

Article

Conservative Financial Reporting and Resilience to the Financial Crisis

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Abstract: Given that the current economic hardship created by COVID-19 is still in progress, it is important to understand firms' strategic responses to prior external shocks (e.g., the financial crisis in 2007 and 2008) and the relationship between their courses of action and post-shock firm performance. This study examines (1) whether firms' practices in financial reporting are associated with the financial crisis and (2) whether firms with conservative financial reporting during the crisis exhibit better performance in post-crisis periods. Using the ordinary least squares (OLS) models and conservatism proxy, we find that firms are more conservative in financial reporting during the financial crisis. We also find that firms with a higher degree of accounting conservatism in the financial crisis outperform in the post-crisis periods. These findings have implications for practice by providing guidance on accounting conservatism for firms who want to develop resilience from financial setbacks due to economic shocks.

Keywords: conservatism in financial reporting; financial crisis; firm performance



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1. Introduction

Since the World Health Organization (WHO) declared the novel coronavirus outbreak a global pandemic on 11 March 2020, COVID-19 has had a profound impact on the U.S. and the worldwide economies. According to the 2020 results of the Business Response Survey from the U.S. Bureau of Labor Statistics, during the COVID-19 pandemic, over 50 percent of businesses experienced a decline in demand for their products or services. About 20% of the companies were affected by government-mandated closures. The global economy had to embrace the losses of up to 40% in the stock markets in March 2020 [1].

We have witnessed global recessions caused by the dot-com boom burst in 2000 and the U.S. subprime mortgage crisis in 2007. Given that the current economic hardship created by COVID-19 is still in progress, understanding firms' strategic responses to prior financial crises and the association between the courses of action and firm performance after the shocks could help in formulating solutions to enhance business resilience to this unprecedented crisis.

This study empirically investigates whether firms are more conservative in financial reporting during the economic shock, especially the global financial crisis in 2007 and 2008. Further, we examine whether conservative firms in financial reporting during the shock show more profitability in the post-shock periods. Following Donovan et al. [2], we use special items ratio as the primary measure of accounting conservatism. Using a sample of 36,561 firm-year observations from 1990 to 2016, consistent with our expectations, we find firms tend to be more conservative in financial reporting during the economic friction. Moreover, we find that firms with a higher degree of conservatism in financial reporting in the crisis outperform in the post-crisis periods. A battery of robustness checks, including alternative proxies for conservatism in financial reporting and profitability in our analyses, confirm not only the tendency for firms to be more conservative in financial reporting

during the economic shock but also the effects of firms' conservative practices during the crisis on profitability in subsequent years. Our results suggest that conservative financial reporting plays a crucial role in developing resilience during financial setbacks prompted by economic shocks.

This study contributes to several strands of the literature by providing insight into the relationship between conservatism in financial reporting during economic shocks and post-shock firm performance. This study is aligned with Kim and Pevzner [3], who find that firms with higher levels of conservatism in financial reporting are less likely to have future bad news. Our findings are also in line with the role of conservative financial reporting in affecting the real economy in the face of the financial crisis, as suggested by Balakrishnan et al. [4]. We also extend Francis et al.'s findings [5] by showing that firms with a higher degree of conservatism in financial reporting would be better off in the post-crisis periods, not just during the crisis. Furthermore, we help firms in practice by suggesting to them how they might establish an effective strategy for recovering from an economic downturn via conservative financial reporting. Given that corporate sustainability ensures businesses can survive and thrive, we believe that our examinations (i.e., how firms respond to the financial crisis with conservative financial reporting and whether conservative practices in financial reporting induce profitability in post-crisis periods) are aligned with sustainability.

The remainder of the paper proceeds as follows. Section 2 covers literature review and Section 3 develops the hypotheses. We describe the sample and research design in Section 4. Subsequent sections present the results of the regression analyses and robustness tests. The last section offers our discussion and conclusions.

