

The Effect of Regulatory Rulings on Cash Flow Volatility and Firm Risk

Ronald A. Stunda
Valdosta State University

The purpose of this study is to extend prior research of Goel and Thakor (2014), and Morris (2012), who had conducted preliminary analysis of the effect of major financial regulatory reform. Whereas these studies were limited in that they assessed only one year and focused on singular regulatory issues, this study assess three major financial regulatory mandates over the past two decades, namely; Regulation FD, Sarbanes-Oxley, and Dodd-Frank. In addition, an analysis is made of the effects of these regulatory rulings for five quarters after passage. Analysis is conducted on both cash flow volatility, and risk measures in assessing predictive value of security returns after passage of such regulation. Findings indicate that after passage of major financial regulations, the majority of firms in the sample, for each regulatory sample group, have an increase in both cash flow volatility and overall firm risk, expressed through beta. For each of the three regulatory sample groups which have below average betas and cash flow volatility measures, the information content of earnings for these firms contains significant security return predictive value. For each of the three regulatory sample groups which have above average betas and cash flow volatility measures, the information content of earnings for these firms contains insignificant security return predictive value.

INTRODUCTION

Cash flows have been used in many studies to achieve several objectives. Perhaps the most notable cash flow studies are those of Wilson (1986, 1987). In both studies, findings suggest that the cash and total accruals component of earnings have incremental information content beyond earnings themselves. These studies compelled other researchers to evaluate the information content of cash flow components.

Livnat and Zarowin (1990) disaggregated cash flow into its operating, financing and investing components. They concluded that the disaggregation of cash flows into operating cash flows and accruals does not improve the relationship between cash flows and security returns beyond the contribution of net income. Further, they find that there is an improved degree of association between financing and operating cash flows and security returns.

Sloan (1996) found that stock prices fail to fully reflect information contained in the accrual and cash flow components of current earnings until that information impacts future earnings. Cash flow is defined in this study as the income from continuing operations less accruals. Again the uncertainty of the accrual calculations limits the accuracy of this proxy for cash flows.

Stunda (1996) found that reported cash flows, when disaggregated by operating, financing and investing components, have a greater relationship with security returns than with disaggregated estimates reported by Livnat and Zarowin (1990).

Dechow (1998) disaggregates the accrual components of cash flows and finds that some have greater predictive value on security returns than others. Barth, Cram, and Nelson (2002) pick up on the Dechow et al study (1998) and circle back to the findings of the studies from the 1980's and re-assert that accruals have a greater predictive ability of security returns than do actual cash flows, thereby contradicting the finding of Stunda (1996).

These studies are extended by later studies that emphasize the need for stable cash flows. Graham, Campbell, and Rajgopal (2005) finds 97% of corporate executives favor stable, non-volatile cash flows as being a positive influence on earnings and security prices. Brown and Kapadia (2007) show the rise in cash flow volatility, especially among new public offerings. Bennett and Sias (2007) relate a good deal of the cash flow volatility to small stocks, although Irvine and Pontiff (2008) attribute only 1/3 of the total cash flow volatility to small stocks, and further find that such volatility has increased since 1997. Morck, Yung, and Yu (2009) posit that because of increased volatility in cash flows, perhaps cash flows do not have the predictive ability they were found to have in prior research.

With respect to firm risk, Holthausen and Leftwich (1986), Hand, Holthausen, and Leftwich (1992), and Dichev and Piotroski (2001) show that investors react to credit rating announcements, and that the reaction is greater for credit rating downgrades than for upgrades. Ederington and Goh (1998) and Kao and Wu (1990) show that ratings are informative about subsequent operating performance and about credit risk, respectively. Kliger and Sarig (2000) study finer rating partitions instituted by Moody's and show that both bond prices and stock prices react to Moody's rating refinement. These results suggest that ratings contain relevant information not available from other sources, and that liability accruals increase in firms experiencing credit downgrades and subsequent credit risk. These increased liability accruals have the effect of increasing overall firm risk.

