Information asymmetry and the FASB's multi-period adoption policy: the case of SFAS no. 115

Daniel R. Brickner
Eastern Michigan University

Abstract

This paper examines Financial Accounting Standard No. 115 with respect to the Financial Accounting Standards Board's (FASB's) common practice of permitting multi-period adoption for its standards. The banking industry was selected for analysis based on the significance of this standard to that industry. The sample consists of 118 banks, of which sixty-one adopted this standard early compared with fifty-seven who adopted on the effective date. This study posits that adoption timing differences across the two groups of firms created information asymmetry between their financial statements. It is hypothesized that the lack of comparability between the financial statements of the two groups would lead to a differential market reaction surrounding the release of their annual financial statements. The results of this study indicate that adoption timing did not explain firm abnormal returns; however, adoption timing was significant in explaining changes in firm trading volume. The major implication of this study is to provide evidence that the FASB may need to consider retracting its current policy of allowing early adoption of its standards.

Keywords: information asymmetry, multi-period adoption

1. INTRODUCTION

This paper analyzes the common occurrence of multiple adoption periods for new accounting pronouncements issued by the Financial Accounting Standards Board (FASB). The standard examined here is Financial Accounting Standard No. 115 (SFAS No. 115), entitled, "Accounting for Certain Investments in Debt and Equity Securities," which was issued in May, 1993. SFAS No. 115 was effective for fiscal years beginning after December 15, 1993. However, the FASB allowed enterprises the option to adopt this standard as of the end of an earlier fiscal year. Therefore, the initial adoption period for calendar year-end firms which chose to be "early adopters" was December 31, 1993. The remaining "late adopter" calendar year-end firms were required to adopt the standard's provisions as of January 1, 1994.[1]

The FASB's primary justification for multi-period adoption is to mitigate the implementation costs for firms (Langer and Lev, 1993). Previous research has examined the adoption timing issue and has primarily focused on the characteristics of early and late adopter firms. However, this paper examines whether multi-period adoption across firms creates differential market reactions. Specifically, differences in adoption timing subject's investors to differing levels of information content in both the financial statements and related footnotes, thus resulting in information asymmetry across firms. This paper posits that the lack of cross-sectional comparability in the financial statements created by adoption timing differences may lead to differences in security returns and trading volume between early and late adopters.

The sample for this study consists of 118 publicly traded banks. This sample was chosen primarily due to the relevance of this standard to the banking industry since investment securities represent a relatively higher percentage of total assets for banks than for firms in most other industries. Also, SFAS No. 115 can significantly impact the stockholders' equity account for firms holding debt and equity instruments. This is of particular importance in the banking industry due to the regulatory capital requirements they must maintain.

The primary results of this paper indicate that differences in adoption timing did not significantly explain firm security returns at the initial adoption date of SFAS No. 115. However, as hypothesized, adoption timing did significantly explain changes in firm trading volume at the initial adoption period. Three implications of these findings are suggested. First, SFAS No. 115 disclosures provide relevant and useful information to the market as evidenced by their significance in explaining changes in trading volume. Second, the market response to the SFAS No. 115 disclosures was not a consensus since adoption timing was not significant in explaining firm returns. Finally, the FASB may need to reconsider its current multi-period implementation policy. The findings of this research indicate that the lack of comparability created by adoption timing differences impairs market liquidity. Also, previous research has shown that, contrary to the FASB's primary motive, reducing firms' implementation costs are not a significant factor in the adoption timing choice. Rather, prior studies have revealed that the income effect of adopting a particular standard is the principal factor in the adoption timing decision.

The remainder of this paper is structured as follows. Section 2 reviews previous literature pertinent to the issues. Section 3 formally develops and states the hypotheses of this analysis.

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[1] Readers should be aware that the "late adopter" description is used here for expositional purposes. It may be more accurate to classify firms that adopted SFAS No. 115 on January 1, 1994 as "on-time adopters" since they would have adopted the standard's provisions by the required deadline.

Section 4 specifies the research design used in this study. Section 5 provides the results. Section 6 concludes the paper.

2. PRIOR LITERATURE

Several previous studies have examined the characteristics of early and late adopter firms for individual financial accounting standards. For example, Ayres (1986) examined the characteristics of companies which elected early adoption of SFAS No. 52. Langer and Lev (1993) and Ali and Kumar (1994) performed similar studies for the characteristics of firms adopting SFAS No. 87. In a more comprehensive study, Balsam et al. (1995) examined the motives of early and late adopters for eleven major standard promulgations of the FASB. The primary findings from these studies strongly indicated that a respective standard's impact on income and contracting costs was significant in explaining the adoption period choice.