2. Literature Review

Previous literature shows how firms are affected by external shocks and how they react to the financial crises caused by the shocks. Charoensukmongkol [6] argues that firms' improvisational behavior is associated with firm performance during the economic crisis, while Lee et al. [7] find that firms respond to the crisis by shifting their advertising strategy to an informational approach. Andreou et al. [8] also show a positive relationship between managerial ability and corporate investments during the financial crisis, which indicates that managerial capacity plays a crucial role in firm performance, especially when firms experience financial hardship. They all highlight that firms with an adaptive approach to strategy can successfully cope with the unfavorable business environment. In addition, Grimaldi [9] finds firms are less likely to be involved in earnings management during financial crises.

Previous literature also provides evidence that corporate governance is associated with firm performance during the financial crisis. For example, Gonenc and Aybar [10] find that firms with highly concentrated ownership are worse off during a financial crisis. Aldamen et al. [11] find audit committee characteristics are associated with firm performance during a crisis. Johnstone-Louis et al. [12] find that firms with a higher level of ESG show better performance even in a crisis. Corporate social responsibility activities can play an essential role in outperforming during financial crisis periods [13,14].

Some argue that firms' practices in financial reporting have added fuel to the fire of the financial crisis. According to American Bankers Association [15], the U.S. financial crisis in 2007 was allegedly exacerbated due to fair-value accounting. On the other hand, Barth and Landsman [16] and Laux and Leuz [17] find little evidence that fair-value accounting inflamed the financial crisis. Instead, Lin et al. [18] find evidence that high-quality information in accounting mitigates information asymmetry during economic distress.

Accounting conservatism has been a long-standing convention in financial reporting. Since Bliss [19] defined accounting conservatism as "anticipate no profits but anticipate all losses," the asymmetric recognition between profits and losses has been one of the distinctive features of financial reporting. Some argue that conservative reporting is a costly practice in accounting because accounting information can be biased due to asymmetri-

cal recognition and may lead to an impediment to neutrality, that is, the faithfulness of accounting information, which has ousted accounting conservatism from the conceptual framework [20].

Nonetheless, conservatism in financial reporting is a cost-efficient mechanism in contracts for both debt holders and shareholders [21]. From the perspective of the contracting hypothesis, conservatism contributes to improvement in corporate governance and efficiency in contracts, thereby reducing agency costs [22–28]. Furthermore, conservatism in financial reporting is an effective means of relaxing information asymmetry [29,30]. As a governance function, conservatism in financial reporting may reduce information asymmetry, and thereby managers may be less likely to be involved in earnings manipulation [30,31]. Garcia Lara et al. [32] suggest that conservative practices in financial reporting reduce the cost of capital by enhancing the accuracy of bad news and consequently weakening information uncertainty.

3. Hypotheses Development

3.1. Economic Crisis and Firm Performance

The stock market crash of 2020, inflamed by the COVID-19 pandemic, prompts a sense of déjà vu because the U.S. subprime mortgage crisis led to the global financial shock in 2007 and 2008. How to remain resilient from the financial shock is of great concern to firms when such a global shock affects them across all economic sectors. Previous studies examine how firms strategically react to the financial crisis. For example, firms strategically respond to an economic crisis through financial-service advertising and by reducing the number of promotional activities with cutbacks in the budgets, as well as by focusing on informational advertising [7]. Charoensukmongkol [6] finds evidence that entrepreneurs' improvisational behavior is positively associated with the firm performance of small and medium-sized businesses during the economic shock.

Previous studies suggest that corporate governance factors affect firm performance during economic shocks [10,33]. For example, Gonenc and Aybar [10] find that firms with highly concentrated ownership experience a more considerable decline in equity value during the financial crisis, which points out the effect of specific corporate governance factors on firm-level performance. Aldamen et al. [11] address that firm performance is affected by audit committee characteristics during economic shocks. Lins et al. [13] show that high social capital firms outperform during financial crisis periods, implying that the trustworthiness between firms and shareholders is more critical. Public trust in capital markets has deteriorated. Flammer and Ioannou [14] find that firms that have maintained their investments in the activities of R&D and CSR during the financial crisis show better performance in the years following the crisis. While those firms have reduced the level of capital expenditures and labor force during the financial crisis, they did not curtail their investments in innovation and stakeholder relationships, which implies that firms' strategic focus on differential investments plays a pivotal role in sustaining competitiveness in times of crisis.

