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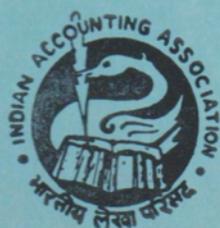
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*K. R. Ghosh*  
*3.1.93*

# INDIAN JOURNAL OF ACCOUNTING

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## EDITORIAL

Six articles in different areas of accounting and finance are included in this issue. David P. Franz, Phillip H. Siegel and John T. Rigsby in their article "the information content of various cash flow measures after controlling for earnings" examine the relationships between the unexpected cash flows of various cash flow measures and excess security returns using the Wilcoxon rank sum test and Spearman's correlation. The results indicate that cash flow information tended to be more closely associated with long-term earnings than short-term earnings. In "expert financial information processing and useful ratios for lending decisions - a manocova test of analysts' behaviour" Keishiro Matsumoto, Melkote K. Shivaswamy and James P. Hoban, Jr. investigate the validity of some of the principles of financial information processing developed by means of protocol analysis. The results of this study are based on the ratings of financial ratios obtained from 62 audit analysis employed by midwestern banks in the United States. In the next article Arijit Dutta examines the limitations of the conventional approach while exploring the operational relationship between liquidity and profitability recast in the context of internal liability. He suggests the need for developing an alternative framework. Rocco R. Vanasco in his IAA international research award-winning article on the code of ethics in international perspective highlights similarities among the codes of ethics promulgated by professional societies in the United States and also their shortcomings because most of the articles of professional codes do not reflect the cultural dimensions of Asian, European and other countries. According to him, the international professional societies may wish to consider alternatives to incorporate in their codes of ethics especially the cultural dimensions of other countries. Syamal K. Ghosh and Roger W. Mills in their article examine the application of shareholder value analysis to corporate strategic decisions and argue that economist's interpretation of value, as a measure of strategic decisions, is more relevant than its accounting counterpart. In the last article, Sujit Sikidar highlights the need for developing a conceptual framework of accounting.

May I now draw the attention of our members to the national and international conference news published elsewhere in this issue ? I have no doubt that the active participation by our members will make these conferences a success.

We continue to get this issue printed through Laser in spite of shortage of fund. I am grateful to IAA Calcutta Branch and IAA Research Foundation, Calcutta, for partly funding the publication of this issue. Sri A. K. Basu who helped me in my editorial and secretarial works also deserves special thanks.

December 15, 1993

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## THE INFORMATION CONTENT OF VARIOUS CASH FLOW MEASURES AFTER CONTROLLING FOR EARNINGS

*David P. Franz* \*  
*Philip H. Siegel* †  
*John T. Rigsby* ‡

The business world and accounting regulators have increasingly stressed the importance of cash flow statements, yet there is a paucity of empirical studies on the information content of cash flow measures. This study examined the relationships between the unexpected cash flows of various cash flow measures and excess security returns using the Wilcoxon rank sum test and Spearman's correlation. Hypothesis one predicted that if actual cash flow is greater than predicted cash flow then the stock market ought to consider it good news and the stock price increase and vice versa. Hypothesis two examined the extent of investors reaction to prediction errors. As the size of the prediction error increased, the size of the stock price reaction was also predicted to increase and vice versa. A weak, systematic relationship between unexpected cash flow and excess security returns was found for cash flow from operations and cash flow from operations after changes in property, plant, and equipment for both hypotheses one and two. The results indicate that cash flow information tended to be more closely associated with long term earnings than short term earnings, suggesting that short term cash flow prediction errors may be overridden by the earnings figures or that the information may already be incorporated in the market price.

### Introduction

While the importance of cash flow information to investors and others is generally agreed upon, there is still considerable debate about which cash flow measures are important to users. Because of the perceived importance of cash flow information, the Financial Accounting Standards Board requires cash flow statements as part of a full set of financial statements. Yet most previous studies have generally failed to find incremental information content for such proxies: they have, however, been primarily restricted to a cash flow definition such as net income plus

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**Hypothesis 1 :**

The stock market will adjust for errors in the prediction of cash flow when the actual cash flow number is disclosed.

To test the first research hypothesis, it was restated as follows :

$$H_{10} : E(U_{it}/e_{it} > 0) = 0$$

1

$$H_{1a} : E(U_{it}/e_{it} > 0) > 0$$

1

$$H_{10} : E(U_{it}/e_{it} < 0) = 0$$

2

$$H_{1a} : E(U_{it}/e_{it} < 0) < 0$$

2

where :

$U_{it}$  is the excess return of firm  $i$  in period  $t$ .

and

$e_{it}$  is the error of the respective cash flow/expectations model.

The Wilcoxon Rank Sum Test was used to test the association of the  $U_{it}$ , expressed as the cumulative average residual (CAR), with the sign of the  $e_{it}$ .<sup>1</sup>

The second hypothesis examined the extent of investors reactions to predictions errors. Investors reactions were expected to be proportionate to the size of the prediction error. As the size of the prediction error increased, the size of the stock price reaction was also expected to increase, and vice versa, ceteris paribus.

**Hypothesis 2 :**

The magnitude of the stock price reaction will be directly related to the magnitude of the prediction error.

Restated for testing, the second hypothesis reads :

$$H_{20} : P_s(U_{it}/e_{it}) = 0$$

$$H_{2a} : P_s(U_{it}/e_{it}) > 0$$

where :

$P_s$  is the Spearman's rank correlation.

When testing the second hypothesis the  $e_{it}$  were standardized by dividing the error term by three normalizers : (1) its standard error; (2) firm  $i$ 's total assets for year  $t$ ; and (3) the absolute value of the firm  $i$ 's expected cash flow in year  $t$ . A standardization is required because  $e_{it}$  is a function of the level of the cash flow measure yet the choice of the scaling factor is

1. Tests were repeated using t-tests with similar results.

inherently arbitrary. The first normalizer, standard error of the residual, is appealing because it includes a consideration of both the size and the variation of the cash flow. Everything else being equal, it is considered that the stock market would react less strongly to an error in cash flow estimation for a firm with cash flows that are historically more difficult to estimate, than it would for an equal error with a firm whose cash flows are normally accurately estimable. The use of the standard error of the residual compensates for this effect. The second normalizer, total assets, is used to control for the association of firm size with size of the  $e_{it}$ . The third normalizer, the absolute value of the expected cash flow, is used to derive a percentage of cash flow error to compare with a percentage excess return error. The results based on the three normalizers are presented to provide evidence on the sensitivity of the results to the choice of the normalizer.

### **Measures of Cash Flow**

Numerous measures of cash flow have been proposed in the literature. The variety of these measures is due, in part, to the variety of different uses and users. For the purposes of this research, the primary user is the stock investor. Due to the lack of strong evidence supporting any one measure as most important to the stock investor and since no one measure is generally accepted by the accounting profession, several cash flow alternatives were considered in selecting the cash flow measures. Four general criteria were used. They were: (1) current availability of the data necessary to compute the cash flow measure; (2) the acceptance, or breadth of use, of the cash flow measure in previous studies; (3) the absence of a high correlation with another cash flow measure; and (4) the data needed to compute the cash flow measure was not completely known at the time of the earnings announcement. Based on these criteria, five cash flow measures were considered. There were: net income from operations plus depreciation and amortization (NIPD), working capital from operations (WCFO), cash flow from operations (CFFO) cash flow from operations after changes in plant, property, and equipment (CFAP), and cash flow after investments (CFAI).

Cash flow measures may be viewed along a continuum ranging from the accrual-based, operating net income, to changes in cash (see Bowen, Burgsthaler, and Daley, 1986). To examine the relationships among these five cash flow measures, cross sectional Spearman's correlations were computed for 1974 and 1982, as an indicator of the overall correlation of the cash flow measures for all firms in the sample. They are detailed in Table 1. An examination of this table shows a high correlation between operating net income (OPNI), net income plus depreciation and amortization (NIPD), and working capital from operations (WCFO). As a result, NIPD and WCFO were not included in this study. The other three measures examined, i.e., cash flow from operations (CFFO), cash flow form operations

**Table 1**  
**Cross Sectional Spearman's Correlations of Cash Flow Measures**  
**Normalized by Total Assets**

## a. For the Year 1974

	OPNI	NIPD	WCFO	CFFO	CFAP	CFAI
Operating Net Income (OPNI)	1.0	.918	.852	.396	.134	.134
Operating Net Income Plus Depreciation (NIPD)	.918	1.0	.944	.551	.170	.174
Working Capital From Operations (WCFO)	.852	.994	1.0	.613	.224	.221
Cash Flow From Operations (CFFO)	.396	.551	.613	1.0	.639	.623
Cash Flow After Change in Plant, Property and Equipment (CFAP)	.134	.170	.224	.639	1.0	.954
Cash Flow After Investments (CFAI)	.134	.174	.211	.623	.954	1.0

## b. For the Year 1982

	OPNI	NIPD	WCFO	CFFO	CFAP	CFAI
Operating Net Income (OPNI)	1.0	.942	.883	.583	.403	.348
Operating Net Income Plus Depreciation (NIPD)	.942	1.0	.940	.665	.371	.325
Working Capital From Operations (WCFO)	.883	.940	1.0	.699	.391	.348
Cash Flow From Operations (CFFO)	.587	.665	.699	1.0	.748	.693
Cash Flow After Change in Plant, Property and Equipment (CFAP)	.403	.371	.391	.748	1.0	.939
Cash Flow After Investments (CFAI)	.348	.325	.348	.693	.939	1.0

after changes in plant, property, and equipment (CFAP), and cash flow after investment (CFAI), were not found to be as highly correlated to earnings as the first two. The Spearman's correlations of the various cash flow measures on an individual firm basis were also examined over the years 1974 to 1983. The results were similar to the cross sectional correlations in Table 1.

However, cash flow after changes in plant, property and equipment (CFAP) was found to be very highly correlated with cash flow after investments (CFAI), which equals CFAP plus the change in investment in other corporations. Due both to this high correlation and to the probability that any major investments in other corporations are likely to be known before the annual report or 10-K report is released, CFAI also was not studied in this research.

The manner in which the two selected cash flow measures were defined in the study for computational purposes follows.

1. Cash flow from operations [CFFO] was defined as :  $CFFO = WCFO - \text{changes in noncash current assets and liabilities}$ . It used the following Compustat data item numbers :

$CFFO = \text{data (110,t)} - \text{data (4,t)} + \text{data (4, t-1)} + \text{data (1,t)} - \text{data (1,t-1)} + \text{data (5,t)} - \text{data (5, t-1)} - \text{data (44,t)} + \text{data (44, t-1)}$  where data 4 is total current assets, data 1 is cash, data 5 is total current liabilities, and data 44 is current portion of long term debt.

2. Cash flow from operations after changes in plant, property and equipment [CFAP] was defined as :

$CFAP = CFFO + \text{data (107,t)} - \text{data (128,t)}$  where data 107 is sale of plant, property, and equipment, and data 128 is purchase of plant, property, and equipment. Note that CFAP is not as correlated with short term liquidity as is CFFO and WCFO. CFAP is a measure of the firm's ability to internally generate needed funds to replace and/or expand plant, property and equipment without borrowing funds or issuing new equity.

One basic expectation model was used for each cash flow measure across all firms. The parameters of the model, however, were different for each firm in the sample. Note that, because of limited data availability, the parameters were estimated for each firm using all ten years of data, including the year being tested. In other words, even though the study examined ten years (1974 to 1983) only one set of expectation model parameters was estimated for each firm per each cash flow measure. The available data are limited because they were obtained from the firm's Statement of Changes in Financial Position (SCFP) which was first required by APB Opinion No. 19, issued in March 1971 and effective for fiscal periods ending after September 30, 1971. To estimate the parameters of the cash flow models using only data available prior to the year being tested would severely limit the time period available for study.

The models used to estimate cash flow were :<sup>2,3</sup>

1. Cash flow from operations expectation model  
 $CFFO_{i,t} = a_1 + b_1 * SALES_{i,t} + c_1 * OPNI_{i,t} + d_1 * CFFO_{i,t-1} + e_{1,t}$
2. Cash flow from operations after change in plant, property, and equipment expectation model  
 $CFAP_{i,t} = a_j + b_1 * SALES_{i,t} + c_1 * OPNI_{i,t} + d_1 * CFAP_{i,t-1} + e_{1,t}$

where :

$SALES_{i,t}$  is net sales for firm i in period t,

$OPNI_{i,t}$  is operating net income for firm i in period t.

2. Tests were repeated using index models :

$CB_{i,t} = a_j + b_1 * Sales_{i,t} + C_1 * OPNI_{i,t} + d_1 * CB_{i,t} + e_{i,t}$ ,

where  $CB_{i,t}$  is the mean cash flow for year t with similar results.

3. Details on the selection of models are available from the authors.

$CFFO_{i,t}$  is cash flow from operations for firm  $i$  in period  $t$ .  
 $CFAP_{i,t}$  is cash flow from operations after change in plant,  
property and equipment for firm  $i$  in period  $t$ .  
 $e_{i,t}$  is the unexpected CF for firm  $i$  in period  $t$ .

Unexpected information ( $e_{it}$ ) was measured as actual cash flows minus expected cash flows. Actual cash flows for the individual firms were obtained from the published financial statements as reported on Compustat. The primary measure of information content was the stock market reaction to unexpected cash flows as measured by the excess return model.

### Research Method

This section details the research methods used in estimating the information content of the cash flow measures. Information content is defined as evidence that the accounting data have been used as a signal, within an information system, to revise investors' beliefs. Evidence of use is indicated by the stock market reaction to the disclosure of the accounting data.

#### *Event Date*

Accounting information becomes known to the participants in the stock market at various times. Numerous studies have shown that the stock market reacts at the time annual earnings are announced. However, a serious problem in previous empirical tests of the information content of cash flow, as opposed to annual earnings was separating the significant reaction of the stock market to the annual earnings announcement from the information content of the cash flow. These reactions were confounded in previously published studies which used the stock market data from the date of the earnings announcement to attempt to measure both the earnings and the cash flow information content. Wilson (1987) has shown that the announcement date of the annual earnings is not the same as the announcement date of the cash flow. Firms generally announce their annual earnings to the investing public before the annual financial statements and/or 10-K reports are available to the public. In addition, for the majority of firms (Wilson, 1987), the earnings announcement does not supply sufficient information to compute the actual annual cash flow. The detailed information in the annual report or the 10-K, both submitted to the Securities and Exchange Commission (SEC), is required to actually compute the cash flow.

In this study, the proxy used as the date when cash flow was known to the stock investors was the date the SEC received either the annual report or the 10-K report, whichever was first. Assuming the stock market is efficient in the semi-strong form, it should react to the release of public information. Since the event date in this study is not exactly known, a nine day event period using four days on both sides of the date the SEC receives the appropriate report was examined.<sup>4</sup>

4. A five day waiting period was also examined although, as the results are essentially the same as the results for the nine day event period, only the nine day period is reported.

ments [see Table 2]. Since the CRSP tape was used to obtain the stock price data, the sample was restricted to firms listed on the New York and American Stock Exchanges.

A random sample without replacement of 250 firms was selected from Compustat. Of these 250 firms, 244 were on the CRSP daily returns tape. Since the CRSP tapes do not contain daily data for all 244 firms for all ten years, in a year where there are less than 200 days of stock return data available for a particular firm, that firm was dropped from the sample. This reduced the sample to 193 firms in year 1974.

The firms in the random sample cover a wide range of industries. A total of 54 different industry classifications, based on the two digit SIC code, are represented. They range from 01 to 89 and include both manufacturing and retail firms although no financial institutions are included (SIC codes 60 to 62).

### *Unsystematic Security Returns*

Prior research has developed three basic methods for calculating excess, or unsystematic, security returns : mean adjusted returns, market adjusted returns, and the market model. Regarding the market, Scholes and Williams (1977) and Dimson (1979) have identified possible biases when the parameters of the market model are estimated using ordinary least squares (OLS) and they have proposed methods for correcting these biases.

Dyckman, Philbrick, and Stephan (1984) compared the effectiveness of the three basic methods for measuring excess returns and the Scholes-Williams and the Dimson methods of estimating beta. They found a slight preference for the market model compared to the other models tested. Brown and Warner (1985) simulated the performance of these three methods with and without clustering of event dates : they found the mean adjusted returns method is not very powerful with clustering (p.22), while there was little difference in the power of the methods when the date was not clustered.

Based on these findings, and considering that this research used a variety of event dates and industries (though the event dates used clustered near month end) this research selected the market model :

$$R_{i,t} = a_i + b_i * R_{m,t} + U_{i,t}$$

where :

$R_{i,t}$  is the return of the security for firm  $i$  on day  $t$ .

$R_{m,t}$  is the value weighted return for the market on day  $t$  as calculated on the CRSP tapes.

$U_{i,t}$  is the excess return

Daily market returns obtained from the CRSP tapes were used to calculate the excess returns. Since the number of available observations preceding the event date for each year and firm was over 200, it was not necessary to use the observations during the event period when estimating the parameters of the model. The parameters were calculated using ordinary least squares hence, by construction  $E(U_{i,t}) = 0$ .

Separate parameter estimations were made for each firm for each year of the study and the error term ( $U_{i,t}$ ) calculated during the event period was considered the excess return for the individual firm. A cumulative abnormal return (CAR) was calculated for each firm for each year by summing the individual firm's excess return over the 9 days of the event period.

### Empirical Results

This section reports the results of the empirical tests of the two basic hypotheses. First, the results of testing hypothesis one are reported, followed by those for the second hypothesis.

#### *Results for Hypothesis One*

As detailed earlier, hypothesis one ( $H_1$ ) involves testing whether or not the market considers a positive error term from the cash flow expectation models ( $e_{it}$ ) to be good news and whether or not the market considers a negative  $e_{it}$  to be bad news. This was examined by dividing the sample into two groups, one with  $e_{it} > 0$  and one with  $e_{it} < 0$ , and comparing the relationships of the error terms from the market model ( $U_{it}$ ) for the two groups using the wilcoxon rank sum test.