Prior work shows that the properties of credit ratings change over time [Blume, Lim, and MacKinlay (1998), Baghai, Servaes, and Tamayo (2014)]. Alp (2013) finds a structural shift towards more stringent ratings in 2002, as a response to the increased regulatory scrutiny and investor criticism following the collapse of Enron and WorldCom. Jorion, Liu, and Shi (2005) find that the information content of earnings is less pronounced and volatility of security prices is greater following the passage of Regulation Fair Disclosure (FD) in 2000. Similarly, Cheng and Neamtiu (2009) find that credit rating authorities issue more timely downgrades, increase rating accuracy, and reduce rating volatility following the passage of the Sarbanes-Oxley Act in 2002. Cathcart, El-Jahel, and Evans (2013) analyze volatility of securities pursuant to the passage of the 1998 Securities Litigation Uniform Standards Act (SLUSA) and find greater volatility of both cash flows and stock prices, while at the same time reflecting an increase in liability accruals of firms.

Goel and Thakor (2014) are the first to analytically examine the potential effects of regulatory reforms in their assessment of the Dodd-Frank Act passed in 2010. Goel and Thakor (2014) show that increased regulation, as a result of Dodd-Frank, produces greater litigation which, in turn, drives up liability accruals while at the same time increasing stock volatility through increased regulatory risk. This parallels Morris (2012) who finds that increasing litigation and regulatory risk leads to less informative ratings. These studies are limited in their analysis. They assesses only one year (i.e., 2011) and stop short of assessing the full impact of sweeping national regulation on firms. This study will extend current literature by assessing the effects of major financial regulatory reforms over more than a decade and determine the impact of these regulatory changes on firm risk, cash flow volatility, and subsequent earnings' predictive value of stock price. These major financial regulatory reforms include; Regulation FD, SOX, and Dodd-Frank.

BACKGROUND

Regulation Fair Disclosure (Reg FD)

In the late 1990s, both the U.S. Congress and the Securities and Exchange Commission (SEC) sought to encourage more transparency in information flow and forward-looking disclosures between U.S. companies and investors. In an attempt to obtain more numbers of credible earnings forecast disclosures

the Regulation Fair Disclosure, known as Reg FD was enacted in August, 2000. The rule mandates that all publicly traded companies must disclose material information, both historical and forward-looking, to all investors at the same time. This Regulation stamped out selective disclosure to mainly large institutional investors. Publicly held companies now had a Federal Regulation which encouraged them to release financial forecast data. Although various studies assess the effectiveness of this regulation, none analyze the subsequent effects on cash flows, firm risk or earnings volatility of the forecasting firms.

Sarbanes-Oxley (SOX)

In July 2002, Congress enacted the Sarbanes-Oxley Act in response to various corporate scandals including Enron, WorldCom, Tyco, and Global Crossing. As a result, the risks associated with auditing increased significantly in the post-SOX period. SOX altered the regulatory regime of auditing by shifting the oversight of audit firms from the American Institute of Certified Public Accountants (AICPA) to the Private Company Accounting Oversight Board (PCAOB). Also, Auditing Standard No. 2 lowers the risk threshold by mandating that the auditor examine all internal controls that could impact the occurrence of fraud that could have a material impact on the financial statements (Griffin and Lont 2010). “This standard also results in higher costs for auditors regarding significant deficiencies ‘in internal controls’ and ‘reasonable assurance’ that ‘no material weakness’ exists by defining a deficiency as significant and a weakness as material ‘if there is more than a remote likelihood’ that a material misstatement will not be prevented or detected (Griffin and Lont 2010).

In addition, the insurance and other liability-related costs increased significantly in the post-SOX period (Rama and Read 2006). Increased auditor risks and costs may have led to a rise in auditor conservatism in the issuance of audit reports. Auditing firms may have implicitly raised the threshold for issuance of an unqualified audit opinion by overhauling and improving the audit process (Bryan-Low 2003). Hence, SOX may have brought about a change in the implications of a qualified audit report. Investors’ concerns over and reaction to a qualified audit report may have significantly changed after SOX.

