



Are corporate governance and earnings management practices relevant to company value in Mexico?

¿Son las prácticas de gobierno corporativo y de earnings management relevantes para el valor de las empresas en México?

Isela Alanís Aguilar, Martha del Pilar Rodríguez García^{✉*},
Klender Aimer Cortez Alejandro

Facultad de Contaduría Pública y Administración, Universidad Autónoma de Nuevo León, México

Received March 7, 2018; accepted June 4, 2019

Available online December 4, 2019

Abstract

This research is analyzed if corporate governance (we considering corporate governance as the set of relationships between the different participants of the company) and earning management (intervention in the process of preparing financial information) have an impact on the value of companies in Mexico. The research was conducted during the period from 2008 to 2017, using a sample of 50 companies listed on the Mexican Stock Exchange, the methodology used was the quantile method, so we analyzed the impact of large companies dividing them into small, medium and large firms with Tobin's Q ratio. Our results show that earning management had a negative impact in the value of the company in all company sizes measured by Tobin's Q ratio, which indicates an opportunistic perspective of the management of results in Mexican companies. While the impact of corporate governance only occurs in medium-sized companies. We also find evidence that manipulation is greater in crisis period in small and large companies. Regarding the sectorial impact, it is observed that for the 25th and 50th percentiles the industrial sector, frequent consumption and telecommunications have more impact on Tobin's Q ratio than the materials sector, while the health sector has a greater impact than materials on the value of the company in all percentiles.

JEL code: M41, G30, O16

Keywords: Corporate governance; Earning management; Mexican stock exchange; Quantile regression

* Corresponding author.

E-mail address: martha.rodriguezgc@uanl.edu.mx (M. del P. Rodríguez García).

Peer Review under the responsibility of Universidad Nacional Autónoma de México.

<http://dx.doi.org/10.22201/fca.24488410e.2020.1965>

0186- 1042/©2019 Universidad Nacional Autónoma de México, Facultad de Contaduría y Administración. This is an open access article under the CC BY-NC-SA (<https://creativecommons.org/licenses/by-nc-sa/4.0/>)

Resumen

Esta investigación analiza si el gobierno corporativo (conjunto de relaciones entre los diferentes participantes de la empresa) y el earning management (representa la intervención en el proceso de elaboración de la información financiera) tienen impacto en el valor de las empresas en México. La investigación se realizó durante el periodo del 2008 al 2017 utilizando una muestra de 50 empresas listadas en la Bolsa Mexicana de Valores, la metodología empleada fue el método de cuantiles por lo que analizamos el impacto de grandes empresas agrupándolas en pequeñas, medianas y grandes de acuerdo a su tamaño relativo medido por la razón Q de Tobin. Nuestros resultados muestran que existe un impacto negativo del earning management sobre el valor de la empresa en todos los tamaños de empresa medidos por la razón de Q de Tobin. Estos hallazgos, indican una perspectiva oportunista de la gestión de resultados en empresas mexicanas de diferente tamaño. Mientras que el impacto del gobierno corporativo solo se presenta en empresas de tamaño medio. Asimismo, encontramos evidencia de una mayor manipulación en época de crisis, en particular en el 2008, en empresas pequeñas y grandes. Con relación al impacto sectorial se observa que para los percentiles del 25th y 50th el sector industrial, consumo frecuente y telecomunicaciones tienen más impacto sobre la Q de Tobin que el sector de materiales mientras que el sector salud tiene mayor impacto que materiales sobre el valor de la empresa en todos los percentiles.

Código JEL: M41, G30, O16

Palabras clave: Gobierno corporativo; Earning management; Bolsa mexicana de valores; Regresión cuantílica

Introduction

Financial scandals led to an increase in corporate transparency and an improvement in corporate governance systems. The OECD (2015) establishes, in its corporate governance principles, that a company must align its corporate governance with its strategic guidance through effective monitoring of the management and accountability of the board of directors. An effective corporate governance system requires appropriate levels of transparency that reduce information asymmetry between company managers and stakeholders (Melis, 2004).

Uncertainty arises in a context of public interest as to whether the implementation of the corporate governance measures promoted by the codes of good practices in business environments with different characteristics provides similar results. In the context of the United States, the corporate governance measures promoted by the codes are mandatory for listed companies. On the other hand, in the European context, a majority have opted for the voluntary implementation of these recommendations. (García & Gill, 2005).

The United Kingdom government has recently passed reforms regarding corporate governance principles (UK Corporate Governance Code, 2017), emphasizing how companies should be run by an effective board that is collectively responsible for the long-term success of the company. For the case of Italy, Lombardi (2019) states that a sustainable corporate governance integrated model aimed at preventing corruption must be implemented. Similarly, Di Pietra and Melis (2016) mention that the corruption of corporate managers is an increasingly critical problem at both the national and international level, which affects the economic and financial development of companies. In many cases, corruption has been recognized as acceptable behavior in business conduct and management in specific countries. An ethical dimension must guide the implementation of corporate governance and not just regulatory or legal requirements (Cormier & Magnan, 2017).

There is a growing interest in understanding how institutions and companies function in contexts where family ownership is widespread in emerging markets (Witt & Redding, 2013). According to Chong and López de Silanés (2007), in Latin America, investor protection is weak, and markets are underdeveloped. Mexico has a history of poor investor protection and has one of the smallest and least developed stock markets in the world (Chong *et al.*, 2009).

Two conditions must be met for corporate governance to have a positive impact on market value (Chong-En *et al.*, 2006). First, good governance must increase company stakeholder returns; second, the stock market must be sufficiently efficient that the stock prices reflect fundamental values. Although the authors mention that mature markets are more likely to meet these conditions, it is not clear if it applies to emerging markets.

Conversely, earnings management² occurs when managers use judgment in financial information and in structuring transactions to alter financial reports, and one of the incentives for companies to manipulate information is the effect on company value (Healy & Wahlen, 1999).

Academics and professionals have a great interest in understanding the impact of corporate governance and earnings management on company value for different countries and areas of concern. Many studies on the topic are found in Europe, the United States, Latin America, and Asia (Drobetz *et al.*, 2003; Bauer *et al.*, 2004; Beiner *et al.*, 2006; Garay & González, 2008; Chong & López de Silanés, 2007; Huddart & Louis, 2011; Cohen *et al.*, 2011; Gholami *et al.*, 2012; Tangjitprom, 2013). This study aims to understand the impact of this phenomenon in Mexico.

This study contributes to the discussion as to whether corporate governance and earnings management affect company value in Mexico during the 2008-2017 period. Therefore, this study aims to determine whether corporate governance and manipulation affect company value in Mexico. The main findings demonstrate that there is opportunistic behavior in Mexico in public companies of different sizes measured by Tobin's Q and that the effects on company value are negative. Additionally, the effect of corporate governance is found on medium-size companies measured through Tobin's Q ratio of company value. There is also evidence that there is more manipulation in small and large companies during crisis periods.

This study contains five sections. The first section includes the theoretical framework of corporate governance and earnings management. The second presents a review of the literature, highlighting the main findings of studies in Europe, the United States, Latin America, and Asia. In the third, the methodology, including the models, hypothesis, and sample is presented. The results and conclusions are in the last two sections.

Theoretical framework

Corporate governance and earnings management

Agency theory emerged in the United States and the United Kingdom, two countries with a favorable legal and institutional context for the efficient implementation of agency agreements (Peng, 2003; Young *et al.*, 2008). The concept of public company focuses on the stakeholder, and its performance is assessed in the stock market (Davis, 2005). According to Reyna *et al.* (2012), agency theory is the most important theoretical basis that examines and explains the relationship between ownership structure and financial structure.

