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OF FINANCIAL STATEMENT DISCLOSURES:  
THE CASE OF LIFO INVENTORY LIQUIDATIONS

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**THE INCREMENTAL INFORMATION CONTENT OF FINANCIAL STATEMENT**

**DISCLOSURES: THE CASE OF LIFO INVENTORY LIQUIDATIONS**

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## 1. INTRODUCTION

Evidence exists indicating that annual earnings numbers convey information to investors that is relevant to the pricing of common stocks for publicly traded companies (e.g., Ball and Brown [1968], Beaver, Clarke and Wright [1979]). However, comparatively little is known about the information content of the more comprehensive disclosures regarding earnings and earnings components that are provided in the complete text of a firm's financial statements and the accompanying footnotes.<sup>1</sup> These disclosures are typically not available to investors at the time summary earnings information is released, because earnings announcements generally precede, by several weeks, the public release of complete financial statements in annual reports to shareholders and SEC Form 10-K filings.

Recent research on the information content of accounting numbers other than earnings is aimed at determining whether information beyond "bottom line" earnings numbers is useful, at the margin, for explaining the behavior of share prices. Examples include Lipe [1986] on the information content of earnings components, and Wilson [1986a, 1986b] and Rayburn [1986] on the incremental information content of the accrual and cash flow components of earnings. These studies have examined a subset of the nonearnings data in financial reports, concentrating on well-defined components of earnings, and related accruals, that are

standard financial statement disclosures. Beyond these standard items, additional data regarding the components of earnings are often disclosed in footnotes rather than in the financial statements.

To date, questions regarding the information content of footnote disclosures have received relatively little attention. In particular, existing research has not addressed the following questions. Are such disclosures useful in interpreting the more timely message conveyed by summary announcements of annual earnings? That is, do the more comprehensive disclosures provided in financial statements contain incremental information that is relevant to the pricing of firms' securities? If they do, then when is this incremental information impounded in share prices?

In principle, the time lag between earnings announcements and the public distribution of complete financial statements can be used to structure tests of the incremental information content of the details underlying reported earnings disclosed in financial statements.<sup>2</sup> A disclosure item thought to be useful in the proper interpretation of reported income figures, and one that must be provided in firms' financial statements, is the amount of reported earnings attributable to liquidations of LIFO inventories. This paper investigates the questions of (1) whether disclosures about LIFO inventory liquidations contain information that is

relevant to the pricing of firms' securities and (2) when this information is assimilated by the market, by documenting the abnormal share price reaction during periods surrounding earnings announcements and the public release of financial statement data for firms making these disclosures.<sup>3</sup>

For firms reporting first occurrences of LIFO liquidations during the period 1979 to 1983, the abnormal share price reaction observed at annual earnings announcement dates and financial statement release dates is zero, on average. This would be consistent with the proposition that, on average, the market discounts the earnings impacts of these events at or before the time earnings are announced. However, cross-sectional tests reveal that cumulative excess returns during the ten-day period surrounding the financial statement release date are positively associated with the earnings impacts of these events. While such a cross-sectional relation is evidence that financial statement disclosures of LIFO liquidations have incremental information content, the direction of this relation is opposite to what one would predict if these disclosures were interpreted as providing unfavorable information about the quality of earnings previously reported.

The rest of the paper is organized as follows. In Section 2, I consider alternative hypotheses about the potential information content of disclosures about LIFO inventory liquidations. The

relevance of certain institutional features of the disclosure environment is discussed in Section 3. The data are described in section 4; and results on the abnormal share price reaction to disclosures of LIFO liquidations are presented in section 5. Section 6 summarizes the paper.

## **2. THE POTENTIAL INFORMATION CONTENT OF DISCLOSURES ABOUT LIFO LIQUIDATIONS**

As a starting point, consider why financial statement disclosures of LIFO liquidations are required when there is a material impact on reported earnings.<sup>4</sup> LIFO liquidations take place whenever reductions of inventory quantities occur in "pools" of LIFO inventories. When inventory prices are rising, such liquidations trigger the accounting recognition of unrealized holding gains on inventories.<sup>5</sup> Hence, investors may regard this component of earnings as a transitory "paper profit," not indicative of a firm's ability to generate future cash flows, and conclude that the "quality" of reported earnings is lower than if such a transitory gains were not included.

If this component of earnings is not separately disclosed at the time summary announcements of earnings are made, then investors may initially assess this transitory component of earnings as representative of the future cash generating potential of firms that liquidate LIFO inventories. If so, then one would



expect to observe, on average, a negative abnormal share price reaction for these firms when they subsequently disclose that a portion of their earnings are "paper profits" from LIFO liquidations, and that this reaction would vary with the magnitude of the liquidation component of reported earnings. This prediction will be labeled an information correction response, because the share price response would correspond to a "correction" of the market's previous assessment of the future cash generating potential of these firms, based on more complete information regarding the composition of the "bottom line" figures supplied in earnings announcements.

LIFO inventory liquidations also trigger the realization of unrealized holding gains on inventory for tax purposes; so, there is generally a tax cost to liquidating LIFO inventories. These negative tax consequences provide additional reasons for predicting a negative share price response to disclosures of LIFO liquidations.<sup>6</sup> However, specific tax consequences will depend on the tax status of the firm. If a firm would otherwise have positive taxable income (or a net operating loss that could be carried back to offset taxable income in prior periods) then the tax cost would be the additional taxes payable (or tax savings foregone) computed at the firm's marginal tax rate. If a firm was in a net operating loss carryforward position, then liquidating LIFO inventories would reduce the amount of loss carryforwards

that could be used to offset taxable income in future periods; so the tax cost would be the present value of the additional taxes that could be avoided in the future if these gains were not realized currently. There would be no tax cost to liquidating LIFO inventories in cases where net operating loss carryforwards could not otherwise be used; in fact, here the firm benefits by permanently avoiding taxation on the gains realized.

Alternative hypotheses about the information content of disclosures about LIFO inventory liquidations involve the potential significance of the operating decision to liquidate LIFO inventories. Because of the associated tax cost, the liquidation of LIFO inventories may be a credible signal regarding management's future plans or expectations. For example, observing that a firm has liquidated LIFO inventories could be interpreted as evidence of a relatively permanent reduction in the optimal level of inventories, for at least some segment(s) of the firm. Unfortunately, such an interpretation does not lead to unique implications for security price behavior. It could indicate an unfavorable change in management's expectations about expected future sales levels or the overall demand for a company's products; and this could have negative implications for share prices. On the other hand, it might indicate that management intends to scale back its activities in currently unprofitable lines of business, or implement improved inventory management practices which the market could interpret as "good news."

