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► To cite this version:

Ghribi Rihab, Anis Jarboui. Impact of accounting and financial manipulations around mergers and acquisitions on shareholders' perception. Accounting Research Journal , 2016. hal-01371223

HAL Id: hal-01371223

<https://inria.hal.science/hal-01371223>

Submitted on 24 Sep 2016

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Article

Impact of accounting and financial manipulations around mergers and acquisitions on shareholders' perception

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Technologie d'Information, Gouvernance et Entrepreneuriat « LARTIGE »

Abstract

This paper provides an analysis of earnings management by the shareholders in a mergers and acquisitions setting, recognising that such opportunistic behaviour can have irreversible wealth consequences for both target and acquirer shareholders. The purpose of this study is to examine the role of earning management and the associated importance from the perspective of shareholders. In other words, we set up a brief discussion of the acquirers firms' motivations for practicing earnings management. Earnings management is not only induced for motivation related to mergers and acquisitions context, but also by those linked to shareholders' perception. Empirical results show that on the whole, two (independent boards and audit size) of the four variables are related to shareholders 'perception factors. In addition, two (nature of the operation, use of accounting criteria) of the four variables linked to mergers and acquisitions operations are found to significantly determine earnings management by the acquirings firms.

Keywords: shareholders' perception, mergers & acquisitions operations, earnings management, acquiring firms

1. Introduction

Accounting is used as a tools for firms to communicate important internal information to external stakeholders, who rely on such information to evaluate the performance of the firms and to make informed decisions. The discretion to how accounting information can be reported are given to managers in a way to best and most efficiently reflect firms' performance and value within the requirements of the accounting standards. And whilst these discretions may not always be used in the way to accurately present firm values, they can be used for opportunistic reasons, raising the issue of earnings management (Wang, 2014).

As a major strategic decision, the market's attitude to mergers & acquisitions can directly affect the prospects for future development of the enterprise; it also encourages the motivation of company management to falsify earnings reports, making some profit in the merger process of earnings management behavior (Shuang &Rong. 2014).

Some studies on mergers & acquisitions have revealed that the target shareholders benefit the most while the acquirer shareholders are usually losers following an acquisition. Thus, the acquirer may intentionally engage in earnings management or its management may merely be optimistic about the future of the combined firm and engages in income increasing accruals based on this optimism.

Banseh & Khansalar (2016) have reached a possible explanations for the acquirer's management to inflate the value of the firm preceding the acquisition announcement. In this case, the acquirer could be creating income enhancing accruals to drive up the value of the firm's stock and end up acquiring the target at a favorable rate of exchange.

In this paper, we will try to examine, on the one hand, whether acquirers use earnings management to boost their stock prices prior to announcing an acquisition where stock is used as a method of payment. On the other hand, we tend to analyse factors that could potentially mitigate or exacerbate acquirer managers' opportunistic behavior. These factors include the impact of such manipulations on the shareholders 'perception.

2. Hypothesis development

2.1. Detection of accounting and financial manipulations

The merger operation results in a change in power relations in the acquiring company. This change is manifested by a dilution of capital and shareholder and managerial power after the merger which is the result of exchange of shares between the participating companies. Thus the leaders of the acquiring company may seek to preserve their interests and those of their shareholders in order to prevent such dilution. They can therefore attempt to influence the exchange parity by implementing, in the year preceding the operation, an accounting policy affecting the value of their firm.

A review of the literature on the existence of earnings management before the operation merger and acquisition allowed us to clear the hypothesis that the managers of the participating companies adopt earnings management before the operation.

Consistent with previous studies, we document that managers of acquiring companies engage in more aggressive earnings management in cases of stock-financed acquisitions. Moreover, in cash-financed acquisitions there is no evidence at all of earnings management prior to the announcement of the deal.

Among these studies, the work of Alsharairi (2012) can be highlighted. According to him, to predict pre-merger earnings management by non-cash acquirers, we can use two theories, namely window-dressing and the double lemons' problem.

The term 'window-dressing', from an accounting perspective, refers to a broad range of techniques undertaken by a firm aimed at enhancing the financial position of the firm as perceived by users. This occurs through adjusting reports, financial ratios and disclosures to look better (Hillier et al. 2008). In a narrower view, window-dressing can also be directly associated with financial reporting practices that impact the earnings figure (Feltham and Xie 1994), since one of the incentives for window-dressing "relates to perceptions of earnings figures as a key cognitive reference point in the eyes of financial statement users (Guan et al. 2008, p.26)".

According to this view, it could be argued that a non-cash acquirer has a motivation to brighten up its reports by managing earnings upward before approaching a target firm, in

order to seem more attractive and convincing to the target's shareholders to receive acceptance and successful completion of a mergers & acquisitions deal.