3.2. Conservative Financial Reporting during Financial Crises

Several studies document the association between accounting practices and financial crises [16,17]. They argue that there is little evidence that fair-value accounting played a crucial role in exacerbating the U.S. financial crisis in 2007, while some believe that fair-value accounting has misled investors during the financial crisis [15]. Kothari and Lester [34] attribute the financial crisis to the faulty application of fair value accounting and stress the importance of conservative financial reporting. Lin et al. [18] also show that firms with high-quality financial reporting have fewer adverse effects during the financial crisis, which suggests that accounting information quality plays an essential role in reducing information asymmetry and improving investor confidence.

3.3. Hypotheses Development

Under financial distress during the financial crisis, firms may face a dilemma of either managing to thrive or understating performance. Kolasinski and Yang [35] find evidence that myopic management was responsible for the U.S. subprime mortgage crisis in 2007 because such management is more concerned about short-term performance than long-term performance. On the other hand, managers are more prone to understate their performance because firms are expected to underperform during the shocks. Their managers may easily find excuses for their underperformance from the macro factors stemming from economic shocks.

According to Kim and Pevzner [3], firms with a higher level of conservatism in financial reporting are less likely to have future bad news because early recognition of bad news implies that such bad news is less recognized in the future. Given that uncertainty mounts in excess during economic shocks and conservative financial reporting works as an effective means of reducing uncertainty [32], firms are expected to recognize losses more quickly during the shocks. In higher uncertain business environments (e.g., economic crises), conservative firms in financial reporting are more likely to lead to enhanced performance in the post-crisis periods.

Thus, the following hypotheses are proposed:

Hypothesis 1 (H1). *Ceteris paribus, firms exhibit more conservatism in financial reporting during a financial crisis.*

Hypothesis 2 (H2). *Ceteris paribus, firms with a higher degree of conservatism in financial reporting during a financial crisis have greater post-crisis performance.*

4. Research Design and Sample

4.1. OLS Regression Models

To test H1, whether a firm's conservatism in financial reporting is associated with a financial crisis. We analyze the relationship between a proxy for the financial crisis and the firm's degree of conservatism in financial reporting (CSV). Following Donovan et al. [2], we use the special items ratio, total asset-adjusted special items scaled by cumulative stock returns of firms, in line with Basu's [36] asymmetric recognition of bad news.

We test the hypothesis (H1) by estimate the following OLS model:

$$CSV_{i,t} = \beta_0 + \beta_1 SHOCK_i + \beta_2 MB_{i,t} + \beta_3 LEV_{i,t} + \beta_4 SIZE_{i,t} + \beta_5 GRSALE_{i,t} + \beta_6 RDA_{i,t} + \beta_7 CFO_{i,t} + \beta_8 REVSTD5_{i,t} + \beta_9 AGE_{i,t} + \beta_{10} RETVOL_{i,t} + \beta_{11} SPREAD_{i,t} + \varepsilon_{i,t} \quad (1)$$

where $CSV_{i,t}$ is measured as the quintile rank of conservatism measure discussed above (i.e., special items ratio) to avoid false inference, and $SHOCK_i$ equals one if a firm's fiscal year is 2007 or 2008, and zero otherwise. We include control variables that are known to be associated with conservatism in financial reporting following prior studies [26,37]. First, we control for market-to-book ratio ($MB_{i,t}$), leverage ($LEV_{i,t}$), and firm size ($SIZE_{i,t}$). $MB_{i,t}$ is measured as the ratio of market value of equity to book value of equity at the beginning of year t . Leverage ($LEV_{i,t}$) is computed as the sum of long-term and short-term debt deflated by the market value of equity at the beginning of year t . $SIZE_{i,t}$ is the natural log of the market value of equity of firm i at the beginning of year t . We also control for sales growth ($GRSALE_{i,t}$), R&D and advertising expense ($RDA_{i,t}$), operating cash flow ($CFO_{i,t}$), operating uncertainty ($REVSTD5_{i,t}$), and firm age ($AGE_{i,t}$). As additional variables for information asymmetry, we control for bid-ask spread ($SPREAD_{i,t}$) and return volatility ($RETVOL_{i,t}$). Detailed measurements of all variables used in Equation (1) are explained in Appendix A.

