



Effect Of Earnings Opacity On Cost Of Equity

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Abstract

This study aims to investigate the effect of earnings opacity on the cost of capital as measured by an index of earnings opacity which is constructed from seven measures including earnings aggressiveness, income smoothing, earnings management, a restatement of financial statements, the proportion of notes to financial statements, stock trading volume, and *bid-ask spreads*. This study focuses on all companies listed on the Indonesia Stock Exchange (IDX) from 2009-2013. However, financial sector companies were excluded from the sample because financial sector companies have specific characteristics related to governance and accounting standards, besides that the financial sector also has a special set of rules that will affect discretionary accruals which is one measure of earnings opacity. Regression testing shows results that are consistent with the results of previous studies. This research proves that the higher the profit opacity, the higher the cost of equity. This study has limitations where the earnings opacity index is built from seven dimensions, one of which is the restatement of financial statements. In Indonesia, in the non-financial sector, there are very few samples that restate financial statements. Further research can use a larger number of samples and additional variables such as the reform of the financial reporting system.

Keywords: earnings opacity, earnings opacity index, cost of equity

INTRODUCTION

Profit is an instrument for measuring the company's operational performance. Profit information measures the success or failure of the business in achieving the stated operating objectives. Therefore, quality earnings information is needed for the right decision-making for both internal and external parties of the company. Under the accrual accounting system, the main measure of a company's performance is profit, in this case, profit is an estimate of current and future net cash flows from economic transactions during a period. This implies that the company's reported profit is an estimate of the company's performance. The accuracy of the estimate depends on the quality of the accounting property used to make the estimate. The lower the estimation accuracy causes the profit to be blurry. An opaque profit is a non-transparent profit. Earnings opacity (Milken institute, 2016) is *earnings opacity*, so it does not present the true distribution of economic profits.

Companies in Indonesia have a high level of profit opacity. This is indicated by the high ranking of Indonesia's opacity index, which is ranked 35th out of 48 countries (Milken institute, 2016). Another rating made by (Bhattacharya, U., H. Daouk, 2003) shows the level of opacity of Indonesia's earnings at the 32nd rank out of 34 countries.

The more opaque the company, the more bad information the company hides (Jin & Myers, 2006). Earnings opacity will also affect the informational risk associated with increasing the cost of equity and decreasing stock trading (Bhattacharya, U., H. Daouk, 2003) economic

development and human development, capital market prosperity in a country (Riahi-Belkaoui, 2005); cash flow and risk (Jin & Myers, 2006), stock returns (Hutton et al., 2009).

Disclosure of information to the public through annual reports and other disclosures will reduce uncertainty about the timing and size of future cash flows as well as the risk premium. This has implications for financial reporting regulations and voluntary disclosure policies, that the more informative public disclosures will be, the less the cost of equity (Christensen et al., 2010). As one of the components of publicly disclosed financial statements, opaque earnings can affect a country's financial markets

(Bushman & Smith, 2001) identified that earnings opacity will affect financial markets in three ways: 1) better accounting information helps investors distinguish between good and bad investments which reduces estimation risk, thereby lowering the firm's cost of equity, and 2) better accounting information. better help investors distinguish between good and bad managers who lower agency costs, thereby lowering the firm's cost of equity, 3) earnings opacity weakens the relationship between reported accounting earnings and unobserved accounting earnings, thereby increasing information asymmetry.

Meanwhile, according to (Bhattacharya, U., H. Daouk, 2003) earnings, opacity causes information risk, namely the variation in risk that investors may face, resulting from inadequate or inappropriate information processing as the basis for investment decisions. Therefore, empirical evidence is also needed in public companies in Indonesia, that earnings opacity will increase information risk it affects the cost of equity.

HYPOTHESIS DEVELOPMENT

Earnings Opacity

According to (Bhattacharya, U., H. Daouk, 2003) The opacity of a country's earnings is the extent to which the reported profit distribution of firms in that country fails to provide information about the true (but unobserved) distribution of economic profits.

According to (Riahi-Belkaoui, 2005), earnings opacity can be seen as a problem of accounting techniques, and its impact can be corrected by law enforcement. There are two possibilities: (1) law enforcement may be weak and ineffective, as in some cases: there are political connections within companies that benefit from the government, such as protection and *rent*. The existence of political connection makes management more aggressive in the choice of accounting method so that it will result in a higher level of profit opacity, (2) law enforcement may take place even though there is a political connection, such as the existence of market discipline. In this case, the percentage of the market capitalization of connected companies is high, so the lower the expected profit opacity, because market participants need better accounting quality.

