Power of cash flows

Entertainment, Games

The Power of Cash Flow Ratios EXECUTIVE SUMMARY CASH FLOW RATIOS ARE MORE RELIABLE indicators of liquidity than balance sheet or income statement ratios such as the quick ratio or the current ratio. LENDERS, RATING AGENCIES AND WALL STREET analysts have long used cash flow ratios to evaluate risk, but auditors have been slow to use them. SOME CASH FLOW RATIOS COMPARE THE RESOURCES A company can muster with its short-term commitments. OTHER CASH FLOW RATIOS MEASURE A COMPANYS ability to meet ongoing financial and operational commitments.

THERE IS NO CONSENSUS ON THE DEFINITION OF NET free cash flow, although the authors suggest taking off-balance-sheet financing into account. AUDITORS CAN USE THE INSIGHTS uncovered by cash flow ratios to spotlight potential problem areas, thus helping them plan their audits more effectively. JOHN R. MILLS, CPA, PhD, is a professor in the Department of Accounting and CIS at the University of Nevada, Reno. His e-mail address is www.unr. edu1. Mills experience includes auditing and consulting in the gaming industry. JEANNE H.

YAMAMURA, CPA, PhD, is an assistant professor in the accounting and CIS department at the university's Reno campus. Her e-mail address is www.edu2. Yamamura worked as an auditor overseas, including a stint in Papua, New Guinea. To fully understand a company's viability as an ongoing concern, an auditor would do well to calculate a few simple ratios from data on the clients cash flow statement (the statement of sources and uses of cash). Without that data, he or she could end up in the worst possible position for an auditor—having given a clean opinion on a client's financials just before it goes belly up.

When it comes to liquidity analysis, cash flow information is more reliable than balance sheet or income statement information. Balance sheet data are static—measuring a single point in time—while the income statement contains many arbitrary noncash allocations—for example, pension contributions and depreciation and amortization. In contrast, the cash flow statement records the changes in the other statements and nets out the bookkeeping artifice, focusing on what shareholders really care about: cash available for operations and investments.

For years, credit analysts and Wall Street barracudas have been using ratios to mine cash flow statements for practical revelations. The major credit-rating agencies use cash flow ratios prominently in their rating decisions. Bondholders—especially junk bond investors—and leveraged buyout specialists use free cash flow ratios to clarify the risk associated with their investments. That's because, over time, free cash flow ratios help people gauge a company's ability to withstand cyclical downturns or price wars.

Is a major capital expenditure feasible in a tough year? If the last time total cash got a hair below where it is now the company's capital structure had to be revamped, the auditor should treat the deficient value like a loud buzzer. Many auditors and, to a lesser extent, corporate financial managers have been slow to learn how to use cash flow ratios. In our experience, auditors traditionally use either a balance sheet or a transaction cycles approach. Neither approach emphasizes cash or the statement of cash flows.

While auditors do use the cash flow statement to verify balance sheet and income statement accounts and to trace common items to the cash flow statement, their use of ratios for cash-related analysis has been limited to

the current ratio (current assets/current liabilities) or the quick ratio (current assets less inventory/current liabilities). According to an informal survey of Big 5 and other national accounting firms, even now their audit procedures have not changed in ways that take advantage of the information presented in the cash flow statement, even though that statement has been required for over a decade.

The value of cash flow ratios was evident in the collapse of W. T. Grant. Traditional ratio analysis performed during the annual audit did not reveal the severe liquidity problems that resulted in a bankruptcy filing shortly thereafter. While W. T. Grant showed positive current ratios as well as positive earnings, in fact it had severely negative cash flows that rendered it unable to meet current debt and other commitments to creditors. Educators have not been emphasizing the cash flow statement either. Auditing textbooks commonly include only ratios based on the balance sheet and income statement with little or no discussion of cash ratios.

The next generation of auditors needs to learn how to use cash flow ratios in audits because such measures are becoming increasingly important to the marketplace. Investors and others are relying on them. The cash flow ratios we find most useful fall into two general categories: ratios to test for solvency and liquidity and those that indicate the viability of a company as a going concern. In the first, liquidity indicators, the most useful ratios are operating cash flow (OCF), funds flow coverage (FFC), cash interest coverage (CIC) and cash debt coverage (CDC).

