



The Effect of Opacity of the Financial Reports on Volatility of Stock Return: Evidence from Tehran Stock Exchange

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ABSTRACT

This article investigates the effect of opacity financial reports on volatility of stock return of the accepted companies in Tehran stock exchange. Earnings management by discretionary accruals manipulation is criterion of determination of financial reports opacity. Discretionary accruals are calculated by the modified Jones model. Stock return crash and Stock return jump variables are calculated using market return regression by considering both final monthly returns in the firm during a year. (Amy Hutton and et al opaque financial reports, R^2 and crash risk model Journal of financial Economics 94, 2009, 67, 86 has been used). In order to evaluate the effects of financial reports on mentioned variables, statistical tests (comparison of two statistical populations and logistic regression) have been employed. According to 261 observations during 2004 - 2008 selected by systemic omission financial statement opacity does not have effect on crash and jump of stock return.

KEYWORDS: Opacity of financial reports, stock return crash, stock return jump, earnings management.

INTRODUCTION

Vishwanath and Kaufmann (1999) defined opacity as intentional unavailability of information, proposing incorrect information, inability of the market in obtaining reliable and qualitative information. There are different negative consequences of opacity on financial markets. Imbalance between risk and return is one of the consequences of opacity of financial report. In this case, unaware individuals by more risk will have low return and vice versa, so the wealth will be on hands of a few, and indeed no earn is produced. The clear consequence of opacity is corruption that has negative effect on investment and economic growth (Fung et al., 2002). According to changes in countries especially in developing nations, proposing proper solution for better utilization of wealth is necessary. Expansion of investment is considered as a main strategy. Investors and creditors require information for decision making. Based on diverse information resources in financial markets, financial reports are attracted by investors, so qualitative information will be useful. Information dependability is one of these characteristics. Dependability is affected by Opacity information and as a result leads to investor's misguidance. Investment decisions change stock price by affecting on supply and demand. In this article, it was tried to evaluate the importance and effect of opacity on investment risk by estimation of opacity in financial reports. Human being needs information in order to recognize phenomena and reduce opacity of unknowns. Information reduces opacity and leads to accurate decisions making. Fung et al., 2002 thinks and then determines the proper solution. On time, accurate and dependable information about economic institution is the primary step in investment (Zadmehr and Mansouri, 1999). So institution's financial reports should help investors in evaluation of management performance ranged from preservation and optimal utilization of resources (Mojtahedzadeh and Chit Sazan, 2005). Stock holders and investor's preserve wealth and resources in economic institutions. Thus it is necessary that the manager offer complete reports of operations involving financial status and results of management at the end of fiscal year (Mojtahedzadeh and Chit Sazan, 2005). Transparency and opacity are important variables in financial reporting. In Iran, the role of accountancy data is double because of rare data resources as a result; the importance of accountancy information will be double for investors. Opacity in reports oscillates stock exchange prices and decrease investor risk. For example, enclosure of worst news for long-term and sudden disclosure cause rapid drop in stock exchange and loss of the investors. Transparency increases users reliance and decreases risk and it has positive effect on stock price. As before stated transparency and opacity are related with different aspects in market. In the past, the relationship between transparency and opacity and issues like corporate governance, foreign investment and etc have been studied. In considerable part of this research, market return regression coefficient has been used for measuring firm information; firm return and total return in market are dependent and independent variables respectively. The authors suggest that lack of information about firm activities cause that no investor reacts to investment. As a result of stock return

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changes, the firm will be coordinated with total market and it will use high determination coefficient. It can be concluded that the high coefficient means low availability of information.

Amy Hutton and et al. (2009) investigated the relationship between financial reports opacity and distribution of stock return. They used earnings management for measuring opacity. Earnings management can lead investor's misguidance by changing fundamental information. The results showed that financial statements opacity has direct and meaningful relationship with risk transferred on investor and stock return crash risk.

Li and Myers (2006) studied stock market R^2 in 30 countries and its relation with expansion of financial markets and return crash level in country. The authors used 5 criterion, universal competition reports, elevation of accountancy activities key accountancy variables used in financial statement, report of price water House accountancy institution and difference between results of the analysts prediction. The results indicated that R^2 is high in countries with under developed financial statements and low corporate governance. Also stock market R^2 and level of return crash is high in countries with more opacity.