Obscurity of Profit and Cost of Equity

(Bhattacharya, U., H. Daouk, 2003) , examined the financial statements of 34 countries from 1984-1998 to create a panel data set that measures three dimensions of accounting earnings reported by companies, namely earnings aggressiveness, loss avoidance, and income smoothing. Then examine the effect of the three measures of earnings opacity on the demand for return by shareholders and how much is traded. Overall, a country's earnings opacity will increase the informational risk associated with increasing the cost of equity and decreasing stock trading in that country.

The Sarbanes-Oxley (SOX) legislation aims to reduce financial reporting opacity and improve the integrity of financial reporting by improving disclosure and corporate governance practices. (Akhigbe & Martin, 2006) estimated the effect of firm SOX valuation on the financial industry, and found evidence that firms significantly benefit from SOX adoption.

(Riahi-Belkaoui, 2004) examines the relationship between earnings opacity in 32 countries and elements of political interest. The results show that earnings opacity is positively related to the percentage of companies listed on the stock exchange that are politically connected and negatively related to connected companies as a percentage of market capitalization and the level

of law enforcement. Meanwhile, the level of disclosure, the number of auditors per 100,000 population, and the adoption of international accounting standards (as elements of the accounting aspect) are not significantly related to earnings opacity internationally. The quality of accounting in general and the opacity of earnings, in particular, are determined more by the political climate than by the climate of accounting techniques.

(Riahi-Belkaoui, 2005) states that the quantity and quality of accounting information have a significant impact on international economic and human development. International variation in earnings opacity indicates that there are local factors that determine the degree and change of earnings opacity. The study examines the impact of corruption on the level of profit opacity internationally. The results showed a significant relationship between the level of corruption and profit opacity after controlling for economic development, human development, economic freedom, and government size.

(Riahi-Belkaoui, 2005) examines how accounting quality as measured by earnings opacity affects the welfare of the capital market, which will also be related to economic growth. The results show that the welfare of the capital market is negatively affected by earnings opacity. The research data also shows that the exogenous component of capital market welfare defined by earnings opacity is positively related to economic growth. The direct effect of earnings opacity on economic growth is expected to be negative, but not significant.

(Hooper & Kim, 2007) examines the relationship between international capital flows and recipient country opacity. This study uses the 2000 *Price Waterhouse Coopers* (PWC) opacity index and examines its effect on three types of net international capital flows, namely foreign direct investment, portfolio capital, and international bank loans. In general, research results show that the higher the opacity, the fewer capital flows. However, in some cases, research results show the opposite result, namely when capital flows are higher the opacity is associated with an increased specific business climate, regulation and accounting for foreign direct investment flows, corruption and regulation for portfolio flows, and economic opacity and corruption for loan flows. International. This is due to higher profit opportunities which indicate the role of informal channels in investment practices so that the opacity index increases. The results also show that international bank loans generally respond differently to portfolio flows and foreign direct investment.

(Riahi-Belkaoui & Alnajjar, 2006) identify and examine the factors that influence earnings opacity in the international context. International earnings opacity is negatively related to levels of economic freedom and quality of life and positively related to the rule of law, economic growth, and levels of corruption. However, the level of disclosure, the number of auditors per 100,000 population, and the adoption of international accounting standards (as accounting elements) are not significantly related to earnings opacity.

Increasing the quality of financial information can reduce information asymmetry so that it can reduce the cost of capital (August et al., 1986) and (Diamond & Verrecchia, 1991). Companies can reduce information asymmetry between companies and between market participants, between informed and uninformed investors by providing information that helps in the decision-making process. The results of empirical research show that the level of disclosure is related to the cost of equity (Botosan, 1997); and (Plumlee, 2002)

(Ratti et al., 2008) examined the effect of bank concentration on the financial constraints of corporate investment decisions in 14 European countries between 1992 and 2005. The study used panel data of non-financial companies to analyze financial constraints using the Euler equation derived from the dynamic investment model. . The results of the study indicate that companies in the banking sector that are highly concentrated are less financially constrained.

