The Edwards and Bell Theory as an Information Set Approach

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Abstract

In this paper, we investigate the concepts of financial performance in the Edwards and Bell theory. Many prior studies tried to show the contributions of the Edwards and Bell theory. However, there is no study on financial performance, which investigated their profit concepts from accounting views such as "Asset and Liability view" and "Revenue and Expense view."

Consequently we conclude that financial performance is defined in two dimensions. The theory implies that the combination of the components is not only based on Asset and Liability view but also on Revenue and Expense view. Thus, in order to present profit components, they exploited the "dual bottom line" disclosure.

The Edwards and Bell theory has three profit concepts : accounting profit, realized profit and business profit. Each of the profit concepts is combination of four profit components, such as current operating profit, realizable cost savings, realized capital gains and realized cost savings. Through the process of profit determination, we separate the profit regarding activities : operating and holding. This feature can be used as an information set approach to solve reporting problems regarding financial performance.

The information set approach is an idea accepted in the United Kingdom, that can be explained as follows: "the performance of complex organisations cannot be summarised in a single number and has therefore adopted an 'information set' approach that highlights a range of important components of performance" in FRS (Financial Reporting Standard) No. 3.

We may consider the subject following two points. First, we need to consider what kind of data should be disclosed related to the financial performance. Each item of financial statements is not statistical data. Thus, it is worthwhile to reexamine the meanings of profit components in the Edwards and Bell theory.

Secondly, we should examine whether the Edwards and Bell theory is based on the two accounting views. Regarding current trends where Asset and Liability view seems to be superior to Revenue and Expense view, the Edwards and Bell theory suggests a clue to solving problems regarding reporting financial performance.

Recently, the financial reporting is controversial since the joint "performance reporting" project by the ASB (Accounting Standards Board). This debate is currently studied extensively by the IASB (International Accounting Standards Board) in collaboration project with the FASB (Financial Accounting Standards Board). Since the convergence of accounting standards is a fundamental issue, we should focus on problems on classification of performance. It is necessary to reexamine the performance of the firm in the financial statements from the information set approach. This approach means a departure from a single performance indicator.

Since the Edwards and Bell theory splits profit regarding activities, the notable feature propose solutions to the financial performance problem. We will confirm that since financial statements are fundamentally related with and based on the same underlying data, the definition of performance is originated from the Edwards and Bell theory.

1. Introduction

A bewildering problem, common to financial statement presentation, is the meaning of disclosed financial data and accounting models used to generate such data. The meaning of disclosed financial data is usually related in one sense to profit components and combinations of the components in financial statements. The Edwards and Bell (hereafter, E&B) theory is widely noticed as a theory to split profit into segments regarding activities. The separation of the profit into plural parts reveals tantalizing clues about reporting problems of financial performance as an information set approach.

The information set approach is the idea in FRS (Financial Reporting Standard) No. 3 in the United Kingdom. Although the definition will be presented fully in Section 3, the outline of the approach is that the performance of complex organisations cannot be summarized in a single number and has therefore adopted the information set approach that highlights a range of important components of performance.

Recently, the IASB (International Accounting Standards Board) discuss the problem regarding financial performance in a joint project with the FASB (Financial Accounting Standards Board) for the convergence of accounting standards. Nakamura (2005) mentioned that this discussion of financial performance started primarily in the 1930s in the United States with a developing stock market. The information set approach has the sort of impact, so that it is natural to take up the problem from the information set approach, which means a shift from a single performance indicator.

Some problems with accounting models have been discussed in FASB discussion memorandum (1976), and it revealed that there are two accounting models: "Asset and Liability view" and "Revenue and Expense view". The definition of the accounting models is given in Section 4.

In FASB discussion memorandum (1976), the both views assume articulated financial statements. A view of nonarticulated financial statements is discussed as well. For the moment, we shall confine our attention to articulated financial statements. Financial statements are fundamentally related and are based on the same underlying data (FASB discussion memorandum (1976), para. 35), and the thought is in E&B (1961).

