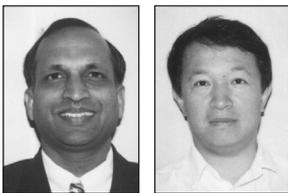


# Getting their measure

EPS or OCF\S? Depends on your point of view

*A debate is growing about the relative merits of earnings per share and operating cashflow per share as reliable indicators of companies' financial performance.*

*MAHENDRA K. GOYAL and MING-WEI ZHANG report on a study of the perceptions of sample groups of company executives and accounting academics.*



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Since a number of major corporate collapses in the late 1980s, cashflow reporting has attracted increasing academic and regulatory attention, with many countries issuing or revising cashflow reporting standards. Examples include Statement of Financial Accounting Standard FAS 95 *Statement of Cash Flows* in the United States (November 1987), Statement of Standard Accounting Practice SSAP 10 *Statements of Cash Flows* in New Zealand (October 1987), Accounting Standard AASB 1026 *Statement of Cash Flows* in Australia (December 1991) and Financial Reporting Statements FRS 1 *Cash Flow Statements* in the United Kingdom (September 1991).

While these standards make the preparation of cashflow statements mandatory, little evidence has been presented on the usefulness of cashflow information in evaluating a company's performance. Published articles on cashflow ratio analysis include Figlewicz and Zeller (1991), Whitis and Smith (1993), Giacomino and Mielke (1993) and Sharma (1996).

Among the cashflow ratios suggested by these researchers, one of the most controversial is operating cashflow per share (OCF\S). Companies in the US are prohibited from reporting cashflow per share in their financial statements, possibly

to avoid confusion in investors' minds between this measure and the other key ratio, earnings per share (McEnroe 1996). In its "Basis for Conclusions" in the appendix of FAS 95, the FASB asserts that OCF\S disclosure "would falsely imply that cash flow, or some component of it, is a possible alternative to earnings per share as a measure of performance". McEnroe suggests that the SEC and FASB should allow more latitude in cashflow accounting, perhaps permitting the presentation of operating cashflow per share.

It has been noted that the earnings per share (EPS) performance measure should be calculated and disclosed under an EPS accounting standard for example, Australian Accounting Standard Board AASB 1027 *Earnings per Share* (1993), Financial Reporting Standard FRS 3 *Reporting Financial Performance* (1992) and Statement of Financial Accounting Standard SFAS 128 *Earnings per Share* (1997).

In spite of the US prohibition of OCF\S, this ratio has been widely regarded and used by financial analysts as a valuable financial measure. Thirty-six years ago, Paton (1963, p. 243) observed: "Security analysts, not always noted for their grasp of accounting principles and procedures, seem to be suffering from an acute attack of 'cash-

flowitis', manifested especially by their fondness for per-share calculations of 'cash-flow', in company with or superseding figures for net earnings per share."

In practice, financial analysts have been reporting cashflow per share statistics using terms such as fully diluted, distributable, discretionary, and free cashflow. Previts et al (1994) examined 479 financial analyst reports and found that one-third of them referred to cashflow per share or operating cashflow per share. From a firm-size perspective, they found that analysts appeared to regard cashflows as more important in evaluating smaller companies than larger companies, with the exception of highly leveraged larger companies or ones in which a dividend reduction was likely. The *Wall Street Journal* (1994) referred to OCF\S in relation to real estate investment trusts and to a restaurant holding company. McEnroe (1996) found that financial analysts and investment advisers were significantly more receptive to cashflow accounting, as an integral part of external financial reporting, than accounting professors and accountants.

Although few Australian studies have been conducted in the use of cashflow information for performance evaluation, Jones et al (1995) and Jones and Ratnatunga (1997) surveyed the decision-usefulness of cashflow statements (CFS) of 210 companies listed on the Australian Stock Exchange. Their findings suggest that CFS have considerable use for major internal and external user groups. Many Australian companies did not consider operating profit to be a better measure of business performance than operating cashflows (Jones et al 1995, p. 126). This indicated that the CFS was important for a wide variety of internal and external decision contexts and appealed to a wide range of users.

Jones and Ratnatunga (1997) also analysed the decision-usefulness of cashflow statements and found that firms using CFS rated them highly for a number of liquidity and performance evaluation tasks. Further, operating cashflow was rated as a superior performance measure to operating profit by larger firms; by companies having a major reporting requirement to bankers, non-bank lenders, investors or managers; and by firms

having a history of preparing CFS (Jones and Ratnatunga 1997).

In a case study of Hooker Corporation Ltd, Flanagan and Whittred (1992, p. 50) reported that "share-price performance was more consistent with its underlying cashflow experience than its reported profits." Kay (1991) put a similar view, stating that "rather than earnings per share (EPS), shareholder value analysis (SVA) is the current trend for evaluating a company."