The results of this study remain *robust* after controlling for company opacity, company size, and the business cycle. Overall the research results are consistent with the information-based hypothesis, namely that the higher the market power, the banks are encouraged to produce information on potential borrowers. The findings are *robust* after controlling for country-specific institutional factors.

(Seo, 2010) examines the effect of financial reporting system reform in Korea on earnings quality by testing the sample in two periods, namely before and after the 1997 economic crisis in Korea. The results show that financial sector reform has reduced the opacity in Korean corporate earnings reports. The results also show that there is a successful transfer of rules and regulations between countries despite having different social, legal, and cultural systems, namely the adoption of global accounting standards which have a positive impact on earnings quality.

(Christensen et al., 2010) states that increasing public disclosure will reduce the company's cost of equity. The focus of this research is the effect of information on the cost of equity after the announcement of the information. The results showed that the decrease in the cost of equity after the announcement of the information was followed by an increase in the cost of equity after the announcement of the information. While publicly or privately provided information affects the timing of uncertainty resolution and when information is reflected in the equilibrium price, there is no impact on the initial price.

(Daouk et al., 2006) examines the relationship between capital market governance and several market performance measures. The measure of the capital market governance index covers three dimensions of securities laws: the degree of opacity of earnings, the enforcement of internal law, and the effect of removing *short selling restrictions*. This research proves that the improvement of the capital market governance index is related to the decrease in the cost of equity, the increase in market liquidity, and the increase in the efficiency of market prices. Investors will pay more for companies that adopt policies that result in high accounting transparency and disclosure, to obtain reliable information (Aggarwal et al., 2005).

(Hutton et al., 2009) examined the relationship between financial statement transparency and the distribution of stock returns. The study uses earnings management to measure opacity, the results show that after SOX earnings management tends to decline or companies can hide little information in the new regulatory environment.

The published income statement shows an available and informative profit. Investors will bear the low cost of the profit information. According to (Barth et al., 2013) when profit transparency is low, the profit does not reflect changes in the actual economic value of the company, it will result in investors trying to find private information. Finding private information that is not reflected in the published income statement is very expensive, so investors incur high transaction costs.

The higher the opacity of the company's earnings, the higher the informational risk borne by investors, so that investors demand a high return to compensate for this risk, the higher the cost of equity borne by the company. Therefore, the third hypothesis in this study is as follows:

Ha: The higher the profit opacity, the higher the cost of equity borne by the company.

METHODOLOGY

Population and Sample

The population of this study is all companies listed on the Indonesia Stock Exchange (IDX) from 2009-2013. The sample selection method is purposive sampling, with the following criteria:

1. Companies are other than the financial sector listed on the Indonesian stock exchange in a row from 2009-2013. Companies from the financial sector were excluded from the sample because they have specific characteristics related to governance and accounting standards, besides that the sector also has special regulations that it will affect discretionary accruals which is one measure of earnings opacity.
2. Companies that have a non-pyramid ownership structure. Companies with pyramid ownership are excluded from the sample because they usually have the *ultimate owner* who participates in controlling financial reporting policies
3. The Company uses the reporting currency in Rupiah. Companies with reporting currencies other than rupiah are excluded from the sample because this study also uses discretionary accrual measures for three years. Companies that change their reporting currency will affect the consistency of discretionary accruals calculations.

Table 1. Sample Selection Results

Information	Amount
Non-financial companies listed on the IDX from 2009-2013	237
Companies that do not have a non-pyramid ownership structure	(86)
Companies that use a reporting currency other than Rupiah (the functional currency)	(25)
Number of samples	126

Based on the results of the sample selection above, the final sample was obtained from as many as 126 companies and observations for 5 years. The number of observations is 630 (company years).

The data in this study are secondary data which include:

1. The company's annual financial report was obtained from the Indonesia Stock Exchange.
2. Ownership structure graph obtained from the OSIRIS database.
3. Stock data obtained from Bloomberg (Bank Negara Indonesia data center, Faculty of Economics and Business Universitas Gadjah Mada)

Research variable

This study uses earnings opacity as the independent variable and the cost of equity as the dependent variable.

