How well does net income measure firm performance?
A discussion of two studies

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Abstract

The papers by Dhaliwal, Subramanyam and Trezevant (1998) and Vincent (1998) both examine whether stock returns are more highly associated with net income or an alternative measure of firm performance in contexts that are of some current interest to accounting regulators. However, since neither paper does a very good job of motivating their basic economic questions, we are left with results that are not all that interesting or surprising. Both papers would have benefited greatly from a clearer delineation of the economic rationale for their tests and predictions. © 1999 Elsevier Science B.V. All rights reserved.

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1. Introduction

At first glance, the papers by Dhaliwal, Subramanyam, and Trezevant (hereafter, DST, 1998) and Vincent (1998) seem disparate. While the former deals with Financial Accounting Standards Board (FASB) Statement of Financial Accounting Standards No. 130, ‘Reporting Comprehensive Income’ (SFAS-130),
the latter deals with the reporting of Funds from Operations (FFO) by Real Estate Investment Trusts (REITs). However, as it turns out, the basic research question that underlies both studies is fundamentally the same — how well does net income measure firm performance compared to possible alternative measures? (DST compare net income to comprehensive income while Vincent compares net income to FFO.)

Both papers address topics that are of current concern to policymakers. In the case of comprehensive income, the FASB has just issued SFAS-130 (June 1997), and is likely to be interested in evidence on whether comprehensive income is more highly associated with stock returns than net income. In the case of FFO, the REIT industry group (NAREIT) has argued for several years that FFO should replace net income in these firms’ financial reports, and the SEC has already allowed these firms to include FFO in their financial statements on a supplementary basis, so there seems to be some regulatory sympathy for the use of FFO as a performance measure in this industry.

Despite the currency of these topics, I have concerns about the motivation for each of these papers, which I outline in turn. In my view, neither paper does a convincing job of outlining the economic rationale for their basic research approaches, with the result that not a great deal is learned from either paper.

2. Motivation for the research

One thing that neither paper does particularly well is provide an economic rationale for why we might expect the variable of interest (comprehensive income or FFO) to outperform net income as a summary measure of firm performance and why the best approach to studying this question is through a stock-returns association study.

To motivate their paper, DST cite arguments from the accounting literature about whether we should use the ‘current operating performance’ approach or the ‘all inclusive’ approach to income measurement. At the risk of oversimplification, GAAP has traditionally preferred the all-inclusive approach because this approach provides a more objective and verifiable measure of earnings, and so is more desirable for contracting purposes. On the other hand, stock market investors are more likely to prefer a current operating performance approach, under which the firm reports a number that is closer to ‘core earnings’ (i.e., excludes transitory earnings components). This follows because stock market investors are most interested in predicting future cash flows/earnings and so are principally interested in those components of earnings that persist into future

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periods. This being the case, it is hard to see why the authors chose a stock-returns based approach since this is a context where comprehensive income would seem to be relatively less useful to users. To give comprehensive income a fair chance, it would seem to be better to look at contracting contexts where there are good reasons to utilize all-inclusive measures of performance (e.g., where performance is being measured ex-post for compensation purposes).

To see more clearly why stock returns are likely to be more highly associated with net income than with comprehensive income, consider what comprehensive income comprises and how it compares to net income. Under previous (pre-SFAS 130) GAAP, three non-capital items are taken directly to stockholders’ equity, thus violating ‘clean surplus’ accounting:³

1. Unrealized gains and losses on ‘available-for-sale’ securities pursuant to SFAS-115 (accounting for investments),
2. The net loss associated with the minimum liability pension adjustment pursuant to SFAS-87 (pension accounting), and
3. Foreign currency translation adjustments pursuant to SFAS-52 (foreign currency translation).

A principal objective of SFAS-130 is to eliminate these clean surplus violations by requiring companies to report a new number (in addition to net income) called ‘Comprehensive Income’, defined as net income adjusted to include the effects of these three items (which together comprise ‘other comprehensive income’).

It is hard to see how any of these three items have implications for the firm’s future operating performance or cash flows, which is the principal focus of stock market investors. First, past changes in the value of investment securities have no implications for future changes, and so are unlikely to be related to future earnings or cash flows. Thus, while these changes reflect changes in the value of the firm’s assets and so will likely be reflected in current equity values, they are completely transitory. Second, the other two components of other comprehensive income are essentially accounting adjustments that are difficult to interpret economically and which sophisticated analysts tend to ignore in estimating future earnings and cash flows; these items arguably add ‘noise’ to reported earnings (e.g., see White et al., 1998 (Chapters 15 and 18)). As a result, it is hard to imagine circumstances under which these items would be correlated with stock returns. Overall, it is not clear why we would expect comprehensive income to be more highly correlated with stock returns than net income, since it includes items that have few, if any, implications for the firm’s future cash flows and earnings.