In developed economies, because ownership and control are often separated and legal mechanisms protect the interests of the owners, governance conflicts focus mainly on the principal-agent problem. There is conflict between managers (principal) and stakeholders (agent) because of their different needs (Jensen & Meckling, 1976). When the managers are not the owners of the company, they can have incentives that distance them from maximizing company value and from the interests of the stakeholders (Berle & Means, 1932; Coase, 1937; Jensen & Meckling, 1976; Fama, 1980; Fama & Jensen, 1983). It is necessary to adopt mechanisms to align the interests of the principal and the agent (Fama, 1980; Jensen & Meckling, 1976).

In emerging economies, the institutional context and the weak rule of law make the implementation of good governance more costly and problematic (North, 1990; Wright *et al.*, 2005; Dharwadkar *et al.*, 2000). This issue results from the concentration of company ownership in one or a few owners (Dharwadkar *et al.*, 2000). Morck *et al.* (2005) and Young *et al.* (2008) state that ownership concentration and a lack of effective good governance mechanisms result in more

² Also known in the literature as accounting manipulation, result management, and result manipulation.

frequent conflicts between the controlling and minority stakeholders. These conflicts influenced the development of a new perspective on corporate governance, known as the principal-principal company model. The confrontation of the controlling stakeholders against the minority stakeholders often results in expropriating the value of the minority stakeholders to the majority or controlling stakeholders (Shleifer & Vishny, 1997).

Lefort (2003) mentions that corporate governance consists of the set of relationships established between the different participants in the company to ensure that each receives what is fair. Corporate governance comprises a key element in increasing economic efficiency and boosting growth, as well as in promoting investor confidence (OECD, 2004).

Ball and Brown (1968) and Beaver (1968) are often called the pioneers in analyzing the capital market response to accounting information. Healy and Wahlen (1999) classify the incentives for companies to manipulate accounting in three groups: valuation incentives, contractual incentives, and political and governmental incentives. García *et al.* (2005) identify two types of manipulation: accounting and real activities. Schipper (1989) defines earnings management as an intervention in the preparation process of financial and accounting information for personal benefit.

It is fundamental to establish the relationship between good corporate governance practices and earnings management practices, given that corporate governance principles also aim to establish greater reliability and transparency of the financial information of companies. In this context, previous studies have focused on two aspects of this relationship: 1) the optimal composition of the board of directors and the role of non-executive directors, and 2) the effect of the creation and structure of the delegated commissions of the board, particularly the audit committee. These studies, developed in the Anglo-Saxon context, have documented the role of the manipulative accounting practices (“creative” accounting) carried out both by independent directors, appointed to represent the interests of small stakeholders, and by independent audit committees (García & Gill, 2005).

Generally, the actions derived from corporate governance should aim to eliminate manipulative accounting practices and fraud in the operation of the company. On occasion, the interests of the managers lead them to develop opportunistic behaviors in which accounting information plays an important role and consequently can become the object of manipulation, which reduces the quality of this information. Therefore, good corporate governance should seek to restrict earning management practices to ensure the transparency and quality of the information (Callao *et al.*, 2008).

Review of the literature

There are studies applied in developed (La Porta *et al.*, 2002) and European (Bauer *et al.*, 2004; Renders & Gaeremynck, 2012) economies that use different samples of countries to find the effect of corporate governance on company value. La Porta *et al.* (2002) found, during 1995 and 1996, a better valuation of companies in 27 countries with better protection of minority stakeholders. On the other hand, Bauer *et al.* (2004) and Renders and Gaeremynck (2012) find a positive relationship between corporate governance and company value; however, in the first study, the relationship weakens with the country effect.

In Eastern Europe, Klapper and Love (2004) and Gompers *et al.* (2003) argue that better corporate governance is associated with greater market value. Similarly, Gompers *et al.* (2003) indicate that companies with strong stakeholder rights have a high market value. There are studies in developed countries with mixed results on the relationship between corporate governance and company value. In Germany, Drobetz *et al.* (2003), considering 30 variables divided into five categories³, and in Switzerland, Beiner *et al.* (2006), considering 38 corporate governance attributes, demonstrate that companies with better corporate governance tend to receive higher valuations. In Canada, however, using a corporate

³ 1) Corporate governance responsibilities, 2) Stakeholder rights, 3) Transparency, 4) Management and supervision of the board of directors, 5) Audit.

governance index⁴, Klein *et al.* (2005) demonstrate results with no evidence of a relationship between corporate governance and company value.

Black (2001) in Russia, Mousa and Desoky (2012) in Bahrain, and Nazir and Afza (2018) in Pakistan find that, in emerging countries, corporate governance behavior has a great effect on company value. In this last study, the authors also indicate that manager behavior is opportunistic towards earnings management. Finally, in China, using a sample of 1,004 companies in the year 2000, Chong-En *et al.* (2006) find an inverse relationship between the corporate governance index and company value.

Studies in Latin America have also analyzed the relationship between corporate governance and company value, although these studies are few. At the start of the year 2000, Garay and González (2008), in Venezuela, and Chong and López de Silanés (2007), in Mexico, analyzed the relationship between corporate governance and company value to evaluate insufficiently studied governance practices in these countries. The authors created a corporate governance index for 33 companies listed in the Caracas Stock Exchange for 2004 and 159 companies in the case of Mexico, respectively. The findings demonstrate a positive and significant relationship between the corporate governance index and company value.

In summary, there are a great number of studies in Europe, Latin America, and Russia that find positive associations between corporate governance and company values for listed companies (Black, 2001; La Porta *et al.*, 2002; Bauer *et al.*, 2004; Drobetz *et al.*, 2003; Gompers *et al.*, 2003; Klapper & Love, 2004; Beiner *et al.*, 2006; López, 2006; Chong & López de Silanés, 2007; Garay & González, 2008; Renders & Gaeremynck, 2012). Few studies find neutral associations, for example, Klein *et al.* (2005) in Canada. Finally, 1004 companies in China present negative associations between corporate governance and company value (Chong-En *et al.*, 2006).

The theoretical review demonstrates a great number of studies with positive associations in both developed and emerging countries. Therefore, the hypothesis for this study is:

H₁: The corporate governance index positively affects company value.

Earnings management and company value

McNichols (2000) identifies three lines of research used to detect earnings management, with studies based on 1) adjustment by aggregate accruals, 2) adjustment by specific discretionary accruals, 3) distribution of profit. For their part, García *et al.* (2005) mention that the first two methodologies can be conceptually grouped into one that allows for the identification of the means of manipulation. It identifies two types of manipulation, depending on whether it affects only the transaction records (accounting manipulation) or the transactions themselves (real activities manipulation). The aggregate accruals model is the most used in the literature (Jones, 1991).

In the work of Huddart and Louis (2011) and Cohen *et al.* (2011), there is strong evidence that managers and directors tend to manipulate elements of the profit and loss account and balance sheet through accruals to maintain or maximize the share price for the current year or subsequent years.

Studies in the United States have mixed findings. First, Magrath and Weld (2002), Jiraporn *et al.* (2008), and Gholami *et al.* (2012) find that earnings management has positive impacts on company value. In the first of these studies, it is mentioned that earnings management can reduce profit volatility and increase company value. For their part, the last two studies, using large samples, finding that earnings management is beneficial to company value.

⁴ This index was calculated by the sum of four sub-indices that measure: 1) composition of the board, 2) shareholding policies, 3) compensation policies, 4) stakeholder rights policies and disclosure policies.

Second, in studies by Fairfield *et al.* (2001) and Chan *et al.* (2006), the relationship between earnings management and company value is negative. In the former, for the period of the 1990s, the long-term growth in net operating assets, as accruals, has a negative association with the return on assets for the coming year. For their part, Chan *et al.* (2006) mention that the imperfection of accounting standards and measurement errors cause opportunistic behavior.