To test H2 and determine whether the firms with greater level of conservatism in financial reporting show greater future performance, we estimate the following OLS model:

$$\Delta PERF_{i,t} = \beta_0 + \beta_1 CSV_{i,t} + \beta_2 SHOCK_i + \beta_3 CSV_{i,t} \times SHOCK_{i,t} + \beta_4 MB_{i,t} + \beta_4 LEV_{i,t} + \beta_5 SIZE_{i,t} + \beta_6 GRSALE_{i,t} + \beta_7 RDA_{i,t} + \beta_8 CFO_{i,t} + \beta_9 REVSTD5_{i,t} + \beta_{10} AGE_{i,t} + \beta_{11} RETVOL_{i,t} + \beta_{12} SPREAD_{i,t} + \beta_{13} ZSCORE_{i,t} + \beta_{14} RET_{i,t} + \varepsilon_{i,t} \quad (2)$$

where $\Delta PERF_{i,t}$ is a firm's future performance measured by the change in average stock returns over three years (i.e., $RET_{i,(t+3)} - RET_{i,(t-3)}$), where $RET_{i,(t+3)}$ is a firm's annual return measured from year $t + 1$ to $t + 3$, and $RET_{i,(t-3)}$ is a firm's annual return measured from year $t - 3$ to $t - 1$, $CSV_{i,t} \times SHOCK_i$ is a two-way interaction term between $CSV_{i,t}$ and $SHOCK_i$. We include market to book ratio ($MB_{i,t}$) to control for firm risk and growth opportunities and total assets ($SIZE_{i,t}$) for firm size effects following prior studies, e.g., [38]. In addition to the Altman Z-score ($ZSCORE_{i,t}$), we add current stock return of a firm at time t ($RET_{i,t}$) to control for the effect of current performance on future firm performance. Other variables are defined similarly as in the earlier model (1).

4.2. Sample Selection

Our analyses encompass the 1990–2016 sample period. We obtained accounting and market data from Compustat, a database for public companies in North America, and the Center for Research in Security Prices (CRSP) for the sample period. We also required non-missing firm-year observations for all variables in both OLS regression models (see Appendix A for variable definitions), which generated a sample of 36,561 firm-year observations (5425 public firms in North America including 481 Canadian firms over 27 years across all industries). All continuous variables were winsorized at the 1% and 99% levels to control for outliers. Standard errors were two-way clustered at both firm and year, according to the study of Gow et al. [39].

5. Results

5.1. Descriptive Statistics

Table 1 reports the descriptive statistics of the variables used in OLS regression models. The mean value of $SHOCK$ is 0.089, which indicates 8.9% of firm-year observations in our sample are hit by the financial crisis. The mean value of future performance, $\Delta PERF$, is -0.002 . The average market-to-book ratio (MB), leverage (LEV), and firm size ($SIZE$) are 2.957, 0.455, and 6.057, respectively. The average age of the firms in our sample is 22 years, which indicates that the accounting data for a firm in our sample have been available for 22 years on average in Compustat.

Table 1. Descriptive statistics.

