What´s wrong with fair value accounting?

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Keep in mind

"Recorded revenue was accepted as valid only on the basis of the objective evidence furnished by bona fide sales to independent parties"

(Paton, W.A. and A.C. Littleton. American Accounting Association, 1940)

Abstract

From the days of Paton and Littleton, accounting valuations, especially on balance sheets, has evolved from objective valuations to providing value-relevance to share markets in bureaucratic and politicized struggles, in which the U.S. and its economic interests have captured the process. This paper explores this evolution and the consequences of use of the discounted future cash flow expedient using two listed Swedish property companies as case examples. It concludes with a reflection of what is value-relevance.

Prelude

As the first step in this paper there is a need to demonstrate the evolution from a focus on the logic of bookkeeping to the point where we no longer discuss these issues but instead focus on valuation and the way calculated values are to be presented to the market place. The development of these trends has been both bureaucratic and politicized in which the struggle for power sometimes obscures other important issues. Earlier the problem was what the company had (the balance sheet) and why (the income statement), that is double entry bookkeeping and the flow of money was the focus. From bookkeeping to accounting, it could be argued the 1900s was the era of regulation and the U.S. has taken command in order that accounting should be “owned” by a single set of stakeholders, investors. The first step in such regulation was to stop the use of market values in the balance sheet which had been in use before the stock
market crash in 1929. This step in the power struggle over accounting regulation in the U.S. came because of the expressed theory that high stock prices would contribute to an overall more positive perception of the economic situation and thereby contribute to increased consumption. High share prices had been viewed as “keeping the wheels rolling” reflecting a perceived connection between subjective accounting in companies for the “general good”. Values were more important than money for the regulation of society.

As a result of this change in the relationship of accounting values and economic prosperity, it is important to discuss what value is and have an even a deeper discussion about the accounting relationship between cash and accruals and further discuss the inclusion of unrealized gains and losses in net income measurements. (Including unrealized gains and losses in net income measurements is sometimes called “anticipated income” when translated from other languages, e.g. Swedish). Under accounting standards of the U.S. and international accounting standards, unrealized gains and losses are often included in a term called “comprehensive income” in English if they are not included in the measurement of net income itself. This essay does not focus on rules or regulations; instead the aim is to increase the understanding of accounting. In this case, an essential aspect of the accrual accounting is that it contributes to a fusion of “what” and “why” and the income statement shows corrections of the unrealistic forecasts made in previous years. The balance sheet thus is the central report but may be unrealistic with respect to future cash flows.

About the same time the opinion emerged that the role of accounting should be to provide the stock market with relevant information, stock market research accelerated and value relevance studies became a research area. After 1965, more than 1,000 academic research articles on the relationship between accounting measures and stock prices have been produced. Basically these studies are about whether the stock market reacts to the information provided by companies to the market and whether the reactions are strong or weak with respect to different kinds of information. In the long term, these reactions are collected to represent accumulated events for the so-called correlation studies. It has then been shown that short-term correlation was weaker than long-term correlation. These correlations, of course depend on expectations the market has for

1 Bengtsson, Bengt, Redovisning i ett utvecklingsperspektiv – Från fakta till förhoppningar, The Journal of the Economic Society of Finland, 2013:1
information given to it.² It is often the case that an improved result in the company leads to falling share price because the market is expecting an even better result. A worse result could conceivably contribute to an increase in share price because the market expected a worse result. In the long term, however, share price performance moves in the same direction as the company’s accounts describe. Low correlation in the short term thus does not need to be an indication of low value relevance.

**Increasing value relevance with fair value accounting**

Which accounting measures indicate strong value relevance in the long term? A simple answer cannot be given to this question. If the problem is limited to a comparison of “fair value accounting” with respect to reporting assets at historical costs³, some conclusions can be drawn regarding the accounting value relevance to the stock market. One place such value relevance can be observed is in Swedish property companies for the accounting number “shareholders’ equity” after the period they began to apply fair value accounting.

