中証鵬元國際
CSPI Ratings

Corporate Financial Adjustments and Ratio Definitions

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Summary

(***Editor's Note:*** *We originally published this criteria report on 7 May 2018. We republished it following our periodic review completed on 14 March 2025.)*

CSPI Ratings analyzes a company's financial statements and calculates credit ratios to help analysts and committees draw conclusions on the issuer's credit risks. However, there are significant differences among the accounting frameworks of the International Financial Reporting Standards (IFRS), US Generally Accepted Accounting Principles (US GAAP), Chinese accounting standards (CAS) and other accounting standards. To ensure our analysis of different companies is fully comparable, we adjust the companies' reported financials using a set of pre-defined rules and then compare their credit ratios on the same basis. The adjustments are not intended to challenge the companies' accounting practices and auditors' opinions. This criteria report outlines the different types of financial statement adjustments used in our rating of non-financial corporate issuers globally. Exhibits are included in this report to demonstrate the information required for our analysts for make the necessary adjustments and the implications of our adjustments for different financial statement items. Definitions of key terms and financial ratios are included in this report to facilitate understanding of our General Corporate Rating Methodology.

Some adjustments are universally applied to all companies at all times, such as operating lease and underfunded pension liabilities, while some other adjustments may apply only to certain industries and companies, such as hybrid capitals and inventories. We acknowledge analytical judgments are often needed to determine whether and what adjustments are required. However, the quality of financial disclosure varies greatly among companies and may constrain our ability to adjust their financials from time to time. CSPI Ratings strives to compare all companies on the same basis and achieve maximum consistency and comparability across regions and industries.

These criteria apply to ratings of all issuers and issuances rated by CSPI Ratings, and will be effective immediately for all new and outstanding ratings, upon publication.

This methodology is a supplementary document to the General Corporate Rating Methodology report and is effective on the date of publication.

Financial Adjustments

Total Debt

CSPI Ratings uses an amortized cost method to analyze a company's debt, which is consistent with the amortized cost method used in most accounting standards. If a company reports its debt at fair value instead of amortized cost, we adjust the reported figure to reflect the amortized cost method. If the amortized cost figure cannot be found in the financial statements, an estimate by our analyst may be adopted.

The reported debt figure on a company's balance sheet often understates the true financial obligations of this company. To properly reflect a company's debt burden, we adjust the following items: accrued interests and dividends, debt issuance cost, hybrid capital instruments, financial guarantees, litigation exposures, asset retirement obligations, operating and financial leases, underfunded pension liabilities, factoring and securitized liabilities. This list is not exhaustive. The adjustment of these items may often need adjustments of other items to balance the balance sheet. Even though these adjustment items have both short-term and long-term impact on the balance sheet, we often regard accrued interest, dividends and debt issuance costs as short-term debt and other accounts as long-term debt for the sake of simplicity.

Debt adjustments

+	Short-term debt
+	Long-term debt
+/-	Adjustments arising from the conversion of fair value debt to amortized cost debt
=	**Reported debt at amortized cost**
+	Accrued interests and dividends
+	Debt issuance cost
+	Hybrid capital considered as debt component
+	Financial guarantees that may be considered as potential liabilities
+	Estimated litigation cost not already accrued
+	Net asset retirement obligations
+	Net present value of future operating lease payment
+	Finance lease obligations that not already reported as debt
+	Underfunded pension liabilities
+	Receivables sold or securitized
+/-	Other debt adjustments
=	**Total debt**

Adjusted Interest Expense

A company's reported interest expense in the income statement is usually accrual-based, and does not reflect the true interest burden of the company. CSPI Ratings considers any financial accounts that services the cost of carrying an obligation as interest, which means we will adjust the following items in the interest expense: interest from the adjustment of fair value to amortized cost, capitalized interest cost, interest cost from extra asset retirement obligations, imputed interest costs from capitalizing operating leases, interest from underfunded pension liabilities, and imputed interest from receivable factoring and securitization. This list is not exhaustive.

