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AN EXAMINATION INTO THE MARKETS FOR CORPORATE CONTROL: EVIDENCE ON MERGER AND ACQUISITION DEALS INVOLVING QATARI COMPANIES

*Virginia Bodolica**

Abstract

Although a rich body of literature on acquisition deals and their distinguishing features exists in Western business settings, the current understanding of the governance discipline instituted by the market for corporate control in the emerging and rapidly growing economy of Qatar is severely underdeveloped. As the country is seeking to achieve its vision of becoming a preferred financial hub in the MENA region by hosting mega sport events and attracting significant foreign investments, the importance of the local market for corporate control as an external governance mechanism cannot be neglected. This study seeks to contribute to the building of a contextual knowledge in the field by providing empirical evidence on M&A transactions involving Qatari targets and acquirers. The collected data are analyzed in terms of both the idiosyncrasies of participating companies (i.e., industry and public/private status of target and acquiring firms; features of repetitive acquirers) and specific deal characteristics (i.e., absolute number and dollar value; diversifying versus consolidating, domestic versus cross-border, and synergistic versus disciplinary acquisitions; size of control premium; mode of financing; type of antitakeover defenses). Several recommendations for future research directions on M&A activities in Qatar are provided in the concluding section of the article**.

Keywords: Market for Corporate Control, Corporate Governance Discipline, Merger and Acquisition Deals, Acquirers, Targets, Qatar

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1 Introduction

Over the past decades, the frequent occurrence of corporate failures and decision makers' misconduct has led to an enhanced scholarly interest in corporate governance practices of today's organizations. In light of the dominant agency principle of separation of ownership and control, the importance of building a comprehensive system of corporate governance started to be increasingly emphasized for the purpose of tightening the alignment of managers' and shareholders' interests and securing the sustainability of corporations. Along with the multiple mechanisms of internal monitoring, such as board of directors' supervision, performance-based executive compensation, and family-related or concentrated ownership structures (Bodolica and Spraggon, 2010), the efficiency of markets for corporate control as an external governance instrument became a central topic for empirical investigation (Hopner and Jackson, 2006). As Spraggon and Bodolica (2011) noted, merger and acquisition (M&A) activities can discipline not only the underperforming companies by transforming them into potential takeover targets but also the executives of acquiring firms who initiate value-destroying acquisitions by displacing them from their top management positions.

Nowadays, a vast body of academic literature on acquisition transactions and their distinguishing features exists, particularly in North American and Western European business settings. Researchers have made significant progress in examining a variety of M&A-related topics regarding the governance function of Western markets for corporate control (Hopner and Jackson, 2006; Bethel et al., 1998), the performance implications of conducting acquisitions during merger waves (Alexandridis et al., 2012; Duchin and Schmidt, 2013), the association between acquisition activities and executive compensation (Bodolica and Spraggon, 2009a,b; Spraggon and

Bodolica, 2011), the size of control premium and method of payment used in M&A deals (Lee and Choi, 1992; Uddin and Boateng, 2009), the acquisition of private versus publicly-traded targets (Fuller et al. 2002; Capron and Shen, 2007), the occurrence of cross-border versus domestic transactions (Chen et al., 2009; Ferreira et al., 2010), the experience effect of multiple versus single acquirers (Aktas et al., 2013; DeYoung, 1997), the abnormal returns ensuing from diversifying versus industry focusing deals (Nankervis and Singh, 2012; Cornett et al., 2003), and the target hostility and effectiveness of antitakeover defenses (Song and Walkling, 1993; Fiss et al., 2012).

Only recently scholars began focusing their attention on analyzing the behavior of acquiring and target companies originating from emerging markets such as Malaysia (Nurhazrina and Wee, 2013), Colombia (Andonova et al., 2013), and various Eastern European countries (Franks et al., 2012). Yet, the current knowledge on the governance discipline instituted by the market for corporate control in an emerging but rapidly growing economy of the Middle East and North Africa (MENA) region, namely Qatar, is severely underdeveloped. Although in the last couple of years Qatar has enjoyed an increased research consideration in the areas of ethics, governance and economics (Al Naimi et al., 2012; Ali and Al-Aswad, 2012; Baydoun et al., 2013), a search for the specific literature on M&A deals involving Qatari firms produced only one investigation that was performed by Al-Kaabi et al. (2010). Relying on data gathered via semi-structured interviews, the authors discussed a single case study of Qatar Telecom to highlight the company’s internationalization strategy which was pursued mainly through cross-border acquisitions.

With a total population of about 1.7 million, the small country of Qatar has experienced a rapid economic growth in the past decades reaching one of the highest GDP per capita in the world, particularly due to its rich oil and natural gas reserves (Ali and Al-Aswad, 2012). Qatar is a member of the vibrant Gulf Cooperation Council (GCC) along with the other five member states including Kuwait, Bahrain, Oman, Saudi Arabia, and the United Arab Emirates. Considering that less than 10% of the total employed population is represented by Qatari nationals whose job-related behavioral patterns are characterized more by prestige than efficiency rationales (Williams et al., 2011), the country’s labor market relies heavily on self-initiated expatriates originating principally from South-East Asia (Scurry et al., 2013). Qatar has a small national stock market with only 41 corporations being listed on Qatar Exchange, while the majority of companies operate in the private sector. The predominant ownership structures of Qatari organizations are concentrated or family-related and there is a significant involvement of the state in corporate control (Zain and Kassim, 2012).

Baydoun et al. (2013) examined the efficacy of the corporate governance regime in five GCC countries, excluding Saudi Arabia, in terms of three main categories including shareholder rights and obligations, information transparency, and internal management structure and rewards. Relying on the 2005 survey of the Organization for Economic Cooperation and Development, their results showed that Qatar received the lowest rating based on the average score across all categories. The authors found that issues associated with violation of shareholder rights were not adequately addressed, audit and board nominating committees were lacking, and there were low levels of disclosure of financial information in Qatar. According to Baydoun et al. (2013), the reinforcement of the national governance legislation should occur by following the model of the rule-based regime operating in the United States (Spraggon et al., 2013). Al Naimi et al. (2012) performed a descriptive content analysis of annual reports of Qatari listed companies to analyze their reporting of activities related to corporate social responsibilities. Noting that human resources and product development topics were well covered while issues related to the environment were never discussed in corporate reports, the study encouraged more investigation for understanding the reasons behind these disclosure practices of Qatari firms.

In order to achieve its vision of becoming a sought-after financial hub in the MENA region, Ali and Al-Aswad (2012) recommended that Qatar ought to engage into the path of economic diversification, build a coherent legal infrastructure, and develop an efficient labor market framework where the magnitude of compensation offered to the local public-sector workforce should be weighed against cost effectiveness concerns and issues of economic sustainability. As Qatar is preparing to host the 2022 World Cup, Abuzayed (2013) studied the impact of the announcement of this mega sport event on stock market returns of local organizations. Finding that the service sector was the most affected, the author suggested that decision makers ought to involve more consistently in promotional activities to amass significant foreign investments for covering up the costs of hosting such mega events.

Prior research in Qatari settings seems to agree on the need to further explore this market and enhance its governance infrastructure for stimulating a larger influx of financial resources from abroad. Due to its economic prosperity, Qatar can attract more foreign investors but they are likely to demand higher standards of transparency and accountability. Chahine and Safieddine (2008) showed that countries with illiquid financial markets which provide weak external control could turn to internal mechanisms of monitoring. Yet, since the internal corporate governance system in Qatar is still underdeveloped (Baydoun et al., 2013) the importance of the local market for corporate control should not be neglected.

Therefore, this study seeks to contribute to the building of a contextual knowledge base in the field by providing empirical evidence on M&A transactions that involved acquiring and target firms from Qatar.

This article is structured in the following manner. The next section reviews the key findings from prior literature on M&A deals and their characteristics. Section three describes the study methodology and the main sources used for data collection purposes. The article proceeds with the discussion of data analyses and results which are presented in a separate fashion for Qatari acquirers and targets. Recommendations for future research directions on M&A activities in Qatar are provided in the concluding section.

2 Literature review

Noting that M&A activities typically occur at various levels of frequency and intensity, Bodolica and Spraggon (2009a) identified six merger waves each of them being subjected to a different logic and featuring specific characteristics. The first four merger waves spread over a period of 100 years to come to an end at the beginning of 90s, evolving from horizontal, consolidating and debt-financed deals to more diversified, conglomerate and hostile acquisitions. According to Weston and Chen (1994), this period has witnessed an important shift from an era of heavy leveraging as a mechanism to discourage takeover attempts to an entirely new epoch of financial restructuring and equitizing. The fifth M&A wave can be described by the usage of equity financing and antitakeover defenses, while the most recent wave of 2004-2007 became entirely global in nature to give rise to bidders from emerging markets. Alexandridis et al. (2012) offered some empirical evidence on the sixth merger wave to identify its distinctive features in terms of lower acquirers' acquisitiveness, less target overvaluation, more rationality in M&A-related behavior, larger cash components in deals' financing and lower control premiums.

Recently, Andonova et al. (2013) discussed the strategic connotation of the specific timing for carrying out acquisitions earlier or later in the wave to extract either first mover or late mover advantages. Using a sample of 145 Colombian privately-held acquiring companies, the authors provided significant support for strategic waiting where acquirers which performed M&As later in a wave benefited from more acquisition experience and knowledge about the target. Therefore, these firms exhibited stronger post-acquisition performance as opposed to companies that involved in acquisition deals at the peak of a wave to generate the lowest level of return on assets. The presence of multiple agency problems in transactions initiated during periods of high merger intensity, such as poorer quality of analysts' predictions, weaker monitoring and lower penalties for value-decreasing acquisitions, was also highlighted in the study of Duchin and Schmidt (2013). The corporate governance standards and post-deal performance was found to be significantly weaker for merger-wave acquirers relative to non in-wave acquirers, leading to the conduct of bad acquisitions.

The market for corporate control hypothesis suggests that M&A deals operate as external governance instruments that take place for disciplining non-efficient target firms whose lower market value compared to real value allows acquiring companies to earn abnormal returns (Bodolica and Spraggon, 2009a; Hopner and Jackson, 2006). Yet, the empirical support for this hypothesis is not consistent, with some studies confirming and others rejecting it in various cultural and regulatory settings. On the one hand, reporting that activist investors' block share purchases in diversified and poorly performing American companies were followed by increases in operating profitability and decreases in M&A transactions, Bethel et al. (1998) corroborated the governance role of the market for partial corporate control in the United States. On the other hand, finding that financial performance was not a distinguishing characteristic between acquired and non-target firms, Tsagkanos et al. (2008) concluded that acquisition deals in Greece occurred mostly for strategic rather than disciplining purposes.

Bodolica and Spraggon (2009a) conducted a comprehensive review of the empirical literature on M&A activities and their association with the executive compensation of acquiring and target firms. The results of their analysis indicated that top management teams in acquiring companies extracted significant compensation benefits from the conduct of M&As even when these deals had value-destroying effects for shareholders. Moreover, the threat of takeover increased the implementation of golden parachutes in target firms, while the equity-based compensation of target managers reduced their hostility towards a deal. Other researchers focused more specifically on the examination of M&A features to demonstrate that a suboptimal selection of the premium magnitude (i.e., overpayment for the target) and mode of acquisition financing (i.e., share exchanges), which typically generated negative returns to acquiring shareholders (Blackburn et al., 1997), exerted a disciplining effect on the executives of acquiring companies. Relying on a large sample of deals conducted by Canadian acquirers, scholars showed that higher acquisition premiums and stock-based financing were likely to translate into a higher rate of adoption of long-term incentive plans rather than compensation protection devices and an increase of the proportion of equity-based disincentives at the expense of stock option incentives in executive pay packages (Bodolica and Spraggon, 2009b; Spraggon and Bodolica, 2011).

Using a sample of 373 cross-border acquisitions, Uddin and Boateng (2009) performed an empirical investigation to examine how specific M&A features influenced the short-term performance of British

acquirers. The study demonstrated that cash-based and industry-related deals and acquisitions of targets which were privately-held and originated from North American rather than European locations led to higher firm performance in the short-run. However, this evidence built on British samples was only partially confirmed in an American corporate setting. Analyzing 539 US bidders which completed multiple acquisitions over a short period of time, Fuller et al. (2002) reported that returns to acquiring shareholders were higher when a stock-based (rather than cash-related) method of payment was offered and when purchasing a private business entity. The association between acquirers' returns and targets' private/public status was also examined by Capron and Shen (2007) who employed a sample of multinational bidders and found that the post-merger performance was higher for companies that bought privately-held rather than publicly-traded firms.

Scholarly research also showed that important governance implications can be extracted from the conduct of cross-border, rather than domestic, and multiple, rather than single, deals. For a large sample of takeover bids announced over the 1998-2005 period in nine countries from East Asia, Chen et al. (2009) found that the occurrence of cross-border M&As was influenced by financing constraints incurred by the acquiring firm. Cross-border acquisitions were favored by bidders which had better access to external financing, with the exception of family-owned and state-controlled enterprises which opted for domestic deals to avoid diluting their management control in the company. According to Ferreira et al. (2010), the incidence of cross-border transactions increased under the presence of foreign institutional ownership, particularly in countries with underdeveloped markets for corporate control and weaker regulatory environments. In an empirical inquiry of 300,000 M&As that took place between 1992-2009, Aktas et al. (2013) showed that repetitive acquirers extracted significant learning benefits from conducting successive acquisitions, especially under the condition of deals' similarity and CEO continuity. These findings are consistent with the experience effect observed in earlier studies which demonstrated the presence of important cost efficiencies ensuing from the completion of frequent acquisitions in the American banking industry at the end of 80s (DeYoung, 1997).