In the second category, ratios used to assess a company's strength on an ongoing basis, we like total free cash (TFC), cash flow adequacy (CFA), cash

to capital expenditures and cash to total debt. Lenders, rating agencies and analysts use all of these. Auditors should know when and how to use them, too. The gaming industry expanded to 12 states from 2 between 1989 and 1995. During that time, many of the traditional casino corporations managed asset growth rates of 200% and more. Rapid expansion led to major problems, including bankruptcy, when revenues did not meet projections.

As this examination of two gaming companies shows, cash flow analysis can help avoid business meltdowns, providing auditors and clients with an additional level of comfort in both planning the audit and evaluating the strength of the going concern. Boomtown was a relatively young but successful Nevada company that went public in October 1992, with assets of $56 million. By 1995, its assets were up to $239 million, dropping to $206 million in 1996. Company operations grew from one casino in the local Nevada market to four properties in three states—Nevada, Louisiana and Mississippi.

In the same period, Circus Circus was one of the largest and most profitable gaming corporations in the industry. Its properties, also all in Nevada at that time, included the Excalibur and the original Circus Circus in Las Vegas, the Colorado Bell and Edgewater in Laughlin and the Circus Circus in Reno. The company grew from total assets of $783 million in 1992 to over $2. 2 billion by 1996, including acquisitions. By the end of 1996, it had operations in three states—Nevada, Louisiana and Mississippi. Liquidity Assessment Exhibit 13, shows a variety of ratios calculated from the financial statements of Boomtown and Circus Circus.

The figures cover the period from 1992 to 1996, although Circus Circus was on a January 31 fiscal year while Boomtown used a fiscal year ending September 30. Look at the lines for the current ratio (current assets/ current liabilities) and the quick ratio (current assets less inventories/current liabilities) for each. Viewed through the lens of these traditional balance-sheet-based ratios, Boomtown appears to be stronger financially than Circus Circus. But this was not the case. Boomtown's current ratio was frequently well over 1. 00, even soaring to 4. 4 in 1993, while Circus Circus current ratio never strayed over 1. 32. Boomtown was able to maintain a higher quick ratio as well. Over the five years in question, Boomtown's current ratio showed fairly consistent improvement, a trend that would be reassuring to most auditors. Although the balance sheet ratios for both companies are fairly low, that is normal for the gaming industry. Casinos just don't carry much inventory—mostly perishable foods and the like. And gaming companies carry practically no receivables because gaming generally is a cash business.

The traditional measures don't address operating cash flows or cash interest coverage directly, but auditors can use cash flow ratios to answer questions about their clients liquidity—Are these companies generating enough cash to cover their current liabilities? How many times does cash flow from operations cover interest expense? Running a Casino... Image Boomtown's cash interest coverage was considerably weaker than that of Circus Circus, except in 1993, when Boomtown had no long-term debt. Circus Circus consistently maintained cash in excess of 5 times debt. Now look at the line for OCF.

Over the interval shown, the Circus Circus OCF ratio slipped under 2. 00 only once, meaning that it generated enough cash to cover its current liabilities twice over—and even improved on that despite a rapid growth rate. The company's cash interest coverage ratio also was consistently high. Boomtown's cash flow ratios, however, might surprise an auditor relying solely on balance sheet ratios. Its OCF was consistently weaker than that of Circus Circus, even slipping into a negative position in 1994. Once Boomtown's OCF slipped below 1. 00, it was not generating enough cash to meet its current commitments.

Accordingly, it had to find other sources for financing normal operations. An auditor relying solely on the quick and current ratios in this instance would have missed that important point. An auditor who bothered to calculate two other cash flow ratios—FFC and cash/current debt—would have gotten even more remarkable results. Because Circus Circus carried very little current debt, its cash covered current debt well over 175 times in every year, while Boomtown's cash didn't even cover current debt in 1994, and its cash/current debt coverage was in the single digits for three of the other four years.

More remarkably, Boomtown's FFC went negative in 1994 and again in 1996 and was consistently weaker than that of Circus Circus in every year. Accordingly, the conclusions an auditor might draw after looking at the cash flow ratios might differ sharply from his or her opinion based solely on balance sheet ratios. Going-Concern Analysis Traditionally, auditors have used the balance-sheet-based debt-to-equity ratio (total debt/total equity)

and the times-interest-earned (EBIT/annual interest payments) ratio to examine a company's longer-term financialhealth(see exhibit 24).

These measures do provide one perspective on the company's ability to carry its long-term debt obligations and its solvency. The traditional solvency ratios reveal big differences between Circus Circus and Boomtown. Although both companies expanded considerably in 1993 and 1994, the effects on each corporation's financial position were drastically different. Circus Circus showed a downward trend in its traditional debt-to-equity ratio, an indicator of an increasingly strong balance sheet, while maintaining a fairly stable times-interest-earned ratio.