Variable	Mean	Std. Dev.	Q1	Median	Q3
CSV	2.562	1.509	2.000	2.000	4.000
SHOCK	0.089	0.285	0.000	0.000	0.000
$\Delta PERF$	-0.002	0.487	-0.238	-0.004	0.232
MB	2.957	4.069	1.224	1.939	3.250
LEV	0.455	1.016	0.029	0.179	0.493
SIZE	6.057	2.295	4.352	6.038	7.699
GRSALE	0.117	0.437	-0.026	0.065	0.180
RDA	0.027	0.134	0.000	0.000	0.000
CFO	-0.099	0.764	-0.057	0.040	0.109
REVSTD	0.284	0.285	0.116	0.200	0.344
AGE	21.793	12.629	11.000	19.000	31.000
RETVOL	0.127	0.078	0.074	0.108	0.158
SPREAD	0.043	0.033	0.024	0.036	0.053
ZSCORE	5.156	17.958	1.994	3.351	5.335
RET	0.203	0.704	-0.176	0.085	0.386

Table 2 presents Pearson correlation coefficients among the variables used in regression analyses. Consistent with our expectations, *CSV* is positively correlated with *SHOCK*. A firm's future performance ($\Delta PERF$) is positively correlated with the firm's current degree of accounting conservatism (*CSV*). This implies that firms with a higher degree of conservatism in financial reporting exhibit better future performance. An economic crisis (*SHOCK*) is positively correlated with a firm's future performance ($\Delta PERF$), while *SHOCK* is negatively correlated with a firm's current performance (*RET*).

Table 2. Correlations.

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. <i>CSV</i>														
2. <i>SHOCK</i>	0.110													
3. $\Delta PERF$	0.073	0.098												
4. <i>MB</i>	−0.069	−0.011	−0.158											
5. <i>LEV</i>	0.087	0.030	0.214	−0.128										
6. <i>SIZE</i>	−0.037	0.072	−0.187	0.195	−0.136									
7. <i>GRSALE</i>	−0.045	0.020	−0.131	0.119	−0.042	0.015								
8. <i>RDA</i>	0.013	0.016	−0.004	0.064	−0.056	0.001	0.034							
9. <i>CFO</i>	0.003	−0.003	−0.018	−0.048	0.003	0.263	0.001	−0.008						
10. <i>REVSTD</i>	0.026	0.012	−0.044	0.135	−0.012	−0.113	0.228	0.091	−0.035					
11. <i>AGE</i>	−0.005	0.038	−0.010	−0.028	−0.009	0.332	−0.110	−0.072	0.034	−0.308				
12. <i>RETVOL</i>	0.058	−0.010	0.089	0.058	0.104	−0.382	0.058	0.066	−0.104	0.278	−0.321			
13. <i>SPREAD</i>	−0.008	−0.103	0.067	0.014	0.022	−0.472	0.060	0.050	−0.153	0.239	−0.304	0.508		
14. <i>ZSCORE</i>	−0.041	−0.017	−0.090	0.161	−0.084	0.009	0.068	0.044	−0.061	0.077	−0.044	0.035	0.022	
15. <i>RET</i>	−0.190	−0.189	0.013	0.145	−0.090	0.013	0.058	−0.003	0.000	0.017	−0.061	0.254	0.163	0.064

Note: See Appendix A for variable definitions. All continuous variables are winsorized at the top and bottom 1%. Numbers in bold are significant at the 5% or better level.

5.2. Economic Shocks and Conservatism (H1)

Table 3 presents the results of the regression of conservatism in financial reporting on the financial crisis. The estimated coefficient on *SHOCK* is positive ($\beta_1 = 0.556$) and statistically significant at the 1% level ($t = 2.65$), which implies that firms during the financial crisis are more conservative in financial reporting. *MB* is negatively related to conservatism in financial reporting, consistent with LaFond and Roychowdhury [24]. Similar to findings in prior studies, we find a positive and significant coefficient on *LEV* at the 1% level, indicating firms with high conflicts between bondholders and shareholders have a greater degree of conservatism in financial reporting. The coefficient on *SIZE* is negative, implying that large firms reduce the demand for conservatism in financial reporting, but it is statistically insignificant. We find a negative relationship between conservatism in financial reporting and sales growth (*GRSALE*), indicating that firms with greater sales growth are less conservative in financial reporting. The coefficients on *RDA* and *REVSTD* are positive and significant, consistent with previous research.

Table 3. Accounting conservatism and economic shock (H1).