Only one article has examined the market's differential response to the timing of a mandatory accounting standard. Lee and Stiner (1993) used an event study approach and analyzed stock price reactions for nineteen banks which adopted SFAS No. 96 early. Their analysis focused on four pertinent announcement dates relevant to the standard and they found a significant stock price reaction for two of the dates.

The majority of previous studies examining adoption timing have emphasized the identification of the characteristics of early and late adopter firms. In contrast, the focus of this research is to measure the market's response to the disclosures related to the adoption of SFAS No. 115 at the initial adoption period. Unlike Lee and Stiner (1993), this study examines only one date related to the adoption of SFAS No. 115 --- the date firms released their financial statements at the initial adoption period. Furthermore, this research tests for differences in the market's response between early and late adopter firms, in contrast to examining only early adopter firms. Therefore, the incremental contribution and impetus for this research is to address the FASB's current policy of permitting multi-period adoption of its standards. If this policy results in the reduction of market liquidity, as evidenced by differences in the market's response to the financial statements of early and late adopter firms upon initial adoption of SFAS No. 115, then the viability of this policy becomes an issue of concern.

3. HYPOTHESES

Accounting standards should provide useful and relevant information to financial statement users (FASB, 1980). Therefore, it follows that the FASB believes that SFAS No. 115 provides more useful and relevant information than the standard which it superseded. Specifically, SFAS No. 115 requires new measurement methods and disclosures for investments in equity securities that have readily determinable fair values and all debt securities. It requires that each of these investments be classified into one of the three following categories: 1) held-to-maturity, 2) trading securities, or 3) available-for-sale. Held-to-maturity securities are debt securities which an enterprise has the positive intent and ability to hold to maturity. Trading securities are debt and equity securities which are held principally for the purpose of selling in the near term. Available-for-sale securities are debt and equity securities which are not classified in either of the first two categories (FASB, 1993, para. 6-12).

SFAS No. 115 superseded SFAS No. 12 and related FASB interpretations, which primarily required these investments to be carried at the lower of aggregate cost or market value with unrealized losses presented as a valuation allowance that was deducted from stockholders' equity. In a significant departure from the historical cost model, SFAS No. 115 requires securities classified as either trading or available-for-sale be recognized on the balance sheet at their fair values (FASB, 1993, para. 12). The standard also requires that any unrealized gains or losses during the period which are attributable to trading securities be included in earnings, while those related to available-for-sale securities be excluded from earnings and reported as a separate component of stockholders' equity (FASB, 1993, para. 13). Transfers between the classifications are permitted. However, transfers from the held-to-maturity classification are to be rare, except for transfers which meet stringent guidelines specified by the FASB.[2]

The focus of this study is on the differential market reaction to either the adoption or non-adoption of SFAS No. 115 by banks at the initial adoption period. The banking industry was chosen for this study due to the comparatively large concentration of banks' assets in debt and equity instruments. These investments are typically used by banks to manage interest rate risk, provide a significant source of liquidity, and generate interest income. This standard is also relevant to banks because of its potential impact on stockholders' equity. Specifically, banks have various regulatory capital adequacy requirements, and "by law, regulatory accounting must at least be as stringent as GAAP" (Ernst & Young, 1993). Therefore, the regulatory capital adequacy of banks could be significantly affected by market fluctuations in investment securities resulting from adherence to this standard.

The hypotheses are developed to test the market's response to the new information provided by SFAS No. 115 as detailed in the banks' financial statements. Based on the requirements of SFAS No. 115 noted above, there exist two primary sources of new information disclosed to the market for banks. First, the fair values of investment securities classified as available-for-sale are recognized on the balance sheet. This results in the recognition of unrealized gains and losses as a separate component of stockholders' equity, thus impacting the total bank capital.[3] Prior to the issuance of SFAS No. 115, banks had disclosed the fair values of investment securities for many years (Barth, 1994). These disclosures were either in the footnotes or as an annotation to the balance sheet. However, it appears that the FASB deems required recognition to be more useful and relevant than the previous disclosures. Second, a bank's distribution of securities among the three classifications is disclosed. The allocation among the classifications provides information to the market regarding the bank's flexibility in managing the institution's asset-liability position in addition to its exposure to balance sheet volatility (Ernst & Young, 1993). Specifically, significant holdings in held-to-maturity securities

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[2] Examples of such circumstances include deterioration in the issuer's creditworthiness, changes in statutory or regulatory requirements, and a major business combination or major disposition which justifiably necessitate sales or transfers from the held-to-maturity category. The FASB specifically stated that firms could not sell these securities prior to maturity simply in response to changes in interest rates or due to liquidity needs (FASB, 1993).

