

An Opinion Survey Analysis of Valuation of Intellectual Capital for Integrated Reporting

Nidhi Bhanawat*

Faculty, Department of Accountancy and Statistics, Mohanlal Sukhadia University, Udaipur, Rajasthan, India

Abstract: Financial reporting and risk are important aspects of corporate reporting. However, high-quality decision-making can only be possible when additional information is available. IR has developed from the growing realization that traditional financial reporting provides insufficient information for integrated thinking and investment decision-making. As a result, the international integrated reporting council (IIRC) was formed. In December 2013, the IIRC released the first version of its IR Framework to be used as guidance for voluntary adoption of IR. Here an attempt has been made to critically examine the available methods and models for valuation of intellectual capital for the purpose of integrated reporting and to analyze opinion survey of professionals and academicians about ranking of the existing models for valuation of intellectual capital and prevailing accounting standards relating to intangible assets. For analysis of data 5 point Likert Scale of measurement statistical technique is used. Opinion survey result shows that respondents identified Balance Scorecard model as best model for measurement of Intellectual Capital followed by Intellectual Capital index model. Both academicians and Chartered Accountants respondents are fully agreed on the issue to review and modify accounting standards by regulatory bodies from time to time to incorporate recent development made in the field of intangibles. The research is both quantitative and descriptive in nature and mainly uses primary data obtained from survey of 60 respondents.

Keywords: intellectual capital, integrated reporting, accounting standards, EVA, sustainable development.

1. Introduction

Intellectual Capital has become imperative resource for creating sustainable development. It encompasses on the ability of firms to innovate and their subsequent competitiveness with Knowledge –based economy. With shift to a knowledge-based economy, the principal source of economic and wealth is no longer the production of tangible goods but the creation and manipulation of intangible assets. Hence, intellectual capital is also be disclosed by entities in integrated reporting. Integrated

Reporting in order to make sustainable development, a balance among economic progress, social advances and environment protection is required which is the foundation of the new value creation vision intrinsic to integrated reporting. It has been suggested that in the past there has been too much reliance on financial reporting standards and these were often rigidly enforced and compliance-based. Very lengthy annual reports are often the result, and these do not always address the needs of all stakeholders. It has become clear that the current corporate reporting framework needs to evolve to reflect the wide range of tangible and intangible factors that affect corporate performance. Hence, Integrated Reporting has developed from the growing realization that traditional financial reporting provides insufficient information for integrated thinking and investment decision-making. The true value of an organization will depend in part on tangible or financial factors that will traditionally show on a balance sheet and are perhaps fairly straightforward to account for. But the value will also depend on a wide range of other factors that are less easy to measure. Factors such as people, energy security, natural resources and intellectual property all also have a bearing on the value of an organization. As a result, the international integrated reporting council (IIRC) was formed. In December 2013, the IIRC released the first version of its IR Framework to be used as guidance for voluntary adoption of IR.

No standardize method for valuation of intellectual capital has been developed so far. Hence it is a matter of research to develop an appropriate model for valuation of IC and it should be recognized in as part of accounting standard. Many people discussing Integrated Reporting for the first time want to ‘see’ an example of an Integrated Report. However, there is no standard format for an Integrated Report and no specific disclosure requirements. Instead, the Discussion Paper issued by the IIRC sets out Guiding Principles and Content Elements

Table 1

Feature	Current Reporting	Integrated Reporting
Trust	Narrow disclosures	Greater transparency
Stewardship	Financial	All forms of capital
Thinking	Isolated	Integrated
Focus	Past, financial	Past and future; connected; strategic
Time frame	Short term	Short, medium and long term
Adaptive	Rule bound	Responsive to individual circumstances
Concise	Long and complex	concise and material
Technology enabled	Paper based	Technology enabled

Source: KPMG, integrated reporting, issue1, www.kpmg.com/integratedreporting

*Corresponding author: bhanawat1985@gmail.com

for an Integrated Reporting.

2. Objectives

- To critically examine the available methods and models for valuation of intellectual capital for the purpose of integrated reporting.
- To analyze opinion survey of professionals and academicians about prevailing accounting standards relating to intangible assets.
- To review valuation and accounting practices of IC.
- To examine problems involved in valuation and reporting.

3. Research Methodology

This research is quantitative in nature. For questionnaire analysis 5-point Likert measurement is used whose mapping is described below:

Strongly Agree -5, Agree -4, Neutral 3, Disagree -2, Strongly Disagree-1.