a. Profit Blur

Earnings opacity is measured by the earnings opacity index, which is constructed from seven measures of earnings opacity, namely earnings aggressiveness, earnings management, income smoothing, level of disclosure through notes to financial statements through profit and loss statements, restatements of financial statements, stock trading volume, and *bid-ask spreads*. This study creates an index that ranks the relative opacity of each company in the sample. This study categorizes all measures of earnings opacity into deciles, in this case, the most opaque company will get a score of 10, and the least opaque will get a score of 1. The seven categories are then summed and scaled by a factor of 70 (total possible score) to make an index ranging from 0.1 to 1. The higher the index, the higher the level of profit opacity. This index provides a relatively *robust measure of* opacity because it averages the overall measure of earnings opacity. This measurement is a modification of the opacity index (Anderson & Reeb, 2003) and (Bhattacharya, U., H. Daouk, 2003)

b. Cost of Equity

The cost of equity is the minimum rate of return required by investors from providing capital to the company (Plumlee, 2002). The cost of equity consists of two components, namely the risk-free interest rate and the undiversified risk premium. The cost of equity cannot be observed directly, therefore it must be estimated. The difficulty of estimating the cost of equity can be overcome by using historical data. The CAPM (*Capital Asset Pricing Model*) model is one of the models used to estimate the cost of equity using historical data. Based on the CAPM model, the cost of equity is the rate of return expected by investors as compensation for undiversified risk (share beta), with the following formula:

$$KE_{it} = R_f + (\beta_{it} (R_{mt} - R_f)) \dots\dots\dots(1)$$

Information:

KE_{it}: Cost of equity of firm I in period t

R_f: Risk-free interest rate

β_{it}: Stock beta

R_{mt}: Market return in period t

Variable Example

The variable used to control the effect of earnings opacity on the cost of equity is firm size. The selection of this variable is based on previous research that examines the relationship between information disclosure and the cost of equity [(Botosan, 1997) ; (Plumlee, 2002) (Hang Chan, 2009)]. The larger the size of the company, the more transparent the company will be so that investors will bear low transaction costs which will reduce the cost of equity.

The hypothesis in this study predicts that profit opacity will increase the cost of equity. This hypothesis is tested by equation 2. The dependent variable in model 1 is the cost of equity as measured by the CAPM, the independent variable is the earnings opacity index, and the control variable is firm size.

Research Models:

$$CE_{it} = \alpha + \beta_1 OPACITY\ INDEX_{it} + \beta_2 LSIZE_{it} + e \dots\dots\dots(2)$$

Information:

- OPACITYINDEX_{it} : The opacity index of company i's earnings in period t.
- CE_{it} : The cost of equity of company I in period t.
- Control Variables :**
- SIZE_{it} : Ln Total assets of the company i in period t.

RESULTS AND DISCUSSION

The description of the data which includes the minimum, maximum, average, and standard deviation values of all the variables tested in this study is presented in the following table:

Table 2. Descriptive statistics

	N	Average	Standard Deviation	Minimum	Maximum
OPACITYINDEX	630	0.7004	0.1085	0.4090	0.8999
CE	630	0.8574	0.6888	-,2012	1.2290

The average sample company has a high-profit opacity index of 0.7. The Composite Stock Price Index (JCI) during the year observed was relatively not volatile, there was even an upward trend from year to year. Only in 2009, the JCI experienced a decline 2009 compared to 2008. This resulted in the cost of equity measured by the CAPM being low and even negative.

Classic Assumption Test Results

1. Normality Test Results

The residual normality test of equation 2 uses the *Kolmogorov-Smirnov test*. This study uses a different sample for Equation 2 because this study excluded 116 outlier samples. So the sample tested is 514. The test results show that the regression model in Equation 2 has a statistically significant residual at < 5%. This shows that the regression model (equation 2) has residuals that are not normally distributed. Because the sample of this study is large, the assumption of residual normality can be ignored. In a large sample, classical assumption testing more emphasized heteroscedasticity and autocorrelation which can cause statistical conclusions to be invalid.

2. Multicollinearity Test Results

The multicollinearity test of the regression model (Equation 2) uses a correlation matrix and the value of *Tolerance* & *VIF*. *Pearson* correlation matrix equation 2 is presented in the following table:

Table 3. Correlation Matrix Equation 2

VARIABLE	TO	OPACITYINDEX	SIZE
CE	1		
OPACITYINDEX	0.125 **	1	
SIZE	-0.096*	-0.032	1

**) Significant correlation on : 1% (two sides)

*) Significant correlation on : 5% (two sides)

The correlation matrix of the variables in equations 7-2 does not show any multicollinearity. The highest correlation was between OPACITYINDEX and KE (*p-value* <0.01), while firm size (SIZE) CE had a negative correlation (*p-value* <0.05). The positive correlation between OPACITYINDEX and KE was in line with the predictions in this study.

