute an accrual accounting proxy for gross operating cash flow (GOCF).

EBITDA is used for a number of reasons including the following:

- EBITDA provides a benchmark against which the quality of a company's reported earnings can be assessed by undertaking a reconciliation to GOCF;
- EBITDA provides a measure of earnings that is not distorted by

differences in accounting treatments of depreciation and amortisation, the effects of financial leverage and varying tax rates and treatments, and hence facilitates comparable company analysis on both a country-specific and global basis;

- EBITDA can provide a starting point in the calculation of free cash flow;³
- EBITDA provides an indication of the potential debt burden that a business can endure, via liquidity measures such as EBITDA/Interest and Debt/EBITDA;
- EBITDA provides a key input in valuation analysis, in particular EV/EBITDA valuation and DCF valuation.

What are the weaknesses of EBITDA ?

EBITDA suffers from a number of weaknesses and shortcomings that users of financial statements should be cognisant of. The weaknesses of EBITDA include the following:

- EBITDA is only a proxy for GOCF, and is not an accurate measure of any form of cash flow;
- EBITDA is an accrual accounting measure of earnings that is susceptible to manipulation by company management;
- EBITDA can be either over stated or under stated by the use of equity accounting;
- EBITDA can be impacted by the choice of leasing method (e.g. finance versus operating leases);
- EBITDA does not incorporate working capital requirements;
- EBITDA does not incorporate Capex requirements;
- EBITDA does not offer an adequate measure of earnings for businesses that operate with short-lived assets or are potentially subject to material Capex commitments due to changes in industry structure and/or technological change;
- EBITDA is not necessarily consistent on a global basis given the differing treatments of corporate combinations, revenue recognition and expense recognition by various countries' accounting standards; and
- EBITDA is not relevant whatsoever to

banking and insurance businesses, given that their earnings are largely underpinned by interest income.

Perhaps the shortcomings of EBITDA are best distilled in a comment by one of the world's most successful investors and longtime critic of financial alchemy, Warren Buffett, in his 1997 Chairman's Letter to shareholders of Berkshire Hathaway Inc:

"...we do not think so-called EBITDA is a meaningful measure of performance. Managements that dismiss the importance of depreciation—and emphasise "cash flow" or EBITDA—are apt to make faulty decisions, and you should keep that in mind as you make your own investment decisions".

How is EBITDA calculated?

For publicly listed corporations in Australia, EBITDA can be calculated from either a company's preliminary accounts (Appendix 4B statement) or its statutory accounts.

Generally speaking, EBITDA on a reported basis is calculated using reported pre-tax profits before unusual and abnormal items as a starting point. From there, one proceeds to add back net interest expense (interest expense less interest revenue), depreciation and amortisation.

This represents a company's EBITDA on a reported basis and is usually the number available from research reports, financial databases and financial market news providers.

EBITDA on a reported basis can be calculated as follows:

Pre-tax Profit
Add (less): Unusual/Abnormal Loss (Gain)
Add: Interest Expense
Less: Interest Revenue
Add: Depreciation Expense
Add: Amortisation Expense
Reported EBITDA

Example: Based on the format in the table above we have calculated reported EBITDA for Burns Philp & Company Limited for the period FY2000 to FY2002. (Refer to Table 1.)

Since the introduction of AASB 1018 in FY2002, abnormal items are no

TABLE 1 CALCULATION OF REPORTED EBITDA \$AUD (M)

For the year ended 30 June	2000	2001	2002
Pre-tax Profit	98.1	102.6	120.9
Add (less): Unusual Loss (Gain)	(5.2)	–	35.2
Add: Interest Expense	90.9	95.8	72.9
Less: Interest Revenue	(9.9)	(13.0)	(7.0)
Add: Depreciation and Amortisation Expense	98.6	100.7	105.0
Reported EBITDA	272.5	286.1	327.0