The findings are diverse for emerging countries. A study by Lin (2011) for companies listed in Taiwan for the 1997-2007 period, in a sample of 277 companies, found a non-linear relationship, that is, the discretionary accrual adjustments affect company value when managerial ownership is below 9.67% (opportunistic behaviors) and leans towards efficient management when this ownership is above 9.67%. In Thailand, for the 2008-2011 period, with a sample of 1,748 observations, Tangjitprom (2013) found positive but weak results. Finally, In Malaysia, Kusuma and Hermuningsih (2013) found negative relationships.

There are studies in which manipulation has no effect, such as with Ning (2006), who studies the benefits of earnings management practices and who has argued that such practices are not fraud since they take place within legal restrictions. Companies have incentives to report downside profits when economic profits are above the desired level. On the other hand, earnings management can create a false representation of profits but do not distort the economic value of the company in terms of the total assets, liabilities, and capital.

Lastly, some studies indicate that companies carry out result management as a consequence of financial crises to solve the financial situation of the company (Chia *et al.*, 2007; Dutzi & Rausch, 2016; Lisboa, 2016). Studies by Eng *et al.* (2018) find greater earning management in periods of crisis, such as in China or the United States.

Some studies indicate that earnings management positively affects company value (Huddart & Louis, 2011; Cohen *et al.*, 2011; Magrath & Weld, 2002; Jiraporn *et al.*, 2008; Gholami *et al.*, 2012; Tangjitprom, 2013). Other studies found non-linear relationships, such as Lin (2011), negative relationships (Fairfield *et al.*, 2001; Fernandes & Ferreira, 2007; Chan *et al.*, 2006; Kusuma & Hermuningsih, 2013), and neutral relationships (Ning, 2006). Finally, it was found that during periods of crises, there is greater manipulation (Eng *et al.*, 2018).

The earnings management practice, derived from the literature, can present different behaviors. Since most studies find positive associations in developed countries and negative associations in emerging countries, the second hypothesis of this study is derived from the works of Lin (2011) and Kusuma and Hermuningsih (2013):

H₂: Earnings management negatively affects company value.

Similarly, to determine the effect of manipulation during periods of crisis, the third hypothesis is based on the study by Eng *et al.* (2018):

H₃: Earnings management is present during crisis periods with greater intensity than during normal periods.

Finally, to determine whether there is a sectoral effect on company value such as in studies by Rodríguez *et al.* (2015), Artikis and Nifora (2011), and Mahmud (2011) in which there is a sectoral effect on financial performance, the fourth hypothesis is the following:

H₄: The company sector affects company value.

Methodology

This study considers the 2008-2017 period and uses a sample of 50 companies listed in the Mexican Stock Exchange (Spanish: *Bolsa Mexicana de Valores*, BMV), excluding companies in the financial sector since they are subject to a different accounting regulation than the rest of the sample. For this study, the annual series of accounting and market variables were obtained from the Bloomberg database. In order to test *H₁*, *H₂*, and *H₄* equation (1) was used to prove whether the corporate governance index, earnings management, and sectoral effect impact company value in Mexico. The

adjustments by discretionary accruals were considered to implement this model, using the modified version of the Jones (1991) model proposed by Dechow *et al.* (1995). Model 1 is represented as follows:

$$QTobin_{it} = \beta_0 + \beta_1 ABSAD_{it} + \beta_2 IGC_{it} + \beta_3 DE_{ACT_{it}} + \beta_4 Health_{it} + B_5 Industrial_{it} + B_6 Cons.Frec_{it} + B_7 Bienesnobas_{it} + B_8 Tele_{it} + B_9 Health_{it} + e_{it} \quad (1)$$

where:

$QTobin_{it}$ = market value of company i in period t divided by the replacement asset value of company i in period t .

$ABSAD_{it}$ = absolute value of the adjustments by discretionary accruals (AD_{it}) of company i in period t deflated with assets from period $t-1$.

IGC_{it} = corporate governance index of company i in period t .

$DE_{ACT_{it}}$ = debt-to-asset ratio of company i in period t .

$Size_{it}$ = natural logarithm of the assets of company i in period t .

$Industrial_{it}$ = dichotomous variable with a value of 1 for the industrial sector and 0 for other sectors.

$Cons.Frec_{it}$ = dichotomous variable with a value of 1 for the Fast-moving Consumer Goods sector and 0 for other sectors.

$Bienesnobas_{it}$ = dichotomous variable with a value of 1 for the consumer discretionary sector and 0 for other sectors.

$Tele_{it}$ = dichotomous variable with a value of 1 for the telecommunications sector and 0 for other sectors.

$Health_{it}$ = dichotomous variable with a value of 1 for the health sector and 0 for other sectors.

Following the studies by Chong *et al.* (2009) and Gompers *et al.* (2003), Tobin's Q is used to determine company value by dividing the market value of the shares and total equity. Gompers *et al.* (2003) define Tobin's Q as the market value of the assets divided by the book value of the assets, that is, the asset market value plus the market value of the ordinary shares minus the sum of the book value of the ordinary shares and deferred taxes.

The modified version of the Jones (1991) model proposed by Dechow *et al.* (1995) is used for the adjustments by discretionary accruals. Accrual adjusting is defined as that part of income or expense that does not involve receipts or payments. Accruals are calculated indirectly by the difference between the result before taxes and the cash flows from operations. A distinction must be made between adjustments by non-discretionary accruals (AND_{it}), which are more difficult for management to manipulate, and adjustments by discretionary accruals (AD_{it}), which are simpler to manipulate.

$$AT_{it} = AND_{it} + AD_{it} \quad (2)$$

Adjustments by total accruals are calculated by the difference between the income (loss) from continuing operations (ICO) and operating cash flow (OCF) using the following formula:

$$AT_{it} = ICO_{it} - OCF_{it} \quad (3)$$

Since the discretionary and non-discretionary components of the accrual adjustments cannot be observed directly and must be estimated, the modified version of the Jones (1991) model proposed by Dechow *et al.* (1995) will be used.

$$\frac{AT_{it}}{A_{it-1}} = \alpha_1 \frac{1}{A_{it-1}} + \alpha_2 \frac{\Delta VTAS_{it} - \Delta Ccobarar_{it}}{A_{it-1}} + \alpha_3 \frac{INMOV_{it}}{A_{it-1}} + e_{it} \quad (4)$$

where:

AT_{it} = adjustments by total accruals for company i in fiscal year t

$\Delta VTAS_{it}$ = change in sales of company i in fiscal year t compared to $t-1$

$\Delta Ccobarar_{it}$ = change in accounts receivable of company i in fiscal year t compared to $t-1$

$INMOV_{it}$ = gross fixed assets figures for company i in fiscal year t

e_{it} = error term for company i in fiscal year t

A_{it-1} = total assets for company i in fiscal year $t-1$

Equation (4) was estimated for the 2008-2017 period, assuming that the adjustments by non-discretionary accruals (AND) are calculated according to annual changes in sales, accounts receivable, and fixed assets. The calculation was done for each of the company observations in the sample. Additionally, A_{it-1} is used as a deflator to prevent heteroscedasticity problems.

With the deflated estimated total accruals (AT), the error was cleared, which is equivalent to the discretionary accruals for each company and fiscal year:

$$AD_{it} = \frac{AT_{it}}{A_{it-1}} - \left(\alpha_1 \frac{1}{A_{it-1}} + \alpha_2 \frac{\Delta VTAS_{it} - \Delta Ccobarar_{it}}{A_{it-1}} + \alpha_3 \frac{INMOV_{it}}{A_{it-1}} \right) \quad (5)$$

where:

AD_{it} = adjustments by discretionary accruals for company i in fiscal year t

AT_{it} = adjustments by total accruals for company i in fiscal year t

$\Delta VTAS_{it}$ = change in sales of company i in fiscal year t compared to $t-1$

$\Delta Ccobarar_{it}$ = change in accounts receivable of company i in fiscal year t compared to $t-1$

$INMOV_{it}$ = gross fixed assets for company i in fiscal year t

A_{it-1} = total assets for company i in fiscal year $t-1$

The absolute value of AD_{it} expressed as $ABSAD_{it}$ is used to incorporate this variable in Equation (1).