A multicollinearity test was also carried out with *Tolerance* and VIF values. The results of the multicollinearity test are presented in the following table:

Table 4. Multicollinearity Test Results Equation 2

Variable	Tolerance	VIF
CE	0.999	1,001
Size	0.999	1,001
Conclusion	No multicollinearity	No multicollinearity

Based on table 4.10 the regression model (Equation 2) does not occur multicollinearity, which is indicated by the absence of independent variables (Cos of Equity and SIZE) which have a *Tolerance value* of less than 0.10 and a *variance inflation factor* (VIF) greater than 10. So there is no multicollinearity between independent variables in Equations 7-2.

3. Autocorrelation Test Results

The results of the autocorrelation test with the *Durbin-Watson test* are presented in the following table:

Table 5. Autocorrelation Test Results

Variable	DW	dL	dU
Equation 2	1,735	1,853	1,862
Conclusion	Autocorrelation +		

Based on Table 5, the *Durbin-Watson value* < dL, then the autocorrelation coefficient is > 0. It can be concluded that there is a positive autocorrelation in the regression model. The autocorrelation was then corrected by the *Newey-West method*. This method was chosen because, in addition to being easy to do, this method is still possible to use *ordinary least squares* (OLS) but by correcting the *standard error* (Damondar N. Gujarati, 2003). After being corrected by the *Newey-West method*, there are differences in the *standard error values*, t statistics, and p values, but the results are more valid in making conclusions than without correction.

4. Heteroscedasticity Test Results

Heteroscedasticity testing was carried out using the *Park test*, which is presented in table 6 below:

Table 6. Heteroscedasticity Test Results

Variable	t	p-value
CE	-0.797	0.426
Size	-2,270	0.024
Conclusion	There is heteroscedasticity	

The test results show that the regression model of Equation 2 indicates the presence of heteroscedasticity. This is indicated by the t value of the SIZE variable which is statistically significant at 5%.

Heteroscedasticity causes the OLS model to be inefficient. The inefficiency of the regression model causes the results of hypothesis testing to be misleading. Correction of heteroscedasticity is done by correcting the *standard error* using *White's robust standard error* (Damondar N. Gujarati, 2003). The results of the *standard error* correction have corrected the *standard error* value, t value, and p-value, but the coefficient remains the same so that it does not change the conclusion.

The test results from equation 2 are presented in the following table:

Table 7. Results of Regression Analysis of Equation 2

Equation 2 : $CE_{it} = \alpha_0 + \alpha_1 OPACITYINDEX_{it} + \alpha_2 LSIZE_{it} + e$

The dependent variable is the cost of equity (CE_{it}), while the independent variable is the earnings opacity index ($OPACITYINDEX_{it}$); the control variable is the firm size ($LSIZE_{it}$)

Variable	Coefficient	t-Stats
C	2.355654	3.030193***
OPACITYINDEX	1.467962	3.097098***
SIZE	-0.154829	-1.971008**
N	514	
Adj R ²	0.020380	
F-statistics	6,336293***	

*** Significant at 1%

** Significant at 5%

Based on Table 7, equation 2 has an F statistical value of 6.336293 and is significant at 1%, meaning that this research model is fit to explain the effect of variations in the OPACITYINDEX and SIZE variables on variations in the CE variable. However, it has a relatively small Adj R² value of 2.04 %, so 97.06% of the variation in the KE variable is explained by other factors not explained in the model.

OPACITYINDEX variable has a coefficient of 1.467962 (positive) which is significant at 1%. This means that the variable OPACITYINDEX has a positive effect on the CE variable. The higher the earnings opacity index, the higher the cost of equity. The SIZE variable has a negative coefficient (-0.154829) and is significant at 5%. This shows that the SIZE variable hurts the CE variable. The larger the size of the company, the smaller the cost of equity.