Hunton and et al. (2004) investigated the relationship between earnings management and transparency of financial reporting. In their research, 62 financial managers were asked to select among stock exchange in available portfolio for sale. The authors manipulated the transparency of total profit and loss and the relationship in target earnings with results prediction. These managers sold stocks when the target earning is less or more than prediction that led to decrease or increase in earnings. Transparent financial reporting obligations reduce earning management struggle.

Ravi (2006) investigated the relationship between firm opacity and information asymmetry by measuring transactional cost of incorrect selection. He found the nonlinear relationship between incorrect selection and opacity of firm after controlling market structure and stock liquidity. Incorrect selection cost is high when the firm is not completely transparent or opacity. The firm can reduce its capital cost by increasing opacity or transparency.

Rajgopal and et al. (2006) raised this question " could change in financial reporting quality explain increase in unnatural changes in stock price in recent 4 years? He used two criteria for evaluation of reporting quality: 1- Earning quality and 2- difference in financial analyst's predictions. In order to evaluate earning quality discretionary accruals (based on Dechow and Dichev model, 2002) and abnormal accruals (based on Jones model) were used. The result showed that financial reporting quality is related to abnormal stock price changes in 4 recent decades.

Ferreira Miguel and Paul laux (2005) studied the relationship between corporate governance policies and anti risk and anti ownership. For evaluation of corporate governance related variable calculated by data base was used. Based on the relationship between accountancy information transparency and stock price changes risk, the authors evaluated transparency in firm by using abnormal discretionary accruals as a control variable. The results of these authors and Jin and Mir (2005) research showed that transparency play an important role in exclusive risk verification. Firm openness for accepting super visional policies and corporate governance has strong relation in spite of transparency variable.

Xu and Christos Pantzalis (2008) investigated whether R^2 is a proper scale for price continuous measurement. He believes that the firm size affects considerably on previous results. The finding of this study suggested that without controlling size factor R^2 is not proportionate scale for measuring stock price information without controlling firm size.

LITERATURE REVIEW

The link between opacity and R-square has been extensively discussed in the literature. When less firm-specific information is publicly available, there are fewer observable reasons for individual stock returns to depart from broad market indexes, and stock-market synchronicity increases. The link between opacity and crash risk has received comparatively much less attention. Several mechanisms may engender crash risk or more generally, negative skewness in returns. For example, it is well known that trading among investors who have different opinions may reveal the private signals of others and move prices even in the absence of new fundamental information (Romer, 1993). In Hong and Stein (2003) this process, combined with short sale constraints, imparts an asymmetry in which market declines differentially reveal the private signals of relatively pessimistic investors. Such revelation may lead other investors to downgrade their assessments of a firm's prospects, thereby reinforcing the decline. Other sources of negative skewness focus on volatility feedback effects (French et al., 1987 or Campbell and Hentschel, 1992). For example, big price movements may cause investors to reassess market volatility and increase required risk premia. An increased risk premium will reduce equilibrium prices, which reinforces the impact of bad news but offsets the impact of good news, thus generating negative skewness. Our empirical tests, however, are motivated by far simpler models of the information structure. They most directly follow the model of Jin and Myers (2006) and require neither disagreement among investors nor time variation in risk premia. Instead, the model envisions firm managers

controlling at least a portion of the public access to fundamental information about the firm. Managers have incentives to “stockpile” bad news, but in some circumstances those incentives collapse, leading to a sudden release of accumulated negative information and a stock-price crash. The management of firm specific information simultaneously increases both R-square and crash risk. In Jin and Myers (2006), lack of full transparency concerning firm performance enables managers to capture a portion of cash flow, in the process absorbing (and making non-visible) part of the variation in firm-specific performance. This increases R-square. Managers are willing to personally absorb losses due to temporary bad performance in order to protect their jobs. However, following a run of sufficiently bad news, they will be unwilling or unable to absorb any more losses—in other words, they have an abandonment option. If they abandon their positions, all of the hitherto-unobserved negative firm-specific shocks become public at once, resulting in a crash. This process can give rise to long left tails in the return distribution. Whereas the precise nature of opacity in Jin and Myers is largely irrelevant, Kirschenheiter and Melumad (2002) focus on a particular source of imperfect information, earnings smoothing. In their model, higher reported earnings increase the inferred level of permanent earnings, and therefore, the value of the firm. This effect is greater when reported earnings are perceived as more precise and therefore, managers generally have an incentive to smooth earnings, under-reporting earnings in response to positive surprises, and over-reporting following negative surprises. But when news is particularly bad, the manager will under-report earnings to the greatest extent possible, partially to reduce the inferred precision of the bad news, and partially to enable shifting of discretionary income to future periods. This gives rise to occasional “big baths,” or stock-price crashes. However, while the Kirschenheiter-Melumad model is consistent with stock price crashes, it does not predict a reduction in R-square. Jin and Myers note that for R-square to decrease, managers (or interpreting their model more generally, employees) must absorb some risk from shareholders. In the Kirschenheiter-Melumad framework, the timing of information releases is affected, but not the amount of risk borne by shareholders over extended periods. Jin and Myers’ cross-country empirical results indicate that measures of opacity in a given national market are associated with both higher average R-square and higher crash risk of the firms in that country. But virtually all other empirical work on opacity has focused entirely on R-square. Li et al. (2004) also focus on country-level data, finding that capital market openness and better legal systems are associated with lower R-square. Piotroski and Roulstone (2005) find that the presence of informed market participants such as analysts and institutional investors is associated with lower R-square.

