

THE POWER OF CASH FLOW RATIOS

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Various groups of professionals make frequent use of financial ratios as a tool for analysis and planning. Foremost among these groups are accountants and auditors. For instance departments of accounting on many campuses nationwide have initiated a course in fraud examination and in the aftermath of corporate scandals such as Enron the demand among students for these courses has been strong. In this setting students are learning about the value of financial ratios. For example, both Albrecht (2003) and Wells (2005) recognize that ratio analysis is very useful in detecting red flags for a fraud examination.

Most computed ratios usually focus only on balance sheets and income statements. This is unfortunate since the statement of cash flows (SCF) can also offer useful insights from ratio analysis. Balance sheet ratios can only provide a date-in-time perspective, whereas the SCF represents activity for a continuous period. Income statements report the results of operations for a period of time, but do not disclose other important changes in resources that result from activities in financing and investing. The SCF complements the balance sheet and income statement by providing additional information concerning an organization's ability to operate efficiently, to finance growth, and to pay its obligations. The purpose of this article is to provide an overview of cash flow ratios as a powerful and effective analytical tool.

Statement of Cash Flows

The SCF classifies all cash flows into one of three categories: operating activities, investing activities, and financing activities. Although the FASB recommends a direct method, the operating activity section of the SCF for most organizations is prepared based on the indirect method. In this method, operating activities are presented as a reconciliation of accrual-based net income to net cash flows from operations. The indirect method reconciliation begins with the amount of net income followed by adjustments for items, such as depreciation, that affect reported net income, but not cash. Additional examples of adjustments include gains, losses, and the amounts of increase or decrease in operating accounts. The second section of the SCF reports cash from investing activities, including cash flows associated with capital asset and investment transactions. The third section of the SCF reports cash from financing activities, including funds obtained through debt or by sale of stock, as well as, cash used to pay the principal amounts of debts to creditors and dividends to stockholders. Additional information about cash payments for interest and income taxes is provided by way of supplemental disclosure accompanying the SCF.

A ratio is the quotient of a number or sum divided by another numerical value and can be used to concisely express the relationship among selected items of financial statement data. In this context many ratios based on the SCF are possible, but this article will highlight only nine SCF ratios. Furthermore, it is acknowledged that information about cash flows from investing (CFI) and financing (CFF) activity is important, but the centerpiece of a company and its principal motive for existence is its operating activity. Therefore, this article emphasizes cash flow from operations (CFO) as the most

significant element of the SCF for the purpose of ratio analysis, and CFO is included as an element in each of the nine ratios that are reviewed.

Current Liability Coverage

$$\frac{CFO - Cash Dividends Paid}{Current Liabilities}$$

In computing the current liability coverage for a company, the amount of cash flows from operations less cash payments for dividends is divided by the total amount of current liabilities. By using the amount of cash net of any cash dividends the current liability coverage ratio gives a better clue as to a company's debt management practices than a more traditional earnings-based ratio. The ratio is also a better indicator of a company's actual ability to meet current liabilities than more widely known ratios such as the current ratio and quick ratio. The ratio provides an indication of a company's ability to pay for debts and obligations coming due within one year, including any *currently maturing portion of long term debt*. As such, the current liability coverage ratio is a liquidity measurement based on a comparison of operating cash flow with near term obligations. In the event a company is not generating enough cash from operations to meet its obligations, then other more costly sources for cash will be required that may increase the risk of default or bankruptcy.

Long Term Debt Coverage

$$\frac{CFO - Cash Dividends Paid}{Long Term Debt}$$

In this ratio the amount of cash flow available from operations after meeting dividend payments, is divided by long term debt such as mortgage notes payable, bonds payable and other significant obligations. The long term debt coverage ratio measures the solvency of a company by indicating the time it would take to pay back debts assuming that no new long term debts were incurred and that operating cash is used exclusively to repay debt. A trend of decreasing coverage signifies a much riskier environment because management might attempt inappropriate actions to raise capital or other sources of financing in an effort to avoid bankruptcy.

Interest Coverage

$$\frac{CFO + Cash Payments for Interest and Income Taxes}{Cash Payments for Interest}$$

Interest is a tax deductible expense. Therefore, the interest coverage ratio is computed by adding back to CFO the amounts paid for interest and income taxes, and then dividing the result by cash paid for interest. The cash payments include total interest paid for both short-term and long-term interest-bearing debt. A conventional times-interest-earned ratio does not offer a very useful benchmark for debt service because of the non-cash

items and accrual adjustments required for determining reported earnings. By contrast, the interest coverage ratio with its emphasis on cash flows provides a more realistic indicator of liquidity and an organization's ability to service its debt. A very low ratio signifies an increased risk that a company might not have enough cash available to meet its obligation to pay interest on its debts. Therefore, it is important to monitor and track trends in the interest coverage ratio over time.

