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MOODY'S INVESTORS SERVICE

SPECIAL COMMENT

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Leveraged Finance

EBITDA: Used and Abused

As a widely used fundamental measure for assessing corporate profitability, value and risk, consistency is important

Table of Contents:

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» **Risk tolerance is on the rise.** Investor thirst for yield in the current low-rate environment is driving an issuer friendly market. Increasing low-rated debt issuance and declining covenant quality is prompting regulators to review underwriting standards more closely alongside growing concern from market participants. In Moody's view, an accurate picture of a firm's creditworthiness requires scrutiny of key metrics like EBITDA – a fundamental measure for assessing a company's profitability and credit profile.

» **Getting EBITDA right is important.** We view EBITDA as an important metric in credit analysis: it is present in most nonfinancial corporate industry methodologies, generally in ratios that are indicators for leverage. We standardize our EBITDA calculation for non-financial corporations to facilitate consistency and cross-sector comparability. Other market participants may have alternative approaches and therefore calculate EBITDA differently. In this report, we reflect on the strengths of EBITDA and its limitations as an indicator of credit risk.

» **Calculating EBITDA can be open to interpretation.** Market participants use EBITDA as a proxy for normalized pre-tax unlevered operating earnings. But what constitutes "normal" is subjective, and in periods of low risk tolerance, issuers can have a tendency to more aggressively calculate EBITDA to improve their credit metrics and facilitate market access. No single credit measure is sufficient by itself as an indicator for impending credit stress. In addition to standardizing our EBITDA calculation, we use a number of financial ratios, including measures of cash flow from operations and free cash flow when we make a comprehensive assessment of credit quality.

» **EBITDA – with other metrics – can help signal defaults.** EBITDA measures, along with other credit ratios and liquidity indicators, often provide clear signals of rising default risk. An examination of three different EBITDA-based interest coverage ratios for companies that defaulted in 2009 and 2013 shows that declines in these ratios signaled credit stress during the three years leading up to default.

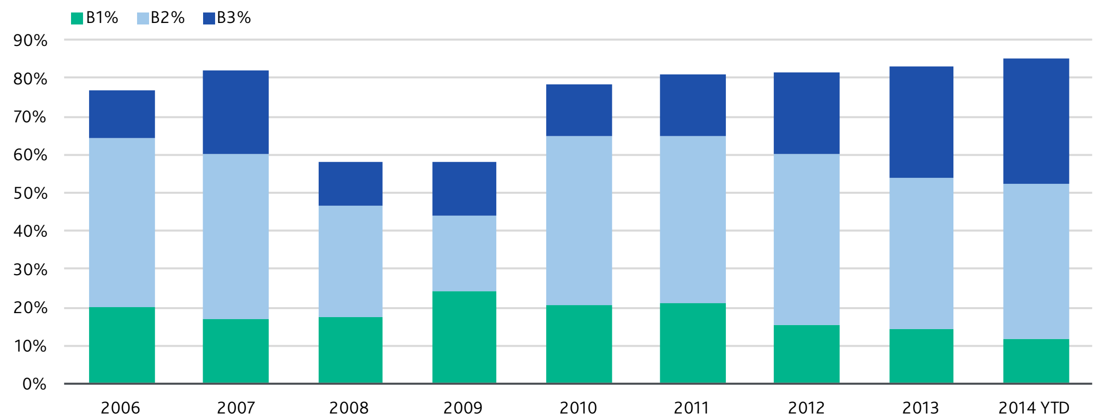
Risk tolerance is on the rise

A significant increase in the number of low-rated debt-financed deals across industries amid record speculative-grade issuance indicates that risk tolerance is on the rise (Exhibit 1) as investors search for yield in a low-interest rate environment. This year's sharp rise in debt-funded M&A activity is also supplanting less risky refinancing as the primary driver of speculative-grade issuance. Covenant protection is also declining, with our loan and bond covenant quality indexes continuing to show deterioration this year (Exhibit 2). The number of covenant-lite loans[1] has also increased dramatically – from just 3% of total institutional loans in 2010 to roughly 70% of issuance today.[2]