Dodd-Frank

On July 21, 2010, President Barack Obama signed the Wall Street Reform and Customer Protection Act into law. This Act is commonly known as the Dodd-Frank Act, bearing the name of its sponsors. The Act was instituted in response to the 2008 financial crisis which some claimed to be the result of excessive risk speculation promoted by financial institutions’ exploitation of a deregulated market.

One of the more significant provisions of Dodd-Frank is the one that increases the Credit Rating Agency’s (CRA) liability for issuing incorrect or biased rating (Coffee 2011). Traditionally, CRAs have been successful in claiming that credit ratings constitute opinions protected as free speech under the First Amendment. This defense required plaintiffs to prove that CRAs issued ratings with knowledge that they were false with reckless regard of facts or accuracy. Section 933 of the Act lessens this requirement to the point that plaintiffs only have to show that the CRAs failed to conduct a reasonable investigation of the security being rated. This change has resulted in more lawsuits with significant monetary implications.

Another significant provision of Dodd-Frank deals with the expanded role of the Securities and Exchange Commission (SEC). Section 933 of the Act states that penalty and enforcement provisions of federal securities laws now apply to CRAs to the same extent that these provisions apply to registered accounting firms or security analysts. Prior to this, CRA statements were considered forward-looking and were protected under the safe harbor provisions of the SEC Act of 1934. This change makes it easier for the SEC to bring claims against CRAs. These prior two changes have caused an increase in CRA liability accrual and costs, which have in turn been passed on to individual institutions (Becker and Milbourn, 2011).

RESEARCH DESIGN

Cash Flow Volatility Measure

In an analysis of investment decisions, Cleary (2006) finds the importance of cash flow volatility in relation to factors that impact the financial decision of the investor. Booth and Cleary (2007) establish a model for assessing volatility of cash flows. The authors relate cash flows, net income before extraordinary items plus depreciation, (CF) to average net fixed assets (K) to arrive at an equation of CF/K in relating these two components. Their first measure of cash flow volatility is Vol(CF/K) which represents the standard deviation (volatility) of a firm's cash flow as its standard measure of volatility. Their second measure is CV(CF/K), which is the coefficient of variation of CF/K, accounts for the size of the firm's cash flows as well as the volatility of those cash flows. These same measures of cash flow volatility are used in this study

Liability Accrual Assessment

Goel and Thakor (2014) relate increases in liability accruals to overall firm risk as indicated by firm beta (β). The theory is that as firm risk increases, as a result of increased regulation, so does the potential for future lawsuits. The effect is to increase liability accruals. Increase in liability accruals have been shown to increase earnings volatility and, therefore, make stock prices more uncertain; Jorion, Liu, and Shi (2005), Cheng and Neamtiu (2009), Cathcart, El-Jahel, and Evans (2013). As a result, firm betas will be assessed in relating their movement to volatility of earnings and stock prices.

Expectations Model

Utilizing a similar technique of previous event studies, an expectations model similar to Wilson (1987) is used. Wilson applied Ordinary Least Squares (OLS) estimation to a pooled cross-section of firms, which assumes that model parameters are the same for all firms. The functional form of this expectation model is the same as that used in Wilson [1986 and 1987], and Bernard and Stober (1989). This methodology is perceived to be more accurate than the random walk model used by Livnat and Zarowin (1990).

