

5 - 8

Assuming the survey is accurate, there are three possible explanations for the results:

- (i) Firms were not aware of the magnitude of their postretirement health benefits until they were forced to calculate them by the new accounting rule.
- (ii) The mandated balance sheet recognition and disclosure of health care liabilities was directly responsible for their curtailment by firms.
- (iii) There is no direct cause and effect between balance sheet recognition and the curtailment of benefits. The events are only correlated with another.

The first explanation assumes that managers (as well as investors) are "fixated" on annual reports and that managers have no appreciation actual costs unless and until they are contained in the financial reporting system. Previous research on leases and foreign currency translation suggest that managers do pay more attention to events that they must account for. Similarly, field tests carried out when the health cost disclosure was first introduced indicated that (some) managers had difficulty in complying with the requirements because of a lack of data availability.

Because of this lack of data and the complexity of calculating the present value of these benefits (see Chapter 9) it is possible that some firms had only the haziest idea of the cost of these benefits. Postemployment benefits were often granted to unionized employees as trade off for current wages, that had to be recognized as expense immediately. Managers had a clear incentive to trade future costs for present costs. [A senior manager of one Fortune 100 company told one of the authors that he thought the benefits would not have been granted if management had known their cost.]

The second explanation is consistent with the "economic consequences" branch of the positive accounting approach. By adversely affecting the company's reported performance, the new accounting standard may impact one or more of the following:

- (1) management compensation,
- (2) bond covenants on existing debt,
- (3) the terms of any new debt,
- (4) future labor negotiations, and
- (5) internal resource allocation decisions.

All of these factors can have real costs associated with them and may be incentives for management to reduce health care costs.

Somewhat less likely in our opinion, is the possibility that managers reduced their health care costs because they feared the market reaction to the accounting recognition and disclosure. This is not necessarily inconsistent with the efficient market hypothesis as it is possible that even though the market is efficient, managers may not perceive it to be so. However, in this case, prior disclosure requirements (SFAS 81) may have taken some of the surprise out of the actual accounting.

The third explanation is the most likely. Under this view, the benefit curtailments were not caused by new accounting standards. Rather, both events were influenced by the same underlying factor--the explosion of health care costs in recent years. The growth in these costs was a major factor that triggered the FASB project that resulted in new accounting standards. Similarly, the higher costs induced firms to reduce the health care benefits offered to employees. Thus the coincidence of these events is an example of *association and correlation not causation*.

One would not expect to see any market reaction to the survey as companies had already been disclosing the effect of the new standard. As far as reaction to the accounting rule itself and subsequent disclosures, any market reaction observed and its direction (positive or negative) would result from one of three factors:

- (1) the disclosure requirement itself,
- (2) the curtailment of benefits, or
- (3) the level of health care costs.

Under the efficient market hypothesis, ceteris paribus, one would not expect to see any market reaction to the rule itself or the subsequent balance sheet disclosures unless the market (analysts) had previously done a poor job of estimating the level of a firm's health care liabilities.

Then the actual disclosure may contain surprises ('good' and 'bad') triggering market reaction

Under the 'economic consequences' hypothesis one would expect to see market reaction, primarily at the time of the adoption of the new rule. The direction would presumably be negative, unless it is assumed that the market anticipates that the disclosure rule will force firms to curtail future benefits. The curtailment may be perceived as being positive as it lowers future costs.

Under any approach, the results must be understood in the context of rising health care costs. Any results indicating that firms that have a higher burden of health care costs perform poorly relative to firms whose health care costs are not as high may be measuring reaction to rising health care costs rather than to the new accounting and disclosure requirement. This point would be especially relevant if the research did not focus on the period (days) immediately surrounding the new disclosure requirement.

5 - 9

A. To determine abnormal returns, one must abstract from general market conditions as well as industry factors. Overall market indices rose by 1% to 2%, much less than the increases in Amgen (6.3%) and Deere (5.2%) and, in the opposite direction, the 16.9% decline in Dell. Thus, ignoring industry factors all three firms could be said to exhibit abnormal returns.

When we consider industry factors, the answers become more complicated. As the index for computer stocks increased slightly, it would be safe to argue that the decline in Dell is firm-specific and would qualify as an "abnormal" return. To a lesser extent, a similar argument can be made for Deere as the overall industry index for heavy machinery increased by only 2.9%; Deere's increase was substantially higher. However, this conclusion would depend on Deere's "beta" relative to the industry index. If it was very high then Deere's high return would be

considered industry rather than firm related.