According to Rappaport (1986) shareholder value analysis is based on discounted value of cashflows: "The 'shareholder value approach' estimates the economic value of an investment (e.g. the shares of a company, strategies, mergers and acquisitions, capital expenditures) by discounting forecasted cash flows by the cost of capital" (p. 12).

Alix and Ramaekers (1995) realised the importance of EPS, stock price appreciation, market share growth and leverage in evaluating a business. But they said, after all, "cash is king."

This leads to a conclusion that cash is more important than profits, particularly to pay a business's financial obligations. According to Nordgren (1986): "Financial obligations are paid with cash not profits. Profitable activities do not necessarily provide needed cash, and cash-generating activities are not necessarily profitable. A profitable business can suddenly go bankrupt because of a shortage of cash to pay debts when due, and a solvent company may remain unprofitable for several years."

If this is true, OCF\S should be equal to or superior to EPS in leading to meaningful decisions. It was expected that the subjects participating in this study would favour OCF\S to EPS.

This study compares the usefulness of OCF\S and EPS as performance measurement tools. It has been argued (McEnroe 1996, Jones and Ratnatunga 1997) that users of these ratios behave differently. Further, a comparison is made between the perceptions of chief executive officers/financial controllers and accounting academics. McEnroe (1996, p. 169) provided reasons for selecting these groups:

- they are all knowledgeable about the nature of accounting principles and terminology; and
- each represents a different type of stakeholder in the domain of financial reporting.

#### PRIOR STUDIES AND THEORY DEVELOPMENT

EPS has been recognised as a prime tool for the assessment of a company's performance. But several studies have found that in a cash-crisis period, EPS would not help in predicting the solvency of a company (Gombola and Ketz 1983, Flanagan and Whittred 1992, Giacomino and Mielke 1993, Whitis and Smith 1993, Garrod and Hadi 1995, Sharma 1996).

Giacomino and Mielke (1993, p. 55) argue that it is important to use cashflow ratios for a performance evaluation which can be viewed in terms of *sufficiency and efficiency*: "*Sufficiency* describes the adequacy of cash flows for meeting a company's need; *efficiency* describes how well a company generates cash flows relative both to other years and to other companies."

They have produced nine cashflow ratios, labelling six as sufficiency (cashflow adequacy, long-term debt payment, dividend payout, reinvestment, debt coverage, depreciation-amortisation impact) and three as efficiency (cashflow to sales, operation index, cashflow return on assets). They claim these ratios provide additional information (over traditional financial ratios) about the relationship between cashflow from operations and other important operating variables.

A case study by Largay III and Stickney (1980, p. 53) on the bankruptcy of W.T. Grant Company suggested that it was necessary to determine the company's ability to generate cash internally. Therefore, an analysis of cashflow from operations was more important than the company's prospects. The study commented: "The most striking characteristic of the Grant Company during the decade before its bankruptcy was that it generated virtually no cash internally. The company simply lost its ability to derive cash from operations. After exhausting the possibilities of its liquid resources, it had to tap external markets for funds. As the failure to generate cash internally continued, the

need for external financing snowballed.”

A similar case was found in the Flanagan and Whitted (1992) study of Hooker Corporation, which collapsed in July 1989. The most striking characteristic of Hooker Corporation in the years before its collapse was its inability to generate cash internally – that is, from operations.

Ratios based on cashflow can provide better and more consistent information about a cash crisis (ability to generate cash internally) of the firm than more traditional ratios based on earnings. Sharma (1996, p. 43), in analysing Brash Holdings Ltd, concludes: “The proposed cashflow ratios were applied to a recent financial failure which suggested that the company was experiencing a cash crisis as early as four years before voluntary administrators were appointed. This was not sufficiently apparent from the more traditional accrual analysis of financial performance. For instance, only the conventional return ratios indicated any signs of distress, while all three categories of cashflow ratios indicated that Brash was facing a financial crisis. Thus, the messages conveyed by cashflow ratios appear to be more consistent than accrual ratios and are likely to lead to better-informed decisions.”

Thomson (1995) suggested that EPS was finally knocked from its pedestal after the collapse of companies such as Coloroll, Polly

Peck and Maxwell Communications. The researchers advocated several alternative methods that have become of more interest to performance analysts, including economic value added, cashflow analysis including discounted cashflow, shareholder value analysis and net realisable value.

According to a 1995 study by Thomson, a large part of the investment community is questioning EPS, claiming that it is neither simple nor convenient. Figlewicz and Zeller (1991) assert that a single measure of performance based on accrual accounting profitability should no longer be acceptable. According to these researchers, both operating net income and operating cashflow are needed to fully evaluate a firm’s performance.

