The current issue and full text archive of this journal is available at
www.emeraldinsight.com/0268-6902.htm

Received 31 May 2009
Revised 6 January 2010
Accepted 8 January 2010

The association between corporate governance guidelines and risk management and internal control practices

Evidence from a comparative study

Gerrit Sarens
Louvain School of Management, Université Catholique de Louvain, Louvain-la-Neuve, Belgium and
Faculty of Business Administration, University of Antwerp, Antwerp, Belgium, and
Joe Christopher
School of Accounting, Curtin University of Technology, Perth, Australia

Abstract

Purpose – The purpose of this paper is to investigate whether the weaker focus on risk management and internal control within the Belgian corporate governance guidelines is associated with less developed risk management and internal control systems within Belgian companies, when compared to Australian companies.

Design/methodology/approach – Theoretical arguments were drawn from institutional theory. Data for the study were collected through a questionnaire that was sent out to chief audit executives in Australia and Belgium.

Findings – The paper finds that the weaker focus of the Belgian corporate governance guidelines on risk management and internal control is associated with less developed risk management and internal control systems in Belgian companies than in Australian companies.

Originality/value – The paper contributes to the literature on corporate governance, as it suggests that the specific content of corporate governance guidelines is an important variable to take into account. This paper also confirms that institutional theory is a relevant framework to study on the one hand, corporate governance practices in a "comply or explain" context, and on the other hand, corporate governance practices within unlisted companies.

Keywords Risk management, Internal control, Corporate governance, Australia, Belgium

Paper type Research paper

Earlier versions of this paper have been presented at the Annual Conference of the British Accounting Association (Blackpool, April 1-3, 2008), the 31st Annual Conference of the European Accounting Association (Rotterdam, April 23-25, 2008) and the 2nd European Risk Conference (Milan, September 10-12, 2008). The authors would like to thank the participants of all three conferences for their useful comments. They also would like to thank Jenny Stewart and Mara Cameran for their detailed suggestions to improve this paper.

Managerial Auditing Journal
Vol. 25 No. 4, 2010
pp. 288-308

0268-6902
DOI 10.1108/02686901011034144

1. Introduction

Increased concerns regarding corporate accountability in various developed nations have been associated with the need for appropriate risk management and internal control systems. This has been reflected through recent voluntary corporate governance guidelines. The subjectivity of this area has given rise to different levels of emphasis on risk management and internal control and is, correspondingly, reflected in the governance guidelines of various countries. While these voluntary guidelines that have originated in each country may provide different levels of focus on these two areas, it is uncertain as to what extent these different levels of focus exert an influence, either direct or indirect, on an organisation's risk management and internal control practices.

Uncertainty regarding the association between the focus of voluntary corporate governance guidelines and risk management and internal control activities in practice has created a research gap in this area. Beekes and Brown (2006) refer to company responses to such voluntary guidelines as a rich area for research. This study addresses this research gap, by investigating if there is an association between the emphasis or focus of corporate governance guidelines and its corresponding development in practice. The motivation behind this approach is to contribute to the corporate governance literature on risk management and internal control, by establishing if voluntary corporate governance guidelines are an influencing force impacting practices in these areas. This will assist in narrowing the research gap in this area and have relevant implications for governance policy makers who might be interested in knowing the impact of their corporate governance guidelines.

The study focuses on the corporate governance guidelines that exist in Australia (Australian Stock Exchange (ASX) Corporate Governance Council, 2003[1]) and Belgium (Belgian Corporate Governance Committee, 2004[2]). The rationale for selecting these two countries is that their basic corporate governance principles are similar, they have both undergone recent changes as a result of global corporate pressures to improve governance, and both guidelines apply a similar "comply or explain" regime. Given these common underlying characteristics, both countries nevertheless have different focuses on risk management and internal control in their respective voluntary corporate governance guidelines. The common characteristics provide a base for a comparative study on the effect of these different focuses of voluntary guidelines on the risk management and internal control practices of organizations in the respective countries.

More specifically, our analysis indicates that the Australian guidelines, relative to the Belgian guidelines, appear to be more strongly focused on risk management and internal control. To some extent, this focus may be attributable to Australia's early emphasis on risk management via the implementation of the world's first risk management Standard in 1995, a generic guide for managing risk (Risk Management Institution of Australasia, 2004).

Given the weaker focus of the Belgian guidelines on risk management and internal control, the less explicitly formulated link with the integrity of financial reporting, as well as the less explicit monitoring role of executive management with respect to the risk management and internal control system, the question is raised as to whether this has a significant impact on the status of the risk management and internal control systems within Belgian companies, and consequently, whether Belgian companies have a less developed risk management and internal control system than Australian companies.

Data for the study were collected through a questionnaire that was sent out to chief audit executives (CAE) in Australia and Belgium in 2006.

In undertaking the study, the authors draw on institutional theoretical arguments that do not depend specifically on a longitudinal time element. While the guidelines in both countries generally are not mandatory for companies, given the "comply or explain principle," the authors argue that these institutional theoretical arguments suggest that companies will comply with such guidelines. This would indicate that both listed and unlisted companies would likely comply with the aspects of risk management and internal control contained within these guidelines. The results of this study suggest that the focus of corporate governance guidelines on risk management and internal control has an impact on these areas in practice. With respect to the comparative study, Belgian companies appear to have less developed risk management and internal control systems than their Australian counterparts.