Wilson [1986b] suggests another possible link between firms' operating decisions and stock price behavior that is consistent with available empirical evidence. His results on the information content of cash from operations indicate that firms reporting unexpected positive (negative) cash from operations experience positive (negative) returns during the period surrounding the release of their annual reports. Because his results were observed during an economic downturn (1981-1982), they could be viewed as consistent with the market rewarding firms for being responsive to changes in economic conditions, such as demand swings for their products, by cutting back on inventories and receivables, and, in the process, increasing cash from operations.

Obviously, many other decisions affect cash from operations. But, because of the associated tax cost, liquidating LIFO inventories might be viewed as more permanent than liquidating inventories costed on some other basis or other types of operating assets, which could be drawn down at the end of a year and then replenished as a balance sheet "window dressing" technique. Thus, if Wilson's conjectures as to why unexpected cash from operations has information content are correct, then operating decisions to liquidate LIFO inventories may have special significance; and one could expect positive abnormal share price behavior to accompany at least some disclosures of LIFO inventory liquidations.

### 3. THE DISCLOSURE ENVIRONMENT

This section describes how tests were structured to detect an information correction response to LIFO liquidations. Two different "event dates" are used: (1) the date on which the summary earnings announcement appeared in the Wall Street Journal, and (2) the date that financial statements for firms disclosing LIFO liquidations were first released to the public. Henceforth these two dates will be referred to as the "earnings announcement date" and the "financial statement release date," respectively.

Because LIFO adjustments are based on the level of year-end inventories for tax purposes, financial statement disclosures of LIFO liquidations were expected to be primarily a fourth-quarter phenomenon. Generally accepted accounting principles (APB Opinion No. 28, paragraph 13) specify that companies shall not recognize income from liquidations of LIFO inventories at interim reporting dates if it is expected that inventories will be replenished by year-end. Therefore, tests were structured around the release of annual earnings and annual financial statements for firms disclosing LIFO liquidations.

Most companies announce annual earnings in summary form, via a press release, some time prior to the public distribution of a complete set of financial statements. Company press releases are prepared for limited distribution to members of the financial press and security analysts, and are the basis for publication of

the "earnings announcement" in the Wall Street Journal "Earnings Digest" column, and similar coverage by other media (e.g., the "Broad Tape"). Typically, complete financial statements are first released to the public at a later date, either as part of the firm's annual report to shareholders, or as part of the firm's 10-K report filed with the SEC. Thus the first public release of annual financial statements would ordinarily be the earlier of the release dates for these two reports.

Tests of an information correction response rely on earnings announcements and disclosures of LIFO liquidations occurring on separate dates. Contemporaneous disclosures of the earnings impacts of LIFO liquidations are made in some firms' news releases containing earnings announcements; and, in those instances, one would not expect to observe an information correction response. Also, to argue that an information correction response should be observed implies that the market does not fully anticipate LIFO liquidations and their consequences for reported earnings when summary announcements of earnings are made. However, even if the market forecasts a LIFO liquidation, it is not clear that the dollar impact on reported earnings can be estimated before it is disclosed in a firm's financial statements. Because the dollar impact depends on the composition of individual pools of LIFO inventories, it is not a straightforward task to estimate this amount.<sup>7</sup>

If LIFO liquidations are unexpected, their earnings impact is a component of unexpected earnings at the earnings announcement date. Thus, a positive average share price reaction is predicted at the earnings announcement date for unexpected LIFO liquidations. An information correction response would then consist of a reversal reaction: positive abnormal share price performance at the earnings announcement date and negative abnormal performance at the financial statement release date, with the absolute magnitudes of the abnormal share price responses a function of the earnings impacts of LIFO liquidations.

All occurrences of LIFO inventory liquidations may not be equally informative or "surprising" to the market, since firms that have previously liquidated LIFO inventories may be more likely to experience current period LIFO liquidations. If at least some LIFO liquidations are unexpected events, then the market's expectation of the earnings impacts of these events can be assumed to be something very close to zero. All other things equal, first occurrences of LIFO liquidations are more likely to be unexpected than later occurrences; hence, tests on first occurrences should have the greatest potential for detecting a share price response to these disclosures.

#### 4. DATA

Competing sources of information make it difficult to identify the date on which complete financial statements are first publicly available. During the period studied here, financial statements filed with the SEC were date-stamped when received; they were processed; and then (at about the same time that these financial statements were shipped to Disclosure Inc., in Bethesda, MD.) copies were made available for public inspection in Washington, D.C., at the SEC office. In turn, Disclosure Inc. would reproduce these documents on microfiche and distribute them to its subscribers. However, as soon as they were shown as "received" on Disclosure Inc.'s computer system, paper copies of these documents were also available on an "immediate shipment" basis from Disclosure Inc.'s "demand services," to any customer willing to pay the hard copy reproduction costs and express service charges.

In principle, these same documents could have been obtained faster (presumably at a higher cost) from other "information companies," which operate directly out of the public document room at the SEC. Nevertheless, these other private companies do not eliminate the inevitable processing lag at the SEC, which is typically greatest during peak filing periods (such as the March 31 deadline for 10-K reports for calendar year firms). Once these documents were processed by the SEC, they could usually be made

available by Disclosure Inc.'s "demand services" within a couple of days. Therefore, the dates on which such documents were recorded as "received" by Disclosure Inc. should be a consistent indicator of the latest date that documents became publicly available through the SEC.

For the empirical work reported here, Disclosure Inc.'s "received dates" were used to represent the public release dates for annual reports and 10-K statements. Typically if one of the two Disclosure Inc. "received dates" was missing, it was the "received date" for the annual report. In the majority of cases both of these dates were available; and the "financial statement release date" was defined as the earlier of these two dates. Where only one of these dates was available, the "financial statement release date" was defined to be the available date.

Firms disclosing LIFO inventory liquidations were identified by examining the text of financial statements in annual reports on the NAARS database for instances of these disclosures, for the years 1979 through 1983.<sup>8</sup> The appendix to this paper outlines the process of identifying occurrences of LIFO inventory liquidations in more detail, and describes characteristics of the population. Data on these disclosures were collected from all reports (identified in this search) that belonged to New York and American Stock Exchange firms, for which daily common stock returns data were available on the CRSP database. The disclosures included in the final sample met the following data requirements.



- (1) The disclosure contained a dollar amount for the effect of the liquidation on income from continuing operations. This eliminated disclosures where the earnings impact was described as immaterial, and LIFO liquidations where the earnings impact was reported in the discontinued operations section of the income statement, which is separately reported in earnings announcements appearing in the Wall Street Journal Earnings Digest.
- (2) A Wall Street Journal earnings announcement date for the release of fourth quarter earnings was available from the COMPUSTAT quarterly industrial file.
- (3) A financial statement release date that followed the earnings announcement date was available from Disclosure, Inc. This date followed the earnings announcement date by an average of 27 trading days.