EXHIBIT 1

The Number of Lower-Rated New Speculative-Grade Issuers Is Increasing

North American New Issuer Corporate Family Ratings

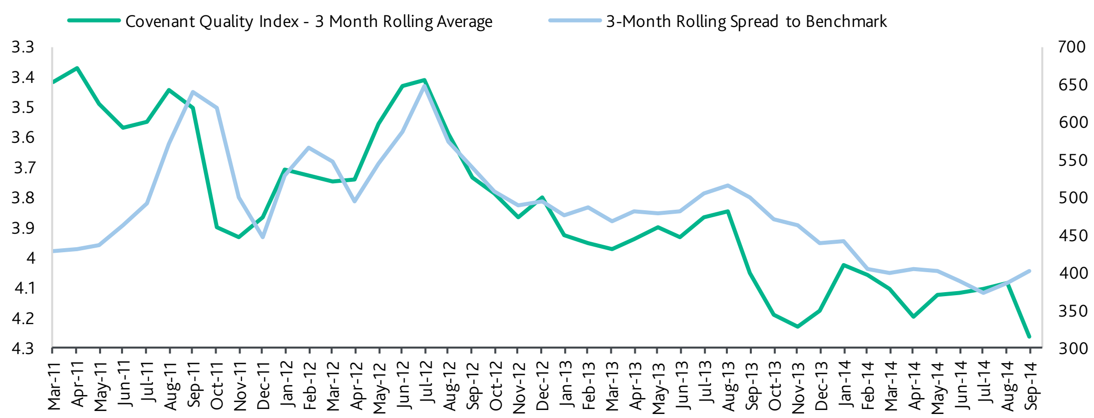


Data as of 1 October 2014

Source: Moody's Investors Service

EXHIBIT 2

Covenant Quality Is Also Declining Based on Moody's Covenant Quality Indices



Source: Moody's High-Yield Covenant Database

Note: Moody's Covenant Quality Index (CQI) tracks the degree of overall investor protection in the covenant packages of high-yield bonds issued in the US and Canada on a three-month rolling average basis.

1 See Time Is Catching Up with Covenant-Lite, 24 June 2014

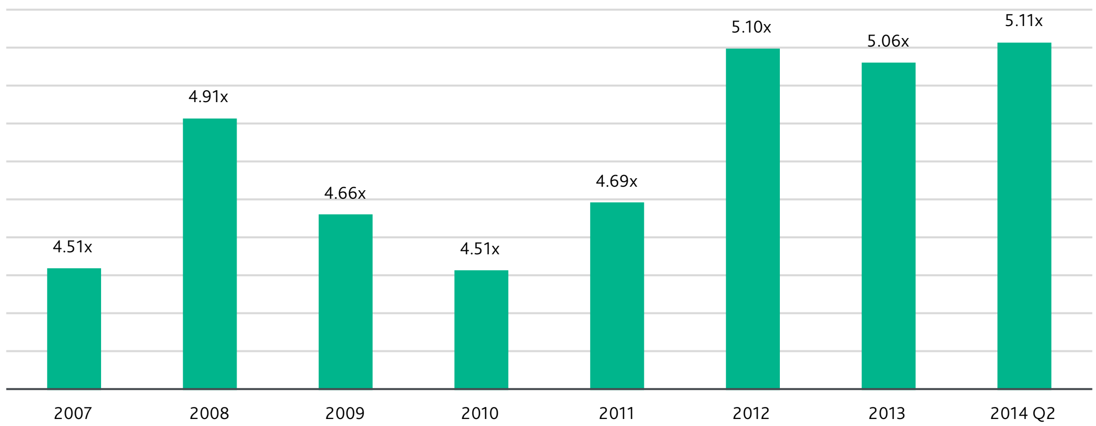
2 Data source is Thompson Reuters

All of this comes at a time when leverage levels have been rising (Exhibit 3) and regulators have been tracking risk more closely. In a 7 November joint announcement by the US Federal Reserve, the FDIC and the OCC, the regulators said the annual Shared National Credits (SNC) review found that in 2014 the volume of criticized assets[3] was at $340.8 billion, or 10% of total commitments, which is roughly double pre-crisis levels and follows three consecutive years of improvements. In July this year, during the Fed's semi-annual testimony to the Senate Banking Committee, Fed Chair Janet Yellen warned of deterioration in lending standards and of risks that could develop in this low-interest rate environment.