The following is summarized from the author’s doctoral thesis published in 2008.⁴

It is only the relationship between a company’s balance sheet and the share market that is of interest. This relationship focuses on the change that provides publicly traded property companies in Sweden the opportunity to use fair value in the balance sheet from the beginning of 2005. Before 2005 property companies had the opportunity and also the duty to determine and report their properties at fair values, but only as supplementary information. Following the introduction of IAS 40, property company values must be expressed in a clear and more comprehensive way, included as part of the balance sheet, and thus affect the income statement. The new method of accounting was intended to describe a fairer picture of the actual economic situation. However, it can also be assumed that the new method to account may contribute to more subjective reporting. Another problem, which can be increasing, is specific interests from shareholders that may affect the accounting. The new way of accounting and reporting can therefore be argued have two sides, one “good” and one “bad”.

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⁴ Summary from Bengtsson’s thesis, Åbo Akademi, Åbo, Finland, 2008
What does IAS 40 signify about the value relevance of accounting? There are many aspects of this problem.

One of these problems is the relationship between “equity reported on the balance sheet” and the company's share price at specified times and changes that have occurred after IAS 40 was applied. The question is interesting because of the assumption that it is reasonable that equity is the amount shareholders have to “download” from the company through dividends or the sale of their shares to other investors.

A second aspect is the way changes in accounting standards affect the share price just at the reporting moment (when the companies present their quarterly reports). Are movements in the share prices stronger after IAS 40 came into force? This question is interesting in light of the debate on whether or not flexible rules can create uncertainty among the actors in the share market.

A third aspect is the potential for increased flexibility in financial statements that might result from IAS 40. Will variations in “equity reported on the balance sheet” increase with the new standard? This question is interesting in light of the critical debate that flexible accounting rules can be exploited for interests other than those of the shareholders.

A fourth aspect is how the variables “share market value” and “equity reported on the balance sheet” correlate over time before and after the introduction of IAS 40. A good correlation over a slightly longer period of time can be an indication that shareholders use companies’ reporting as the basis for their decisions. There is also an opposite view that the market is more interested in price movements themselves than in companies’ reporting.

The following issues were investigated:

a) What has happened to the ratio “market value/equity reported on the balance sheet” in the process of transition to IAS 40 and what do further developments look like?

b) Have changes occurred share price movements of property companies on reporting dates?

c) What are the changes in the variation in “equity reported on the balance sheet”?

d) Has the correlation between “equity reported on the balance” and the value on the share market changed?

The purpose of the study was to illustrate whether and how the value relevance of accounting has changed in property companies as a result of the introduction of IAS 40 and to analyze the pattern observed in the variables “market value” and “equity reported on the balance sheet”.

The IAS 40 framework has been suggested as having both positive and negative effects on the
share market. The study presents an understanding of these aspects. A better convergence of “equity reported on the balance sheet” by the companies and their value on the share market has been achieved at the same time as the relationship with the share market has become more homogeneous among the companies investigated. The ratio “market value/equity reported on the balance sheet” has also stabilized at a lower level after IAS 40 was introduced.

A negative development is that movements in share prices have increased in a time period when they have declined in other companies. It must be noted, however, that this movement may be perceived as a positive development by some players in the market. Increased movements in share prices might be an indication that the share market reacts stronger to the information supplied after the introduction of IAS 40. One possible reason for increased movements in the share prices, however, is that the share market is responding to the fact that the information is provided and not to information content itself.

The “equity reported on the balance sheet” shows a higher variation after the change of rules was implemented. It should also be noted that the variations in “equity reported on the balance sheet” are substantially larger than the variations in the share price. This fact is noted both before and after the IAS 40 came into force.