After 1992, Boomtown's debt-to-equity ratio rose steadily, showing increasing reliance on outside borrowing. Its times-interest-earned ratio also weakened, even going negative twice. Cash flow ratios, however, provide an even clearer picture of each company's financial solvency. Consider the lines for TFC, two for each company—one based on actual capital expenditures and the other on estimated maintenance spending. Negative figures in 1993 reveal that Circus Circus needed to go outside to raise cash for capital expenditures in both 1993 and 1994.

However, using a capital maintenance approach, figures consistently greater than 1. 0 show the company was clearly generating enough cash flow from operations to maintain its normal operations and to provide at least some funds for additional growth. But 1993 and 1994 were years when total assets grew at 21% and 37%. Few companies could expand at this rate solely with internally generated funds from operations. Analysis of Boomtown's cash

flow ratios unveils a very different kind of growth. Its TFC (maintenance) ratio slipped below 1. 0 for three years in a row.

An auditor who notices that Boomtown wasn't able to fund normal operations from internal sources for three consecutive years has heard an alarm; however, the noise from the TFC (actual) ratio is even louder. Boomtown did not manage any of its growth from internally generated cash—it's TFC (actual) ratio never got above 1. 00! That can't go on forever. Now look at the total debt ratio line and the two cash flow adequacy (CFA) ratio lines for each company. The total debt ratio, to which credit-rating agencies and loan officers pay close attention, was quite stable for Circus Circus throughout.

Boomtown's, which started out weaker, took one wild fluctuation way up and then collapsed. Looking at the CFA ratios, once again Circus Circus exhibits more than adequate funds for maintenance and sufficient internally generated cash for new capital investments in all but one year. The one exception was attributable to rapid growth. Boomtown's spectacularly negative ratios shout the company's need for substantial outside funding. Turning to the capital expenditures ratio lines, Boomtown was unable to generate enough cash internally to even maintain plant and equipment in 1994, despite more than doubling its total assets.

Circus Circus, on the other hand, had plenty of cash for maintenance throughout and needed outside cash to fund growth only for a two-year interval. In fact, Boomtown's cash ratios do indeed reveal that drastic changes would have been needed for this company to survive on its own. It didn't. Boomtown was acquired by Hollywood Park, Inc. , on June 30, 1997. Boomtown also disposed of its Las Vegas property, which had generated

continuing operating losses. Despite its earlier promise, Boomtown ran out of cash. Traditional ratios would not have provided sufficient warning, but cash flow ratios would have.

Auditors who employ cash flow ratios to assess corporate liquidity and viability can help their clients spot trouble in time to take corrective action. HOW TO TEST SOLVENCY WITH CASH FLOW RATIOS Creditors and lenders began using cash flow ratios because those ratios give more information about a company's ability to meet its payment commitments than do traditional balance sheet working capital ratios such as the current ratio or the quick ratio. When a loan officer evaluates the risk she is taking by lending to a particular company, her greatest concern is whether the company can pay the loan back, with interest, on time.

Traditional working capital ratios indicate how much cash the company had available on a single date in the past. Cash flow ratios, on the other hand, test how much cash was generated over a period of time and compare that to near-term obligations, giving a dynamic picture of what resources the company can muster to meet its commitments. Operating cash flow (OCF) Cash flow from operations Current liabilities Company's ability to generate resources to meet current liabilities Operating cash flow (OCF) ratio. The numerator of the OCF ratio consists of net cash provided by operating activities.

This is the net figure provided by the cash flow statement after taking into consideration adjustments for noncash items and changes in working capital. The denominator is all current liabilities, taken from the balance sheet. Operating cash flow ratios vary radically, depending on the industry. For

example, the gaming industry generates substantial operating cash flows due to the nature of its operations, while more capital-intensive industries, such as communications, generate substantially less. The gaming giant, Circus Circus, exhibited an OCF of 1. 37 for fiscal year l997 while the media king, Gannett, produced an OCF of 1. 148 for a similar period. In order to judge whether a company's OCF is out of line, an auditor should look at comparable ratios for the company's industry peers. (For further details, see the case study5.) Funds flow coverage (FFC) EBITDA (Interest + Tax-adjusted* debt repayment + Tax-adjusted* preferred-dividends) Coverage of unavoidable expenditures *To adjust for taxes, divide by the complement of the tax rate. Funds flow coverage (FFC) ratio.