Yet, substantial disagreements exist in the literature with regard to the presence of principal-agent conflicts of interest in the context of conglomerate acquisitions. This ongoing scholarly tension on whether unrelated transactions generate wealth-enhancing or value-destroying consequences for acquiring shareholders was discussed in detail in the review article by Bodolica and Spraggon (2009a). While some researchers demonstrated that focused acquiring companies produced significant synergistic effects to outperform unrelated acquirers (Shim, 2011) which earned negative abnormal returns (Cornett et al., 2003), others did not find that the costs of industrial diversification outweighed its benefits (Shekhar, 2005). For instance, having examined 446 Australian deals over the 2000-2007 period, Nankervis and Singh (2012) did not report any statistically significant differences in terms of announcement-related abnormal returns between acquisitions that were diversifying in nature and those that were pursuing industry specialization.

The predominance of hostile deals in the fourth merger wave has increased the number of studies on targets' hostility and antitakeover measures, contributing to the further enrichment of the complex M&A-related literature. According to Demidova (2007), despite the young nature of the market for corporate control in Russia, the number of hostile deals in this emerging economy was higher than in most countries of the European Union. Defining different antitakeover defenses (i.e., preventive, operational and universal) and discussing their respective costs and benefits, Demidova (2007) showed that, although the usage of these mechanisms was limited in the Russian context, managers rarely employed multiple defenses in combination and tended to implement them post-factum. While the disciplinary role of hostile acquisitions was generally corroborated in empirical settings (Song and Walkling, 1993; Kohler, 2012), the effectiveness of antitakeover measures in creating stockholder wealth is still open to debate as witnessed by the inconsistency of results obtained by recent inquiries into the topic. Thus, antitakeover laws were found to inhibit corporate innovation (Atanassov, 2013), golden parachutes continued to spread across firms despite being seen as a controversial practice (Fiss et al., 2012), whereas the presence of staggered boards did not play any role in M&A transactions undertaken by real estate investment trusts (Campbell et al., 2011).

3 Study method

In this study, two major databases were accessed for data collection purposes, namely Thomson ONE issued by Thomson Financial and Zephyr published by Bureau van Dijk. Both databases provide comprehensive information on M&As worldwide that were completed, announced, and rumored and offer data to analyze both deal characteristics and financial aspects of companies engaged in these transactions. Initially, each of the two databases was used to extract separate lists of Qatari acquirers and targets that involved in M&A deals over the past decades. Subsequently, the information generated via Thomson One and Zephyr databases was compared and assessed to secure the reliability of analyzed data.

Since Thomson One and Zephyr employ slightly different methods of reporting, several variations in M&A-related data were encountered between the two databases. These variations are discussed below in

greater detail. Thomson One tends to provide relevant information which is related specifically to M&A transactions, while Zephyr is broader in scope featuring other deals such as joint ventures, initial public offerings, and capital increases pursued through a variety of means. The specific statistics regarding Qatari companies involved in M&A deals that were obtained using Thomson One database are reported in Table 1.

Table 1. Qatari M&A data generated using Thomson One database

Reported information	Acquirers		Targets	
	#	%	#	%
TOTAL M&A deals:	306	100	163	100
• **Completed M&A deals**	**182**	**59.5**	**94**	**57.7**
• Uncompleted M&A deals:	124	40.5	69	42.3
▪ Pending	83	66.9	54	78.3
▪ Unknown status	20	16.1	3	4.3
▪ Rumor	8	6.5	1	1.5
▪ Withdrawn	7	5.7	3	4.3
▪ Intended/Dis-rumor	6	4.8	3	4.3
▪ Search for buyer disclosed	0	0	5	7.3

A general search for Qatari acquirers produced a total of 306 deals, of which 59.5% were completed and 40.5% were uncompleted. The 182 completed deals are either acquisitions of majority (from 51% to 100%) / minority (from 3.5% to 49%) stakes or mergers undertaken by companies located in Qatar. Out of the 124 uncompleted transactions initiated by Qatari acquirers, 66.9% were pending, 16.1% had an unknown status, 6.5% were rumored, 5.7% were withdrawn, and 4.8% were either intended or dis-rumored. As far as the M&A deals involving Qatari targets are concerned, out of the 163 total transactions reported on Thomson One 57.7% were completed (where an acquirer sought to buy a stake in, or merge with, a Qatari firm) and 42.3% were uncompleted. As many as 78.3% of the 69 uncompleted transactions with Qatari targets were pending, while the remainder had a disclosed search for buyer (7.3%), had an unknown status (4.3%), were withdrawn (4.3%), were intended or dis-rumored (4.3%), or were rumored (1.5%).

Table 2 reproduces data that were obtained using Zephyr database. In total, 564 deals with Qatari acquirers were generated of which 44.5% were completed and 55.5% – uncompleted. The 251 completed deals included not only mergers and acquisitions of majority or minority interest (70.9%), but also joint ventures (6.4%) and multiple situations when a Qatari firm was merely one of the multiple acquirers involved (13.5%), when the minority stake or acquisition was unknown (7.6%), or when the acquirer was undisclosed (1.6%). A total of 313 deals were reported as uncompleted of which 40.5% were announced, 21.7% were rumored, 29.4% were rumored and expired, and the remainder was pending or awaiting regulatory approval (2.6% and 3.8%, respectively).

Table 2. Qatari M&A data generated using Zephyr database

Reported information	Acquirers		Targets	
	#	%	#	%
TOTAL deals:	564	100	316	100
• Completed deals:	251	44.5	126	39.9
▪ Multiple acquirers/targets	34	13.5	1	0.8
▪ Minority stake/acquisition unknown	19	7.6	8	6.4
▪ Joint ventures	16	6.4	28	22.2
▪ Acquirer/target undisclosed	4	1.6	0	0
▪ Initial public offering	0	0	21	16.7
▪ Capital increase	0	0	25	19.8
▪ **Completed M&A deals**	**178**	**70.9**	**43**	**34.1**
• Uncompleted deals:	313	55.5	190	60.1
▪ Announced	127	40.5	97	51.1
▪ Pending	8	2.6	6	3.1
▪ Pending – awaiting approval	12	3.8	10	5.3
▪ Rumor	68	21.7	10	5.3
▪ Rumor – expired	92	29.4	63	33.1
▪ Rumor informal/withdrawn	6	2	4	2.1

Similar observations can be made with regard to transactions that involved target companies from Qatar (see Table 2). Out of the 316 reported deals, there were more uncompleted (60.1%) than completed (39.9%) transactions. The 190 uncompleted deals included transactions that were announced (51.1%), expired (33.1%), rumored (5.3%), awaiting regulatory approval (5.3%), pending (3.1%), and withdrawn (2.1%). Concerning the 126 deals with Qatari targets that were disclosed on Zephyr as completed, many were joint ventures (22.2%), initial public offerings (16.7%), and capital increases effectuated through rights issues or capital placements (19.8%).

Given the uncertain nature of uncompleted deals, this study focused exclusively on M&A transactions that were reported as finalized at the date when the data collection process was carried out. This article also aims to emphasize the governance discipline of markets for corporate control that is brought about by M&A deals rather than initial public offerings, joint ventures, or capital increases achieved via different means. For the purpose of ensuring consistency of data analyses, the study evaluated the completed deals conducted with Qatari acquirers and targets that were obtained using Thomson One database. Yet, in the case of missing data on a specific aspect of a given M&A transaction, the availability of required information was cross-checked on Zephyr database to provide a more complete account about the market for corporate control in Qatar.

4 Results and analysis

The two following sub-sections provide empirical evidence concerning M&A deals that involved acquirers and targets from Qatar. In particular, M&As are analyzed in terms of absolute numbers and dollar values of transactions, industrial sectors and public/private status of acquiring and target firms, features of repetitive acquirers that conducted multiples deals, diversifying versus consolidating transactions, domestic versus cross-border acquisitions, size of control premium and type of method of payment used, synergistic versus disciplinary deals (or target company's management attitude), and antitakeover defenses deployed to prevent the transaction.

4.1 M&As conducted by Qatari acquirers

A total of 182 M&A deals were conducted by Qatari acquirers, with the first reported deal being completed in April 1996 and the most recent one being finalized in July 2013 (see Table 3). Due to the lack of earlier data, there is no confirmation of existence in Qatar of the first four merger waves (with the fourth wave ending in 1989) identified by Bodolica and Spraggon (2009a). Although some nascent evidence exists with regard to the fifth merger wave (1992–2001), only seven deals with relatively low dollar values (between US$ 2.18 and 549.75 million) were conducted by Qatari acquirers in this time interval. The Qatari data are also not supportive of the sixth merger wave which emerged in 2003 and ended in 2007 (Alexandridis et al., 2012; Bodolica and Spraggon, 2009a), since the M&A activity in the country began to manifest with higher frequency and magnitude starting from 2007 onwards.

Table 3. Number and value of M&A deals completed by Qatari acquirers

Year	**#**	**Value (mln. US$)**		**M&Ap eriod**	**#**	**Value (mln. US$)**	**t-test (2) – (1)**
		Min	**Max**				
< 08/2013	15	100.00	1,974.01	**(2)**	156	Min = 5.80	*Equal variances*
2012	34	96.99	1,853.23	< 08/		Max = 9,569.48	*assumed:*
2011	22	6.85	275.00	2013-		Mean = 860.61	Mean difference =
2010	23	16.93	2,719.00	2007			728.97*
2009	17	7.50	9,569.48				t = 1.793
2008	24	5.80	3,482.84				
2007	21	12.30	3,800.66				*Equal variances*
2006	5	9.89	127.43	**(1)**	26	Min = 0.64	*not assumed:*
2005	6	0.64	236.30	1996-		Max = 549.75	Mean difference =
2004	4	192.29	245.63	2006		Mean = 131.64	728.97***
2003	4	14.86	22.03				t = 3.780
2000	2	2.18/?	2.18/?				
1999	3	10.00	549.75				
1997	1	164.81	164.81				
1996	1	42.00	42.00				

Note:
? – missing values
* – significance at the p < 0.10 level
** – significance at the p < 0.05 level
*** – significance at the p < 0.01 level

The statistics reproduced in Table 3 point to a different conclusion regarding the specific timing of markets for corporate control in Qatar. The analyses indicate that two M&A-related periods can be identified in Qatar, namely prior to 2007 and following 2006. The former period is characterized by a low or non-existent M&A activity, while the latter can be distinguished due to its relatively high merger intensity. The post-2006 period in the country has witnessed the completion of 156 deals by Qatari acquirers, as opposed to only 26 deals over the ten preceding years. Concerning the M&As' magnitude after 2006, the maximum value of transactions approached or exceeded US$ 2 billion, with the exception of the year 2011. The two pick years in terms of the maximum deal value (over US$ 9,569 million) and acquisition frequency (34 deals) were 2009 and 2012, respectively.

During this merger-intense period, the absolute record breaker was Qatar Investment Authority, a sovereign wealth fund created in 2005, which conducted a transaction worth US$ 9.5 billion to increase its ownership stake in Germany-based Volkswagen AG from 2% to 17%. It is worth noting that despite the financial recession which hit the Gulf region at the end of 2008, M&A deals continued to occur at the same yearly frequency of more than 20 deals, with only a slight reduction in the number of acquisitions completed in 2009 (i.e., 17 deals). This finding suggests that the credit crunch has actually represented a good opportunity for cash-rich Qatari acquirers to buy undervalued target companies.

The t-test for equality of means was performed to compare the mean dollar values of transactions between the pre-2007 and post-2006 periods. The results of the t-test indicate that the mean difference of US$ 728.97 million is statistically significant both when the equality of means is assumed and not assumed (at the 10% and 1% levels, respectively). Therefore, all the subsequent analyses of deals completed by Qatari acquiring firms are presented and contrasted across these two M&A periods.

Table 4 reports the industrial sectors in which Qatari acquirers operated at the time when they completed their acquisitions. The most active initiators of M&A deals, both prior to and following the year 2007, were financial companies (with 9 and 87 deals, respectively). These acquirers were followed by firms from the automobile industry (6 deals), for the first M&A period, and real estate and construction companies (21 deals), for the second merger-related period. Qatari corporations from the energy sector have also manifested an increased interest in the conduct of M&A deals, particularly between 2008 and 2012.

Table 4. Industrial sectors of Qatari acquirers (# of firms)

Industrial sectors of acquirers	**M&A period**									**Total**
	(1)	**(2) ≥ '07**								
	'96-'06	**'07**	**'08**	**'09**	**'10**	**'11**	**'12**	**<08 /'13**	**Total (2)**	
Financials	**9**	12	13	9	10	11	23	9	**87**	**96**
Real estate & construction	**0**	2	5	2	6	4	1	1	**21**	**21**
Energy, oil & gas	**1**	0	2	1	2	1	3	0	**9**	**10**
Automobile	**6**	2	0	1	0	0	0	0	**3**	**9**
Telecommunications	**1**	2	1	2	0	0	2	0	**7**	**8**
Chemicals & metals	**3**	2	0	0	1	1	0	0	**4**	**7**
Media & advertisement	**0**	0	1	0	1	1	2	2	**7**	**7**
Hospitality	**0**	0	2	0	0	0	2	3	**7**	**7**
Transportation	**3**	0	0	0	1	2	0	0	**3**	**6**
Government agency	**3**	0	0	1	0	0	1	0	**2**	**5**
Consumer prod. & retail	**0**	1	0	1	0	2	0	0	**4**	**4**
High technology	**0**	0	0	0	2	0	0	0	**2**	**2**

Concerning the public status of the acquiring company, the evidence shows that in each of the two identified M&A-related periods the vast majority of acquirers (73.1%) were private firms or governmental agencies, while the remaining (26.9%) companies were public. With regard to prior acquisition experience of Qatari firms, it is notable that 19.1% and 17.8% of companies in the pre-2007 and post-2006 periods, respectively, were repetitive acquirers (see Table 5). The number of times these organizations conducted acquisitions oscillated between two and as many as 14. While repetitive acquirers most commonly involved in two M&A deals (3 firms before 2007 and 13 firms after 2006), corporations such as Jaidah Group, Qatar Sports Investments, QEWC, Investor Group, Qatari Diar RE Invest Co, and QInvest LLC have recently completed between three and eight transactions. In line with Al-Kaabi et al. (2010) who have noted Qtel's favorable attitude towards M&As for market development purposes, Table 5 shows that over the past six years the company conducted seven different acquisitions. From 2007 onwards, Qatar Investment Authority involved in

a record number of deals (n = 14), followed by Qatar Holding LLC (n = 13), and QNB (n = 10).