The rest of this paper is structured as follows. In Section 1, a brief background is provided on the corporate governance guidelines in both countries. Section 2 theoretical arguments based on institutional theory are analyzed to explain the impact of voluntary corporate governance guidelines on both listed and unlisted companies. In Section 3, the two corporate governance guidelines are compared and analyzed, forming the basis for the hypotheses to be tested in this study. Section 4 outlines the research methodology. Section 5, the results are presented. The final section summarizes and discusses the conclusions.

2. Institutional theoretical arguments

Even though companies are not mandated to comply with corporate governance guidelines in either of these two countries, given the underlying "comply or explain" principle, this study draws on a number of arguments from institutional theory to explain why companies are motivated to comply with these guidelines and why aspects relative to risk management and internal control activities have a corresponding impact upon such processes within companies. While these guidelines primarily are focused on listed companies, similar theoretical arguments also are used to explain why unlisted companies apply these guidelines, resulting in similar impacts on processes relative to risk management and internal control practices.

One of these institutional theoretical arguments is that organisations tend to focus on the pressures and constraints of their environment (Oliver, 1991). This is supported by assertions that organisational choice is limited by a variety of external pressures (Meyer *et al.*, 1983), environments are collective and interconnected (DiMaggio and Powell, 1983; Powell, 1988), and organisations must be responsive to external demands and expectations, in order to survive (Meyer and Rowan, 1977). Institutional theorists (DiMaggio and Powell, 1983; Meyer and Rowan, 1977; Zucker, 1987) have suggested further that institutional constituents that exert pressures and expectations include not only formal corporate governance guidelines, but also public opinion regarding good corporate governance (Scott, 1987). In the context of this study, this theoretical argument is used to argue that organisations in Australia and Belgium tend to focus on their respective corporate governance guidelines as they exert pressure and expectations on their operational environment.

Another argument is that institutional theorists have emphasized the survival value of conformity with the institutional environment, and the advisability of adhering to

external rules and norms (DiMaggio and Powell, 1983; Meyer and Rowan, 1977). Zucker (1987) argues that organisations are predicted to conform to institutionalized beliefs or practices when the "social fact" quality of these beliefs or practices renders them the only conceivable "obvious" or "natural" way by which to conduct an organizational activity. Therefore, in the context of this study, this institutional theoretical argument illustrates that when corporate governance guidelines obtain the status of a social fact, organisations may engage in complying with such guidelines as they are seen as obvious or proper, as opposed to being calculative and self-interested (Oliver, 1991). This institutional theoretical assertion is used to argue that compliance by both listed and unlisted Australian and Belgian companies with corporate governance guidelines may not be linked only to positive organisational outcomes (e.g. higher perceived reliability of financial reporting), but also because it would be unthinkable to do otherwise. In other words, applying corporate governance guidelines may be driven not only by processes of interest mobilisation, as explained by DiMaggio (1988), but also by preconscious acceptance of these institutionalised guidelines.

Another aspect of institutional theory is that an organization's survival requires it to conform to social norms of acceptable behaviour (Covaleski and Dirsmith, 1988). DiMaggio (1988), DiMaggio and Powell (1983), Meyer and Rowan (1977) and Zucker (1988) suggest that the self-serving advantages of compliance with institutional norms and requirements are revealed in the variety of rewards to which organisational conformity has been related in the institutional literature. Examples include increased prestige, stability, legitimacy, social support, internal and external commitment, access to resources, attraction of personnel, fit into administrative categories, acceptance within professions and invulnerability to questioning. The above-noted theoretical institutional assertion is used to argue that Australian and Belgian companies, whether listed or not, comply with corporate governance guidelines so as to conform to social norms of acceptable corporate behaviour. This also enables us to assume that the specific content of these guidelines, relative to risk management and internal control, exerts an important influence on their risk management and internal control practices. In summary, all of the above-noted institutional theoretical arguments are used as the underlying theory to assume that both listed and unlisted companies adhere to corporate governance guidelines, even though the guidelines are neither mandatory nor limited to a "comply or explain" principle.

3. Comparison of corporate governance guidelines

The ASX Corporate Governance Council was formed in August 2002. The Council's overriding mission was to develop and deliver an industry-wide, supportable framework for corporate governance that could provide a practical guide for listed companies, their investors, the wider market, and the Australian community (ASX Corporate Governance Council, 2003). This framework was published in March 2003. It consisted of ten principles and 28 recommendations that support the principles. ASX listing rule 4.10.3 requires all listed companies to disclose the extent to which they have adhered to the 28 recommendations during the reporting period. This rule became enforceable for companies with reporting periods ending in 2004[3].

By 1998, Belgium had three separate sets of corporate governance rules that had been drawn up by different authorities and these rules were in need of updating and

consolidation. In this context, a committee was established to draft a single code of best practices on corporate governance for all listed companies. The committee's aim was to draft a code that was aligned with international practices and EU recommendations (Belgian Corporate Governance Committee, 2004). The final version of the Code was published in December 2004 and became enforceable on January 1, 2005[4].

Both sets of guidelines have a degree of built-in flexibility, enabling them to be adapted to each company, depending upon its size, activities and culture. The so-called "comply or explain" principle allows companies in both countries to deviate from the guidelines when their circumstances so justify, subject to the company providing an adequate explanation for such deviation. Even though both guidelines primarily are oriented towards listed companies, it is recognized that they could function as a best practice reference framework for all other companies. This inference is elaborated further in the next section.

An analysis of the guidelines of both countries indicate that while they are based on similar corporate governance principles, the countries differ in terms of the degree of attention given to risk management and internal control. This section will explore, in greater detail, the specific differences that exist in the guidelines, relative to risk management and internal control, and how they may have an influence on risk management and internal control practices in both countries, given the institutional theory arguments outlined in the previous section.