Nature of Study: Descriptive.

Survey Tool: Open and Close ended questionnaire

Measurement Scale: Likert 5-point scale.

Population: CA/CS/ICWA, academicians research scholars and IT experts.

Survey Area: India.

Statistical Techniques Used: Graphical presentation, Mean score, Percentage Standard deviation and variance were used.

Method of Sampling: Non-Probability and Judgmental sampling technique.

4. Analysis and Discussion: Models and Methods

Although researchers have been regularly demanding to disclose intellectual capital in annual report since a couple of decades yet no accounting standards included this concept as such. Recently it comes in limelight after introducing the concept of integrated reporting. Researchers have developed

Table 2
Summary of major intellectual capital valuation models

S.No.	Name of Measure	Major Proponents	Approach	Description of the Measure
1.	Balance score card (BSC)	Kalpan and Norton (1992)	Component by component	Extent of Intellectual capital and its performance is measured based on relationship of firms organizational vision and strategies from indices that cover four major perspectives: (a) Financial perspectives (b) Customer perspectives (c) Internal business perspectives (d) Learning and growth Perspectives.
2.	Technology Broker	Brooking (1996)	Component by component	Value of Intellectual capital of a firm is calculated on diagnostic analysis of a firm responsible to twenty questions cover four major components of Intellectual capital.
3.	Citation-weighted Patents	Bontis (1996)	Quasi-Semi component by-component	A technology factor is calculated based on the patents developed by a firm. Intellectual capital and its performance is measured based on the impact of research development efforts on a series indices, such as number of patents and cost of patent to sales turnover, that describes the firm's patents.
4.	Skandia Navigator	Edvinsson and Malone (1997)	Component by -component	Intellectual capital is measured the analysis of 164 metric measures that cover five components: (a) financial, (b) customer, (c) process, (d) renewal and development (e) human.
5.	Intangible Asset Monitor (IAM)	Sveiby (1997)	Component-by -component	Management selects one or two indices based on the strategic objectives of the firm, to measure three components of Intellectual capital; (a) growth and renewal (b) efficiency (c) stability
6.	EVA and MVA	Stewart (1997)	Organizational level	Calculated using formula: Net sales – Operating Expenses – Taxes – Capital Charges. If EVA is assumed to be related to Intellectual capital changes in EVA will provide an indication of whether the firm Intellectual capital is productive or not. MVA is difference between market value and net worth of a firm to measure IC.
7.	Value Added Intellectual Coefficient (VAIC)	Pulic (1997)	Organizational Level	Measurement of how much and how efficiently Intellectual capital and capital employed create value based on the relationship to three major components: (a) Capital employed (b) Human capital (c) Structural capital. The measure considers value of employee as most appropriate proxy to represent, creation, development and addition of value to Intellectual capital.
8.	Calculated Intangible Value (CIV)	Luthy (1998)	Organizational Level	Calculates the excess return on hard assets then use this figure as a basis for determining the proportion of return attributable to tangible assets.
9.	IC- Index	Roos (1998)	Single Index based on Component by Component view	Consolidates all individual representing Intellectual properties and components into a single index. A change in the index is then related to changes in market.
10.	Tobin's 'q'	James Tobin (1999)	Organizational Level	The 'q' is the ratio of the market value of the firm to the replacement cost of assets. Changes in 'q' value provide a proxy for measuring effective performance or not of a firm's Intellectual capital.
11.	Value Chain Scorecard	Lev Baruch (2001)	Organizational Level	Measures three portion of value chain, (a) Discovery and Learning (b) Implementation (c) Commercialization to provide non-financial information to decision makers.
12.	Danish IC Statement	Danish Ministry of Science, Technology and Innovation	Organizational Level	Consist of four elements, (a) Knowledge narrative (b) Management Challenges (c) Set of initiative (d) Set of Indicators to report on Intellectual Capital of a firm.