[3] The "trading" classification was not new to the banking industry. Banks had been using a similar classification, "held for trading," and recorded these securities at market values even prior to the issuance of SFAS No. 115. Therefore, this standard did not impact the treatment of these securities for banks.

would tend to limit a bank's flexibility while significant holdings in available-for sale securities would tend to increase a bank's exposure to market fluctuations.[4]

Dating back to the pioneer work of Ball and Brown (1968) and Beaver (1969) and the related studies which followed, empirical research has documented both a return and trading volume reaction at the time of earnings announcements. Their research is the foundation upon which other studies have expanded to illustrate price and volume reactions upon the occurrence of many "events" or informational disclosures other than earnings announcements. The hypotheses of this paper focus on a specific event, namely the release of information required under SFAS No. 115 at the initial adoption period. Since the financial statements and related footnotes are the source of information regarding the adoption timing and related disclosures for SFAS No. 115, their release serves as an informational "event" upon which a price and volume response can be measured.

It is hypothesized that the new information provided by the SFAS No. 115 disclosures will help explain abnormal firm security returns and changes in firm trading volume. Based on the fact that the initial adoption period of SFAS No. 115 for calendar year-end firms was December 31, 1993, the two hypotheses, stated in the null form, follow:

Ho_1: The stock price reaction to the release of the December 31, 1993 annual report/ 10-K is the same for early and late adopters of SFAS No. 115.

Ho_2: The trading volume reaction to the release of the December 31, 1993 annual report/10-K is the same for early and late adopters of SFAS No. 115.

4. RESEARCH DESIGN

Sample

The sample consists of 118 banks listed on the 1994 Compustat Bank Tape whose annual report and/or 10-K was microfilmed by Q-Data Corp.[5] A summary of the sample selection is provided in Table 1. The identification of early and late adopter banks was accomplished through analysis of footnote disclosures in the banks' financial statements. Of the 118 sample banks, sixty-one chose to adopt SFAS No. 115 early compared to fifty-seven late adopters.

Methodology

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[4] A bank with significant holdings in held-to-maturity securities has less flexibility to transact with these securities in the future due to the restrictions imposed by the FASB with respect to transfers out of this category. The increase in balance sheet volatility is a result of the fair value accounting treatment required for securities classified as available-for-sale. Changes in the balances of these securities and stockholders' equity will occur whenever the fair values of the securities change. Changes in the fair values for investment securities held by banks are typically a function of interest rate changes.

[5] Microfilmed copies of firm annual reports and 10-Ks are available at the Kent State University library. Q-Data Corp. is the firm which filmed these reports. Per discussion with a representative at Q-Data Corp., they film any annual report or 10-K which they receive. This includes firms listed on the NYSE, AMEX, and NASDAQ. They do not have any other criteria, such as a firm size threshold, that would appear to create a sample bias for this study.

The Center for Research in Security Prices (CRSP) database was used to extract return and volume data for the sample banks. Since the adoption period choice, recognition, and disclosure requirements of SFAS No. 115 are detailed in a bank's financial statements, it is reasonable to assume that this information was not available to the market until a bank released its annual report or 10-K. Therefore, the earlier of the filing dates for the annual report or 10-K serves as the "event date" for this analysis.

With respect to the returns analysis, abnormal returns were computed using the following market adjusted returns model, as shown in Brown and Warner (1985):

$$AR_{jt} = R_{jt} - R_{mt} \qquad (1)$$

where:

AR_{jt} = the abnormal return for firm *j* on trading day *t*.
R_{jt} = the return for firm *j* on trading day *t*.
R_{mt} = the return on the CRSP value-weighted portfolio for the respective NYSE/AMEX and NASDAQ firms on trading day *t*.