3.1 Guidelines on risk management and internal control in general

Contrary to the Belgian code (2004), the Australian guidelines (2003) explicitly recommend that companies establish a sound risk management system to identify, assess, monitor, and manage risk, as well as to inform investors of material changes to the company's risk profile. This structure can enhance the environment for identifying and capitalizing on opportunities to create value. In Australia, the Risk Management Institution of Australia published, in 1995, the world's first risk management standard. This standard was updated twice, in 1999 and 2004, and specifies the generic elements of the risk management process that may be applied to a very wide range of activities, decisions or operations of any public, private or community enterprise, group or individual (Risk Management Institution of Australasia, 2004). The early emphasis of risk management through this Standard may be a contributory factor to the strong emphasis on risk management that is apparent in the Australian corporate governance guidelines.

3.2 Guidelines on risk management and internal control responsibilities of the board of directors

In both countries, the board is requested to review the existence and functioning of the risk management and internal control system. However, the Australian guidelines (2003) go further, by recommending that the board or an appropriate committee (in most cases, the audit committee) establish policies on risk oversight and management. It also is stipulated that these policies should clearly describe the roles and respective accountabilities of the board, audit committee, management, and any internal audit function.

The lack of focus on risk management and internal control systems expressed in the above-noted Belgian guidelines inevitably raises the question as to whether

risk management and internal control systems are less developed within Belgian companies.

3.3 Guidelines on risk management and internal control responsibilities of executive management

In both countries, executive management (chief executive officer and chief financial officer (CFO)) is clearly held responsible and accountable for the company's financial statements. In addition, management is required to inform the board about the company's financial condition. The Australian guidelines (2003) go further, explicitly requiring the CEO and CFO to state, in writing to the board, that the company's financial reports present a true and fair view, in all material respects, of the company's financial condition and operational results, and that they are in accordance with relevant accounting standards. Furthermore, the Australian guidelines (2003) clearly mention that the integrity of a company's financial reporting depends on the existence of a sound system of risk oversight and management and internal control. In contrast, the Belgian code (2004) does not explicitly make the link between sound risk management and internal control, and the overall integrity of the financial reporting.

Both guidelines require that management establish and implement a risk management system, including internal control systems, throughout the organisation. However, the Australian guidelines (2003) recommend that the CEO and CFO state to the board, in writing, that:

- the integrity of financial statements is founded on a sound system of risk management and internal compliance and control, which implements the policies adopted by the board (read: audit committee); and
- the company's risk management and internal compliance and control system is operating efficiently and effectively in all material respects.

In other words, the Australian guidelines (2003) more explicitly stipulate the monitoring role of executive management, with respect to risk management and internal control, than the Belgian code does (2004).

Given the weaker focus of the Belgian guidelines (2003) on risk management and internal control, the less explicitly formulated link with the integrity of financial reporting, as well as the less explicit monitoring role of executive management with respect to the risk management and internal control system, the question is raised as to whether this has a significant impact on the status of the risk management and internal control systems within Belgian companies, and consequently, whether Belgian companies have a less developed risk management and internal control system than Australian companies.

The Appendix provides a structured comparison of the Australian guidelines (2003) and the Belgian code (2004), with respect to the topics discussed above.

The comparison and analysis of both corporate governance guidelines noted above forms the basis for the hypothesis to be tested in this study:

H1. The weaker focus of the Belgian corporate governance guidelines on risk management and internal control is associated with less developed risk management and internal control systems in Belgium than in Australia.

4. Methodology

4.1 Data collection

A questionnaire was developed, based upon literature and a review of the corporate governance guidelines in both countries. The questionnaire was pre-tested with several CAEs in Australia and Belgium. The target population of this study consisted of all non-governmental companies represented in the membership databases of the Australian and Belgian Institute of Internal Auditors. This target population consists of companies that operate in a highly regulated environment (e.g. banks, insurance, and listed companies) as well as companies operating in a less regulated environment. In Australia, the target population was comprised of 206 companies, whereas the Belgian target population, there were 260 companies.

In 2006, the questionnaire was e-mailed to the CAEs of all 466 companies spanning the two target populations. Risk management and internal control are the main areas on which the internal audit department focuses in its daily activities. In addition, given the non-operational (objective) and independent mandate of the internal audit function, we consider the CAE as an appropriate person to provide us with reliable data on the status of risk management and internal control within an organization than for example senior managers. After intensive follow-up by e-mail and phone[5], 104 useable questionnaires were collected, representing an overall response rate of 22.3 percent. In Australia, 31 useable questionnaires were obtained, representing a response rate of 15.1 percent. In Belgium, 73 useable questionnaires were collected, representing a response rate of 28.1 percent. Nevertheless, we deem both sets of data as both reliable and representative enough to allow for data analysis comparing the two countries.

4.2 Dependent variables and research questions

In order to obtain more profound insights into the development of risk management and internal control systems within organisations, respondents were asked to evaluate the following four dimensions, representing four dependent variables, each measured by one or more items that use a five-point Likert response scale ranging from (1) strongly disagree, to (5) strongly agree. The items are based on a review of the corporate governance guidelines in both countries as well as on previous studies by Sarens and De Beelde (2006a, b, c). These studies refer to best practice guidelines on risk management and internal control and the status of risk management and internal control when investigating the role of internal audit and the relationship between internal audit and other corporate governance actors like senior managers and the audit committee:

(1) *Formalisation of the risk management and internal control system*. Within our company:
   - responsibilities related to risk management and internal control are clearly defined and communicated;
   - formal risk assessments are performed regularly;
   - a formal risk management system is used;
   - policies are formalised; and
   - procedures are formalised.