In this model, abnormal returns are generated for event days -1, 0, and +1, where day 0 is the release date of firm cash flow data. Deviation of abnormal returns is as follows:

$$\begin{aligned} AR_{it} &= R_{it} - B_i RM_t \\ CAR_{it} &= \sum AR_{it} \end{aligned} \tag{1}$$

Where:

- R_{it} = Return for security i, period t
- B_i = Estimated slope coefficient of market model for security i
- RM_t = Market adjusted model
- CAR_{it} = Cumulative abnormal return for security i, period t

Wilson (1987) finds that most firms' earnings and cash flow releases are separate events. Documents used to release cash flow data include annual reports, 10-Ks, and 10-Qs. Therefore, primary release dates of these documents are used to proxy for the release data of cash flow data. The market model is utilized along with the CRSP equally weighted market index and regression parameters are estimated between days -290 and -91. Abnormal returns are then summed to calculate a cumulative abnormal return, as indicated in equation (1).

In order to assess the information content of cash flows from operations as utilized in the studies of Dechow (1998) and Barth, Cram, and Nelson (2002), the following regression equation is utilized, which will be run twice to assess above and below average firms in the sub-samples for 1) cash flow volatility and 2) overall beta risk:

$$CAR_{it} = a + b_1FD + b_2FD + b_3SOX + b_4SOX + b_5DF + b_6DF + e_{it} \quad (2)$$

Where:

- CAR_{it} = The measure of abnormal returns for firm i, period t
 a = The intercept coefficient
 b_1 = The coefficient associated with below average Reg FD firms
 b_2 = The coefficient associated with above average Reg FD firms
 b_3 = The coefficient associated with below average SOX firms
 b_4 = The coefficient associated with above average SOX firms
 b_5 = The coefficient associated with below average Dodd-Frank firms
 b_6 = The coefficient associated with above average Dodd-Frank firms
 e_{it} = Error term for firm i period t

The above regression formula forms the basis of determining which firms have greater predictive value in the presence of cash flow volatility, and overall firm risk, during periods of financial regulatory change.

Sample of Firms

The sample of firms is actually broken down into three unique samples which will permit analysis of the three major regulatory rulings between 2000 and 2010. Sample firms are selected from Compustat for relevant data, and the Center for Research on Security Prices (CRSP), for security returns, for two distinct periods in each sample. For each regulatory change, financial data, including earnings, cash flow, beta, and stock price data is gathered for five reporting quarters before and after the implementation of the regulatory ruling. This provides an assessment of the impact of the ruling itself. In order to minimize confounding issues, any firm that experienced significant management or structural change, as identified by the Wall Street Journal, was eliminated from the sample. Table 1 summarizes the samples of firms included in the study.

TABLE 1 SAMPLE SUMMARY			
	Number of Firms		
	Reg FD	SOX	Dodd-Frank
Original Sample	5,450	5,318	5,629
Firms with insufficient Compustat data	718	649	741
Firms with insufficient CRSP data	384	318	404
Final Sample	4,348	4,351	4,484
Reg. FD sample includes 5 quarters of data before/after inception in August, 2000. SOX sample includes 5 quarters of data before/after inception in July, 2002. Dodd-Frank sample includes 5 quarters of data before/after inception in July, 2010.			

Partitioning the Sample

Data for all firms in the samples are used to construct a data set with median values of volatility measures. These median values were portioned into four quartiles, with each subsequent quartile representing a higher degree of cash flow volatility. This was done in order to establish how the firm samples were spread over a range of volatility. In addition, a mean volatility level was determined for the entire sample. Table 2 reflects the results of the volatility measures. The table presents the results of non-parametric tests (Mann-Whitney tests) that compare the “location” of the sample distributions. The table is partitioned into three panels, each section represents the firms associated with each of the three major financial regulatory changes over the past two decades.