The cumulative abnormal return (CAR) was computed for each sample firm during the respective event periods as follows:

$$CAR_j = \sum_{t=\tau}^{T} AR_j \quad \text{(for event period } \tau \text{ to T trading days)} \qquad (2)$$

Several event periods were examined to measure the market's response.[6] Shorter event periods provide the advantage of capturing fewer confounding events, while longer event windows provide the advantage of allowing for any prior informational leakage as well as providing the market time to assimilate the information contained in the banks' reports. As expected, the mean CAR was found to be significantly different from zero for each of the eight event periods analyzed. This indicates the market responded to the information disclosed in the firms' annual reports/10-Ks. The event period (-10 to +10) was judgmentally selected for use in the remainder of the analysis.

The CAR of each bank was regressed cross-sectionally on various bank characteristics. This was done to test whether the adoption timing had a significant impact on abnormal security returns. The following cross-sectional model was examined:

$$\begin{aligned} CAR_j = {} & \alpha + \beta 1 LN(ASSETS_j) + \beta 2 BETA_j + \beta 3 TIER1_j + \beta 4 \Delta EPS_j + \\ & \beta 5 \Delta(LOANS_j / DEPOSITS_j) + \beta 6 \Delta(LLP_j / LOANS_j) + \\ & \beta 7(INV_j / ASSETS_j) + \beta 8 DUMMY_j + \varepsilon_j \end{aligned} \qquad (3)$$

where:

CAR = firm *j*'s cumulative abnormal returns over the event period.

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[6] Specifically, the following event periods were examined: relatively shorter intervals of (-20 to +20), (-10 to +10), (-5 to +5), (-1 +1), (-1 to +5), (-1 to +10) and (-1 to +20) and a comparatively longer interval of (-60 to +60).

LN(ASSETS) = the natural log of the firm *j*'s total assets (reported in millions) at 12/31/93. This variable proxies for firm size.

BETA = firm *j*'s beta from the market model. This variable proxies for firm systematic risk, measured over the last 125 trading days of 1993.

TIER1 = firm *j*'s core capital (tier-1) ratio at 12/31/93. This is a common measure of risk-adjusted capital adequacy. Banks have a regulatory minimum of 4%. This ratio is available from the Compustat Bank Tape.

ΔEPS = the change in bank *j*'s earnings per share from the period of 12/31/92 to 12/31/93. Although earnings per share is disclosed in the bank's earnings announcement, this variable is included to control for the market's reaction to the composition of firm earnings, which is disclosed more fully in a firm's annual report/10-K.

Δ (LOANS / DEPOSITS) = the change in bank *j*'s ratio of total loans to total deposits from the period of 12/31/92 to 12/31/93. This ratio controls for changes in the primary asset and liability for banks. Also, this ratio serves as a measure of liquidity and credit risk (Mansur et al., 1993).

Δ (LLP / LOANS) = the change in bank *j*'s ratio of loan loss provision to total loans from the period of 12/31/92 to 12/31/93. This ratio serves as a measure of loan quality.

INV / ASSETS = the ratio of bank *j*'s investment securities to total assets at 12/31/93. This ratio measures the significance of a bank's investment securities portfolio relative to total assets.

DUMMY = a dummy variable that is coded '1' for early adopter firms and '0' for late adopters.

α, ε = the regression intercept term and disturbance term, respectively.

For the trading volume analysis, daily trading volume for firm *j* on day *t* can be measured as follows:

$$\text{Trading Volume}_{jt} = \frac{\text{Number of Shares Traded}_{jt}}{\text{Number of Shares of Stock Outstanding}_{jt}} \quad (4)$$

Consistent with Beaver (1968), the volume measure is standardized by the number of shares of stock outstanding. The reason for this standardization is to control for the size of the firm based on the number of shares of stock that the firm had available to be traded. Bamber and Cheon (1995) use a volume measure which incorporates daily trading volume both prior to the event period and during the event period. Such a measure thus incorporates changes in volume activity.

In a similar manner, changes in volume activity are measured here as follows:

$$\Delta Volume_j = MTV_{jEV} - MTV_{jEST} \quad (5)$$

where:

ΔVolume = the change in mean trading volume for firm *j*.

MTV_{EV} = the mean daily trading volume for firm *j* during the event period (EV).

MTV_{EST} = the mean daily trading volume for firm *j* during the estimation period (EST). The estimation period consists of the 250 trading days prior to the event period.