The correlation between the variables “market value” (share price) and “equity reported on the balance sheet” improved and the ratio of the variables was also stable. This means variations in the variables “pull in the same direction” and that changes in companies’ “equity reported on the balance sheet” and share prices accompany each in a better way after the introduction of IAS 40. What caused this phenomenon cannot be determined based of this study. It might be the share market makes its assessments using companies’ accounts but it could also be that companies adjust their accounting to share markets’ assessments of the value of the company. With the restrictive rules in force prior to January 1, 2005, the latter option was not available. A reasonable assumption is that through the new framework, there is a consensus and that companies now make their assessments based on the same facts as the market. The value of a property depends, of course, greatly on external factors. It may be that the higher correlation is due to these two factors because the share market in the short term is influenced by the accounting (and did this to a higher degree than before the introduction of IAS 40). It can be noted, however, that the share price had been rising both before and after January 1, 2005, while the ratio “market value/equity reported on the balance sheet” ceased to rise after January 1, 2005. For this reason, there is cause to believe that share prices in the long-term move irrespective of balance sheet presentation of reported equity. It is also natural that this situation exists because the real value of the property has been known, even when it was not recorded on the balance sheet. It is therefore reasonable to assume that the share price developments would have been the same without the introduction of IAS 40.

Movements in both the prices of shares and “equity reported on the balance sheet” have a significant increase. This fact can be seen as the accounting is now adapted to reality and that the share market, in spite of what was said above, considers accounting by reacting to it. In the long-term, the market also responds in the same direction as the accounting. In the short-term,
accounting contributes to adjusting the share market expectations and such a shift in expectations can contribute to the deterioration of correlation.

As a whole, the new way of reporting has improved reporting and the value relevance of accounting information has increased as a result of IAS 40. It is also clear that negative attributes of IAS 40 are not proven through this investigation. However, it is important to point out that a similar study in the future, including a few more years, could lead to a different conclusion. (More about this issue later in this essay).

Although variations in share prices overall are wider than on the average for all “share days”, it can be demonstrated that individual events other than quarterly reporting can provide significantly greater movements in the share prices. Perceptions and statements published by external sources can be much more decisive for the development of share prices during individual days.

It should be noted that although value relevance has improved with fair value accounting this is no guarantee that the reporting is good for the stock market in the long term, only that it that is potentially worthwhile. This finding is based on the fact that in order for a value to be considered fair, it should in the long run generate the amount of cash flow on which it is based. Fair value cannot be anything but a projection of future cash flows and about the future we really know nothing. It is likewise not certain that fair values are produced fairly. They may be subjective or, at worst, fraudulent. The opportunity for distortion lies mainly in the third stage of the four possible valuation steps as follows.

This third step allows as an expedient the calculation of fair values by an analysis of the present value of cash flows over an asset’s life rather than the asset's sales price on the closing date. The FASB in the U.S. strongly criticized this approach (Hertz and McDonald, 2008)5. In the recently produced IFRS 13, the present value of future cash flows valuation method remains but there have been substantially increased requirements for disclosures about assets that are valued according to the cash flow model. This increased requirement might be seen as an attempt by the regulators to limit this very theoretical and flexible method of valuation, which of course really only is based on projections.

Keep in mind that “equity reported on the balance sheet” using fair value accounting includes forecasted profits and is necessarily equal to accumulated net cash flows from operations. Thus it is only money that counts. Will predicted net cash flows be achieved? If not, the fair value of them will be just an illusion. The same is true for the accounting measure “unrealized gains and losses”. It is interesting in this context to consider value relevance for accounting measures that do not include fair values. An example of such a measure is “cash flow from operations”. This measure is equivalent to an income statement on a cash basis, i.e. an income statement that does not contain accruals. An accumulation of both income measures over the enterprise’s lifetime will necessarily correspond to the sum of all reported income. A correction occurs when an asset is sold or scrapped by recognizing the difference between the book value and amounts received (capital gain or loss).

The diagram below shows financial performance and cash flow in ten Swedish real estate business groups over the period 2005 - 2012. The ratio between the variables has largely increased throughout the period except for the period around 2008 - 2009 when there was a financial crisis.