EXHIBIT 3

Leverage Levels Have Been Rising for Speculative-Grade Companies

Median Debt/EBITDA for issuers at Ba1 and below



Source: Moody's Financial Metrics

Regulators flagged similar concerns in the March 2013 Interagency Guidance on Leveraged Lending (LLG), where they cautioned about corporate transactions that push leverage above 6x total debt/EBITDA for most industries.

The inclusion of a specific EBITDA-based metric (earnings before interest, taxes, depreciation and amortization) raises important questions about how EBITDA is being calculated. Regulators were not specific on this point. This is not a new question – but it is coming back into focus as lenders weigh the potential for fresh constraints on their ability to assume risk. To understand why EBITDA matters, it is important to start with an understanding of what EBITDA is, the role it serves and, ultimately, how best to use it.

Given the frothy credit environment, we think this is an important time to revisit both the merits and shortcomings of EBITDA. In this report, we reflect on the strengths of EBITDA and its limitations as an indicator of credit risk. Our sensitivity is heightened during times where demand is particularly favorable for issuers.

3 A criticized asset is rated special mention, substandard, doubtful, or loss as defined by the agencies' uniform loan classification standards. According to the report, the 2014 review included an evaluation of underwriting standards on SNCs that were originated in 2013.

Getting EBITDA right is important

We view EBITDA as a useful metric that is broadly incorporated in most credit assessments. But we are also aware that EBITDA is not calculated uniformly by issuers, investors and in credit agreements and bond indentures. As demand remains strong for issuers with weak balance sheets and companies are able to negotiate myriad aggressive adjustments to EBITDA in indenture and credit agreement financial covenants, understanding the limitations of EBITDA is once again important.

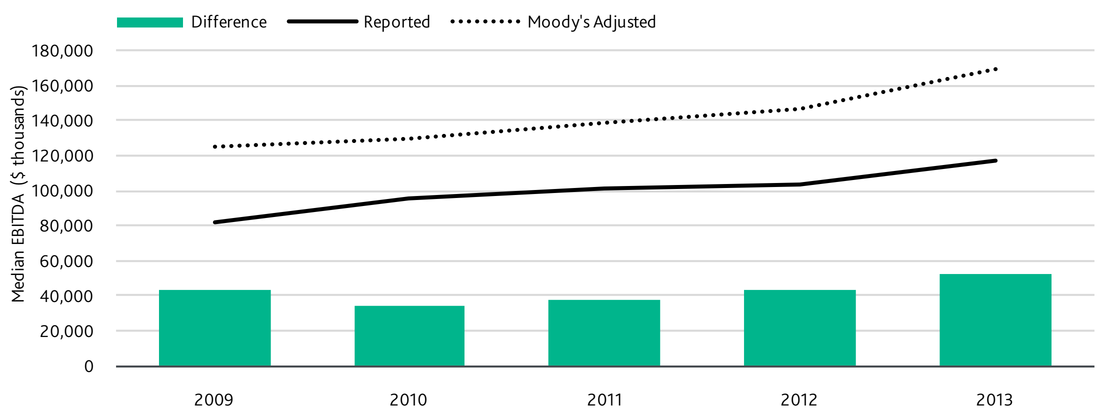
EBITDA is present in most corporate industry methodologies, generally in respect to ratios that are indicators for leverage across rating levels. The general relationship between leverage and rating varies by sector due to differences in industry risks, which include cyclical volatility. We standardize our EBITDA calculation for non-financial corporations to facilitate consistency and cross-sector comparability.

Other market participants may calculate EBITDA differently, based on how they wish to portray leverage levels. Exhibit 4 illustrates how EBITDA can diverge before and after factoring in unusual, non-recurring and other standard adjustments. The gap is wider when restructurings and write-downs intensify, as happened during the last recession. This chart shows data for approximately 1,200 public and private speculative- grade companies.