Table 5. Number and name of repetitive Qatari acquirers in each M&A period

Item	**M&A period**					
	(1) ≤ ’06			**(2) ≥ ’07**		
# of times	**# of firms**	**% of firms**	**Acquirers’ name**	**# of firms**	**% of firms**	**Acquirers’ name**
2 times	3	11.5	Qatar Shipping Co, State of Qatar, QIPCO Holding	13	8.3	Al Khaliji Commercial Bank, Al Meera Consumer Goods Co, Barwa Bank, Barwa Real Estate Co, Commercial Bank of Qatar, Delta(Two)Ltd, Ghanim Bin Saad Al Saad & Sons, Hassad Food Co, Katara Hospitality Co, Lusail International Media Co, Qatar Foundation, Qatar Luxury Group, Qatar Media Services Co
3 times	1	3.8	Qatar Islamic Bank	4	2.6	Barwa International, Jaidah Group, Qatar Sports Investments, Salam Intl Invest Ltd
4 times	0	0		3	1.9	Qatar Steel Co, QEWC, QNH Co
5 times	1	3.8	Jaidah Group	1	0.6	Investor Group
7 times	0	0		2	1.3	Qatari Diar RE Invest Co, Qtel
8 times	0	0		2	1.3	Qatar First Investment Bank, QInvest LLC
10 times	0	0		1	0.6	QNB
13 times	0	0		1	0.6	Qatar Holding LLC
14 times	0	0		1	0.6	Qatar Investment Authority
Total	**5**	**19.1**		**28**	**17.8**	

Further, this study examined the industrial relatedness of the acquiring and target firms (Spraggon and Bodolica, 2011) to conclude about the cross- versus intra-industry nature of Qatari M&A deals. In particular, a transaction was considered consolidating (where the acquirer seeks to strengthen its competitive position within the same industry) if the four digits of the primary SIC code of the acquirer and the target were equal, and diversifying, otherwise. As shown in Table 6, the majority of deals (over 74%) in both periods involved companies from different industries. This evidence demonstrates that Qatari acquirers were primarily concerned with diversifying their portfolio of investment in order to reduce financial risk (Bodolica and Spraggon, 2009a). While only three consolidating M&As were undertaken before 2007, the most active industrial sectors for consolidation purposes in the post-2006 period were banks (35%), followed by hotels and motels (15%), telephone communications, except radiotelephone (10%), and television broadcasting stations (10%).

Table 6. Diversifying versus consolidating deals completed by Qatari acquirers

Cross- versus intra-industry deals		**M&A period**			
		(1) ≤ ’06		**(2) ≥ ’07**	
SIC	**SIC description**	**#**	**%**	**#**	**%**
Diversifying (cross-industry deals)		23	88.6	116	74.4
Consolidating (intra-industry deals):		3	11.4	40	25.6
3312	Steel works, blast furnaces, & rolling mills	0	0	2	5
4412	Deep sea foreign transportation of freight	0	0	1	2.5
4813	Telephone communications, except radiotelephone	1	33.3	4	10
4833	Television broadcasting stations	0	0	4	10
4911	Electric services	0	0	2	5
5411	Grocery stores	0	0	1	2.5
6000	Banks	1	33.3	14	35
6282	Investment advice	0	0	1	2.5
6311	Life insurance	0	0	1	2.5
6552	Land sub-dividers & developers, except cemeteries	0	0	3	7.5
6799	Investors	1	33.4	1	2.5
7011	Hotels and motels	0	0	6	15

Table 7 displays the absolute and relative figures regarding the conduct of domestic versus cross-border transactions by Qatari acquiring companies. Due to the smallness of the national market for corporate control (Chahine and Safieddine, 2008), it is not surprising that about 77% of all completed deals involved a non-Qatari target. In the post-2006 period, more M&As were undertaken within the GCC region as opposed to the pre-2007 period (16.7 and 5%, respectively). Although some target firms were domiciled in the broader MENA region, the large majority of cross-border deals involved companies from outside this region (80% and 66.6% for the first and second period, respectively). In both M&A-related periods, the most attractive nations for acquisition purposes were France, UK and Germany with over 62% of firms originating from these European countries, followed by Asian targets mainly from India, Pakistan, Singapore, and Indonesia (21.2%).

Table 7. Domestic versus cross-border deals conducted by Qatari acquirers

Domestic versus cross-border deals	M&A period			
	(1) ≤ ’06		(2) ≥ ’07	
	#	%	#	%
Domestic deals:	6	23.1	36	23.1
Cross-border deals:	20	76.9	120	76.9
• Within GCC region	1	5	20	16.7
• Outside GCC but within MENA region	3	15	20	16.7
• Global (i.e., outside MENA region):	16	80	80	66.6
~ Australia	1	6.25	1	1.3
~ Europe (e.g., France, UK, Germany)	10	62.5	53	66.2
~ Asia (e.g., India, Pakistan, Singapore, Indonesia)	4	25	17	21.2
~ North America (e.g., US, Canada)	1	6.25	7	8.8
~ Latin America (e.g., Brazil)	0	0	2	2.5

Two important characteristics of M&As are the magnitude of the acquisition premium offered to target shareholders and the method of payment used in the transaction (Bodolica and Spraggon, 2009b). Three different time intervals are typically used to calculate the size of the premium, namely one day, one week, and four weeks prior to the announcement of the deal (see Table 8). The reported numbers suggest that Qatari acquirers paid relatively low acquisition premiums, particularly after 2006 where the size of the minimum premium offered in a deal reached a negative extreme of -71% for each of the three types of measurement. The average premium magnitude offered by Qatari firms in both pre- and post-2007 periods (18.5%, 16.5%, 14.5% and 3%, -1%, -3%, respectively) is remarkably lower than the average premium of about 30% reported in prior studies (Spraggon and Bodolica, 2011; Hartzell et al., 2004).Yet, caution has to be exercised when interpreting these results because many values of acquisition premiums were missing in Thompson One database.

Table 8. Size of the acquisition premium (%)* and method of payment offered in the deal

Size	M&A period											
	(1) ≤ ’06						(2) ≥ ’07					
	Premium 1 day		Premium 1 week		Premium 4 weeks		Premium 1 day		Premium 1 week		Premium 4 weeks	
Min	6		0		-3		-71		-71		-77	
Max	31		33		32		25		25		28	
Values	Cash		Stock		Unspecified		Cash		Stock		Unspecified	
	#	%	#	%	#	%	#	%	#	%	#	%
	14	53.9	1	3.8	11	42.3	57	36.5	4	2.6	95	60.9
Note: * – there are many missing values												

An interesting observation pertains to the method of payment that was used by Qatari companies to finance their acquisitions. In the first and second M&A periods, a large number of transactions had an unspecified mode of financing (42.3% and 60.9%, respectively). Of the remaining deals, the predominant form of payment was cash (53.9% and 36.5%, respectively) as opposed to stock financing which was almost non-existent (1 and 4 deals, respectively). These findings suggest that Qatari acquirers were either cash-rich, especially considering the country’s tax-free environment which exempts local firms from

the payment of taxes on capital gains, or interested in the conduct of cash-based acquisitions since they require less documentation and are faster to conclude (Bodolica and Spraggon, 2009a,b). Contrary to the widespread occurrence of combined cash and stock deals demonstrated in the international M&A literature (Spraggon and Bodolica, 2011), there is no evidence of mixed methods of deal payment in Qatar.

Table 9. Target company's attitude towards the deal and antitakeover defenses used

M&A period											
(1) ≤ '06						(2) ≥ '07					
Friendly		Neutral		Hostile		Friendly		Neutral		Hostile	
#	%	#	%	#	%	#	%	#	%	#	%
23	88.5	3	11.5	0	0	144	92.3	12	7.7	0	0
Antitakeover defenses: White knight, back-end, flip-over, greenmail, litigation, pacman, poison pill, proxy fight, white squire, and voting plan											
None						None					

As illustrated in Table 9, the vast majority of deals in both pre-2007 and post-2006 M&A periods were synergistic or friendly (88.5% and 92.3%, respectively), with only few deals having a neutral attitude (11.5% and 7.7%, respectively). Since in none of the completed transactions in either of the two periods the management or the board of directors of the target company displayed a hostile attitude, it can be concluded that no disciplinary transactions were undertaken by Qatari acquirers. Finally, a large variety of antitakeover defenses was examined in the study, including the white knight, back-end, flip-over, greenmail, litigation, pacman, poison pill, proxy fight, white squire, and voting plan defense that can be used by a target firm to make the takeover more difficult and expensive for a bidder (Demidova, 2007). However, since these defenses are typically used in the case of target hostility and given the lack of disciplinary transactions in Qatar, none of these defenses has been deployed by targets to prevent a M&A deal.

4.2 M&As involving Qatari targets

Table 10 reproduces the number and dollar value of completed transactions that involved target companies from Qatar. It is worth noting that there were less M&A deals conducted with Qatari targets (n = 94) than with Qatari acquirers (n = 182). The first reported acquisition of a target firm from Qatar occurred in December 1990, while the most recent deal was finalized in July 2013. Between 1990 and 2006, two to maximum three acquisitions were occurring yearly, while these figures almost doubled (n = 5) and tripled (n = 9) in 2007 in 2008, respectively. The most significant deal in terms of dollar magnitude was the merger (worth US$ 1.1 billion) of two national providers of water transportation services, namely Qatar Shipping Co and Qatar Navigation Co. From 2009 till 2012, the number of deals with Qatari targets was established at around ten per year, with a record number of 14 acquisitions being reported in 2011.

These findings suggest that, similar to the evidence generated on Qatari acquirers, two major periods of M&As involving Qatari target companies emerge. The first period of relatively low merger activity (28 deals) ended in 2006, while the second more intense period (66 deals) started in 2007 and continues till present days. The maximum value of transactions conducted in the second merger-related period was two times higher than in the first period (US$ 1,104.02 million and US$ 549.75 million, respectively). However, it is critical to acknowledge that for many reported M&As, the dollar value was missing in Thompson One database. The outcomes of the t-test for equality of means of deal values between the post-2006 (US$ 173.04 million) and pre-2007 (US$ 153.98 million) periods indicate that the mean difference of US$ 19.06 million is not statistically significant.

To secure that these insignificant findings are not sensitive to the type of information included in the retained database, similar analyses were performed employing the values of M&A deals that were reported in Zephyr database. Although there were still many missing values, the results of the t-test for equality of means between the second (US$ 316.43 million) and the first (US$ 189.58 million) merger-related periods show that the mean difference of US$ 126.85 million is not statistically significant both when equal variances are assumed (t = 1.000) and not assumed (t = 1.211). Hence, these findings may be driven more by the amount of missing deal values, which do not allow generating reliable conclusions, rather than by the type of database used. Yet, for the sake of consistency of data presentation in line with the previous sub-section on Qatari acquirers, the subsequent analyses of transactions with Qatari targets are discussed and compared across the two M&A-related periods.

Table 10. Number and values*of M&A deals involving Qatari targets

Year	#	M&A period	#	Value (mln. US$)	t-test (2) – (1)
< 08/2013 2012 2011 2010 2009 2008 2007	5 11 14 12 10 9 5	**(2)** < 08/2013 - 2007	66	Min = 0.57 Max = 1,104.02 Mean = 173.04	*Equal variances assumed:* Mean difference = 19.06 (not significant) t = 0.152 *Equal variances not assumed:* Mean difference = 19.06 (not significant) t = 0.168
2006 2004 2003 2002 2001 2000 1999 1997 1995-96 1992-93 1990-91	2 3 2 3 3 3 3 2 2 3 2	**(1)** 1990-2006	28	Min = 0.63 Max = 549.75 Mean = 153.98	
Note: * – there is a large amount of missing deal values					

From the point of view of local and foreign acquirers, the most attractive Qatari targets in earlier times were originating from the energy and oil and gas (n = 12) sector (see Table 11). However, the most recent acquisitions were directed towards companies activating in the real estate and construction industry (n = 24). Overall, these results are comparable with the evidence built on Qatari acquirers since in both cases the three most active sectors for M&A purposes were financials, energy and oil and gas, and real estate and construction. Findings also suggest that, in both the post-2006 and pre-2007 periods, the majority of Qatari firms that were taken over in an M&A transaction were private entities (86.4% and 92.9%, respectively) and only 9 and 2 companies, respectively, had a public status on the acquisition day.

Table 11. Industrial sectors of Qatari targets (# of firms)

Industrial sectors of targets	M&A period									Total
	(1)	(2) ≥ ’07								
	’90-’06	’07	’08	’09	’10	’11	’12	<08 /’13	Total (2)	
Financials	**4**	0	1	5	0	5	1	1	**13**	**17**
Real estate & construction	**1**	4	1	2	6	3	7	1	**24**	**25**
Energy, oil & gas	**12**	1	0	2	3	1	0	1	**8**	**20**
Automobile	**1**	0	0	0	0	0	0	0	**0**	**1**
Chemicals & metals	**7**	0	1	0	1	1	0	0	**3**	**10**
Media & advertisement	**2**	0	0	0	0	2	0	0	**2**	**4**
Hospitality	**0**	0	0	0	0	0	0	2	**2**	**2**
Transportation	**1**	0	3	1	1	1	1	0	**7**	**8**
Consumer prod. & retail	**0**	0	3	0	0	1	2	0	**6**	**6**
High technology	**0**	0	0	0	1	0	0	0	**1**	**1**

Table 12 illustrates the type of acquisitions involving Qatari target firms which were either diversifying or consolidating in nature. As shown, for a large majority of both earlier and more recent transactions, targets and acquirers were originating from different industrial sectors (64.3% and 74.2%, respectively). Only in a limited number of instances (10 and 17 deals, respectively) Qatari targets were used by acquiring companies for the purpose of consolidating their position in the same industry. The established target-acquirer relatedness in the crude petroleum and natural gas (7 deals) and banking (3 deals) sectors indicates that these two industries were

the most common candidates for consolidation across both M&A-related periods.