This paper is organized as follows. Section 2 furnishes descriptions of the E&B theory so as to clarify this theory, which adopts a decision usefulness approach. Section 3 surveys FRS No. 3 with special emphasis on the information set approach. In Section 4, we will begin by

¹⁾ Although E&B (1961) do not employ the term "articulation" itself, the thought is shown in their figure.

considering confusion regarding financial performance. Two accounting views, "Asset and Liability view" and "Revenue and Expense view", offer a clue to an understanding of financial performance. Section 5 provides concluding remarks.

2. The Edwards and Bell Theory

2—I The Purpose of Accounting in the Edwards and Bell Theory

Tweedie and Whittington (1984) express a decision usefulness approach in E&B theory best, when he mentions :

... the Edwards and Bell approach provides a broad set of information about the effects of both general and specific price changes. This is consistent with the user-oriented view of accounting which has become fashionable in both theory and practice during the past twenty years, and with the view that there are a variety of uses with a variety of information needs [p. 271].

E&B then list up varied interested parties. It is for this reason that the purpose of accounting is useful for decision making for a variety of information needs. They get a mention concerning the purpose of accounting as internal function first. E&B (1961) has written three kinds of business decisions :

... accounting data serve as a means of protecting against fraud or theft; but, much more important, the data serve as a means of evaluating business decisions, thereby contributing (1) to the control of current events in the production process, (2) to the formulation of better decisions in the future, and (3) to the modification of the decision-making process itself [p. 4].

In addition to these interested parties, they alluded to various outside users :

That outside users of accounting data such as stockholders, stock analysts, labor union officials, government statisticians and policy makers [p. 5].

This is what E&B has to say on the matter :

... just as management uses such data primarily for purposes of evaluation, most external uses involve similar evaluations. It should not be surprising then if the same set of accounting principles can be used to develop

²⁾ The explanation of E&B approach, "true income" approach and "decision usefulness" approach are fully developed in Revsine (1981).

data suitable to external as well as to internal users [p. 5].

It is obvious that E&B intended the financial statement, which is a composite of information to satisfy the needs of users. The E&B theory aims to develop data suitable to the variety of users especially for external users.

We would be inclined to interpret the authors E&B approves of suggesting that nothing should be better than to have information of all sorts for people with variegated needs. The thought cannot possibly be true, for business is restricted in resources. We shall now look more carefully into E&B regarding the criteria for deciding the components.

2—2 Operating Activities and Holding Activities

For the purpose of E&B (1961), they split profit into two parts. It is necessary for the evaluation of business decisions, the accounts should be classified according to the activity undertaken. They state :

The purposive profit-making activities of a firm can be conveniently divided into (1) those that yield a profit by combining or transforming factors of production into products whose sale value exceeds the value of the factors, and (2) those that yield a gain because the prices of assets rise (or prices of liabilities fall) while such assets (or liabilities) are in possession of the firm. In the first instance profit is developed by *using* factors; in the second it results from *holding* factors or products [p.36; italics in original].

As far as the discussions concerning E& B, Tsujiyama observed that the joint ASB/IASB project on financial performance had the idea which was based on E& B theory (Tsujiyama (2004), p. 11). At that time, the issue is involved with dividing profit into two parts, such as changes in current value and the other parts. It appears that the divided profit bear some resemblance to the E&B theory. The theory proposes to make the distinction between operating profit and holding gains.

It was observed in this section that the purpose of accounting intended for a variety of interested parties. E&B theory shows that the purposive profit-making activities of a firm can be conveniently divided into *using* and *holding*. Thus, operating profit, which is developed by *using* is separated from *holding* gains as a result of holding activities.

³⁾ The IASB agreed to take a fresh look at the problem in presentation of information in the financial statements. The joint projects with the FASB expand scopes as financial statement presentation.

2—3 Four Profit Components and Three Profit Concepts

For what has been discussed above, we can devote some space to the discussion of three profit concepts in the E&B theory : accounting profit, realized profit and business profit. Each profit concep is combination of four profit components which are listed below.

Two activities are key concepts for E& B. As two elements are classified regarding the activities such as operating and holding. Four profit components include these company's activities. Referring to four profit components, three profit concepts are defined.