EXHIBIT 4

EBITDA Measure Can Look Significantly Different with Adjustments

(US speculative-grade Issuers' EBITDA before and after Moody's adjustments)



Reported EBITDA is Earnings (revenues less expenses) Before Interest, Taxes, Depreciation, and Amortization and is typically used as a proxy for pre-tax unlevered operating earnings. Moody's EBITDA incorporates our effort to standardize EBITDA for peer comparability by incorporating adjustments for pension, leases, unusual expenses or gains, and other items. See Appendix and "Moody's Approach to Global Standard Adjustments in the Analysis of Financial Statements for Non-Financial Corporations: Standardized Adjustments to Improve Global Consistency," Moody's Investors Service, December 2010

Source: Moody's Investors Service

The difference between reported and Moody's EBITDA is a function of adjustments we make for items that are typical in most financial statements – pension and leases being the most significant – as well as adjustments for unusual and non-recurring items and other "non-standard" items that analysts feel are appropriate. Companies and industries with significant rent or pension obligations, such as retail and transportation, are likely to have higher Moody's than reported EBITDA because our standard adjustments (for both leases and pensions[4]) typically add to reported EBITDA by reclassifying a portion of expenses to interest and depreciation. Our pension and lease adjustments also increase debt.

[4] We adjust financial statements for the difference between service cost and reported pension expense. While there are nuances, our pension adjustment generally reduces operating expenses and increases EBITDA if reported pension expense exceeds service cost, and increases operating expenses and reduces EBITDA if service cost exceeds reported pension expense.

Depending on leverage and the magnitude of an issuer's pension and operating leases, our adjustments can be neutral to or reduce leverage; however, more often than not the adjustment increases leverage.

Significant judgment is employed when we make adjustments for unusual and non-recurring items and other analytical non-standard adjustments, but we also consider a well-defined framework of factors. These include the duration, frequency, timing, materiality, substance, classification and nature of the underlying activity.

Calculating EBITDA can be open to interpretation

Market participants use EBITDA as a proxy for normalized pre-tax unlevered operating earnings. But what constitutes "normal" is subjective, and we find that in periods of low risk tolerance, issuers more aggressively calculate EBITDA to improve their credit metrics and facilitate market access.

EBITDA has long been viewed by market participants as a near-cash proxy for "normalized" operating earnings, before the burdens of capital expenditures, interest and taxes and the "noise" created by swings in working capital. This gives it broad appeal among sponsors, investors and analysts for estimating the future operating results of a company, calculating enterprise value and comparing financial performance among companies. The two most commonly seen EBITDA-based credit ratios, interest coverage (EBITDA/interest expense) and leverage (debt/EBITDA), are used in equity and credit analysis, including financial maintenance tests and incurrence covenants in both credit agreements and bond indentures.

However, EBITDA may be calculated aggressively to portray a more favorable credit profile. Investors may take a more conservative view than the company. Even when there is agreement on the calculation, EBITDA does not capture key items such as interest, taxes, working capital and capital expenditures that affect a company's cash flow. It is essential to understand how these differences can affect a company's credit profile. The desire of banks and market participants for additional clarity on EBITDA-based measures used by regulators in the LLG highlights the tension inherent in subjective indicators such as EBITDA.

Reasonable differences of opinion can exist regarding whether certain charges such as restructuring expenses are "normal" or 'non-recurring." EBITDA definitions in bond indentures and credit agreements are usually quite detailed, but the amount of "add-backs" varies widely from company to company, which diminishes comparability. The type of adjustments also vary widely; they range from reasonable add-backs of expenses recorded over the prior 12-month period that obscure underlying operating trends such as non-cash impairment charges or gains/losses on asset sales.

Other add-backs are more aggressive, such as restructuring charges for a company at which cost-reduction initiatives are ongoing or the addition of "pro forma" cost savings that depend on expenses being reduced in the future. Such savings are beneficial but do not always result in a future dollar-for-dollar EBITDA increase because they may not be fully realized and any savings achieved may get eaten up by cost increases, business reinvestment or price reductions due to competitive pressure. Projected cost savings can also be overestimated. Higher earnings and better covenant ratios in current periods, produced by incorporating projected future, synergies can mask potential covenant compliance issues if future results are worse-than-management expected.

EBITDA's limitations can vary greatly depending on the company, circumstance or industry. EBITDA requires estimates of income earned and costs incurred, but the amount and/or timing of actual cash flows typically differs from these estimates – making working capital analysis important.

It is essential to assess how issuers calculate EBITDA in bond indentures and credit agreements because it is typically used in financial maintenance, restricted payment, debt incurrence, and other covenants. Such covenants affect a company's liquidity, debt capacity and use of cash flow. However, there are limitations in the effectiveness of any credit ratio in predicting default and loss, including EBITDA-based ratios. As well as standardizing our EBITDA calculation to improve comparability, we use many other indicators when evaluating credit risk, including EBIT and various measures of cash flow and free cash flow and liquidity as part of our comprehensive assessment of credit quality.