The present study provides similar conclusions about the usefulness of EPS and OCF\S as performance measurement tools.

**RESEARCH METHOD**

A simple questionnaire, which had been pre-tested on a number of academics and executives, was mailed to the chief executives/financial controllers of 200 publicly listed companies (selected at random from the Australian Stock Exchange list) and to the 48 heads of accounting/finance departments of Australian universities (as identified by the AAANZ office in Melbourne). The covering letter to the universities invited the

department heads to distribute photocopies of the questionnaire to appropriately experienced academics in their departments. A total of 163 useable questionnaires were received from 94 companies and 69 academics. The response rates for company executives was 47%; the response rate for academics is unknown because an unknown number of photocopies were distributed.

Survey questions on the usefulness of EPS and OCF\S were presented in two groups.

• **Questions related to EPS:**

- Q1: Whether EPS improves the information that is provided to users of financial reports. Labelled as EPSIMPROV.
- Q2: Whether EPS provides a reliable prime indicator of performance. Labelled as EPSRELI.
- Q3: Whether EPS increases the market share price of companies. Labelled as EPSINCSP.

• **Questions related to OCF\S:**

- Q4: Whether OCF\S is a better indicator of performance measurement than EPS. Labelled as OCFSBETTER.
- Q5: Whether OCF\S is a more reliable measure of performance than EPS. Labelled as OCFSRELI.
- Q6: Whether OCF\S represents a significant improvement on current practice. Labelled as OCFSIMPROV.

The subjects were required to indicate their responses on a five-point Likert scale where “1” represents “strongly agree” and “5” represents “strongly disagree”. The midpoint was a “neutral” response.

**RESULTS**

Descriptive statistics of the perceptions by the participants for the six survey questions are presented in Table 1.

All participants responding to the statement that “the introduction of AASB 1027 in Australia has improved the information that is provided to users of financial results” agreed with the usefulness of the EPS standard (mean score 2.531, median 2.0). This score indicates a favourable attitude to the application of AASB 1027. A generally neutral response was given (mean 2.853, median 3.0) for EPS providing a reliable prime indicator of performance, a result

TABLE 3 Descriptive statistics

Question*	N**	Mean	STD	Median	Min***	Max****
Q1. EPSIMPROV	162	2.531	0.920	2.000	1.000	5.000
Q2. EPSRELI	163	2.853	0.938	3.000	1.000	5.000
Q3. EPSINCSP	162	3.704	0.863	4.000	1.000	5.000
Q4. OCFSBETTER	162	3.068	1.070	3.000	1.000	5.000
Q5. OCFSRELI	156	2.981	1.038	3.000	1.000	5.000
Q6. OCFSIMPROV	143	3.070	0.998	3.000	1.000	5.000

\*EPSIMPROV = EPS improves the information that is provided to users of financial reports.  
 EPSRELI = EPS provides a reliable prime indicator of performance.  
 EPSINCSP = EPS increases the market share price of companies.  
 OCFSBETTER = OCF\S is a better indicator of performance measurement than EPS.  
 OCFSRELI = OCF\S is a more reliable measure of performance than EPS.  
 OCFSIMPROV = OCF\S represents a significant improvement on current practice.

\*\* Number of participants varies because of failure to answer question.

\*\*\* Agree very strongly

\*\*\*\* Disagree very strongly

consistent with the McEnroe studies (1989, 1996). This indicates that other measures could be considered in assessing a reliable prime indicator of performance. Participants did not agree about the relationship between EPS and their company's share price (mean 3.7, median 4.0). They felt that several other factors were more relevant to increases the market share price.

Participants were asked if OCF\S would be a more reliable indicator of performance than EPS and would represent a significant improvement on current practice. Again a generally neutral response was given (mean 3.06, 2.98 and 3.07 and median 3.0 in each case). A similar statement – “cashflow from operating activities is a more meaningful number than net income from operations in evaluating the economic performance” – scored “disagree” in McEnroe (1996) and “disagree” to “very strongly disagree” in McEnroe (1989). The result in the present study indicates that many Australian companies are not in the practice of using and reporting OCF\S, although there is some evidence (see Table 3) of the usefulness of OCF\S in a cash-crisis period where EPS fails to serve its purpose.

#### EXECUTIVES VS ACADEMICS

Descriptive statistics are provided for the differences between executive and academic perceptions on the usefulness of EPS and OCF\S in Table 2.