Similar to the above abnormal returns model, the event period of (-10 to +10) was used for the volume analysis. Also, the following cross-sectional regression was used to test the impact of adoption timing on firm trading volume during the event period:

$$\begin{aligned}\Delta VOLUME = {} & \alpha + \beta 1 LN(ASSETS_j) + \beta 2 TIER1_j + \beta 3 \Delta EPS_j \\ & + \beta 4 \Delta(LOANS_j / DEPOSITS_j) + \beta 5 \Delta(LLP_j / LOANS_j) \\ & + \beta 6(INV_j / ASSETS_j) + \beta 7 DUMMY_j + \varepsilon_j\end{aligned} \quad (6)$$

where the above variables are as previously defined.

5. RESULTS

Univariate tests for the regression variables of the sample firms are reported in Table 2. As shown, there are few differences between the early and late adopter firms. The major finding was that early adopter firms had a higher change in earnings per share from the previous year compared to late adopter firms (at the 0.01 and 0.05 statistical level for the t-test and Wilcoxon test, respectively). A possible interpretation of this difference is that early adopter firms, with their relative improved profitability from the prior year, were more willing and financially stable to take the "risks" associated with adopting early. Examples of such risks include the potential exposure to balance sheet volatility and restricted flexibility referred to earlier.

Also, the univariate tests show no statistical differences between the CARs for the early and late adopters. However, as anticipated, both the mean and median of the change in trading volume were somewhat greater for the early adopter firms than the late adopters during the event period. The difference between the two groups approaches statistical significance (at the 0.10

level for the Wilcoxon test). As expected, trading volume increased on average for early adopter firms, evidenced by the positive sign of the mean, while average trading decreased for late adopter firms as indicated by the negative sign. The median for both groups was negative. These results corroborate the hypothesis that early adopters of SFAS No. 115 provided more information to which the market could respond relative to their late adopter counterparts. However, the significance of the change in volume attributable to the adoption timing will be tested by the regression results.

The only other univariate difference between the two groups was the change in the loan loss provision to total loans ratio. However, as reported in table 2, the difference is only mildly statistically significant for the mean test (0.10) and insignificant for the Wilcoxon test (.8717). Also of note is the concentration of investment securities over total assets for the sample firms. Table 2 indicates that the mean and median values of investment security holdings approximates one-fourth of total assets for both early and late adopter firms.

The primary results from this study are derived from the regression models detailed in Tables 3 and 4. Table 3 presents the regression for explaining abnormal firm returns. The results of five different regressions are reported. The basic model, as detailed above, is model (1) in Table 3. The other four models are variations of model (1), with the primary distinction being the inclusion of an interaction variable between the ratio of investment securities to total assets and the adoption timing dummy variable. This logically follows since the market's reaction to disclosures of this standard would likely depend on the significance of investment security holdings by the banks. As reported in the table, firm size, systematic risk, the change in the loans-to-deposits ratio, and the change of loan loss provision-to-loans ratio were all significant in explaining firm abnormal returns at traditional statistical levels in all five of the models. However, contrary to the hypothesis, adoption timing, as evidenced by the dummy variable and the interaction variable, was not significant in explaining firm abnormal returns.

Table 4 provides the results for the cross-sectional regression for the trading volume analysis. As reported in model (1) of the table, the capital adequacy ratio (at 0.10), the change in earnings per share (at 0.10), and the ratio of investment securities to total assets (at 0.05) were significant variables in explaining the changes in the trading volume at the traditional statistical levels. Models (4) and (5) both report significance in the change in earnings per share (at 0.10), while the ratio of investment securities to total assets (at 0.05) is also significant in model (4). However, as noted by the adjusted R^2 and F-values, these two models have the least explanatory power of the five reported.

The two models with the most explanatory power are models (2) and (3). Model (2) includes all eight of the variables in the regression. The dummy variable was the only variable significant (at 0.10). The positive sign of this variable indicates that early adoption of this standard was associated with greater changes in trading volume. Model (3) includes the interaction variable and the dummy variable, while excluding the investment securities to total assets ratio. The logic for this specification is that the investment securities to total assets ratio would appear to be of primary importance to the market for early adopter firms since the accounting treatment for investment securities did not change for late adopters. The results indicate strong significance of both the interaction variable (at 0.01) and the dummy variable (at 0.01). Again, the positive sign of the dummy variable indicates that early adoption of SFAS No. 115 was associated with a greater change in trading volume during the event period. The negative sign of the interaction variable indicates that the lower the early adopter bank's

investment security holdings over total assets, the higher the change in trading volume. One interpretation of these results is that the disclosures related to SFAS No. 115 did provide information upon which the market reacted, as evidence by the significance of the dummy variable. However, the greater an early adopter bank's holdings in investment securities, the more uncertainty the market has with respect to the future impact of this standard on the bank. For example, higher investment security holdings potentially subject the bank to increased balance sheet volatility (if the bank has significant holdings in available-for-sale securities) or limited flexibility (if the bank has significant holdings in held-to-maturity securities) in the future.