These data requirements were satisfied for 692 annual report disclosures of LIFO liquidations. Then, to remove instances where a liquidation disclosure was made prior to the release of annual financial statements, occurrences of LIFO liquidations were eliminated from the sample if either of the following two conditions held.

- (4) Prior disclosure of the LIFO liquidation was found in an earnings announcement or in another news item appearing on the "Broad Tape," accessed through the Dow Jones News

Retrieval Service.<sup>9</sup> A total of 107 occurrences of LIFO liquidations were preceded by such disclosures.

- (5) Information in the annual report indicated that a portion of the earnings impact had been taken into income in the first through third fiscal quarters. This was the case in 43 occurrences of LIFO liquidations.

Imposition of conditions (4) and (5) jointly eliminated 133 cases. This reduced the sample to 559 occurrences of LIFO liquidations, disclosed by 272 different firms during the years 1979 through 1983. Thus, on average, each firm disclosed approximately 2.5 LIFO liquidations during this five-year period. Table 1 describes the frequency with which LIFO liquidations occurred for the sample firms during these years.

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Insert Table 1 about here.

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The main objective of condition (4) was to exclude instances where disclosures of LIFO liquidations were included in fourth quarter earnings announcements; however such disclosures were found in other news items as well. There were 71 cases of disclosures contemporaneous with "preliminary" announcements of fourth quarter earnings, one case where disclosure was made in a "final" earnings announcement at a later date than the

"preliminary" announcement, and two cases where such disclosures accompanied management forecasts of earnings. In the remaining 33 cases, disclosure was made in announcements of first through third fiscal quarter earnings.

Condition (5) was imposed to eliminate additional instances of prior disclosures at interim reporting dates, where information available in the annual report indicated that the fact that LIFO inventories were being liquidated had probably been disclosed in a 10-Q report.<sup>10</sup> Where separate first through third quarter earnings impacts were not indicated in a firm's annual report, it was assumed that the entire annual earnings impact of a LIFO liquidation was taken into income in the fourth quarter.

The use of information about quarterly earnings impacts contained in annual reports was an incomplete means of identifying instances where first through third quarter disclosures had taken place. A total of 54 occurrences of LIFO liquidations were disclosed in first through third quarter earnings announcements appearing on the "Broad Tape" (21 cases where the liquidation was also disclosed in the fourth quarter earnings announcement, and the 33 cases where it was not). Of these, only 7 would have been eliminated because of condition (5). This suggests that a substantial number of cases remain in the sample where liquidations could have been first disclosed in interim reports. However, a simple extrapolation of the frequency of LIFO

liquidations disclosed in first through third quarter earnings announcements on the "Broad Tape" would overstate the actual frequency of interim report disclosures of LIFO liquidations if the probability that a liquidation is disclosed via the "Broad Tape" and the probability that a liquidation is booked at an interim reporting date are both increasing functions of the magnitude of the liquidations.

Classification of LIFO liquidations as either first occurrences or later occurrences was done prior to the elimination of observations with prior disclosures, and also used comparative information about 1978 LIFO liquidations appearing in 1979 annual reports. Thus, disclosures for 1979 were classified as first occurrences if the comparative disclosures in the 1979 annual report did not indicate that a liquidation had occurred in 1978. Although some firms reporting LIFO liquidations that were classified as first occurrences may have disclosed liquidations in years prior to 1978, this procedure seemed reasonable given that 85 percent of the later occurrences were cases where a LIFO liquidation was disclosed one year earlier.

Because the likelihood of a firm liquidating LIFO inventories may depend on general economic conditions, it is useful to know whether LIFO liquidations are concentrated in particular years. Table 2 shows the annual incidence of LIFO liquidations in the sample, for the years 1979 through 1983, with first occurrences

and later occurrences of LIFO liquidations shown separately. This table shows that LIFO liquidations became more frequent within the sample over the years 1979-1982, and then tapered off in 1983. First occurrences of LIFO liquidations, however, were more evenly distributed across the entire five-year period, with the peak years being 1980 and 1982. These same observations would characterize the sample before instances of prior disclosures were removed.

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Insert Table 2 about here.

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Some additional descriptive information is helpful in understanding how first occurrences of LIFO liquidations may differ from later occurrences. Loss carryforwards at the end of the year in which the liquidation was reported were indicated on COMPUSTAT for 9 percent of the first occurrences and 16 percent of the later occurrences of LIFO liquidations in the sample, with an overall frequency of loss carryforwards of 13 percent. This suggests that the presumption that there is a current period tax cost to liquidating LIFO inventories is a reasonable one, particularly for the first occurrence subsample.

Also, as a measure of the extent to which LIFO liquidations are associated with changes in reported inventories, the ending inventory balance (in dollars) decreased from the balance a year

earlier 28 percent of the time for first occurrences of LIFO liquidations versus 63 percent for the later occurrences (50 percent for sample as a whole). This indicates that first occurrences of LIFO liquidations would be more difficult to predict from changes in aggregate inventory balances.

Cross-sectional tests of the association between abnormal share price behavior and the earnings impacts of LIFO liquidations will use a relative earnings impact variable, created by scaling the per share earnings impact of each LIFO liquidation by the firm's share price at the end of the fiscal year for which the liquidation was reported. Because the sample was not restricted to firms with positive earnings, scaling by reported earnings would not be a useful procedure. Scaling by share price avoids the problem of negative denominators.

Table 3 describes the distribution of this relative earnings impact variable. As shown there, most of the relative earnings impacts of LIFO liquidations are small, ranging between zero and one percent of the market value of equity. However, to put these numbers in perspective, one must make some assumptions about the effect of unexpected earnings on share prices. For example, assume an earnings multiplier of three; that is, \$1 of unexpected earnings produces a \$3 change in share price. Then, an earnings impact of one percent of share price would translate to an unexpected return of three percent. Earnings impacts were greater

than one percent of share price 42 percent of the time across all occurrences of LIFO liquidations in the sample, with 36 percent of the first occurrences and 45 percent of the later occurrences having relative earnings impacts greater than one percent. Thus, the prospects for finding a statistically detectable share price reaction seem reasonable, at least for the liquidations with larger relative earnings impacts.

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Insert Table 3 about here.