The numerator of the FFC ratio consists of earnings before interest and taxes plus depreciation and amortization (EBITDA), which differs from operating cash flow. Operating cash flow includes cash paid out for interest and taxes, which EBITDA does not. The FFC ratio highlights whether the company can generate enough cash to meet these commitments (interest and taxes). Accordingly, interest and taxes are excluded from the numerator. The denominator consists of interest plus tax-adjusted debt repayment plus tax-adjusted preferred dividends. To adjust for taxes, divide by the complement of the tax rate.

All of the figures in the denominator are unavoidable commitments. An auditor can use the FFC ratio as a tool to evaluate the risk that a company will default on its most immediate financial commitments: interest payments, short-term debt and preferred dividends (if any). If the FFC ratio is at least 1. 0, the company can meet its commitments—but just barely. To survive in the

long run, any company must have enough cash flow to maintain plant and equipment. To be really healthy, it should be able to reinvest cash for growth. Accordingly, if a company's FFC is less than 1. , the company must raise additional funds to meet current operating commitments. To avoid bankruptcy, it must keep raising fresh capital. Cash interest coverage Cash flow from operations + Interest paid + Taxes paid Interest paid Company's ability to meet interest payments Cash interest coverage ratio. The numerator of cash interest coverage consists of cash flow from operations, plus interest paid plus taxes paid. The denominator includes all interest paid —short term and long term. The resultant multiple indicates the company's ability to make the interest payments on its entire debt load.

A highly leveraged company will have a low multiple, and a company with a strong balance sheet will have a high multiple. Any company with a cash interest multiple less than 1. 0 runs an immediate risk of potential default. The company must raise cash externally to make its current interest payments. The cash interest coverage ratio is analogous to the old-fashioned coverage ratio (also known as the interest coverage ratio). However, where the numerator of the coverage ratio begins with earnings from the income statement, the numerator of the cash interest coverage ratio begins with cash from the cash flow statement.

Cash interest coverage gives a more realistic indication of the company's ability to make the required interest payments. Earnings figures include all manner of noncash charges—depreciation, pension contributions, some taxes and stock options. A company with a low income-based coverage ratio may actually be able to meet its payment obligations, but the mask of

noncash charges makes it difficult to see that. A cash-based coverage ratio gives a direct look at the cash available to pay interest. Cash current debt coverage Operating cash flow—cash dividends Current debt

Companys ability to repay its current debt Cash current debt coverage ratio. The numerator consists of retained operating cash flow—operating cash flow less cash dividends. The denominator is current debt—that is, debt maturing within one year. This is, again, a direct correlate of an earnings current debt coverage ratio, but more revealing because it addresses managements dividend distribution policy and its subsequent effect on cash available to meet current debt commitments. As with the cash interest coverage ratio, the current debt ratio indicates the company's ability to carry debt comfortably.

The higher the multiple, the higher the comfort level. But like most other ratios, as long as the company is not insolvent, the appropriate level varies by industry characteristics. HOW TO USE CASH RATIOS AS A MEASURE OF FINANCIAL HEALTH Beyond questions of immediate corporate solvency, auditors need to measure a client's ability to meet ongoing financial and operational commitments and its ability tofinancegrowth. How readily can the company repay or refinance its long-term debt? Will it be able to maintain or increase its current dividend to stockholders? How readily will it be able to raise new capital?

Banks, credit-rating agencies and investment analysts understandably are very concerned with these questions. Accordingly, they have developed several ratios to provide answers to them. Auditors, who are more concerned about full disclosure, can use these same ratios to pinpoint areas for closer

scrutiny when planning an audit. Capital expenditure Cash flow from operations Capital expenditures Company's ability to cover debt after maintenance or investment on plant and equipment Capital expenditure ratio. The numerator is cash flow from operations. The denominator is capital expenditures.

A financially strong company should be able to finance growth. This ratio measures the capital available for internal reinvestment and for payments on existing debt. When the capital expenditure ratio exceeds 1. 0, the company has enough funds available to meet its capital investment, with some to spare to meet debt requirements. The higher the value, the more spare cash the company has to service and repay debt. As with all ratios, appropriate values vary by industry. Cyclical industries, such as housing and autos, may show more variation in this figure than noncyclical industries, such as pharmaceuticals and beverages.