TABLE 2					
SAMPLE PARTITION					
Vol(CF/K) is the standard deviation of cash flows to average net fixed assets (CF/K), while CV(CF/K) represents the coefficient of variation of (CF/K) (Q1 = low volatility...Q4 = high volatility)					
Panel A Cash Flow Volatility Measures-Reg FD (n = 4,348 firms)					
Quartile	Total firms	Vol(CF/K) (median)	Vol(CF/K) mean	CV(CF/K) median	CV(CF/K) mean
Q1	526	0.11		0.20	
Q2	714	0.19		0.34	
Q3	1,271	0.26		0.60	
Q4	1,837	0.38		1.40	
			0.25		0.73
Panel B Cash Flow Volatility Measures- SOX (n= 4,351 firms)					
Quartile	Total firms	Vol(CF/K) (median)	Vol(CF/K) mean	CV(CF/K) median	CV(CF/K) mean
Q1	325	0.13		0.24	
Q2	598	0.21		0.40	
Q3	1,391	0.31		0.71	
Q4	2,037	0.42		1.66	
			0.31		0.89
Panel C Cash Flow Volatility Measures- Dodd-Frank (n= 4,484 firms)					
Quartile	Total firms	Vol(CF/K) (median)	Vol(CF/K) mean	CV(CF/K) median	CV(CF/K) mean
Q1	409	0.12		0.23	
Q2	610	0.22		0.38	
Q3	1,481	0.34		0.75	
Q4	1,984	0.44		1.70	
			0.33		0.94

Panel A relates to firms associated with Reg FD. As can be seen, with respect to standard deviation, over 42% of the firms in the sample fall into Quartile 4 (high volatility) with an average standard deviation for the overall sample of 0.25 and an average overall coefficient of variation of 0.73. These averages establish the two sub-samples to be used in the study; those firms with below average cash flow volatility (standard deviation < 0.25, and coefficient of variation < 0.73), and those firms above average cash flow volatility (standard deviation > 0.25, and coefficient of variation > 0.73).

Panel B relates to firms associated with SOX. With respect to standard deviation, 47% of the firms in the sample fall into Quartile 4 (high volatility) with an average standard deviation for the overall sample of 0.31 and an average overall coefficient of variation of 0.89. These averages establish the two sub-samples to be used in the study; those firms with below average cash flow volatility (standard deviation < 0.31, and coefficient of variation < 0.89), and those firms above average cash flow volatility (standard deviation > 0.31, and coefficient of variation > 0.89).

Panel C relates to firms associated with Dodd-Frank. With respect to standard deviation, 44% of the firms in the sample fall into Quartile 4 (high volatility) with an average standard deviation for the overall sample of 0.33 and an average overall coefficient of variation of 0.94. These averages establish the two sub-samples to be used in the study; those firms with below average cash flow volatility (standard deviation < 0.33, and coefficient of variation < 0.94), and those firms above average cash flow volatility (standard deviation > 0.33, and coefficient of variation > 0.94).

Table 3 summarizes the partitioned sample by below average cash volatility firms and above average cash volatility firms for each of the three sample groups. For the Reg FD sample, 59% of the firms exhibit above average cash flow volatility, while this number is 63% for SOX firms and 60% for Dodd-Frank firms.

TABLE 3			
CASH FLOW VOLATILITY			
PARTITIONED FIRM SAMPLE BY SAMPLE GROUP			
	Number of Firms		
	Reg FD	SOX	Dodd-Frank
Below average cash flow volatility firms	1,786	1,616	1,814
Above average cash flow volatility firms	2,562	2,735	2,670
Total	4,348	4,351	4,484

Using a similar approach to assess the measurement of overall firm risk through beta (β), Table 4 presents the number of firms in each sample group that are above and below average beta for their respective sample group. For the Reg FD group, 58% of the sample firms exceed average beta. For the SOX sample group, 64% of the sample of firms exceed average beta. The Dodd-Frank group contains 62% of the firms in their respective sample that exceed average beta.

TABLE 4			
OVERALL ASSESSMENT OF RISK MEASURE BY FIRM BETA			
PARTITIONED FIRM SAMPLE BY SAMPLE GROUP			
	Reg FD	SOX	Dodd-Frank
	Average Beta (β) of Firms In Sample		
	.78	.85	.81
	Number of Sample Firms		
Below average beta firms	1,801	1,582	1,725
Above average beta firms	2,547	2,769	2,759
Total	4,348	4,351	4,484

HYPOTHESES DEVELOPMENT

As previously noted, recent studies [Dechow et al (1998) and Barth et al (2002)] conclude that when accounting accruals are disaggregated by components, various components provide a greater relationship to security returns, than do actual reported cash flows, and thus greater predictive value. Stunda (1996) found that actual reported cash flows possess greater predictive value than accounting estimates (i.e., accruals) in total.