**Table 3**  
**Relationship of  $e_{it}$  and CAR Wilcoxon Rank Sum**  
**Test Significance Levels**

YEAR	CFFO	CFAP
1974	.424	.621
1975	.230	.042
1976	.218	.380
1977	.082	.238
1978	.085	.080
1979	.024	.254
1980	.267	.384
1981	.378	.120
1982	.471	.213
1983	.721	.072
All Years	.017	.020

For CFFO, as Table 3 shows, when all the years were combined the Wilcoxon test is significant at p value of .017. For the individual years,

however, the results were not consistent across the years. Only one year, 1979, has a p value less than .05 and only two years, 1977 and 1978, had p values less than .10. Box plots were examined to test for an effect across years which could cause the significant finding for the total data set but no year effect was found. Therefore, it was concluded that the significance for the total data set reflected a general trend in the data and provided limited evidence of a weak relationship between the excess returns of the firms ( $U_{it}$ ) the error terms ( $e_{it}$ ) of the respective cash flow models over a period of time. The relationship, though, was generally not found to be significant on a yearly basis.

For CFAP, the results were similar to those for CFFO. In Table 4, the test using all years of data was significant ( $p = .02$ ). Again, however, the results were inconsistent across the years. Only one year, 1975, had a p value of less than .05 and only two years, 1978 and 1983, had p values of less than .10. Box plots of the data were again examined for evidence that a year effect was contributing to the significance when the total data set is tested, but no year effect was found. Therefore, as with CFFO, it was concluded that the significance in the total data set reflected a general trend in the data and provided evidence of a weak, systematic relationship over time between the two variables,  $U_{it}$  and  $e_{it}$ , which tended not to be significant on a yearly basis.

### *Results for Hypothesis Two*

Hypothesis two ( $H_2$ ) examined the relationship of the magnitude of the error term from the cash flow expectations model ( $e_{it}$ ) with excess return ( $U_{it}$ ). It was hypothesized that as the value of  $e_{it}$  increased so would the value of  $U_{it}$ , and vice versa. Association was measured using the Spearman's rank correlation test between  $e_{it}$  and  $U_{it}$ .

The data set was analyzed using CAR and three measurements of  $e_{it}$  for each cash flow model :

1.  $e_{it}$  divided by the standard error of the residual,
2.  $e_{it}$  divided by the total assets for firm  $i$ , and
3.  $e_{it}$  divided by the absolute value of the expected cash flow,  $E(CF)$ .

A total of 2132 observations were included for the first two measures of  $e_{it}$  when all the years are combined, while there were a total of 1749 observations for the third measure. The third measure has fewer observations since those observations with  $-1 E(CF) < 1$  were deleted in order to avoid the distortion of division by a very small number.

Based on the results, as presented in Table 4, CFFO had a positive correlation for all three  $e_{it}$  measures, and  $H_2$  can be rejected at the .05 level for one of the normalizers and at the .10 level for two of them. The correlations, though, were small (even with approximately 2000 observa-

**Table 4**  
**Spearman's Correlations of  $e_{it}$  and CAR**

Year	std. error	$e_{it}$ normalized by assets	E(CF)
1974	.014	.006	-.049
1975	.069	.123 <sup>b</sup>	.062
1976	.026	.068	.085
1977	.083	.082	.087
1978	.080	.070	.116 <sup>a</sup>
1979	.050	.075	.080
1980	.023	.056	.102 <sup>a</sup>
1981	-.041	-.087	-.052
1982	-.011	.024	-.036
1983	.027	-.012	-.021
All years	.029 <sup>a</sup>	.034 <sup>a</sup>	.042 <sup>b</sup>
<b>b. For CFAP Expectation Model</b>			
1974	.021	.005	-.040
1975	.141 <sup>b</sup>	.174 <sup>c</sup>	.178 <sup>b</sup>
1976	.026	.049	.075
1977	.050	.045	.082
1978	.134 <sup>b</sup>	.140 <sup>b</sup>	.142 <sup>b</sup>
1979	.035	.035	.006
1980	.003	.055	.009
1981	.022	-.001	.055
1982	-.043	-.030	-.036
1983	.060	.050	.111
All Years	.042 <sup>b</sup>	.050 <sup>b</sup>	.052 <sup>b</sup>

where :

a is significant at  $p < .10$ .

b is significant at  $p < .05$ , and

c is significant at  $p < .01$ .

tions the  $p$  values range from .036 to .091). For individual years, the correlations for all three  $e_{it}$  measures were positive in the years 1975 to 1980, two correlations are positive in 1974, one in 1982, and one in 1983. While not statistically significant, because there are fewer observations, the magnitude of the individual year's correlations exceed the magnitude of the overall correlations in 17 of the 30 instances.

For CFAP,  $H_2$  can be rejected at less than the .05 level of significance for all three measures of  $e_{it}$  [see Table 4]. CFAP had a significant, positive correlation for all three normalized  $e_{it}$  with the  $p$  values ranging from .010 to .025. However the magnitude of the correlations range from only .042 to .052, thus a large portion of the variability of the CAR was not captured by the  $e_{it}$ . An examination of the results for the individual years found that

CFAP had a significant positive correlation with CAR in years 1975 and 1978 and had a positive correlation in 25 out of the 30 measures examined with 13 of the 30 measures having an individual magnitude that was greater than the respective magnitude for the total data set.

### Conclusions

This study has examined the information content of two cash flow measures to one of the primary groups of financial statement users : security market investors. The following discussion focuses on the results of the study when the data for all the years were combined.

Both CFFO and CFAP had statistically significant results for  $H_1$ , which tested the relationship of the sign of the unexpected cash flow with excess returns. The findings indicate a weak, systematic relationship between the error terms ( $e_{it}$ ) of the cash flow models and the excess returns ( $U_{it}$ ) of the firms. On a long-term basis the results indicate that the market adjusts appropriately for errors in the prediction of cash flow when the actual cash flow number is released. On a yearly basis, though, the relationship was generally not significant. Several possible explanations exist for these results. First, while earnings may tend to approximate cash flow over time, they do not tend to do so in the short-term. Second, much of the short-term information may already be captured in the market price. And third, the relationship between  $e_{it}$  and  $U_{it}$  for cash flow may be more complex than the simple, direct relationship tested. All three factors likely played a part in determining the results. CFFO and CFAP also had statistically significant results for  $H_2$ , which tested the relationship between the magnitude of unexpected cash flow and the magnitude of excess returns. CFFO had a positive correlation for two of the normalizers at the .10 level of significance and at the .05 level for the third normalizer (i.e.,  $e_{it}$  divided by the absolute value of the expected cash flow). CFAP had a positive correlation for all three of the normalizers at the .05 level of significance. CFAP would appear to provide substantially more informational content to investors than CFFO. Again, however, significance was found for the trend data and generally not for individual year data. These results also may be explained using the same three explanatory factors discussed above, except now CFAP appears to have more usefulness for investors than CFFO.

Several limitations of the research should be noted. First, the sample studied consists only of firms listed on either the New York or American Stock Exchanges for all the years from 1973 to 1983. While this is a large population of firms, it is not representative of all firms since these firms tend to be large, established companies which were operating for at least eleven years. To the extent that cash flow is important as a measure of solvency or liquidity, the sample selected for this study presents a biased measurement that could underplay the information content of unexpected cash flow. For example, investors in new businesses or in companies which are on the verge of liquidity problems, such as near default on debt payments because of insufficient cash reserves, may be more interested in unexpected cash flow than investors in large, established firms. Future research could better examine this problem by studying emergent or financially distressed companies.

Second, the assumption that negative unexpected cash flow is bad news and that positive unexpected cash flow is good news may be too

simplistic. A firm could have negative unexpected cash flow, as measured in this study, when inventories or production capacity are increasing at an irregular but expanding rate in order to meet increasing future sales opportunities. Despite negative unexpected cash flow, the increasing sales opportunities could cause a positive reaction in the security price. An attempt to control for this on an individual firm basis would be extremely difficult. Future research might devise a method to control for negative unexpected cash flow which could be a positive signal for certain firms and for positive unexpected cash flow which could be negative signal for other firms.

And third, the study did not control for the release of cash flow new information prior to the publication of either the annual report or the 10-K report. This effort would likely dilute the results somewhat, though previous research has indicated the dilution effect would not be significant. Future research might also devise a method to control for its efforts.

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**EXPERT FINANCIAL INFORMATION  
PROCESSING AND USEFUL RATIOS FOR  
LENDING DECISIONS — A MANOCOVA TEST OF  
ANALYSTS' BEHAVIOUR**

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This study was conducted to investigate the validity of some of the principles of financial information processing developed by means of protocol analysis. Since protocol analysis is an ethological investigation, its results must be verified by other types of empirical data. The results of this study are based on the ratings of financial ratios obtained from 62 credit analysts employed by midwestern banks in the United States. The findings suggest that expert analysts as a group indeed possess a checklist of useful financial ratios particularly suited for analyzing retail and manufacturing firms. They appear to know which ratios are more useful for analyzing retailers than for analyzing manufacturers. Though many useful ratios emerge for both industries, it appears that, since expert analysts split up the complex task of ratio analysis into a series of simple subtasks based on ratio subgroups, the number of useful ratios analyzed for each subgroup appears to be no more than 4 or 5. A possibility exists that expert analysts subdivide the activity ratio subgroup into inventory turnover, receivables turnover, and capital turnover. The level of education as well as experience on a credit related job appears to materially influence the respondents' ratings of financial ratios, a finding consistent with expert/novice studies of decision making.

**Introduction**

Several studies in finance have shown that ratios reflect differences in underlying industry characteristics. Johnson (1979) found that financial ratios were significantly different among retailers and manufacturers. Gombola and Ketz (1983), who further examined this issue, asserted that these two industries were at opposite ends of the spectrum of ratio characteristics. Another group of pertinent studies involves the application of information processing theory to financial ratio analysis. A recent approach to information processing is known as protocol analysis or

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process tracing. Protocol analysis is an ethological study of cognitive processes in decision making. Subjects are asked to verbalize their thought processes during experimental sessions. Information obtained from session recordings are then analyzed to determine how financial data are utilized to reach decisions. Bouwman (1983) examined the behaviour of MBA students by protocol analysis. In a sequel to this study Bouwman and Frishkoff (1987) employed this technique to investigate the behaviour of chartered financial analysts. These studies attempted to explore how experts differ from novices in decision making. Anderson (1988) found significant differences between expert and novice analysts in the way they reached financial decisions. Expert / novice differences were further highlighted in a survey conducted by Choo (1989). Frishkoff, Frishkoff, and Bouwman (1984) focused on the use of accounting data in financial analysis and compared the findings from protocol analysis with results of questionnaire surveys.

Using the questionnaire method, Buzby (1974) and Chandra (1974) attempted to determine what type of financial data should be presented in financial statements. More recently, Gibson (1983, 1985, 1987) used similar methodology to determine the usefulness of financial analysis.

Findings of protocol analysis suggests that expert analysts possess the knowledge bases relevant to their tasks such as firm and industry characteristics and problems. Another characteristic of expert analysts is, in the language of protocol analysis, a mastery of financial templates. They refer to analysts' cognitive skills employing their knowledge and understanding of financial accounting theories. They are found to have the ability to organize all significant findings to a logically consistent scenario which coherently explains a firm's financial condition.

Do expert analysts possess their own checklist of ratio attributes? Do they break up the complex task of ratio analysis into a series of small subtasks as suggested by some laboratory studies of human decision making? Do they know which ratios are more suitable for analyzing retailers than for manufacturers? Is their behaviour consistent with the findings from expert / novice studies of decision making? How valid are some of these findings developed lately in the area of information processing?

### **Formulation of Hypotheses**

A careful review of the studies cited above helps develop the following testable assertions :

- A1. Expert ratio analysts must deal with a large number of ratio attributes. Human information processing is severely restricted by the perceptual, cognitive, and memory capacity of analysts. However, the grouping of such ratios into subgroups reduces to a small and manageable number the key ratio attributes to be dealt with at each subtask level.
- A2. Retail and manufacturing firms differ significantly in ratio characteristics. Expert analysts must be aware of which ratios are more useful for analyzing retailers than for manufacturers.

- A3. Experts and novices differ in the process of acquiring information relevant to their tasks as well as in the use of the information acquired. Hence, the rank scores should not be identical between experts and novices.

### **The Survey Design**

To test the hypotheses developed above, a survey was conducted at the Commercial Loan Officers' Seminar sponsored jointly by Robert Morris Associates and a medium-sized midwestern university during the spring of 1989. Respondents in the survey were commercial bank officers engaged in commercial lending. Their experience in loan-related work ranged from one to 31 years with a median of 7 years. A majority of them (37) were college graduates. Another eleven of them were MBAs. Twelve respondents had some college experience. Two respondents only had high school diplomas. The respondents represented small as well as medium sized banks from Kentucky, Ohio and Indiana.

The respondents were asked to rate 43 individual ratios on a five point scale as to their usefulness in credit evaluation of client firms. A rating of 5 on this scale represents very useful, whereas a rating of 1 signifies not useful at all. The questionnaire assignment as well as the order of presenting ratios in the questionnaire were randomized so that sampling biases could be minimized. All 66 participants turned in the questionnaires but only 62 of them were usable. Out of this 62, 32 were asked to rate the 43 ratios for retail firms while the remaining 30 were asked to rate the ratios for manufacturers.

### **Survey Findings**

#### *Behaviourally Useful Ratios*

The confidence intervals based on the large sample normality of means are constructed around the 43 mean rank scores for each industry with the overall probability of at least 95%. Out of 43, the confidence intervals for 20 ratios were found to capture the rank score of 4 for the retail group. These ratios were declared to be behaviourally useful ratios in this study.

Similarly, 12 ratios were found behaviourally useful for manufacturers. These ratios are classified by industry as well as ratio category. The ratio groups used are solvency, liquidity, activity and profitability, as shown in Table 1.

At a cursory glance, the 20 and 12 behaviourally useful ratios appear to be too many in view of the limited nature of human information processing capacities. If analysts judge each ratio to be either favourable or unfavourable, the total outcomes implied would be  $2^{20}$  and  $2^{12}$  respectively for retailers and manufacturers. However, if these ratios are grouped as in Table 1, with the exception of the activity ratio group, all others would have from two to five ratios. Even within the activity ratio group, sales/inventory and selling period, and sales/receivables and collection period, could be considered essentially identical ratios. Indeed, as Chen and Shimerda (1984) suggested, it is conceivable that the analysts might subdivide the activity ratio group further into inventory turnover, receivables

turnover, and capital turnover subgroups. In general, the findings appear to be broadly consistent with assertion A1.

**Table 1**  
**Behaviourally Useful Ratios Classified by Ratio Groups**

Subgroups	Ratios	Retailers		Manufacturers	
		Mean	Std. Dev.	Mean	Std. Dev.
Solvency	total debt/equity	4.1563	.884	4.3000	.750
	total debt/assets	4.0625	.948	3.9000	1.030
	long term debt/equity	3.4838	1.020		
	EBIT/interest	3.4839	.996		
	fixed coverage ratio	3.3667	1.130		
Liquidity	current ratio	4.2190	.752	4.3000	.794
	quick ratio	3.7740	.845	3.7667	.935
	curr. liab./equity	3.5313	.915		
	cash flow/sales	3.4333	1.140		
Activity	sales/inventory	4.4375	.716	3.6333	1.070
	selling period	4.2813	.924	4.0333	.890
	collection period	4.3750	.942	4.4000	.770
	sales/receivables	4.0625	.982	3.9633	.850
	receivables/inventory	3.7742	1.260		
	sales/total assets	3.5800	1.060		
	sales/equity	3.4100	1.070		
Profitability	net income/sales	4.1870	.980	4.1333	.819
	cgs/sales	4.1875	.896	4.1667	.913
	sales growth rate	4.0313	.822	3.9333	.868
	net income/total assets	3.7419	.999	3.6000	.968

**Note :** All ratios are tested to determine whether or not they are greater than the rank score of 4.

95% confidence level was utilized in this regard.