EBITDA – with other metrics – can help signal defaults

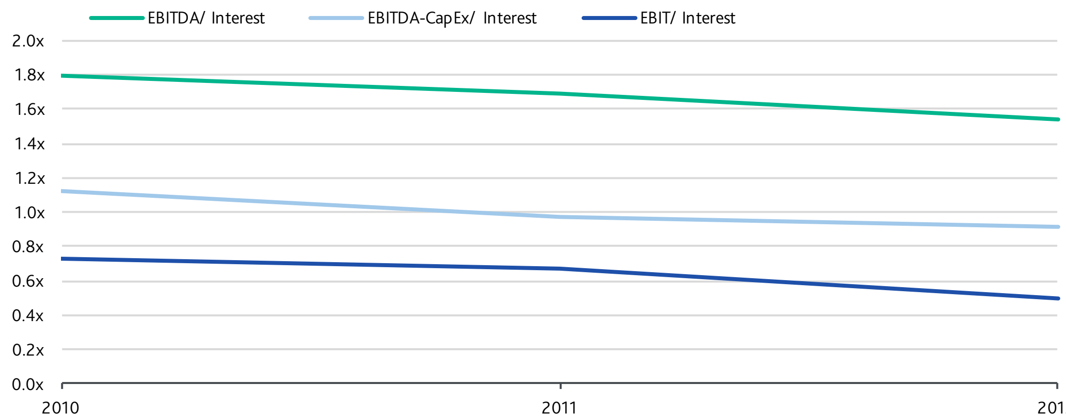
In most industry sectors, EBITDA-based metrics are a valuable tool for assessing a company's financial risks and flagging financial distress in advance of default. In Exhibits 5 and 6 (page 7) we depict various interest coverage ratios over the three-year period leading up to US non-financial corporate defaults in 2013 and during the most recent downturn (using the representative peak default year of 2009).

Median ratios for EBITDA/interest, EBIT/interest and (EBITDA-capex)/interest all deteriorated over the three-year period prior to default. The first two ratios declined by a greater proportion, which is not surprising since struggling companies often constrain capital expenditures to conserve cash. However, the trend for all three ratios was predictive despite differences in broad credit stress in 2009 and 2013. Credit conditions in the US were deteriorating in 2008 and generally improving in 2013. This difference is reflected in the much steeper decline in ratios in the 2006-2008 period compared to the 2010-2012 period. The key common point is that these EBITDA measures were significantly declining before default in both periods.

The exhibits are based on defaulting US company counts of 100 in 2009 (representing $113 billion of rated debt) and 13 in 2013 (covering $7.6 billion of rated debt). The data are subsets of the total number of 158 and 27 rated entity defaults in 2009 and 2013, respectively. The difference is due to the removal of duplicate rated entities within the same issuer family (for which there is only one set of financial statements), companies which changed their fiscal year or for whom we did not have financial statements for the full three-year period leading up to default. We also excluded companies whose interest coverage deterioration over the three year period prior to default is magnified because of a significant change in the company debt structure, such as would occur after an LBO. To be sure, interest coverage for such companies also deteriorated and including them in the data set would steepen the slope of the declines in both exhibits.

EXHIBIT 5

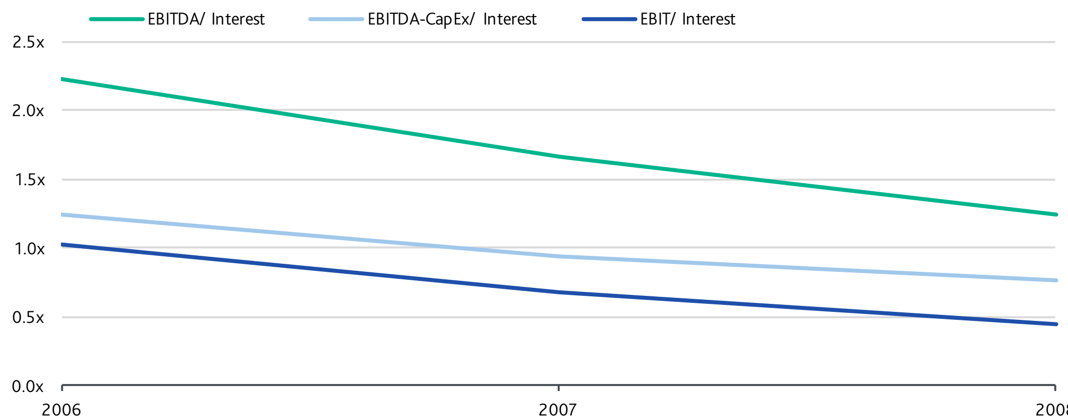
Interest Coverage Trends for 2013 US Non-Financial Corporate Defaulters