A methodology similar to that used by Chong *et al.* (2009) and Macías and Román (2014) is used for the corporate governance index, gathering information through the corporate best practices questionnaire for Mexican companies listed in the BMV obtained through the digital information of each company for the years 2008 to 2017. Based on this questionnaire, a corporate governance index⁵ was developed, adding a point for every positive response in which the company complies with the code recommendation. The index is standardized between 0 and 1, dividing the number of positive answers by the total number of answers to the questionnaire.

The studies by Garay and González (2008) and Chong-En *et al.* (2006), who incorporate the size and debt variables, were the basis for the control variables. Artikis and Nifora (2011) use sector type as the control variable to

⁵ The corporate best practices questionnaire considers five general categories: 1) shareholders assembly, 2) board of directors, 3) audit function, 4) evaluation function, 5) compensation, finance function, and planning.

determine the level of financial performance. Similarly, Gruian (2011) uses a sectoral level in thirteen non-financial sectors. Six economic sectors under study were used for the sectoral variable, although only five were considered since the dichotomous variables of each sector are explained in accordance with the materials sector, and the collinearity problem is eliminated.

To prove H_3 Equation (1) was used, incorporating the effect of the 2008 crisis considering that $ABSAD_{it}$ can behave differently in normal and crisis periods. Equation (6) illustrates the manipulation effect during normal and crisis periods:

$$\beta_1 = \beta_1^{SC} + \beta_1^{CC} Crisis \quad (6)$$

where:

β_1 = total manipulation

β_1^{SC} = manipulation in normal periods

β_1^{CC} = manipulation in crisis periods

$Crisis$ = dichotomous variable with a value of 0 in normal periods and 1 in crisis periods

Substituting Equation (6) in Equation (1) of model 2 results in Equation (7):

$$QTobin_{it} = \beta_0 + \beta_1^{SC} ABSAD_{it} + \beta_1^{CC} ABSAD_{it} * Crisis_{it} + \beta_2 IGC_{it} + \beta_3 DE_{ACT_{it}} + \beta_4 Size_{it} + B_5 Industrial_{it} \\ + B_6 Cons. Frec_{it} + B_7 Bienesnobas_{it} + B_8 Tele_{it} + B_9 Health_{it} + e_{it} \quad (7)$$

where:

$ABSAD_{it} * Crisis_{it}$ = represents the interaction between the discretionary accruals adjustment variable ($ABSAD$) and the dichotomous variable $Crisis$ with a value of 1 in 2008 and 0 in all other periods.

Quantile regression method

This study aims to understand the impacts that corporate governance and earnings management have on different-sized companies in Mexico. Quantile regression is used to achieve this aim. Koenker and Hallock (2001) note that this method has advantages over traditional methods, for example, being more reliable. The model is briefly detailed below. Assuming a linear specification for the conditional quantiles of Y_i ,

$$Y_t = x_t \beta + e_t \quad (7)$$

Where Y_i is the dependent variable, x_t is the independent variable, β is the coefficient of the model to estimate, and e_t is the residual term. Therefore, quantile regression estimates β for different conditional quantitative functions. Assuming that the conditional mean of Y is $(X) = X' \beta$, then the approximation of the ordinary least squares calculates the mean, $\min_{\mu \in R} \sum_{t=1}^n (Y_t - \mu)^2$, that is,

$$\min_{\beta \in R} \sum_{t=1}^n (Y_t - X' \beta)^2 \tag{8}$$

Solving Equation (8) provides an estimation of the median function (50th percentile). τ indicates other quantitative variables. Thus, the quantile equation can be expressed as follows:

$$Q_E \left(\frac{\tau}{X} \right) = X' \beta(\tau) \tag{9}$$

Therefore, the following equation must be solved to obtain the estimate for the conditional quantitative functions:

$$\min_{\beta \in R} \sum_{t=1}^n \rho_{\tau}(Y_t - X' \beta)^2 \tag{10}$$

Following the minimization algorithm of Function (10), the following is obtained:

$$\min_{\beta} \left[\tau \sum_{E_t X' \beta} |Y_t - X' \hat{\beta}| + (1 - \tau) \sum_{Y_t \leq X' \hat{\beta}} |Y_t - X' \hat{\beta}| \right] \tag{11}$$

Where $X' \hat{\beta}$ is a $\tau - th$ approximation of the conditional quantile of Y . By having τ close to 0 (1), $X' \hat{\beta}$ characterizes the behavior of Y to the left (right) of the tail of the conditional distribution. Additionally, this minimization problem could be solved by using the linear programming method proposed by Koenker and D'Orey (1987).

Results

Considering a study sample for the years 2008 to 2017 and compiling information through Bloomberg, Table 1 displays the sectors considered in the sample in order of importance. The sample considers 50 companies in total, with the industrial sector and materials sector having the greatest participation at 26% each, and the health sector with the lowest participation at 2%.

Table 1
Companies by sector

Sector	No. of companies	Percentage in sample
Industrial	13	26%
Materials	13	26%
Fast-moving consumer goods	10	20%
Consumer discretionary	7	14%
Telecommunications	6	12%
Health	1	2%
Total	50	100%

Source: own elaboration

Table 2 illustrates the correlation between independent study variables. The correlation between independent variables helps to detect possible multicollinearity between the variables. The values are relatively small, which indicates a low correlation between variables and thus that there are no signs of multicollinearity.

Table 2
 Correlation coefficients between independent study variables

<i>Variable</i>	<i>ABSAD</i> ⁽²⁾	<i>IGC</i> ⁽³⁾	<i>DE_ACT</i> ⁽⁴⁾	<i>Size</i> ⁽⁵⁾
<i>ABSAD</i>	1.00	-0.13	0.05	-0.12
<i>IGC</i>	0.13	1.00	0.012	-0.02
<i>DE_ACT</i>	0.05	0.012	1.00	0.10
<i>Size</i>	-0.12	-0.025	0.10	1.00

⁽¹⁾ *ABSAD*: absolute value of the adjustments by discretionary accruals of company *i* in period *t* deflated with the assets of period *t-1*

⁽²⁾ *IGC*: corporate governance index of company *i* in period *t*

⁽³⁾ *DE_ACT*: debt-to-asset ratio of company *i* in period *t*

⁽⁴⁾ *Size*: natural logarithm of the assets of company *i* in period *t*

Source: own elaboration using *E-views*

Table 3 displays the collinearity between variables using the variance inflation factor (VIF) proposed by Menard (2002), which suggests estimating the ordinary least squares (OLS) regression model. The VIF of the regression indicates how much the inflation of the standard error could be explained by collinearity. This analysis provides values below 10, which indicates that there are no multicollinearity problems.