Table 3

Input Capitals	Output Capital
Intellectual Capital	Intellectual Capital
KBL has developed intellectual capital of designing, manufacturing and testing of pumps which cater to requirements of various segments of the business. Capability to design engineered Concrete volute pumps, Metallic Volute Pumps, Lowest Life Cycle Cost Pumps and total Pumping system Solutions as per customer specific requirements are the intellectual capital of the company. KBL has implemented global management systems like ISO 9000, ISO 14000, OHSAS 18000	KBL's expertise of designing and manufacturing custom designed pumps developed over many years is the output in terms of intellectual capital. It has also developed systems and process for manufacturing of these pumps and capability to test and commission these pumps at the customer sites

Source: Kirloskar brothers limited: Integrated Report 2013-14

various models and methods for valuation of Intellectual Capital so far. Some of the well-known models and methods suggested by researchers are discussed in table 2.

A. Reporting of Intellectual Capital by Kirloskar Brother Limited (KBL): A Sample Disclosure Under IR

First Integrated Report for the year 2013-14 of KBL disclosed the intellectual capital in the following ways.

B. Opinion Survey Results

After coming the concept of integrated reporting one question arise whether the existing accounting standards should be reviewed or not. In order to know about the awareness of professionals and non- professionals about Indian and International accounting standards on intangible assets and popularity of existing model discussed above, a survey of academician and professionals was conducted. The analyses of survey are given as under.

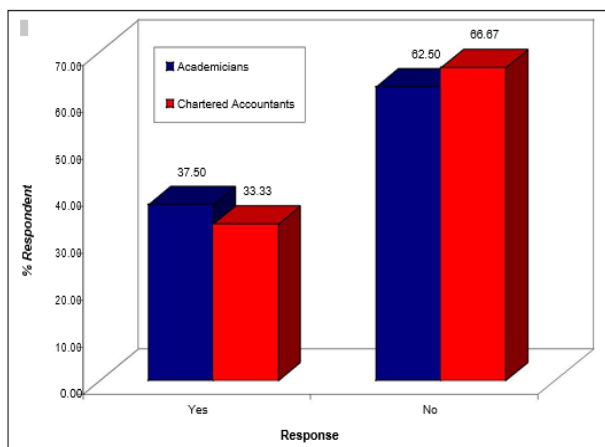


Fig. 1. Respondents' views regarding the statement that whether any significant difference Exists among AS26, IAS-38 and FAS-142 (Vide. Q.no.2)

Table 4

Respondents' views regarding the statement that whether any significant difference exists among AS26, IAS-38 and FAS-142 (Vide. Q.no.2)

Response	Academicians		Chartered Accountants	
	No.	%	No.	%
Yes	9	37.50	12	33.33
No	15	62.50	24	66.67
Total	24	100.00	36	100.00

Table 5

Respondents' views regarding the statement that should all accounting standards be modified and reviewed by regulatory bodies after coming the concept of integrated reporting (Vide Q.no.4)

Response	Academicians		Chartered Accountants	
	No.	%	No.	%
Yes	24	100.00	36	100.00
No	0	0.00	0	0.00
Total	24	100.00	36	100.00

Out of 24 academicians, 9 respondents are agree that significant difference exists among three standards on intangibles while among 36 Chartered accountants, 12 respondents agree with the statement remaining 15 academician and 24 Chartered accountants are not agree with the statement that significant difference exists among AS-26, IAS-38 & FAS-142. The following Figure 1 depicts views of respondents regarding the statement that whether any significant difference exists among AS26, IAS-38 and FAS-142. The graphical presentation of respondent's views regarding accounting standards on Intangible assets is given in the following the figure 1.

The table 4 revealed about the awareness of respondents about prevailing accounting standards. The Chartered accountant and academicians are more aware of about AS-26 as compared to other accounting standards because the mean score of both the respondents are less aware of FAS-142, as it is evident by least mean score of respondents. Further, Chartered accountants felt that a separate accounting standard for IC should be introduced in India while academicians are little bit not felt. The graphical presentation of respondent's views regarding accounting standards on Intangible assets is given in the following the figure 2.

Table 6

Respondents' views regarding following statements on accounting standard on Intangible assets (Vide Q.no.3)

Particulars	Academicians		Chartered Accountants	
	Mean Score	Rank	Mean Score	Rank
(a) Are you aware of International Accounting Standard (IAS-38) with regard to intangibles?	0.67	4	0.44	4
(b) Are you aware of Indian Accounting Standard AS- 26 with regard to intangibles?	1.75	1	1.81	1
(c) Do you agree with view that Accounting Standard affects the quality of corporate reporting?	1.58	2	1.56	3
(d) Are you aware of FAS-142 Accounting standard with regard to intangibles?	0.42	5	0.39	5
(e) Are you feel to introduce separate accounting standard for IC in India?	1.25	3	1.72	2