For Amgen, it would seem that its increase of 6.3% was industry-specific (rather than firm-specific) as the biotechnology index increased by a similar 5.4%. However, the industry index may itself be affected by firm-specific events (see Part E to this problem). Amgen is a component of the biotechnology index. Thus the change in that index may reflect the firm-specific change in Amgen rather than industry wide factors. To remedy this problem, an industry index without Amgen would have to be constructed and used. Additionally, to the extent that news about one firm provides information about other firms in the industry, it is difficult to argue that the market reaction was not related to Amgen simply because it affected the shares. Of other firms in the same industry. Similar arguments can, of course, be made for the other industry indices.

B. The efficient market hypothesis does not hold that the market is omniscient; only that it correctly and rapidly processes available information. If the information about Amgen's earnings was not known earlier, then the negative reaction at the time of the announcement would be totally consistent with the efficient market hypothesis. Only if there existed prior public information in the form of lower orders for example, that could have permitted the market to anticipate the earnings disappointment, would the lack of anticipation be an example of market inefficiency.

We are ignoring the strong form of the efficient market hypothesis, that holds that even nonpublic information is reflected in prices as insiders trade on it. In Amgen's case, one would have to know when the insiders became aware of the disappointing earnings expectation and whether they had the time or opportunity to trade on it.

For Dell, the question of market inefficiency seems to be more relevant. Only a month earlier, Dell had hit an all-time high of approximately \$50. This raises the first question: how did this happen? What news (seemingly completely contrary to present news about the firm) did the market react to then? Since then, the stock had declined by about 30% prior to February 24. Obviously, the market had wind of the

negative news prior to the February 24th announcement. The question now becomes: why wasn't the full reaction immediate? Why did the decline take over a month? To answer these questions, more information would be required as to the pattern of news relating to Dell appearing in the last month.

C. The existence of abnormal returns would be an indicator of reaction to firm-specific news. Thus, as argued in part A, it appears that Dell's market reaction was related to the news item. However, the strongest argument can be made for Amgen. The reaction was over a very short time horizon (one half-hour) after the normal market close, it immediately followed the release of the news item, and it was in the opposite direction to the stock's movement prior to the news release.

D. It is difficult to determine the 'cause' of the market reaction because there are confounding news items:

- (i) the reduction of the long-term profit goal; and
- (ii) the withdrawal of the stock issue.

Which of these items is "responsible" for the market reaction is difficult if not impossible to determine.

E. (i) In this part, we assume that the Amgen effect is not large enough to significantly affect the Biotechnology index.

The actual change in Amgen occurred after the market closed on February 24. On that day the biotechnology index was positive, and as we argued in part C, Amgen's reaction is surely a result of the news item. However, by using February 25 as the announcement date, when the index was negative, a researcher may erroneously conclude that the reaction was industry related.

(ii) The evidence about the components of the index clearly indicate that the index was significantly affected by Amgen. The assumption made in (i) does not hold. However, since the index is affected by Amgen, by using the index to abstract industry wide effects, the researcher would erroneously conclude that the Amgen effect was industry related when the correct conclusion was the reverse. The industry effect was caused by Amgen (Also see discussion earlier for questions 3 and 7A.)

F. One would expect to see little or no market reaction after the financial statements are released as all the information was anticipated by then. The market reaction will depend on how the actual earnings report compares with that expected (not just with prior year earnings).

This does not mean that financial statements in general are irrelevant. As discussed in previous questions (see 12), relevance should not be based on one statement but rather on the whole system of accounting reports. After all, the market reacted to a forecast of a number produced by that system. It is difficult to argue then that financial statements are irrelevant. Moreover, the detailed income statement will contain the components of earnings and may explain why earnings were disappointing (were gross margins too low, was selling expense too high, did research expense increase, did the tax rate rise, etc.). Taken together with the balance sheet (e.g. inventory levels) and cash flow statement (cash from operations) the statements may contain data that help the market forecast future earnings and cash flows. [At times, the market may first react to an earnings release in one direction, then reverse direction when details of the earnings report become available, casting new light on the results.]

G. Changes in production (and demand) ultimately affect profitability. Financial statements are useful in determining how such changes affect profitability. They provide information about a firm's operating and financial leverage, and provide a historical record of how previous changes in volume affected profitability.