From a different theoretical perspective, as noted earlier, the participants in the mergers & acquisitions market have imperfect information regarding each other's firm. Each party expects the other to make rational decisions that maximise their own Mergers & Acquisitions gains. There is an uncertainty in the acquirer's information regarding the target's real value. The lemons' problem causes the acquirer to discount the target's value avoiding potential adverse selection. A parallel scenario may occur on the target's side if it was offered equity issue in the payment structure. Hansen (1987) describes this situation as a double lemons' problem, suggesting that a target would suffer a similar information uncertainty regarding the acquirer's true value.

In this respect, Erickson and Wang (1999) note that pre-merger earnings management implies two incentives to the acquiring firm. The first is that the acquirer has an incentive to obtain capital at a lower cost so that the acquirer's management attempt to reduce the number of shares issued to the target and retain stronger control. The second incentive is to try to mitigate the post-merger diluting effect on the acquirer shareholders' rights of voting and profit sharing (i.e. their EPS) by minimising the number of shares that the acquirer is going to issue to the target's shareholders in the merger exchange.

Guo et al. (2008) have added that acquirers do not only have the motivation to manage earnings, but they also have control over the timing element in initiating the M&A process which enhances their efficiency in undertaking pre-merger earnings management.

Hence, the first hypothesis in this study is formulated as follows:

H1. Acquiring firms manage their earnings prior to the announcement date of a Mergers & Acquisitions deal if they offer equity shares in the deal.

2.2. Factors related to shareholder's perception and those linked to mergers and acquisitions context.

2.2.1. Impact of shareholder's perception

2.2.1.1. Share of a manager in the capital

By referring to the positive accounting theory, managers whose remuneration is indexed on the performance generated by the company, are looking to increase their remuneration.

The agency theory suggests executive compensation as the appropriate antidote to align the interests of managers and shareholders.

According to Jensen and Meckling (1976), executive compensation may encourage managers to undertake certain transactions that aim to maximise their benefits rather than shareholders.

In the context of mergers and absorptions operations, there is evidence that managers manipulate reported earnings upward employing earnings management activities to meet performance-based compensation targets (Bergstresser & Philippon, 2006; Cazier, 2009).

Missonier-Piera and Ben-Amar 2007 stipulate that managers can attempt through the operation across their accounting policy to maximize their interests at the expense of their shareholders. Thus, these managers, when holders of company shares, have as shareholders an interest to negotiate a parity required to grant a limited number of shares to shareholders of the absorbed (the acquired).

In this regard, we expect that anxious to preserve their remuneration and their power, managers should therefore adopt more accounting choices increasing their earnings as the proportion of voting rights held by them in the absorbent is important.

Hence, the following hypothesis can be advanced:

H2. The more managers hold a significant participation in the acquiring firm, the higher the level of earning management and this is a year prior to the announcement date of a mergers & acquisitions deal.

2.2.1.2. Shareholder structure

In the context of mergers and takeovers, the ownership structure of the acquiring company will be changed. Thus, when the pre-existing shareholders in the acquiring company hold a significant share of capital and voting rights, they are especially exposed to the effects of the decisions of managers, therefore the dilutive impact of the transaction (Smith, 1976). When ownership is concentrated, the change introduced by the merger can lead in this case to reduce this concentration. Dominant shareholders are going to seek on the occasion of the conclusion of forward transaction to preserve their interests. In their negotiations, they will take into account the current costs and future advantages of the operation and will be willing to pay a higher price (ie to agree on a less favorable parity) only if future benefits outweigh the cost. But as the cost components are the dilutive effects outlined above, the grant of such parity

will be against the interests of the dominant shareholders of the absorbent because it modifies immediately and at a time their power and wealth.

Fakhfakh & Nasfi (2012) show that control of the acquiring company by a shareholder (manager, ruling family, institutional investor) could be used to obtain private benefits by pursuing higher growth targets on the size of the firm rather than maximizing shareholder wealth. As a result, negative performance may increase when the family holds the position of the leader. Whereas if the family control is associated with an officer external to the family, it has an incentive to minimize agency costs and exercise greater control on managers to maximize firm value.

These developments lead us to put forward the following hypothesis:

H3: If the ownership structure is concentrated, acquiring firms manage their earnings the year prior to the announcement date of a mergers & acquisitions deal.

2.2.1.3. Board of directors

According to agency theory, the purpose of the board of directors is to minimize agency costs.

In fact, the effectiveness of the control board is supposed to be based on the presence of outside directors.

The cognitive approach to governance considers the system of governance as a key player in trade and construction of knowledge. This should facilitate coordination and reduce the costs of separate cognitive conflicts of interest, such as studying the traditional approach to shareholder (Fakhfakh & Nasfi 2012).

In this context, Charreaux (2003), Osterloh and Frey (2004), consider that the cognitive approach of the Board is supported by the cognitive contribution of the individual members as well evidenced by the knowledge and skills of inside directors as those of outside directors in prediction and interpretation of results. The characteristics of the board may define the powers and influence the decisions of leaders. Among the characteristics of the board we can find: the size, composition and independence.