Also, a low figure is more understandable in a growth industry, such astechnology, than in a mature industry, such as textiles. Total debt Cash flow from operations Total debt Company's ability to cover future debt obligations Total debt (cash flow to total debt) ratio. The numerator is cash flow from operations. The denominator is total debt—both long term and short term. Total cash flow to debt is of direct concern to credit-rating agencies and loan decision officers. This ratio indicates the length of time it will take to repay the debt, assuming all cash flow from operations is devoted to debt repayment.

The lower the ratio, the less financial flexibility the company has and the more likely that problems can arise in the future. Auditors should take

diminished financial flexibility into account when identifying high-risk audit areas during planning. NET FREE CASH FLOW RATIOS Other ratios that spotlight a company's viability as a going concern rely on a computation of net free cash flow. Net free cash flow (NFCF) is not yet well defined, although bankers are working to standardize these computations in a way that would facilitate comparisons across companies and across industries.

However, at present, there are still many variations of net free cash flow. We propose a total free cash (TFC) ratio developed by First Interstate Bank of Nevada, which uses it to make loan decisions and loan covenant agreements. This TFC computation offers the advantage of incorporating the effects of off-balance-sheet financing—by taking into account operating lease and rental payments. Total free cash (TFC)† (Net income + Accrued and capitalized interest expense + Depreciation and amortization + Operating lease and rental expense - Declared dividends - Capital expenditures) (Accrued and capitalized interest expense Operating lease and rental expense + Current portion of long-term debt + Current portion of capitalized lease obligations) Company's ability to meet future cash commitments † These ratios require computation of the company's net free cash flows. As net free cash flow can vary by company as well as by industry, the formulas should be considered as recommended rather than absolute. TFC ratio . The numerator of this ratio is the sum of net income, accrued and capitalized interest expense, depreciation and amortization and operating lease and rental expense less declared dividends and capital expenditures.

The denominator is the sum of accrued and capitalized interest expense, operating lease and rental expense, the current portion of long-term debt

and the current portion of long-term lease obligations. Varying definitions of capital expenditures can confuse the issue. Since different definitions change the value of free cash flow ratios, it is best to be clear about which definition the auditor is using and why it makes sense for a particular purpose. For example, if the auditor is trying to determine whether the company can maintain its present level of operations, the capital spending figure used hould exclude new investments and be limited to the amount of spending required to maintain operating assets. Sometimes maintenance spending is estimated at 2% of total assets, or up to 5% of property, plant and equipment. Industries with very long-lived capital assets may use smaller percentages to estimate maintenance spending. However, if the auditor is more interested in long-term growth potential, then actual capital expenditures from the cash flow statement should be used. Cash flow adequacy (CFA)† (EBITDA - taxes paid - interest paid - capital expenditures) (Average annual debt maturities scheduled ver next 5 years) Company's credit quality † These ratios require computation of the company's net free cash flows. As net free cash flow can vary by company as well as by industry, the formulas should be considered as recommended rather than absolute. Cash flow adequacy (CFA) ratio. The numerator is earnings before interest, taxes, depreciation and amortization (EBITDA) less taxes paid (cash taxes) less interest paid (cash interest) less capital expenditures (as qualified above). The denominator is the average of the annual debt maturities scheduled over the next five years.

Cash flow adequacy helps smooth out some of the cyclical factors that pose problems with the capital expenditure ratio. It also makes allowances for the

effects of a balloon payment. Companies with strong NFCF compared with upcoming debt obligations are better credit risks than companies that must use outside capital sources. Thus, a high CFA means high credit quality. KNOW YOUR CLIENT In order to fully understand where to set the levels at which the cash flow ratios discussed here should trigger deeper investigation, auditors need to understand their clients businesses and the industries in which they operate.

As with any other ratio, an auditor should listen to the client's explanation of any unfavorable changes in cash ratios before becoming too alarmed. An auditor should know what cash concerns are critical to a company's business. We wouldn't suggest that a successful audit is just a matter of picking the right equations and plugging in the numbers. There are no absolutes. But properly applied, cash flow ratios can be revealing to auditors during the audit planning stages and can give the auditor a more accurate picture of the company. Auditors must ascertain whether the financial statements are fairly presented in accordance with GAAP.

They must be satisfied with the accuracy of the transactions and balances summarized in the four financial statements and the related disclosures. Effective auditors can use cash flow ratios to improve their understanding of the cash concerns critical to the particular company and to plan the audit more effectively. References ^www.unr. edu (www. readability. com) ^www.edu (www. readability. com) ^Exhibit 1 (www. journalofaccountancy. com) ^exhibit 2 (www. journalofaccountancy. com) ^case study(www. journalofaccountancy. com)