#### Industry Differences

Bouwman's (1983) information processing theory suggests that expert analysts possess checklists of key attributes that they should look for. If this assertion is true, some ratios must be considered by expert analysts more useful for analyzing retailers than for analyzing manufacturers. Forty

three t-tests were conducted to determine whether or not the mean rank scores significantly differ between retailers and manufacturers. Table 2

**Table 2**  
**Mean Rank Score Comparison**

Financial Ratios	Manuf. Std. Dev.	Retailers Std. Dev.	t	P		
			Ratios Values			
sales/inventory	3.630	1.070	4.437	.716	-3.46	.0011
curr.liab./equity	2.900	.960	3.531	.915	-2.65	.0100
receivable/inven.	2.970	1.270	3.770	1.260	-2.49	.0160
sales/equity	2.833	.874	3.410	1.070	-2.31	.0240
EBIT/interest	3.033	.890	3.484	.996	-1.86	.0670
sales/total assets	3.167	.913	3.580	1.060	-1.64	.1100
cash flow/total assets	2.800	.997	3.250	1.220	-1.60	.1200
cash/total assets	2.667	.992	3.030	1.120	-1.40	.1700
EBIT/sales	3.000	1.020	3.323	.791	-1.38	.1700
cash/sales	2.900	1.060	3.250	1.050	-1.31	.2000
curr.liab./total assets	3.100	1.060	3.406	.946	-1.20	.2400
EBIT/equity	2.670	1.030	2.935	.929	-1.07	.2900
selling period	4.033	.890	4.281	.924	-1.08	.2900
cash flow/equity	3.000	1.020	3.280	1.110	-1.04	.3000
quick assets/ total assets	2.870	1.010	3.130	1.100	-.96	.3400
cash flow/sales	3.170	1.050	3.430	1.140	-.91	.3500
EBIT/total assets	2.567	.898	2.760	.817	-.90	.3700
price/earnings ratio	2.470	1.110	2.690	1.090	-.79	.4300
curr.assets/ total assets	3.133	.860	3.310	1.120	-.72	.4700
total debt/equity	4.300	.750	4.156	.884	.69	.4900
total debt/ total assets	3.900	1.030	4.063	.948	-.65	.5200
EBIT/curr. maturities	3.230	1.040	3.060	1.120	.61	.5400
NWC/total assets	3.100	.845	3.250	1.080	-.61	.5400
net income/ total assets	3.600	.968	3.742	.999	-.56	.5800
sales growth rate	3.933	.868	4.031	.822	-.46	.6500
sales/receivables	3.967	.850	4.063	.982	-.41	.6800
long term debt/ total assets	3.300	1.060	3.190	1.090	.41	.6800
current ratio	4.300	.794	4.219	.751	.41	.6800
long term debt/equity	3.767	.898	3.840	1.020	-.32	.7500
EPS growth rate	2.600	1.100	2.531	.950	.26	.7900
NI/sales	4.133	.819	4.187	.998	-.23	.8200
NWC/MV	2.300	.877	2.250	.950	.22	.8300
fixed cost coverage total assets	3.310	.967	3.370	1.130	-.21	.8400
growth rate	3.448	.783	3.406	.946	.19	.8500
net income/equity	3.270	1.050	3.313	.965	-.18	.8600
retention/ total assets	3.210	1.180	3.180	1.140	.17	.8700
NWC/sales	3.200	.961	3.160	1.250	.16	.8800
MV/BV	2.522	.973	2.500	.916	.14	.8900
collection period	4.400	.770	4.375	.942	.11	.9100
CGS/sales	4.167	.913	4.187	.896	-.09	.9300
sales/NFA	3.200	1.100	3.220	1.040	-.07	.9500
cash/curr.liab.	3.240	1.090	3.220	1.010	.08	.9500
quick ratio	3.767	.935	3.774	.845	-.03	.9700

exhibits the 43 t-tests on the mean rank scores for both industries. The 43 items are listed according to their p-values. For instance, the 5 most differentiating ratios for analyzing retailers are sales/inventory, curr. liab./equity, receivables/inventory, sales/equity, and EBIT/interest.

The logical question in this regard is how many ratios should be regarded significantly higher in the mean rank scores for retailers than for manufacturers. Since 43 tests must be conducted simultaneously, it is not readily possible to test how many of the 43 ratios are different at the 5% level of significance. The use of confidence intervals unfortunately leads to concluding that none of the 43 ratios is different at the combined significance level of 5%.

To bypass this problem, the multivariate analysis of covariance is utilized in this work. The basis for using this method rests on the asymptotic normality of residuals. The model under consideration is the following :

$$Y = \alpha + \beta X_1 + \gamma X_2 + \epsilon.$$

Vector  $Y$  is a column vector consisting of  $Y_{ijk}$ , representing the rank score response for the  $j$  th ratio belonging to the  $i$  th industry elicited from the  $k$  th subject. Vector  $\alpha$  is a vector of  $\alpha_{ij}$ , which is the treatment effect for the  $i$  th industry due to the  $j$  th ratio. Vector  $\beta$  is a vector of  $\beta_j$ , which is the slope for the level of education  $X_1$  for the  $j$  th ratio. Similarly, vector  $\gamma$  consists of  $\gamma_j$ , that is the coefficient for the number of years  $X_2$  on a credit related job for the  $j$  th ratio. Vector  $\epsilon$  represents a vector of  $\epsilon_{ijk}$ . It is an  $ijk$  th element of an independently normally distributed random vector  $\epsilon = (\epsilon_{ijk})$  with  $E(\epsilon) = 0$  and  $E(\epsilon\epsilon') = \Sigma$ , the variance-covariance matrix. It is possible to test the hypothesis of no difference in industry effect  $\alpha_{ij}$  with the overall significance of 5%. The two covariates are included in the model for greater error reduction. The length of vector  $Y=(Y_{ijk})$  depends on how many ratios are included in analysis.

Observe the row labelled 1 of Table 3. The first test considers just the inventory ratio and examines whether or not this ratio has the industry effect :  $H_0 \alpha_{11} = \alpha_{21}$ . In this instance, vector  $Y$  contains one ratio. The first row shows that Hotelling  $T^2$  is 7.041 with a p-value of 0.001, thus proving that the response scores for the inventory turnover ratio significantly differ between the two industries.

The second test includes curr. liab./equity in addition to the inventory turnover ratio. The ratios are selected according to the order of the earlier t-tests. The size of vector  $Y=(Y_{ijk})$  is 2. Hence, starting from this case, the multivariate ANOCOVA is actually in use and Hotelling  $T^2$  will be utilized in testing the industry effect. Specifically, the test is to check whether or not the response scores for the two ratios jointly differ in terms of the industry effect :  $H_0 : \alpha_{11} = \alpha_{21}, \alpha_{12} = \alpha_{22}$ . The test statistic on the second row is 8.234 with the p-value of 0.001.

As the number of ratios included is increased, the ratios with lower t-values will be included one at a time, step-by-step. Eventually, non-differentiating ratio pairs with weak t-ratios will dominate differentiating ratios with significant t-ratios included earlier. Hence, the p-value will gradually increase. The purpose of this sequential testing is to locate at what stage of testing the p-value crosses over the 5% significance level.

Table 3 suggests that the crossover point occurs between the eleventh and twelfth rows. Eleven ratios may therefore be considered differentiating.

**Table 3**  
**Multivariate Analysis of Covariance**

No.	Ratios	Hotelling T <sup>2</sup> Industry		F- ratio	
		Effect	p-value	covariates*	p-value
1	inventory turnover	7.041	.001	4.700	.013
2	curr.liab./equity	8.234	.001	5.964	.000
3	receivable/inventory	5.809	.002	4.041	.001
4	sales/equity	4.554	.003	3.046	.004
5	EBIT/interest	3.399	.010	2.715	.005
6	sales/total assets	3.208	.010	2.272	.014
7	cash flow/total assets	2.957	.012	2.024	.024
8	cash/total assets	2.541	.022	1.927	.027
9	EBIT/sales	2.246	.036	1.676	.059
10	cash/sales	2.092	.042	1.501	.101
11	curr.liab./total assets	2.088	.045	1.371	.153
12	selling period	1.953	.054	1.250	.226
13	EBIT/equity	1.795	.076	1.194	.269
14	cash flow/equity	1.631	.111	1.108	.352

\* Covariates : the level of education and the number of years on a credit related job

The order of including the ratios is based on the rank order established by the t-tests reported on Table 2.

However, only six of them, judged by mean rank score, may be considered important. The six differentiating ratios which are also significantly more useful in evaluating retailers are inventory turnover, receivables/inventory, sales/equity, and asset turnover among activity ratios; current liability/equity among liquidity ratios; and EBIT/interest among solvency ratios. The evidence presented here is supportive of assertion A2.

#### *Expert/Novice Differences*

Recently, Anderson (1988) and Choo (1989) have pointed out that the difference between novices and experts was a critical issue in understanding the decision making processes. Does the evidence we have support this point of view ?

Table 4 presents ten most significant covariate regressions from a MANCOVA run with all 43 ratios included in the model. The slope

coefficients and the intercepts are presented for the variates, education and years of credit-related experience. For instance, the slope coefficient for

**Table 4**  
**Covariate Regressions with High R<sup>2</sup>s**

dependent variables.....	intercepts.....		covariates.....		goodness of fit	
	retailers	manufac- turers	covariates education	years	goodness of fit statistics	
j th ratio	alpha(1j)	alpha(2j)	beta(j)	gamma(j)	R <sup>2</sup>	p-values
sales/receivables p-values	4.063	3.967	.4900 .0050	.0103 .6110	.1000	.0200
sales/equity p-values	3.410	2.833	.4304 .0060	.0322 .0780	.1167	.0120
EBIT/TA p-values	2.760	2.567	-.2742 .0930	.0227 2240	.0703	.0580
NI/equity p-values	3.313	3.270	-.3819 .0440	.0098 .6470	.0601	.0770
curr.liab./TA p-values	3.406	3.100	-.2375 .2310	.0366 .1070	.0675	.0630
curr.liab./equity p-values	3.531	2.900	-.5337 .0070	.0136 .5350	.1333	.0100
cash flow/sales p-values	3.430	3.170	-.2563 .2760	.0471 .0820	.0709	.0570
curr. assets/TA p-values	3.310	3.133	-.3330 .0810	.0659 .0030	.2265	.0010
quick assets/TA p-values	3.130	2.870	-.3276 .1140	.0606 .0120	.1716	.0030
cash/curr.liab. p-values	3.220	3.240	-.0745 .7240	.0708 .0050	.1369	.0090

**Note :** The intercepts are the mean rank scores.

sales/receivables for the two covariates are 0.49 and 0.0103 respectively. The slope coefficient for education, 0.49, is highly significant since its p-value is 0.005. However, the slope coefficient for years on the job, .0103, with an associated p-value of 0.6110, is not significant. The overall R<sup>2</sup> for sales/receivables is 0.10 with an associated overall p-value of 0.02. Hence, this regression is a good fit.

An interesting finding is that the scores tend to be greater as the number of years on the job gets longer. The associated p-values for years on the job, however, vary from 0.611 to 0.003. Liquidity ratios such as current liability/total assets, cash flow/sales, current assets/total assets, quick assets/total assets, and cash/current liabilities, tend to become more important as analysts gain more experience on the job. Similar to this is sales/equity with a p-value of 0.0780. In sum, these ratios are relatively overrated by more experienced officers (experts), and underrated by the less-experienced analysts (neophytes). It appears that these ratios are initially not so popular because they are less understood, but their importance begins to be appreciated as analysts gain experience on the job.

Another finding is that the scores are negatively related to the level of education in eight cases out of ten. Scores on these ratios appear to decline as the level of education increases. EBIT/total assets, net income/equity, current liability/equity, and current assets/total assets have small p-values ranging from 0.0930 to 0.007. These cases are statistically significant or almost so. Hence, less educated analysts tend to relatively overrate and more educated analysts tend to relatively underrate these ratios.

It may be concluded that the level of education and years of experience on a credit-related job definitely influence analysts' perceptions of these ratios. This conclusion is supportive of assertion A3.

### **Summary and Conclusions**

Broadly speaking, findings of this survey appear to be consistent with the results of earlier studies based on protocol analysis. The survey data appear to confirm the validity of the three assertions.

Expert analysts rely on a checklist of key ratio attributes perceived most suitable for analyzing the creditworthiness of retailers and manufacturers. They examine a large number of ratio attributes by breaking them up into subgroups and focusing on a parsimonious set of key ratio attributes within each ratio subgroup.

This work also appears to statistically confirm that the most differentiating and useful ratios for retail firms are in the activity ratio group. Sales/inventory, sales/equity, receivables/inventory, and sales/total assets are particularly more useful for analyzing retailers than for analyzing manufacturing firms. EBIT/interest, and current liability/equity are also found more useful for analyzing retail firms.

Many popular ratios are found useful for analyzing both retail and manufacturing firms. Among the solvency ratios, total debt/equity, and total debt/total assets are clearly useful for both groups of clients. Current and quick ratios are also perceived as useful for both groups. Two activity ratios, collection period and sales/receivables, are considered useful for both retailers and manufacturers. Among profitability ratios, net income/sales, CGS/sales, sales growth rate, and net income/total assets are all clearly useful for both groups.

The scores appear to clearly reflect the level of education and years of experience on a credit related job. Less popular ratios such as current

assets/total assets, cash/sales, quick assets, and sales/equity are more highly rated by experienced analysts and underrated by novices. Ratios such as current liability/equity, net income/equity, and current assets/total assets are found to be relatively overrated by the less educated and relatively underrated by the more educated.

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## **SOME THOUGHTS ON LIQUIDITY IMPLICATIONS OF ACCOUNTING PROFIT**

*Arijit Dutta* \*

The relationship between liquidity and profitability, the two important dimensions of operating ability, has been explored in the conventional techniques of financial analysis in the context of the comparative static analysis of stock variables. The present study highlights the limitations of the conventional approach while exploring the operational relationship between liquidity and profitability recast in the context of internal liability. The study reveals the need for developing an alternative framework captured in the light of fund generation and deployment process of ongoing business operations.

In the conventional techniques of financial analysis based primarily on the stock estimates, the profitability and the liquidity dimensions of current operations are considered to have a tangled relationship. Since the maintenance of liquidity involves question of financing, the cost and hence profitability implications of liquidity are obvious. The tangle implicit in the stock estimates of profitability involving total investment<sup>1</sup> or capital employed<sup>2</sup> presumes the following :

(a) accounting profit is a criterion for evaluating the justification or otherwise of operating investment:

(b) current assets or net current assets (or alternatively the current ratio) reflect upon the liquidity status of a business enterprise; and finally

(c) liquidity and profitability implications of operating investment can be operationally segregated and hence may be subjected to independent analysis in a comparative static framework.

The relationship between liquidity and profitability, as envisaged in such an analytical construct, thus tends to abstract from the important behavioural dimensions implicit in the dynamics of fund generation and deployment in relation to current operations. The process involved in the transformation of current operating outlays into a particular configuration of current assets as well as the manner in which they are financed should ideally constitute the key elements in the conceptualisation of the operating dimensions of liquidity and profitability.

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The basic proposition that is being attempted to be established here is that neither the investment nor the financing decisions can be made in isolation in any sincere effort to improve operating efficiency while maintaining financial viability of a firm. Investment options which would apparently increase profitability may ultimately encroach upon the liquidity position by distorting the financial flows. This may happen primarily because the time-specific distribution of various assets that results from different investment decisions may not be properly matched with the maturity structure of various sources that goes to help finance the asset formation. The consequences may be serious. Firstly, the firm's dependence on external fund may tend to grow alarmingly and push the firm into a situation of 'debt-trap'. Maturing obligations may either remain unserved or may be repaid out of costly funds. There may thus be a series of borrowings without commensurate increase in the level of operation or in capital formation. Secondly, the profitability may be adversely affected because of the incidence of higher interest cost. Under such a seemingly adverse situation, the proportion of liquid assets to total current assets is likely to decline and moreover, a greater proportion of liquid assets would be debt-generated rather than self-generated. Thus, the true liquidity strength of a firm under such circumstances cannot be adequately established by merely comparing the magnitude of current assets and current liabilities at any point of time. Ideally, the comparison thus should be between the maturity structure of the assets and liabilities<sup>3</sup>. Borrowings can temporarily improve the liquidity of a firm and create a false sense of security. Although financing current operations from borrowed funds can be acceptable in principle (owing to its cost advantage), such borrowings should be justified in terms of their serviceability from funds generated out of current operations. Under conditions of stringent financial market, it would be very difficult for a firm to continuously depend on external funds for maintaining its liquidity, while at the same time achieving reasonable profitability, because of the lack of flexibility in reaching the desired activity level. It is possible for a firm in a short-run to show satisfactory liquidity ratio while maintaining its existing Debt-Equity ratio by continuously replenishing one maturing debt with a new one. The penalty for this financing strategy would be in the form of higher interest costs as it is very likely that progressively old debts might have to be repaid out of costly funds. When the firm's current operations are sufficiently self-generating, the liquidity position can be expected to improve over time along with its profitability.

In the light of the above analytical construct, an attempt may be made to recast the matching process involved in the determination of accounting profit for discerning the implications of investment and financing decisions on the liquidity status of a firm. The following hypothetical profit & loss statement is illustrative of such an attempt.

**Statement of Variables Determining Periodic Income**

Particulars	Amount	Particulars	Amount
Purchases	$x_1$	Cash from Sales	$C_s$
Conversion Costs	$x_2$	Debtors (Credit Sales that accumulates as Drs. during the period)	$[m(x_1+x_2+x_3+x_4+x_5)$ $(1+z)]$
Administration, Distribution/ Other Expenses	$x_3$		
Financing Costs	$x_4$	Inventory Accumulation : (a) Raw Materials	$CS_1 - OS_1$ or $V_1x_1 - OS_1$
Non-cash Expenses	5		
Profit	$p$	(b) Finished Goods	$CS_2 - OS_2$ or $V_2(x_1+x_2) - OS_2$

**Note :**

- (i)  $OS_1$  = Opening Stock of Raw Materials
- (ii)  $OS_2$  = Opening Stock of Finished Goods
- (iii)  $CS_1$  = Closing Stock of Raw Materials
- (iv)  $CS_2$  = Closing Stock of Finished Goods
- (v)  $V_1$  = Fraction of Current Purchases which is held as Raw Materials
- (vi)  $V_2$  = Fraction of  $(X_1 + X_2)$  which accumulates as Finished Goods Inventory
- (vii)  $m$  = Fraction of Total Cost which is represented by Debtors
- (viii)  $z$  = Profit Margin
- (ix) Work-in-process as well as other costs and incomes are ignored for simplicity
- (x) Non-cash expenses include depreciation
- (xi) Full-cost pricing is assumed
- (xii) Inventory accumulation is assumed

From the above Statement of Income Determination, the profit identity can be written as follows :

$$\begin{aligned}
 x_1 + x_2 + x_3 + x_4 + x_5 + p &= C_s + [m(x_1+x_2+x_3+x_4+x_5)(1+z)] \\
 &+ \\
 &V_1(x_1) - OS_1 \\
 &+ \\
 &V_2(x_1 + x_2) - OS_2
 \end{aligned}$$

The right hand side of the identity can be reconstructed as follows :

$$C_s + mx_1 + mx_1z + mx_2 + mx_2z + mx_3 + mx_3z + mx_4 + mx_4z + mx_5 + mx_5z + v_1x_1 - OS_1 + v_2x_1 + v_2x_2 + OS_2. \quad \text{or,}$$

$$C_s + x_1 (m + mz + v_1 + v_2) + x_2 (m + mz + v_2) + x_3 (m + mz) + x_4 (m + mz) + x_5 (m + mz) - OS_1 - OS_2.$$

If we consider  $m + mz = k$ , the profit identity may be rewritten as follows :

$$x_1 + x_2 + x_3 + x_4 + x_5 + p = C_s + x_1 (k + v_1 + v_2) + x_2 (k + v_2) + x_3 (k) + x_4 (k) + x_5 (k) - OS_1 - OS_2.$$

Again, since  $v_1$  and  $v_2$  are also constants<sup>\*</sup>, the profit identity can be written as follows :

$$x_1 + x_2 + x_3 + x_4 + x_5 + p = C_s + x_1k_1 + x_2k_2 + x_3k + x_4k + x_5k - OS_1 - OS_2$$

(Where  $k_1 = k + v_1 + v_2$  ;  $k_2 = k + v_2$ )

Re-arranging the above identity, we get

$$\begin{aligned} p = & C_s - [x_1 (1-k_1)] + [x_2 (1-k_2)] \\ & + [x_3 (1-k)] + [x_4 (1-k)] \\ & + [x_5 (1-k)] - OS_1 - OS_2 \end{aligned}$$

Furthermore, if 't' proportion of current cash generation is spent on current outlays, then  $(1-t)$  proportion of  $C_s$  is retained. The portion retained represents cash in hand on the assumption that no dividend is paid. The value of t depends on the extent to which a company can secure financial accommodation to support current operations as well as by the financial discipline attained in matters of fund generation and deployment.