Literature in the Anglo-Saxon context states that the first Board mission is to guarantee the interests of shareholders. In this case, directors should stand by the managers practices. But in the French context, according to Jeanjean (2002), the first vocation of directors is to ensure the social interest which by definition is not confused with shareholders' interests.

The nature of earnings management should not influence the quality control of independent directors. Consequently, the proportion of independent directors to the board (or supervisory board) should limit the possibilities of action leaders. This results in the following hypothesis:

H 4: The higher the proportion of independent directors is important, the lower the level of earning management of acquiring companies is high and this is a year prior to the announcement date of a mergers & acquisitions deal.

2.2.1.4. external auditor

The employment of an independent external auditor to verify accounting numbers reported by managers is a market-induced mechanism to reduce agency costs (Watts and Zimmerman, 1983).

Chung et al. (2005) examine the effectiveness of high-quality auditors as an external monitoring mechanism for a sample of low-growth firms with high free cash flow, who have the incentive to report income-increasing accruals in order to offset the low or negative earnings that inevitably accompany investments with negative net present values. They, too, find that Big 6 auditors are effective in deterring managers' opportunistic earnings management.

In the context of mergers and acquisitions, we are dealing with a second control that is to audit the financial statements used to set the exchange ratio. (Legal obligation) (Fakhfakh & Nasfi 2012).

Abbot and al (2004), Bradbury and al (2006) and Mc Meeking and al (2007), have assumed through their theoretical and empirical studies that the "Big N" differ from other audit firms for their cautious approach toward the accounting choices. Consequently, the discretionary accruals of companies audited by "Big N "are significantly lower than the discretionary accruals of other companies.

Like Sundgren (2003) in the context of public offerings as part of the French mergers, it is postulated that there is a negative link between membership of the auditors in a big audit firm and the level of earnings management ahead absorbent companies.

From the foregoing, we express in our turn the following hypothesis:

H5: In the presence of at least one auditor belonging to a big audit firm, the level of earning management of acquiring companies decreases and this is a year prior to the announcement date of a mergers & acquisitions deal.

2.3. Impact of mergers and acquisitions context

2.3.1. Size of the operation

Erickson and Wang (1999) are the first to show earnings management for the case of the acquiring firm for operations financed by share exchanges. For these authors, the exchange parity is an inverse function of the share value of the acquiring company. The manager would be encouraged to increase their accounting results during the period preceding the operation to improve the value of securities of their company, notably the share price.

Their objective would be to minimize the number of shares to be issued and incidentally the cost of the operation.

In the context of merger, the absorbent, whether initiator or target, is only to issue shares. Thus accounting behaviors of leaders should lead to a reduction in the number of shares issued. The motivations of leaders to adopt accounting and financial choices increase the value of their business and therefore lead to a reduction in the cost of the operation for the shareholders of the acquiring company.

Several studies suggest that if the target firm size is relatively small compared to the one of the acquiring firm, the relative size from increasing stock price via manipulated earnings will also be relatively small (Fakhfakh & Nasfi 2012).

We can pose our hypothesis:

H6: The more important the size of the operation, the higher the level of earning management of acquiring companies and this is a year prior to the announcement date of a mergers & acquisitions deal.

2.3.2. Dilution effects

The issuance of securities of the acquiring companies to pay for shareholders' contribution of the acquired companies may lead to a dilution of capital and voting rights of the pre-existing shareholders in the acquiring companies.

It is worth noting in this context that the existence of dilutive effects on earnings and control therefore encourage the leaders of the acquiring companies to adopt accounting and financial choices improving their results (Erickson & Wang, 1999; Asano & al. 2007 ; Francoeur & Rakoto, 2007). Indeed, if the exchange ratio and the dilutive effects are inversely related to the value of shares of the acquiring companies, leaders can through the higher earnings management try to minimize the number of shares to be issued and therefore the dilutive effects of the operation (Boutant & Djama, 2006).

The level of dilution being, all things being equal, an inverse function of the value of acquiring companies, the more dilutive effects are expected before the operation, the more shareholders of acquiring companies have an interest in what their leaders adopt accounting

and financial choices which will improve the value of their company and reduce the number of shares to be issued.

We can advance this hypothesis:

H7: The more important the expected dilutive effects, the higher the level of earnings management of acquiring companies.

2.3.3. nature of the operation

According to Asano and al. (2007), the objective of the grouping influences the earnings management of the acquiring companies. They indicated that they manage their results differently depending on the nature of the operation. Indeed, the reasons why the leaders manage their results to the increase may vary depending on the nature of the operation; that is to say when the operation corresponds to a takeover or restructuring of the group.

If in the context of takeovers parity is at the heart of the concerns of actors so as not only the cost but also the control are at stake. During restructuring, the control is established and actions taken to act on parity are not intended to challenge the control, but they should be designed to minimize the cost of operation by offering a reduced number of shares to minority shareholders of the target.