Table 12. Diversifying versus consolidating deals involving Qatari targets

Cross- versus intra-industry deals		M&A period			
		(1) ≤ '06		(2) ≥ '07	
SIC	**SIC description**	**#**	**%**	**#**	**%**
Diversifying (cross-industry deals)		18	64.3	49	74.2
Consolidating (intra-industry deals):		10	35.7	17	25.8
1311	Crude petroleum and natural gas	5	50	2	11.8
2911	Petroleum refining	1	10	0	0
3534	Elevators and moving stairways	0	0	1	5.9
4213	Trucking, except local	0	0	1	5.9
4412	Deep sea foreign transportation of freight	0	0	2	11.8
4833	Television broadcasting stations	0	0	1	5.9
4911	Electric services	0	0	2	11.8
5411	Grocery stores	0	0	1	5.9
6000	Banks	2	20	1	5.9
6231	Security and commodity exchanges	0	0	1	5.9
6282	Investment advice	1	10	0	0
6552	Land sub-dividers & developers, except cemeteries	0	0	1	5.9
6798	Real estate investment trusts	0	0	1	5.9
6799	Investors	1	10	0	0
7011	Hotels and motels	0	0	2	11.8
8711	Engineering services	0	0	1	5.9

Contrary to the evidence produced on recent Qatari acquirers, the majority of acquisitions of targets from Qatar that occurred after 2006 were undertaken by domestic (54.5%) rather than foreign companies. Yet, as indicated in Table 13, in earlier years cross-border transactions were occurring at a higher frequency (78.6%) with as many as 72.7% of acquiring firms originating from outside the MENA region, followed by companies located in other GCC member states (27.3%). In the post-2006 period, the most common global acquirers of Qatari targets were of European (33.3%), Asian (12.5%), and North American (12.5%) descent.

Table 13. Domestic versus cross-border deals involving Qatari targets

Domestic-versus cross-border deals	M&A period			
	(1) ≤ '06		(2) ≥ '07	
	#	**%**	**#**	**%**
Domestic deals:	6	21.4	36	54.5
Cross-border deals:	22	78.6	30	45.5
• Within GCC region	6	27.3	5	16.7
• Outside GCC but within MENA region	0	0	1	3.3
• Global (i.e., outside MENA region):	16	72.7	24	80
~ Africa (e.g., South Africa)	2	12.5	1	4.2
~ Europe (e.g., France, UK, Germany, Denmark)	4	25	8	33.3
~ Asia (e.g., Hong Kong, India, Singapore, Japan)	4	25	3	12.5
~ North America (e.g., US, Canada)	5	31.3	3	12.5
~ Unknown nationality	1	6.2	9	37.5

The key findings on the premium size and payment mode characterizing M&A deals that involved targets from Qatar are represented in Table 14. Due to a large amount of missing values, the results regarding acquisition premiums that were offered to shareholders of Qatari targets are inconclusive. As far as the method of payment is concerned, the evidence is consistent with the above analysis of transactions initiated by Qatari acquiring companies. Letting aside all the deals with an unspecified method of financing (78.6% and 50% for the first and second period, respectively), about 44% of post-2006 acquisitions of firms from Qatar were financed in cash, representing an important increase from 17.8% of cash-based deals completed in the pre-2007 period. In both M&A-related periods, there were only few stock-financed deals (5 overall) and no transactions with combined cash-stock payment.

Table 14. Acquisition premium (%)* and method of payment offered to Qatari targets

Size	M&A period											
	(1) ≤ ’06						(2) ≥ ’07					
	Premium 1 day		Premium 1 week		Premium 4 weeks		Premium 1 day		Premium 1 week		Premium 4 weeks	
Min	missing		Missing		Missing		5		-4		-11	
Max	missing		Missing		Missing		16		missing		23	
Values	Cash		Stock		Unspecified		Cash		Stock		Unspecified	
	#	%	#	%	#	%	#	%	#	%	#	%
	5	17.8	1	3.6	22	78.6	29	43.9	4	6.1	33	50

Note:
* – there is a large amount of missing premium values

Finally, the attitude of target management and board of directors towards the deal and the type of antitakeover defenses used by Qatari targets are illustrated in Table 15. In line with the prior conclusion drawn for Qatari acquirers, the vast majority of acquisitions with targets from Qatar were synergistic, both before 2007 and after 2006 (78.6% and 83.3%, respectively). In both periods, there were only 17 transactions with a neutral status and no deals at all where the target company displayed a hostile attitude. Due to a total lack of disciplinary M&As, none of the ten examined antitakeover defenses (see Table 15) was deployed by Qatari targets to thwart the impending acquisition.

Table 15. Attitude towards the deal and antitakeover defenses used by Qatari targets

M&A period											
(1) ≤ ’06						(2) ≥ ’07					
Friendly		Neutral		Hostile		Friendly		Neutral		Hostile	
#	%	#	%	#	%	#	%	#	%	#	%
22	78.6	6	21.4	0	0	55	83.3	11	16.7	0	0
Antitakeover defenses: White knight, back-end, flip-over, greenmail, litigation, pacman, poison pill, proxy fight, white squire, and voting plan											
None						None					

5 Conclusion and future research

This article aims to enhance the contextual knowledge on global markets for corporate control by examining the completed M&A endeavors that involved acquiring and target companies from Qatar. The key results ensuing from this study are as follows. Qatar is characterized by a relatively low M&A activity in terms of both deals’ number and value, representing an underdeveloped market for corporate control which provides an insufficient corporate governance discipline for firms operating in the country. This finding is consistent with the research outcomes extracted from other emerging markets such as Lebanon (Chahine and Safieddine, 2008) and Russia (Demidova, 2007). Contrary to the international evidence that points to the existence of six merger waves (Bodolica and Spraggon, 2009a), the Qatari data suggest the identification of two distinctive periods of relatively low (prior to 2007) and high (after 2006) merger intensity.

With regard to acquiring firms from Qatar, the results indicate that the most active buyers were privately-held companies operating in financial sectors, the M&A experience of repetitive acquirers oscillated between two and 14 deals, and the majority of transactions were industry diversifying, cross-border, cash-financed and friendly, which resulted in the payment of low control premiums and did not require the usage of antitakeover defenses. Concerning Qatari targets, the evidence provided in this article indicates that the most attractive firms for acquisition purposes had a private status and originated from the real estate and construction and energy, oil and gas industries, the majority of targets were part of diversifying deals, more firms were recently bought by domestic rather than cross-border acquirers, and a large percentage of targets received low premiums that were paid in cash, exhibited a friendly attitude and did not deploy any antitakeover mechanism.

Given the country’s rapid pace of economic development and its importance on the regional and global scene, more empirical investigations should be conducted on Qatar in general, and its market for corporate control, in particular. Underlining the increasing competition to well-established brands originating from the BRICOland, Bell (2009) called for more scholarly attention to be paid to Arabian Knights such as Qatar, which is home to two internationally acclaimed brands in broadcasting (i.e., Al Jazeera) and airline (i.e., Qatar Airways) industries. Future research can explore the motives behind the

initiation of M&As in Qatar and estimate their consequences in terms of potential gains or losses to acquiring and target shareholders. In a recent study of 156 transactions, Datta et al. (2013) reported that target owners benefited, while the acquiring shareholders suffered, from the conduct of M&A activities in highly-regulated utility sectors in Europe.

Moreover, the question of whether the previously demonstrated association of privately-held targets with higher abnormal returns in acquiring firms (Capron and Shen, 2007) can be confirmed in Qatari settings is worthy of further exploration. The analysis of the reasons associated with the payment of relatively low acquisition premiums to shareholders of Qatari targets merits a separate discussion. Since some foreign acquirers that enjoyed better tax advantages relative to American bidders were found to offer higher premiums (Lee and Choi, 1992), a possible path of future inquiry may be the examination of whether the magnitude of control premiums is affected by specific accounting treatments.

Similar to other emerging economies (Demidova, 2007), to play an effective governance role for local business entities the Qatari market for corporate control ought to experience further development and regulation for expanding the methods of undertaking M&A deals and clarifying shareholder wealth implications of using various antitakeover defenses. In the case of passive markets for corporate control the governance discipline inflicted by takeover transactions can be substituted by internal mechanisms of monitoring, such as board of directors' vigilance and ownership by managers and directors (Campbell et al., 2011). Consistent with Franks et al. (2012) who found that in countries with inactive financial markets family and concentrated ownership tends to persist over time, Qatari companies are likely to continue relying on internal means of monitoring by preserving their family status or concentrated shareholding structures to compensate for the lack of external governance devices. To operate effectively as an integrative part of the complex national corporate governance system, the market for corporate control and the associated takeover regulation in Qatar cannot be developed in isolation. According to Hopner and Jackson (2006), an advancement of such kind requires taking into account the specificities of the local banking system, financial institutions, corporate bylaws, and dominant ideologies in the country.

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DEVELOPING FINANCIAL MANAGEMENT SKILLS IN A COMMUNITY ORGANISATION USING SCAFFOLDING: A PILOT STUDY

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Abstract

The third sector literature argues that organizational capacity is important for community organizations to achieve their missions. Financial Management Skills (FMS) are important for the enhancement of capacity that supports the effective operations, accountability viability and governance of community organizations. However, many community organisations lack the necessary understanding of financial management. This paper examines the use of scaffolding to develop financial management skills in a community organisation. Participants completed a pre-test to determine the level of FMS and a post-test after the scaffolding sessions. The results indicate that scaffolding was effective in developing the participant's FMS. However, the time spent on each phase of the scaffolding learning cycle may influence the effectiveness of the method**.

Keywords: Financial Management Skills, Community Organisation, Scaffolding

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1 Introduction

Community organisations (CO) are established to address a need or problem in the community in which they are established, (Holland and Ritvo, (2008). The organisation is considered to be effective if it achieves its stated objectives and reduces the need or introduces the desired change. However, to be effective the organisation must have the ability to undertake programs, manage funds assess performance and develop strategy and acquire resources. These skills can be grouped under the heading of 'capacity' and the enhancement of those skills referred to as 'capacity building'. The building of capacity supports the development of good governance by enabling the monitoring of resource use and organisational performance. However, the development of capacity cannot happen in isolation but requires antecedent conditions; in particular, the presence of financial management skills.

The model being suggested in this paper is that the acquisition of financial management skills will enable a CO to develop capacity. The development of capacity encourages an organization to operate effectively and supports the viability of the CO. Both are critical aspects of governance. Effectiveness in third sector organizations is, however, a contested concept and according to Herman and Renz (2008) it is also a socially constructed concept, however, they argue that it is not an arbitrary concept. According to Herman and Renz (2008) there are meaningful dimensions of effectiveness such as financial condition, fundraising performance or program outcomes that can be supported by hard data. They go on to point out that the use of generally accepted accounting principles can provide evidence about revenues, costs, and surplus. Not all stakeholders however, will be able to use, or interpret the evidence in the same way as they lack financial management skills to do so. The acquisition of financial management skills such as understanding an organization's accounting system and financial statements, managing cash and budgeting are seen as important skills that can enhance an organization's capacity and governance.

2 Capacity Building, Effectiveness and Financial management Skills

Capacity is defined by Eisinger (2002) as: *a set of attributes that help or enable an organization to fulfil its mission* He goes on to point out that effective organizations have a broad range of capacity attributes and the ability to use that capacity to meet organizational objectives. Eisinger goes on to argue that, based on the findings of others, that the critical components of capacity include acquiring appropriate resources, effective leadership, skilled and sufficient staff, a certain level of organizational structure and links to the broader community from which the organization can receive assistance.

According to Wagner (2003) there is no one single initiative that increases the effectiveness of a community organization but rather a systematic approach to improve the organization's capabilities at all levels. However, Wagner (2003) goes on to point out that building capacity utilizes many resources that CO management would prefer to use on programs. While the continued viability and effectiveness of a CO is underscored by building capacity there is a reluctance to invest scarce resources in the building of organizational capacity. In addition Wagner (2003) argues that CO's have been impeded in their efforts to develop capacity by a lack of knowledge about how to do so.

In keeping with Wagner (2003), Fredericksen and London (2000) have argued that internal organisational capacity enables organizations to implement programs and achieve goals and is derived from various elements within the organization. They propose that there are four elements of organizational capacity: 1) Leadership and Vision, 2) Management and Planning, 3) Fiscal Planning and Practice and 4) Operational Support. Financial management is a significant component of elements 2 and 3. Management and Planning and the ability to adapt to changing circumstances are essential to the survival of a CO. While Fiscal Planning and Practice enables an organization to support operations with adequate and predictable financial resources.

This element of capacity is emphasized by Fredericksen and London (2000) and is centred upon the existence and use of a formal fiscal systems incorporating fundraising, financial tracking systems and financial reporting systems. A formal fiscal system provides important information for planning as well as evidence of accountability. The elements of capacity operate interdependently with other organisational components such as the existence of a budget and the process of developing the budget both indicate the ability of an organization to plan the use of resources and adapt to its environment (Fredericksen and London (2000).

Dart (2010) argues that the concept of effectiveness centres on the extent to which a CO fulfils the purpose for which it exists. However, Dart concludes that there is no evidence that effectiveness is understood beyond the initial steps which commence but do not fulfil the causal chain required to produce the change to which the organisation aspires.