Dependent Variable = <i>CSV</i>		
Variable	Coeff.	(t-Stats)
Intercept	2.463 ***	(22.89)
<i>SHOCK</i>	0.556 ***	(2.65)
<i>MB</i>	−0.021 ***	(−5.84)
<i>LEV</i>	0.101 ***	(7.08)
<i>SIZE</i>	−0.013	(−0.90)
<i>GRSALE</i>	−0.160 ***	(−5.35)
<i>RDA</i>	0.181 **	(2.40)
<i>CFO</i>	0.014	(0.97)
<i>REVSTD</i>	0.189 ***	(4.37)
<i>AGE</i>	0.001	(1.29)
<i>RETVOL</i>	1.273 ***	(3.36)
<i>SPREAD</i>	−1.941 ***	(−3.17)
2-way cluster		Yes
Industry & year		Yes
Adj. R ²		0.029
N		36,561

Note: See Appendix A for other variable definitions. ** and *** indicate statistical significance at the 10 percent, 5 percent, and 1 percent levels (two-tailed), respectively.

5.3. Future Firm Performance and Conservatism during an Economic Shock (H2)

Table 4 presents the results of the regression of future performance ($\Delta PERF$) on accounting conservatism (CSV) and its interaction with economic shocks ($SHOCK$). The coefficient of our interest is the two-way interaction term, $CSV \times SHOCK$ (β_3), which captures the incremental effect of a firm's conservatism in accounting during a financial crisis on a firm's future performance. The coefficient on $CSV \times SHOCK$ is positive and statistically significant at the 1% level ($\beta_3 = 0.037$, $t = 7.39$). This demonstrates that conservative financial reporting during the economic shock is positively associated with the firm's future performance. Consistent with H2, the results imply that firms with a higher degree of conservatism in financial reporting show greater firm performance in the post-shock periods. The coefficient on RET is positive and significant at the 5% level, indicating that firms' current performance is strongly associated with their future performance.

Table 4. Firm performance and accounting conservatism during economic shock (H2).

Variable	Dependent Variable = $\Delta PERF$	
	Coeff.	(t-Stats)
Intercept	0.138 **	(2.48)
CSV	0.009 **	(2.39)
$SHOCK$	0.084 ***	(2.65)
$CSV \times SHOCK$	0.037 ***	(7.39)
MB	−0.011 ***	(−6.38)
LEV	0.082 ***	(8.25)
$SIZE$	−0.034 ***	(−5.38)
$GRSALE$	−0.119 ***	(−5.71)
RDA	0.065 **	(2.12)
CFO	0.011 **	(2.00)
$REVSTD$	−0.033	(−1.35)
AGE	0.001 ***	(2.54)
$RETVOL$	0.098	(0.73)
$SPREAD$	0.029	(0.09)
$ZSCORE$	−0.001 *	(−1.95)
RET	0.055 **	(2.22)
2-way cluster		Yes
Industry & year		Yes
Adj. R^2		0.117
N		36,561

Note: See Appendix A for other variable definitions. *, **, and *** indicate statistical significance at the 10 percent, 5 percent, and 1 percent levels (two-tailed), respectively.

5.4. Robustness Tests

We extend the tests by replacing CSV with an alternative measure of conservatism in financial reporting. To estimate the extent to which earnings include negative non-operating accruals (CSV_ALT), we use the average non-operating accruals [40] over the previous five years [41]. Following Zhang [42], we multiply the estimated non-operating accruals by a negative one so that the higher CSV_ALT , the more conservative the firm. Table 5 provides the results of estimating Equations (1) and (2) to test our hypotheses with the alternative measure of conservatism based on non-operating accruals. Panel A presents the testing results of the financial crisis on firms' conservatism in financial reporting. The estimated coefficient on $SHOCK$ is strongly positive ($\beta_1 = 0.242$) at the 1% level ($t = 5.60$), supporting the hypothesis (H1) that the financial crisis is positively related to the level of firms' conservatism in financial reporting. Panel B presents the testing results of hypothesis 2 (H2) when CSV_ALT replaces CSV . Consistent with prior results, the coefficient estimate on $CSV_ALT \times SHOCK$ is statistically significant at the 1% level ($\beta_3 = 0.019$, $t = 2.72$). This also provides additional support for our proposition that firms with a higher degree of conservatism in financial reporting during the financial crisis are associated with greater post-crisis performance.