(2) *Risk and control awareness*. Within our company:
   - there is a high level of risk and control awareness at the management level; and
   - there is a high level of risk and control awareness at lower levels.

(3) *Development of internal controls*. Within our company:
   - a formal internal control charter exists; and
   - most internal controls are based on risk assessments.

(4) *Risk management function*. Within our company there is a separate risk manager or risk management function[6].

Table I presents the results of the factor analysis that was run on the above ten items measuring the four dimensions. All items together explain about 82 percent of the total variance, and load high on the right dimension. Formalisation of the risk management and internal control system (Dimension 1), as well as of risk and control awareness (Dimension 2), can be considered reliable measurement scales, given their high Cronbach's alpha (0.892 and 0.862, respectively). The reliability of the development of internal controls measurement scale (Dimension 3) is lower (0.677), but still acceptable. For these three dimensions, the average score was calculated for use as dependent variables in further analysis.

For each of the four dependent variables, a specific research question was formulated:

RQ1. Is the weaker focus of the Belgian corporate governance guidelines on risk management and internal control associated with less formalised risk management and internal control systems in Belgium compared to Australia?

RQ2. Is the weaker focus of the Belgian corporate governance guidelines on risk management and internal control associated with lower levels of risk and control awareness in Belgium compared to Australia?

Items	Factor loading	Cronbach's alpha
1. Formalisation of the risk management and internal control system		0.892
Responsibilities related to risk management and internal control are clearly defined and communicated	0.769	
Formal risk assessments are performed regularly	0.744	
A formal risk management system is used	0.837	
Policies are formalised	0.793	
Procedures are formalised	0.690	
2. Risk and control awareness		0.862
There is a high level of risk and control awareness at the management level	0.831	
There is a high level of risk and control awareness at lower levels	0.904	
3. Development of internal controls		0.677
A formal internal control charter exists	0.871	
Most internal controls are based on risk assessments	0.792	
4. Risk management function		
There exists a separate risk manager or risk management function	0.928	

Table I.
Factor analysis

RQ3. Is the weaker focus of the Belgian corporate governance guidelines on risk management and internal control associated with less developed internal controls in Belgium compared to Australia?

RQ4. Is the weaker focus of the Belgian corporate governance guidelines on risk management and internal control associated with a lower prevalence of separate risk management functions or risk managers in Belgium compared to Australia?

In order to draw any conclusions related to our hypothesis (see above), the average score in all four dimensions was computed, which provides an indication of the overall degree of development of the risk management and internal control system.

4.3 Independent variable

There was only one independent variable of interest (dummy variable) in this study: country, indicating whether it was a Belgian (dummy = 1) or an Australian company (dummy = 2). Country was considered a proxy for the institutionalised corporate governance guidelines in the respective countries. Given the institutional theory arguments outlined in the previous section, it was assumed that all Australian companies comply with the Australian guidelines, and all Belgian companies comply with the Belgian code.

4.4 Control variables

For all seven control variables, we expect a positive association with the degree of formalisation of the risk management and internal control systems, the level of risk and control awareness, the degree of development of the internal controls and the prevalence of a separate risk management function. First, companies operating in the financial industry (banks and insurance companies) are subject to specific regulatory requirements. Moreover, they are highly regulated and have compliance risks that exceed many other industries. Therefore, we expect their risk management and internal control systems to be more developed (Basel Committee on Banking Supervision, 2006). Second, companies that include an internal control statement in their annual report (voluntary or not) are expected to have more developed risk management and internal control systems, given that they formally report on it. Third, we expected companies operating in a complex industry to have more developed risk management and internal control systems, which should allow them to compensate for the high volatility and low predictability that characterizes complex industries. Fourth, companies that were subject to high growth over the preceding two years also are expected to have more developed risk management and internal control systems, given that high growth often goes hand in hand with higher risks (and often higher returns, as well) (Committee of Sponsoring Organizations of the Treadway Commission, 2004). The remaining three control variables find their origin in agency theory. More specifically, larger companies are expected to need more developed risk management and internal control systems to reduce the significant agency problems to which they often are subject (Jensen and Meckling, 1976). The same reasoning applies for companies with a larger number of reporting levels and companies operating in a larger number of countries. The reduced observability in hierarchies and decentralised

companies can cause a loss of control (Williamson and Ouchi, 1981), which necessitates a more developed risk management and internal control system.

4.5 Ordinal regression model

An ordinal regression analysis was conducted, given that our dependent variables are ordinal. The following model summarizes the control variables described in paragraph 4.4 as well as the independent variable that we are interested in (country):

$$\begin{aligned}\mathrm{Ln}\frac{\mathrm{prob(DV)}}{(1-\mathrm{prob(DV)})} &= a_1 + a_2\,\mathrm{Finance} + a_3\,\mathrm{IC\_statement} + a_4\,\mathrm{Industry\_complexity} \\ &\quad + a_5\,\mathrm{Company\_growth} + a_6\,\mathrm{Firm\_size} + a_7\,\mathrm{Reporting\_levels} \\ &\quad + a_8\,\mathrm{Operation\_countries} + a_9\,\mathrm{Country}\end{aligned}$$

where:

DV	=	Degree of formalisation of the risk management and internal control system (ranging from one to five); level of risk and control awareness (ranging from one to five); degree of development of the internal controls (ranging from one to five); prevalence of a separate risk management function or risk manager (ranging from one to five); overall degree of development of the risk management and internal control system (ranging from one to five).
Finance	=	Company operates in the financial industry or not (0/1).
IC_statement	=	Company provides an internal control statement in its annual report or not (0/1).
Industry_complexity	=	The industry in which the company operates is highly complex or not (0/1).
Company_growth	=	Over the past two years, company growth was positive or not (0/1).
Firm_size	=	Total assets are more than one billion or not (0/1).
Reporting_levels	=	There are five or more reporting levels between top management and the lowest operating unit or not (0/1).
Operation_countries	=	The company has one or more operating units in ten or more countries or not (0/1).
Country	=	A Belgian company (1) or an Australian company (2).