Herman and Renz (2008) argue that effectiveness continues to be a contested concept but they suggest that comparison is a key element; the more effective organisations are more likely to use accepted management practices; CO effectiveness is a social construct and it is important to differentiate effectiveness at program, organisation or at network levels.

They note that some CO leaders are uncomfortable with the idea that effectiveness is a social construct. However, they go on to say

" although effectiveness is socially constructed, there are useful dimensions of effectiveness (for example, financial condition, fundraising performance, or program outcomes)n that can be grounded in hard data. For example, use of generally accepted accounting principles provides solid evidence about revenues, costs, and surplus."(p. 410)

Thus, the effective operation of a CO is linked to capacity. The link between capacity and effectiveness is reinforced by Eisinger who quotes Forbes (1998) as defining effectiveness in two ways: 1) the extent to which an organization achieves its goals; and 2) the extent to which an organization has the ability to acquire and use resources to function and sustain its own survival. The ability of an organization to achieve its goals and marshal resources is enabled by the organization's capacity. An organisation's capacity is linked to the ability to undertake the following activities: strategic planning, budgeting, costing, recording and reporting financial transactions, monitoring cash-flow, measuring financial and non-financial performance (Anthony and Young 2003, and Zietlow Hankin and Seidner, 2007). These activities are fundamental to an organisation's governance. The authors referenced above argue cogently for a link between an organisation's ability to use FMS and organisational capacity.

Similarly, Ritchie and Kolodinsky (2003) point out that a significant component of organizational capacity and effectiveness is supported by management skills, particularly financial management skills. They argue that the ability to use financial analysis by the management of a CO is important for ensuring sound financial management of an organisation and enabling the organisation to fulfil its objectives. The ability to understand financial statements and analyse the information reported in the financial statements or the ability to budget and manage cash are examples of financial management skills.

In addition, Wagner (2003) states that donors have sought to increase the leverage from their donations by encouraging CO capacity building. Donors are justified in their demand that organisations undertake systematic capacity building to improve their effectiveness and governance, reinforcing the importance of FMS to CO's. However, as stated above, Wagner also argues that managers of CO appear reluctant to divert resources to build organisational capacity from programs creating a dilemma.

3 Bridging the Gap

While it would seem important that a CO develop FMS a number barriers limit their ability to do so. In the State of Victoria, Australia, most COs are staffed

mostly by volunteers who have little understanding of financial management (FM). Volunteers tend to join COs to participate in the organisation's activities and are content to leave FM to the treasurer who may in fact have very limited FMS. Undertaking courses in FM can be costly and time consuming in addition most courses have a commercial orientation and do not include material dealing with FM of non-profit organisations. In addition, access to FM courses can be difficult for volunteers located in rural and regional areas of the state.

To overcome these impediments a pilot program was devised to introduce FMS to CO volunteers. The program was designed to introduce participants to the financial management of COs and to be delivered over four hours. The program was designed to be taken to the participants therefore overcoming issues of access. It was assumed that participants had no knowledge of accounting and the pilot program was structured to move participants from a lack of understanding to greater understanding. Using a scaffolding method of instruction the program introduced participants to:

1. the accrual accounting system,
2. the financial statements; income statement, balance sheet, and cash flow statement, and
3. financial statement analysis.

The aim of the pilot program was to assist participants to acquire basic FMS through modelling various FMS. This instruction approach is called scaffolding and has been successfully used by David Rose to teach literacy to marginal groups in Australia.

4 Scaffolding

Rose (2005) has developed a scaffolding approach to reading that includes:

1. Selecting an appropriate text,
2. Preparation before reading the whole text,
3. Paragraph –paragraph reading,
4. Text marking finding key information
5. Detailed reading involving more detailed text marking
6. writing

This approach can be used to develop financial literacy, specifically the ability to read, understand and analyse financial statements. The appropriate texts are financial statements; the preparation includes becoming familiar with accounting terminology and structure of financial statements. Steps 3, 4 and 5 involve reading the financial statements and increasingly more detailed analysis. While undertaking tasks of categorising financial information, constructing and analysing financial reports is the equivalent of the writing stage

Rose (2006) has described this approach in general terms as the scaffolding learning cycle that includes Prepare, Task and Elaborate. The learning cycle involves the instructor preparing the students for learning by introducing and explaining the new material. Students are then set tasks initially involving substantial guidance from the instructor but that is reduced with each subsequent task. The final phase of the cycle allows for students to seek elaboration so that they are confident in using the knowledge they have gained during the previous phases of the cycle.

When the learning cycle is applied to financial literacy preparation means the introduction of the accrual accounting system, an introduction to the content and structure of financial statements and methods of financial statement analysis. At each step tasks are set involving categorising financial information, constructing financial statements and analysing financial statements.

The experiment reported in this paper consisted of two seminars each of two hours duration. In the first seminar's preparation stage participants were introduced to the functioning of the accrual accounting system and important accounting vocabulary. Participants were also introduced to structure and vocabulary of financial statements. In the task phase participants were required to classify financial data and complete financial statements. Participants were asked to complete the construction of a number of statements of financial performance (income statement) and statements of financial position (balance sheet). A significant amount of information was provided enabling participants to easily complete the statements. Less information was provided with each subsequent task. Thus participants were supported in the first task but the support was decreased with next task.

In the second seminar preparation consisted of an introduction and explanation of vertical and horizontal analysis (casting financial data into percentages) and ratio analysis including an introduction to ratios used exclusively in the third sector. Tasks were constructed, as they were in the first seminar, moving from most of the solution to tasks being provided to participants completing the task and providing the solution.

5 Framework

The third sector literature suggests that financial management is a significant support for capacity building. While it would not be accurate to say that the acquisition of financial management skills will automatically lead to more effective COs it could provide organisations with capacity that would enable them to enhance their effectiveness and viability. The acquisition of and use of financial management skills is an antecedent to capacity building creating the conditions in which managing resources, planning and assessing performance are encouraged. However, many COs are staffed by volunteers who have little or no understanding of FM. In addition, access to appropriate FMS for non-profit organisations, such as COs, is problematic in Australia. The aim of the pilot study was to deliver a short course in a location and time suitable for the participants and determine whether a scaffolding instructional method can

facilitate the acquisition of FMS by volunteer members of a CO with very little understanding of FM.

6 Research Method

The pilot study used scaffolding with a volunteer organisation located in the south east of Melbourne's metropolitan area. There were 11 participants in the first session and 9 participants in the second. Instruction was given over two sessions, each of two hours duration. In each session material was presented to the participants using the scaffolding method. A pre-test was given to the participants at the beginning of each session and a post test was given to the participants at end of both sessions. At the end of the second session participants were also asked to complete an evaluation of the two sessions.

Yin (2003) argues that conducting an experiment in one organisation can be regarded as a case study. He further argues that the number of participants in the experiment has .no bearing on the results because the case study is not attempting gauge attitude or behaviour in a population. Rather, the purpose of an experiment is to observe the results when a specific method or approach is applied.

7 Results

The results reported in this paper suggest that the scaffolding method of instruction assisted the participants to improve their knowledge of FM. When the pre-test results are compared to the post-test results for the first session (See Tables 1 and 2) there is an increase in the number of correct responses, and a reduction in incorrect and "Don't know" responses. Statement 4 is the only statement to show a reduction in correct responses in the post-test. Statements 5, 6, and 7 had the smallest increase in correct answers

Table 1. Pre-Instructional Results Seminar 1

Statements	Correct response	Incorrect response	Didn't know
There are 3 Financial Statements	3	2	6
A cash accounting system will record depreciation	6	1	4
There are 5 categories of accounts	1	0	10
Assets appear on the Income Statement	7	3	1
Equity is the difference between assets and liabilities	9	1	1
Non-cash items are reported in the Income Statement	4	4	3
A liability is something owed by the organisation	9	1	1
Equity appears on the Balance Sheet	6	1	4
Accrual accounting is considered to be more accurate than cash accounting	2	2	7
All transactions are first recorded in journals	7	2	2

Table 2. Post-Instructional Results Seminar 1

Statements	Correct	Incorrect	Didn't know
1 There are 3 financial statements.	11	0	0
2 A cash accounting system will record depreciation	9	1	1
3 There are 5 categories of accounts	7	1	3
4 Assets appear on the Income Statement	4	6	1
5 Equity is the difference between assets and liabilities	10	0	1
6Non-cash items are reported in the Income Statement	5	5	1
7 A liability is something owed by the organisation	11	0	0
8 Equity appears on the Balance Sheet	10	0	1
9 Accrual accounting is considered to be more accurate than cash accounting	9	1	1
10 All transactions are first recorded in journals	11	0	0

.

The results for the second session also show an increase in the number of correct responses (See Tables 3 and 4). However, statements 1 and 3 showed no improvement or decline, while the number of correct responses for statement 6 was reduced from 3 to 1. Seven of the ten statements showed an increase in correct responses

Table 3. Pre-Instructional Results Seminar 2

Statements	Correct	Incorrect	Didn't know
1 The current ratio is calculated by dividing the current surplus by the current assets	1	2	6
2 The operating margin does not apply to community groups.	1	3	5
3 Horizontal Analysis can only be applied to the Statement of Financial Position	1	1	7
Interest Earned indicates how many time over the interest expense could be paid	0	2	7
5 Return on Assets shows how much would be earned by selling all the assets	2	4	3
6 The Equity ratio shows the amount of equity to surplus	3	2	4
7 The equity ratio is one of the ratios used to determine financial vulnerability	5	0	4
8 The operating margin cannot be used to determine financial vulnerability	4	1	4
9 Vertical Analysis involves the converting of dollar amounts for one accounting period into percentages	2	0	7
10 There are two development expenses ratios.	1	1	7

Table 4. Post-Instructional Results Seminar 2

Statements	Correct	Incorrect	Didn't know
The current ratio is calculated by dividing the current surplus by the current assets	1	7	1
The operating margin does not apply to community groups.	7	2	0
Horizontal Analysis can only be applied to the Statement of Financial Position	1	8	0
Times Interest Earned indicates how many times over the interest expense could be paid.	9	0	0
Return on Assets shows how much would be earned by selling all the assets	3	6	0
The Equity ratio shows the amount of equity to surplus	1	8	0
The equity ratio is one of the ratios used to determine financial vulnerability	9	0	0
The operating margin cannot be used to determine financial vulnerability	7	2	0
Vertical Analysis involves the converting of dollar amounts for one accounting period into percentages	7	2	0
There are two development expenses ratios.	3	3	3

The results recorded in Table 5 show that the participants generally agreed that the scaffolding method used over the two sessions improved their understanding of financial statements. A greater number of participants responded that they agreed with the statements in Table 5 than were unsure or disagreed. Of note are the responses to statements 1 and 2 indicating that a clear majority of participants believed they could better read financial statements and felt that they could now contribute to a discussion about the financial management of their organisation. Statement 4 had the lowest number participants who agreed and the most who disagreed. This result can be explained by the limited time participants had to work through the practical examples. On two of the evaluations was written that the participants had felt that the sessions had been rushed.

Table 5. Evaluation

Statement	Agree	Not sure	Disagree
1 I am better able to read financial statements after participating in the seminar series.	8	1	0
2 I believe that I will now be able to contribute to the discussion about the financial management of our organization.	7	2	0
3 The method of instruction enabled me to understand the analysis of the Statement of Financial performance and the Statement of Financial Position	7	2	
4 The method of instruction has given me confidence to undertake an analysis of our organization's Statement of Financial performance and the Statement of Financial Position.	5	2	2
5 I found that the method of instruction provided logical steps so that I moved from not understanding financial statements to a position of better understanding.	7	2	0
6 I thought the materials were appropriate for my understanding of the topic.	7	2	0
7.I could easily understand the presenter	7	1	1

8 Discussion

Generally the results indicate that using a scaffolding method of instruction to teach volunteer members of a CO to understand the accrual accounting system, to be able to read a CO's financial statements and analyse those statements was successful. The success of the instruction method was substantiated by the increase in correct responses between the pre-test and post-test for both sessions. The conclusion that scaffolding is an appropriate method to teach FMS to CO volunteers was reinforced by their evaluation of the sessions. The result for statement 4 (*The method of instruction has given me confidence to undertake an analysis of our organization's Statement of Financial performance and the Statement of Financial Position.*) on the evaluation does not contradict this assessment. First, a majority of respondents agreed with the statement; second, independently undertaking an analysis of a CO's financial statements is a significant step after only four hours of instruction. In comparison the responses to statement 2, (*I believe that I will now be able to contribute to the discussion about the financial management of our organization.*) are more positive. Statement 2 envisages the volunteer working with others while statement 4 implies undertaking the analysis by oneself.

Statements 3 (*The method of instruction enabled me to understand the analysis of the Statement of Financial performance and the Statement of Financial Position*) and 5 (*I found that the method of instruction provided logical steps so that I moved from not understanding financial statements to a position of better understanding.*) point to the volunteer's perceptions that the scaffolding method contributed to their understanding of the financial statements and their analysis. The growth in understanding of FMS is the basis of capacity building and the development of good governance.

The test results for statement 4 in session 1 and the test results for statements 1, 3 and 6 in session 2 are a reflection of the conditions under which the material was presented. There was a great deal of material to be covered in two sessions of two hours. Two of the participants had noted on their evaluations that the sessions had been rushed. The scaffolding learning cycle particularly undertaking the tasks and the opportunity for elaboration may not have been sufficient. It must also be noted that the instructional material presented in the second session was technically more difficult than the material presented in the first session.

9 Conclusion

The results of the pilot project reported in this paper suggest that a scaffolding method of instruction was successful in developing the FMS of a CO's volunteers. The pilot study has demonstrated that the provision of a short course aimed at improving the FMS of volunteers in a CO can overcome the barriers of cost, time and appropriateness. The course was of four hours duration, not a semester, and it was delivered at a time and location that was convenient for the volunteers. The material covered in the pilot study was specific to the non-profit sector and therefore considered to be relevant by the participants. The pilot study also demonstrated the potential of a targeted FMS course to be the basis of capacity building and the development of governance.