Table 3
 Regression VIF

<i>Parameters</i>	<i>Total VIF</i>	<i>1/VIF</i>
<i>ABSAD</i> ⁽¹⁾	1.07	0.9372
<i>IGC</i> ⁽²⁾	1.17	0.8559
<i>DE_ACT</i> ⁽³⁾	1.23	0.8156
<i>Size</i> ⁽⁴⁾	1.2	0.8334
<i>Industrial</i> ⁽⁵⁾	1.6	0.6268
<i>Cons.Frec</i> ⁽⁶⁾	1.59	0.6309
<i>Bienesnobas</i> ⁽⁷⁾	1.41	0.7111
<i>Tele</i> ⁽⁸⁾	1.45	0.6887
<i>Health</i> ⁽⁹⁾	1.12	0.8964

Source: own elaboration using *Stata v12*

Table 4, on the other hand, presents the descriptive statistics of the variables of the model described above. The *size* variable has the highest mean (4.39), while the *ABSAD* variable has the lowest mean (0.5). On the other hand, the variable with the highest standard deviation is *Tobin's Q* (.70), while *ABSAD* (.05) has the lowest standard deviation. The asymmetry value should indicate whether the distribution values are symmetrically arranged around the mean or whether they have a higher mean towards the right or left. The asymmetry for the *ABSAD* variable is positive since the data are above the value of the arithmetic mean. The *IGC* variable has a negative asymmetry since the data are below the value of the mean. The presence of kurtosis and asymmetry in the data could indicate atypical data and asymmetry in the distribution of the study variables. Therefore, the quantile methodology is a viable option in this study.

Table 4
 Descriptive statistics

<i>Statistic</i>	<i>TobinQ</i> ⁽¹⁾	<i>ABSAD</i> ⁽²⁾	<i>IGC</i> ⁽³⁾	<i>DE_ACT</i> ⁽⁴⁾	<i>Size</i> ⁽⁵⁾
<i>Mean</i>	1.51	0.05	0.91	0.29	4.39
<i>Standard Deviation</i>	0.70	0.05	0.06	0.17	0.60
<i>Asymmetry</i>	1.65	3.20	-2.30	0.72	0.49
<i>Kurtosis</i>	7.01	20.44	12.44	3.28	2.90

⁽¹⁾ *TobinQ*_{*it*}: market value of company *i* in period *t* divided by the replacement asset value of company *i* in period *t*

⁽²⁾ *ABSAD*_{*it*}: absolute value of the adjustments by discretionary accruals of company *i* in period *t* deflated with the assets of period *t-1*

⁽³⁾ *IGC*_{*it*}: corporate governance index of company *i* in period *t*

⁽⁴⁾ *DE_ACT*_{*it*}: debt-to-asset ratio of company *i* in period *t*

⁽⁵⁾ *Size*_{*it*}: natural logarithm of the assets of company *i* in period *t*

Source: own elaboration using *E-views*

Table 5 presents the results of implementing Model 1, examining the relationship between the result management practice and company value to determine whether the management is opportunistic or beneficial. The first step is to determine the sign of the relationship. If the managers manipulate the results for personal benefit and not to generate wealth for the stakeholder, then there is an inverse relationship between the degree of results management and company value. In the percentile analysis, the results demonstrate that there is an inverse and significant relationship between earnings management and company value in all the percentiles (25th, 50th, and 75th). Additionally, this opportunism or manipulation falls in a range of -1.3 to -1.4, which indicates that the manipulation size does not change with the percentile under analysis. The negative influence in the results suggests an opportunistic perspective, which is consistent with the results obtained in emerging countries (Lin, 2011; Kusuma & Hermuningsih, 2013).

Table 5
 Panel data and quantile regression by sectors

<i>Variable</i>	<i>25th percentile</i>		<i>50th percentile</i>		<i>75th percentile</i>	
<i>ABSAD</i> ⁽¹⁾	-1.448	(-2.9479)*	-1.3837	(-3.1894)*	-1.3222	(-1.7169)**
<i>IGC</i> ⁽²⁾	0.0099	(0.0336)	0.5858	(1.8721)**	1.0386	(1.3181)
<i>DE_ACT</i> ⁽³⁾	-0.1811	(-1.2136)	-0.2951	(-1.7752)**	-0.8359	(-2.6416)*
<i>Size</i> ⁽⁴⁾	0.1236	(3.0620)*	0.126	(3.1736)*	0.2761	(2.8380)*
<i>Industrial</i> ⁽⁵⁾	0.1973	(2.8848)*	0.1742	(2.5840)**	0.5905	(2.7560)*
<i>Cons.Frec</i> ⁽⁶⁾	0.3989	(6.7991)*	0.3236	(4.5941)*	0.2019	(1.6644)**
<i>Bienesnobas</i> ⁽⁷⁾	0.0826	(1.0835)	0.1301	(1.2680)	0.2255	(1.3641)
<i>Tele</i> ⁽⁸⁾	0.3589	(4.3626)*	0.3374	(3.3670)*	0.4448	(-1.3082)
<i>Health</i> ⁽⁹⁾	0.9415	(5.2711)*	0.8617	(8.5156)*	0.5159	(3.1587)*
<i>Cons</i> ⁽¹⁰⁾	0.4821	(1.4947)	0.2363	(0.7333)	-0.365	(-0.4026)
<i>R-squared</i>	0.103887		0.11088		0.069856	

Note: *p-value<0.10; ** p-value <0.05; *t* values in parenthesis

⁽¹⁾ *ABSAD*_{*it*}: absolute value of the adjustments by discretionary accruals of company *i* in period *t* deflated with the assets of period *t-1*

⁽²⁾ *IGC*_{*it*}: corporate governance index of company *i* in period *t*

⁽³⁾ *DE_ACT*_{*it*}: debt-to-asset ratio of company *i* in period *t*

⁽⁴⁾ *Size*_{*it*}: natural logarithm of the assets of company *i* in period *t*

- (5) *Industrial_{it}*: dichotomous variable with a value of 1 for the industrial sector and 0 for other sectors
 (6) *Cons.Frec_{it}*: dichotomous variable with a value of 1 for the Fast-moving Consumer Goods sector and 0 for other sectors
 (7) *Bienesnobas_{it}*: dichotomous variable with a value of 1 for the Consumer Discretionary sector and 0 for other sectors
 (8) *Tele*: dichotomous variable with a value of 1 for the telecommunications sector and 0 for other sectors
 (9) *Health*: dichotomous variable with a value of 1 for the health sector and 0 for other sectors
 (10) *Cons*: regression constant

Source: own elaboration using *E-views*

In the case of small or large companies, that is, at the extremes, corporate governance does not affect Tobin's Q. On the other hand, for companies in the 50th percentile, the effect is positive and significant. In other words, the effect of corporate governance is only present in companies with Tobin's Q around the median. These results are consistent with the study of Garay and González (2008). The results are also consistent with the studies of Poletti (2011), Chong *et al.* (2009), and Klapper and Love (2004), which present positive and significant results that support the hypothesis that companies have higher valuations with better corporate governance.

The expected sign for debt is negative but not significant in small companies. These results are not consistent with Chong *et al.* (2009) and Chong-En *et al.* (2006), who find an inverse relationship between debt and company value. On the other hand, medium and large companies had the expected results, that is, an inverse relationship between debt and company value. These results are consistent with the study of Frijns *et al.* (2016).

For the *size* variable, the coefficients are positive and significant at 5% for all three percentiles, and the effect for this variable is higher the larger the company measured with Tobin's Q. These results are consistent with Poletti (2011), who found a direct relationship between size and company value. The results are also consistent with Jiraporn *et al.* (2008), Renders and Gaeremynck (2012), and Kusuma and Hermuningsih (2013).

Regarding the sectoral effect, companies in the Health sector have a greater impact on Tobin's Q than companies in the Materials sector for all quantiles. The same applies to the Communications and Transport sector. The results are consistent with Artikis and Nifora (2011). The Industrial sector has more effect on large companies than the Materials sector. These results are consistent with Mahmud (2011), who finds that the Clothing sector is one of the most profitable within the Industrial sector.

On the other hand, Model 2 is estimated to determine the effect of the 2008 crisis. Table 6 displays the results. Manipulation is evidenced mainly during a crisis period since, when the dichotomous variable *Crisis* interacts with the *ABSAD* variable, the coefficient is negative and significant in small and large companies, in contrast to the coefficient of *ABSAD* without the interaction with the *Crisis* variable. The results are similar to those found by Lisboa (2016) and Eng *et al.* (2018). Similarly, the *IGC* variable is positive in large companies, including in a crisis period, and the rest of the coefficients for companies of this size have the expected signs. In small and medium companies, corporate governance and result management do not affect Tobin's Q.