Interest expense adjustments

+	Reported interest expense
+	Interest difference between reported amount and estimated amount when converting fair value debt to amortized cost method
+	Capitalized interest cost
+	Asset retirement obligations related interest cost
+	Assumed discounted rate of NPV of capitalized operating leases
+	Interest amount from underfunded pension liabilities
+	Interest amount from reclassification of hybrid capital
+	Imputed interest from factoring and securitization
+/-	Other interest adjustments
=	**Adjusted interest expense**

Hybrid Capital

It has become increasingly popular for many companies to use financial instruments such as perpetual bonds and cumulative preference shares. These instruments are often classified as equity by companies on their balance sheets, but actually have debt-like features according to CSPI Ratings' analytical criteria. We analyze such instruments thoroughly on their terms and conditions, and determine how much equity characteristics these instruments actually have. If the reporting on the balance sheet mismatches our analytical outcome, we will adjust the value of these instruments on the balance sheet to reflect the real credit risks that they carry. The adjustment method is to reallocate some of the hybrid instrument value from equity to debt if reported as equity, and reclassify a portion of the dividend payment obligations of these instruments as interest expenses. We will apply five percentage categories, 0%, 25%, 50%, 75%, and 100%, in dividing between the equity and debt components of a hybrid issuance.

Hybrid Capital adjustments

+	Amount reported as equity
-	Amount reclassified to debt from equity
=	**Adjusted equity**

Excess Cash

When two companies have identical amounts of outstanding debt, CSPI Ratings believes the one with more free cash on hand and liquid investments is less leveraged than the one with lesser cash and liquid investments, since the company can always use the cash on hand and liquidate short-term investments to repay debt. However, not all cash and liquid investments that a company reports on its balance sheet can be freely allocated by the management, and companies often see certain amounts of cash restricted for various reasons, such as deposits for loans, cash held in escrow accounts, compensating balance required for a line of credit, cash trapped in subsidiaries, tax effects on the repatriation of cash, and cash held in a nonconvertible currency or an extremely high-risk country. We deduct the restricted cash from the total cash balance to derive the excess cash that a company has and can be freely allocated for general purposes or debt repayment.

Other than the restricted cash, CSPI Ratings believes a company needs to maintain a certain level of operating cash to keep business going even under financial distress, such as paying employee salaries, minimal client services and production procurement, legal services and other necessary business activities. To determine the minimal operating cash needs, we use the cash requirements for 10-15 days of uninterrupted full operation as a benchmark, which means the company must maintain a certain level of cash to cover roughly 3% of annual operational costs. We use 3% as the default assumption in our analysis, but the rating committees may choose a different value if they see fit. Usually we estimate the operational costs as the sum of cost of goods sold and operational expenses.

In rare cases, we may consider removing some other cash requirements out of a company's cash balance to derive our assessment of excess cash. Such considerations will be decided upon by the analysts and rating committees.

Excess cash adjustments

+	Cash and Cash equivalents
+	Short-term investments
=	**Reported Cash & liquid investments**
-	Restricted cash
-	Operating cash
+/-	Other cash adjustments
=	**Excess cash**

Receivables

As described in debt adjustments, we think a company may continuously be liable for receivables factored or securitized, even if some form of non-recourse terms may be in place. CSPI Ratings believes even a well-segregated factoring or securitization deal may protect the company from being legally liable for payments in cases of underlying receivable assets failing to perform, but the potential reputational risk and concerns over continuous capital market access often give the company an incentive and pretext to buy back those sold receivables. A true sale is often not the reality for those companies. We would consider such sold receivables as potential liabilities of the company and will bring them back to the balance sheet accordingly.

Receivable adjustments

+	Reported receivables
+	Trade receivables sold or securitized
+	Finance receivables sold or securitized
+/-	Other receivable adjustments
=	**Adjusted receivables**

Inventory

CSPI Ratings believes its analysis of a company's financial state should focus on properly reflecting this company's financial well-being. Most accounting frameworks allow different inventory accounting treatments, such as first in first out (FIFO), last in first out (LIFO), and weighted average cost. Among these inventory accounting methods, FIFO provides a more up-to-date valuation of inventory on the balance sheet, but may understate the cost of goods sold and overstate the income in an inflationary environment. On the other hand, LIFO records inventory under the older cost method, which may understate the inventories on the balance sheet but reflect the cost of goods sold closer to current value or replacement cost basis.

In reality, a lot of companies use LIFO for external reporting, such as for tax preparation, to reduce the tax burden in an inflationary environment, and FIFO for internal use to maximize profitability. An account called LIFO reserve or LIFO allowance or revaluation to LIFO will arise from the adoption of these two different inventory methods, which is defined as FIFO inventory minus LIFO inventory.

LIFO liquidation also occurs when a company adopts LIFO inventory accounting and then liquidates its older LIFO inventories when its current sales outpace its purchase of inventories. This liquidation often distorts the cost of goods sold towards the lower side and overstates the current period profitability in an inflationary environment. To reflect a company's true and sustainable profitability, CSPI Ratings will usually exclude the LIFO liquidation gains from our profitability measures, such as earnings before interest, tax, depreciation and amortization (EBITDA), earnings before interest and tax (EBIT), and funds from operations (FFO).