Median data for 2013 US Corporate defaulters; incorporates Moody's standard adjustments.
Based on 13 defaulting issuers. This is a subset of the 27 rated entity defaults in 2013 because we removed duplicate rated entities within the same issuer family (for which there is only one set of financial statements), companies where we did not have the prior three years of financial statements, companies which changed their fiscal years during the 2010-2012 time period, and companies where trend data over the 2010-2012 period is less meaningful because of a change in the company circumstances such as LBO
Source: Moody's Investor Services

EXHIBIT 6

Interest Coverage Trends for 2009 US Non-Financial Corporate Defaulters



Median data for 2009 US Corporate defaulters; incorporates Moody's standard adjustments.
Based on 100 defaulting issuers. This is a subset of the 158 rated entity defaults in 2009 because we removed duplicate rated entities within the same issuer family (for which there is only one set of financial statements), companies where we did not have the prior three years of financial statements, companies who changed their fiscal years during the 2006-2008 time period, and companies where trend data over the 2006-2008 period is less meaningful because of a change in the company circumstances such as LBO.
Source: Moody's Investor Services

In the three years leading up to the default, the median interest coverage ratios for the defaulting issuers in 2009 and 2013 were considerably worse than for all single-B rated issuers (Exhibit 7, page 8). The interest coverage deterioration for the 2009 defaulting issuers was more pronounced than for the 2013 defaulters because of the sudden drop in corporate earnings as the recession took hold.

EXHIBIT 7

Defaulting Issuers Had Considerably Worse Median Interest Coverage

	2009 defaulters			Medians (single-B)		
	2006	2007	2008	2006	2007	2008
EBITDA/ Interest	2.2	1.7	1.2	2.3	2.3	2.3
EBITDA-CapEx/ Interest	1.2	0.9	0.8	1.3	1.3	1.3
EBIT/ Interest	1.0	0.7	0.4	1.3	1.3	1.2

	2013 defaulters			Medians (single-B)		
	2010	2011	2012	2010	2011	2012
EBITDA/ Interest	1.8	1.7	1.5	2.7	2.7	2.5
EBITDA-CapEx/ Interest	1.1	1.0	0.9	1.7	1.6	1.5
EBIT/ Interest	0.7	0.7	0.5	1.4	1.4	1.3

Ratios incorporate Moody's adjustments.
Non-financial corporates (public and private), excluding GRIs, regulated utilities that deliver electricity and gas, power and water, companies, exploration and production companies, project finance, airports, toll roads, investment holding companies, real estate investment trusts and homebuilders
Source: Moody's Investor Services

Increasing leverage (debt-to-EBITDA) provides a useful indication of deterioration in value, but coverage of interest expense is likely to best explain a near-term default. Given the cov-lite status of many new issuers, default risk is more likely to be associated with an inability to service debt and fund day-to-day operations, as opposed to the early signal provided by covenant violations. However, an unsustainable capital structure could also signal the potential for a distressed exchange. Distressed exchanges have become a more common type of default since the financial crisis and are easier to execute when an issuer has a cov-lite structure.

The current spate of issuers with highly adjusted EBITDA will require a more disciplined approach to credit analysis. EBITDA cannot be taken at face value and generally should be evaluated alongside other liquidity and cash metrics. Overly optimistic adjustments, pro forma for “future synergies,” future earnings” or “run-rate EBITDA” will leave investors vulnerable to the next credit default cycle downturn.

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- » Putting EBITDA In Perspective: Ten Critical Failings Of EBITDA As The Principal Determinant of Cash Flow", June 2000 (55730)
- » High-Yield Bond Covenants Arcane EBITDA Adjustments Can Loosen Covenant Protection, November 2012 (145986)
- » Putting EBITDA In Perspective, June 2000 (55730)

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