Durnev et al. (2003) show that stock returns better predict future earnings changes when R-square is lower (that is when there is greater implied transparency). Wei and Zhang (2004) relate the secular decline in average R-square between 1976 - 2000 to changes in the level and volatility of firm-specific information, particularly return on equity. Ferreira and Laux (2007) show that firms with fewer anti-takeover provisions display higher trading activity, better information about future earnings in stock prices, and higher levels of idiosyncratic returns. Admittedly, not all of the literature is consistent. Ashbaugh et al. (2006) find that the Durnev et al. (2003) results do not generalize in an international setting. Some papers suggest that lower R-square may reflect greater non-information related noise in returns rather than more firm-specific information (West, 1988). Barberis et al. (2005) find that the simple addition or deletion of a firm to the SandP 500 index can significantly change its R-square.

In contrast to most prior work, we employ a direct measure of opacity based on measures of earnings (specifically accruals) management. Considerable evidence indicates that accruals management obscures at least some information about firm fundamentals (Sloan, 1996) and is thus a direct, firm-specific measure of opacity. In addition, aggressive earnings management is likely to proxy for management’s general proclivity to hide information from the capital market and thus captures less easily quantifiable or observable aspects of opacity. This is an advantage of our empirical framework compared to that of Jin and Myers. In their cross-country setting, opacity is measured using characteristics of the broad capital market in which the firm happens to be situated. In contrast, our observations are at the firm level, and allow us to construct proxies for the level of opacity chosen by each particular firm. We take this choice as given and do not model cross-sectional differences in the underlying motivation of firms to manage their earnings, but note that this is a topic that has received considerable attention in the corporate governance literature. Dechow et al. (1996) examine firms subject to enforcement actions by the SEC and show that compared to a matched control sample these firms have weaker corporate governance. For example, they are less likely to have audit committees, less likely to have outside blockholders, more likely to have insiders holding a majority of the board seats and more likely to have a CEO who is also the Chairman of the Board. These authors also attempt to understand why firms manipulate earnings and conclude that “important motivations for earnings manipulation are the desire to raise external financing at low cost and to avoid debt covenant restrictions.” More recent research confirms many of these findings. For instance, Klein (2002) documents a negative relation between audit committee / board independence and earnings management. Cornett et al. (2008) find that large stock ownership by institutional investors also constrains earnings management. Conversely, they show that economic rewards to a high stock price (in the form of incentive-based compensation such as option grants) encourage earnings

management. Other studies also find that earnings management responds to payoffs associated with a temporarily high stock price (Bergstresser et al., 2006; Bergstresser and Philippon, 2006; Teoh et al., 1998a, 1998b). More generally, firms seem to respond to incentives to manipulate reported earnings to retain healthy market valuations. Specifically, Skinner and Sloan (2002) and Kinney et al. (2002) document dramatic stock price declines associated with even small negative earnings surprises; Matsumoto (2002) and Burgstahler and Eames (2006) provide evidence of earnings management to meet analysts' forecasts.

RESEARCH HYPOTHESES

1. Opacity of financial reports increases coordination between stock return and market return.
2. Opacity of financial reports leads to stock return crash firm.
3. Opacity of financial reports leads to stock return jump firm.

METHODOLOGY

The statistical population involves accepted firms in Tehran stock exchange selected according to following reasons:

1. Availability of financial information of firms accepted in stock change.
2. Special criteria have been enacted for accepting and activities of these firms so; it seems that the information mentioned in these firms financial statement is qualitative.