The possible bubble
The upper curve refers to accumulated accrual-based net income which includes unrealized gains and losses based on fair value accounting and the lower curve refers to “accumulated cash flow from operations” by quarter January 1, 2005 - June 30, 2012
This clarifies the risk associated with fair value accounting because it is the nature of the accounting model that in the long term the sum of all incomes will be the same as cash.

With this observation in mind, it is interesting to analyze which of the variables “net income” which is on a fair value basis with unrealized gains or losses or “cash flow from operations” best correlates with companies’ stock prices (market value). This analysis is shown as follows.

**Two cases**

Two cases of two listed Swedish property companies can be used to illustrate study the relationship of valuations based on future cash flows. The following cases compare the estimated future cash flows and the historical cash flow (cash flow from operations). The analysis involves companies that report their assets in accordance with IAS 40. The time interval is 12 years and covers the years 1999 to 2010. As shown on the graphs, variables examined are the company’s stock price ($\Delta$), the company’s reported income ($\Box$) which is based on fair value accounting beginning in 2005 and cash flow from operating activities ($\Diamond$). For a detailed description of the analysis refer to article in *The Journal of the Economic Society of Finland* 6.

The correlation between Company X’s stock price and the company’s reported net income is 50 per cent before the introduction of IAS 40. After this date the correlation is 100 percent. The correlation between Company X’s stock price and cash flow from operations is 83 per cent before the introduction of IAS 40. After this date, the correlation of the two variables dropped to 50 percent.

The correlation between Company Y’s stock price and the company's reported net income is 83 per cent before the introduction of IAS 40. The investigation after this date shows the same correlation. The correlation between Company Y’s stock price and the cash flow from operations is 67 per cent before the introduction of IAS 40. After this date, the correlation of the two variables dropped to 50 percent.

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The analysis also shows in graphs 01 and 02 that Company X has had a fairly steady growth in both cash flow from operations and in reported net income. Company Y has a somewhat more diverse pattern of reported net income while the cash flow from operations has remained constant.

The analysis of the two companies together shows the correlation between the stock price and average reported income is 67 percent prior to the rule change and 92 percent after that time. The correlation between the stock price and the reported cash flow from operations before the rule change was 75 percent and after the rule change only 50 percent. The correlation has thus increased for the variable “reported net income” and has declined for the variable “cash flow from operations.” Based on this information it can be assumed that the stock market largely uses the variable “net income” in decisions on share transactions rather than “cash flow from operations”.

Graph 01
Stock price performance, reported net income and cash flow from operations during the period 1999 - 2010 in Company X
The danger of inflated stock prices is obvious as the expected future cash flows are too optimistically estimated using fair value accounting. Variation in the income statement has also increased in the two companies analyzed (as shown in Chart 01 and 02) after the introduction of IAS 40.
Cash flow from operations has been equal in both companies throughout the period analyzed and reported net income has been written down in Company X during the crisis 2008 - 2009. This measure indicates that the company admits it had been too optimistic in previous years.

What is the forecast of net income relative to the actual cumulative cash flows from operating activities? The ratio for Company X is 0.79 before the change in rules and 0.90 six years after while the values of Company Y have changed from 1.98 to 3.45. These values are shown in graphs 03 and 04.

In Graph 03, the variables for reported net income and cash flow from operations have accumulated over time for Company X. The graph shows the ratio between the variables during the years 1999 to 2010. The implication of this information is that the cash flow total over the 12 years is slightly larger than the sum of all reported net incomes which indicates that cash flow is slightly larger than estimated. Company X thus can’t be deemed to be in a better position.

Chart 03
Analysis of stock price, accumulated reported net income and accumulated cash flow from operations during the period 1999 - 2010 in Company X

The report thus shows no signs of subjectivity. The situation at the end of 2010, however, is achieved by downward adjustments in earlier expectations of future cash flows.