Source: Burns Philp & Company Limited annual reports

TABLE 2 CALCULATION OF REPORTED EBITDA ADJUSTED FOR EQUITY ACCOUNTING \$AUD (M)

For the year ended 30 June	2000	2001	2002
Reported EBITDA	272.5	286.1	327.0
Less: Equity Accounted Profit	(11.6)	(12.4)	(10.1)
Add: Equity Accounted Loss	–	–	–
Reported EBITDA adj for equity accounting	260.9	273.7	316.9

Source: Burns Philp & Company Limited annual reports

TABLE 3 CALCULATION OF CORE EBITDA \$AUD (M)

For the year ended 30 June	2000	2001	2002
Reported EBITDA	272.5	286.1	327.0
Less: Asset Sale Gain	(0.3)	(0.5)	–
Add: Asset Sale Loss	1.0	–	2.0
Less: Unusual 'Usual' Cash Costs	–	–	–
Less: Capitalised or Deferred Operating and Financing Costs	(27.6)	(24.2)	(32.5)
Less: Equity Accounted Profit	(11.6)	(12.4)	(10.1)
Add: Cash Dividends Received from Associates	7.8	8.6	15.3
Core EBITDA	241.8	257.6	301.7

Source: Burns Philp & Company Limited annual reports

longer separately disclosed in company financial statements. This change in disclosure creates a number of fundamental problems for the users of financial statements in Australia.

Firstly, one can no longer easily determine the abnormal related tax expense (or benefit), thus impairing the ability to calculate a company's effective tax rate and thus its pre-abnormal or normalised NPAT.

Secondly, one is effectively reliant upon company management disclosing unusual or abnormal items in its statutory accounts. It remains to be seen whether unusual or abnormal profits will be disclosed to users of financial statements with as much expansive detail and justification for their

exclusion from "normalised" earnings as losses have been over the past few years.

Despite the change in accounting disclosure regarding abnormal items, the requirement for investment analysts to objectively assess the efficacy of each unusual or abnormal item reported by a company remains constant.

It should be noted that, after the introduction of equity accounting in Australia via AASB 1016 and UIG 24, a like-for-like comparison of reported EBITDA for a company must adjust for the equity accounted contribution that is incorporated into the pre-tax profit line from FY1999 onwards.

Reported EBITDA adjusted for the effect of equity accounting can be calculated as follows:

Reported EBITDA

Less: Equity accounted profit
Add: Equity accounted loss

Reported EBITDA Adjusted for Equity Accounting

Example: Based on the format in the table above we have calculated the Reported EBITDA adjusted for equity accounting for Burns Philp for the period FY2000 to FY2002. (Refer to Table 2.)

On occasion EBITDA, as calculated above, may differ from the measure of EBITDA disclosed by a company in a result presentation, investor briefing or annual report. This may be due to the company adjusting EBITDA for the inclusion or exclusion of the following:

- Equity accounted contribution;
- Unusual or abnormal items;
- Pro forma adjustments;
- Interest income and other non-operating investment income;
- Contributions from non-core operations that are to be divested.

For example, Burns Philp discloses EBITDA for FY2000, FY2001 and FY2002 of \$277.7m, \$286.1m and \$291.8m respectively.⁴ The difference between the numbers we have calculated and those of the company (being \$5.2m in FY2000 and \$35.2m in FY2002) represent items deemed unusual or abnormal by the author.

Core EBITDA

EBITDA on a reported basis may not necessarily provide users of financial statements with an adequate reflection of a business's underlying, raw operating earnings, given the inclusion or exclusion of non-operating revenues, non-cash revenues and non-cash costs.

An additional level of analysis can be undertaken which adjusts reported EBITDA for any such distorting items so as to calculate a measure that more accurately reflects underlying or core EBITDA. Core EBITDA is deemed to provide a relatively more accurate measure of the underlying operating earnings of a business.