This research was conducted in (2004 - 2008). According to following criterion, 261 firm-years were analyzed.

1. Those firms that their stock price is not below nominal value.
2. The firms stock transactions were conducted in Tehran stock exchange and their transactional pause is less than two months for mentioned stock.
3. These firms are not investment and service corporate
4. The firms that their data are available for measurement of optional commitment items and control variables.
5. Their fiscal year is not ended in March
6. The firms that their cash rate is less than 200 in a year
7. There are enough firms in mentioned industry.

It is expected that the firms by price less than nominal value have difficulties and considerable fraction of the bad news is related to this firms, so these firms were omitted. The firms that their return information was not available were also omitted. The data used in regression of the market return were dependable because of applying item 6. Since those firms with weak cash rate have low transactions and their prices are changed by low transaction volume. That a few actors can affect on it. Finally by applying above mentioned items 261 firms were selected for study.

Measurement of independent variable

The firm's discretionary accruals are calculated by using cash flow and note of operational profit reconciliation statement. The parameters are estimated by using cross-sectional multivariate regression and the firm's data for every research year. After estimation of parameters of model (1) and replacing in the modified Jones model, discretionary accrual items are calculated for every firm:

$$\frac{TA_{j,t}}{Assets_{j,t-1}} = \alpha_0 \frac{1}{Assets_{j,t-1}} + \beta_1 \frac{\Delta Sales_{j,t}}{Assets_{j,t-1}} + \beta_2 \frac{PPE_{j,t}}{Assets_{j,t-1}} + \varepsilon_{j,t} \quad (1)$$

Where $TA_{j,t}$, t denotes total accruals for firm j during year t ;

$Assets_{j,t}$, t denotes total assets for firm j at the end of year t ;

$\Delta Sales_{j,t}$, t denotes change in sales for firm j in year t ;

And $PPE_{j,t}$, t denotes property, plant, and equipment for firm j at the end of year t .

Discretionary annual accruals as a fraction of lagged assets for firm j during year t ($DiscAcc_{j,t}$) are then calculated using the parameter estimates from Equation (1):

$$DiscAcc_{j,t} = \frac{TA_{j,t}}{Assets_{j,t-1}} - \left(\frac{\hat{\alpha}_0}{Assets_{j,t-1}} + \frac{\hat{\beta}_1 (\Delta Sales_{j,t} - \Delta Receivables_{j,t})}{Assets_{j,t-1}} + \hat{\beta}_2 \frac{PPE_{j,t}}{Assets_{j,t-1}} \right) \quad (2)$$

$\Delta Receivables$: Receivable accounts changes in firm j at the end of the year t .

OPACITY is the prior two years' moving sum of the absolute value of discretionary accruals. Specifically,

$$OPACITY = AbsV (DiscAcc_{t-1}) + AbsV (DiscAcc_{t-2}) \quad (3)$$

Where DiscAcc_t is measure using the modified Jones Model

It is assumed that considerable discretionary accruals indicate more earning management and decrease in useful information for investors. For these reasons discretionary accruals are reversed rapidly in next periods (Dichev, 1996). So its obsolete limit was employed. In order to cover earning management it is better the sum of two years was used instead of one year.

Measurement of dependent variable

Market return regression model is:

$$R_{j,t} = \beta_0 + \beta_{1,j} r_{m,t} + \beta_{2,j} r_{i,t} + \epsilon_{j,t} \quad (4)$$

R_{j, t}: Is the return on stock j in month t;

And r_{i, t}: Is return of firm's industry j in month t;

And r_{m, t}: Is market index return in time t.

We use remainder values of regression (4) for measurement of jump and crash variables And we used, the coefficient of determination for the first hypothesis test.

Remainders of regression (4) were used for defining firm monthly return as in (1+resignal) because of controlling the effect of growth and recession of the market on the firm return. By using monthly return, jump and crash variables were defined. Then jump and crash variables were defined by using market return regression for every firm in each year.

Jump variable: If in distribution of the firm monthly return, the return of a month is more than 2 according to mean standard deviation, Jump variable is one and in other case it will be zero.

Crash variable: If in distribution of the firm month return the return of month is less than -2 according to mean standard deviation is 1 and in other cases it I will be zero.

HYPOTHESES TEST

In order to test hypothesis one, the firms are categorized and mean of R² is calculated then by using mean comparison test in two samples, Hypothesis 1 is investigated.