Earnings Quality

$$\frac{CFO + \text{Cash Payments for Interest and Income Taxes}}{Net Income + Interest Expense + Income Tax Expense}$$

In the earnings quality ratio both CFO and net income are adjusted for the effects of interest and income taxes that result from differences between cash payments versus accruals and deferrals. This provides a more realistic indication of the extent of deviation between operating cash flows and reported earnings. Non-cash items such as depreciation, amortization, losses and gains, are a typical cause for normal deviation of CFO from earnings. However, the underlying cause of any potentially abnormal or substantial deviations needs to be investigated. Therefore, during the evaluation process it is important to not only understand that a difference exists and to monitor its direction and size, it is equally important to identify the underlying cause. For example, based on comparisons over time, an earnings quality ratio that is falling increasingly further below 1.0 could indicate a possible problem such as fictitious receivables or unrecorded payables.

Asset Efficiency Ratio

$$CFO / Total Assets$$

The asset efficiency ratio provides an indication of how well the assets of a company are utilized to generate a cash flow return. As an alternative measure, total property, plant and equipment could be used in place of total assets for the denominator to reflect a company's ability to minimize waste in generating cash flows from operations based on its investment in operational assets. These measures, tracked over a period of time, can provide useful insights especially when the results are compared to other companies in the same industry.

Capital Asset Ratio

$$\frac{CFO + \text{Cash Inflows from Capital Asset Disposals} - \text{Cash Paid for Dividends}}{\text{Cash Outflows for Capital Asset Acquisitions}}$$

Capital assets consist of property, plant and equipment used for operations. Cash flow information for capital assets is provided in the investing section of the statement of cash flows. The capital asset ratio shows a company's ability to meet its capital expenditure needs from cash generated by operating activities rather than from financing activities. A

ratio of 1.0 or greater means that debt financing is not necessary for capital expenditures. The capacity to replace or update capital assets ultimately determines whether or not a company can successfully compete with others in the same industry. A potential risk that many organizations face is a stagnant or decreasing level of capital spending. Therefore, it is important to monitor how much a company spends on technological advances and new equipment.

Cash Generating Power

$$CFO / CFO + Investing\ Cash\ Inflows + Financing\ Cash\ Inflows$$

Cash generating power is computed by dividing CFO, by CFO plus the *inflows* of cash that are listed in the investing and financing sections of the SCF. The ratio demonstrates a company's ability to generate cash and the proportion of the cash generated solely by operations compared to the total cash inflow. Year to year comparisons of the cash generating power for a company should be evaluated, as well as, comparisons with industry competitors. Significant decreases in the ratio over time would be a source of concern that merits investigation. A related ratio, the external financing index computed as CFF divided by CFO, compares cash flows provided by financing activities with cash generated from operations. The ratio indicates the extent of dependence on external sources as a means of financing. The larger the ratio, the more dependent a company is on external funding and this can lead to higher level of financial risk.

Operating Cash Margin

$$\frac{CFO}{Sales}$$

The operating cash margin ratio is somewhat similar to a traditional profit margin ratio except for the use of CFO in place of either net income or operating income as the numerator. Thus, the operating cash margin ratio provides a more robust indicator of performance based on cash generating ability as opposed to a profit margin ratio with its focus on accrual based accounting income. Essentially, the operating cash margin ratio highlights the timing of cash flows with respect to the timing of sales. Therefore, this ratio can prove useful as part of a process to evaluate cash management performance, as well as, credit granting policies and receivable collections. However, since cash flow margins are likely to exhibit substantial variations among companies in different industries, it is more effective to focus a comparative analysis on companies within the same industry.

Cash Flow Per Share

CFO – Cash Paid for Preferred Dividends
Weighted Average Shares Outstanding Common

This ratio focuses on the amount of cash flow from operations available to common stockholders after meeting the dividend obligation, if any, to preferred stockholders. Cash flow per share incorporates the same denominator used for computing earnings per share, namely the weighted average number of shares of common stock outstanding after giving retroactive adjustment for any stock dividends or splits. However, in comparison to the more conventional earnings per share measure, cash flow per share minimizes the effects of various accounting alternatives for determining reported income. Therefore, cash flow per share provides a relevant basis for tracking substantive changes in a company over time. Although the cash flow per share ratio would seem to be of greater interest to investors than accountants or auditors, the ratio is worth tracking since an unexpected significant fluctuation in this ratio could indicate a red flag that deserves a follow-up.

Conclusion

Accountants and auditors can help strengthen corporate governance by keeping an eye out for red flags or fraud signals, such as unusual or unexpected fluctuations in financial statement relationships. In this regard ratio analysis is an effective approach for evaluating SCF information because it reduces financial data to a concise set of key relationships that highlight operations and the results of a company's cash management practices. The power of cash flow analysis is enhanced by comparing ratio results to industry averages or to at least a select group of comparable organizations. Useful insights can also be developed by reviewing year-to-year trends in the ratios of an organization over time.

References

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