The conclusions of hypothesis testing are presented in table 8 below:

Table 8. Conclusion of Hypothesis Testing

Hypothesis	Variable	Coefficient	p-value	Conclusion
Ha	OPACITYINDEX	1.467962	0.0021	Ha supported

Based on Table 8, shows that the hypothesis in the study is supported. The earnings opacity index is proven to have a positive effect on the cost of equity. The higher the profit opacity, the higher the cost of equity borne by the company.

The hypothesis in this study is supported. Profit opacity has been shown to have a positive effect on the cost of equity. The higher the earnings opacity index indicates the company is deliberately managing its earnings transparency to hide certain information, this will have an impact on increasing information asymmetry. The opacity of earnings also illustrates that the company's internal parties cover up favorable information compared to external parties so that external parties bear high transaction costs. The high transaction costs cause investors to demand high returns which will increase the cost of equity borne by the company. The results of this study are in accordance with (Bhattacharya, U., H. Daouk, 2003) and (Daouk et al., 2006). In addition, because earnings opacity is a complex interaction of three factors, namely managerial motivation, accounting standards, and enforcement of accounting standards (audit quality) it is difficult for investors to observe a company's earnings opacity. This will increase the risk of information that has an impact on the high cost of equity.

Firm size hurts the cost of equity. The larger the size of the company, the more motivated the company will be to make the company's profits transparent. Transparent earnings reports show low information asymmetry between companies and investors, thereby reducing transaction costs for investors. Low transaction costs will reduce the cost of equity. This is consistent with (Atiase, 2016) who states that the larger the size of the company, has lower the information asymmetry because the higher the amount of private information disclosed before the disclosure of financial statements.

The results of this study are also consistent with those (Anderson & Reeb, 2003) and (Anderson et al., 2009), which state that the larger the size of the company, the more transparent it is so that the level of earnings opacity is lower. The results of this study are also consistent with those (Plumlee, 2002) and (Botosan, 1997), and (Hang Chan, 2009) which state that the larger the size of the company, the more transparent the company will be, so that investors will bear low transaction costs so that it will reduce the cost of equity.

CONCLUSIONS AND LIMITATIONS

This study uses an earnings opacity index which is constructed from seven measures of earnings opacity which include internal earnings opacity and external earnings opacity. Internal earnings opacity is earnings opacity as measured by fundamental data in financial statements, which consist of earnings aggressiveness, income smoothing, earnings management, a restatement of financial statements, and the proportion of notes to financial statements. Meanwhile, external profit opacity is profit opacity as measured by market data, namely stock trading volume and *bid-ask spread*.

This research proves that the higher the profit opacity, the higher the cost of equity. The results of this study are consistent with the results of research (Bhattacharya, U., H. Daouk, 2003), (Daouk et al., 2006) and (Barth et al., 2013). When profit transparency is low, the profit does not reflect changes in the actual economic value of the company, it will cause investors to seek private information. Each investor is different in terms of seeking information related to information about the economic value of the company. So the cost of searching for information and the amount of information desired among investors can vary between companies. This indicates that the informational risk of each investor is different, so the returns required to compensate for this risk are also different. The higher the information risk borne, the investors will ask for a high return to compensate for this risk so that the cost of equity borne by the company is high.

The limitation of this study is that the earnings opacity index in this study is constructed from seven dimensions of earnings opacity, one of which is the restatement of financial statements. Additional analysis results cannot prove that the restatement of financial statements is an appropriate measure of earnings opacity. This is because very few sample companies make restatements of financial statements. This study also does not distinguish between mandatory or voluntary restatements of financial statements. Further research can enlarge the sample including financial sector companies, so that more samples of companies that perform restatement of financial statements, both mandatory and voluntary, can be obtained. Future research can also add new variables such as reform of the financial reporting system.