However, it was evident from the test results and the evaluations that the amount of time used for instruction is an important consideration. Sufficient time must be allowed for the task and elaboration phases of the FMS course to be given adequate time if scaffolding is to be completely successful. Future research could examine the impact on results of providing more time. Research also needs to be

undertaken to determine whether the FMS acquired by the participants are used in decision making.

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THE VALUATION OF EXTERNAL PROJECTS BY SOUTH AFRICAN BANKS

A A Tickner*, F J Mostert**, J H Mostert**

Abstract

While banks are in competition to expand their market share, their credit portfolios may become less diversified without adequate reward for the increased risks. Even well-capitalised banks may come under financial pressure when global economic conditions turn. This research paper focuses on the valuation by banks of the clients' projects to determine whether and to which extent the banks are going to provide financing for their clients' projects.
The *objective* of this research evolves around the improvement of financial decision-making by banks when they are valuating the projects of their clients. The objective of this research is achieved by means of a literature study as well as an empirical survey which focuses on the top banks in South Africa. The determining factors which are considered by banks when the projects of clients are valuated, the problem areas experienced by the banks during the valuation process and the adjustments requested by banks are amongst the aspects that are addressed.

Keywords: Adjustments, Banks, Determining factors, External projects, Problem areas, Valuation

JEL code: M

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1 Introduction and objective of research

Banks all across the world have since the 1990s been in competition for market share expansion. This may have put banks in the position of accepting credit portfolios which are less diversified, without being rewarded for the increased risks. Even well-managed banks can come under financial pressure when global economic conditions deteriorate, as many found out in the recent economic recession (De Wet, Van Eyden & Gupta, 2009:1000). Banks should create general as well as specific provisions for possible loans losses which may occur in order to curb financial distress (Gideon *et al.*, 2009:310).

The South African banking sector was not as severely influenced by the global financial crisis, because of the introduction of the National Credit Act, and various other measures put in place by the South African banks and the national government. Competition between South African banks were improved since the 1980s according to Verhoef (2009:197), but the four big groups in the banking sector still dominated the local landscape. She also concluded that the improved competition did not improve the efficiency of the banks.

External projects are investments that are made *by* the clients of banks. The clients may approach the banks in order to obtain the necessary financing for their projects *from* the banks. This research paper is about the valuation of the clients' projects by the banks, to determine whether and to which extent the banks are going to provide financing to their clients. These decisions are of prime importance to banks, because it was concluded that the most important risk factor of a bank is the quality of its loan portfolio (Barnhill, Papapanagiotuo & Schumacher, 2002:433).

The *objective* of this research embodies the improvement of financial decision-making by banks when they are valuating the projects of their clients. The determining factors which are considered by banks when the projects of their clients are valuated and the problem areas experienced by the banks in the valuation process, are amongst the various aspects which are addressed by this research. The objective of this research is achieved by means of the literature

study in the next section, as well as the empirical survey which follows thereafter.

2 Determining factors when external projects are valuated

Various factors should be considered by banks when they are valuating the projects of their clients. The following determining factors are seen as the most prominent factors, focusing on the role of the business plan, the business and financial risks involved, the solvency, profitability, liquidity and net cash inflows of the client's enterprise, the corporate governance of the client's business, as well as the future growth opportunities of the business operations. A brief discussion of each of the factors is given in the following sections.

2.1 The role of the business plan

The process of compiling a business plan forces an enterprise to evaluate its own situation, as well as the possible challenges and scenarios it may face. Smaller firms usually have a tougher time convincing banks to grant loans because of their perceived risks and costs involved (Pretorius & Shaw, 2004:225). This means that small firms need to have an extremely good business plan in order to convince banks to consider their projects and evaluate them to obtain financing. The business plan should contain amongst others detailed information about the external project and the existing enterprise to satisfy the requirements of the banks.

2.2 Business risk of the client's operations

The business risk of an enterprise related to the risk of the operations without taking the financing of the project into account (Brigham & Daves, 2004:489-494 & 994; Firer *et al.*, 2004:536). The variability of the turnover and the selling price, the cost structure and cost-effectiveness, the operating leverage, the capital intensity of the operations and the exposure to foreign exchange rate risk will, amongst others, impact on the business risk of the client's project and its entire business.

2.3 Financial risk of the client's business

The financial risk of an enterprise refers to the additional risk of the equity capital when an external project is financed with debt capital (Brigham & Daves, 2004:494-496). As the providers of debt capital usually receive a fixed periodic interest payment irrespective of the financial performance of the enterprise, the equity capital bears the financial risk (Brealey, Myers & Allen, 2006:458). Banks will, however, be interested in the financial risk of the client's project as it may put the entire business of the client in bankruptcy and the bank may be deprived of its funding.

2.4 Solvency of the client's business

Solvency focuses on the creditworthiness of an enterprise which project is valuated by the bank. Banks will always require a safety margin which is represented by a positive difference between the enterprise's assets and its liabilities (Lambrechts, 1990:119-120). This safety margin together with the ability of the client's business to earn a reasonable return on its capital should indicate to the bank whether it is financially feasible that the loan and its interest will be reimbursed by the client. There are also various critical elements which focus on the management of working capital and fixed assets, as well as the control of expenses, which should be applied to preserve solvency (Bochedi, 2010:19).

2.5 Profitability of the client's business

The return on the capital employed was mentioned in the preceding section to support the solvency considerations of the client's business. The profitability ratios of the client's enterprise reveals the combined result of the fixed and current asset management, as well as the impact of debt financing on the financial operations of the enterprise (Brigham & Daves, 2004:238). Although the concepts of profitability and liquidity differ, the profitability of the client's business over the long run is a prerequisite for the liquidity of an enterprise to reimburse the loan capital and periodic interest payments to the bank.

2.6 Liquidity of the client's business

The capacity of an enterprise to generate cash in the short-term focuses on the concept liquidity and addresses the ability of the current assets to cover the enterprise's current liabilities (Els, 2012:67). It is therefore a much broader concept than only the cash flow considerations of a business. Liquidity embodies the ongoing ability of a business to honour the required payments in the short-term under the assumption that its normal operations are sustained (Lambrechts, 1990:113). The liquidity of the client's business is consequently of prime importance to the bank when the client's projects are valuated. It should be emphasised that the enterprise's liquidity position must be supported by an adequate level of profitability.

2.7 Net cash inflow of the client's business

The *net* cash inflow focuses on the difference between the cash inflow and cash outflow of an enterprise during a particular period. The net cash flow available to the client's business after all payments due are settled, should be of prime importance to banks. This

safety margin indicates how easy the client's enterprise can repay the bank loan and settle the periodic interest payments to the bank. The sustainable growth rate of cash flow should also be taken into account (Burger & Hamman, 1999:101). This represents the rate at which an enterprise can expand while a target cash balance is maintained.

2.8 Corporate governance of the client's business

The governance of the client's business is important as it indicates the organisational, cultural and ethical nature of an enterprise and its ability to reach the stated goals. The emphasis should be on the structure and competence of the board of directors, involving executive, non-executive and independent directors, as well as an efficient audit committee. Aspects which are sometimes deliberately not mentioned by a client when a bank valuates the project of an enterprise, may include excessive salaries and personal expenses by directors and executive managers, as well as unacceptable high staff rewards (Bochedi, 2010:19) Banks should pay due attention to the capability and experience concerning the corporate governance of a client's enterprise when its project is valuated. This determining factor plays an important role in the functioning and success of a business over the long term.

2.9 Future growth opportunities of the business operations

When valuating the project of a client's enterprise, banks should also focus on possible growth opportunities which may be available to an enterprise in the anticipated future. Not only may future development options lead to the expansion of the enterprise, but the increase of business activities may impact on the solvency, profitability, liquidity and net cash inflow thereof. When a bank only focuses on the valuation of the current external projects, it may lead to a short-sighted assessment of an enterprise's financial and operational abilities.

3 Research methodology

The objective of the research paper was already defined as the improvement of financial decision-making by banks when they valuate the projects of their clients. The perceptions of the market leaders of the banking industry in South Africa are therefore of prime importance, as they should provide a pro forma structure for the particular industry. The value of the particular perceptions of the market leaders is however not limited to South Africa. It should also be significant to banking industries in other developing countries with emerging market economies, as South Africa is classified as such and recently became a member of the BRICS countries (MSCI Barra, 2010; SouthAfrica.info, 2011).

The total assets according to the consolidated financial statements of the South African banks were used to rank them in a declining order. The sample of the empirical study consists of top 10 banks which represent more than 99% of the total assets of all the banks in South Africa. The literature study formed the basis of the questionnaire which was compiled. The questionnaire and a covering letter were sent to the chief executives of the 10 banks. One of the executives indicated that his bank was not actively involved in the valuation process of external projects and this bank was eliminated from the sample to avoid the distortion of the empirical results. After following up, executives of the remaining nine banks completed the questionnaires.

The respondents provided answers to some of the questions on a five point Likert interval scale. These answers were weighted as it was explicitly stated on the questionnaire that the five point Likert interval scale forms a continuum (Albright, Winston & Zappe, 2002:224-229 & 245). The answers of the respondents received the following weights:

Answers of the respondents		**Weights assigned**
Extremely important	Always	5
Highly important	Very often	4
Moderately important	Sometimes	3
Little important	Seldom	2
Not important	Never	1

The weights will be applied in the next section which addresses the results of the empirical survey.

4 Empirical results

The empirical results focus on the importance of various factors when banks valuate the projects of clients, the problem areas concerning the valuation of external projects, and how often the various factors will be adjusted by a client at the bank's request. The empirical results obtained from the executives who completed the questionnaires are addressed in the following sections.

4.1 Importance of various factors when valuating external projects

The importance of the various factors when banks are valuating the projects of their clients appears in Table 1.

Table 1. The importance of the various factors as perceived by the respondents when they valuate the projects of their clients

Factors of the client's business being valuated	Extremely important	Highly important	Moderately important	Little important	Not important
The net cash flow of the external project being valuated	7	2			
The expected profitability of the external project being valuated	4	5			
The strength of the balance sheet, in terms of the net assets of the enterprise being valuated	5	4			
The solvency margin of the enterprise being valuated	3	3	3		
The level of risk associated with the particular industry of the external project	5	4			
The number of years of experience which the enterprise has in the particular industry of the external project		8	1		
The role of the business plan in the valuation of the external project	4	4	1		
Particulars of successes or failures of the enterprise being valuated, in their previously executed projects	2	6	1		
The role of competition in the market in which the external project will take place	2	6	1		

In order to have a clear depiction of the answers provided by the respondents, the results shown in Table 1 were weighted as described in Section 3. The following table contains the total weighted scores calculated, in a declining order of importance.

Table 2. The weighted responses on the importance of the various factors as perceived by the respondents when they valuate the projects of their clients, in a declining order of importance

Total weighted score calculated	Declining order of importance	Factors of the client's business being valuated
43	1	The net cash flow of the external project being valuated
41	2	The strength of the balance sheet, in terms of the net assets of the enterprise being valuated
41	2	The level of risk associated with the particular industry of the external project
40	4	The expected profitability of the external project being valuated
39	5	The role of the business plan in the valuation of the external project
37	6	Particulars of successes or failures of the enterprise being valuated, in their previously executed projects
37	6	The role of competition in the market in which the external project will take place
36	8	The solvency margin of the enterprise being valuated
35	9	The number of years of experience which the enterprise has in the particular industry of the external project

The net cash flow of the client's project which is valuated by the bank received the highest total weighted score calculated. As the repayment of the loan and settlement of the periodic interest payments to the bank is of prime importance in this regard, it is not surprising that this determining factor was rated so highly by the respondents.

The following two determining factors in the declining order of importance have the same total weighted score calculated. They are the strength of the balance sheet in terms of the net assets of the enterprise being valuated, which emphasises the solvency thereof, as well as the level of risk associated with the particular industry of the external project, which addresses the associated business risk. Both factors are very important considerations to the responding banks for obvious reasons.

The fourth important determining factor according to the perceptions of the respondents focuses on the expected profitability of the external project being valuated. As previously mentioned, the profitability of the client's business over the long term is a prerequisite for adequate liquidity to make the due payments to the bank.

A business plan must provide detailed information concerning various aspects of an external project and a client's enterprise to meet the requirements of banks. This factor received the fifth highest total weighted score calculated according to Table 2. The respondents therefore have the perception that the role of the business plan is also an important factor when a client's project is valuated.

It is interesting to note that the following four factors are also important according to the respondents, but that they are not at the same level of importance as the factors which were already discussed:

- Particulars of successes or failures of the enterprise being valuated, in their previously executed projects;
- The role of competition in the market in which the external project will take place;
- The solvency margin of the enterprise being valuated; and
- The number of years of experience which the enterprise has in the particular industry of the external project

Possible reasons why these four factors are at the end of the declining order of importance can be as follows:

- Historical successes or failures may be due to causes which may not exist currently and which will not impact on the present external project.
- Competition is quite normal and some level of competition will always be part of any business operation. Competition also impacts on the level of risk associated with the particular industry which was already discussed as one of the second most important factors.
- The solvency *margin* in isolation is not so important. The strength of the balance sheet in terms of the net assets of the enterprise being valuated, was already discussed as one of the second most important factors. This factor addresses the entire aspect of solvency.
- When the number of years of experience which the enterprise has in the particular industry of the external project is inadequate, the know-how can be obtained by employing experts who have superior knowledge concerning the specific industry.

4.2 Problem areas when valuating external projects

The three most important problem areas which each of the respondents perceived when valuating external projects appear in the following table.