Table 6
 Panel data and quantile regression by sectors and crisis effect

Variable	25 th percentile		50 th percentile		75 th percentile	
<i>ABSAD</i> ⁽¹⁾	-0.5809	(-1.1163)	-0.9259	(-1.6460)	-0.9294	(-1.2604)
<i>ABSAD</i> * <i>Crisis</i> ⁽²⁾	-1.1971	(-1.7928)**	-1.0295	(1.3561)	-1.8003	(-2.3150)*
<i>IGC</i> ⁽³⁾	-0.071	(-0.2312)	0.5511	(1.5636)	1.176	(2.7171)*
<i>DE_ACT</i> ⁽⁴⁾	-0.1689	(-1.2089)	-0.3582	(-2.1622)*	-0.888	(-3.1672)*
<i>Size</i> ⁽⁵⁾	0.121	(3.2598)*	0.1183	(2.9877)*	0.2643	(2.8525)*
<i>Industrial</i> ⁽⁶⁾	0.161	(2.5346)*	0.1521	(2.2797)*	0.5613	(2.9832)*

<i>ConsFrec</i> ⁽⁷⁾	0.3744	(6.3226)*	0.3184	(4.6196)*	0.2203	(1.8736)**
<i>Bienesnobas</i> ⁽⁸⁾	0.043	(0.5964)	0.1304	(1.2678)	0.2766	(1.8943)**
<i>Tele</i> ⁽⁹⁾	0.2847	(3.2242)*	0.3479	(3.4671)*	0.4069	(2.3335)*
<i>Health</i> ⁽¹⁰⁾	0.9391	(5.3511)*	0.8693	(8.1254)*	0.491	(3.1692)*
<i>Cons</i> ⁽¹¹⁾	0.567	a(1.8162)	0.3078	(0.8738)	-0.4278	(-0.7869)
<i>R-squared</i>	0.108789		0.11363		0.074703	

Note: *p-value<0.10; ** p-value <0.05; t values in parenthesis

⁽¹⁾ *ABSAD_{it}*: absolute value of the adjustments by discretionary accruals of company *i* in period *t* deflated with the assets of period *t-1*

⁽²⁾ *ABSAD*Crisis*: represents the interaction of the adjustments by discretionary accruals (*ABSAD*) variable and the dichotomous variable *Crisis*, which has a value of 1 in 2008 and 0 in all other periods *t*

⁽³⁾ *IGC_{it}*: corporate governance index of company *i* in period *t*

⁽⁴⁾ *DE_ACT_{it}*: debt-to-asset ratio of company *i* in period *t*

⁽⁵⁾ *Size_{it}*: natural logarithm of the assets of company *i* in period *t*

⁽⁶⁾ *Industrial_{it}*: dichotomous variable with a value of 1 for the industrial sector and 0 for other sectors

⁽⁷⁾ *Cons.Frec_{it}*: dichotomous variable with a value of 1 for the Fast-moving Consumer Goods sector and 0 for other sectors

⁽⁸⁾ *Bienesnobas_{it}*: dichotomous variable with a value of 1 for the Consumer Discretionary sector and 0 for other sectors

⁽⁹⁾ *Tele*: dichotomous variable with a value of 1 for the telecommunications sector and 0 for other sectors

⁽¹⁰⁾ *Health*: dichotomous variable with a value of 1 for the health sector and 0 for other sectors

⁽¹¹⁾ *Cons*: regression constant

Source: own elaboration using *E-views*

To test the robustness in Model 1, the dependent variable, Tobin's Q, is substituted by the return on assets (ROA)—a performance metric validated in other studies (Chong & López de Silanés, 2007). The models were estimated for the 25th, 50th, and 75th percentiles, demonstrating that the results and the goodness of fit (R2) test are similar to those obtained with the original dependent variable (Tobin's Q). On the other hand, to test the robustness of the independent variables (*ABSAD* and *IGC*), the corporate governance indicator provided by Bloomberg was incorporated. The results demonstrate that the model does not change significantly, although the R2 is higher with the corporate governance index than initially considered. These robustness tests demonstrated that the model does not significantly change when the dependent or independent variables are replaced with similar variables to those in the original models.

Conclusions

Accounting regulation is not just the result of an economic process, but also the result of a political process. Since accrual accounting involves subjective criteria regarding future cash flows, there is room for the producers of the accounting information (executives, companies) and regulatory and controlling bodies (courts, regulators, boards, unions) to implement local criteria (Ball & Shivakumar, 2005). Therefore, this study aimed to understand the impacts of result management and corporate governance for companies with varying market values measured through Tobin's Q.

This study is important for Mexico because it was possible to verify that there is opportunistic behavior in the BMV for all the percentiles measured through Tobin's Q. Chon and López de Silanés (2007) state that the Mexican economy has a weak legal system, which promotes this form of opportunistic behavior. Investors should follow the accounting information and use it cautiously in decision-making. Decision-makers should be aware of the analysis of the profit and loss account and balance sheet and determine the proper administrative management of the companies in which they are looking to invest. This recommendation could increase investor confidence in Mexican companies and can be a key factor for investment growth and capitalization in Mexico.

Furthermore, verifying that corporate governance impacts company value for medium-sized companies measured through Tobin's Q is an important contribution to Mexico. The findings demonstrate that corporate governance practices

strongly and positively affect company value in Mexico, coinciding with similar studies at the international level (Klapper & Love, 2004) that find this relationship in weak environments. On the other hand, there are studies at a national level by Chong and López de Silanes (2007) that verify this positive association for the Mexican case. The originality of this study lies in finding that corporate governance affects medium-sized companies and not small or large companies, which differs from the results obtained by Drobetz *et al.* (2003), who found that companies with a high level of corporate governance tend to be large.

Small and large companies need to implement corporate governance controls to contribute to company information transparency, which will, in turn, positively affect company value. The limitations of this study are the following: constructing the corporate governance index and the lack of findings regarding corporate governance factors, as in Mousa and Desoky (2012), who study the characteristics of the board of directors and ownership structure, finding a positive effect on company value. Therefore, future studies can focus on more specific aspects of the subject.

Additionally, during crisis periods, there is greater manipulation in small and large companies, with a greater effect in large than in small companies. This result management negatively affects companies. It should also be noted that according to Drobetz *et al.* (2003), companies with a high level of corporate governance tend to be large, which coincides with the model in this study, including the crisis effect, although it was also found that more manipulations take place in large companies.

Finally, this study proves the need for greater efforts on behalf of managers to contribute to capital markets in order to improve the transparency of their reports and, consequently, influence company value. This effort would also allow for investors, in Mexico, to trust in institutions, financial information, and good corporate governance controls, which would, in turn, help companies have sustainable financial performances over time.