Watts and Zimmerman (1990) considered that leaders manage their results when they anticipate higher profits in this management costs of not managing. However, in the context of takeovers, the costs resulting from the earnings management can put a considerable strain on the expected benefits. In fact, the management teams are strongly encouraged to call on experts (accountants, auditors, investment banks, etc.) to assess the financial statements of the opposing companies. The leaders of the participating companies in takeovers can estimate the probability that the manipulation detected is high because of mutual supervision.

However, the other company can request a review of the parity or even threaten to cancel.

This makes it possible to prevent the participating companies from adopting a earnings management which increase the value of their company.

On the contrary, as regards restructuring, earnings management is easier to the extent that the parent company controls the accounts of his daughter. It can exert "intra-group earnings management" and locate the benefits so as to justify an understated price for the minority of the target (Thauvron, 2000).

Accordingly, the leaders of acquiring companies should adopt more accountants and financial decisions improving their results during restructuring as during takeovers.

Therefore, the following hypothesis is proposed:

H8: During restructuring, acquiring companies displayed a level upward of earnings management higher than the acquiring companies in takeovers.

2.3.4. Multi-criteria approach

Since 1977, the SEC (then AMF) recommends using a multi-criteria approach to select, calculate and weigh several evaluation criteria (stock prices, the results, the net and reassessed assets, discounted cash flows, etc.) to determine the relative values of the participating companies as a reference to the fixing of parity. Indeed, the different criteria used can be based directly on the accounting and financial statements submitted by the leaders. This is particularly the case when the evaluation criteria refer to revenues, the gross operating surplus, accounting results, the cash flow, the accountant net and reassessed assets, etc. The criteria may also be based indirectly on accounting and financial statements. This is notably the case when the evaluation criteria are the stock prices, the multiple, the discounted future cash flows, etc. In the French context, the leaders of acquiring companies may therefore attempt to influence the parity not only in their choice of selection and combination of parity criteria but also by financial and accounting manipulations (Boutant, 2009).

In this perspective, it can be assumed that the relationship between the exchange parity and earnings management is stronger when accounting criteria are directly mobilized. Indeed according to the efficient market hypothesis, the courses which normally represent the best estimate of the intrinsic value of the company should not be affected by earnings management.

These developments lead us to put forward the following hypothesis:

H9: the acquiring companies where the value of shares is estimated based on accounting criteria displayed level upward of earnings management higher than other acquiring companies.

3. Research methodology

This section is devoted to discussing the empirical methodology applied to test the already-developed hypotheses.

3.1. Variable measurement

3.1.1. Measuring the dependent variable: Detection of accounting and financial manipulations

In consistency with several previously-elaborated studies, discretionary accruals have been selected, in this research, as a means to measure the earnings management (e.g., Cohen and Zarowin, 2010; Gong and al., 2008; Hadani, Goranova & Khan, 2011; Higgins, 2013).

Indeed, Healy (1985) and De Angelo (1986) were the first authors to develop models to estimate the discretionary accruals based on the assumption of stationarity non-discretionary accruals. That is, they have assumed that non-discretionary accruals are constant.

Subsequently, Jones (1991) defines a model, widely reported in the work of the results management, which includes the impact of economic factors on the calculation of normal accruals (Benkraiem 2008). According to this model, non-discretionary accruals are function of turnover variable, assumed to follow the evolution of economic conditions, and the company's investment policies (the level of property, plant and equipment.). Thus, the total accruals (TA) are defined as follows:

$$\frac{TA_{it}}{A_{it-1}} = \alpha_0 \frac{1}{A_{it-1}} + \alpha_1 \frac{\Delta REV_{it}}{A_{it-1}} + \alpha_2 \frac{PPE_{it}}{A_{it-1}} + \varepsilon_{it}$$

With, TA_{it} represents the total accruals for fiscal year t and firm i,

A_{it-1} : total assets for fiscal year t and firm i,

ΔREV_{it} : the change in revenues for fiscal year t and firm i,

PPE_{it} : the gross value of property, plant and equipment for fiscal year t and firm i,

$\alpha_0, \alpha_1, \alpha_2$: regression parameters

ε_{it} : error term

Jones model is based on the implicit assumption that the change in revenues (REV) is not discretionary (Dechow et al. 1995). But some REV elements such as customer payment terms can be influenced by management. To reduce this bias, Dechow et al. (1995) proposed a modified version of Jones model.

$$\frac{TA_{it}}{A_{it-1}} = \alpha_0 \frac{1}{A_{it-1}} + \alpha_1 \frac{\Delta REV_{it} - \Delta REC_{it}}{A_{it-1}} + \alpha_2 \frac{PPE_{it}}{A_{it-1}} + \varepsilon_{it}$$

Another modification of the original Jones model is the integration of a third explanatory variable in the model: cash flow generated by the activity (Dechow et al 1995). The model is therefore written:

$$\frac{DA_{it}}{A_{it-1}} = \frac{TA_{it}}{A_{it-1}} - \left[\bar{\alpha}_0 \frac{1}{A_{it-1}} + \bar{\alpha}_1 \frac{\Delta REV_{it} - \Delta REC_{it}}{A_{it-1}} + \bar{\alpha}_2 \frac{PPE_{it}}{A_{it-1}} + \bar{\alpha}_3 \frac{CF_{it}}{A_{it-1}} + \varepsilon_{it} \right]$$

3.1.2. Measuring the explanatory variables

In accordance with the theoretical part of this research, we will split the presentation of measurement explanatory variables in two parts. Specific measures reveal the impact of shareholders' perception and mergers-acquisitions context.