Table 3. The three most important problem areas when valuating external projects, as perceived by the respondents

Number of respondents who mentioned the problem area	Problem areas
8	The net cash flow of the external project being valuated
6	The expected profitability of the external project being valuated
5	The strength of the balance sheet, in terms of the net assets of the enterprise being valuated
3	The level of risk associated with the particular industry of the external project
1	The solvency margin of the enterprise being valuated
1	The number of years of experience which the enterprise has in the particular industry of the external project
1	The role of the business plan in the valuation of the external project
1	The role of competition in the market in which the external project will take place
1	The review of all the risk drivers of the external project

The net cash flow of the client's project was mentioned by eight of the nine respondents as a topic which may cause problems during the valuation process. As the emphasis of the valuation should be on the ability of the client to repay the bank loan and meet the periodic interest payments to the bank, problems may be likely to occur here. Possible solutions to solve this problem area should focus on the accuracy of expected cash flow to convince the banks about the external projects' ability to generate adequate net cash flow and to compare the cash flow of similar projects in international markets.

Six of the nine respondents indicated that the profitability of the external project being valuated may also cause problems during the valuation process. As the long-term profitability of a client's business is a prerequisite for an adequate level of liquidity, emphasis will also be placed by banks on this financial aspect. Without acceptable profitability over the long run, liquidity levels may be insufficient to reimburse the loan capital and settle the due interest payments to the banks. The assessment of the factors which affect the sustainability of the external project's earnings should therefore be carefully considered, while benchmarking against the earnings of the particular industry should also help to solve this problem area.

Not only the financial operating results of the client's business should play a role, but banks will also focus on the strength of the balance sheet in terms of the net assets of the enterprise being valuated. The solvency of the client's business may also cause problems as the safety margin provided by the enterprise may not be adequate to the bank, according to five respondents. This problem area may be addressed by proper valuation of the particular assets to determine whether adequate collateral is available to cover the client's responsibilities towards the bank.

Only a third of the respondents mentioned the level of risk associated with the particular industry of the external project. The business risk of the client's project may be too high according to the bank and the client may experience problems to convince the bank about its ability to manage the associated risk. Careful assessment of the prevailing economic, financial and business climate, both domestically and internationally, should indicate the level of risk which can be anticipated.

To conclude, the problem areas which the respondents experience focus mainly on the cash flow, the profitability and the level of risk of the external projects, as well as the strength of the balance sheet in terms of the net assets of the enterprise being evaluated. Accurate projections and valuations of economic, financial and business information, as well as the proper financial assessment thereof should provide solutions to the stated problem areas.

4.3 How often the various factors will be adjusted by the enterprise at the bank's request

Following the preceding section which focused on the problem areas experienced by the respondents, it is clear that various factors will often have to be adjusted by the enterprise at the bank's request. The perceptions of the respondents on how often the

various factors will be adjusted by the enterprise during the valuation process appear in Table 4.

Table 4. How often the various factors will be adjusted by the enterprise during the valuation process at the bank's request, as perceived by the respondents

Factors of the enterprise being valuated	Always	Very often	Some-times	Seldom	Never
The required net cash flow of the external project being valuated	3	3	3		
The expected profitability of the external project being valuated	2	4	2	1	
The employment of applicable measures to decrease the level of risk associated with the particular industry of the external project	1	5	2	1	
The acquisition of experienced employees to increase the experience which the enterprise has in the particular industry of the external project		2	5	2	
The role of the business plan in the valuation of the external project	1	3	4	1	

The perceptions of the respondents according to the preceding table were weighted as described in Section 3. The total weighted scores calculated as shown in Table 5 provides a clear depiction of how often the various factors will be adjusted by the enterprise during the valuation process at the bank's request.

Table 5. The weighted responses on how often the various factors will be adjusted by the enterprise during the valuation process at the bank's request as perceived by the respondents, in a declining order of importance

Total weighted score calculated	Declining order of frequency	Factors of the enterprise being valuated
36	1	The required net cash flow of the external project being valuated
34	2	The expected profitability of the external project being valuated
33	3	The employment of applicable measures to decrease the level of risk associated with the particular industry of the external project
31	4	The role of the business plan in the valuation of the external project
27	5	The acquisition of experienced employees to increase the experience which the enterprise has in the particular industry of the external project

Based on the total weighted score calculated according to the preceding table, the required net cash flow of the external project being valuated must be *most* often adjusted by the enterprise at the bank's request. The expected profitability of the external project is the *second* factor in a declining order of frequency, which must be adjusted by the enterprise at the request of the bank. These empirical results correspond with the two problem areas as indicated by the largest number of respondents according to Table 3. These two problem areas therefore lead to the banks requesting that the enterprises must adjust their submissions concerning the required net cash flow and expected profitability.

The employment of applicable measures to decrease the level of risk associated with the particular industry of the external project, as well as the role of the business plan are respectively the *third* and *fourth* factors in a declining order of frequency which enterprises must adjust at the request of banks. Based on the perceptions of the respondents, the acquisition of experienced employees to increase the experience which the enterprise has in the external project's particular industry is least often adjusted by the enterprise at the bank's request.

5 Conclusions

It was stated in Section 1 that the *objective* of this research embodies the improvement of financial decision-making by banks when they are valuating the projects of their clients. Based on the literature study

and the empirical survey involving nine of the top 10 banks in South Africa, the following important conclusions were made, which should improve the financial decision-making by banks in developing countries with emerging market economies when they valuate the projects of their clients:

(1) The net cash flow of the client's project is regarded as the most important factor when banks are valuating the project, while the strength of the balance sheet in terms of the net assets of the enterprise being valuated and the level of risk associated with the particular industry of the external project are next in the declining order of importance. The expected profitability of the external project which is valuated is perceived as the fourth important factor in the valuation process.

(2) The problem areas which the largest number of banks experience when valuating the projects of their clients are the required net cash flow of the project, the expected profitability of the external project and the strength of the balance sheet in terms of the net assets of the enterprise being valuated. Recommended solutions to solve the stated problem areas are situated in accurate projections and valuations of economic, financial and business information as well as the proper financial assessment thereof.

(3) It is concluded that the required net cash flow of the external project being valuated is most often adjusted by the enterprise at the request of the bank, while the expected profitability of the project is the second factor in a declining order of frequency. It should be emphasised that these adjustments correspond with the two problem areas which were identified by the largest number of respondents. The employment of applicable measures to decrease the level of risk associated with the particular industry of the external project as well as the role of the business plan, are aspects which are less frequently adjusted at the request of banks.

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THE AUSTRALIAN BANKING SECTOR REFORMS: PROGRESS AND CHALLENGES

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Abstract

This paper gives an overview of the Australian banking sector; it highlights the reforms since the 1970s; it tracks the growth of the banking sector in response to the reforms implemented over the past five decades; and finally, it highlights the challenges facing the Australian banking sector. The country's banking sector consists of more than 60 commercial banks, with the Reserve Bank of Australia, the country's central bank, at the apex. Since the 1980s, the Australian government has implemented a number of banking sector reforms in order to safeguard and improve the banking sector. The response to these reforms by the banking sector has been varied. As a result of these reforms, there has been an increase in the number of banks and a decrease in the number of building societies and credit unions. There has also been an improvement in the central bank's oversight of the financial institutions, and an enforcement of the banks' capital-adequacy requirements. Currently, Australia has one of the most developed banking systems in the world. The country has enjoyed a substantial bank-based financial sector development over the years, and its institutional framework has also grown stronger. However, like any other country's financial system, the Australian banking system still faces wide-ranging challenges, such as bank concentration and exposure.

Keywords: Australia, Reserve Bank of Australia, banking sector, reforms

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1 Introduction

The role of banks in economic development is widely acknowledged in the literature. In particular, Schumpeter (1911) put the role of financial intermediation at the centre of economic development. He argued that financial intermediation, through the banking system, plays a pivotal role in the economic development; and it does this by affecting the allocation of savings, thereby improving productivity, technical change and the rate of economic growth. Additionally, banks play a central role in the development of every economy by mobilising resources for productive investments, and by being the conduit for the implementation of monetary policy (Sanusi, 2011).

In support of the importance of banks in the economic growth of a country, Boyd and Prescott (1986) model the critical role that banks play in easing information frictions and therefore in improving resource allocation, while Stiglitz (1985) and Bhide (1993) stress that stock markets will not produce the same improvement in resource allocation and corporate governance as banks. In a separate study, King and Levine (1993) show that bank development helps to explain economic growth in a sample of more than 80 countries. Levine (1999) and Levine, Loayza, and Beck (2000) confirm this finding.

The endogenous growth literature also supports the argument that financial development has a positive impact on growth (Bencivenga and Smith 1991). Well-functioning bank-based financial systems are able to mobilise household savings, to allocate resources efficiently, to enhance the flow of liquidity, to reduce information asymmetry and transaction costs, and to provide an alternative to raising funds through individual savings (Bencivenga and Smith, 1991). In the light of these functions, it may confidently be stated that banks have a positive impact on growth.

In Australia, the bank-based segment of the financial sector plays a crucial role in both financial-sector development and economic development. Australia's banks offer a wide range of financial services to individuals and businesses and play an important role in the economy (Australian Bankers' Association, 2013). The banking system ensures the efficient allocation of resources in the Australian economy, through lending to businesses and individuals. Banks facilitate business through the settlement of funds and the provision of credit to

consumers. They provide 24-hour access to funds and facilities, thereby enabling institutions and individuals to save and invest with safety. Additionally, banks in Australia value the communities in which they find themselves and are committed to giving something back to those communities. Every year, community organisations receive millions of dollars of direct support from banks in various forms. The industry also has a strong tradition of free education in financial skills and in 2003 embarked on a major new initiative in financial literacy (Australian Bankers' Association, 2013).

Although Australia has one of the most developed financial sectors in the world, its financial development, as in other developed countries, is largely driven by the market-based segment. Thus the market-based financial segment tends to overshadow its bank-based counterpart. Despite the important role banks play in the economic development of Australia, the Australian banking sector has not received adequate coverage in terms of research. Not much has been documented on the bank-based segment of the financial sector in Australia, except for fragmented policy documents and a couple of papers, which fall short of bringing out a clear picture of such an important segment (Thomson and Abbott, 2000; Merrett, 2002; Neal, 2004; Kirkwood and Nahm, 2006; Hogan and Sharpe, 2007; Gray, 2008). This paper aims to put the Australian banking sector in the limelight – by providing an overview of the country's banking sector, its reforms, growth and challenges since the 1970s and through to 2010.

The rest of this paper is organised as follows: Section 2 gives an overview of the Australian bank-based financial system. Section 3 outlines the reforms implemented to revitalise the banking sector. Section 4 tracks the growth of the Australian banking sector, in response to the reforms. Section 5 highlights the challenges facing the development of the Australian bank-based financial sector. This is followed by the concluding section.

2 An Overview of Bank-Based Financial System in Australia

The Reserve Bank of Australia (RBA) is Australia's central bank. It conducts monetary policy, works to maintain a strong financial system and issues the nation's currency. As well as being a policy-making body, the RBA provides selected banking and registry services to a range of Australian government agencies and to a number of overseas central banks and official institutions. It also manages Australia's gold and foreign exchange reserves (Reserve Bank of Australia, 2013).

The role and functions of the Reserve Bank are underpinned by various pieces of legislation, which includes the Reserve Bank Act 1959, Payment Systems (Regulation) Act 1998, Payment Systems and Netting Act 1998 and Corporations Act 2001. The Bank is a statutory authority, established by an Act of Parliament, the Reserve Bank Act 1959, which gives it specific powers and obligations. In terms of the Act, there are two Boards: the Reserve Bank Board and the Payments System Board (Reserve Bank of Australia, 2013).

The Reserve Bank Board's obligation is to ensure that the monetary and banking policy of the Bank is directed to the greatest advantage of the people of Australia and that the powers of the Bank are exercised in such a manner as to best contribute to the stability of the currency of Australia. The Payments System Board's obligation is to ensure that the Bank's payments system policy is directed to the greatest advantage of the people of Australia, and that the powers of the Bank under the Payment Systems (Regulation) Act 1998 and the Payment Systems and Netting Act 1998 are exercised in a way that will best contribute: to controlling risk in the financial system; to promoting the efficiency of payments system; and to promoting competition in the market for payment services, consistent with the overall stability of the financial system (Reserve Bank of Australia, 2013).

The history of the RBA dates back to as early as 1911 when legislation established the Commonwealth Bank of Australia, which opened for business in mid-1912. With the Federation of the Australian States into the Commonwealth of Australia, the Australian Parliament assumed power to make laws with respect to banking and currency. The first Commonwealth Bank Act, in 1911, gave the Bank only the ordinary functions of commercial and savings banking. The Bank did not specifically have a central banking remit and it operated as both a savings and a trading bank (Merrett, 2002).

In 1924, the Commonwealth Bank Act was amended and the Bank was given control over the note issue. From this time until 1945 – when there were major changes to the legislation – the Bank gradually evolved its central banking activities, initially in response to the pressures of the depression in the early 1930s and later by formal, albeit temporary, expansion of its powers under wartime regulations. These included exchange control and a wide range of controls over the banking system (Reserve Bank of Australia, 2013).

The new Commonwealth Bank Act and the Banking Act, both of 1945, formalised the Bank's powers in relation to the administration of monetary and banking policy, and exchange control. In 1959, the Reserve Bank Act 1959 preserved the original corporate body, under the new name of the Reserve Bank of Australia, specifically to carry on the central banking functions of the Commonwealth Bank, which had evolved over time. The Reserve Bank Act 1959 took effect from 14 January 1960 (Reserve Bank of Australia, 2013).