Table 5. H1 and H2 with alternative conservatism measure.

Panel A. H1		
Dependent Variable = <i>CSV_ALT</i>		
Variable	Coeff.	(<i>t</i> -stats)
Intercept	2.637 ***	(34.64)
<i>SHOCK</i>	0.242 ***	(5.60)
Controls		Yes
2-way cluster		Yes
Industry & year		Yes
Adj. R ²		0.029
N		36,561
Panel B. H2		
Dependent Variable = Δ <i>PERF</i>		
Variable	Coeff.	(<i>t</i> -stats)
Intercept	0.125 **	(2.23)
<i>CSV_ALT</i>	0.013 **	(3.97)
<i>SHOCK</i>	0.138 ***	(5.18)
<i>CSV_ALT</i> × <i>SHOCK</i>	0.019 ***	(2.72)
Controls		Yes
2-way cluster		Yes
Industry & year		Yes
Adj. R ²		0.118
N		36,561

Note: Following Givoly and Hayn [40], *CSV_ALT* is an alternative conservatism measure calculated as non-operating accruals. See Appendix A for other variable definitions. ** and *** indicate statistical significance at the 10 percent, 5 percent, and 1 percent levels (two-tailed), respectively.

To address measurement error in the post-crisis performance, we extend the test of H2 by replacing Δ *PERF*, the market-based performance measure, with the change in operating performance (Δ *PERF_ALT*). Δ *PERF_ALT* is measured by the difference between *ROA* from year $t + 1$ to $t + 3$ and *ROA* from year $t - 3$ to $t - 1$. Table 6 reports the estimation of Equation (2) by using the alternative performance measure. Panel A shows the coefficient on the interaction term *CSV* × *SHOCK* is positive and significant ($\beta_3 = 0.002$, $t = 1.84$), supporting the hypothesis that more conservative firms in financial reporting during the financial crisis are associated with greater post-crisis performance. Panel B reports the results of H2 using the alternative performance measure (Δ *PERF_ALT*) with *CSV_ALT*. Confirming our expectation, the coefficient on the interaction term *CSV_ALT* × *SHOCK* is positive and significant at the conventional level of significance ($\beta_3 = 0.004$, $t = 4.31$). Overall, this indicates that our results are not sensitive to the alternative measure of operating performance.

Table 6. H2 with alternative firm performance measure.

Panel A. Alternative performance measure		
Dependent Variable = Δ <i>PERF_ALT</i>		
Variable	Coeff.	(<i>t</i> -stats)
Intercept	−0.040 ***	(−4.04)
<i>CSV</i>	−0.003 ***	(−3.74)
<i>SHOCK</i>	−0.013 **	(−2.07)
<i>CSV</i> × <i>SHOCK</i>	0.002 *	(1.84)
Controls		Yes
2-way cluster		Yes
Industry & year		Yes
Adj. R ²		0.039
N		36,561

Table 6. Cont.

Panel B. Alternative performance measure with alternative conservatism measure		
Dependent Variable = $\Delta PERF_ALT$		
Variable	Coeff.	(t-stats)
Intercept	−0.047 ***	(−4.55)
CSV_ALT	−0.000	(−0.36)
SHOCK	−0.023 ***	(−4.71)
CSV_ALT × SHOCK	0.004 ***	(4.31)
Controls		Yes
2-way cluster		Yes
Industry & year		Yes
Adj. R ²		0.038
N		36,561

Note: Following Givoly and Hayn [40], CSV_ALT is an alternative conservatism measure calculated as non-operating accruals. $\Delta PERF_ALT$ is an alternative performance measure calculated as $ROA_{(t+3)} - ROA_{(t-3)}$, where ROA is return on assets. See Appendix A for other variable definitions. *, **, and *** indicate statistical significance at the 10 percent, 5 percent, and 1 percent levels (two-tailed), respectively.