4.6 Non-response bias

Early and late respondents were compared, so as to detect any possible non-response bias (Armstrong and Overton, 1977). In the total group of respondents, as well as in both countries separately, no significant differences were revealed, in terms of the number of employees or the total assets, between early and late respondents. Furthermore, the variables included in the ordinal regression analysis mentioned

above do not differ significantly between early and late respondents. Including a dummy variable for late respondents in the ordinal regression analysis did not change the results.

5. Results

5.1 Control variables

Table II provides descriptive statistics for the seven control variables. According to Panel A, in Belgium, slightly more than one fourth of the responding companies (26.0 percent) operate in the financial industry. This percentage is lower in Australia (19.4 percent). In Australia, about two-thirds of the responding companies (67.7 percent) provide an internal control statement in their annual report (Panel B), whereas this percentage is much lower in Belgium (36.4 percent). In both countries, a sizeable percentage of the responding companies operate in a highly complex industry (Panel C) (48.4 percent in Australia; 63.1 percent in Belgium). Panel D shows that a large majority of the responding Australian companies (87.1 percent) as well as Belgian companies (86.4 percent) experienced positive growth over the preceding two years (2004-2005). In both countries, almost half of the responding companies (approximately 48 percent) have total assets of more than one billion dollars (Panel E). According to Panel F, less than half of the responding companies in both countries have less than five reporting levels (respectively 42.4 and 42.5 percent). More than half of the Belgian companies (52.1 percent) operate in more than ten countries, whereas this percent is much lower in Australia (12.9 percent) (Panel G).

5.2 Dependent variables

Table III provides an overview of the average scores for the four dimensions measured, and the results of univariate significance tests (*t*-test) for each dimension. In two of the

	Australia (%)	Belgium (%)
Panel A: financial industry		
Financial services and insurances	19.4	26.0
Panel B: internal control statement		
Company provides an internal control statement	67.7	36.4
Panel C: sector complexity		
Not or moderately complex	51.6	36.9
Highly complex	48.4	63.1
Panel D: company growth		
Negative or none	12.9	13.6
Positive	87.1	86.4
Panel E: firm size (total assets, billion $)		
<1	51.6	51.4
>1	48.4	48.6
Panel F: number of reporting levels		
<5	58.6	57.5
≥ 5	42.4	42.5
Panel G: Number of countries		
<10	87.1	47.9
≥ 10	12.9	52.1

Table II.
Control variables (descriptive statistics)

four dimensions, a significant difference was found between Australian and Belgian companies. In Australian companies:

- the risk management and internal control system is significantly more formalised ($t = -2.930$; $p = 0.005$); and
- a separate risk management function is significantly more prevalent ($t = -3.075$; $p = 0.003$).

In the two countries, risk and control awareness is assessed at a similar moderate level. Moreover, internal controls are slightly more developed in Australia than in Belgium, though this difference is not significant at $p = 0.10$. An overall score, computed using the means of the four dimensions, gives an impression of the global status of the risk management and internal control system within Australian and Belgian companies. It was found that the risk management and internal control system is significantly more developed ($t = -3.292$; $p = 0.002$) within Australian (average score = 3.68) versus Belgian companies (average score = 3.10).

5.3 Correlations

Table IV presents the correlations between all control variables, including the independent variable country. All correlations are below the threshold above which multi-collinearity problems could be deemed problematic.

5.4 Ordinal regression analysis

Table V shows the results of the ordinal regression analysis for each of the dependent variables[7].

Panel A of Table V indicates that companies operating in a less complex industry ($p = 0.023$) and with total assets lower than one billion dollars ($p = 0.001$) are significantly less likely to have a formalised risk management and internal control system. Besides, Belgian companies are significantly less likely to have a formalised risk management and internal control system compared to Australian companies ($p = 0.002$). In other words, this result confirms *H1*, that the weaker focus of the Belgian corporate governance guidelines on risk management and internal control is associated with less formalised risk management and internal control systems in Belgium than in Australia.

Dimensions (average scores on 5)	Country	*n*	Mean	SD	Min.	Max.	*t*	*p*-value
1. Formalisation of the risk management and internal control system	Australia	31	4.01	0.91	1.8	5.0	−2.930	0.005
	Belgium	73	3.41	1.09	1.0	5.0		
2. Risk and control awareness	Australia	31	3.62	1.02	1.0	5.0	−1.285	0.202
	Belgium	73	3.34	1.03	1.0	5.0		
3. Development of internal controls	Australia	31	3.26	1.22	1.5	5.0	−1.599	0.115
	Belgium	65	2.84	1.30	1.0	5.0		
4. Risk management function	Australia	31	3.87	1.48	1.0	5.0	−3.075	0.003
	Belgium	73	2.84	1.77	1.0	5.0		
Global status of the risk management and internal control system	Australia	31	3.68	0.80	2.1	5.0	−3.292	0.002
	Belgium	73	3.10	0.95	1.0	4.9		