First, we will make clear the basic components with which we shall deal. The basic components are four in number: current operating profit, realizable cost savings, realized capital gains and realized cost savings. The possible components of profit concepts can be summarized by E&B (1961, p.115; italics in original):

- A. *Current operating profit* the excess over a period of the current value of output sold over the current cost of the related inputs.
- B. *Realizable cost savings* the increase in the current cost of assets while held by the firm during the fiscal period.
- C. *Realized capital gains* the excess of proceeds over (depreciated)

historic costs on the irregular sale or disposal of assets.

D. *Realized cost savings* – the excess of the current cost over the historic cost of inputs used in producing output sold.

Secondly, an important point to be emphasized is that three profit concepts contain four components A, B, C and D. The definitions of these three profit concepts are given below to facilitate comparison (E&B (1961, p. 121). They show :

| | | Profit elements included | | |
|----------------------|---------------------|--------------------------|---------------------------------------|-------|
| | As operating profit | | As capital gains (or cost savings) | |
| 1. Accounting profit | = | (A+D) | + | С |
| 2. Realized profit | = | А | + | (C+D) |
| 3. Business profit | = | А | + | в |

It seems that E&B intended to separate profit elements by the nature of activities. As one of the distinctive features in the theory is "cost savings." E&B (1961) refers to the saving in detail that "An increase in the current cost of assets held represents instead a *cost saving*. ... [cost] saving attributable to the fact that input used was acquired in advance of use. This saving is attributable to holding activities ... [p.93; italics in original]." Hence, cost savings are one type of capital gains.

To begin with, we will mention realized profit in comparisons with accounting profit so that we can identify the nature of all four components. E&B are indifferent to the mixture of component C and component D in realized profit, while accounting profit takes notice of it from an activity standpoint. One of the reasons for the mixture is that it does not matter for realized profit whether the gains caused at irregular sale (or disposal) or not. Realized profit identifies realized cost savings while accounting profit does not. Accounting profit, or rather traditional profit shows a stage primarily for classification method for information.

Since they have a desire to show component A single, the component A is independent as an absolute operating profit. This classification is manifest in the manner of their separation of profit components by the nature of activities.

Component D is included in cost savings when they adopt realized profit as compared with accounting profit. The nature is not from operating activities but from holding activities. Cost savings are realized through the use of assets in production and sale (E&B (1961), p. 112). E&B insinuate that they are willing to eliminate component D from operating profit when they invent a new profit concept, that is, realized profit.

Component B in business profit is mentioned by E&B taking inventories for example. In order to record increases in the value of inventories held during the year and related cost savings accruing, E&B carry the analysis a stage further regarding holding, so the gains are included as cost savings.

3. An Information Set Approach

3—I An Information Set Approach in FRS No. 3

FRS No. 3 stated that :

The Board believes that the performance of complex organisations cannot be summarised in a single number and has therefore adopted an 'information set' approach that highlights a range of important components of performance [The development of the standard, para. iii; emphasis in original].

We employ the term "an information set approach" defined above. To sum up the basic characteristics of the information set approach, we can state that the approach is unfocused on a single number in bottom line and focused on a rage of important components. Before we discuss the issue on components, let us draw attentions to the issue of the bottom line.

On website of the FRC (Financial Reporting Council), they mentioned the bottom line also. Although we do not purpose that we should deal with standard setting, it is interesting to note what the website pointed out. Regarding the development of accounting standards, the website produces one of the ASB set which itself proposes five principle objec-

tives. It mentioned as one of the principal objectives that "Reverse the 'bottom line' mentality by focusing performance reporting on the components of income." An overemphasis on the bottom line figure is one of the reasons for "creative accounting" practice. We have mentioned this digression as we needed to explain the unfocused on the bottom line for performance reporting.

We will clarify that the E&B theory has a common feature with the view of FRS No.3 regarding the information set approach. The preface of E&B (1961) mentions :

Accounting techniques are needed ... which are sufficiently flexible to provide data for the business profit concept as well as for certain additional profit concepts, shown to be intimately related to business profit, but techniques which at the same time do not burden the firm with the unnecessary cost of multiple daily records[p. ix].

According to this citation, we can emphasize further possibilities on profit concepts as business income. It is reasonable to suppose that an idea of the information set approach is equivalent to the idea in the E&B theory. However, much the

information is classified; all of the accounting figures are led from daily record rationally, of course, not hazarding a conjecture that the management will succeed.