A close scrutiny of the matching process, as revealed in the Statement of Income Determination, indicates that various current assets (like different items of inventory and debtors) represent part of current operating investment which is not recovered in cash out of current sales. Again, these current assets are in fact used to offset a part of the current expenses, and to that extent the reported profit cannot entirely reflect the justification or otherwise of current operating investments. Under an extremely adverse situation, shifting of funds amongst various cost-based current assets\*\* may help to provide a face-lift to the accounting surplus and thereby shield partly the inefficiencies in current operations. Inappropriate policies in the area of procurement, processing and distribution may disrupt the operating cycle. These would not only create critical resource gap, but may also result

\* In general, the accumulation pattern of current assets are defined in the context of the existing operating structure as well as by several policy options adopted by the management. These existing operating parameters in fact define the value of m, z,  $v_1$  and  $v_2$  and hence these proportions are expected to remain constant in the short run.

\*\* Cost-based current assets have their source in current operating cost and are in fact segregations of the same. They are distinct from cash in hand or in bank as their source may not entirely relate to current operating outlays.

in accumulation of current assets unwarranted by the extent of fund generation from current operations as well as the value of sales. Speculative motives may prompt a firm to continuously shift fund from raw materials to finished goods inventory and debtors. The urge for periodic reporting of accounting profit, particularly by the corporate entities, and the threat of an imminent glut may often entice premature disposal of inventories. With every shift in the input-output price ratio, the firm is expected to adjust its inventory accumulation and production plans. Since inventory accumulation takes place only slowly, it is thus very natural for firms to generate additional force in order to reduce any lag in the adjustment mechanism necessitated by any change in the input-output price ratios. Such an adjustment mechanism is likely to strain the liquidity position of the firm since any effort to reduce the lag in the adjustment mechanism would end up in distorting the ratio of cash cost of production to cash realisation from sales. A firm would be interested in the secret reserves arising out of speculative holding of inventories so long as the firm is ensured of the availability of adequate funds for adjusting the level of operation and different items of current assets in the most profitable manner. When the control over proper balance between current operating costs and cash generation from operations is eroded in the process of adjusting different items of current assets due to continuous shift in pressure points from inputs to outputs, the firm is gradually forced to relinquish its strength in liquidity for ensuring a reasonable book profit.

A more rigorous scrutiny of the profit-identity recast in the light of the operational dimensions of fund generation and deployment is expected to substantiate the arguments set forth as regards the liquidity implications involved in the determination of accounting profit. The profit identity indeed constitutes a frame of reference for the conceptualisation of the operational relationship between the dimensions of liquidity and profitability. The general inferences that may be drawn are summarised as follows :

(a) With given amount of cash generations and opening inventory, it is thus evident from the profit identity that the higher the value of the operating parameters (i.e.,  $k_1$  &  $k_2$ ), higher would be the reported profit. Higher value of the parameters in the determination of accounting profit can also be explained by managerial inefficiency in different spheres of current operation. Higher the value of the operating parameters, larger would be the leakage of fund from current operations in the form of accumulation of current assets. Thus, within the framework of accounting income determination, not only, the operating inefficiencies are sheltered, furthermore, the existing concept of tangle between the stock estimates of liquidity and profitability is largely defied. Any analysis to explore the operational tangle between the dimensions of liquidity and profitability based on accounting profit would thus be a misconstruction in the light of the profit identity.

(b) An increase in the value of the operating parameters ( $k_s$ ) will have differential impact on the profit depending on the extent to which the incremental portion of the operating outlays are financed out of current cash generations and borrowed funds. All the items of costs (particularly  $x_1$ ,  $x_2$  and  $x_3$ ) may increase due to either increase in the level of activity or rise in the unit rate of inputs. In the latter case, profit is likely to be adversely affected unless the firm enjoys sufficient market power to transfer the higher costs to its customers or suitably adjusts its cost-based current assets so as to lower the value of operating parameters sufficiently. However, in the former case the effect on profit would greatly depend on the extent to which the current outlays are financed out of cash generations from sales ( $C_s$ ). If the different items of costs rise disproportionately to  $C_s$  (could be due to an urge for holding higher cost-based current assets for reaping speculative gains even with unchanged  $k_s$ ), the profit generation will be correspondingly lower. Higher the disparity between current cash generations ( $C_s$ ) and current operating outlays, greater would be the consequential strain on liquidity. Under such circumstances, a substantial portion of the incremental current assets is likely to be supported by borrowed funds rather than being self-financed. It is thus evident that the accumulation of current assets will have different profitability and liquidity implications depending on their mode of financing as well as their accumulation rate.

(c) Within a given set of operating constraints (stable value of  $k_s$ ) as well as constant activity level (stable value of the item of expenses), lower the level of cash generation from operations ( $C_s$ ), lower would be the accounting profit. Thus, the forces that tend to reduce the liquidity (through reduction in  $C_s$ ), have a dragging effect on profitability.

(d) With a constant level of current cash generation, higher the proportion of current costs in relation to  $C_s$ , a greater portion of the current asset formation would be debt financed. Under such circumstances additional current assets shall inflict strains on both liquidity as well as profitability.

(e) Under conditions described in situation (d), when financial accommodation is easily available (may be at a low real cost of financing), there might be tendency on the part of the firms to adjust the value of the operating parameters ( $k_s$ ) of the profit identity (and in the process increasing the level of current assets) and thereby restore the level of accounting profit. Under such circumstances accounting profit may apparently remain stable despite deterioration in the liquidity conditions. Thus, particularly under adverse market conditions, accumulation of current assets is likely to provide a false sense of security.

The above discussion thus highlights the inherent fallacies of accounting profit as a criterion for evaluating the justification or otherwise for

operating investment. Simultaneously, the false notion of liquidity implications of current assets is also adequately revealed.

One would thus be inclined to consider the proportion between current cash generation and current operating outlays as an indicator signifying the operational justification for holding incremental current assets. When the proportion is favourable, it is very likely that a greater proportion of current assets would be self-financed permitting a firm to adopt a more flexible operating strategy with the least possible strain on liquidity. A departure from the static concept to the flow concept of liquidity may be noted in the works of Donaldson and later by others. Donaldson<sup>4</sup> emphasised on cash generating capacity as a foundation for liquidity analysis. That liquidity strength of a firm depends on the cash flows and to some extent on cash and near cash holdings has been indicated by Hunt, Williams and Donaldson<sup>5</sup>. Lemke<sup>6</sup>, on a critical review of the static estimates of liquidity suggested an alternative framework highlighting the parity between cash inflows and cash outflows on a day to day basis. Alternative framework like the 'funds position' by Hunt<sup>7</sup> and 'cash productivity' by Slater<sup>8</sup> are other important contributions in this area. The desired internal balance between the apparently contradictory measures of liquidity and profitability can be ensured to a large extent if adequate financial discipline is attained in aligning operating costs to the cash generation from sales on a continuous basis. With the knowledge of the optimum value of the operating parameters ( $k_s$ ) corresponding to alternative  $C_s$  to cash cost ratio, a firm can determine the minimum level of  $C_s$  and maximum cash cost as a percentage of total cost which it should plan to attain for realising a desired profit margin while maintaining adequate liquidity.

It is thus evident that there is a need for developing an alternative framework for exploring the operational relationship between the dimensions of profitability and liquidity. Since the true liquidity strength of a firm depends on its fund generating capacity, ideally the operational justification of current investments must be sought in the context of fund generation and deployment over successive periods of time. The emphasis, thus, needs to be shifted from the static or comparative static analysis of stock estimates to the dynamics of the flow variables recast in the context of internal viability.

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## XVII ANNUAL CONFERENCE OF IAA

The XVIII Annual Conference of the Indian Accounting Association will be held, under the joint auspices of the Kousali Institute of Management Studies, Karnatak University, Dharwad and the North Karnatak Management Association, Hubli-Dharwad, in Dharwad from **May 29 to 31, 1994**. The **topics** for the conference are : (1) Liberalisation Policy and Indian Capital Market, and (ii) Corporate Disclosure Practices. The conference will be followed by a seminar on accounting research.

The **deadline** for submitting papers (two copies each, along with a summary not exceeding 250 words) is **March 31, 1994**. Delegate fees are : for member Rs. 200 ; for non-members Rs. 300 ; corporate delegates Rs. 500 each. Delegate fees should be received latest by **April 15, 1994** (spot registration is to be avoided).

Delegates would be lodged in Boys Hostels which are furnished with hard bed. Delegates are requested to bring their own beddings etc. Hotel arrangements may also be made on request. Hotel charges are around Rs. 100 per day.

**Trip to Goa** could be arranged on **June 1** subject to availability of adequate number of delegates for each bus (full capacity). Those going to Goa may book their return journey from Goa.

For any enquiry or further details **contact : Professor Bhagwati Prasad, Director, Kousali Institute of Management Studies, Karnatak University, Dharwad-508 003.**

## THE IIA CODE OF ETHICS : AN INTERNATIONAL PERSPECTIVE<sup>†</sup>

*Rocco R. Vanasco\**

The purpose of this paper is to highlight similarities among the codes of ethics promulgated by professional societies in the United States such as the Institute of Internal Auditors (IIA), the American Institute of Certified Public Accountants (AICPA), the Institute of Management Accountants (IMA), and the EDP Auditors Association (EDPAA). The Code of Ethics of the Institute of Internal Auditors, an international professional association, will be taken as an example to demonstrate that most of the articles of professional codes do not reflect the cultural dimension of Asian, European, and other countries. Since one single universal code of ethics may not meet the need of an international group, international professional societies may wish to consider alternatives to incorporate in their codes of ethics especially the cultural dimension of other countries. Cultural differences often limit the effectiveness of a uniform international code of ethics because they create a lack of consensus within a profession as to what constitutes acceptable behaviour.

### **Introduction**

Trying to apply a single code of ethics may result  
in a code that is too broad to be useful.

*Schlegelmilch and Houston, 1989*

Professions have several characteristics in common - a complex body of knowledge, standards of admission to the profession, and a need for public confidence. To guide the conduct of their members and demonstrate a dedication to serve the public's interest, all recognized professions have established codes of professional ethics.

In July 1990, the International Federation of Accountants issued its "Guidelines on Ethics for Professional Accountants". Its stated purpose is to support the objectives of the accounting profession "to work to the highest standards of professionalism, to attain the highest level of performance, and generally meet the public interest" (IFAC, 1990). The IFAC Guidelines is typical of professional codes of conduct of the American Institute of Certified Public Accountants (AICPA), The Institute of Internal Auditors (IIA), Institute of Management Accountants (IMA), the EDP Auditors Association, and others. They normally include : (a) statement mandating technical proficiency, (b) a list of responsibilities to management or clients, (c) a description of etiquette in dealing with auditees, clients, and

<sup>†</sup> This article has won IAA International Research Award.

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colleagues, and (d) a characterization of an individual's responsibilities to the profession and society (Merz and Groebner, 1981).

Normally, the path to a more ethical work environment consists of several steps. The first is the establishment of a Code of Conduct, a corporate ethics committee, and a policy empowering the internal audit group to include checking for compliance with the Code as part of its responsibility. The second step is continuous training in how to deal with ethical dilemmas. The third and most significant step is a willingness to accept responsibility for one's behaviour (Maddocks, 1992). The codes of ethics of the IFAC, AICPA, IIA, IMA, and EDPAA are in consonance with such steps which set forth principles in the practice of financial accounting, managerial accounting, internal and external auditing, and charge their members to maintain high standards of conduct. They demand commitment to honorable behaviour, even at the sacrifice of personal advantage.

A Code of Ethics also establishes high standards against which individuals can measure their own performance and communicate to those outside the organization the value system from which the organization's members must not be asked to deviate. Certified Internal Auditors (CIAs), Certified Public Accountants (CPAs), Certified Management Accountants (CMAs), Certified Information Systems Auditors (CISAs) and other professionals have in common some basic understanding of ethical behaviour by its members such as conducting oneself in the highest moral standards, ensuring organizational compliance with the spirit as well as letter of pertinent laws and regulations, and reporting to appropriate internal or external authority any illegal or fraudulent act by the organization.

Mautz and Sharaf point out that professional ethics, whether in law, medicine, or auditing, apply general ethics to the choices and consequences imbedded in a particular profession :

Ethical behaviour in auditing or in any other activity is no more than a special application of the general notion of ethical conduct devised by philosophers...Ethical conduct in auditing draws its justification and basic nature from the general theory of ethics (Mautz and Sharaf, 1961).

Ethics has been defined as the customs or standards which a particular group or community acts upon (Donalson, 1990). The professional codes of ethics reflect those standards which professional accountants and auditors can act upon. The potential for a wide array of ethical behaviour exists even in the sense of right or wrong. This suggests two types of influences on ethical decisions which need to be governed : (1) the personal ethics of the professional accountant/auditor, and (2) the external influences such as culture and socioeconomic conditions which may alter or intercede in the ethical process (Schweikart, 1992).

The U.S. codes of ethics of professional associations echo the English Common Law ethical duties of obedience, loyalty, and confidentiality. CIAs,

CPAs, CMAs, CISAs, and other professionals owe these same duties to the profession, the community and their professional associations (David McNamee, 1992). There are, however, significant differences between codes of conduct of Western European and American associations. The European codes of ethics stress the right of codetermination and the sense of belonging and responsibility found in a familial-type of relationship, whereas American codes of ethics stress fairness and equity (Langlois and Schlegelmilch, 1990). The causes of different codes of ethics are primarily economic development, educational levels of auditors and accountants, and cultural values held by societies (Farmer & Richman, 1964).

### **The IIA Code of Ethics**

Some might argue that internal auditing responsibilities differ widely among organizations, thus making a common code impossible. The Code, as written, could be an acceptable guide for personal discipline and conduct under all circumstances.

*W. B. Pitt, 1969*

The Institute of Internal Auditors has developed ethical standards for the practice of internal auditors. The ethics provisions primarily address internal auditors' obligations to their employers, but they also include provisions that prescribe honesty, objectivity, competence, and morality in the practice of the internal auditing profession. The IIA promulgated a *Code of Ethics* primarily to reflect the particular needs of Certified Internal Auditors (CIAs) and its members in dealing with ethical issues in the performance of their operational audits and in communicating the results to the audit committee and management.

The Certified Internal Auditor has a professional obligation to management, stockholders, and the general public to maintain high standards of conduct. In recognition of these obligations, the Board of Directors of the Institute of Internal Auditors has adopted the IIA *Code of Ethics*. The IIA has emphasized high standards of conduct from internal auditors through the Code of Ethics, the Standards for Professional Practice of Internal Auditing (SPPIA), and the Professional Standards Bulletins (PSB). On December 13, 1968, the IIA adopted two Codes of Ethics : one for members and the other for the certified internal auditors (CIAs). In 1988 the two codes were amended and unified. Developing the new code represents a positive response by the profession to the rapidly changing environment of internal auditing. The new Code applies to all CIAs and IIA members. The Code consists of Purpose and Applicability sections and eleven standards of conduct. It reflects the acceptance by the IIA members and CIAs of responsibility to the interests of those they serve.

The Code serves as the framework for evaluating the internal auditor's conduct. A significant provision of the Code is that CIAs will use the Certified Internal Auditor designation with discretion and in dignified

manner and will maintain high standards of conduct in order to effectively discharge their responsibility. The standards of conduct set forth in the Code provide basic principles in the practice of internal auditing. Individual judgment is, however, required in the application of these principles. It represents the cornerstone of the whole Code of Ethics.

While the IIA Code of Ethics may be acceptable among U.S. entities, it does not, however, reflect the vast array of cultural differences and ethical dilemmas faced by auditors in other countries since culture plays an important role in defining ethical standards. The Institute of Internal Auditors, as an international professional association, in defining ethical standards must take into consideration cultural differences of auditors of various countries.

### **Honesty, Objectivity and Diligence**

The term ethical behaviour implies more than determining what is right. It implies living it out, and that requires commitment to integrity.

*Frederick L. Neumann, 1992*

Article I of the Code obligates internal auditors to exercise honesty, objectivity and diligence in all matters concerning the affairs of their organization or to whomever they may be rendering services.

Honesty ought to be an important trait of internal auditors. A survey on fraud prevention has revealed that many of the frauds in books of accounts are committed in small businesses by a single person in an accounting role. Fraud prevention is a product of good management and good internal controls can be achieved mostly by hiring honest employees (Wells, 1992). Examples of precluded behaviour, which are in violation of the concept of honesty, are (a) the false information on an application for employment is a dishonest act; and (b) the false sign-off in the interim report as to the computer check of the database is also a dishonest act.