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LIFO liquidations eliminated from the sample because of prior disclosures had somewhat larger earnings impacts than the liquidations remaining in the sample. Of the liquidations disclosed in news stories carried on the "Broad Tape," 58 percent had earnings impacts exceeding one percent of share value. Also, of the liquidations for which first through third quarter earnings impacts were indicated in annual reports, 49 percent had relative earnings impacts greater than one percent. This reinforces the notion that liquidations disclosed in news stories and in quarterly reports differ in magnitude from those disclosed only in the annual report.

## 5. EMPIRICAL RESULTS

### 5.1 EXCESS RETURN METRICS

Given that there is uncertainty about when the information content of financial statement disclosures would be impounded in share prices, excess returns were measured over several intervals of trading days surrounding earnings announcement dates and financial statement release dates, for each event (an occurrence of a LIFO liquidation). Daily stock price data were used to construct all measures of excess returns. Results are reported for alternative measures of daily excess returns: market adjusted returns and market model residuals, calculated as follows:

$$\text{Market adjusted returns: } ER_{it} = R_{it} - R_{mt} \quad (1)$$

$$\text{Market model residuals: } ER_{it} = R_{it} - (a_i + b_i R_{mt}) \quad (2)$$

where:

$ER_{it}$  = excess return on the common stock of firm  $i$  on day  $t$ ;

$R_{it}$  = return on the common stock of firm  $i$  on day  $t$ ;

$R_{mt}$  = return on the CRSP equally weighted New York and American Stock Exchange index on day  $t$ ;

$a_i, b_i$  = ordinary least squares estimates of market model parameters. The parameters are estimated over a period of up to 239 trading days (a minimum of



100 days required), day -589 through day -351, relative to the earnings announcement date.

The period for estimating market model parameters was chosen so as to exclude observations from the fiscal year for which a particular liquidation was reported, so that events leading to the liquidation of LIFO inventories (e.g., lower than expected sales) will not influence estimates of market model parameters. This influence may still be a concern, especially for later occurrences of LIFO liquidations where there was also a liquidation in the preceding year. This concern can be addressed by comparing the results across returns metrics.

Let  $t$  denote a day in event time, defined relative to the event date of interest (either the earnings announcement date or the financial statement release date). On each event day,  $t$ , the excess returns,  $ER_{it}$ , were averaged across  $N_t$  firms in the sample (or subsample) to form an average excess return,  $AER_t$ , calculated as:

$$AER_t = (1/N_t) \sum_{i=1}^{N_t} ER_{it}. \quad (3)$$

An estimate of the standard deviation of this series,  $S_{AER}$ , was calculated for the 100 trading days +101 to +200, again defined relative to the event date of interest. The cumulative average

excess return over a window period of  $k$  days, from  $t$  to  $t+k$ , is:

$$CAER_{t,t+k} = \sum_{j=t}^{t+k} AER_j. \quad (4)$$

The significance of this cumulative average excess return can be evaluated using the test statistic:

$$t = CAER_{t,t+k} / k^{1/2} S_{AER}. \quad (5)$$

This test statistic will have a  $t$ -distribution with 99 degrees of freedom if the average excess returns,  $AER_t$ , are normally distributed and independent over time. It incorporates any cross-sectional dependence in daily excess returns that might result from event dates being aligned in calendar time. Because many of the release dates for 10-K reports are concentrated near the end of the 90-day filing deadline, the potential for cross-sectional dependence in excess returns is greatest for event windows defined relative to the financial statement release date.

## 5.2 TESTS OF THE AVERAGE SHARE PRICE REACTION TO LIFO

### LIQUIDATIONS.

Table 4 reports tests of the average share price reaction during various periods surrounding the earnings announcement date (E) and the financial statement release date (F) for firms disclosing LIFO liquidations. Results are presented for all 559

occurrences of LIFO liquidations and separately for both first occurrences and later occurrences.

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Insert Table 4 about here.

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Panel 1 of table 4 contains results for the earnings announcement date and the day before it, to capture the effects of earnings announcements that appear on the "Broad Tape" the day prior to their publication in the Wall Street Journal. In panel 1, statistically significant positive excess returns are observed around earnings announcements for the later occurrences of LIFO liquidations; however, since the variability of excess returns on earnings announcement days is greater than the variability of excess returns during other periods, the significance levels of the t-statistics should be discounted. Also, in absolute terms, the average share price response is modest (about three-fourths of one percent for the two days combined). In contrast, for first occurrences, there is no evidence of an average share price response over this two-day period. Significant results in panel 1 for all occurrences of LIFO liquidations are driven primarily by the results for the later occurrences.

Panels 2 through 4 in table 4 present results for various window periods near the financial statement release date. The only significant t-statistics in these panels are observed during

trading days F+1 through F+10, where excess returns are positive, but this result is not consistent across return metrics. Also, although not reported in table 4, cumulative excess returns were also computed over the period following the earnings announcement date and ending on the financial statement release date (E+1 through F). Excess returns over this period were not significantly different from zero.<sup>11</sup> Thus, overall, there is no evidence of a significant average share price response to the release of financial statements containing disclosures about LIFO liquidations.

### **5.3 THE CROSS-SECTIONAL RELATION BETWEEN EXCESS RETURNS AND EARNINGS IMPACTS**

Tests reported in table 4 of the average market response to LIFO liquidations did not use information on the reported earnings impacts of these events. Because most of the reported earnings impacts are small, relative to share prices, tests of the average market response might be weakened by inclusion of liquidations with negligible earnings impacts. If liquidations with larger earnings impacts should produce the greatest share price response, then cross-sectional tests of the relation between excess returns and relative earnings impacts may have greater potential for detecting a systematic share price response to these disclosures.

To test for such a relation, cumulative excess returns for the event periods surrounding the earnings announcement date and the financial statement release date were initially regressed on the relative earnings impacts of LIFO liquidations. However, because the distribution of the relative earnings impacts is so heavily skewed toward the larger values, the results were found to be extremely sensitive to outliers. To avoid the problem with outliers, Spearman rank correlations between cumulative excess returns and relative earnings impacts were computed for these event periods, and the results are presented in table 5.

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Insert Table 5 about here.

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In panel 1 of table 5, none of the rank correlations between excess returns at the time of earnings announcements and the relative earnings impacts of LIFO liquidations is significant. Thus, there is no evidence to suggest that the earnings impacts of LIFO liquidations are systematically related to the unexpected component of earnings. In particular, the positive average excess returns observed during this period for later occurrences do not appear to be a result of liquidations with large earnings impacts.

For periods surrounding the financial statement release date, there is evidence that excess returns are related to the relative earnings impacts of LIFO liquidations; however the sign of this

relation differs between the first occurrence and later occurrence subsamples. Significant rank correlations appear only in panel 4, for trading days F-4 through F+5. For first occurrences, there are significant positive rank correlations over this interval of trading days for both return metrics. In contrast, for later occurrences, negative rank correlations are observed over this interval, but only the one for market model residuals is (marginally) significant at the .05 level. These relations tend to offset one another, so across all occurrences of LIFO there is no association between cumulative excess returns and relative earnings impacts.