Core EBITDA can be calculated as follows:

Reported EBITDA
Less: Asset Sale Gain
Add: Asset Sale Loss
Less: Usual 'Unusual' Cash Costs
Less: Capitalised or Deferred Operating and Financing Costs
Less (add): Equity Accounted Profit (loss)
Add: Cash dividends received from associates
Core EBITDA

Example: Based on the format in the table above, we have calculated Core EBITDA for Burns Philp for the period FY2000 to FY2002. (Refer to Table 3.)

Reconciling EBITDA to GOCF

EBITDA provides an accrual accounting proxy for the GOCF of a business. However, given that businesses in different industries enjoy varying cash conversion cycles due to differing working capital requirements, the correlation between EBITDA and GOCF may vary significantly across a large sample of industrial companies.

As a consequence, this reduces the overall efficacy of EBITDA as a proxy for GOCF. Furthermore, management can utilise accrual accounting techniques to generate a more robust outlook of operating performance than what may actually be the case.

Consequently, users of financial statements should endeavour to assess the underlying quality of a company's EBITDA via conducting a reconciliation of EBITDA to GOCF.

GOCF can be calculated as follows:

TABLE 4 CALCULATION OF GOCF \$AUD (M)

For the year ended 30 June	2000	2001	2002
Cash Receipts from Customers	1,282.4	1,409.6	1,404.2
Less: Cash Payments to Suppliers and Employees	(1,047.3)	(1,207.7)	(1,133.1)
Add: Dividends received from Associates	7.8	8.6	15.3
Add: Other Operating Cash Receipts	–	–	–
GOCF	242.9	210.5	286.4

Source: Burns Philp & Company Limited annual reports

TABLE 5 ANALYSIS OF GOCF/CORE EBITDA \$AUD (M)

For the year ended 30 June	2000	2001	2002
GOCF	242.9	210.5	286.4
Core EBITDA	241.8	257.6	301.7
GOCF/Core EBITDA	100%	82%	95%

Source: Burns Philp & Company Limited annual reports

TABLE 6 TOP-DOWN RECONCILIATION \$AUD (M)

For the year ended 30 June	2000	2001	2002
Sale revenue	1,290.8	1,425.2	1,395.7
Less: Cost of Goods Sold	(693.2)	(784.5)	(730.5)
Less: Selling, General and Administration (SG&A) expenses	(438.2)	(483.0)	(455.6)
Add: Depreciation and Amortisation	98.6	100.7	105.0
Add: Other Non-operating Revenues	2.9	15.3	2.3
Add: Equity Accounted Profits	11.6	12.4	10.1
Operating costs	(1,018.3)	(1,139.1)	(1,068.7)
Add (Less): Core EBITDA Adjustments	(30.7)	(28.5)	(25.3)
Core EBITDA	241.8	257.6	301.7
Add (Less): Dec (Inc) Change in Working Capital	(0.9)	(47.1)	(21.1)
Implied GOCF	240.9	210.5	280.6

Source: Burns Philp & Company Limited annual reports

Cash Receipts from Customers
Less: Cash Payments to Suppliers & Employees
Add: Dividends Received from Associates

Add: Other Operating Cash Receipts
GOCF

Example: Based on the format in this table, we have calculated GOCF for



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TABLE 7 ANALYSIS OF ACTUAL GOCF VS IMPLIED GOCF \$AUD (M)

For the year ended 30 June	2000	2001	2002
Actual GOCF	242.9	210.5	286.4
Implied GOCF	240.9	210.5	280.6
Actual GOCF/Implied GOCF	101%	100%	102%
Difference	2.0	–	5.8
Difference as a % of actual GOCF	0.8%	0.0%	2.0%

Source: Burns Philp & Company Limited annual reports

TABLE 8 COMPONENT RECONCILIATION \$AUD (M)