Later studies [Cleary (2006) and Booth and Cleary (2007)] interject the notion of cash flow volatility. They note that beginning around 1997 and moving forward, firms seem to possess an increased cash flow volatility, thus affecting potential investment decisions. If cash flow volatility could affect investment decisions could it also affect predictive value? This notion is assessed in the following hypotheses.

The first hypothesis revolves around the notion of low cash flow volatility. The implication is that firms that have below average cash flow volatility would also contain greater predictive value since they are regarded as being more stable. This leads to the following hypotheses, stated in the null form:

H1: Reported cash flows for below average cash flow volatility firms, by sample group, are significantly correlated to predictive value of security returns.

H2: Reported cash flows for above average cash flow volatility firms, by sample group, are significantly correlated to predictive value of security returns.

Goel and Thakor (2014) relate increases in liability accruals to overall firm risk as indicated by firm beta (β). The theory is that as firm risk increases, as a result of increased regulation, so does the potential for future lawsuits. The effect is to increase liability accruals. Increase in liability accruals have been shown to increase earnings volatility and, therefore, make stock prices more uncertain; Jorion, Liu, and Shi (2005), Cheng and Neamtiu (2009), Cathcart, El-Jahel, and Evans (2013). As a result, firm betas are assessed in relating their movement to overall volatility of earnings and stock prices. This leads to the following hypotheses, stated in the null form:

H3: Below average beta firms, by sample group, are significantly correlated to predictive value of security returns.

H4: Above average beta firms, by sample group, are significantly correlated to predictive value of security returns.

RESULTS

Table 5 reports the findings by each of the three sample groups when firms in each respective group are analyzed by above average and below average cash flow volatility distinction. For each of the three groups, firms that are below average cash flow volatility report a smaller mean value with p-values that are significant at conventional levels [Reg FD (0.14, 0.01), SOX (0.12, 0.01), Dodd-Frank (0.10, 0.05)]. This indicates that security returns for these groups of firms possess information content and therefore have high predictive value when correlated with those returns. For this reason, hypothesis H1, which states that reported cash flows for below average cash flow volatility firms by sample group are significantly correlated to security returns cannot be overturned.

Turning attention to above average cash flow volatility firms for the same three groups, the results are exactly the opposite. For each of the three groups, firms that are above average cash flow volatility report a larger mean value with p-values that are not significant at conventional levels [Reg FD (0.44, 0.21), SOX (0.51, 0.18), Dodd-Frank (0.41, 0.20)]. These findings indicate information content to be much more noisy and less informative, and as a result, less correlated to the predictive value of security returns.

For this reason, hypothesis H2, which states that reported cash flows for above average cash flow volatility firms by sample group are significantly correlated to security returns must be rejected.

TABLE 5
REGRESSION RESULTS ASSOCIATED WITH CASH FLOW VOLATILITY

Model: $CAR_{it} = a + b_1FD + b_2FD + b_3SOX + b_4SOX + b_5DF + b_6DF + e_{it}$

Where:

- CAR_{it} = The measure of abnormal returns for firm i, period t
- a = The intercept coefficient
- b_1 = The coefficient associated with below average Reg FD firms
- b_2 = The coefficient associated with above average Reg FD firms
- b_3 = The coefficient associated with below average SOX firms
- b_4 = The coefficient associated with above average SOX firms
- b_5 = The coefficient associated with below average Dodd-Frank firms
- b_6 = The coefficient associated with above average Dodd-Frank firms
- e_{it} = Error term for firm i period t