In analyzing the overall results, the differences in the returns and volume analysis appear to be somewhat contradictory. However, as Beaver (1968) notes, price changes reflect the average change in the market's beliefs; whereas, trading volume measures the sum of the market's different reactions. Therefore, it appears that differing price reactions from individual investors may somewhat nullify each other since the overall price reaction represents an average response. This nullification may make measuring the true cause of security return differences more difficult. In contrast, no such nullification exists in a volume reaction, since it represents a sum of the market's reaction. This may help explain why the adoption timing was not significant in the return analysis, while it was significant in the volume analysis. Specifically, since December 31, 1993 represented the potential initial adoption of SFAS No. 115 for calendar year-end firms, the market may not have been efficient in interpreting its disclosures and related impact. Therefore, differences in opinion by individual investors, or a lack of consensus, would result in the price reaction differences or nullification referred to above.

Based on the univariate results reported in Table 2, an additional variable of (ΔEPS * Dummy) was added to both of the basic regression models. This was done to test the significance of the interaction between changes in earnings per share and adoption timing. This interaction variable was not significant and did not improve the explanatory power of either model, and thus, was not reported in the table.

Several other regressions were run, the results of which were not reported. Most of these regressions included variables which incorporated information specific to the disclosures related to the adoption of SFAS No. 115. Specifically, they included the impact that adopting SFAS No. 115 had on the banks' stockholders' equity in addition to the allocation of securities between the held-to-maturity and available-for-sale classifications. These variables did not improve the explanatory power of the models and were not found significant in explaining either of the dependent variables. This appears somewhat perplexing since one would assume that specific information related to the required disclosures of the standard would provide even more explanatory power to the model. Yet, based on the results reported in Table 4, it appears that adoption timing alone, and not the related disclosure related to adoption, helps explain the differences in trading volume during the event period.

One explanation for this occurrence is that adoption timing alone provides a signal upon which the market responds. For example, management's decision to early adopt SFAS No. 115 may have signaled management's confidence in the quality of their portfolio and investment policy in response to the potential market fluctuations in capital that SFAS No. 115 presents. Another may be related to the lack of consensus in the market's reaction to the SFAS No. 115 disclosures, evidenced by the lack of significance in the returns analysis. This may indicate a "learning curve" for the market with respect to interpreting the disclosures of new accounting

standards. These are two possible explanations; however, the exact reason for the lack of significance of the standard-specific information may be an issue for future research.

Sensitivity Analysis

In order to test whether the regression model of the early adopter firms is a similar fit to that of the late adopters, a Chow F-test was performed for both the abnormal returns model and the trading volume model. The basic regression models, equations (3) and (6), were run for both the early and late adopter firms. The results are reported in Table 5. The reported F-values indicate no differences in the respective regression models for the two groups of firms.

6. CONCLUSIONS

This paper has examined SFAS No. 115 with respect to the FASB's recent trend of permitting multi-year adoption for its standards. It was hypothesized that adoption timing differences create information asymmetry across firms and that adoption timing would help explain firm abnormal returns and changes in trading volume during the respective event periods. The sample was comprised of 118 calendar year-end banks, as the banking industry was examined due to the significance of this standard on that industry.

The results of this study are mixed. Contrary to the first hypothesis, adoption timing did not explain firm abnormal returns. However, in support of the second hypothesis, adoption timing was significant in explaining changes in firm trading volume during the event period. Furthermore, based on the fact that variables representing standard-specific disclosures did not improve the explanatory power of the volume model, it appears that the cause of the significance of adoption timing is an unresolved issue. One explanation is that the adoption timing choice provides a signal upon which the market reacts. The results suggest that firm-specific characteristics may trigger the decision to adopt early.

The main implication of this study pertains to the viability of the FASB's multi-period adoption policy. The FASB originally established this policy in order to reduce the implementation costs to firms. Yet, the majority of prior research has indicated an association between adoption timing and potential earnings management. Specifically, previous studies which have examined the adoption timing issue have found that the individual standard's income effect, not implementation costs, was the primary explanatory variable for firms' adoption choices.