References

- Artikis, P. y Nifora, G. (2011). The Industry Effect On The Relationship Between Leverage and Returns. *Eurasian Business Review*, 1(2), 125-145
- Ball, R. y Brown, P. (1968). An empirical evaluation of accounting income numbers. *Journal of Accounting Research*, 129-178, <https://doi.org/10.2307/2490232>
- Ball, R., y Shivakumar, L. (2005). Earnings quality in UK private firms: Comparative loss recognition timeliness. *Journal of Accounting and Economics*, 39(1), 83–128. <http://doi.org/10.1016/j.jacceco.2004.04.001>
- Bauer, R. Guenster, N., y Otten, R. (2004). Empirical evidence on corporate governance in Europe: The effect on stock returns, firm value, and performance. *Journal of Asset Management*, 5(2), 91-104. <https://doi.org/10.1057/palgrave.jam.2240131>
- Beaver, W. (1968). The information content of accounting earnings announcements. *Journal of Accounting Research*, 67-92, <https://doi.org/10.2307/2490070>
- Beiner, S., Drobetz, W., Schmid, M. M., y Zimmermann, H. (2006). An integrated framework of corporate governance and firm valuation. *European Financial Management*, 34, 249-283. <https://doi.org/10.1111/j.1354-7798.2006.00318.x>
- Berle, A. y Means, G. (1932). *The modern corporation and private property*. Nueva York: MacMillan. <https://doi.org/10.2307/3475545>
- Black, B. (2001). Does Corporate Governance Matter? A Crude Test Using Russian Data, *University of Pennsylvania Law Review*, 149, 2131–2150. <https://doi.org/10.2139/ssrn.252706>

- Callao, S., Gasca, M. M. y Jarné, J.I. (2008). Gobierno Corporativo y deficiencias de la información Contable. *RC-SAR*, 10(1), 133-156
- Chan, K., Chan, L. Jegadeesh, N. y Lakonishok, J. (2006). Earnings quality and stock returns, *Journal of Business*, 79, 1041-1082. <https://doi.org/10.1086/500669>
- Chia, Y., Lapsley, I., y Lee, H. (2007). Choice of auditors and earnings management during the Asian financial crisis. *Managerial Auditing Journal*, 22(2), 177-196.
- Chong, A. y López de Silanes, F. (2007). Investor protection and corporate governance. Firm level evidence across Latin America. Washington D.C.: Stanford University Press-Inter American Development Bank. <https://doi.org/10.1596/978-0-8213-6913-5>
- Chong, A., Guillén J. y López-de-Silanes, S. (2009). Corporate governance reform and firm value in Mexico: an empirical. *Journal of Political Economy Reform*, 12(3), 163-188. doi.org/10.1080/17487870903105346
- Chong-En, B., Qiao, L., Joe, L., Frank, S., y Junxi, Z. (2006). An Empirical Study on Corporate Governance and Market Valuation in China. *Front. Econ.China*, 1, 83-111. <https://doi.org/10.1007/s11459-005-0011-0>
- Coase, R. (1937). The nature of the firm. *Económica*, 4(16), 386-405. DOI: 10.1111/j.1468-0335.1937.tb00002.x
- Cohen, L., Marcus A.J., Rezaee, Z. y Tehranian H. (2011). Earnings Guidance, Earning management, and Share Prices 1-42 Disponible en https://www2.bc.edu/~cohenlj/Guidance%2008_25_2011.pdf (acceso el 24-May-16).
- Cormier, D., Magnan, M. (2017). Does a firm's exposure to ethical failures matter to financial markets? A governance perspective. *Journal of Management & Government*, 21 (2), 267-289. <https://doi.org/10.1007/s10997-016-9341-9>
- Davis, G. F. (2005). New directions in corporate governance. *Annual Review of Sociology*, 31(1), 143-162. <https://doi.org/10.1146/annurev.soc.31.041304.122249>.
- Dechow, P.M., Sloan, R.G. y Sweeney, A.P. (1995). Detecting earnings management. *The Accounting Review*, 70(2), 193-225.
- Di Pietra, R. y Melis, A. (2016). Governance and corruption: is history repeating itself? Fostering a debate and inviting contributions from a multidisciplinary perspective. *Journal of Management & Government*, 20 (4) 689-701. <https://doi.org/10.1007/s10997-015-9326-0>.
- Dharwadkar, R., George, G. and Brandes, P. (2000). Privatization in emerging economies: an agency theory perspective. *Academy of Management Review*, 25, 650-69.
- Drobetz, W., Schillhofer, A. y Zimmermann, H. (2003). Corporate governance and expected stock returns: Evidence from Germany. *European Financial Management*. 10(2), 267-293. DOI: 10.1111/j.1354-7798.2004.00250.x
- Dutzi, A., y Rausch, B. (2016). Earnings management before bankruptcy: A review of the literature. *Journal of Accounting and Auditing: Research & Practice*, 2016, 1-21. <http://dx.doi.org/10.5171/2016.245891>. ID 245891
- Eng L., Fang H., Tian X., Yu T., Zhang, H. (2018) Financial crisis and real earnings management in family firms: A comparison between China and the United States, *Journal of International Financial Markets, Institutions and Money* (In Press). <https://doi.org/10.1016/j.intfin.2018.12.008>.
- Fairfield, P., Whisenant, S. y Yohn T.L. (2001). Accrued Earnings and Growth: Implications for Earnings Persistence and Market Mispricing, *SSRN Electronic Journal*, DOI:10.2139/ssrn.249311 Available from: Scott Whisenant. Recuperado el: 04 April 2016
- Fama, E. (1980). Agency problems and the theory of the firm. *Journal of Political Economy*, 88 (2), 288-307. <https://doi.org/10.1086/260866> <https://doi.org/10.1086/260866>
- Fama, E. y Jensen, M. (1983). Agency problems and residual claims. *Journal of Law and Economics*, 26, 327-349. <http://dx.doi.org/10.2139/ssrn.94032>

- Fernandes, N. y Ferreira M. (2007). The evolution of Earnings Management and Firm Valuation: A Cross-Country Analysis. EFA 2007 Ljubljana meetings paper, 1-38. http://papers.ssrn.com/sol3/papers.cfm?abstract_id=965636
<https://doi.org/10.2139/ssrn.965636>
- Frijns B., Dodd, O., Cimerova, H. (2016). The impact of cultural diversity in corporate boards on firm performance, *Journal of Corporate Finance*, 41, 521–541 <https://doi.org/10.1016/j.jcorpfin.2016.07.014>
- Garay, U. y González, M. (2008). Corporate Governance and Firm Value: the case of Venezuela. *Journal Copilation*, 16(3), 194-209. doi:10.1111/j.1467-8683.2008.00680.x
- García B., Gill, B. y Gisbert, A. (2005). La Investigación sobre Earnings managements. *Revista Española de Financiación y Contabilidad*, XXXIV(127), 1001-1033. <https://doi.org/10.1080/02102412.2005.10779570>
- García, B. y Gill, B. (2005). El Gobierno Corporativo y las Prácticas de Earnings Management: Evidencia Empírica en España, Instituto Valenciano de Investigaciones Económicas, S.A., España, 2-10.
- Gholami, S., Nickjoo, M. y Nemati, S. (2012). The study of the relation between Earning management and Long Run Stock Performance, *Journal of Basic and Applied Scientific Research*, 2(8), 8008 – 8010.
- Gompers, P., Ishii J. y Metrick A. (2003). Corporate Governance and Equity. *The Quarterly Journal of Economics*, 118(1), 107-156. doi: 10.1162/00335530360535162
- Gruian, C. (2011). The Financial Performance of European Companies: A Comparative Approach. *Annals of the University of Oradea, Economic Science Series* 20 (1): 193-200
- Healy, P. y Wahlen, M. (1999). A review of the earnings management literature and its implications for standard setting, *Accounting Horizons*, 13 (4), pp. 365-383. <https://doi.org/10.2308/acch.1999.13.4.365>
- Huddart, S. y Louis, H. (2011). Insider Selling, Earnings management, and the 1990s Stock Market Bubble, *SSRN Electronic Journal*, 1-58. Disponible en https://www.researchgate.net/publication/228230301_Insider_Selling_Earning_management_and_the_1990's_Stock_Market_Bubble (acces 24-May-16). <https://doi.org/10.2139/ssrn.912214>
- Jensen, M. y Meckling, W. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305-360. [https://doi.org/10.1016/0304-405x\(76\)90026-x](https://doi.org/10.1016/0304-405x(76)90026-x)
- Jiraporn, G., Miller, S. Yoon, y Kim. Y. (2008). Is earnings management opportunistic or beneficial? An agency theory perspective, *International Review of Financial Analysis*, 17, 622-634. <https://doi.org/10.1016/j.irfa.2006.10.005>
- Jones, J. (1991). Earnings management during import relief investigations. *Journal of Accounting Research*. 29 (2), 193-128. <https://doi.org/10.2307/2491047>
- Klapper, L., y Love, I. (2004), Corporate Governance, Investor Protection, and Performance in Emerging Markets, *Journal of Corporate Finance*, 10, 703-728. <https://doi.org/10.2139/ssrn.303979>
- Klein, P., Shapiro, D., y Ypung J. (2005). Corporate Governance, Family Ownership and Firm Value: the Canadian evidence. *An International review*, 38(6), 769-784. <https://doi.org/10.1111/j.1467-8683.2005.00469.x>
- Koenker, R. y Hallock, K., (2001). Quantile regression: an introduction. *Journal of Econmics Perspectives*, 15(4), 143-156. <https://doi.org/10.1257/jep.15.4.143>
- Koenker, R.W. y D'Orey, V., (1987). Algorithm as 229: computing regression quantiles. *Appl. Stat.* 36:383–393. <http://dx.doi.org/10.2307/2347802>.
- Kusuma, D. y Hermuningsih S. (2013). Does Earning management Reduce Firm Value in Malaysia. *International Conference on Business and Management* 2-4 Octubre 2013, Chiang Mai - Bangkok.
- La Porta L., López-de-Silanes, F, y Shleifer, A. (2002). Investor Protection and Corporate Valuation. *Journal of Finance*, 57(3), 1147-1170. <https://doi.org/10.1111/1540-6261.00457>