For the year ended 30 June	2000	2001	2002
Sales revenue	1,290.8	1,425.2	1,395.7
Add (Less): Dec (Inc) A/Cs Receivables	(4.0)	(12.2)	8.6
Add (Less): Inc (Dec) Cash Collections	7.8	8.6	15.3
Add (Less): Inc (Dec) Unearned Revenue	–	–	–
Less: Bad Debts	(2.8)	(4.8)	(1.1)
Implied Cash Receipts and Collections	1,291.8	1,416.8	1,418.5
Operating Costs	(1,018.3)	(1,139.1)	(1,068.7)
Add (Less): Core EBITDA Adjustments	(30.7)	(28.5)	(25.3)
Add (Less): Dec (Inc) Inventory	23.5	5.2	(14.9)
Add (Less): Inc (Dec) A/Cs Payable	12.3	1.7	8.4
Add (Less): Inc (Dec) Provisions and Other A's/L's	(32.7)	(41.8)	(23.2)
Implied Cash Payments to Suppliers and Employees	(1,045.9)	(1,202.5)	(1,123.7)
Implied GOCF	245.9	214.3	294.8

Source: Burns Philp & Company Limited annual reports

TABLE 9 ANALYSIS OF ACTUAL VS IMPLIED PAYMENTS AND RECEIPTS \$AUD (M)

For the year ended 30 June	2000	2001	2002
Implied Cash Receipts and Cash Collections	1,291.8	1,416.8	1,418.5
Actual Cash Receipts and Cash Collections	1,290.2	1,418.2	1,419.5
Difference	(1.6)	1.4	1.0
Difference as a % of Actual CR and Cash Collections	0.1%	0.1%	0.1%
Implied Cash Payments to Suppliers & Employees	(1,045.9)	(1,202.5)	(1,123.7)
Actual Cash Payments to Suppliers & Employees	(1,047.3)	(1,207.7)	(1,133.1)
Difference	1.4	5.2	9.4
Difference as a % of Actual CR & Cash Collections	0.1%	0.4%	0.8%
Implied GOCF	245.9	214.3	294.8
Actual GOCF	242.9	210.5	286.4
Difference	3.0	3.8	8.4
Difference as a % of Actual GOCF	1.2%	1.8%	2.9%

Source: Burns Philp & Company Limited annual reports

Burns Philp for the period FY2000 to FY2002. (Refer to Table 4.)

Having calculated Core EBITDA and GOCF we are now in the position to assess the underlying quality of EBITDA and the proportion of Core EBITDA that is backed by GOCF. Clearly the closer the fit between Core EBITDA and GOCF, the greater the reliance that can be placed on Core EBITDA as a proxy for both the underlying raw earnings of a business and its GOCF generating capacity.

In this example, as per Table 5, the ratio of GOCF/Core EBITDA for Burns Philp indicates that for every \$1.00 of Core EBITDA, the company generated \$1.00, \$0.82 and \$0.95 in GOCF over FY2000, FY2001 and FY2002 respectively. In general, differences between Core EBITDA and GOCF are usually explained by changes in working capital. In this example, the majority of the difference in FY2001 and FY2002 is explained by such changes. (This is illustrated in the following section of the article.)

In Australia, conducting an EBITDA to GOCF reconciliation is facilitated by the requirement as per AASB 1026 for corporations to disclose a direct cash flow statement in their statutory accounts.

This is in contrast to the situation in the US, for instance, where SFAS 95 allows corporations to choose between either a direct cash flow or an indirect cash flow statement. Corporations in the United States tend to report cash flows via indirect cash flow statements, and this is possibly due to the relative ease of preparation versus direct cash flow statements.

Nonetheless, indirect cash flow statements hinder users of financial statements from undertaking a reconciliation of EBITDA to GOCF due to the non-disclosure of cash receipts from customers, cash payments to suppliers & employees and other relevant operating cash flow items.

In Australia, an EBITDA to GOCF reconciliation can be conducted by:

- 1 Top-down reconciliation; or
- 2 Component reconciliation.