The results of this study indicate that changes in trading volume are explained by the early adoption timing choice of firms. Although this implies that the disclosure of this standard has information content, it also indicates that market liquidity may be weakened due to adoption timing differences. Specifically, at the initial adoption period, the market has more information on which to trade for early adopter firms compared to their late adopter counterparts. In conclusion, it appears that based on previous research and the results of this study, the FASB may need to reevaluate the viability of its multi-period adoption policy.

TABLE 1

Summary of the sample selection.

Firms listed on the Compustat Bank Tape with the necessary data:	160
Less:	
Firms missing CRSP data:	(6)
Firms whose annual report/10-K was not filmed by Q-Data Corp.:	(36)
Sample Firms	118

TABLE 2
Descriptive statistics and univariate tests for regression variables.

VARIABLE	EARLY ADOPTERS n = 61 MEAN (MEDIAN) [STD DEV]	LATE ADOPTERS n = 57 MEAN (MEDIAN) [STD DEV]	P-value t-test [a] (Wilcoxon) [b]
CAR	.0572 (.0456) [.0787]	.0564 (.0645) [.0594]	.9547 (.6823)
CH_VOL	.0045 (-0.0118) [1.2301]	-0.2650 (-0.2771) [.9915]	.1945 (.0950) *
LN(ASSETS)	9.0596 (8.8802) [1.3735]	8.9655 (8.8983) [1.3681]	.7101 (.9957)
BETA	.7361 (.70) [.6362]	.6845 (.72) [.5028]	.6274 (.4672)
TIER1	10.6459 (10.49) [2.7876]	11.3481 (10.95) [2.8188]	.1765 (.2277)
Δ EPS	.6064 (.30) [1.8621]	-0.1758 (.150) [1.311]	.0092 *** (.0323) **
Δ (LOANS / DEPOSITS)	.0388 (.0434) [.0880]	.0347 (.0265) [.0465]	.7467 (.1567)
Δ (LLP / LOANS)	-0.0053 (-0.0029) [.0081]	-0.0027 (-0.0029) [.0075]	.0760 * (.8717)
INV / ASSETS	.2665 (.2594) [.1247]	.2693 (.2383) [.1126]	.8974 (.7507)

[a] P-value reported is the result of a parametric t-test for comparing the means of two samples.
[b] P-value reported is the result of a non-parametric Wicoxon rank-sum test for comparing two samples.
* Significant at 0.10
** Significant at 0.05
*** Significant at 0.01

TABLE 3

Cross-sectional regression results for explaining firm returns.

$$CAR_{j[-10,+10]} = \alpha + \beta_1 LN(ASSETS_j) + \beta_2 BETA_j + \beta_3 TIER1_j + \beta_4 \Delta EPS_j + \beta_5 \Delta (LOANS_j / DEPOSITS_j) + \beta_6 \Delta (LLP_j / LOANS_j) + \beta_7 (INV_j / ASSETS_j) + \beta_8 [(INV_j / ASSETS_j) * DUMMY_j] + \beta_9 DUMMY_j + \varepsilon_j$$

Model	α	β_1	β_2	β_3	β_4	β_5	β_6	β_7	β_8	β_9	Adj. R^2	F-Value p-value (model)
(1)	.166	-.134	.026	-.003	-.004	.204	-2.21	.048		-.004		2.172
	2.44**	-2.25**	1.99**	-1.07	-.96	2.28**	-2.22**	.81		-.33	.0742	.0351
(2)	.168	-.013	.025	-.003	-.004	.205	-2.22	.042	.010	-.007		1.914
	2.39**	-2.23**	1.94*	-1.06	-.94	2.27**	-2.21**	.48	.09	-.21	.0657	.0573
(3)	.177	-.014	.025	-.003	-.004	.207	-2.25		.048	-.017		2.140
	2.65***	-2.29**	1.90*	-.97	-.92	2.30**	-2.25**		.66	-.72	.0723	.0379
(4)	.163	-.013	.026	-.003	-.005	.203	-2.20	.054	-.012			2.166
	2.44**	-2.24**	2.00**	-1.06	-.99	2.27**	-2.21**	.83	-.27		.0739	.0355
(5)	.171	-.014	.026	-.002	-.005	.203	-2.22		.004			2.383
	2.59**	-2.34**	1.99**	-.82	-1.04	2.27**	-2.24**		.10		.0764	.0262

Numbers reported above represent coefficient estimates with related t-values reported beneath.