The fact that significant rank correlations are observed only in the interval of trading days surrounding the financial statement release date does suggest that the share prices are indeed responding to the release of financial statement information. But, only the negative relation between cumulative excess returns surrounding the financial statement release date and relative earnings impacts for the later occurrence subsample would be consistent with an information correction response. If this were to be interpreted as evidence of an information correction response, it is difficult to see why a positive relation should be observed for first occurrences, where LIFO liquidations are most likely to be unanticipated. Furthermore, the positive relation observed in the first occurrence subsample

is consistent across return metrics and appears to be stronger than the negative relation observed for later occurrences.

Further analysis was performed to assess the relative strength of these conflicting results. Data from all years were pooled to obtain the results reported in table 5, in order to obtain more powerful tests. Even though tests on fewer observations may be less powerful, if either of these relations represents a systematic market response to disclosures of LIFO liquidations, one would expect it to show up consistently within different years. Table 6 shows, year-by-year, the rank correlations between relative earnings impacts and cumulative excess returns for trading days F-4 through F+5.

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Insert Table 6 about here.

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In table 6, for first occurrences, positive rank correlations greater than .10 are observed in all years except 1980, although these correlations are reliably different from zero across both return metrics only in 1979, where they are based on only 27 observations. The rank correlations in 1979 are considerably larger than those in 1981-1983, which are of roughly the same order of magnitude as those obtained by pooling all years together. However, the positive rank correlations obtained for first occurrences by pooling all years together do not appear to

be driven by observations from 1979 or any other single year; if observations from any particular year are excluded, positive rank correlations that are significant at less than the .10 level would still be observed for the remaining observations.

In contrast, for later occurrences, the rank correlations are consistently negative across returns metrics only in 1982, where they are significantly different from zero. Excluding the 98 observations from 1982, the rank correlations for the 248 observations remaining are  $-.02$  for market adjusted returns and  $-.03$  for market model residuals, neither of which is reliably different from zero. Thus, the negative relation between relative earnings impacts and cumulative excess returns can be attributed to the year 1982.

Even though the rank correlation results for first occurrences are evidence that cumulative excess returns during trading days F-4 to F+5 are positively related to the earnings impacts of LIFO liquidations, the average share price response during this interval was very close to zero. The rank correlations are evidence that there is a differential share price response to liquidations with large versus small earnings impacts, but do not indicate how large this differential reaction may be. To provide some evidence on this issue, first occurrences of LIFO liquidations were partitioned into three groups of 71 firms each, according to the size of the relative earnings impacts of the



liquidations. Table 7 shows the cumulative average excess returns (CAERs) over trading days F-4 through F+5 for portfolios consisting of firms experiencing LIFO liquidations with low, medium, and high relative earnings impacts.

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Insert Table 7 about here.

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In the top panel of table 7, the partitions are based on the size of relative earnings impacts ranked across all years. Over this ten-day period, the low earnings impact portfolios experience CAERs of less than -1 per cent, compared with CAERs of more than +1.5 per cent for the high earnings impact portfolios. Although CAERs of this magnitude are not significantly different from zero for these 71 security portfolios, the returns on the high earnings impact portfolio and the low earnings impact portfolio are reliably different from each other. The differences between CAERs on the high and low earnings impact portfolios are 2.83 per cent ( $t = 3.25$ ) and 2.63 per cent ( $t = 3.01$ ) for market adjusted returns and market model residuals, respectively.<sup>12</sup>

Although only 20 firms in the first occurrence subsample reported tax loss carryforwards at the end of the year for which the liquidation was reported, differences in tax status might explain these results if loss carryforward firms were concentrated in the high earnings impact portfolio. The numbers of firms with

tax loss carryforwards in the low, medium, and high earnings impact portfolios were two, nine, and nine, respectively. However, when loss carryforward firms are excluded, the CAERs on the high earnings impact portfolios are even greater. So, differences in tax status do not explain why positive returns are observed on the high earnings impact portfolio while negative returns are observed on the low earnings impact portfolio.

To assess whether these results are due to a concentration of high and low earnings impacts in different years, first occurrences of LIFO liquidations were partitioned according to the size of the relative earnings impacts within each year, and the CAERs for portfolios of low, medium, and high earnings impacts over the interval F-4 through F+5 are shown in the bottom panel of table 7. When the partitions are based on relative earnings impacts within each year, CAERs on the low earnings impact portfolio remain about the same as before, while there is some shifting between the returns on the medium and high earnings impact portfolios. CAERs in excess of 2 percent are now observed on the high earnings impact portfolios, but they are still not significantly different from zero for these portfolios of 71 securities.<sup>13</sup> Now, the differences between CAERs on the high and low earnings impact portfolios are 3.42 percent ( $t = 3.88$ ) and 3.25 percent ( $t = 3.70$ ) for market adjusted returns and market model residuals, respectively.

Taken at face value, observing a positive relation between cumulative excess returns and the relative earnings impacts of LIFO liquidations is contrary to the prediction of an information correction response. Because this relation is observed in at least four out of the five years, and shows up where one would expect to find a market response to these disclosures (i.e., for first occurrences, in the ten trading days surrounding the financial statement release date) it is difficult to dismiss out of hand. At a minimum, this suggests that the failure to detect a negative average market response to these disclosures is not due to inclusion of LIFO liquidations with small earnings impacts, since positive returns are observed for the liquidations with the greatest relative earnings impacts.

Such a relation would be consistent with the market responding favorably to operating decisions which lead to the liquidation of LIFO inventories. The earnings impacts of LIFO liquidations could be a rough proxy for the amount of inventory liquidated, or the tax cost of the liquidation. However, assuming that first occurrences of LIFO liquidations are unexpected events, this explanation would be more convincing if there was a significant positive average price response to these disclosures, instead of offsetting positive and negative abnormal returns that on average are close to zero.

Nevertheless, observing differences in returns conditional on the earnings impacts of LIFO liquidations is evidence that these disclosures have information content. If LIFO liquidations may convey information about firms' operating decisions, it is possible that the cross sectional tests are picking up an effect that is similar to the market's response to unexpected cash from operations observed by Wilson [1986b]. As a bench mark, Wilson [1986b] reports cumulative market model residuals over a 9-day interval centered around the date that the annual report arrives at the SEC of -1.2 percent and 2.5 percent for portfolios consisting of firms with low and high unexpected cash from operations, respectively. Thus, cross-sectional differences in excess returns observed for first occurrences of LIFO liquidations are close to the same order of magnitude as those observed conditional on other information in financial statements.