Table 7

0.00	0.20	0.40	0.60	0.80	1.00	1.20	1.40	1.60	1.80	2.00
Academicians	Chartered Accountants	Mean score								

Table 8
Ranking for best model for measurement of intellectual capital (Vide Q.no.4)

Models	Academicians	Chartered Accountants
Intangible asset monitor framework model	6	6
Balance score card model	8	7
Intellectual capital index model	7	8
Value chain index model	4	5
Danish Intellectual Capital Statement Model	2	3
Skandia Intellectual capital Statement Model	3	2

Table 9

Intangible Asset Score Sheet	5	4
Other	1	1

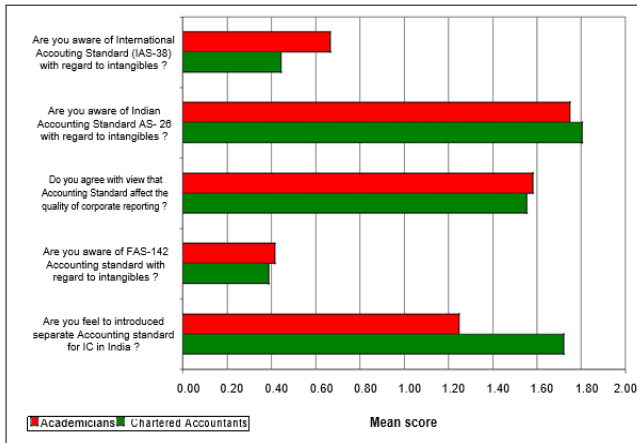


Fig. 2. Respondent’s views regarding following statements on accounting standard on intangible assets (Vide. Q. no. 3)

The table 5 shows views of respondents about the statement that should all accounting standards be modified and reviewed after coming the concept of integrated reporting by regulatory bodies or not. Both academicians and Chartered Accountants are fully agreed on the issue to review and modify accounting standards by regulatory bodies from time to time. The graphical presentation of respondent’s views regarding the statement that accounting standards be modified and reviewed time to time by regulatory bodies is given in the following the figure 3.

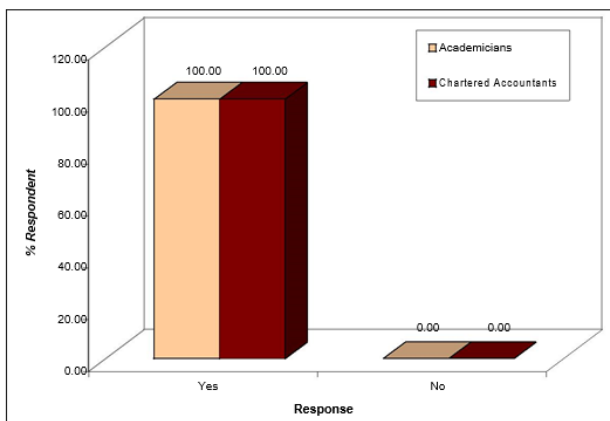


Fig. 3. Respondent’s views regarding the statement that should all accounting standards be modified and reviewed by regulatory bodies after coming the concept of integrated reporting (Vide Q.no.4)

% Respondent	Academicians		Chartered Accountants	
	Yes	No	Yes	No
100.00	100.00	100.00	100.00	100.00
80.00	0.00	0.00	0.00	0.00
60.00	0.00	0.00	0.00	0.00
40.00	0.00	0.00	0.00	0.00
20.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00

In order to identify the relative importance of a particular model, ranking has been made on the basis of response received from respondents. The table 8 indicates best ranking of some common models for measurement of Intellectual Capital. Only eight out of 24 academicians and seven out of 36 professionals’ respondents gave their rank. All eight academicians ranked Balance Scorecard model as best model for measurement of Intellectual Capital while seven Chartered accountants ranked Intellectual Capital index model as best model for measurement of IC.

5. Conclusion

In order to make sustainable development, a balance among economic progress, social advances and environment protection is required which is the foundation of the new value creation vision intrinsic to integrated reporting. Opinion survey result shows that respondents identified Balance Scorecard model as best model for measurement of Intellectual Capital followed by Intellectual Capital index model. Both academicians and Chartered Accountants respondents are fully agreed on the issue to review and modify accounting standards by regulatory bodies from time to time to incorporate recent development made in the field of intangibles.

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