* Significant at 0.10
** Significant at 0.05
*** Significant at 0.01

TABLE 4

Cross-sectional regression results for explaining changes in firm trading volume.

$$\Delta VOLUME_{j[-10,+10]} = \alpha + \beta_1 LN(ASSETS_j) + \beta_2 TIER1_j + \beta_3 \Delta EPS_j + \beta_4 \Delta (LOANS_j / DEPOSITS_j) + \beta_5 \Delta (LLP_j / LOANS_j) + \beta_6 (INV_j / ASSETS_j) + \beta_7 [(INV_j / ASSETS_j) * DUMMY_j] + \beta_8 DUMMY_j + \varepsilon_j$$

Model	α	β_1	β_2	β_3	β_4	β_5	β_6	β_7	β_8	Adj. R^2	F-Value p-value (model)
(1)	-.772	.027	.074	.125	1.88	6.03	-2.25		.231		1.865
	-.74	.33	1.72*	1.66*	1.30	.37	-2.38**		1.11	.0484	.0819
(2)	-1.17	.032	.068	.114	1.77	7.08	-.660	-2.63	.944		1.943
	-1.10	.39	1.59	1.52	1.22	.44	-.47	-1.53	1.85*	.0596	.0605
(3)	-1.34	.039	.063	.112	1.74	7.62		-3.23	1.10		2.204
	-1.34	.48	1.52	1.50	1.21	.48		-2.81***	2.91***	.0661	.0391
(4)	-.560	.022	.070	.135	1.95	4.91	-2.38	.279			1.697
	-.55	.26	1.60	1.80*	1.34	.30	-2.26**	.40		.0394	.1168
(5)	-.986	.050	.035	.145	1.975	6.00		-.421			1.092
	-.96	.61	.85	1.90*	1.33	.36		-.66		.0046	.3717

Numbers reported above represent coefficient estimates with related t-values reported beneath.

* Significant at 0.10
** Significant at 0.05
*** Significant at 0.01

TABLE 5

Chow F-test for explaining differences in regressions between early and late adopter firms.

Panel A: Test of abnormal returns model.

$$CAR_{j[-10,+10]} = \alpha + \beta_1 LN(ASSETS_j) + \beta_2 BETA_j + \beta_3 TIER1_j + \beta_4 \Delta EPS_j + \beta_5 \Delta(LOANS_j / DEPOSITS_j) + \beta_6 \Delta(LLP_j / LOANS_j) + \beta_7 (INV_j / ASSETS_j) + \varepsilon_j$$

Group	α	β_1	β_2	β_3	β_4	β_5	β_6	β_7	F-value R^2
Early	.232	-.022	.047	-.003	-.003	.219	-1.21	.028	2.190
(n = 61)	2.31**	-2.39**	2.54**	-.67	-.43	1.98*	-.78	.33	.1219
Late	.154	-.008	-.008	-.003	-.00002	.075	-2.93	-.010	.864
(n = 57)	1.55	-.90	-.38	-.73	-.002	.41	-2.02**	-.12	-.0173

F-Value: .8425 Prob > F: .5546

Panel B: Test of trading volume model.

$$\Delta VOLUME_{j[-10,+10]} = \alpha + \beta_1 LN(ASSETS_j) + \beta_2 TIER1_j + \beta_3 \Delta EPS_j + \beta_4 \Delta(LOANS_j / DEPOSITS_j) + \beta_5 \Delta(LLP_j / LOANS_j) + \beta_6 (INV_j / ASSETS_j) + \varepsilon_j$$

Group	α	β_1	β_2	β_3	β_4	β_5	β_6	F-value R^2
Early	.322	-.003	.050	.143	2.50	23.54	-3.33	1.688
(n = 61)	.21	-.02	.76	1.32	1.40	.94	-2.46**	.0644
Late	-1.89	.075	.124	.112	-2.96	-16.87	-1.41	1.423
(n = 57)	-1.17	.57	2.10**	1.01	-1.00	-.72	-.99	.0434

F-Value: 1.2470 Prob > F: .2884

Numbers reported above represent coefficient estimates with related t-values reported beneath.

* Significant at 0.10

** Significant at 0.05

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