Suggesting that financial statement disclosures of LIFO liquidations may contain information about management's operating decisions does not imply that any share price response observed would be uniquely attributable to these disclosures. Rather, the market could be responding to other information in financial statements, and disclosures of LIFO liquidations may be associated with the real variable of interest. In particular, changes in inventory have not been controlled here; and, although LIFO liquidations are not directly tied to changes in aggregate

inventory balances, they would not be totally independent of one another.

## 6. SUMMARY

This paper documented the share price response to the earnings attributable to LIFO inventory liquidations. Eliminating instances of disclosures concurrent with earnings announcements, interest centered on first occurrences of LIFO liquidations, since they are less likely to be anticipated by the market than later occurrences. If first occurrences of LIFO liquidations are unexpected events, and this component of earnings is not separately disclosed with earnings, they should give rise to the sort of positive abnormal share price behavior at the earnings release date that is generally associated with positive unanticipated earnings. Further, if the earnings impacts of LIFO liquidations are first disclosed in financial statements, then arguing that these earnings are transitory "paper profits," one would expect to observe an information correction response, characterized by negative abnormal returns at the financial statement release date. Tests of the average share price response to these disclosures did not reveal evidence of any abnormal share price performance at either the earnings announcement date or the financial statement release date that is consistent with these predictions. In particular, the lack of an average share price

response at earnings announcement dates is indirect evidence consistent with the proposition that, on average, the market discounts the earnings impacts of first occurrences of LIFO liquidations at or before the time earnings are announced.

Cross-sectional tests provide some evidence that these disclosures have information content at financial statement release dates, but this evidence is contrary to an information correction response. Cumulative excess returns during the ten-day period surrounding the financial statement release date are positively associated with the earnings impacts of first occurrences of LIFO liquidations; and cumulative average excess returns for firms disclosing high earnings impacts are positive and significantly different from those for firms disclosing low earnings impacts, which are negative. While this might be interpreted as evidence that, instead of an information correction response, the market responds favorably to operating decisions to liquidate LIFO inventories, this explanation does not fit all the data because the cross-sectional results pertain to return differences; and, on average, there is a zero price response at the financial statement release date.

Perhaps the most important limitation of this study is that it lacks an expectations model for LIFO liquidations. Thus excessive reliance may have been placed on the notion that first occurrences of LIFO liquidations are unexpected events. Also,

because the first occurrence subsample undoubtedly still includes instances where LIFO liquidations were originally disclosed in interim reports, tests of the average market response to these disclosures may be weak because the release dates for annual earnings and annual financial statements are not the proper event dates for many of these firms. But, if nonzero share price performance was experienced by the subset of firms which are true first occurrences, and excess returns for the remaining firms were just noise, there should at least be some tendency toward a nonzero average share price response. Since the mean effects observed are very close to zero, yet there is evidence of cross-sectional differences in excess returns, it seems unlikely that the tests fail to detect an average price response because of the failure to eliminate all instances of interim disclosures.

**APPENDIX: DATA COLLECTION PROCEDURES**

The first step in obtaining the sample was to examine the incidence of disclosures regarding LIFO liquidations made by publicly traded firms during the five-year period ending with 1984. A search of the NAARS database for appropriate combinations of the words generally employed in footnotes disclosing LIFO liquidations revealed 1740 instances of annual reports containing such disclosures, representing 9.4% of the total number of annual reports on the NAARS system for these years. Table A-1 provides a year-by-year summary of the results of this search.

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Insert Table A-1 about here.

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Because companies repeat these disclosures in annual reports which contain prior years' financial statements for comparative purposes, the number of reports containing these disclosures overstates the actual frequency with which "current year" LIFO liquidations occurred for these firms. For example, a firm experiencing liquidations of LIFO inventory quantities in 1982 would disclose this fact in footnotes to its 1983 and 1984 annual reports, as well as in its 1982 report.

In general, disclosures of LIFO liquidations in a particular firm's financial statements were found in as many as three separate footnotes. Almost universally, the fact that a LIFO



liquidation had occurred was disclosed in the "inventories" note, which was either a part of the "summary of significant accounting policies" note or a separate note. Other notes found to contain disclosures regarding LIFO inventory liquidations were: (1) the note that reconciles annual earnings to the earnings reported in the first three quarters of the year, and (2) the note containing supplemental information on the effect of changing prices, which is required of approximately 1200 of the largest firms that file with the SEC. Of the latter two notes, only the "quarterly information" note contained useful information that was not otherwise disclosed in the "inventories" note; disclosures of LIFO liquidations in the "changing prices" note typically duplicated the information found in the "inventories" note.

Occasionally, the "changing prices" notes contained descriptions of the potential effects of a hypothetical LIFO liquidation; that is, how the changing prices disclosures would be interpreted should a LIFO liquidation take place in the future, where no such liquidations had actually taken place. Along much the same lines, electric utilities often disclosed that, should a LIFO liquidation occur in future periods, they would be required to make refunds to customers corresponding to the reduction in cost of sales attributable to the LIFO liquidation, so there would be no resulting impact on net income.

Only instances in which the actual dollar amount of the "earnings impact" of a LIFO liquidation was disclosed were considered to be valid cases for further analysis; i.e., disclosures indicating that the "earnings impact" was "immaterial" and disclosures describing the potential effects of hypothetical LIFO liquidations were eliminated from the analysis. Also since earnings from discontinued operations are separately reported in earnings announcements appearing in the Wall Street Journal Earnings Digest, cases where the earnings impact of a LIFO liquidation affected only income from discontinued operations were eliminated.

Data on the annual and (where disclosed) the quarterly impacts on earnings from continuing operations were collected from these disclosures, and coded as to whether the reported earnings impacts were after-tax amounts or before-tax amounts (i.e., effects on the cost of goods sold). Eighty-two percent of such disclosures were after-tax figures, and the remaining observations were converted to after-tax equivalents assuming a 50 percent tax rate. Where earnings impacts were disclosed as a total dollar amount, per share amounts were derived by dividing by the number of shares used to compute primary earnings per share from the COMPUSTAT annual industrial file.

FOOTNOTES

<sup>1</sup>In their review of market-based empirical research in accounting, which they describe as "a decade and a half of the most concerted and ambitious research effort in accounting history," Lev and Ohlson [1982] conclude that "empirical observations are consistent with the belief that earnings announcements provide timely and relevant information to individuals acting in the financial markets." Given the amount of research effort that has been devoted to market-based accounting research, they observe that "...it is somewhat surprising that the incremental (and marginal) information content of the extensive nonearnings data in financial reports has hardly been investigated," and that "...research could usefully focus on what information beyond earnings matters."