3—2 Flexible Data in the Edwards and Bell Theory

In order to explain that each item of financial statements does not mean only statistical data, let us reconsider profit elements in the E&B theory. For an illustration, we utilize E&B's statement of profit and loss. The statement can be called "the statement of financial performance." E&B (1961) stated :

It has been our position ... that the primary function of accounting processes is to evaluate the existing made of production in a dynamic setting [p. 285].

Not all companies see the primary business in the same sense of production, so we need to take the economical context of the E&B time into consideration. The purpose of this quotation is to show E&B assert that companies need to evaluate financial performance by accounting data.

 $^{^{\}rm 4)}$ See to the website (http://www.frc.org.uk/students/faqs.cfm $\#\, {\rm q7})$.

 $^{^{\}scriptscriptstyle 5)}$ The website mentions briefly "creative accounting" is a journalistic term.

⁶⁾ The proposals in FRED No. 22 retain the information set approach of FRS No. 3.

Maeda (2001, p. 206) asserts that the thought of an information set approach is recognized in "The Corporate Report (1975)" in the United kingdom.



We explicate on the statement of financial performance in the E&B theory. It is evident that plural profit concepts can be meant as financial performance.

The E&B theory shows plural profit concepts in a single set of statements, as the profit concepts can be seen in the following Statement 1 (E&B (1961), p. 218). We add the each symbol of profit components A, B, C and D for easy to understand.

Statement 1 tells us that four profit elements are included in three profit concepts in the statement. According to this statement of financial performance, it is apparent that E&B put a great emphasis on profit components. The four components which stated above are placed in the order of the activities on a single set of statements. That is, they displayed information as four components which have a common extent of relevance in the statement, and users will select information in their own way.

4. The Edwards and Bell Theory and Accounting Views

4-I Confusion on Financial Performance

Before turning to a detailed discussion of financial performance, we should illuminate our central concept of two accounting views. The term "Asset and Liability view" is defined in FASB discussion memorandum (1976) as :

Some people view earnings as a measure of increase in net resources of a business enterprise during a period. Thus, they define earnings primarily in terms of increases and decreases in assets and liabilities. [para. 34].

The term "Revenue and Expense view" is defined in FASB discussion memorandum (1976) as :

Some people view earnings as a measure of the effectiveness of an enterprise in using its inputs to obtain and sell output at a period. They define earnings primarily in terms of the difference between revenues and expenses for a period [para. 38].

In addition, we may now proceed to the discussion of the key concept regarding Revenue and Expense view in FASB discussion memorandum (1976).

They commonly describe financial accounting, and especially earnings measurement, as a process of matching costs with revenues [para. 39].

After pointing out that the key concept of Revenue and Expense view is "a process of matching costs with revenues," FASB discussion memorandum (1976) continues :

[E&B] were early advocates of mat-

ching replacement costs with sales revenue to measure "operating profits" as distinguished from "holding gains and losses" [p. 54, endnote 1; emphasis in original].

FASB discussion memorandum (1976) refers to it in the following context :

Current replacement costs can be matched with sales revenue showing that the revenue and expense view is not limited to matching expired historical costs with revenue [para. 47].

The E&B theory seems to be predicated upon Revenue and Expense view as mentioned above. However, it seems that little attention has been given to "holding gains and losses" itself, even if it is a remarkable idea in the E&B theory. Additional particulars of the considerations to the matters on holding gains and losses are given below.

The different accounting views were the main cause of the confusion of the meaning regarding financial performance. For example, when we say profit shows financial performance, it is not clear what kind of financial performance it is. Sato (2003c) argues that this confusion is led by double meanings of financial perform-

⁷⁾ Professor Sato announced this translation in the form of an informal talk.

Paton and Littleton (1940) must be recalled in the gist of what is on "accomplishment." To quote Paton and Littleton (1940, p. 15), "Costs are considered as measuring effort, revenues as measuring accomplishment."



ance (p. 69). The reason for this is not hard to see in two accounting views. One is Asset and Liability view and the other is Revenue and Expense view. In Asset and Liability view, performance means "Remains." In Revenue and Expense view, performance means "Accomplishment."