Table III. Status of the risk management and internal control system (univariate statistics)

Table IV.
Correlation matrix

	Financial_industry	IC_statement	Sector_complexity	Company_growth	Firm_size	Reporting_levels	Operation_countries	Country
Financial_industry	1.000							
IC_statement	−0.117	1.000						
Sector_complexity	0.213*	−0.071	1.000					
Company_growth	0.163	0.181	0.283**	1.000				
Firm_size	0.086	0.201	0.180	0.100	1.000			
Reporting_levels	−0.025	−0.130	0.095	−0.104	0.087	1.000		
Operation_countries	−0.325**	0.068	−0.223*	−0.171	0.246*	−0.028	1.000	
Country	−0.071	0.293**	−0.139	0.010	−0.002	−0.010	−0.365**	1.000

Note: Significance at: $^{*}p < 0.05$ and $^{**}p < 0.01$

	Panel A DV = formalization of the risk management and internal control system		Panel B DV = risk and control awareness		Panel C DV = degree of development of the internal controls		Panel D DV = Prevalence of a separate risk management function or risk manager		Panel E DV = overall degree of development of the risk management and internal control system	
	n	Wald statistics	*n*	Wald statistics	*n*	Wald statistics	*n*	Wald statistics	*n*	Wald statistics
Financial_industry	−0.580	1.525	−0.902	3.541*	−0.294	0.394	−1.605	6.993***	−1.245	6.845***
IC_statement	−0.029	0.005	−0.343	0.690	−0.566	1.892	−0.126	0.072	−0.161	0.158
Sector_complexity	−0.965	5.177**	−0.205	0.237	−0.365	0.759	−0.372	0.616	−0.712	2.896*
Company_growth	−0.390	0.470	−0.793	1.858	−0.850	2.160	−0.680	1.082	−0.978	2.920*
Firm_size	−1.388	10.612***	−0.951	4.966**	0.010	0.001	−1.472	9.626***	−1.255	8.915***
Reporting_levels	−0.171	0.203	0.117	0.092	0.226	0.351	−0.324	0.545	−0.022	0.003
Operation_countries	−0.778	2.462	−0.479	0.875	−0.985	3.849*	−1.130	3.269*	−1.406	7.779***
Country	−1.531	9.487***	−0.746	2.247	−0.750	2.411	−1.875	8.493***	−1.954	14.988***
n	104		104		104		104		104	
−2 Log likelihood	451.539***		310.908**		339.480*		177.533***		697.634***	
Nagelkerke pseudo R^2	0.297		0.178		0.134		0.334		0.346	

Notes: Significance at: *0.10, **0.05, and ***0.01 levels, respectively; statistics shown: coefficients

Table V.
Ordinal regression analysis

Panel B of Table V shows that companies not operating in the financial industry ($p = 0.060$) as well as companies with total assets lower than one billion dollars ($p = 0.026$) are significantly more likely to have a lower level of risk and control awareness. Country, however, appears to exert no significant impact. In other words, no evidence was found to support *H2*.

Panel C of Table V reveals that companies with operations in less than ten countries are significantly less likely to have highly developed internal controls ($p = 0.05$). Country turns out to have no significant impact. Thus, no evidence was found to support *H3*.

Panel D of Table V shows that non-financial companies ($p = 0.008$), companies with total assets less than one billion dollars ($p = 0.002$) and companies with operations in less than ten countries ($p = 0.071$) are significantly less likely to have a separate risk management function or risk manager. Moreover, Belgian companies are less likely to have a separate risk management function or risk manager ($p = 0.004$). This supports *H4*: the weaker focus of the Belgian corporate governance guidelines on risk management and internal control is associated with a lower prevalence of separate risk management functions in Belgium than in Australia.

Panel E of Table V demonstrates that non-financial companies ($p = 0.009$), companies not operating in a highly complex industry ($p = 0.089$), companies characterised by a negative or no growth in the past two years ($p = 0.087$), companies with total assets less than one billion dollars ($p = 0.003$) as well as companies operating in less than ten countries ($p = 0.005$) are significantly less likely to have a well developed risk management and internal control system. The same is true for Belgian companies ($p = 0.000$). This result supports our overall hypothesis: the weaker focus of the Belgian corporate governance guidelines on risk management and internal control is associated with less developed risk management and internal control systems in Belgium than in Australia.

6. Conclusions and discussion

This study investigated whether the weaker focus on risk management and internal control that exists within the Belgian corporate governance guidelines is correspondingly reflected in Belgian companies, as compared with Australian companies. Although in both countries, companies are not mandated to comply with corporate governance guidelines, institutional theory assertions were used as a basis to develop arguments to justify why listed and unlisted companies are strongly motivated to comply with these best practices, and why they could be associated with the corresponding development of risk management and internal control practices within companies.

Contrary to the Australian code, the Belgian guidelines advise less explicitly to establish a sound risk management system. Moreover, it is not clearly mentioned, as it is the case in Australia, that the integrity of financial statements depends on the existence of a sound system of risk management and internal control. Contrary to the Belgian code, the Australian guidelines also recommend that the board or audit committee establish policies on risk oversight and management that describe the roles and responsibilities of the different corporate governance players, including the internal audit function. In both countries, boards or audit committees also are strongly recommended to review the risk management and internal control system regularly. Furthermore, executive management is made responsible for the implementation of this risk management and internal control system. Contrary to the Australian code, the

Belgian guidelines less explicitly describe the monitoring role of executive management (CEO/CFO), with respect to risk management and internal control.