The AICPA Code of Ethics, the IMA Ethical Standards and the EDP Code of Ethics require that their members perform all professional responsibilities with the highest sense of integrity in order to maintain and broaden public confidence. They also emphasize that their members serve in the interest of their employers in a diligent, loyal, and honest manner.

### **Objectivity**

Objectivity is a rare commodity and should not be compromised. Internal Auditors should not be placed in a position where their objectivity can be questioned.

*Lawrence B. Sawyer, 1988*

Objectivity is a must in internal auditing. Internal Auditors must be objective in their reporting activities. The Standards define objectivity as an independent mental attitude which internal auditors should maintain

in performing audits. They also describe several situations in which objectivity may be impaired. For instance, objectivity requires internal auditors to perform audits in such a manner that they have an honest belief in their work and that no significant quality compromises are made. Internal auditors should not be placed in situations in which they feel unable to make objective professional judgments. Objectivity also requires that internal auditors not subordinate their judgment in audit matters to that of others.

The Professional Standards Bulletins offer several cases in which objectivity may be impaired. For instance, auditing the same area several times might result in personal relations with the auditee that could impair objectivity. In such circumstances, Internal Auditors may not continue to use professional skepticism in reviewing areas with which they are familiar. It is, therefore, a prudent policy to rotate auditors periodically from assignment to assignment. The proscription against performing operating responsibilities serves to maintain internal auditor's objectivity while allowing comment and participation in the standard of control for systems or procedures before they are implemented. Objectivity could also be questioned when an internal audit organization conducts internal reviews. In this case, the audit director should emphasize the need for an independent and objective frame of mind.

Objectivity and independence are pivotal to professional associations. The AICPA Code of Ethics stresses that in the conduct of audits, CPAs should maintain objectivity and be free of conflict of interest. A member in public practice should be perceived to be independent not only in fact but also in appearance when providing auditing services. The IMA standards of Ethical Conduct highlight objectivity as a key factor in the decision-making process. Management accountants have a responsibility to communicate information fairly and objectively and disclose fully all relevant information that could reasonably be expected to influence an intended user's understanding of the reports, comments, and recommendations presented (Standards, 1993). The EDPA Code of Ethics expects that auditors perform their duties in an independent and objective manner and avoid activities which threaten, or appear to threaten, their independence (EDPAF, 1993). The objectivity principles of the IFAC requires "a professional accountant shall be fair and not allow prejudice or bias or influence of others to override objectivity" (IFAC, 1990).

The independence concept presents several cross-cultural problems. The statement of being "independent in fact and appearance" required by the external and internal auditors may be strange to a collective culture where relationships and group memberships are the cornerstone of the organization of society (Cohen, Pant, & Sharp, 1992).

Diligence is necessary in the performance of audits and in obtaining adequate evidence to warrant an audit opinion. CIAs have an obligation to exercise diligence in the performance of their duties and to obtain sufficient

factual evidence to warrant expression of an opinion. Diligence implies that when expressing audit opinions, auditors shall use all reasonable care to obtain factual evidence to warrant such expression. SPPIA recommends that auditors be responsible for exercising due professional care by being alert to the possibility of intentional wrong-doing, errors and omissions, inefficiency, waste, ineffectiveness, and conflict of interest. Some examples that express unacceptable behaviour and lack of diligence are (a) late arrivals and early departures from work because this practice is common in the organization is deemed lack of diligence; and (b) because of a highly developed system of internal controls over the cost function, the audit report assured top management that no irregularities existed. In the latter case, an auditor cannot give such assurances.

### **Loyalty**

Within internal auditing, loyalties are likely to vary with the personal plans and opportunities of the auditors concerned.

*Mautz, Tiessen, and Colson, 1985*

Article II of the IIA Code calls for internal auditors to exhibit loyalty to their employers in all matters pertaining to the affairs of that organization or to whichever they may be rendering a service. In like manner, the EDP Auditors foundation Code of Ethics states that the EDP auditor will serve in the interests of their employers, stockholders, clients, and the general public in a diligent, loyal and honest manner, and shall not knowingly be a part to any illegal or improper activities (Standard 2). Loyalty implies that when an internal auditor suspects wrongdoing, the appropriate authorities within the organization be informed.

Mautz's survey found little uniformity in reporting irregularities to the audit committee :

We found no strong understanding or teaching with regard to an overriding professional loyalty to an institution, position, or ideal. On a number of occasions when the suspect of "whistle blowing" slipped into the conversation, the attitude of those present was neither positive nor negative. Some of those who had on occasion "blown the whistle" were bitter about the results of having done so (Mautz, Tiessen, & Colson, 1984).

In contrast to the external auditor, the internal auditor and the management accountant assume an advocacy position with respect to the organization.

Loyalty is not only a reflection of corporate culture but varies from country to country. Business practices in Japan are largely guided by social values and cultural traditions, exemplifying the notion that management cannot be separated from culture. Japanese life is based on loyalty to one's employer. Internal auditing in Japanese companies is generally based on the ethical doctrine that human nature is essentially good. American

workers instead seem to feel inhibited by interlocking loyalties and by social and group demands imposed by employers (Burnaby, Powell, & Strickland, 1992).

The recent incidents involving the Bank of Credit and Commerce International (BCCI) and Maxwell Communication, led Gerald Vinten, editor of *Managerial Auditing Journal*, to question the auditor's loyalty to the public and proposed some reforms of corporate governance that require the compulsory establishment of audit committees and the filing of reports on internal control and irregularities to the appropriate regulatory bodies (Vinten, 1992).

### **Illegal Activities**

Commercial modes and moral practices of other countries will not be changed to meet the U.S. standards unless revolutionary new social orders change the patterns of centuries.

*J. Basche, 1985*

Article II of the IIA Code also states that members should avoid being knowingly part of any illegal or improper activity. Loyalty cannot be extended to encompass illegal or improper activities.

Illegal acts may be seen as a reflection of cultural values. For instance, pressure on a subordinate to cover up a superior's illegal activities, such as accepting bribes, might be evaluated differently by Japanese than Americans because of cultural differences. An American may interpret this pressure as coercion, whereas a Japanese may unwillingly participate in a cover-up to save face and protect the reputation of the group (Cohen, Pant, and Sharp, 1992).

Bribery is the most frequently occurring ethical problem internationally. In the late 1970s, the Securities Exchange Commission was involved in litigation with several companies for alleged bribery overseas. One company authorized \$59 million in political contributions to political parties, while a second company paid \$4 million to a political party in South Korea. In response to these corrupt foreign payments, the U.S. Congress passed the Foreign Corrupt Practices Act of 1977.

The opinion of the business community concerning the ethics of international payments and the restriction of international payments of the Foreign Corrupt Practices Act vary widely. The American Congress, by enacting the FCPA, is perceived to be operating with naivete and the lack of understanding of cultural and political environment around the world (Vanasco, 1992).

Ethical considerations as well as the potential exposure to criminal charges must be weighted against loyalty to the organization. For instance, auditors should avoid any personal involvement in the employment of

illegal aliens. Recently, two of President Clinton's appointees to Secretary of State were rejected by the Congress for allegedly violating the law by employing illegal aliens. Other examples of precluded activities that violate Article II of the Code are (a) reporting apparent violation of antitrust statutes by chief executives to Federal Trade Commission. This is a violation of article II which requires that employees exhibit loyalty in all matters pertaining to the affairs of the organization. Internal auditors should report this matter to the audit committee rather than the FTC; and (b) a Certified Internal Auditor, working for a chemical manufacturer, believed that the toxic waste was being dumped in violation of the law. Out of loyalty to the company, no evidence regarding the dumping was collected. In this case, the auditor violated article II of the Code by knowingly becoming a part of an illegal act.

The IMA Standards of Ethical Conduct likewise stress that Management Accountants have a responsibility to communicate unfavourable as well as favourable information. The Codes of Ethics of all professional societies, including those of CMAs, CPAs, and CISAs prohibit implicitly or explicitly illegal or improper activities.

Whether bribery is more acceptable in other countries than in the United States is an empirical question, but certainly cultural differences play a major role. For instance, making copies of software is considered an illegal act in the United States. By contrast, copying software may be encouraged in those countries where the authors or inventors believe that "the highest compliment one can be paid is to be copied" (Swinyard, 1990).

### **Discreditable Acts**

We must not only take responsibility for the decisions we make, but we must also assume a responsibility for making the decision.

*Charles Woelfel*

Article III of the IIA Code prohibits members and CIAs of knowingly engaging in acts or activities which are discreditable to the profession of internal auditing or their organization. There are almost no examples of discreditable acts reported by the Institute of Internal Auditors. Recently, it seems that the Board of Directors of the Institute of Internal Auditors has taken action against a member who, without passing the CIA Exams, portrayed himself as a CIA in his application of employment.

The AICPA Code of Ethics (Rule 501) lists among the discreditable acts (a) discrimination in employment practices, (b) failure to follow standards and/or procedures or other requirements in governmental audits, (c) negligence in the preparation of financial statements or record, and (d) the retention of client's records and accountant's working papers. The IMA Standards for Ethical Conduct warns CMAs to refrain from engaging in or

supporting any activity that would discredit the profession. The EDPA Code of Ethics provides guidance in avoiding improper activities.

### **Conflict of Interest**

There is a clear awareness by internal auditors of unethical activities. This is a good sign relative to the emergence of this new profession.

*Dittenhofer and Klemm, 1983*

Article V of the IIA Code charges CIAs with the responsibility to avoid actual or apparent conflicts of interest, and requires that they advise all appropriate parties of any potential conflict. CIAs must avoid activities in conflict with the interest of the organization, or prejudicial to the ability to carry out duties objectively. The Code recognizes that a conflict of interest may undermine the objectivity of internal audits. SPPIA encourages internal auditors to report to the director any situation in which a conflict of interest or bias is present or may reasonably be inferred. In these circumstances, the Director of the internal auditing department should reassign the auditors.

The Professional Standards also require that internal auditors not be placed in situations in which they feel unable to make objective professional judgments. The underlying philosophy of a policy dealing with conflict of interest is to ensure that all concerned employees avoid situations which might be interpreted as a conflict between their personal interests and those of the organization.

It has been argued that the appointment of the entity's independent accounting firm to conduct an external review of the internal audit organization might be perceived to be a conflict of interest. In this situation, the PSB suggests that the best way to overcome that perceived conflict would be to retain a firm that is not now, nor has been in the recent past, the independent accountants of the company. If the independent accounting firm is selected as the external reviewer, discussions should be held with the firm and all possible steps should be taken to mitigate the apparent lack of independence. Examples of precluded activities that may be in conflict with the interest of the organization are (a) frequent luncheons and other socializing with major suppliers of the company without the consent of senior management; (b) an internal auditor reviewing a company function with which a close relative is involved has an apparent conflict of interest; and (c) an auditor who is also a part-time business insurance broker may lose his/her objectivity since he/she might benefit from a change in the employer's insurance coverage.

The AICPA Code of Ethics (Rule 102) and the Standards of Ethical Conduct for Management Accountants prohibit any conflict of interest. In the performance of any professional service, CPAs must be free of conflict

of interest. CMAs must avoid actual or apparent conflict of interest and advise all appropriate parties of any potential conflict.

### **Gifts**

By accepting personal gifts, the auditor's ability to maintain a professional objectivity might reasonably be questioned.

*Ratliff, Wallace, & McFarland, 1988*

Article V of the IIA Code states that members and CIAs not accept anything of value from an employee, client, customer, or business associate of their organization which would impair or be presumed to impair their professional judgment. Accepting a fee or gift may imply that the auditor's objectivity has been impaired. Internal auditors are encouraged to report the offer of all material fees and gifts to the immediate supervisor. Examples of precluded behaviour which represent a departure from the Standard of Conduct V are (a) members and CIAs accepting a gift from a supplier of the organization that might impair or presume to impair his/her professional judgment; (b) preparing the personal tax return, for a fee, for one of the company's division manager; (c) the CIA using a beach home owned by the chief executive officer of an operating division for one week per year; and (d) the controller driving several office personnel to a local commuter train station each morning, charging other personnel but not the CIA.

The IMA Standards of Ethical Standards for Management Accountants require that CMAs refuse any gift, favour, or hospitality that would influence or would appear to influence their action.

### **Professional Competence**

When auditors are unaware of current developments in the practice of internal auditing and of internal audit standards, they are conducting internal audits in an unethical manner.

*Dittenhofer and Klemm, 1983*

Article VI of the IIA Code emphasizes the quality of services internal auditor can render to provide measure of comfort to audit committees. Members and CIAs shall undertake only those services which they can reasonably expect to complete with professional competence. The SPPIA also stresses professional competence in performing audit work and suggest that internal auditors should possess the knowledge, skills, and discipline essential to the performance of internal audits.

The Professional Standards Bulletins stress that it is the responsibility of the auditor to research and obtain the requisite knowledge to enable the performance of an effective audit. the research necessary to perform audit work is part of the auditor's developmental process. If auditors feel that they do not possess the necessary skills to perform the audit, they should discuss the audit assignment with their supervisors. The supervisor may explain the scope of the audit and effective audit techniques in such a

manner as to eliminate the auditor's concern. If the supervisor realizes that the auditor does not possess the professional skills for the assigned audit, he could assign the audit to a more experienced member of the audit staff.

The AICPA Code of Ethics (article V) and the Standards of Ethical Conduct for Management Accountants stress professional competence. CPAs should strive continually to improve competence and the quality of services, and discharge professional responsibility to the best of their ability. CMAs have a responsibility to maintain an appropriate level of professional competence by ongoing development of their knowledge and skills.

Differing cultures and level of economic development are likely to cause accountants/auditors to question the technical competence since a wide gap may exist in the sophistication of auditing standards and accounting principles between developed and developing countries.

### **Compliance with SPPIA**

Internal Auditors should see that management enforces the Code rigorously and consistently.

*David McNamee, 1992*

Article VII of the IIA Code requires CIAs to adopt suitable means to comply with the *Standards for Professional Practice of Internal Auditing*. The SPPIA are incorporated by reference into the Code of Ethics. If internal auditors issued opinions or otherwise reported on the results of their work without substantive investigation and compliance with the SPPIA, the audit report would be meaningless. The Standards also require that the Director of internal auditing be responsible for properly managing the department so that audit work conforms to SPPIA. The Director of internal auditing can use three methods to evaluate compliance with SPPIA - supervision, internal reviews, and external reviews. Internal auditors should review the systems established to ensure compliance with those policies, plans, procedures, laws, and regulations that could have a significant impact on operations and reports, and should determine whether the organization is in compliance. SIAS 4 - Quality Assurance describes the applicable standards and potential measurement criteria that should be considered in evaluating the performance of the internal auditing department such as compliance with the Institute's *Code of Ethics*, SPPIA, and the professional development plans of the internal auditing department. An example of precluded activities, which is prohibited by Article II of the Code is the following. To save company resources, the director limits the audit of foreign branches to confirmation from branch managers that no major personnel changes have occurred.

The AICPA Code of Ethics (Rule 202) prescribes compliance with technical standards. A CPA who performs auditing, review, compilation, management advisory, tax, or other professional services shall comply with

standards promulgated by bodies designated by Council. Standards of Ethical Conduct for Management Accountants also state that management accountants have a responsibility to perform their professional duties in accordance with relevant laws, regulations, and technical standards.

Compliance with international auditing and accounting standards is not an easy task. Few companies reference in their financial statements compliance with the International Accounting Standards promulgated by the International Accounting Standards Committee (Vanasco, 1991). Henry Benson, the founder of IASC, gave the following reasons for non compliance with international standards :

Some countries take the view that they cannot require compliance locally until they are satisfied that the standards are internationally acceptable. Some see local legislation as an obstacle to the introduction of international standards. Some accounting bodies do not have the power to exercise discipline over their members, and cannot therefore impose compliance with either national or international standards. Some countries have not yet overcome stubborn local resistance from the business community (Benson, 1975).

The recurrent noncompliance with international auditing standards may be attributed to cross-cultural factors. Cultural differences in financial disclosures, which should play a pivotal role in the formulation of international accounting standards, are not given enough consideration. The impact of the cultural environment in financial statements indicates that cultural differences within economically developed countries will dictate differences in the development of accounting and auditing principles in these countries (Jaggi, 1979).

### **Confidentiality**

A code of conduct which forces individuals to compromise relationships with group members in favour of client confidentiality conflicts with collective cultural norms.

*Haggi, 1990*

Article VIII of the IIA Code requires IIA members and CIAs to be prudent in the use of information acquired in the course of their duties and shall not use confidential information for any personal gain nor in any manner which would be contrary to law or detrimental to the welfare of their organization. Examples of precluded activities by Article II of the Code are (a) an investment in the company's stock could be considered questionable; (b) internal auditors should be extra careful not to discuss proposed mergers nor other sensitive business information with any of the immediate family and friends; (c) the director decides to delay the audit of a branch so that his nephew, the branch manager, will have time to "clean things up;" (d) a CIA is auditing a division in which the chief financial officer is a close personal friend and the CIA learns that his friend is to be replaced

after a series of critical labour negotiations: the CIA in relaying this privilege information to his friend has violated Article VII of the Code.

Lambert and Hubbard have recommended amending the IIA's Code of Ethics to allow the internal auditor to discuss audit matters freely with the firm's external independent auditors. This will allow the internal auditor to fulfill his/her responsibilities without breaking the confidentiality clause (Lambert and Hubbard, 1989).

The AICPA Code of Ethics (Rule 301) - Confidential Client Information states that a member in public practice should not disclose any confidential information without consent of the client. The accounting profession considers confidentiality as the utmost tenet of professionalism. Accountants must not only keep quiet as to their clients' business plans, but they must also not mention in public the names of their clients. Standards of Ethical Conduct for Management Accountants state that management accountants have a responsibility to refrain from disclosing confidential information acquired in the course of their work and inform subordinates as appropriate regarding the confidentiality of information.

The confidentiality principles conflict with the tenets of a collective culture. In a collective culture, a failure to warn family and friends who were owed money would be a serious breach of collective norms.