In Chart 04 for Company Y, like in chart 03, the values of variables are accumulated over time. The implication of this information is that cash flow is not equal to the amounts of reported net income. Expectations of future cash flows are significant. The accumulated cash flow amounts to only 29 percent of the income statement’s reported net income. Considering a period of 12 years, it is questionable to suggest that the reported income computed using fair values and unrealized gains and losses would be exempt from judgmental considerations.
From the standpoint that there is a stronger correlation between reported net income and stock price than between the historical cash flow from operations and stock price, the stock price could possibly be considered “inflated”. In this regard, it should be noted that Company Y is not adjusting down the income statement as Company X did at the time of the financial crisis. The analysis leads to questions as to whether it is “fair” to report assumptions for the future in the way IAS 40 provides, especially because assumptions in a given year have been revised down sharply in the year after. Can such reporting be valuable for the stock market as it still ultimately only money that counts?

Finally, it must be said that high or low correlation need not depend on the information value of the variables but have other causes. For example, it is claimed that reported equity actually is what the owner (the market) is claiming not what the two other variables stand for. Furthermore, it is argued that the concept of income that has been marketed in textbooks and courses is the sole current and “accurate” way to describe a company's performance. Nowadays, when reported net income is based on anticipations, it is unwise not to put more emphasis on the historical cash flow. This flow is today often completely unimportant for decision-making for the benefit of future cash flows (the income statement). Perhaps this is what is described by the graphs 02 and 04?

**Conclusion**

The conclusion of the analyses of cases of Companies X and Y is that the two companies’ stock prices correlate much stronger with the variable “reported net income” than with the variable “cash flow from operations”. In addition, in Company Y, the ratio between values and money is very large. The question is whether the actual future cash flows will achieve what is forecasted. If this does not happen, the current share price is too high. The value
relevance in both cases is higher for the accounting numbers “reported net income” than for “cash flow from operations”. We must still keep in mind that finally it is only the money that counts. As time progresses, “future cash flow” must become “cash flow from operations”. If not, it is an accounting necessity to make net income adjustments in the direction of the actual achieved accumulated cash flow from operations.

As shown in the analyses above, the accrual-based statements are more value relevant than “cash flow from operations”. Just as in the cases analyzed, the most relevant statements possibly can be seen as an illusion indicating expectations that over time will not be fulfilled. A bubble eventually occurs; the ratio between the variables becomes too large for accounting estimates to be converted into cash. The bubble bursts requiring the company to adjust the income statement which should then lead to falling stock prices because the result is the value relevant variable. This occurs despite the fact that cash flow from operating activities is constant over the financial crisis, which could be an indication that the company's financial position is good, although income is reduced.

Reflection

What is the purpose of a value relevant accounting? Perhaps to keep the stock trading at a high level as long as possible? Rising stock prices are supposed to keep consumption up and contribute to prosperity. This is all well and good, but who will pay? In the philosophy of fair value accounting it can be argued there is a built-in correction mechanism called “crisis”. The idea of wealth (artificial wealth) also requires an economic crisis. If the argument is limited to the stock market, those who have shares in the crisis have to pay. It has been shown that in times of crisis, accounting value relevance is sinking to a very low level. The market is initially not consistent with respect to the financial position of companies. The stock price falls and now companies have an opportunity to revise income down towards the actual cash flow. The ratio between reported income and cash flow from operations will thus fall in times of crisis through the “downs” on the income statement. Because the result drives the stock price, the stock price will fall, and those who sell off have to take losses that perhaps may not exist. Do not sell the skin before the bear is shot and keep in mind:

"Recorded revenue was accepted as valid only on the basis of the objective evidence furnished by bona fide sales to independent parties”

(Paton, W.A. and A.C. Littleton. American Accounting Association, 1940)

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7 Bengtsson, Bengt, Redovisningsmått och börskurs, The Journal of the Economic Society of Finland, 2013:2