REFERENCES

- Aggarwal, R., Klapper, L., & Wysocki, PD (2005). Portfolio preferences of foreign institutional investors. *Journal of Banking and Finance*, 29 (12), 2919–2946. <https://doi.org/10.1016/j.jbankfin.2004.09.008>
- Akhigbe, A., & Martin, AD (2006). Valuation impact of Sarbanes – Oxley: Evidence from disclosure and governance within the financial services industry. 30, 989–1006. <https://doi.org/10.1016/j.jbankfin.2005.06.002>
- Anderson, RC, Duru, A., & Reeb, DM (2009). Founders, heirs, and corporate opacity in the United States. *Journal of Financial Economics*, 92 (2), 205–222. <https://doi.org/10.1016/j.jfineco.2008.04.006>
- Anderson, RC, & Reeb, DM (2003). Founding-Family Ownership and Firm Performance: Evidence from the S&P 500. *Journal of Finance*, 58 (3), 1301–1327. <https://doi.org/10.1111/1540-6261.00567>
- Atiase, RK (2016). Predisclosure Information, Firm Capitalization, and Security Price Behavior Around Earnings AnnouncementsAuthor(s):RowlandKwameAtiaseUniversityofChicagoStableURL: <http://www.jstor.org/stable/2490905> Predisclosure Information, Firm Capital. 23 (1), 21–36.
- August, R., Michael, C., Ramaswamy, K., & William, G. (1986). Asset pricing and the bid-ask spread*. 17.
- Barth, ME, Konchitchki, Y., & Landsman, WR (2013). Cost of capital and earnings transparency. *Journal of Accounting and Economics*, 55 (2–3), 206–224. <https://doi.org/10.1016/j.jacceco.2013.01.004>
- Bhattacharya, U., H. Daouk, and MW (2003). The World Price of Earnings Opacity. *The Accounting Review*, 78(3):, 641–678.
- Botosan, CA (1997). Disclosure Level and the Cost of Equity Capital. *The Accounting Review*, 72, 3.
- Bushman, RM, & Smith, AJ (2001). Financial accounting information and corporate governance \$ (Vol. 32).
- Christensen, PO, Rosa, LE De, & Feltham, GA (2010). Information and the Cost of Capital: An Ex Ante Perspective. 85 (3), 817–848. <https://doi.org/10.2308/accr.2010.85.3.817>
- Damondar N. Gujarati. (2003). basic econometrics.
- Daouk, H., Lee, CMC, & Ng, D. (2006). Capital market governance: How do security laws affect market performance? *Journal of Corporate Finance*, 12 (3), 560–593. <https://doi.org/10.1016/j.jcorpfin.2005.03.003>
- Diamond, DW, & Verrecchia, RE (1991). Disclosure, Liquidity, and the Cost of Capital. XLVI (4), 1325–1359.
- Hang Chan, K. (2009). Impact of intellectual capital on organizational performance. *The Learning Organization*, 16 (1), 22–39. <https://doi.org/10.1108/09696470910927650>
- Hooper, V., & Kim, S. (2007). The determinants of capital inflows: Does the opacity of the recipient country explain the

- flows? 31, 35–48. <https://doi.org/10.1016/j.ecosys.2006.08.001>
- Hutton, AP, Marcus, AJ, & Tehranian, H. (2009). Opaque financial reports, R2, and crash risk. *Journal of Financial Economics*, 94 (1), 67–86. <https://doi.org/10.1016/j.jfineco.2008.10.003>
- Jin, L., & Myers, SC (2006). R 2 around the world: New theory and new tests \$. 79, 257–292. <https://doi.org/10.1016/j.jfineco.2004.11.003>
- Milken Institute. (2016). Global Opportunity Report. Global Opportunity Report, September, 1–144. www.globalopportunitynetwork.org
- Plumlee, CAB and MA (2002). A Re-examination of Disclosure Level and the Expected Cost of Equity Capital. 40 (1).
- Ratti, RA, Lee, S., & Seol, Y. (2008). Bank concentration and financial constraints on firm-level investment in Europe. *Journal of Banking and Finance*, 32 (12), 2684–2694. <https://doi.org/10.1016/j.jbankfin.2008.07.001>
- Riahi-Belkaoui, A. (2004). Earnings Opacity and the Productivity of Nations. *Review of Accounting and Finance*, 3 (3), 131–144. <https://doi.org/10.1108/eb043410>
- Riahi-Belkaoui, A. (2005). Earnings Opacity, Stock Market Wealth Effect, and Economic Growth. *Review of Accounting and Finance*, 4 (1), 72–91. <https://doi.org/10.1108/eb043419>
- Riahi-Belkaoui, A., & Alnajjar, FK (2006). Earnings opacity internationally and elements of social, economic, and accounting order. *Review of Accounting and Finance*, 5 (3), 189–203. <https://doi.org/10.1108/14757700610686408>
- Seo, BBL & SD (2010). Reforms in the Korean Financial Reporting Systems and Earnings Quality. *Asia-Pacific Financial Markets*, 17, 51–61.