## **Disclosure**

Deep-seated differences in financial reporting practices could be related to national cultures.

*S. J. Gray, 1988*

Article IX of the Code reminds internal auditors to reveal in their reporting on the results of their work material facts known to them which, if not revealed, could either distort reports of operations under review or conceal unlawful practices. When internal auditors encounter abuses by management, they have no choice but report such violations. If the chief executive officer or president is involved in an irregularity, the Standards require reporting this matter to the audit committee. Auditors who fail to report material deficiencies on the grounds that management is already aware of the defects are in violation of the Code.

The CIA exams offer examples of precluded activities such as (a) knowing that management was aware of the situation, a CIA purposely left a description of an unlawful practice out of the report; (b) an audit of a foreign subsidiary disclosed payment to local government officials in return for orders. Such payments represent a violation of the Foreign Corrupt Practices Act. According to the Standard of Conduct IX, the auditor should inform appropriate company officials; (c) during the audit of one of their company's nuclear power plants, an internal audit team discovered serious instances of violation of safety procedures. Failing to report to management

information that would be material to management's judgment could be construed as a violation of Article IX.

The AICPA Code of Ethics encourages CPAs to disclose material facts that might render financial statements misleading. If the client refuses to make disclosures, the auditor should notify each member of the board of directors. In addition, the auditor should formally notify management, each regulatory agency having jurisdiction over the client, and each person known to be relying on the financial statements that the original audit report should no longer be relied on (Ricchiute, 1992). The Standards of Ethical Conduct for Management Accountants also stresses that management accountants have a responsibility to disclose fully all relevant information that could reasonably be expected to influence an intended user's understanding of the reports, comments, and recommendations presented.

### **Proficiency**

Ethical values that establish a standard for their behaviour, and the competence to effectively carry out job responsibility are essential to effective internal control.

*Treadway Commission, 1990*

Article X of the IIA Code states that members and CIAs shall continually strive for improvements in their proficiency, and in their effectiveness and quality of their services. The IIA Code incorporates by reference the performance of work with proficiency and due professional care. SPPIA requires the same from the internal auditor.

Both the Code and the Standards require internal auditors to maintain high standards of technical competence through continuing education to maintain their proficiency. They should be kept informed about improvements and current developments in internal auditing standards, procedures, and techniques. The IIA recognizes that the profession is growing and changing. In order to maintain state-of-the-art qualifications, all internal auditors must pursue varied means of continuing education. Continuing education is defined as an educational program designed to update the knowledge and skills of its participants. Auditors should attend seminars, conferences, colleges courses or in some way demonstrate an interest in continuing professional development.

Certified Internal Auditors who fail to maintain their proficiency through continuing education could be found in violation of both the *Code of Ethics* and the *Standards for Professional Practice of Internal Auditing*. Any internal audit department that has ignored the IIA's urging to pursue professional excellence through continuing education may be inviting its own replacement (Courtemance, 1991).

Professional proficiency is the responsibility of the audit department and each internal auditor. The Standards expect from internal auditors a

high degree of professional proficiency in the conduct of audits. Proficiency means the ability to apply knowledge to situations likely to be encountered and to deal with them without extensive recourse to technical research and assistance. It has been noted that the dual protective and improvement objectives of the internal auditor are what distinguishes them so importantly from the external public auditor (Brink & Witt, 1982). An example of precluded activities which is deemed in violation of Article X, is: to save company resources, the director cancels all staff training for the 2 years on the basis that all staff are too new to benefit from training. The AICPA Code of Ethics (Rule 201) requires CPAs to render audits services with professional proficiency. CPAs shall adequately plan and supervise the performance of professional services and obtain sufficient relevant data to afford reasonable basis for conclusions or recommendations in relation to any professional services performed.

The Standards of Ethical Conduct for Management Accountants prescribe that CMAs be proficient in their work and prepare complete and clear reports and recommendations after appropriate analyses of relevant and reliable information.

### **Competence, Morality and Dignity**

An internal auditor can have a much easier job of enforcing or consistently enunciated management standard of integrity than if bucking the cross-current of an inconsistent stance or, worse yet, no ethical resolve at all.

*Frederick L. Neumann, 1992*

Article XI of the IIA Code reminds members and CIAs, in the practice of their profession, to be ever mindful of their obligation to maintain the high standards of competence, morality and dignity promulgated by the Institute. All members are obligated to abide by the Bylaws and uphold the objectives of the Institute of Internal Auditors.

The AICPA Code of Ethics (Article V) reminds CPAs to strive continually to improve competence and the quality of services and discharge professional responsibility in the best of the member's ability. Article VI stresses that services be competently delivered and adequately supervised. Article II places emphasis on professional and moral judgment in carrying out professional responsibilities. The Standards of Ethical Conduct for Management Accountants remind CMAs to maintain an appropriate level of competence by ongoing development of their knowledge and skills and refrain from engaging in any activity that would prejudice their ability to carry out duties ethically.

### **Compliance with the Code of Ethics**

Anyone practicing internal auditing who wrongs someone through the practice of his/her profession, might be held accountable when conduct is not consistent with the Code.

*Lawrence B. Sawyer, 1988*

The IIA Board of Directors oversees compliance with the IIA's Code of Ethics through Board Policy Statements included in the Board Policy Manual. When a member commits an act judged to be contrary to the spirit of the code, and thus discreditable to the profession of internal auditing, the IIA Code states that CIAs are required to forfeit the CIA designation upon finding by the Institute's Board of Director of a violation by CIA of the IIA Code of Ethics.

The IIA Board of Directors renders final decisions on disciplinary matters. The following actions can be taken: (a) censure involving a written reprimand that outlines the consequences of repeated actions; (b) suspension is imposed when the misconduct warrants more serious disciplinary action than a censure; and (c) expulsion of a member or forfeiture of the CIA designation is imposed for the most serious misconduct cases.

Enforcement of the AICPA Code of Ethics had been ineffective prior to the 1990s. As a result, the AICPA and the states developed a joint ethics enforcement system in conjunction with the National Joint Trial Board. This system allows the AICPA and the state societies to act either independently or jointly to review complaints and reprimand ethics violators. If the Professional Ethics Committee finds the complaint to be valid, it may take several courses of action. For minor violations, the Division may take direct remedial action, such as requiring the member to get additional continuing education. More serious violations are turned over to the Joint Trial Board for a hearing. If found guilty, the offending member may be censured, suspended for membership for up to two years, or expelled permanently from the AICPA (Whittington, Pany, & Meigs, 1992).

Noncompliance with the Ethical Standards of the Institute of Management Accountants is dealt with a thorough programme of disciplinary actions ranging from automatic expulsion for members convicted of a felony to Notice of Censure with or without continuing education requirements being imposed (Siers and Sweeney, 1991).

### **Conclusion**

The current ethical environment in the accounting profession and in society as a whole calls for management accountants to reflect on ways that current ethical standards may be improved.

*Shaub and Brown, 1992*

The worldwide acceptance of an international code of ethics may be problematic since imposed guidelines will be resisted where they are inconsistent with society's long-standing and entrenched cultural norms. The variety of socioeconomic conditions render a uniform code of ethics inappropriate. For instance, a code of ethics which addresses the ethical conflict arising in the context of high technical proficiency required of auditors in a developed economy might be inappropriate for auditors in developing countries (Wallace, 1990).

The moral significance of codes of ethics is contained in their existence and they have the potential to yield the process of ethical decision making. In the international and domestic arena, we are witnessing a shift from a rule-oriented code of ethics to a code which places reliance on ethical principles. The most recent restructure of the IIA Code of Ethics, AICPA Code of Professional Standards, and the Standards of Ethical Conduct for Management Accountants reflects such an orientation (Shaub and Brown, 1992).

The auditing profession's commitment to high ethical standards is not a recent phenomenon. Ethical conduct of CIAs has been the cornerstone of the Institute of Internal Auditors since its inception. The IIA *Code of Ethics* is unique since it has a *double edge*. Internal auditors must not only comply with their code of conduct but they must also see to it that corporate ethics is followed and complied with throughout the organization. The framework of the IIA *Code of Ethics* has been engineered in such a way that professional standards and standards of conduct are so strictly intertwined to reflect the inseparability of ethics and professionalism.

In solving ethical dilemmas, internal auditors have at their disposal three tools of special value : the IIA's Code of Ethics, the Standards for Professional Practice of Internal Auditing, and consultation with peers and the Director of the Internal Auditing Department. The Code demands self-discipline above and beyond the requirements of laws and regulations. When faced with ethical dilemmas, the SPPIA can provide guidance of what is expected from an internal auditor in terms of objectivity, diligence, honesty, loyalty, and even the pursuit of excellence. Consultation with peers and the Director of the Internal Audit Department can provide the proper setting for analyzing and exploring possible alternatives and potential consequences in solving ethical issues (Stanford, 1991).

William Shenker noted that "maturing ethically is a lifelong process that can benefit from training during the college / professional years but that also must be nurtured through an individual's career" (Shenker, 1990).

The IIA Code of Ethics and the Standards of Ethical Conduct for Management Accountants are similar in the sense that both stress an obligation to the organization they serve, whereas the CPA Code of Ethics' basic responsibility is to the public first. Both the CIA and CPA Codes of Ethics cover in detail all the various aspects of ethical behaviour, whereas the CMA Code of Ethics is less specific and gives a broader overview of what constitutes ethical behaviour.

The emphasis placed on the ethics programmes of the Institute of Internal Auditors (IIA), the American Institute of Certified Public Accountants (AICPA), and the Institute of Management Accountants (IMA) is a clear indication to their members and the general public of its importance in the auditing and accounting profession.

It has been argued that an international code of ethics is feasible if such a code is consistent with a consensus view of professionals worldwide and it must be relevant to professional practice in all countries in which it is to operate (Cohen, Pant & Sharp, 1992). These criteria imply the consideration of relevant cross-cultural factors. The Institute of Internal Auditors, as an international professional association, must consider whether the general guidelines of the IIA Code of Ethics are consistent with the cultural values in all countries.

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## Second International Accounting Conference IAA Research Foundation, Calcutta January 22-23, 1994

### PROGRAMME HIGHLIGHTS

#### January 22, 1994

- Venue : **Hotel Taj Bengal, Calcutta**  
Inauguration at 9-30 a.m.  
Technical Sessions — 10.00 a.m. to 5.00 p.m.
- Cultural Programme : **Indian Museum Auditorium**  
6-30 p.m. to 8.30 p.m.

#### January 23, 1994

- Venue : **Great Eastern Hotel, Calcutta**  
Technical Sessions — 10.00 a.m. to 5.00 p.m.
- Dinner : **At 7.30 p.m.**

**Registration Fees** : Without accommodation : Rs. 300 ; with accommodation : Rs. 500 (21st January noon to 24th January noon). Spot registration will not be allowed. Draft drawn in favour of **IAA Research Foundation (Conference A/c)**, along with other particulars of each delegate should be sent to : **Prof. B. Banerjee, Department of Commerce, University of Calcutta, Calcutta - 700 073**, by 10th January, 1994.

Among the distinguished academics who will attend the conference are : Prof. Stephen A. Zeff, former President, American Accounting Association, Prof. G. Donleavy, University of Hongkong, Prof. Vasant Raval, Creighton University, USA, Dr. Mohan Lal, Massey University, New Zealand, Prof. Patrick J. Hutchinson, Australia.

## **THE ROLE OF SHAREHOLDER VALUE ANALYSIS IN CORPORATE ACQUISITION DECISIONS**

*Syamal K. Ghosh\**  
*Roger W. Mills†*

This paper seeks to examine the application of Shareholder Value Analysis (SVA) to corporate strategic decisions involving acquisition of a firm or a part of it. The need for SVA arises due to the fact that the key concepts in Financial Management, namely, Efficient Market Hypothesis, Portfolio Theory and Capital Asset Pricing Model, are found to be inadequate for evaluating acquisition decisions. The authors conclude that the applicability of SVA, a cash flow based approach, shows beyond doubt that the economist's interpretation of value is more relevant than its accounting counterpart, as a measure of strategic decisions.

### **The Divergence between Accepted Accounting Theory and Economic Theory**

The concept of valuation is central to a vast majority of business decisions. However, there is divergence between accepted accounting theory and economic theory on the issue of valuation. In recent years considerable research has been conducted in the area of valuation and efforts have been made to decide on the proper method/s of valuation in the context of strategic business decisions, such as decisions on Corporate Acquisitions, Mergers and the like.

In this paper an attempt is being made to communicate what the shareholder value analysis approach entails and how this approach can address the question of value in this context.

Accounting concepts of 'income' and 'value' derive their origin from two of the conventions embraced by the accounting profession, namely, those of 'cost' and 'realisation'. Because of the accountants' adherence to the cost convention the basis of valuation in financial accounting is historical cost. And as we all know, there are good reasons for following this convention, especially in the context of vouching and verification. However, this results in the accountant taking "venture" view of the organisation in question, rather than a "going concern" view. We also find that valuation based on the historical cost method seriously distorts the estimation of income.

The convention of realisation implies that changes in value would be reckoned to have taken place only when such changes have actually taken

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place, i.e., been realised. This can also distort the estimation of income.

In Economics, however, the value of an asset is reckoned as the congealed value of discounted future earnings of service flows emanating from such asset over its lifetime. Symbolically, in a continuous interpretation :

$$A_0 = \int_0^T s(t) e^{-rt} dt$$

where,

$A_0$  = the value of an asset at time 0, the time point at which it is observed.

$T$  = the terminal life of the asset

$s(t)$  = service or income flow over time

$e^{-rt}$  = continuous discounting mechanism

And in a discrete interpretation :

$$NPV = \sum_{i=0}^n \frac{S_i}{(1+r)^i}$$

where,

$S_i$  = Service/Income flow in each time period

$r$  = discount rate

$n$  = the last period till which the flows occur

NPV = Net Present Value.

When we follow this interpretation, income will be reckoned as the difference between the capitalised value of the future net inflows at the beginning and at the end of the accounting period.

In this exercise the accuracy of estimation depends upon the degree of certainty under which the forecasts of expected future flows (cash flows) are made — certainty with respect to the discount rate (implying the cost of capital), the quantum and the timing of the flows.

The financial accounting exercise in facilitating decision making in the area of acquisitions is vitiated mainly by uncertainty, which is reckoned by economists. It is true though that situations involving uncertainty can be converted into "risk" situations by assigning subjective or personological probability estimates, but this would mean the introduction of subjectivity into the analysis.

Alexander (1962)<sup>1</sup> adopted the economic interpretation of value imbedded in Hicks (1946)<sup>2</sup>, and of income, in consequence. Accepting this premise, if we now proceed to analyse the decision-making by investor we would notice that three sets of variables are involved in it, namely, the amounts involved, the timing of the flows and the level of uncertainty. The Trueblood Report (1973)<sup>3</sup> noted that "investors are concerned with the

enterprises' ability to generate cash flows to them and with their own ability to predict, compare and evaluate the amount, timing and related uncertainty of these future cash flows".

A rational investor would invest when the current cost of investment, i.e., the consumption foregone, is less than their valuation of the investment and they will disinvest when the former exceeds the latter. Symbolically<sup>4</sup>,

$$V_0 = \left( \sum_{i=1}^n \frac{D_i L_i}{(1+B)^i} + \frac{I_n L_n}{(1+B)^n} \right)^{-I_0}$$

where,

$V_0$  = subjective value of net gain by an investor at time 0

$D_i$  = dividend per share during period  $i$

$L_i$  = certainly equivalent factor determined by the risk attitude of the investor. (If risk averse,  $0 < L_i < 1$ ) (and if risk prone  $1 < L_i$ )

$B$  = opportunity rate for a risk-free investment

$I_n$  = expected market price at the end of the holding period

$I_0$  = outlay on the investment at time 0

Even though this approach takes due cognizance of the nature of the decision process it leaves the issue of determination of the certainty equivalent factors, anticipation of quantum and timing of flows open to debate.

### Key Concepts in Financial Management

Over the past three decades three major concepts have been seminal in the area of financial management, namely, the efficient market hypothesis, portfolio theory and the capital asset pricing model.

The 'efficient market hypothesis' would suggest that information flows swiftly into the market and there is no way that speculators can beat the market. Only random and unforeseen events can affect stock prices. This celebrated concept implies that investors are rational and that they act on the basis of new information and not on the basis of intuition or hunch.

'Portfolio theory' has sought to demonstrate that risks are basically of two kinds, diversifiable and non-diversifiable. By holding a diversified portfolio investors can diversify away all kinds of diversifiable risks. But the investors will have to shoulder the risk attendant to holding the stock, in general. Diversifiable risk (also referred to as unsystematic risk or non-market risk) stems from company-specific factors like competition, plant shutdowns, legal contingencies and the like. On the other hand, non-diversifiable risk (also referred to as systematic risk or market risk) arises from the impact of macro-economic variables : monetary and fiscal policies pursued, the rate of inflation, industrial and technology policy pursued and the like. These variables affect all the firms and, therefore, the investors can hardly avoid the impact thereof.

The "Capital asset pricing model" has been developed on the premise

that rational investors would seek a premium for risky investments. Using 'beta' ( $\beta$ ) as the measure of volatility of stock in relation to the market as a whole, the model developed by William Sharpe can be presented in a nutshell, as shown below :

$$K_j = L_j + \beta_j K_m + e_j$$

where,

$K_j$  = return on security j

$L_j$  = intercept term in the regression equation

$\beta_j$  = regression coefficient

$K_m$  = return on market portfolio. The regression coefficient of the market portfolio, ( $\beta_m$ )

$\beta_m$  = 1 by definition

$e_j$  = random error term

Statistically, the 'beta' coefficients can be arrived at as follows :

$$\beta_j = \frac{\text{Cov.} (K_j, K_m)}{\sigma_m^2} = \frac{\rho_{jm} \sigma_j \sigma_m}{\sigma_m^2} = \frac{\rho_{jm} \sigma_j}{\sigma_m}$$

Where,

$\text{Cov} (k_j, k_m)$  = covariance between returns on security j and those on the market portfolio

$$= \frac{\sum_{i=1}^n (K_{ji} - \bar{K}_j) (K_{mi} - \bar{K}_m)}{(n-1)}$$

(correction for degrees of freedom introduced)

$\sigma_m^2$  = Variance on returns on market portfolio

$\rho_{jm}$  = Correlation coefficient between returns on security and on market portfolio

$\sigma_j$  = standard deviation of returns on security j

$\sigma_m$  = standard deviation of returns on market portfolio

The model allows us to represent the relationship between the risk of a security as measured by the 'beta' coefficient and its returns as follows :

$$K_j = R_f + \beta_j (K_m - R_f)$$

Where,

$K_j$  = expected or required rate of return on security j

$R_f$  = risk-free rate of return

$\beta_j$  = beta coefficient for security j

$K_m$  = expected rate of return on market portfolio.