<sup>2</sup>In a more general context, Wilson [1986a,1986b] has taken advantage of the institutional structure surrounding the release of information about earnings to examine the incremental information content of accruals and cash flows.

<sup>3</sup>These questions could be important from a policy standpoint, because the Financial Accounting Standards Board (FASB) has recently been asked to resolve a number of financial reporting

issues related to use of the LIFO inventory method. If the FASB adds this project to its agenda, the form of LIFO liquidation disclosures is one issue to be considered. In particular, the FASB might decide to designate the income attributable to LIFO liquidations as an extraordinary item. This treatment would assure timely disclosure of this component of earnings, because extraordinary items are separately reported in summary announcements of annual earnings appearing in the Wall Street Journal Earnings Digest.

<sup>4</sup>Whenever a company "includes a material amount of income in its income statement which would not have been recorded had the inventory liquidation not taken place," the SEC requires disclosure of this component of income "in order to make the financial statements not misleading" (SEC Staff Accounting Bulletin 40, Topic 11F).

<sup>5</sup>SEC Regulation S-X, Rule 5-02.6 requires companies to disclose the amount of the so-called "LIFO Reserve," which consists of the difference between ending inventories as reported, at LIFO cost, and the "current cost" of ending inventories. This quantity represents the unrealized holding gain on inventories as of the balance sheet date.

<sup>6</sup>Also, to the extent that management compensation plans are based on reported accounting earnings, there may be an additional negative cash flow impact for a firm which liquidates LIFO inventories, when bonus payments are increased by some fraction of the earnings impact of the liquidation.

<sup>7</sup>Conversely, liquidations occurring in only a few of a firm's LIFO inventory "pools" will not necessarily lead to an overall reduction in LIFO inventory balances. A firm having only one pool of LIFO inventories that liquidates inventory quantities would always report a lower dollar amount for ending LIFO inventories than for beginning LIFO inventories, due to the removal of LIFO inventory layers, regardless of whether prices have increased or decreased during the period. However, for a firm having multiple LIFO inventory "pools," reported inventory balances will decrease from the beginning of a period to the end of a period only if that firm experiences a net liquidation of LIFO inventories across all inventory "pools" (where the effects of liquidating LIFO layers in some inventory pools are not offset by the effects of adding LIFO layers to other "pools" of LIFO inventories).

<sup>8</sup>Reports for firms with fiscal reporting periods ending within six months on either side of the end of a calendar year were classified with reports for that calendar year. For example,

"1983 reports" include reports for fiscal reporting periods ending between July 1, 1983 and June 30, 1984, inclusive; these reports would be contained on the "83/84 Annual Reports" file on the NAARS database. Disclosures about LIFO liquidations appearing in annual reports for 1984 were not considered for inclusion in the sample because the "84/85 Annual Reports" file on the NAARS database was incomplete at the time the sample was selected.

<sup>9</sup>These news items were located by a "key word" search of all news items issued by sample firms over the years 1979-1983 containing "LIFO" or "last-in-first-out." As a check on the accuracy of this procedure, fourth quarter earnings announcements were located for occurrences of LIFO liquidations where the "earnings impact" of the liquidation was greater than five percent of the market value of equity. Of 51 such cases, only 47 fourth quarter earnings announcements could be located, and a review of these announcements revealed only one case, where "LIFO" was incorrectly spelled as "LIFE," in which the "key word" search had failed to locate a disclosure of a LIFO liquidation.

<sup>10</sup>Because the requirement to disclose the "earnings impacts" of LIFO liquidations is a SEC disclosure rule, and quarterly reports to shareholders often contain abbreviated financial statements with few additional disclosures, it is not clear that

they would necessarily contain disclosures of interim LIFO liquidations. Even though footnote disclosure of supplemental information can be omitted from 10-Q filings, disclosures of LIFO liquidations would appear to fall under the category of "disclosures necessary for fair presentation" that (under SEC Accounting Series Release 286) must be provided with financial statements in 10-Q reports.

<sup>11</sup>Test statistics based on standardized cumulative excess returns described in Brown and Warner (1985) were used to adjust for the varying numbers of days in the window periods between the earnings announcement date and the financial statement release date, since test statistics used in table 4 are not readily adaptable to excess returns cumulated over varying numbers of trading days. Although these test statistics are undoubtedly biased upward, because they assume cross-sectional independence of excess returns, none was significant.

<sup>12</sup>Estimates of the standard errors for these return differences were based on the standard errors of the differences in excess returns on the high and low earnings impact portfolios during the 100 trading days F+101 through F+200. Thus, the test statistics incorporate any cross sectional dependence between excess returns both within and across portfolios.

<sup>13</sup>The t-statistics for these returns, the largest in absolute value appearing in table 7, are 1.49 and 1.51 for market adjusted returns and market model residuals, respectively.



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TABLE 1

Frequency of Occurrences of LIFO Inventory Liquidations for Sample Firms:  
1979 through 1983.

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<u>Number of Occurrences</u>	<u>Number of firms</u>
1	109
2	74
3	60
4	23
5	<u>6</u>
TOTAL	<u>272</u>

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TABLE 2

LIFO Inventory Liquidations for 272 Sample Firms, Classified as First or Later Occurrences, by Years: 1979-1983.

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<u>Year</u>	<u>All Occurrences</u>	<u>First Occurrences</u>	<u>Later Occurrences</u>
1979	54	27	27
1980	97	56	41
1981	110	43	67
1982	165	67	98
1983	<u>133</u>	<u>20</u>	<u>113</u>
TOTALS	<u>559</u>	<u>213</u>	<u>346</u>

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TABLE 3

Distribution of the Relative Earnings Impacts of  
LIFO Inventory Liquidations: 1979-1983.<sup>a</sup>

<u>Relative Earnings Impact</u>	<u>All Occurrences</u>		<u>First Occurrences</u>		<u>Later Occurrences</u>	
	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>
-1% to 0	4	0.7%	2	0.9%	2	0.6%
0 to 1%	323	57.8%	134	62.9%	189	54.6%
1% to 2%	115	20.6%	44	20.7%	71	20.5%
2% to 3%	47	8.4%	15	7.0%	32	9.2%
3% to 4%	21	3.8%	4	1.9%	17	4.9%
4% to 5%	19	3.4%	8	3.8%	11	3.2%
5% to 10%	17	3.0%	4	1.9%	13	3.8%
greater than 10%	<u>13</u>	2.3%	<u>2</u>	0.9%	<u>11</u>	3.2%
	<u>559</u>		<u>213</u>		<u>346</u>	

<sup>a</sup>Relative earnings impacts were computed as:  $= \frac{\text{Earnings impact per share.}}{\text{Share Price at end of year}}$

TABLE 4

Cumulative Average Excess Returns for Occurrences of LIFO Inventory Liquidations: 1979-1983.