3.1.2.1. Stakeholders' perception

- **Executive Compensation**

According to Young's research (1998), Erickson and Wang (1999) the variable remuneration is measured by the percentage holding in managers voting rights.

- **Shareholder structure**

If the ownership structure is measured according to Saada (1995) and Jeanjean (2002) by the ownership percentage of major shareholders (at least 5% of shares), Djama (2002) retains the thresholds of 1/3 and 50% of the voting rights as a proxy for this variable.

Thus, the proxies used to measure this variable differs from a research study to another.

Considering that ownership is concentrated as soon as at least one shareholder can block important decisions taken by the company (such as the approval of the merger extraordinary general meeting), the concentration of the shareholders is a dummy variable 1 if at least one shareholder owns more than a third of voting rights in extraordinary general meeting and 0 otherwise.

- **Board independence**

Independent directors include those who have no material relationship with the listed company directly, or as a partner, shareholder, or officer of an organization that has a relationship with the company (Fakhfakh & Nasfi, 2012).

According Petroni and Beasley (2001) the independence of boards is measured by the following ratio:

$$\% \text{ independent boards} = \frac{\text{number of independent directors}}{\text{total number of directors on the board}}$$

- **Auditor size**

To measure this variable, Jeanjean (2002) postulates that when at least one auditor belongs to a big audit firm, leaders do not adopt the accounting and financial choices. So a dichotomous variable is used; it takes the value 1 when at least one auditor of the acquiring company belongs to a big audit firm and 0 otherwise.

3.1.2.2. mergers-acquisitions context

- **Operation size**

In this study we made use of the research of Erickson and Wang (1999) to measure the relative size of the operation. In fact, these authors were the first to provide a measure to this variable. They considered that the relative size of the operation is used as an indicator of the expected benefits of earnings management.

Those researchers used a dichotomous variable equal to 1 when this ratio exceeds the average of the sample ratios and 0 otherwise. This implies that when the relative size of the operation is high (above average), the level of earnings management of acquiring companies is higher than when the relative size of the operation is low (less than average).

However, the partition between low and high relative size is not based on the average but the median, this one is not influenced by extreme values. The variable operation size therefore takes the value 1 when the ratio of the operation exceeds the median and 0 in the opposite case.

- **Dilution effects**

No research to our knowledge has proceeded to test this variable except the Djama and Boutant (2006). Indeed, it is likely to explain this lack of testing by the researchers by the difficulty in determining the precise level of expected dilution before the operation. Inspired by the work of these authors, we measure the expected dilutive effects by the variation percentage of voting rights of major shareholders before and after the operation.

- **Nature of the operation**

French accounting regulations of mergers and acquisitions specifies that the determination of the nature of the merger operation based on the situation of control between the companies before this operation.

In this study and in order to provide a measure of the nature of the operation variable we use CRC regulation 99-02 as amended by CRC Regulation 2004-03. Indeed, a dichotomous variable was created using the concept of exclusive control defined by these regulations. This variable is equal to 1 when no control link higher than 40% of the voting rights are observed between the participating companies or with the same parent company (the transaction is a takeover), and 0 otherwise. That is to say, when a link in voting rights between the participating companies or with the same parent company exists and exceeds the 40% threshold, the operation is considered restructuring.

- **Multi-criteria approach**

In the French context of mergers and takeovers, the financial regulator recommends the implementation of a multi-criteria approach of using several assessment criteria for determining the exchange parity.

To provide a measure for the variable "accounting standards" we made use of Boutant's work (2010). In fact, the researcher used a dichotomous variable that takes the value 1 when at least one accounting criterion is used (revenue, gross operating surplus, accounting results, cash flow, etc.) and 0 otherwise.

3.1.2.3. Control variable

- **Leverage**

In the merger context, the creditors, who bear the risk of the absorbent bankruptcy, will be particularly attentive to the evolution of the debt level after the operation. Also, given the balance of forces exerted between the participating companies, leaders have every incentive to put forward low debt which allows to get a more favorable parity.

To measure this variable, we use the work of Piot and Janin (2007). In this perspective, the variable debt is measured by the debt / equity ratio.