Over the recent decades these three concepts have deeply influenced the manner in which financial markets relate to the corporations they seek to value. It is true, though, that these concepts are being reviewed and questions have been raised about the validity of these approaches<sup>5</sup>.

### **Evaluation of Corporate Acquisition Decisions**

These approaches have limited applications in the case of corporate acquisition of another firm or a part of it. Speculation is usually rife before such acquisition as the seller wants to boost the value and the buyer wants to see it depressed. Perfect knowledge and free flow of information do not seem to obtain. The published accounts suffer from the limitations imposed by the adherence to the cost convention and the realisation convention. It is not unusual to find improper investment, financing or appropriation decisions being taken by the firm which is up for sale in the interest of short-term gains or short-term liquidity.

We find acquiring firms, in seeking to protect their interests usually go in for making sizeable provisions for future losses, and for post-acquisition reorganisation and integration costs and for revaluation of assets at the date of acquisition. This happens because of an implicit recognition of the fact that extraneous influences can and do affect the performance of the corporations and that impact of such influence remains largely outside the scope of conventional accounting.

Currently, imposition of tough new rules relating to valuation in the case of acquisitions is under consideration and the intent is to stop acquiring firms boost their profits artificially<sup>6</sup>. Interestingly, the Accounting Standards Board's recent bulletin (Issue 34 dated April 1, 1993) outlines the current thinking of the profession in regard to ascertainment of fair values in acquisition accounting. The major proposals made may be summed up as follows :

- (i) "Provisions for future losses in acquired businesses and for reorganisation costs following an acquisition should not be accounted for as liabilities of the acquired businesses, instead both should be treated as post-acquisition items in the consolidated profit and loss account of the acquirer. Post-acquisition reorganisation and integration costs should, if material, be reported as exceptional items in the relevant periods.
- (ii) When determining the fair values of assets and liabilities (and goodwill) acquired, the assets and liabilities that may be recognised should be restricted to those that existed at the acquisition date and should not anticipate the acquirer's plans for making changes to the acquired company's activities, or as a result of the acquisition to the acquirer's own activities.
- (iii) The principles of valuation at the point of acquisition should generally follow the "value to the business" principle that is discussed in the Board's discussion Draft of chapter 5 of its Statement of Principles "Measurement in Financial Statements (issued on March 25, 1993)".

In this context, let us examine whether explicit or implicit use is being made of modelling for the purpose of analyzing acquisition of a firm or a

part of it. This is of interest to us since the foregoing overview reveals chinks in our armour.

Since the late sixties corporate modelling has become increasingly popular in the U.K. (even if we define modelling in a restricted sense as the development and use of computer operated routines to map the financial logic of the enterprises concerned and to produce various financial reports)<sup>7</sup>.

### **Shareholder Value Analysis**

In the U.S.A. Rappaport (1982)<sup>8</sup> noted that "most acquisitions are accomplished with cash today, rather than with packages of securities as was common in the 1960s;" and pointed out that the process of analysing acquisitions falls broadly into three stages : "planning, 'search and screen' and financial evaluation". Since our focus in this paper is, in the main, on valuation, we shall limit our discussion to valuation alone.

While Allen (1988 a, 1988 b)<sup>9</sup> has been championing the idea of a distinctive financial model for handling strategic decisions — such as acquisitions in the U.K. and had referred to this as the Strategic Financial Management (SFM) model, Rappaport's model (described in fair amount of detail and contrasted with Allen's model by Mills (1990a, 1990b)<sup>10</sup> has come to be known as "Shareholder Value Analysis" (SVA). In essence, the SVA approach relies on the identification of those elements which determine cashflows, and considered in the context of the cost of capital, allow one to arrive at net present values of various business strategies including the strategic move of acquisitions.

As Mills (1990 a, op. cit.) points out, this approach focusses on a set of value drivers which can influence cash flows, e.g, sales growth, operating profit margin, incremental investment in fixed capital and in working capital, cash tax rate, the cost of capital, and the planning period.

Rappaport (op. cit.) refers to a *Business Week* article (1978 : "The cash-flow takeover formula" 18 December 1978, 86) which reported that as many as half of the major acquisition-minded companies were relying extensively on the discounted cash flow (DCF) technique to analyse acquisitions. He sought to illustrate the framework by citing how Alcar Corporation interested in acquiring Rano products approached the issue of acquisition from this angle. He has convincingly argued that this approach, which came to be described as "shareholder value analysis" is not only an effective way of evaluating a prospective acquisition candidate but also serves as a catalyst for re-evaluating a company's overall strategic plans". In this seminar paper originally published in the *Harvard Business Review* (July-August, 1979) he points out that as of the end of the decade of the seventies itself :

"Various companies have used this approach for evaluation of serious candidates as well as for initial screening of potential

candidates. In the latter case, initial input estimates are quickly generated to establish whether the range of maximum acceptable prices is greater than the current market price of the target companies".

Wenner and Leber (1989)<sup>11</sup> note that Shareholder Value Analysis which is a cash flow based approach can help managers in addressing four major issues, namely, how well the portfolio has been doing, whether plans under consideration (in other words strategic options) make sense, how far the firm's performance may be improved upon and what should be the priorities.

Zent (1990)<sup>12</sup> considers this to be a more reliable approach. As we had noted early, in this review paper, he too, emphasized that the value of an asset depends on the quantum or magnitude, the timing and the level of uncertainty of future cash flows, and confirms that the SVA take these factors into account. He notes that the SVA can also be used backward to determine the appropriateness of management assumptions.

Day (1990)<sup>13</sup> holds that SVA can effectively translate a strategy into cash flow, but it is necessary for managers to consider all strategy alternatives — the competitive context of cash flows and he hints at synergy that may arise on account of the managerial decisions.

Barfield (1991)<sup>14</sup> recognises that SVA is a powerful tool in the hands of the analyst because decisions are linked to value in a clear, objective framework through the planning horizon and the six objective value drivers (described earlier in this paper).

In a fairly recent paper, Allen (1991)<sup>15</sup> compares the two cash-flow based approaches, namely, the Strategic Financial Management (SFM) model developed in the UK and the SVA approach developed in the USA and has opined that both the approaches can be further enhanced and developed and convergence can be expected out of such development.

However, the use of the SVA approach has not been totally free from its share of controversies. Gregory (1992)<sup>16</sup> has alleged that the SVA approach currently being marketed by consultancy services and large accounting firms and chosen by Mills et al. is unlikely to result in a rational valuation and has suggested that an alternative to this could be the forecasting of cashflows of each of the company's principal lines of business (PLB), discounting these at the opportunity cost of capital for the PLB concerned and adding on the present value of the horizon value of the PLB.

Mills, Robertson and Ward (1992)<sup>17</sup> have refuted the allegation and claimed that the technique is effective indeed, and in a series of papers Mills (1993)<sup>18</sup> has sought to demonstrate the shortcomings of the conventional indicators of performance for strategic financial analysis, the innate strengths of the SVA approach and potential problems that may arise when the approach is pursued in a cavalier manner divorced from realism.

It does seem that the economist's interpretation of value is getting increasingly greater recognition as an appropriate measure in the context of strategic decisions, which need not be tied to conventional accounting data that have to conform to legal norms. An empirical investigation into the extent to which the SVA approach is explicitly or implicitly used should help us establish the practice followed in the vast majority of cases for strategic decisions with respect to acquisitions.

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## **DEVELOPING A CONCEPTUAL FRAMEWORK OF ACCOUNTING**

*Sujit Sīkidar\**

This paper attempts to spell out the meaning of "conceptual framework" in the context of financial accounting and reporting and examine why an agreed conceptual framework is considered so essential particularly in matters concerning the development of sound and consistent financial accounting and reporting standards. An endeavour has also been made in this paper to offer a brief sketch of the progress that has so far been made at various national and international levels in resolving the conceptual framework issues.

### **Introduction**

The development of accounting theory has been influenced by changes in social and economic environment. The origin of stewardship function of accounting was ushered in the feudal system (Taylor and Underdown, 1987). The development of accounting theory can be traced into four stages :

a) The period of *laissez faire* ranging from 1936 to 1959 when the accountants were using their own judgments freely in the formulation of accounting practices.

b) The second period ranging from 1959 to 1964 may be identified as the period of best practices where the rules were formulated according to the opinion of professionals and experts.

c) The period ranging from 1964 to 1973 may be earmarked as the period of improvement upon existing accounting practices and principles. This period imbibes a watershed in financial reporting for (i) wider social awareness and social responsibility, and (ii) efficient allocation of capital resources by the private sector corporate entities.

d) The period ranging from 1973 onwards has been earmarked as the period of authoritative practice where certain rigid rules and regulations have been made mandatory with certain exceptions.

All these developments have significant influence in formulating conceptual framework (CF) of accounting.

### **Meaning of a Conceptual Framework**

Users expectations from the financial statements have increased by leaps and bounds over the years. The accounting and reporting system is dynamic and is often subjected to change in order to meet the requirement of the environment in which it operates. Various accounting professional

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bodies, standard setting authorities, regulators of corporate business entities, academics and user groups agree that there is no single, generally accepted body of accounting theory, which is why there is need for a good CF to enable preparation and presentation of financial statements in a comparable manner. All of them have collectively and severally done some work to develop accounting theory in ways which might ensure improvement of financial accounting and reporting. Such body of accounting theory is often termed as a conceptual framework (Taylor and Underdown, 1987). The Financial Accounting Standards Boards (FASB) of USA has been active in developing CF.

### **The Need for a Conceptual Framework**

The purpose of laying down accounting principles (standard) is to enable the preparers of financial statements to adopt uniform and consistent accounting and reporting practices with a view to enhancing the comparability of financial statements over a given period of time. Dearing Committee (1989) on the making of accounting standards observed : "A conceptual framework is seen as essential, if a consistent approach to standard setting is to be achieved. Lack of an agreed conceptual framework is a contributory factor to the difficulty of achieving consistency of approach towards accounting standards; and hence to a lessening of the authority that standards command". Issuance of CF is a precondition for setting up of accounting standards. In consonance with this the FASB was the first to have conceptual framework project. It had issued six Statements of Financial Accounting Concept (SFACs) during the period 1978 to 1985. Basing on these CF, about 109 standards were issued by the FASB. Similarly in the U.K. CF was developed in 1980 and basing on these, around 25 standards had been issued. The Accounting Standards Boards (ASB) of the U.K. had published first two chapters, in draft form, its 'Statement of Principles' in September 1991 which is considered to be equivalent of CF of the FASB. An agreed CF thus can be useful to agencies responsible for framing accounting standards in providing a basis for maintaining consistency between standards. The objective of a CF would depend on : the type of users and the nature of their information needs. The Stamp Committee Report of Canada has indicated 16 classes of present and potential users. It is not an easy task to provide information useful for economic decisions (Ijiri, 1983). But even then the International Accounting Standards Committee (IASC) had issued CF for preparation and presentation of financial statements in April 1989 as a step towards the issue of standards. FASB felt the need of CF project because it would :

- a) guide the FASB in setting accounting standards ;
- b) provide a frame of reference for resolving accounting questions in the absence of specific promulgated standards;
- c) determine the bounds of judgment in preparing financial statements; and
- d) enhance comparability by decreasing the number of alternative accounting methods.

The FASB defined CF as "a coherent system of interrelated objectives and fundamental concepts that can lead to consistent (accounting) standards and that prescribe the nature, function and limits of financial accounting and financial statements". The FASB in its Statement of Financial Accounting Concepts No. 1 has identified three objectives of financial reporting by business enterprises :

1. To provide information useful for investment, credit and similar decisions.
2. To provide information to help present and potential investors, creditors and other users in assessing the amounts, timing and uncertainty of prospective cash receipts from dividends, interest and the proceeds from the sale, redemption or maturity of securities or loans.
3. To provide information about the economic resources of an enterprise, claims on those resources, and the effect of transactions, events and circumstances that change its resources and claims on them.

### **The Concept of 'True and Fair'**

This concept was first developed and debated in the House of Commons in the U.K. The first general legislation on corporate entities was passed in 1844 embodying, inter alia, accounting disclosure. The improvement over the same was brought about by subsequent amendments to the British Companies Act 1948, followed by acts in 1967, 1976, 1980, 1981, and 1985. The concept of 'true and correct' view first appeared in the British Companies Act 1844. The Companies Act 1948 replaced it by the term that financial reports should exhibit 'true and fair' view of financial position and profitability. There were lots of critical interpretations of the concept of true and fair, and the then Accounting Standards Committee (ASC) in 1983 sought an opinion from counsel as to the meaning of the concept. It was then reported that the financial statements can reflect true and fair view when information they contain is sufficient in quantity and quality to satisfy reasonable expectation of the readers to whom they are addressed. The fulfilment of user's expectation would again be moulded by the accounting practices followed in preparation of accounts.

The British Government appointed in 1940, Cohen Committee of Enquiry into company law. At the same time, the Institute of Chartered Accountants in England and Wales (ICAEW) set up a Taxation and Financial Relations Committee in 1942, which had issued 29 recommendations on accounting topics. While setting up the Committee on CF, the ICAEW stated its intent in five areas towards the development of CF as : (a) narrowing the areas of difference and variety of accounting practice ; (b) disclosure of accounting bases, particularly where accounting values depend on judgment ; (c) disclosure of departure from established definitive accounting standards; (d) wider exposure for major proposals on accounting

standards : (e) continuing programme for encouraging adoption of accounting standards in legal and regulatory measures.

### **Difficulties in Developing an Agreed CF**

A number of difficulties have been encountered in course of formulating commonly agreed CF. Disagreement has surfaced as to the user groups and as to the information needs of various user groups of financial statements. One of the objectives of the CF Project of the USA was to enhance the status and authority of the FASB but it could not be proved beyond doubt whether they are also acting on behalf of user groups. The Edward Stamp Committee Report of Canada namely *Corporate Reporting : Its Future Evolution* (1980) opined that the CF of the FASB is not applicable in Canada owing to environmental, historical, political and legal differences. *The Corporate Report* (UK) argued that accountability concept was much wider in the U.K. and Canada so also the user groups. The CF of the FASB promised to protect the interest of investors and creditors which would automatically take care of the information needs of other user groups but this may not be true because in developing countries corporate reporting still renders stewardship function. Accounting is a social activity and as such objective truth cannot exist. Recognition of the variety of user needs, and of conflict of different interest groups makes it difficult to arrive at a consensus, and the formulation of CF is a political process where compromise has to be made between different parties interested in financial statements. Accounting Standards Committee (ASC) of the Institute of Chartered Accountants of England and Wales (ICAEW) has identified a broader range of user groups including employees, government and society as a whole and has defined users as 'those who have a reasonable right to information, and whose information needs should be recognised by corporate reports'.

### **Development of CF in USA**

In order to comply with the accounting principles generally followed by business entities, the American Institute of Certified Public Accountants (AICPA) has been active in defining and describing the generally accepted accounting principles (GAAPs). In between 1939 and 1959, the AICPA's Committee on Accounting Procedure had issued 51 Accounting Research Bulletins (ARBs). However, in order to strengthen the foundation of issuing accounting standards, the AICPA in 1959 replaced the Committee on Accounting Procedure and in its place set up the Accounting Principles Board (APB). In between 1959 and 1973 the APB had issued 31 APB opinions in respect of accounting problems. In a new move in 1973 the APB was replaced by the Financial Accounting Standards Board (FASB). The major criticism levelled against the APB was that it was influenced by the interest of the client members of the accounting profession. Hence to overcome it, an independent agency such as the FASB was created. The

FASB has seven members, all of whom are full time and salaried. The procedures followed by the FASB in formulating accounting standards encompass open hearings, memoranda, and exposure drafts through which the interested parties may ventilate their opinions about the proposed standard. The Statement of Financial Accounting Standards issued by FASB must be followed by the accountants in preparation of financial statements.

There are other agencies which are also preparing several standards for adoption by the enterprises within their control. The Securities and Exchange Commission (SEC) was set up by the US Congress through the Securities Acts of 1933 and 1934. The SEC has been setting up standards through published regulations and in collaboration with the FASB. The other organisations developing accounting standards in the USA are the American Accounting Association (AAA), the National Association of Accountants (NAA), the Government Accounting Standards Board (GASB) and the Financial Executives Institute (FEI). The GASB was established in 1984 and it consists of five members appointed by the Financial Accounting Foundation for a period of five years.

### **The IASC**

The International Accounting Standards Committee (IASC) was set up in 1973 by virtue of an agreement signed by the accounting organisations of Australia, Canada, France, Germany, Japan, Mexico, the Netherlands, the United Kingdom and Ireland, and the USA. The International Federation of Accountants (IFAC) was set up in 1977 for coordinating the activities of development of globally acceptable accounting practices and standards. The IFAC is a federation of 63 professional accounting organisations from 49 countries.