Top-down reconciliation

The top-down approach to reconcile

EBITDA to implied GOCF is detailed as follows:

Sales Revenue
Less: Cost of Goods Sold
Less: Selling, General & Administration (SG&A) Expenses
Add: Depreciation & Amortisation
Add: Other Non-operating Revenues
Add: Equity Accounted Profits
Operating costs
Add (Less): Core EBITDA Adjustments
Core EBITDA
Add (Less): Dec (Inc) Change in Working Capital
Implied GOCF

Example: Based on the format in the table above, we have prepared a top down reconciliation of EBITDA to implied GOCF for Burns Philp for the period FY2000 to FY2002. (Refer to Table 6.)

Having calculated implied GOCF, by essentially adjusting Core EBITDA for changes in working capital, we are now in the position to assess the difference between Implied and Actual GOCF.

In this example, and as per Table 7, the ratio of Actual GOCF/Implied GOCF for Burns Philp indicates that for every \$1.00 of Implied GOCF, the company generated \$1.01, \$1.00 and \$1.02 in Actual GOCF over FY2000, FY2001 and FY2002 respectively. In essence, the differences are immaterial and prima facie reflect a clean series of results.

However, caution is warranted when material differences emerge between Implied GOCF and Actual GOCF which are unexplained by a company's statutory accounts. In the author's view, an unexplained material difference warrants caution and necessitates further investigation.

Component reconciliation

The component approach can be used when cash flows are disclosed via either the direct or indirect method. The component approach to reconcile EBITDA to Implied GOCF is detailed as follows:

Sales Revenue
Add (less): Dec (Inc) A/c's Receivable
Add (less): Inc (Dec) Cash Collections
Less: Bad Debts
Implied Cash Receipts from Customers and Collections
Operating Costs
Add (less): Dec (Inc) Inventory
Add (less): Inc (Dec) A/c's Payable
Implied Cash Payments to Suppliers and Employees
Implied GOCF

Example: Based on the format in the table above, we have prepared a component reconciliation of EBITDA to implied GOCF for Burns Philp for the period FY2000 to FY2002. (Refer to Table 8.)

Table 9 illustrates the difference between implied and actual cash receipts, cash payments and GOCF. In this case, as per the top-down reconciliation conducted previously, the differences between each implied and actual item are immaterial.

Nonetheless, given a segment of Burns Philp's sales revenue is generated in Australia, a component of the difference for FY2001 and FY2002 may be explained by the inclusion of GST in the cash receipts and cash payments lines as per AASB 1026 and UIG 31.

Conclusion

EBITDA provides users of financial statements with an accrual accounting proxy for GOCF, which can be used as a benchmark against which to assess the quality of a company's reported earnings. This is achieved by undertaking a reconciliation of EBITDA to GOCF.

Given the requirement in Australia as per AASB 1026 to disclose a direct cash flow statement, an EBITDA to GOCF reconciliation can be conducted by either a "top down" reconciliation, or a "component" reconciliation. Both reconciliation methods should provide a similar calculation of Implied GOCF, which in turn should approximate Actual GOCF. In the author's opinion, an unexplained material variation warrants caution and necessitates further investigation.

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NOTES

- 1 Warren Buffett and Charles Munger of Berkshire Hathaway Inc have remained consistent sceptics on the investment merit of EBITDA. Martin Fridson, chief high-yield strategist at Merrill Lynch, wrote an article titled "EBITDA is not King" in 1998 questioning the widespread use of EBITDA to assess high-yield issues. Jack Ciesielski of the *Analyst's Accounting Observer* has been a long-term critic of EBITDA.
- 2 GOCF is calculated from the operating component of the Statement of Cash Flows and is equal to "cash receipts from customers" less "cash payments to suppliers and employees".
- 3 In particular free cash flow to the firm (FCFF).
- 4 Burns Philp & Company Limited, Annual Financial Information, 27 December 2002. Page 6.

Disclosure: The author does not hold an economic interest in Burns Philp & Company Limited securities. **J**

The author plans a follow-up article on this topic.