- Lefort, F. (2003). Gobierno Corporativo: ¿Qué es? Y ¿Cómo Andamos por Casa?, Cuadernos de Economía, Año 40 No. 120, pp. 207-237.
- Lin, F. (2011). Is Earning management Opportunistic or Beneficial in Taiwan. *International Journal of Economics and Finance*, 3(1), 133-142. <https://doi.org/10.5539/ijef.v3n1p133>
- Lisboa, I. (2016). Impact of financial crisis and family control on earning management of Portuguese listed firms. *European Journal of Family Business*, 6(2), 118-131
- Lombardi, R., Trequattrini, R., Cuzzo, B. y Cano-Rubio, M. (2019) Corporate Corruption Prevention, Sustainable Governance and Legislation: First Exploratory Evidence from the Italian Scenario, *Journal of Cleaner Production*, 217(20) <https://doi.org/10.1016/j.jclepro.2019.01.214>
- López, P. (2006). Efectos Financieros del Gobierno Corporativo y ética en los negocios en México: El caso de Cemex y TV-Azteca. *Revista Gerenciais*, 5(1), 152-166.
- Macías, A. y Román, F. (2014), Consecuencias económicas de la reforma de Gobierno Corporativo en un mercado de capitales emergente, *El Trimestre económico*, LXXXI (322), 357-412. <https://doi.org/10.20430/ete.v81i322.117>
- Magrath L. y Weld, L.G. (2002). Abusive earnings management and early warning signs. *The CPA Journal*, 72, 50-53.
- Mahmud, H. M. (2011). Sector-Wise Stock Return Analysis: An Evidence from Dhaka Stock Exchange in Bangladesh. *International Journal of Business and Management* 6(6): 276-285 <https://doi.org/10.5539/ijbm.v6n6p276>
- McNichols, M. (2000). Research design issues in earning management studies. *Journal of Accounting and Public Policy* (19), 313-345. [https://doi.org/10.1016/s0278-4254\(00\)00018-1](https://doi.org/10.1016/s0278-4254(00)00018-1)
- Melis A. (2004). Financial reporting, corporate communication and governance. *Corporate Ownership and Control*, 1(2), 31-37.
- Menard, S. (2002). *Quantitative Application in the Social Sciences*, Thousand Oaks, London, New Delhi, Sage Publications Inc. <https://doi.org/10.4135/9781412984867>
- Morck, R., Wolfenzon, D. and Yeung, B. (2005). Corporate governance, economic entrenchment, and growth. *Journal of Economic Literature*, 63, 655-720.
- Mousa M. y Desoky, A. (2012). The association between internal governance mechanisms and corporate value: evidence from Bahrain. *Asian Academy of management Journal of accounting and finance*, (8), 67-91.
- Nazir M.S. y Afza, T. (2018). Does managerial behavior of managing earnings mitigate the relationship between corporate governance and firm value? Evidence from an emerging market. *Future Business Journal*, (4), 139-156.
- Ning, Y. (2006). A different perspective of earnings management, *Canadian Social Science*, 2 (4), 53-59.
- North, D. C. (1990). *Institutions, Institutional Change and Economic Performance*. New York: Norton.
- OCDE (2004). White Paper sobre Gobierno Corporativo en América Latina. Centro para la cooperación con países no miembros de la OCDE.
- OCDE (2015). G20/OECD Principles of Corporate Governance. Disponible en: https://mba.americaeconomia.com/sites/mba.americaeconomia.com/files/gobierno_corporativo.pdf
- Peng, M. (2003). Institutional transitions and strategic choices. *Academy of Management Review*, 28(2), 275-296. <https://doi.org/10.2307/30040713>
- Poletti-Hughes, J. (2011). The value effect of corporate governance: evidence from Mexico. In: *Global Conference on Business and Finance*, Las Vegas. <https://doi.org/10.2139/ssrn.1748624>
- Renders, A. y Gaeremynck, A. (2012). Corporate Governance, Principal-Principal Agency Conflicts, and firms Value in European Listed Companies. *Corporate Governance: an International Review*, 28 (2), 125-143. DOI: 10.1111/j.1467-8683.2011.00900.x

- Reyna, J.M., Durán, R. y Valdes, A.L. (2012). Corporate Governance, Ownership structure and performance in México. *International Business Research*, 5 (11).
- Rodríguez, M. Cortez, K., Méndez, B. y Garza, H. (2015). Análisis de portafolio por sectores mediante el uso de algoritmos genéticos: caso aplicado a la Bolsa Mexicana de Valores. *Contaduría y Administración*, 60 (1), 87-112
[https://doi.org/10.1016/s0186-1042\(15\)72148-0](https://doi.org/10.1016/s0186-1042(15)72148-0)
- Schipper, K. (1989). Commentary on earnings management. *Accounting Horizons*, 3(4), pp. 91-102.
- Shleifer, A. and Vishny, R. (1997). A survey of corporate governance. *Journal of Finance*, 52, 737–83
- Tangjitprom, N. (2013). Earning management and Corporate Governance in Thailand. *National Institute of Development Administration & Assumption University Bangkok, Thailand*, 61(9), 41-45.
- UK Corporate Governance Code (2017). The Financial Reporting Council Limited 2017, available at: www.frc.org.uk
- Witt, M. A., & Redding, G. (2013). Asian business systems: Institutional comparison, clusters and implications for varieties of capitalism and business systems theory. *Socio-Economic Review*, 11 (2), 265–300.
<http://dx.doi.org/10.2139/ssrn.2104088>
- Wright, M., Filatotchev, I., Hoskisson, R. and Peng, M. W. (2005). Strategy research in emerging economies: challenging the conventional wisdom. *Journal of Management Studies*, 42, 1–33. <https://doi.org/10.1111/j.1467-6486.2005.00487.x>
- Young, M., Peng, M, Ahlstrom, D., Bruton, G., Jiang, Y. (2008). Corporate Governance in Emerging Economies: A Review of the Principal–Principal Perspective. *Journal of management studies*, 45(1), 196-220.
<https://doi.org/10.1111/j.1467-6486.2007.00752.x>