³ These are apparently the largest items. SFAS-130 (para. 39) indicates that there are actually eight of these types of ‘dirty surplus’ items.
The problem that DST face in motivating their paper is that it is hard to see any economic justification for SFAS-130 itself, so it is hard to motivate empirical tests for an associated academic study. As the statement (see SFAS-130 para. 1) makes clear, no new information is disclosed as a result of the statement: “This statement establishes standards for reporting and display of comprehensive income and its components… It does not address issues of recognition or measurement.” In other words, all the statement really does is to display previously disclosed information in a different way. Apparently, there was some concern that financial statement users were unable to fully process this information previously, and that the new manner of disclosure would correct this deficiency.4

This concern is difficult to understand. The argument implies that investors process information about recognized financial statement items differently depending on where these items are reported in the financial statements. This is an even more extreme version of the long-standing recognition vs. disclosure debate under which some argue that investors process items differently depending on whether they are disclosed in footnotes or recognized in the financial statements. As Bernard and Schipper (1994) observe, there are some economic reasons why we might expect investors to place different interpretations on items depending on whether they are recognized vs. disclosed (e.g., recognized items may be more reliable). However, these arguments are more difficult to make in the case of SFAS-130. In the end, one gets the impression that the motivation for SFAS-130 is principally political rather than economic. At the same time that SFAS-130 was being developed, the FASB was also considering the highly controversial issue of accounting for derivative securities, and in particular preferred a mark-to-market approach under which unrealized gains and losses on derivative securities would be reported as part of income. Because some constituents (most notably financial institutions) strongly objected to including these items in income, while some on the Board strongly objected to including these items as additional ‘dirty surplus’ items in stockholders’ equity, a compromise position was reached under which certain of these items are included as part of comprehensive income, which is a convenient ‘middle ground’ between these alternatives.5

Overall, there seem to be two problems that underly the motivation for DST. First, the economic rationale for SFAS-130 itself is weak, so it is hard

4 Two quotes from a Wall Street Journal article on the statement illustrate this argument: “The new figure will shine a bright, embarrassing light on items that are now buried in shareholders’ equity” and “The new rule will jog loose unexpected information.” See The Wall Street Journal, 30, September 1997, at C1, “FASB Rule Will Offer Walk on Wild Side” by Elizabeth McDonald.

5 Consistent with this, SFAS-133, “Accounting for Derivative Instruments and Hedging Activities” (issued in June 1998), classifies certain unrealized gains and losses on derivative instruments as part of ‘other comprehensive income’.
to understand exactly what it is we are setting out to test. Second, given
the definition of comprehensive income, it is difficult to understand why
we would expect comprehensive income to be more highly associated with
stock returns than net income. As a result, it is not too surprising that the
authors find that net income dominates comprehensive income in most of their
tests.

A similar argument can be made about the motivation of the Vincent paper,
although here the argument is somewhat stronger. In the case of REITs, GAAP
requires depreciation of real property, causing reported net income to be
relatively low. The industry argues that including this depreciation expense
distorts net income as a performance measure, and so advocates the use of FFO
instead. FFO essentially comprises net income before depreciation and before
the inclusion of gains and losses on property sales and debt restructurings. Thus,
FFO arguably is closer to being a measure of ‘core earnings’ for REITs, and so
one can more plausibly see why this measure may be more highly correlated
with stock prices than net income.

Once again, however, Vincent does not do a good job of spelling out the
economic argument for FFO as a superior measure of firm performance.
Instead, she simply documents the industry argument that FFO is somehow
‘better’ because it excludes depreciation, but fails to tell us precisely what it is
about depreciation expense in this industry that causes it to distort performance
measurement. Presumably, since others have studied the association between
stock returns and the components of accruals, there is something unique about
the economics of the REIT industry that make it an interesting industry to
study. Unfortunately, the author does little to explain why this might be. The
author also argues that “REITs provide an opportunity to examine claims that
traditional, accounting-based performance measures are inferior alternatives,
particularly for fast-growing firms whose operations do not conform well to the
traditional manufacturing or retailing model.” Yet it is hard for me to see how
adjusting net income for depreciation and some other items to arrive at FFO is
an example of an ‘alternative reporting model.’

A related problem is that it is not clear why investors should care which of
these alternative measures are reported as the primary performance measure in
the financial statements, since it seems to be easy to adjust back and forth
between the two measures based on published information. (Vincent is able to
obtain very good estimates of FFO by adjusting net income for depreciation and
the other items using information disclosed in her sample firms’ financial
statements.) This being the case, it is hard to see why the form of disclosure
should matter, as long as the components of performance are separately dis-
closed. Thus, it is unclear why the author expects one or other measure to
provide different amounts of information to investors, unless one again assumes
that investors cannot make simple adjustments based on numbers that are
reported on the face of financial statements.
3. Research design considerations

Similar to Dechow (1994), the basic approach in both papers is to regress ‘long-window’ stock returns (cumulated over quarters or years) on net income and the alternative performance measure to see which measure is more highly associated with returns. As discussed by Dechow, this approach assumes that stock markets are efficient, in the sense that they reflect quickly and in an unbiased way all publicly-disclosed information about firm performance. If, for some reason, stock market participants ‘fixate’ on earnings (as the evidence in Sloan (1996) suggests), then the results in these papers will be biased in favor of net income. Dechow avoids this problem by looking at returns cumulated over longer four year windows as well as the shorter windows, but both of the current papers seem susceptible to this problem.

One way of addressing this concern is to use a measure other than stock returns as the dependent variable. For example, the authors could use future realized measures of performance (such as operating cash flows or earnings) to provide a benchmark for assessing how well current period variables measure firm performance. In fact, DST do exactly this and obtain results similar to those that they obtain using stock returns as the dependent variable. It is difficult to see why Vincent does not also attempt to validate her results in this manner.

4. Conclusion

In the end, neither paper’s results are all that surprising or interesting. DST find that net income consistently dominates comprehensive income in their tests, but for the reasons discussed above, this result is expected given the definition of comprehensive income. Vincent’s results are best characterized as ‘mixed’, in the sense that both variables seem associated with stock returns, although the results are somewhat stronger for net income. Overall, however, it is not quite clear what to make of the results in either paper, since it was not clear from the beginning why we might expect one performance measure to dominate the other. In my view then, both papers would have benefited greatly from a clearer delineation of the economic rationale for their tests and predictions.

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