6. Discussion and Conclusions

This study examines (1) whether firms are more conservative in financial reporting, especially during the financial crisis in 2007 and 2008, and (2) whether firms practicing conservative financial reporting during the financial crisis are more profitable in post-crisis periods. We find supporting evidence for the prediction that firms are more conservative in financial reporting during the financial crisis. We further find supporting evidence that firms practicing conservative financial reporting during the financial crisis have better post-crisis performance. The economic significances of our findings are not sensitive to the different measures of accounting conservatism or firm performance.

Our findings are aligned with Kim and Pevzner [3], who find that firms with higher levels of conservatism in financial reporting are less likely to have future bad news. Our findings are also in line with Francis et al.'s findings [5] by showing that firms with a higher degree of conservatism in financial reporting would be better off in the post-crisis periods, not just during the crisis.

This study contributes to several strands of the literature by providing insight into the relationship between conservatism in financial reporting during economic shocks and post-shock firm performance. Consistent with prior research such as Francis et al. [5] and Balakrishnan et al. [4], our findings suggest that firms' conservative practices in financial reporting affect the real economy in the face of the financial crisis. In that sense, this study contributes to firms in practice by recommending to them how they might establish an effective strategy for recovering from an economic downturn via conservative financial reporting.

Our findings have important implications not only for practitioners but also for regulatory agencies. Concerns have been raised about conservative practices since the International Accounting Standard Board (IASB) removed prudence from the conceptual framework in 2010. While IASB has decided to reinstate cautious prudence in its revised conceptual framework in March 2018, conservatism in financial reporting is a controversial topic in standard setters. Our findings suggest that the importance of conservatism in financial reporting should be reconsidered as Kothari and Lester [34] comment on its transparency to the users of financial information (e.g., investors).

Our findings should be considered in the context of some important limitations. First, we use two different measures of firm performance (i.e., return on assets and annual stock returns). While the measures represent financial outcomes, non-financial measures such as the customer satisfaction index may reflect alternative firm performance. Second, this study does not consider other economic contractions (e.g., the dot-com bubble in the late 1990s and the COVID-19 pandemic). Because the current crisis caused by the COVID-19 pandemic is not contained, concerns have been raised about business resilience in an ongoing economic recession. It is difficult to examine the long-term economic effect of

COVID-19 on businesses as there is a notable change in consumer behavior or markets during unprecedented times [43]. Future research could focus on other types of economic shocks, such as the COVID-19 pandemic, to examine how they relate to firms' financial reporting practices.

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Appendix A

Variable	Definition
CSV	= Conservatism measure in financial reporting (special items ratio) following Donovan et al. [28].
SHOCK	= Indicator variable equal to 1 if fiscal year = 2007 or 2008, and zero otherwise.
$\Delta PERF$	= Change in firm performance equal to $RET_{(t+3)} - RET_{(t-3)}$, where RET is annual stock returns.
M.B.	= Market-to-book ratio at the beginning of the fiscal year ((Compustat "CSHO"*Compustat "PRCC_F")/Compustat "CEQ").
LEV	= Financial leverage = Leverage, which is equal to total debt (Compustat "DLTT" + Compustat "DLC") divided by total assets (Compustat "AT") at the beginning of the fiscal year.
SIZE	= Natural logarithm of the market value of equity (Compustat "CSHO" * Compustat "PRCC_F") at the beginning of the fiscal year.
GRSALE	= Percentage of annual growth in total sales.
RDA	= Total research and development expense plus advertising expense deflated by total sales.
CFO	= Cash flow from operations (OANCF) divided by average total assets of year t .
REVSTD	= Standard deviation of the natural log of revenues measured from $t - 5$ to year $t - 1$.
AGE	= Natural logarithm of the number of years of data for the client firm since the coverage in Compustat.
RETVOL	= Standard deviation of monthly stock returns over year t .
SPREAD	= Bid-ask spread scaled by the midpoint of the spread, obtained from the Center for Research in Security Prices (CRSP).
ZSCORE	= Altman's Z-score.
RET	= Annual compound stock returns.

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