In order to test the effect of opacity on return crash and jump return based on this fact that these variable are in different states, the estimation of two logistic regressions was used. Other model variables were considered as control variables.

$$\text{Log}_u \left(\frac{\text{Pr}[CRUSH=1]}{1-\text{Pr}[CRUSH=1]} \right) = \beta_0 + \beta_1 OPACITY + \beta_2 SIZE + \beta_3 MB + \beta_4 LEV + \beta_5 ROE + \beta_6 SKEWNESS + \beta_7 KURTOSIS + \beta_8 VAR(industry) + \epsilon$$

$$\text{Log}_u \left(\frac{\text{Pr}[JUMP=1]}{1-\text{Pr}[JUMP=1]} \right) = \beta_0 + \beta_1 OPACITY + \beta_2 SIZE + \beta_3 MB + \beta_4 LEV + \beta_5 ROE + \beta_6 SKEWNESS + \beta_7 KURTOSIS + \beta_8 VAR(industry) + \epsilon$$

SIZE is the natural log of the market value of equity at the beginning of the fiscal year.

M to B is the ratio of the market value of equity to the book value of equity measured at the beginning of the fiscal year.

LEV is the book value of all liabilities scaled by total assets, measured at the beginning of the fiscal year.

ROE is contemporaneous return on equity defined as income before extraordinary items divided by the book value of equity.

Skewness is the skewness of the firm-specific monthly return over the fiscal year.

Kurtosis is the kurtosis of the firm-specific monthly return over the fiscal year.

VAR (Industry Index) is the variance of the monthly returns of the Fama and French industry index during the firm's fiscal year.

FINDINGS

H1 test results

H₀: Opacity of financial reports does not increase coordination between stock return and market return.

H₁: Opacity of financial reports increases coordination between stock return and market return.

For test of hypotheses the observations are divided into 3 groups based on opacity variable then mean R² of is calculated in groups 1 and 3. Group 1 and group 3 indicate the least and highest opacity respectively.

T test for two independent samples-comparison of mean of R2

T test is used for comparison of mean of R² for the first of one-third opacity index with the last one third. In other words, the value of model determination coefficient is compared in upper and lower limits of opacity index. Assumptions of zero and equivalent are formulated as follows:

$$\begin{cases} H_0 : \mu_1 = \mu_2 \\ H_1 : \mu_1 \neq \mu_2 \end{cases}$$

Before investigation of means, it is necessary to compare both group variances. Hypothesis H₀ and equivalent are as follows:

$$\begin{cases} H_0 : \sigma_1^2 = \sigma_2^2 \\ H_1 : \sigma_1^2 \neq \sigma_2^2 \end{cases}$$

Leven's test probability for the same variances is 0.262 since this value is not less then 5% so hypothesis H₀ is not rejected in 95% it means that the coefficient of both groups is the same.

Table1. T-test results for comparing two levels of determination coefficient opacity index

Dependent Variable	Opacity	N	Mean	Std. Deviation	Leven's Test for Equality of Variances		t-test		
					F	Sig.	t	df	Sig. (2-tailed)
R ²	First of one third	80	.3732	.24999	1.269	.262	1.219	167	.224
	A final third	89	.3271	.24117					

The test value is 0.224 that it is not in rejection area of H₀. So the H₀ by reliability of 95% is not rejected. There is no meaningful difference in determination coefficient value in upper and lower 30% of opacity index. From above table it can concluded that H₁ is not confirmed, so opacity variable does not affect coordination between stock return and market return.

H2 test results

Logistic regression method is formulated for studying the affect of independent variables on firm's crash:

H₀: Opacity of financial reports does not lead to stock return crash firm.

H₁: Opacity of financial reports lead to stock return crash firm.

According to table (2) the X² equals 12.94 CP=0.074 Thus the model is rejected in reliability of 95% since P<9%10 so in 90% the model is meaningful. The model confirm low amount of predication.

Table 2. The results of significant means test models for predicting Crash

Chi-square	d.f	Sig.
12.938	7	.074

The correct recognition is identified based on table (4); in case of no crash and correct predication, it equals 97.1 in other case it equals 4.9. By this model, the crash amount is 67.6%; there are meaningful values for variables coefficients in table (5). This test was conducted by using Wald statistics and meaningful values were obtained for fixed section 0.772 and for opacity section 0.622. These values were calculated for other control variables, they are meaningful in 95% except skew ness, since their meaningfulness level is more than 5%. Thus skew variable is meaningful in 95%. So, H₀ is not rejected for other variables.