CSPI Ratings adjusts both the LIFO reserves and the LIFO liquidation value to reflect the current market value of the inventory on the balance sheet and the true profitability in the income statement.

Inventory adjustments		
	+	Reported inventories
	+	LIFO reserve
	=	**Adjusted inventories**
	+	Profitability measures (EBITDA, EBIT, or FFO, etc.)
	-	LIFO liquidation gains
	=	**Adjusted profitability measures**

Adjusted Stockholders' Equity

The adjustments we make on some of the financial accounting items will eventually have an impact on the company's equity value. CSPI Ratings also adjusts the stockholders' equity accounting items to reflect the fundamental accounting requirements to reconcile the balance sheet, income statement and cashflow statement. The relevant adjustments include treatment of hybrid capital, financial guarantees, extra litigation costs not accrued on the balance sheet, underfunded pension liabilities, excess goodwill, LIFO reserve and fair value adjustments.

Stockholders' equity adjustments		
	+	Reported common equity
	-	Long-term debt - hybrid capital debt component
	-	Long-term debt - financial guarantees
	-	Litigation cost not accrued on the balance sheet
	-	Underfunded pension liabilities
	-	Excess goodwill
	+	LIFO reserve after tax
	+/-	Fair value adjustments
	+/-	Other equity adjustments
	=	**Adjusted common equity**
	+	Preferred stock
	+	Non-controlling interest/minority interest
	=	**Adjusted stockholders' equity**

Capitalized Development Cost

In most accounting frameworks, research costs are usually expensed to the income statement, but the development cost treatment may vary greatly among companies. Particularly under IFRS, the development costs are allowed to be capitalized on the balance sheet at the discretion of the company. Such subjectivity leads to great disparity among companies' financials. To ensure comparability of data across companies, CSPI Ratings adjusts all capitalized development costs to be an expense item on the income statement, if the companies have not done so. Such adjustments usually reduce a company's reported asset base and profitability measures such as EBITDA and EBIT, and reduce operating cashflow and capital expenditure.

Capitalized development cost adjustments

+	Reported intangible assets
-	Capitalized development cost
=	**Adjusted intangible assets**
+	Reported profitability and cash flow measures
-	Capitalized development cost
=	**Adjusted profitability and cash flow measures**
+	Reported capital expenditure
-	Capitalized development cost
=	**Adjusted capital expenditure**

Ratios Definition

CSPI Ratings calculates all credit ratios based on our adjusted financial accounts to ensure maximum comparability across regions and industries. In this report, we present the most commonly used credit ratios, as well their definitions and formulas to help readers understand our perspectives on a company's financial performance and leverage.

Adjusted Debt: total debt minus excess cash.

Capitalization: adjusted debt plus adjusted stockholders' equity

Invested Capital: operating net working capital plus net property, plant and equipment, plus capitalized operating lease, plus other net operating assets

EBITDA: sales minus cost of goods sold, operating expenses, plus depreciation and amortization, and add other forms of recurring income such as government grants, cash dividends from unconsolidated investments.

EBIT: EBITDA minus depreciation and amortization.

Net Operating Profit After Taxes (NOPAT): EBIT * (1 – effective tax rate)

Funds from Operations (FFO): EBITDA minus net interest expense minus income tax payable for current period

Operating Cash Flow (OCF): operating cashflow is a concept as opposed to investing or financing cashflow, which is used to measure operating cashflow over a certain period. Our formula for operating cashflow is FFO minus the change in working capital.

Free Cash Flow (FCF): free cashflow is a measure of a company's residual cashflow generation capacity after satisfying capital expenditure requirements in terms of both maintenance and expansion capital expenditure. Our formula is OCF minus capital expenditure.

Ratios Used in Corporate Methodology

Debt/EBITDA = Adjusted Debt divided by EBITDA

EBITDA Interest Coverage = EBITDA divided by adjusted interest expense

Gross Debt/Capitalization = Total Debt divided by capitalization

FFO/Debt = Funds from operations divided by adjusted debt

OCF/Debt = Operating cashflow divided by adjusted debt

FCF/Debt = Free cashflow divided by adjusted debt

FFO/Cash interest expense = Funds from operations divided by cash interest paid

EBITDA Margin = EBITDA divided by revenue

ROIC = Net operating profit after taxes (NOPAT) divided by invested capital

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