Overall, it was found that country is an important explanatory variable, as hypothesized. Thus, the weaker focus of the Belgian corporate governance guidelines on risk management and internal control is associated with less developed risk management and internal control systems in Belgian companies than in Australian companies. It seems that a weaker focus on the importance of risk management and internal control in corporate governance guidelines does not encourage companies to (further) develop their risk management and internal control system. This result contributes to the growing academic literature on corporate governance, as it suggests that the specific content of corporate governance guidelines is an important variable to take into account when studying specific corporate governance practices, such as, in this case, risk management and internal control. It must be admitted that, as far as we know, existing studies in this area have neglected this variable. This result also is interesting for policy makers, as it confirms that their efforts to establish detailed corporate governance guidelines should be rewarded. Hopefully, it will encourage them to continue updating and improving corporate governance guidelines, as we can consider these an important springboard to improvements in real business life.

This study also confirms that institutional theory is a relevant framework to study both corporate governance practices in a "comply or explain" context which is relevant in a lot of countries worldwide, and corporate governance practices within unlisted companies, which is still a relatively unexplored research area. The results of the study reveal that although corporate governance guidelines are voluntary, given the lack of legal enforcement, companies are strongly motivated to comply with these guidelines. Organisations in Australia and Belgium tend to comply with the different focuses of their respective corporate governance guidelines as they exert different pressure and expectations on their operational environment. In line with concepts of institutional theory, applying corporate governance guidelines is driven by a number of different institutional theory arguments. For example, it is driven not only by processes of interest mobilization, as explained by DiMaggio (1988), but also by preconscious acceptance of these institutionalized guidelines. In addition, complying with voluntary corporate guidelines is also driven by a strong need to conform to social norms of acceptable corporate behaviour (Covaleski and Dirsmith, 1988).

More specifically, our study generated two main findings. First, the weaker focus of the Belgian corporate governance guidelines on risk management and internal control is associated with less formalised risk management and internal control systems within Belgian companies, when compared with Australian companies. In other words, corporate governance guidelines that do focus more on risk management and internal control, as it is the case in Australia, are assumed to be a stimulus for companies to clearly define and communicate the responsibilities related to risk management and internal control, to formally assess risks on a regular basis, to install a formal risk management system, and to formalise their policies and procedures. Second, this study found evidence that the weaker focus of the Belgian corporate governance guidelines on risk management and internal control leads to a lower prevalence of a separate risk management function or risk manager.

We now briefly identify two limitations of this study that must be taken into consideration, and suggest avenues for further research to overcome these limitations

and further support the findings of this study. First, the results are based on self-reported measures, more specifically, on the perceptions of the head of the internal audit function. Although this does not necessarily lead to biased data, further research involving more objective measures is proposed to support the study's findings. Admittedly, however, it will be a challenge for researchers in this area to develop objective measures to capture the status of the risk management and internal control system. Second, country was used as a proxy for the institutionalised corporate governance guidelines and best practices in the respective countries. An avenue for further research could be the application of more direct measures of the impact of corporate governance guidelines (e.g. disclosure statements in the annual reports) to confirm the results of the study.

Notes

1. Note that the Australian Corporate Governance guidelines were updated in 2007. In this paper, we refer to the guidelines published in 2003 as data for this study were collected in 2006.
2. Note that the Belgian corporate governance guidelines were updated early 2009. In this paper, we refer to the guidelines published in 2004 as data for this study were collected in 2006.
3. In the updated Australian Corporate Governance guidelines (2007), the basic recommendations with respect to risk management and internal control remain the same as in the first edition (Australian Stock Exchange Corporate Governance Council, 2003). However, some additional words of explanation were added.
4. The extent to which the updated Belgian corporate governance guidelines (2009) refer to risk management and internal control is very similar to the first edition (Belgian Corporate Governance Committee, 2004).
5. We gratefully acknowledge the assistance of the Australian and Belgian Institute of Internal Auditors for this component of data collection.
6. Note that this item is not measured as a dummy variable, as it is not always possible to indicate whether a pure risk management function exists, as such. In some companies, this function is interwoven with other functions;, e.g. the insurance manager or the compliance manager. Therefore, respondents were afforded the ability to indicate the extent to which a separate risk management function or risk manager exists.
7. Note that in case of an ordinal regression analysis, a negative coefficient indicates a positive association between the dichotomous independent variable and the ordinal dependent variable.

References

Armstrong, J. and Overton, T. (1977), "Estimating non-response bias in mail surveys", *Journal of Marketing Research*, Vol. 14 No. 3, pp. 396-402.

Australian Stock Exchange (ASX) Corporate Governance Council (2003), *Principles of Good Corporate Governance and Best Practice Recommendations*, ASX, Sydney.

Basel Committee on Banking Supervision (2006), *Core Principles for Effective Bank Supervision*, Bank for International Settlements, Basel.

Beekes, W. and Brown, P. (2006), "Do better governed Australian firms make more informative disclosures?", *Journal of Business Finance & Accounting*, Vol. 33 Nos 3-4, pp. 422-50.

Belgian Corporate Governance Committee (2004), *Belgian Code on Corporate Governance*, Belgian Corporate Governance Committee, Brussels.

Committee of Sponsoring Organizations of the Treadway Commission (2004), *Enterprise Risk Management – Integrated Framework*, available at: www.coso.org/publications/erm/coso_erm_executivesummary.pdf

Covaleski, M.A. and Dirsmith, M.W. (1988), "An institutional perspective on the rise, social transformation, and fall of a university budget category", *Administrative Science Quarterly*, Vol. 33, pp. 562-87.