- **size of the acquiring company**

Labo and Zhou (2006) argue that large firms have incentives to increase the value of their earnings because their business activities are complex. This result was shown by the following research (e. g Jo and Kim , 2007).

In accordance with the work of Djama (2002), Piot and Janin (2007), Hamza and Lakhel (2010), the variable size of the absorbent is measured by the logarithm of total assets of the acquiring company.

3.2. Research design

Econometric validity of our assumptions above requires the choice of an appropriate methodology which is capable of highlighting the effect of explanatory variables on earnings management. So, we proceed to the regression of the amount of discretionary accruals estimated for each business year preceding the operation (t-1) on the set of explanatory variables. The model used is:

$$DA_i = \beta_0 + \beta_1 ExeCompen_i + \beta_2 ShareStru_i + \beta_3 BoardIndep_i + \beta_4 AudS_i + \beta_5 OpeS_i + \beta_6 Dilu_i + \beta_7 OperNatu_i + \beta_8 Multi_i + \beta_9 Lever_i + \beta_{10} Size_i + \epsilon_i$$

With β_0 : constant.

3.3. Sample

Our empirical study includes initially 50 listed acquiring companies on the stock exchange of Paris which have participate in the merger between 2008 and 2014. Mergers for which the absorbent has a purely financial activity or insurance are excluded due to motivations and accounting regulations specific to these companies. This step led us to eliminate 10 operations. The final sample is composed of 40 operations that correspond to acquiring companies.

It should be noted that the data collected for the study of the determinants of earnings management during mergers are extracted whether from treated mergers, annual reports of the acquiring companies from the website of the Financial Market Authority and institutional websites of the participating companies in the operation.

4. Main empirical results

4.1. Hypothesis assessment of the existence of earnings management ahead mergers and acquisitions

The table below (**table 1**) shows the depiction of the total accruals' descriptive statistics and their components relevant to the periods T-1, T-2, T-3 and T-4.

	TA	Δ NWC	A	P	Rev	IP
T-1						
Mean	0.023	0.039	0.015	0.026	0.018	0.0016
Std. dev	0.09	0.1	0.025	0.037	0.029	0.007
T-2						
Mean	0.019	-0.006	0.014	0.026	0.024	0.007
Std. dev	0.054	0.051	0.024	0.027	0.039	0.009
T-3						
Mean	-0.065	-0.026	0.02	0.052	0.0255	0.0032
Std. dev	0.108	0.069	0.048	0.08	0.057	0.0041
T-4						
Mean	-0.04	-0.0026	0.034	0.048	0.0358	0.0043
Std. dev	0.112	0.098	0.091	0.077	0.08	0.0059

TA: Total accruals, Δ NWC: Need for working capital, A: Amortization, P: Provision, Reve: Reversals of depreciation and provisions, IP: Immobilised Production..

We can deduce from a reading of Table 1 in t-1, total accruals are positive and have averaged 2.3% of total assets in the previous year. Conversely, between t-2 and t-4 before the operation,

all total accruals are on average negative and represent -0.019% respectively - 0.065% and 0.04% of total assets. It thus seems that this result supports the idea according to which the leaders could adopt accounting and financial choices just before the operation (t-1).

Concerning the total Accruals component elements, we note that the change in t-1 in working capital averaged 3.9% of total assets. However, in t-2, t-3 and t-4, it was negative between - 0.0026 and -0.026. This increase in working capital in t-1 compared to the years preceding it can be an enabling factor in the adoption of an accounting policy from leaders to improve the result.

This first descriptive analysis of total accruals as well as their elements make up the possibility of adoption of accounting and financial leadership selection to improve their results.

It is through an estimate of discretionary accruals that we can test the hypothesis concerning the existence of earnings management of acquiring companies. We will first proceed to estimate from a modified Jones' model and extract discretionary accruals by making the difference between total accruals and normal ones. We chose the pooled regression method. Jones model is estimated by industry about 3 years accounts before the year preceding the operation (t-4 to t-2) of the absorbent 40 companies, which is pooled regression as was previously practiced by Djama and Boutant (2006) and Missonier-Piera and Ben-Amar (2007). This methodology allows to maximize the sample size which will be 120-years observations (40 firms for each of four years). Indeed, we have chosen this time for the collection of financial and accounting information of each of the companies that can not be operated beyond 4 years before the transaction, so the chronological regression method proved impossible. This justifies our choice to perform a temporal regression by industry.

At this stage, we have applied 120 years observations to estimate the parameters of the modified Jones model. These parameters are obtained by regressing the amount of total accruals for each firm i according to the variation in turnover, the amount of fixed assets and the amount of treasuries flows for the period t (t-4 to t-2) before the merger. The model is then:

$$\frac{TA_{it}}{A_{it-1}} = \alpha_0 + \alpha_1 \frac{\Delta REV}{A_{it-1}} + \alpha_2 \frac{PPE_{itit}}{A_{it-1}} + \alpha_3 \frac{CF}{A_{it-1}} + \varepsilon_{it}$$

It is noted that we have standardized all the variables of the model by the total assets in the year preceding the operation to reduce heteroscedasticity problems.