It can be interfered that opacity as a main variable does not affect on stock return crash risk, so H_2 is rejected and stock return skewness is only effective variable.

Table 3. Coefficients percent dependent variable explained by independent variables

-2 Log likelihood	Cox and Snell R Square	Nagelkerke R Square
308.139 ^a	.049	.069

Table 4. Percentage of correctly predicted by the model

Observed		Predicted		Percentage Correct
		crash		
		With out crash	With crash	
crash	With out crash	169	5	97.1
	With crash	78	4	4.9
Overall Percentage				67.6

Table 5. Logistic regression results

Independent Variables	B	S.E.	Wald	df	Sig.	Exp(B)
Opacity	-.388	.787	.243	1	.622	.679
SIZE	.002	.229	.000	1	.995	1.002
MB	-.047	.029	2.586	1	.108	.954
ROE	.442	.319	1.921	1	.166	1.555
KURT	-.015	.059	.062	1	.804	.985
SKEW	-.278	.131	4.472	1	.034	.757
VAR	-.002	.003	.548	1	.459	.998
Constant	-.371	1.279	.084	1	.772	.690

H₃ test results

H_0 : Opacity financial reports do not lead to stock return jump.

H_1 : Opacity financial reports lead to stock return jump.

As you have seen from table (6) X^2 equals 17,09 in 0.017 so H_0 is rejected. There is no meaningful model (at least one of the variables is effective in firm jump).

Table 6. The results of significant means test models for predicting jump

Chi-square	df	Sig.
17.097	7	.017

Cox and Snell R Square R^2 is 0.065. This index is explained like determination coefficient in normal regression and it indicates dependent variable changes explanation by independent and control variables. The level of accurate recognition is determined by using model in table8. In case of no crash and accurate predication it equals 96,2% and in other case it equals 12.7%. So by using this model the accurate recognition of jump is 73%. Meaningful level was calculated for variables coefficient test in table9. This test was conducted by the main statistics. The meaningful values of 0.392 and 0.13 were obtained for fitted part and opacity part respectively. Other control variables are calculated in table (9). So, size variables are meaningful in 95% reliability since meaningfulness Level is less than 5% for this variable, Thus H_0 is not rejected.

It can be concluded that opacity variable is not effective so H_3 is not confirmed. SIZE is the only effective variable and (-) sign in its coefficient means that the big firm has low probability for return jump.

Table 7. Coefficients percent dependent variable explained by independent variables

-2 Log likelihood	Cox and Snell R Square	Nagelkerke R Square
285.202 ^a	.065	.093

Table 8. Percentage of correctly predicted by the model

Observed		Predicted		Percentage Correct
		Jump		
		With out Jump	With Jump	
Jump	With out Jump	178	7	96.2
	With Jump	62	9	12.7
Overall Percentage				73.0

Table 9. Logistic regression results

Independent Variables	B	S.E.	Wald	df	Sig.	Exp(B)
Opacity	1.186	.785	2.287	1	.130	3.275
SIZE	-.472	.246	3.678	1	.05	.624
MB	-.008	.014	.387	1	.534	.992
ROE	.187	.295	.404	1	.525	1.206
KURT	.116	.061	3.642	1	.056	1.122
SKEW	.140	.141	.986	1	.321	1.150
VAR	.000	.003	.065	1	.799	.999
Constant	1.171	1.369	.732	1	.392	3.225

CONCLUSION

We have used the moving sum of absolute discretionary accruals as a proxy for firm opacity, and have documented that this variable predicts both R-square and crash risk. But earnings management may wax and wane over time, thus providing a natural experiment to further test the impact of opacity on stock price dynamics. According to the results, it can be concluded that opacity of financial reporting does not affect on stock return jump and crash risk. These results do not agree with Hutton and et al. (2009). Lack of sufficient information and not considering the firm's financial report and lack of professional analysts in Tehran stock exchange can be reasons for rejecting hypotheses. The results show that the firm size affects on transferring risk to investors. Investment in big firms has low risk. Also the firms with skewness and expansion in return as a result of their activity nature, transfer more investment risk to the investors. The baseline volume and daily price oscillation are effective factors on research results.

These results are new and consistent with a theoretical model of crash risk based on information management: Firms manage earnings to shelter bad information up to a point, but once some tipping point is crossed, the information comes out in one fell swoop, which results in a price crash.

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