Acceptance and adherence to standardised accounting practice would ensure materiality, objectivity, reliability, comparability, and predictability of financial information disclosed through corporate financial statements. Any standard practice of accounting aspires to realise the basic function of financial statements which should have understandability, relevance, predictive value, feedback value, timeliness, reliability, verifiability, neutrality, representational faithfulness, fidelity, comparability, consistency, and materiality. The American Accounting Association (AAA) in its *A Statement of Basic Accounting Theory*, which was brought out in 1966, has articulated the objective of accounting as 'making decisions concerning the use of limited resources, including the identification of crucial decision areas and determination of objectives and goals'. The Accounting Principles Board Statement No. 4 (1970) of the American Institute of Certified Public Accountants (AICPA) stated that 'accounting is a service activity.' Its function is to provide quantitative information, primarily financial in nature, about economic entities that are intended to be useful in making economic decisions — in making reasoned choices among alternative courses of action.

### CF in Other Countries

In the United Kingdom, the *Corporate Report* was published for the first time in 1975. The document attributed the objective of financial statements as :

To communicate economic measurement and information concerning resources and performance of the reporting entity to those who have reasonable rights to such information.

This report attempted to develop a CF for accounting practices. Meanwhile, Richard Macve was appointed by the then Accounting Standards Committee (ASC) to examine the *Corporate Report* and suggest measures for developing CF of accounting in the U.K. The Richard Macve Report, which was, submitted in 1981 concluded that a generally accepted CF of accounting was not possible. Consequently, the ASC lost interest in establishing a C.F. project until 1989 when it came up with full support for the C.F. developed by the International Accounting Standards Committee (IASC). In July 1991, the Accounting Standards Board (ASB), which took over the responsibility of setting accounting standards in place of ASC in 1990, had issued an ED — *Statement of Principles* — setting out the 'Objective of Financial Statements and the Qualitative Characteristics of Financial Information'.

The Canadian Institute of Chartered Accountants (CICA) published in 1980 a research study titled *Corporate Reporting : Its Future Evolution* by Edward Stamp. This Report is known as Edward Stamp Committee Report. The Accounting Standards Authority of Canada (ASAC) issued in 1987 a statement of *Conceptual Framework for Financial Reporting*. The objectives of the financial statements articulated by the CICA in 1980 in their research study or the Stamp Committee Report 1980 are as follows :

Financial Statements should disclose financial information that is relevant to the needs of users, and to provide it in such a form as to minimise uncertainty and enable the user to make his/her own assessment of the risks associated with the enterprise.

In Australia, an attempt was made to develop CF of accounting in a publication in 1972 by the Australian Accounting Research Foundation (AARF)) of a research study entitled *Objectives and Concepts of Financial Statements*.

In addition, the AARF had published two monographs namely the *Definition and Recognition of Revenues* and the *Definition and Recognition of Liabilities*. Besides, the Public Sector Accounting Standards Board and the Accounting Standards Review Board commissioned a number of research projects concerning development of CF of accounting in Australia.

In Scotland, the Institute of Chartered Accountants of Scotland (ICAS) published in 1988 its Research Committee's report entitled *Making Corporate*

*Reports Valuable (MCRV)*. The Institute of Chartered Accountants in England and Wales (ICAEW) published in 1989, the paper entitled *Guidelines for Financial Reporting Standards (GFRS)* prepared by David Solomons.

The IASC published in 1989 its *Framework for the Preparation and Presentation of Financial Statements*. The CF of IASC identified only one objective of financial statements when it said : "The objective of financial statements is to provide information about the financial position, performance and changes in financial position of an enterprise that is useful to a wide range of users in making economic decisions. "The Accounting Standards Board (ASB) of the U.K. in 1991 in its ED — Statement of Principles — stated that :

The objective of financial statements is to provide information about the financial position, performance and financial adaptability of an enterprise that is useful to a wide range of users in making economic decisions (*Statement of Principles*, Chapter One Para 12).

The IASC's CF of accounting states that financial statements show the results of the stewardship of management for the resources entrusted with them. Thus the onus of preparation and presentation of financial statements has been put in the court of the management. In 1977, the Institute of Chartered Accountants of India (ICAI) set up the Accounting Standards Board (ASB) with a view to harmonising accounting policies. The standardisation of accounting practices will ensure that the companies are applying similar accounting methods in similar circumstances and thus facilitating comparability of financial statements at least across companies in similar business. The application of CF of accounting standards will result in producing financial statements that reflect a true and fair view, much to the advantage of the user groups of financial report.

User primacy has been the ideal for developing CF and the significance of this can be traced back to Carsberg's *Objectives of Published Accounting Reports* of 1974, which said "usefulness for specified purposes is the criterion by which the merits of accounting practice must finally be judged. The ASB of the U.K. has manifested its aims in its *Statement of Aims* (1991). It seeks to 'ensure that the information should be neutral in the sense that it is free from any form of bias intended to influence users in a particular direction and should not be designed to favour any group of users or preparers' (para 1).

Without developing CF, the intricacies of accounting cannot be understood. In a well documented report published by Richard Hannah and Terry Smith of the London firm of stock brokers (UBS Phillips & Drew) it is indicated that even sophisticated analysts cannot bring out the meaning of and adjust for certain complex accounting treatments. The ethics of *New*

*Finance* embodies the need for developing CF of accounting. The theories used in accounting and finance areas tailored by CF can enable the users to make rational judgments. Examples of theories are *Agency Theory*, the *Capital Asset Pricing Model (CAPM)*, *Positive Accounting Theory*, *Information Economics* and the *Efficient Market Hypothesis (EMH)*.

The urge for setting up CF of accounting has come from none other than the United Nations (U.N.) in March 1993. The international conference of leading public accountants from India and 40 other nations on March 14, 1993, has asked the UN to develop global qualification standards for accountants and auditors. The 11th Intergovernmental Working Group Session of experts on international standards of accounting and reporting concluded that public accounting has to do with accountability which in turn could contribute to stability. The UNO also sets CF of accounting for transnational corporations doing business across the globe.

### **Concluding Comments**

Owing to difficulty in arriving at a consensus over a given CF, Arthur Wyatt, President of American Accounting Association (AAA) (1991 - 1992) observed that :

A framework should be a living document, one that is revisited from time to time to retain its relevancy. Shortcomings in the framework provides opportunity for criticism and tend to produce standards that are inconsistent and less supportable than desirable.

Robert Anthony of Harvard University, who was a member of the FASB, in an article published in the *Harvard Business Review* (Jan - Feb 1989) observed that the FASB has spent 12 years and several million dollars trying to construct a general theory of accounting, but it has failed. Published in six statements from 1979 to 1985, the latest conceptual framework only perpetuates — and at times even regresses from current practice. Two theories of ethics which may profitably be applied in accounting CF are consequentialism and deontology.

Consequentialists would judge an action by its outcome; deontologists would see an action as obligatory irrespective of its outcome. An accounting principle and CF would be the best one which serves best the users' interest. Hence in formulating any CF adequate attention ought to be paid to the needs of all participants in the financial reporting process.

### **References**

- FASB, *Scope and Implications of the Conceptual Framework Project*, Stamford, Conn., FASB, 1976.
- Ijiri, Y, "On the Accountability - Based Conceptual Framework of Accounting," *Journal of Accounting and Public Policy*, 1983.
- Taylor, P.J. and Brian Underdown, *Financial Accounting*, Heinemann Professional Publishing Ltd., London, 1987.

## BOOK REVIEW

**'Human Resource Accounting', M.C.Khandelwal and Sujan C. Jain, Pointer Publishers, S.M.S. Highway, Jaipur 302003 (India), 1993, pages 189, Price Rs. 300 (\$60)**

Annual accounting reports, till recently, were regarded merely as statements of financial position and financial performance for the period just ended. Second half of the current century, however, has witnessed revolution in accounting thought, practice and reporting. Accounting branched out into many branches of which human resource accounting is one.

Till now conventional accountants have refused to include human resource as an asset in the balance sheet for various reasons. Reports on human resource accounting (HRA) are, of course, now being incorporated as a separate statement in the annual reports by some leading public and private sector companies.

The present book is a collection of 20 articles on HRA, edited by M.C. Khandelwal and S.C. Jain. Most of the articles have discussed the conceptual issues, different methods of HRA, and HRA in India. Some of the articles have raised thought-provoking issues relating to theory and practice of human resource measurement, for example, the articles by Dinesh Gupta, Prabhakar Rao, Bhagwati Prasad, Alok Pramanik, Subhash Chander. Other articles also make interesting reading.

It is felt that the book could have become more useful to readers if the editors had arranged these articles under different sub-heads, like conceptual, empirical, applied with their broad commentary before the beginning of each sub-head.

The book, no doubt, is a good collection of articles on different aspects of human resource. It will definitely be useful to all concerned.

**L S Porwal**

Former Professor and Head  
Dept. of Commerce  
University of Delhi

## **INTERNATIONAL CONFERENCE NEWS**

### **Symposium on Emerging Capital Markets and International Accounting Diversity**

**May 6, 1994**

**Georgetown University**

The symposium seeks to bring together leading scholars and practitioners interested in the inter-relationship between emerging capital markets and international accounting diversity. The focus will be on the role of accounting as a source of information and the impact of international accounting diversity on the growth, efficiency and transaction costs in emerging markets.

Papers submitted to the Symposium will also be considered by The Journal of International Financial Management and Accounting for a forthcoming issue devoted to the symposium theme. Submissions should be in duplicate and postmarked not later than March 1, 1994. A cover page showing the name and affiliation of the author(s) mailing address, phone and fax numbers should be attached. This information should not appear on the paper itself.

The symposium sponsored by Center for International Business Education and Research (CIBER) at Georgetown University and cosponsored by the International Accounting Section of the American Accounting Association. Cooperating institutions include the Bahrain University College of Business Administration, the International Finance Corporation (IFC) and the Journal of International Financial Management and Accounting.

Inquiries and submission of papers should be sent to : **M. Ali Fekrat, Georgetown School of Business, Georgetown University, Washington DC 20057 ; Telephone : 202-687-3773 Fax : 202-687-4031.**

### **Second Conference on Pacific Basin Business, Economics and Finance**

**May 27-28, 1994**

**Hong Kong**

The Second Conference on Pacific Basin Business, Economics and Finance will be held at The Chinese University of Hong Kong on May 27 and 28, 1994. The major issues of this conference include :

- Business, economic and financial relations between the United States and Pacific Basin countries.
- Financial Markets of Pacific Basin countries.
- Options and Future Markets of Pacific basin countries.
- Business, economic and financial relations among China, Hong Kong and Taiwan.
- International Accounting Issues related to Pacific Basin countries.

Submission deadline was November 30, 1993. Members of the IAA interested to attend the conference may contact :

Professor Cheng-few Lee  
Department of Finance  
The Chinese University of  
Hong Kong  
Shatin, NT, Hong Kong  
Fax (852) 603-5114.

Prof. Bikki Jaggi  
Chair, Accounting Issues Section  
Dept. of Accounting  
Rutgers University  
New Brunswick, NJ 08903  
USA

**Fifth ENDEC World Conference on Entrepreneurship  
July 7-9, 1994  
Singapore**

The Fifth ENDEC World Conference on Entrepreneurship will be held in Singapore in Marina Mandarin Hotel from July 7-9, 1994. The theme of the conference is **The Pursuit of Opportunity**. The Conference aims to bring together the research efforts of academics and the practical experiences of entrepreneurs. In keeping with the theme **The Pursuit of Opportunity**, the Conference will focus on the latest research findings, key issues, regional and global trends around the following topical areas :

- Family Business
- Corporate Entrepreneurship
- Women Entrepreneur
- Entrepreneurship in ASEAN countries
- Entrepreneurship & Economic Development
- Technology & Entrepreneurship
- Entrepreneurship Education & Training
- Financial Issues in Entrepreneurship
- Public Policy & Entrepreneurship Development
- Entrepreneurship Characteristics, Skills & Behaviours

**Calls for Papers**

Papers are invited for presentation at the Conference. After a blind review procedure, all papers accepted for presentation will be published in the Conference Proceedings, which will be distributed to delegates.

Authors are requested to submit three copies of their abstract, single-spaced, and not exceeding one A-4 page. Abstracts should contain a clear statement of major points to be made in the paper as well as a concise summary of the conclusions.

On a separate page, authors are requested to provide their bio-data, which should not exceed half an A4 page.

**Deadline for abstracts : 15 March 1994**

**Deadline for full papers : 1 May 1994**

### Conference Fees

Conference fees have been structured to encourage early registration. In addition, for every five participants registered and paid *en bloc*, the fee of the sixth participant will be halved. For every ten participants, the fee of the eleventh participant will be waived.

#### Schedule of fees

Early Bird	By 1 May 1994	S\$ 475 US\$ 295
Regular	By 21 May 1994	S\$ 525 US\$ 325
Late	After 21 May 1994	S\$ 600 US\$ 375

Any withdrawal after 21 May 1994 will be subject to a cancellation charge of S\$300 or US\$185 per person.

### Paper Awards

ENDEC will present three awards for outstanding papers selected by a panel of judges. These Awards carry prizes of S\$600, S\$300 and S\$200 respectively. To be eligible for the awards, papers must meet the full paper deadline. The Awards will be announced and presented at the ENDEC Banquet on 8 July 1994.

Send your paper along with registration fees and particulars like Name, Organisation & Address (with Pin Code) to :

Mr Wee-Liang TAN  
Chairman  
ENDEC Conference Organising Committee  
School of Accountancy & Business  
Nanyang Technological University  
Nanyang Avenue  
Singapore 2263  
Fax : (65) 791 4538/791 3561

### Sixth Asian-Pacific Conference on International Accounting Issues November 20-23, 1994 Taipei, Taiwan

#### 1. Background

The Sixth Asian-Pacific Conference on International Accounting Issues will be held from November 20-23, 1994 in Taipei, Taiwan. It will be jointly sponsored by California State University, Fresno, and National Taiwan University, Taiwan. The Conference will provide an important forum for the

interaction of different ideas and information between academicians and practitioners, in order to enhance the understanding of international accounting issues in various Asian-Pacific countries.

Research paper presentation and special workshops will be held by well-known international accounting scholars and practitioners to discuss issues on international accounting research, education, and practice, impact of advanced technology on international accounting, comparative ethics in international auditing and business, and related international accounting topics. Prominent scholars and practitioners from many countries the world over are expected to attend the conference.

## 2. Topics

Paper presentations, panel discussions, and workshops on international accounting and other related international business topics are invited. Major topics of interest include, but are not limited to :

- International accounting research, education, and practice.
- Accounting standards, auditing standards, and taxation issues among the Asian Pacific countries.
- Comparative analysis of financial accounting, managerial accounting, public sector accounting, auditing and taxation among Asian-Pacific countries.
- Contemporary issues of advanced technology in international accounting.
- Information and control systems for multinational corporations.
- Interrelationship between accounting and other disciplines (such as management, marketing, finance, economics, human resource management and information management).
- Accounting in specific country or economy.
- Comparative ethics in international auditing and business.
- Cross cultural studies in international accounting.
- Accounting history in Asian-Pacific countries.
- Impact of international mergers and acquisitions on accounting practice.
- Other related international business topics.

[Last date for paper submission : **May 15, 1994**]

## 3. Conference Registration Fee

Early Registration (received by August 30, 1994)	US \$ 200
Late Registration (after August 30, 1994)	US \$ 250

Registration fee covers Reception, 2 Breakfasts, 2 Luncheons, 1 Dinner (Banquet and Entertainment), copy of Conference Proceedings and One-Day Tour.

Send your draft along with your particulars, e.g. Name, Position, Organisation, Address, Telephone/Fax Number to : **Professor Ali Peyvandi, Asian-Pacific Conference on International Accounting Issues, The Sid Craig School of Business & Administrative Sciences, California State University, Fresno, California--93740-0007, U.S.A. The draft should be drawn in favour of C.S.U.F. Foundation. [Fax (209) 278--4911]**

For further details about the conference contact :

Dr. Rong-Ruey Duh  
Professor & Chairman  
Dept. of Accounting  
National Taiwan University  
19, HSU CHOW RD. 10020  
TAIPEI, TAIWAN R.O.C.  
Fax 351-0907

Dr. B. Banerjee  
Member, Program Committee  
164/78, Lake Gardens  
Flat - C-7  
Calcutta-700 045  
Phone : 473-5040

**40th World Conference  
International Council for Small Business  
June 18-21, 1995  
Sydney, Australia**

The International Council for small Business (ICSB) and the small Enterprise Association of Australia and New Zealand (SEAANZ) invite members of the IAA to attend 40th World Conference at the Sydney Convention Centre, Darling Harbour, Sydney, Australia, from June 18-21, 1995. The program will address the **Skills for Success** in Small Enterprise in a rapidly changing and increasingly demanding business environment and will offer innovative ideas on this general theme. Research and practical papers will be invited in the near future, for presentation in parallel tracks and workshops. There will be something of interest to everyone involved in and supporting smaller enterprises. Interested members may ask for a 'Registration Brochure' by sending their "Intention to Attend" with particulars like Name, Organisation, Address (with Pin Code), Telephone and Fax Number, if any, to :

The Secretariat  
40th ICSB Conference  
GPO Box 128  
Sydney NSW 2001  
Australia

## THE INDIAN ACCOUNTING ASSOCIATION

The Indian Accounting Association is an organisation of persons willing to assist in the advancement of accounting education and research. The registered office of the Association is at the Department of Management Studies, Banaras Hindu University, Varanasi-221005, India. Membership of the Association is open to academics and professionals who are willing to assist in achieving the objectives of the Association.

The membership fees for individuals are as under :

	India	Abroad
Life	Rs. 400	US \$ 100
Annual	Rs. 50	\$ 25

Members are entitled to participate in the activities of the Association and receive a free copy of the Indian Journal of Accounting and selected research publications.

### INDIAN JOURNAL OF ACCOUNTING

Indian Journal of Accounting is an official publication of the Indian Accounting Association. It is published twice a year, in June and December.

The subscription rates are :

Individual	India (Rs.)	Abroad (US \$)
Annual	50	25
Life	400	100
<b>Institutional</b>		
Annual	300	100
Permanent	1,000	250

Other particulars of the Journal are :

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