Table 2 presents Regression Parameter Estimation of sectoral model "distribution" according to the method of ordinary least square for the test sample (t-2 to t-4).

	Coefficients	t of Student	statistic significativity
Constant	-0.057	-4.595	0.000***
$\frac{\Delta REV}{A_{it-1}}$	-0.369	-2.737	0.01***
$\frac{PPE_{itit}}{A_{it-1}}$	-0.031	-0.722	0.048**
$\frac{CF}{A_{it-1}}$	0.237	1.978	0.067*

***, **, * represents significance at the 1/ 5/10% level.

Then we will calculate t-1 in normal Accruals for each company in this sector while applying the parameters previously estimated. The following equation allows us to deduct the amount of non-discretionary accruals:

$$\frac{NDA_{it-1}}{A_{it-2}} = -0.057 \times \frac{1}{A_{it-2}} - 0.369 \times \frac{\Delta REV_{it-1} - \Delta CD_{it-1}}{A_{it-2}} - 0.031 \times \frac{PPE_{it-1}}{A_{it-2}} + 0,237 \times \frac{CF_{it-1}}{A_{it-2}}$$

Arriving at the final stage of our previously mentioned approach, the amount of total accruals in t-1 and for each sample company is calculated as:

$$\frac{DA_{it-1}}{A_{it-2}} = \frac{TA_{it-1}}{A_{it-2}} - \left(-0.057 \times \frac{1}{A_{it-2}} - 0.369 \times \frac{\Delta REV_{it-1} - \Delta CD_{it-1}}{A_{it-2}} - 0.031 \times \frac{PPE_{it-1}}{A_{it-2}} + 0,237 \times \frac{CF_{it-1}}{A_{it-2}} \right)$$

By doing this for each sector, discretionary accruals obtained for the absorbent 40 enterprises in t-1 is on average 3.17% of total assets in the previous year. So like Erickson and Wang (1999) and Asano et al. (2007), these results show the higher earnings management between 2 and 10%. Hypothesis 1 is confirmed.

4.2. Empirical result of hypothesis related to mergers and acquisitions context and those linked to shareholders' perception.

To test the validity hypothesis identified in the literature we started at the Lower Square Ordinary method.

The ordinary least squares aims to present the results of multiple regression model and specifically to confirm or refute the hypotheses identified by the literature. It must be ensured before the presentation and interpretation of the results according to OLS regression method, that there is no problem of heteroscedasticity and autocorrelation of residuals problem and there is also an absence of multicollinearity.

The multicollinearity is a computational difficulty that appears when two or more independent variables are highly correlated. From table 3, we present the output from the Pearson's correlation. The result of this table indicates the absence of multicollinearity the fact that the explanatory variables (operation size, dilution effects, multi-criteria approach, executive compensation, board independence and firm size) are weakly correlated with each other.

Table 3 Pearson correlation

	OpeS	Dilu	OperNatu	Multi	ExeCompen	Lever	ShareStru	BoardIndep	AuditS	Size
OpeS	1	0.040	0.133	-0.082	-0.114	-0.075	-0.061	-0.075	0.0255	0.103
		0.7	0.193	0.41	0.265	0.475	0.55	0.478	0.81	0.32
Dilu		1	0.032	-0.045	0.014	0.037	-0.0025	-0.011	0.350	0.071
			0.77	0.654	0.89	0.72	0.985	0.91	0.000***	0.48
OperNatu			1	0.043	-0.046	0.329	-0.076	0.314	0.190	0.203
				0.64	0.66	0.001***	0.45	0.002***	0.06*	0.044**
Multi				1	-0.2	0.074	0.155	-0.062	-0.075	-0.041
					0.046	0.52	0.13	0.54	0.48	0.68
ExeCompen					1	0.204	0.117	0.176	0.003	-0.178
						0.047	0.243	0.077	0.98	0.08
Lever						1	-0.069	-0.117	-0.062	0.045
							0.503	0.27	0,544	0,65
ShareStru							1	-0.184	0.225	-0.243
								0.079*	0.04**	0.045**
BoardIndep								1	0.030	0.124
									0,768	0,223

AuditS									1	0.489 0.000***
Size										1

OpeS : operation size ; Dilu : dilution effects; OperNatu: operation nature; Multi: multi-criteria approach; ExeCompen: executive compensation; Lever: leverage; ShareStru: shareholder structure; BoardIndep: board independence; AuditS: audit size; Size: size firm.

***, **, * pearson correlation represents significance at the 1/5/10% level.

Indeed, in order to check *homoscedasticity* of residues we have use White test. This test shows a Fisher value equal to 1,007 and the risk of rejection of the null hypothesis of no heteroscedasticity is quite high ($p = 0.46 > 0.05$). This leads us to accept this hypothesis and to confirm that there is no problem of heteroscedasticity. Moreover, to ensure that there is no problem of correlation between residues we refer to the Durbin-Watson test. The value was very close to 2 (2.01). This proves that there is no problem of correlation between residues.