DiMaggio, P.J. (1988), "Interest and agency in institutional theory", in Zucker, L.G. (Ed.), *Institutional Patterns and Organizations: Culture and Environment*, Ballinger, Cambridge, MA, pp. 8-21.

DiMaggio, P.J. and Powell, W.W. (1983), "The iron cage revisited: institutional isomorphism and collective rationality in organizational fields", *American Sociological Review*, Vol. 48, pp. 147-60.

Jensen, M.C. and Meckling, W.H. (1976), "Theory of the firm: managerial behaviour, agency costs, and ownership structure", *Journal of Financial Economics*, Vol. 3, pp. 305-60.

Meyer, J.W. and Rowan, B. (1977), "Institutional organizations: formal structure as myth and ceremony", *American Journal of Sociology*, Vol. 80, pp. 340-63.

Meyer, J.W., Scott, W.R. and Deal, T.E. (1983), "Institutional and technical sources of organizational structure: explaining the structure of educational organizations", in Meyer, J.W. and Scott, W.R. (Eds), *Organizational Environments: Ritual and Rationality*, Sage, Beverly Hills, CA, pp. 45-67.

Oliver, C. (1991), "Strategic responses to institutional processes", *Academy of Management Review*, Vol. 16, pp. 145-79.

Powell, W.W. (1988), "Institutional effects on organizational structure and performance", in Zucker, L.G. (Ed.), *Institutional Patterns and Organizations: Culture and Environment*, Ballinger, Cambridge, MA, pp. 115-36.

Risk Management Institution of Australasia (2004), *The Australian Standard for Risk Management (AS/NZS 4360)*, Standards Australia International, Sydney.

Sarens, G. and De Beelde, I. (2006a), "Building a research model for internal auditing: insights from literature and theory specification cases", *International Journal of Accounting, Auditing and Performance Evaluation*, Vol. 3, pp. 452-70.

Sarens, G. and De Beelde, I. (2006b), "Internal auditors' perception about their role in risk management: comparison between Belgian and US companies", *Managerial Auditing Journal*, Vol. 21, pp. 63-80.

Sarens, G. and De Beelde, I. (2006c), "The relationship between internal audit and senior management: an analysis of expectations and perceptions", *International Journal of Auditing*, Vol. 10, pp. 219-41.

Scott, W.R. (1987), "The adolescence of institutional theory", *Administrative Science Quarterly*, Vol. 32, pp. 493-511.

Williamson, O.E. and Ouchi, W.G. (1981), "The markets and hierarchies and visible hand perspectives", in van de Ven, A.H. and Joyce, W.E. (Eds), *Perspectives on Organization Design and Behavior*, Wiley, New York, NY, pp. 347-70.

Zucker, L.G. (1987), "Institutional theories of organization", *Annual Review of Sociology*, Vol. 13, pp. 443-64.

Zucker, L.G. (1988), "Where do institutional patterns come from? Organizations as actors in social systems", in Zucker, L.G. (Ed.), *Institutional Patterns and Organizations: Culture and Environment*, Ballinger, Cambridge, MA, pp. 23-49.

Corresponding author
Gerrit Sarens can be contacted at: gerrit.sarens@uclouvain.be

Appendix

	ASX Corporate Governance Council (2003)	Belgian Corporate Governance Committee (2004)
General principles on risk management and internal control	Establish a sound system of risk oversight and management and internal control. This system should be designed to: identify, assess, monitor, and manage risk; and inform investors of material changes to the company's risk profile This structure can enhance the environment for identifying and capitalising on opportunities to create value	
Responsibilities of the board of directors with respect to risk management and internal control	The board or appropriate committee (see audit committee) should establish policies on risk oversight and management The policies should clearly describe the roles and respective accountabilities of the board, audit committee, management, and any internal audit function It is part of the board's oversight role to oversee the establishment and implementation of the risk management system, and to review at least annually the effectiveness of the company's implementation of that system	The board should review the existence and functioning of a system of internal control, including adequate identification and management of risks (including those relating to compliance with existing legislation and regulations)
Responsibilities of executive management with respect to financial reporting	Require the chief executive officer (or equivalent) and the chief financial officer (or equivalent) to state in writing to the board that company's financial reports present a true and fair view, in all material respects, of the company's financial condition and operational results and are in accordance with relevant accounting standards The integrity of the company's financial reporting depends on the existence of a sound system of risk oversight and management and internal control	Executive management should: be responsible and accountable for the complete, timely, reliable, and accurate preparation of the company's financial statements, in accordance with the accounting standards and policies of the company; and present the board with a balanced and understandable assessment of the company's financial situation

(*continued*)

Table AI.
Comparison between Australian guidelines and Belgian code

Table AI.

	ASX Corporate Governance Council (2003)	Belgian Corporate Governance Committee (2004)
Responsibilities of (executive) management with respect to risk management and internal control	Management should establish and implement a system for identifying, assessing, monitoring and managing material risk throughout the organisation. This system will include the company's internal compliance and control systems The chief executive officer (or equivalent) and the chief financial officer (or equivalent) should state to the board in writing that: the integrity of financial statements is founded on a sound system of risk management and internal compliance and control which implements the policies adopted by the board; and the company's risk management and internal compliance and control system is operating efficiently and effectively in all material respects	Executive management should put internal controls in place (i.e. systems to identify, assess, manage and monitor financial, and other risks), without prejudice to the board's monitoring role