The term "performance" is used as different meanings person by person. One may think the financial performance as accomplishment, which is from efforts, but the other may think the financial performance as remains, which is only a result from calculation.

For reasons mentioned above, we can deduce each meaning of the performance on profit concepts from the accounting views. Similarly, it is necessary to observe each of the components from the accounting views in terms of the information set approach.

4-2 How is the bottom line of the Edwards and Bell Theory to be accepted?

It has been recognized that E&B do not put a great importance on the bottom line figure. Tweedie and Whittington (1984) makes the following remark :

> ... Edwards and Bell proposed, within a single set of accounting statements, to show a variety of information which they considered to be relevant to the evaluation of a firm's activities for different purposes. The important result of this approach is to draw attention to the multiple



Statement 3

dimensions of a firm's performance and to de-emphasise the 'bottom line' of the income statement [p. 54; emphasis in original].

First of all, when we take a close look at realized profit and business profit, both profits seem as the bottom line in the same level. We will use the term "dual bottom line" to refer to plural bottom line which is regarded as a significant performance in a single set of statements, such as realized profit and business profit. The statement of financial performance in the E&B theory tells a dual bottom line.

What the passage makes clear at once is that E&B stress not only on the single figure of the bottom line, but also on each of four profit components regarding activities in the statement. They persist to plural profits combined with profit components in financial statements.

The two statements : Statement 2 and Statement 3 which are illustrated by two accounting views. Both of the statements were developed from Statement 1 [E&B (1961), p. 218). In the statements, we put contracted forms : Revenue and Expense view as REv, and Asset and Liability view as ALv.

We specify the statement of financial performance by E&B. They show dual bottom line regarding accounting views.

Statement 2 shows that realized profit is consisting of Revenue and Expense view.

⁸⁾ Accounting profit is not the point on the grounds that E&B do not show accounting profit itself on their main statement here. Statement for accounting profit has been obtained from E&B (1961, p. 219).

It means that component A, C and D is led by Revenue and Expense view. They accentuate current operating profit, and component A is shown single, for the component is only led from decision making from operating nature. Current operating profit is led from Revenue and Expense view. Since current operating profit is primarily in terms of the difference between revenue and expenses for a period.

In Statement 3, Revenue and Expense view, and Asset and Liability view are performance for business profit. Regarding component B, it can be known only from the observation on the holding assets. The holding gains as realizable cost savings are caused in the period, therefore component B is only led from Asset and Liability view.

When it comes to accounting profit and realized profit, both profits are composed of the three same components A, C and D, and it is just a question of order. It is needless to say that both profits are of the same amounts. I have already indicated the answer to the bottom line problem by passing reference to the dual bottom line.

5. Conclusion

We have explored the E&B theory from the point of view of the information set approach. For one thing, the E&B theory argues that profit should be divided into two elements regarding firm's activities and they also suggested three profit concepts (not other numbers) at once. Without emphasizing the bottom line profit, E&B put an importance on activity criteria. It means that dividing profit by activities is one of the criteria for disclosing profit in the statements.

We will now proceed to examine financial performance on E&B from two profit views. It is concluded that E&B define financial performance in two dimensions. The reason for the dual bottom line is that their profit concepts are based on not only Asset and Liability view but also Revenue and Expense view. The bottom line shows realized profit and business profit in the statement of financial performance.

One final point is that the position is taken that both accounting views put importance rationally, as was stated above, from the view point of the information set approach. An examination of two accounting views can be a clue for solving problems about the concept of financial performance.

Recently, Asset and Liability view seems to be superior to Revenue and ⁹⁾ Expense view, and we have much argument about financial performance in confusion. For solving financial performance problems, it is essential to pay attention

⁹⁾ In particular, Watanabe (2005, 2006) sketched out the past few decades on an historical overview. This issue has been developed in a considerable number of studies on two accounting views.

to both profit views. Eventually E&B suggest that there is no need to select the only one profit concept for decent financial performance.

The implication of E&B regarding financial performance is shown in their bottom line. We find that the E&B theory defines financial performance in two dimensions. Thus, in order to solve the problem on financial performance presentation, they exploited the dual bottom line.

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