The results are shown in the following table.

Table 4 Estimation of explanatory model of discretionary accruals by Ordinary Least Square

Variables	expected sign	Coefficient	t Student	Significativity
Constante		0,069	3,663451	0,0010
OpeS	+	-0,0014	-0,178160	0,8598
Dilu	+	0,00057	0.09	0,928
OperNatu	-	-0,004	-2,489	0,006***
Multi	+	0,009	1,886	0,10*
ExeCompen	+	-0,026	-1,025	0,31
Lever	+	-0,003	-1,972	0.1*
ShareStru	+	-0,013	-1,794	0.083*
BoardIndep	-	-0,09	-2,45	0,065*
AudS	-	-0,5	-2,46	0,006***
Size	+	-0,002	-1,357	0,185

***, * represents significance at the 1% and 10% level.

The variable "nature of the operation" appeared with a negative coefficient consistent with the expected sign and equal to -0.004. The value of Student above -2, is equal to -2.489. It also appears that this variable is significant at the 10% threshold. This result is consistent with the hypothesis 8 of our study that the acquiring companies during restructuring adopt accounting and financial manipulations during takeovers; this is consistent with the study of Asano et al (2007).

We also noted that "the accounting standards" come out with a positive and significant impact on results management (according to the hypothesis 9). That is to say, the use of accounting criteria facilitates the adoption of accounting and financial choice increasing the level of benefits of absorbent given their direct impact on parity. This result is justified by the fact that, according to the market efficiency hypothesis, the evaluation criteria that is indirectly based on the accounting statements as stock prices should not be affected by any earnings management.

Moreover, we find that the variable "shareholder structure" presents a coefficient opposite to the predicted sense but significant at the 10% threshold, as the value of Student is relatively close to -2 ($t = -1.794$). Therefore, the concentrated ownership structure is a constraint results management executives of acquiring companies, the H3 hypothesis is disproved. This is consistent with the classic hypothesis raised by Smith (1976) in the general case but not specifically to the context of the operation. Indeed, he explained this by the reason that the dominant presence shareholding allows to exercise stricter control over the leaders and therefore result management will be reduced.

However, regarding the variable "independent director", its coefficient is negative and statistically significant at the 10% threshold with a value of Student exceeding 2 ($t = -2.45 > 2$). We can assume that the higher the proportion of independent directors, the less limited the adoption of accounting and financial leadership selection. This result supports the hypothesis 4, thereby strengthening the majority of research works namely done by Dechow et al (1996), Jeanjean (2002), and Piot & Janin (2005), in this same context, the direction Button report called the introduction of this type of administrator in the council to improve quality control boards and oversight.

Arriving at the variable "Audit size", it appears with a coefficient consistent with the expected direction (-0.5) and statistically significant at the 1%. We can confirm the hypothesis 5.

According to which membership of at least one auditor in a large audit firm has a negative effect on the level of earnings management. This finding is consistent with the research done by Sundgren (2003) in the context of public offerings. Indeed, constituting one of the external auditors controls, this variable is considered one of the governance mechanisms that influence the intensity of earnings management.

Regarding the variable "dilution", the resulting coefficient is positive and consistent with the predicted direction (0.00057) but it is not significant at the 10% level ($p = 0.928$), as the value is less Student 2 ($t = 0.09$). This proves that when substantial dilutive effects are expected before the operation, no earnings management is detected. So we do not succeed at this stage to reach the conclusions of Erickson and Wang (1999).

5. Conclusion

The present work has made an attempt to study the earnings management of acquiring companies in the context of French mergers. The interest in this subject emerged out of Young's observation (2008) that the specific reasons prompting and forcing the leaders to handle their accounts before mergers & acquisitions operation today remain understudied and blurred.

The goal was here in particular to detect possible earnings management of acquiring companies the year before the merger and the impact of shareholders' perception and also the motivation linked to merger and acquisition context.

However, some limits are allocated to our paper. The first is the simplifier character of our hypotheses because they can not grasp the complexity of the behavior of the leaders. Indeed, they describe the influence of incentives or constraints on the management of linear results without including the possible interactions between the explanatory determinants of earnings management.

Another limitation is related to the measurement of earnings management. Indeed, among the existing estimation models to calculate the abnormal part of the accounting and financial leadership selection, we chose one of the best known and most adopted to the viewpoints of previous research and also because of the possibilities available in the accounting data in our study sample. To overcome this limit to a certain extent, we conducted additional analyzes by analyzing directly handled several accounting items.

As a future research, we propose to extend this work to other institutional contexts in which the pressures of the social stakeholders and legislators are strong.

We can also suggest a comparative study between the context of one of emerging countries and French context which has never, to our knowledge, been investigated in previous research.

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