Coefficient	Mean	t-statistic	p-value	F-statistic	Model R ²
b_1	0.14	2.67	0.01	5.32	0.231
b_2	0.44	0.44	0.21	0.29	
b_3	0.12	2.59	0.01	5.49	
b_4	0.51	0.98	0.18	1.06	
b_5	0.10	2.19	0.05	5.24	
b_6	0.41	0.79	0.20	0.48	

Table 6 reports the findings by each of the three sample groups when firms in each respective group are analyzed by above average and below average overall firm risk, as measured by beta. For each of the three groups, firms that are below average beta report the lowest betas with p-values that are significant at conventional levels [Reg FD (0.55, 0.01), SOX (0.61, 0.01), Dodd-Frank (0.72, 0.03)]. This indicates that security returns for these groups of firms possess information content and therefore have high predictive value when correlated with those returns. For this reason, hypothesis H3, which states that reported betas for below average beta firms by sample group are significantly correlated to security returns cannot be rejected.

Turning attention to above average beta firms for the same three groups, the results are again exactly the opposite, as they were for the cash flow volatility metric. For each of the three groups, firms that are above average beta report a higher beta with p-values that are not significant at conventional levels [Reg FD (1.25, 0.42), SOX (1.19, 0.22), Dodd-Frank (1.37, 0.33)]. These findings indicate information content to be much more noisy and less informative, and as a result, less correlated to the predictive value of security returns. For this reason, hypothesis H4, which states that reported betas for above average beta firms by sample group are significantly correlated to security returns must be rejected.

TABLE 6
REGRESSION RESULTS ASSOCIATED WITH OVERALL FIRM RISK (BETA)

Model: $CAR_{it} = a + b_1FD + b_2FD + b_3SOX + b_4SOX + b_5DF + b_6DF + e_{it}$

Where:

- CAR_{it} = The measure of abnormal returns for firm i, period t
a = The intercept coefficient
 b_1 = The coefficient associated with below average Reg FD firms
 b_2 = The coefficient associated with above average Reg FD firms
 b_3 = The coefficient associated with below average SOX firms
 b_4 = The coefficient associated with above average SOX firms
 b_5 = The coefficient associated with below average Dodd-Frank firms
 b_6 = The coefficient associated with above average Dodd-Frank firms
 e_{it} = Error term for firm i period t

Coefficient	Mean	t-statistic	p-value	F-statistic	Model R ²
b_1	0.55	2.69	0.01	5.19	0.212
b_2	1.25	0.37	0.42	0.51	
b_3	0.61	2.71	0.01	5.62	
b_4	1.19	0.78	0.22	0.96	
b_5	0.72	2.43	0.03	5.04	
b_6	1.37	0.62	0.33	0.83	

CONCLUSIONS

The purpose of this study is to extend prior research of Goel and Thakor (2014), and Morris (2012), who had conducted preliminary analysis of the effect of major financial regulatory reform. Whereas these studies were limited in that they assessed only one year and focused on singular regulatory issues, this study assess three major financial regulatory mandates over the past two decades, namely; Regulation FD, Sarbanes-Oxley, and Dodd-Frank. In addition, an analysis is made of the effects of these regulatory rulings for five quarters after passage. Analysis is conducted on both cash flow volatility, and risk measures in assessing predictive value of security returns after passage of such regulation.

Findings indicate that after passage of major financial regulations, the majority of firms in the sample, for each regulatory sample group, have an increase in both cash flow volatility and overall firm risk. For each of the three regulatory sample groups which have below average betas and cash flow volatility measures, the information content of earnings for these firms contains significant security return predictive value. For each of the three regulatory sample groups which have above average betas and cash flow volatility measures, the information content of earnings for these firms contains insignificant security return predictive value.

These findings are important for firms subject to financial regulatory reform in that it suggests that major reform increases the likelihood of additional cash flow volatility and firm risk while resulting in less predictive value of security returns. This study is subject to additional evaluation by both industry type and expanded time periods.

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