Executives and academics agreed that AASB 1027 on EPS had improved the information provided to users of financial reports. Executives were slightly more positive (mean 2.63) than academics (mean 2.40). Similar results were found for the statement that EPS calculated with AASB 1027 provided a reliable prime indicator of performance. The results in the McEnroe (1996) study, comparing college professors with financial analysts, investment advisers and accountants, were consistent. College professors responded unfavourably (mean score 3.74, “disagree”) compared with accountants (mean score 4.35, “uncertain”). This indicates that executives were looking for other reliable performance measures. On the effect of AASB 1027 on market share prices, both groups disagreed, although executives disagreed slightly more than academics. Both groups cited other factors,

such as dividend payments or the effect of international sharemarkets, as being more relevant influences on market share prices.

We expected that academics would be more supportive of the usefulness of OCF\S than company executives who generally did not report this ratio. Neither executives nor

academics agreed that OCF\S would be a better indicator of performance than EPS, would be more reliable and would represent a significant improvement on current practice. However, most respondents said that OCF\S should not be replaced with EPS. Instead, the two measures should be used concurrently. As noted earlier, OCF\S

TABLE 2 Difference between executives and academics

Question*	Subject	N**	Mean	STD	Median	Min***	Max****
Q1. EPSIMPROV	CEO	94	2.628	0.904	2.0	1.0	5.0
	Academic	68	2.397	0.933	2.0	1.0	5.0
Q2. EPSRELI	CEO	94	2.926	0.964	3.0	1.0	5.0
	Academic	69	2.754	0.898	3.0	1.0	5.0
Q3. EPSINCSP	CEO	94	3.809	0.820	4.0	1.0	5.0
	Academic	68	3.559	0.904	3.0	1.0	5.0
Q4. OCFSBETTER	CEO	94	3.096	1.048	3.0	1.0	5.0
	Academic	68	3.029	1.106	3.0	1.0	5.0
Q5. OCFSRELI	CEO	94	3.021	1.005	3.0	1.0	5.0
	Academic	62	2.919	1.091	3.0	1.0	5.0
Q6. OCFSIMPROV	CEO	83	3.120	0.929	3.0	1.0	5.0
	Academic	60	3.0	1.089	3.0	1.0	5.0

\*EPSIMPROV = EPS improves the information that is provided to users of financial reports.  
 EPSRELI = EPS provides a reliable prime indicator of performance.  
 EPSINCSP = EPS increases the market share price of companies.  
 OCFSBETTER = OCF\S is a better indicator of performance measurement than EPS.  
 OCFSRELI = OCF\S is a more reliable measure of performance than EPS.  
 OCFSIMPROVE = OCF\S represents a significant improvement on current practice.

\*\* Number of participants varies because of failure to answer question.

\*\*\* Agree very strongly

\*\*\*\* Disagree very strongly

TABLE 3 Tests of perceptions of executives and academics

Question*	Test of difference between mean		Test of difference between variance	
	Value	Significance	Value	Significance
Q1. EPSIMPROV	1.7516	0.0798	2.5000	0.1158
Q2. EPSRELI	0.8620	0.3887	1.3400	0.2488
Q3. EPSINCSP	1.8426	0.0654	3.3548	0.0689
Q4. OCFSBETTER	0.5623	0.5739	0.1509	0.6982
Q5. OCFSRELI	0.7630	0.4455	0.3588	0.5500
Q6. OCFSIMPROV	0.8581	0.3908	0.5063	0.4779

\*EPSIMPROV = EPS improves the information that is provided to users of financial reports.  
 EPSRELI = EPS provides a reliable prime indicator of performance.  
 EPSINCSP = EPS increases the market share price of companies.  
 OCFSBETTER = OCF\S is a better indicator of performance measurement than EPS.  
 OCFSRELI = OCF\S is a more reliable measure of performance than EPS.  
 OCFSIMPROVE = OCF\S represents a significant improvement on current practice.

could be more useful during an entity's liquidity crisis.

To test the statistical significance of perceptions between executives and academics, a Mann-Whitney U-test was conducted. The test results are depicted in Table 3.

Contrary to McEnroe's 1996 results, the table shows no significance at the 5% level. There was a significant difference only between the mean for Question 1 at  $P = 0.0798$  and for Question 3 at  $P = 0.0654$ . This indicates that the two groups had similar perceptions about the usefulness of EPS, but they were neutral on the usefulness of OCF\S. Executives were slightly less in agreement on the usefulness of EPS than academics and more in disagreement on the usefulness of OCF\S. This could be a result of an increase in the literature on OCF\S while limited use persists in current practice.

This study had several limitations. There were no demographic statistics, however, we believed such information was not relevant to this project. Particular types of experience could influence participants' perceptions, but this is not reported. Further, the study omitted the views of other important groups, such as shareholders, stockbrokers, standard-setters, financial analysts, investment advisers and professional accountants. However, it is hoped that the project will point to opportunities for further research in this area.

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