Panel	Interval of Trading Days <sup>a</sup>	All Occurrences (N=559)			First Occurrences (N=213)			Later Occurrences (N=346)		
		Market Adjusted Returns	Market Model Residuals	Market Adjusted Returns	Market Model Residuals	Market Adjusted Returns	Market Model Residuals			
1	E-1 through E	0.47% <sup>b</sup> (3.19)	0.45% (3.21)	0.03% (0.11)	-0.03% (-0.13)	0.75% (4.24)	0.76% (4.46)			
	E-1	0.11 (1.04)	0.09 (0.87)	-0.27 (-1.73)	-0.27 (-1.81)	0.34 (2.72)	0.31 (2.59)			
	E	0.36 (3.44)	0.36 (3.64)	0.29 (1.90)	0.24 (1.62)	0.40 (3.21)	0.44 (3.67)			
2	F-9 through F	-0.34 (-0.96)	-0.13 (-0.35)	-0.08 (-0.14)	0.04 (0.06)	-0.51 (-1.14)	-0.23 (-0.51)			
	F-4 through F	-0.03 (-0.12)	0.04 (0.16)	-0.20 (-0.48)	-0.10 (-0.25)	0.07 (0.22)	0.13 (0.41)			
3	F+1 through F+5	0.28 (1.10)	0.36 (1.43)	0.30 (0.71)	0.40 (0.96)	0.27 (0.85)	0.33 (1.05)			
	F+1 through F+10	0.63 (1.75)	0.95 (2.68)	0.66 (1.13)	0.97 (1.64)	0.60 (1.36)	0.94 (2.11)			
4	F-4 through F+5	0.25 (0.69)	0.40 (1.12)	0.10 (0.16)	0.30 (0.51)	0.34 (0.76)	0.46 (1.03)			

<sup>a</sup>Day E is the Wall Street Journal earnings announcement date; day F is the financial statement release date.<sup>b</sup>t-statistics appear in parentheses.

TABLE 5

Spearman Rank Correlations between Cumulative Excess Returns and the Relative Earnings Impact of LIFO Inventory Liquidations: 1979-1983.<sup>a</sup>

Panel	Interval of Trading Days <sup>b</sup>	All Occurrences (N=559)			First Occurrences (N=213)			Later Occurrences (N=346)		
		Market Adjusted Returns	Market Model Residuals	Market Adjusted Returns	Market Model Residuals	Market Adjusted Returns	Market Model Residuals			
1	E-1 through E	.05	.06	.09	.08	.02	.04			
	E-1	.02	.04	.10	.08	-.03	.01			
	E	.05	.05	.00	.00	.06	.07			
2	F-9 through F	-.02	-.04	.03	-.01	-.04	-.05			
	F-4 through F	-.02	-.05	.10	.07	-.08	-.10			
3	F+1 through F+5	.02	.02	.12	.11	-.05	-.04			
	F+1 through F+10	-.02	.00	.10	.10	-.08	-.06			
4	F-4 through F+5	.00	-.01	.19**	.16*	-.10	-.11*			

<sup>a</sup>Relative earnings impacts of LIFO inventory liquidations were computed as :  $\frac{\text{Earnings impact per share}}{\text{Share price at end of year}}$

<sup>b</sup>Day E is the Wall Street Journal earnings announcement date; day F is the financial statement release date.

\*Significant at the .05 level.

\*\*Significant at the .01 level.

TABLE 6

Spearman Rank Correlations Between Cumulative Excess Returns over Trading Days F-4 Through F+5 and the Relative Earnings Impact of LIFO Inventory Liquidations, by Years: 1979-1983.

Year	First Occurrences			Later Occurrences		
	Market Adjusted Returns	Market Model Residuals		Market Adjusted Returns	Market Model Residuals	
1979	(N=27) .65**	.52**		(N=27) .00	-.12	
1980	(N=56) .03	-.08		(N=41) .26	.13	
1981	(N=43) .18	.25		(N=67) .02	-.09	
1982	(N=67) .23	.26*		(N=98) -.28**	-.25*	
1983	(N=20) .25	.17		(N=113) -.06	.03	

<sup>a</sup>Day F is the financial statement release date. Relative earnings impacts of LIFO inventory liquidations were computed as:  $\frac{\text{Earnings impact per share}}{\text{Share price at end of year}}$

\*Significant at the .05 level.

\*\*Significant at the .01 level.



TABLE 7

Cumulative Average Excess Returns Over Trading Days F-4 Through F+5 for First Occurrences of LIFO Inventory Liquidations Partitioned According to the Size of the Relative Earnings Impact: 1979 through 1983.<sup>a</sup>

<u>Size of Relative Earnings Impact</u>	<u>Market Adjusted Returns</u>	<u>Market Model Residuals</u>
<u>Partitions based on relative earnings impacts ranked across all years</u>		
Low (N=71)	-1.26%	-1.09%
Medium (N=71)	-0.01	0.45
High (N=71)	1.57	1.54
<u>Partitions based on relative earnings impacts ranked within each year</u>		
Low (N=71)	-1.28%	-1.07%
Medium (N=71)	-0.56	-0.21
High (N=71)	2.13	2.18

<sup>a</sup>Day F is the financial statement release date. Relative earnings impacts were computed as:  $\frac{\text{Earnings impact per share.}}{\text{Share Price at end of year}}$

TABLE A-1

Incidence of footnote disclosures mentioning LIFO inventory liquidations in annual reports on NAARS database, by years: 1979-1983.

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<u>Year</u>	<u>Number of annual reports searched on NAARS database</u>	<u>Number (percent) of annual reports searched that contain footnote disclosures about LIFO liquidations</u>
1979	3698	186 (5.0%)
1980	3582	311 (8.7%)
1981	3700	360 (9.7%)
1982	3708	445 (12.0%)
1983	<u>3823</u>	<u>438 (11.5%)</u>
TOTALS	<u>18,511</u>	<u>1740 (9.4%)</u>

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<sup>a</sup>The NAARS database was searched for all instances of annual reports in which the word "LIFO" appeared within 20 words of either (1) the word "liquidation" (and variants on it) or (2) the word "quantity" (and its variants), accompanied within 15 words by either of the words "decrease" or "reduction" (and variants on them). In NAARS syntax, the actual search phrase employed was "LIQUIDAT! OR (QUANTIT! W/15 DECREAS! OR REDUCT!) W/20 LIFO."