There were no major changes in the functions of the RBA until the abolition of Exchange Control, following the floating of the Australian dollar in 1983. There had, however, been a gradual movement to market-oriented methods of implementing monetary policy, away from a system of direct controls on banks. In the five years following the appointment of a major financial system inquiry (the Campbell Committee, in 1979), the Australian financial landscape was transformed to a virtually fully deregulated system. At the same time, the RBA gradually built up a specialised banking supervision function (Reserve Bank of Australia, 2013).

Another inquiry into the Australian financial system, the Wallis Committee, was announced in 1996. There were two major outcomes of this inquiry for the Bank, both taking effect from 1 July 1998. The banking supervision function was transferred from the RBA to a newly created authority, the Australian Prudential Regulation Authority (APRA), which was to be responsible for the supervision of all deposit-taking institutions. The Reserve Bank Act was also amended, to create a new Payments System Board, with a mandate to promote the safety and efficiency of the Australian payments system. New legislation – the Payment Systems (Regulation) Act 1998 and the Payment Systems and Netting Act 1998 – was introduced, giving the Bank relevant powers in this area (Reserve Bank of Australia, 2013).

The Australian banking sector comprises banks, credit unions and building societies – known as Authorised Deposit-taking Institutions (ADIs) – that provide the bulk of banking services to Australian households, businesses and governments. These institutions are prudentially regulated by the Australian Prudential Regulation Authority. Non-deposit-taking finance companies also provide competition in selected consumer credit products (Australian Trade Commission, 2011).

Historically, banking in Australia was tightly regulated. Until as recently as the 1980s, it was virtually impossible for a foreign bank to establish branches in Australia (Australian Bankers' Association, 2012). Consequently, Australia had very few banks when compared with such economies as the United States or Hong Kong. Moreover, banks in Australia were divided into two distinct categories, known as savings banks and trading banks. Savings banks paid virtually no interest to their depositors and their lending activities were restricted to providing mortgages. Many of these savings banks were owned by state governments. Trading banks were essentially merchant banks, which did not provide services to the general public. Because of these and numerous other regulatory restrictions on banks, other forms of non-bank financial institutions flourished in Australia, such as the building societies and the credit unions. These were subject to less stringent regulations, and could provide and charge higher interest rates, but were restricted in the range of services they could offer. Above all, they were not allowed to call themselves 'banks' (Australian Bankers' Association, 2012).

According to the Australian Trade Commission (2011, p.9), Australia has a sound, well- capitalised banking sector to date. Its banks are large by global standards, with a strong retail base, highly developed wealth management capabilities, and full-service commercial, trade finance and corporate advisory operations reaching out into the region.

Australia's retail banking sector is highly concentrated, and may be characterised as an oligopoly (Kirkwood and Nahm, 2006, p. 254). There are 65 banks operating in Australia. The four major domestic banks have the largest market shares in the retail and commercial banking sectors. They accounted for 77.49% of resident assets (A$2.4 trillion) as at September 2010. Other domestic banks accounted for 9.2%, while foreign bank subsidiaries and branches accounted for 13.4%. Australia's banking sector offers opportunities for new entrants providing innovative products and distribution systems. Australian banks are increasingly looking to export their expertise in retail banking, funds management, private banking and distribution to the region (Australian Trade Commission, 2011).

While the major Australian banks have dominant market shares across most consumer finance lines, there is also increasing competition from foreign banks, from regional Australian banks and from non-bank lenders (credit unions, building societies and non-deposit-taking specialist finance companies). Foreign banks are also well represented in the Australian market, with 20 of Forbes' top 25 banking institutions having a presence in Australia. The majority of these foreign competitors are focused on commercial banking and capital market activities, although a number of them are now significant players in the retail banking market (Australian Trade Commission, 2011).

According to Bologna (2010), Australian banks were resilient to the global financial crisis, as a result of good fundamentals and a sound prudential and supervisory framework (Bologna, 2010). Banks were not substantially affected by the crisis on the asset side of their balance sheet, with little exposure to U.S. structured credit products and a limited increase in non-performing loans. On the liability side, banks were successful in rolling over most of their short-term debt in international markets, when markets were impaired after the collapse of Lehman Brothers. The authorities' wholesale funding guarantee and liquidity support helped banks to meet their funding needs (Bologna, 2010). The Australian banks, in the context of a sound and effective supervisory environment, are well capitalised and hence well placed to face the forthcoming regulatory changes on capital (Bologna, 2010).

The growth in banks' profits has, however, slowed in recent reporting periods as their bad and

doubtful debt charges have stopped falling, or in some cases, increased. According to the Reserve Bank of Australia (2012), revenue growth has been constrained by modest credit growth and pressures on margins. Even so, aggregate profitability of the banks remains strong. While there is little evidence over the past year that banks have been imprudently easing lending standards in a bid to boost their credit growth, they are seeking ways to sustain the growth in their profitability, including, in some cases, through cost cutting. Such strategies will need to be pursued carefully to ensure that risk management capabilities and controls are maintained (Reserve Bank of Australia, 2012).

The Australian banking sector regulation is split mainly between the Australian Securities and Investments Commission (ASIC) and the Australian Prudential Regulatory Authority (APRA). ASIC has responsibility for market integrity and consumer protection and the regulation of investment banks and finance companies, while APRA is responsible for the licensing and prudential supervision of ADIs, life and general insurance companies and superannuation funds. These regulators are independent statutory authorities without direct oversight by a government department.

The Australian Bankers' Association (ABA) is also part of the Australian banking landscape. It works with its members – banks – to provide analysis, advice and advocacy, and contributes to the development of public policy on banking and other financial services. The aim of the ABA is to ensure Australian banking customers continue to benefit from a healthy, stable and competitive banking industry.

3 Bank-Based Financial Reforms in Australia

The foundation for financial reforms in Australia was laid some decades ago. According to Grenville (1991), Battellino and McMillian (1989), and Perkins (1989), the financial reform period could be divided into three phases – the first phase being the fully regulated era, which stretched up to the late 1960s; this was followed by the second phase of attempted reform during the 1970s; and thereafter the third phase of the reform, which started during the 1980s.

After the Second World War, the Australian economy was totally protected and regulated for about a quarter of a century. During this period, the Australian Government used its regulatory policies, not only to control the financial system, but also to manage the economy to achieve its desired goals and objectives. For example, during this regulated period, there were direct controls on financial institutions, especially on commercial banks' lending and interest rates. In general, the Australian financial system, until the end of 1970s, was highly regulated (Edirisuriya and O'Brien, 2001).

On the other hand, some other countries, notably the United States, had started to use financial market policies, which were less regulatory. These countries, consequently, discovered the cost of regulation much earlier than Australia. In these cases, the deregulation process started as early as the 1960s. According to Edirisuriya and O'Brien (2001), even though it was apparent that the share of the formal banking sector in the Australian financial system was deteriorating – during this time the non-banking sector was rapidly expanding – nothing happened until the appointment of the Campbell Committee in 1979.

The financial institutions in Australia at the end of the 1980s, a decade after the introduction of financial deregulation, were somewhat turbulent. According to Neal (2004, p.175), deregulation of the banks in the 1980s led to rapid credit growth fuelled by bank lending and the development of an asset-price bubble towards the end of the 1980s. Very tight monetary policy in 1988 and 1989 caused the bubble to burst, and led to some degree of financial instability and a marked weakening of bank balance sheets in the early 1990s.

After implementing the Campbell Committee recommendations, a major structural change emerged in the financial service industry of Australia. During this period, the complexity of the financial markets increased. As a result of this, new challenges to the regulatory system of the country surfaced, giving birth to the Wallis Inquiry (Merrett, 2002).

The Wallis Inquiry was directed to look at almost all the issues confronting the financial system of the country in 1997. The Inquiry was asked to suggest directives to overcome the existing problems, and to find ways of promoting a more efficient and competitive financial system. According to Merrett (2002), the Wallis Inquiry was intended to make a recommendation regarding the creation of a flexible regulatory structure, which would be more responsive to the forces of change operating on the financial system. Edirisuriya and O'Brien (2001) view the findings of the Wallis Inquiry – released in 1997 – as creating a signpost to direct the Australian financial system into the 21st Century. With the publication of this report, significant changes to the financial regulatory structure came into effect on 1 July 1998.

Following a nine-month review process commissioned by the Government in the middle of 1996, Australia commenced reforms to its financial regulatory structure. The Committee of Inquiry, which became known as the 'Wallis Committee', made some 115 recommendations, almost all of which have been subsequently adopted by the Government. The most important of these was the restructuring of the Australian financial sector's many regulatory bodies into just four. The financial regulators now consist of: i) The Australian Competition and Consumer Commission (ACCC) –

responsible for competition; ii) the Australian Securities and Investment Commission (ASIC) – responsible for market conduct and consumer protection; iii) the Australian Prudential Regulation Authority (APRA) – responsible for the prudential regulation of deposit-taking, insurance and superannuation; and iv) the Reserve Bank of Australia – with responsibility for overseeing systemic stability through its influence over monetary conditions, and through its oversight of the payments system.

In Carmichael's (2000) view, although on the surface this appears very similar to structures put in place in the United Kingdom, Japan, Korea and a number of Scandinavian countries, in practice, this system is quite different – and in many ways unique – since it is not based on institutions or products, but rather on regulatory functions.

Another important regulatory development early in the 2000s was the implementation of the Corporate Law Economic Reform Program (CLERP) – which commenced in 1997 and led to the introduction of a number of legislative changes over the subsequent seven years. This was designed to improve the financial infrastructure. Changes included reforms to accounting standard-setting arrangements, audit independence, directors' duties and corporate governance requirements, fundraising and takeover procedures, corporate disclosure requirements, compliance arrangements, provisions for electronic commerce, and shareholders' rights (Davies, 2011).

Further reforms saw the passing of the Financial Services Reform Act in 2001, which took effect on 11 March 2002. This Act gave the ASIC additional responsibility for issues relating to consumer protection and for matters involving foreign exchange contracts, credit and unconscionable conduct. The ACCC retained its administration of consumer protection matters involving health insurance – and for enforcing the competition provisions of the Trade Practices Act in the whole of the financial-service sector (Carmichael, 2000). According to Carmichael (2000, p.13), the role played by the APRA is a very significant one – in changing the financial regulatory environment in Australia. The failure of the HIH Insurance Company in 2001, which was one of the largest insurance companies in the world, had placed substantial pressure on the regulatory system in Australia. As a result, a Royal Commission was appointed by the government, to find out the causes of the failure. The Report of the Commission was published in 2003. Among many recommendations, improvement in prudential supervision by the APRA was a highly significant one (Carmichael, 2000).

In 2006, the RBA set out benchmarks for setting credit- and debit-card interchange procedures for card schemes. The setting of wholesale ('Interchange') fees in the Designated Credit and Debit Card Schemes Standards set out the process for determining a common benchmark for interchange fees in the MasterCard and Visa credit card and debit-card schemes, resulting in interchange rates that were lower than the card scheme rates (Reserve Bank of Australia, 2006).

In a bid to improve competition in the banking sector, the RBA announced further reforms to payment systems – targeting a change in the ATM regime from an indirect charge model to a direct charge model – on 10 December 2008. The reform package came into effect on 3 March 2009 (Reserve Bank of Australia, 2008). This package aimed at delivering significant benefits to consumers, including: making the cost of cash withdrawals more transparent to cardholders and placing downward pressure on the cost of ATM withdrawals; helping to ensure that there would be ongoing widespread availability of ATMs – by creating incentives to deploy ATMs in a wide variety of locations; and thereby providing consumers with choice and convenience. According to the Reserve Bank of Australia (2008), without a change in the current arrangements, the number of ATMs would probably have declined over time, as non-bank deployers found it uneconomic to install and maintain ATMs. Thus, reform promoted competition between financial institutions; and made access less complicated for new entrants, thereby strengthening competition (Reserve Bank of Australia, 2008).

To reassure depositors and investors, and to ensure that Australian authorised deposit-taking institutions (ADIs) were not disadvantaged in their access to wholesale funding markets, relative to banks in other countries, the Australian Government introduced guarantee arrangements for ADI deposits and wholesale funding in October 2008 (Turner, 2011). The Financial Claims Scheme (FCS) provided a guarantee of deposit balances at Australian ADIs, up to a cap that was initially set at $A1 million per depositor per institution, based on the aggregated deposits held in the name of each account-holder. Deposit balances greater than $A1 million, and wholesale funding instruments with a maturity of five years or less were eligible for a temporary government guarantee, for a fee, under a separate Guarantee Scheme (GS) for Large Deposits and Wholesale Funding. In December 2010, the Government confirmed the FCS as a permanent feature of the Australian financial system, and changed the deposit insurance limits to more appropriate post-crisis levels of A$250 000 per person per ADI (Turner, 2011).

In 2011, the Australian financial regulatory authorities further reformed the banking sector. The reforms started with a ban on mortgage exit fees on new home loans from 1 July 2011 – a measure the Australian Banking Reforms (2013) argues would help to boost competition in the home loan market, and would give consumers greater freedom to walk

down the road and get a better deal. From January 2012, lending institutions were compelled by regulation to provide home loan fact-sheets to their customers on request. A fact-sheet provides a standardised layout of information regarding a customer's loan. Because lenders would provide a customer with information in the same way, it would be easier to shop around and compare loans. Through regulation, it has also been made easier to move an everyday transaction account from one financial institution to another. These banking sector reforms stimulated competition among the financial institutions (Australian Banking Reforms, 2013).

In May 2012, the government introduced legislation to amend the Privacy Act (1988) to allow more comprehensive credit reporting. The changes were in response to an earlier Australian Law Reform Commission Inquiry into the application of the Act. In the view of the Reserve Bank of Australia (2012), the reforms aimed to allow credit providers to build a fuller picture of an individual's financial circumstances when determining their eligibility for credit, thereby enabling more accurate assessments of a client's creditworthiness. The reforms also improve consumer protection under the Act, by making it easier for individuals to dispute and correct any errors on their credit file (Reserve Bank of Australia, 2012).

4 Banking Sector Growth in Australia

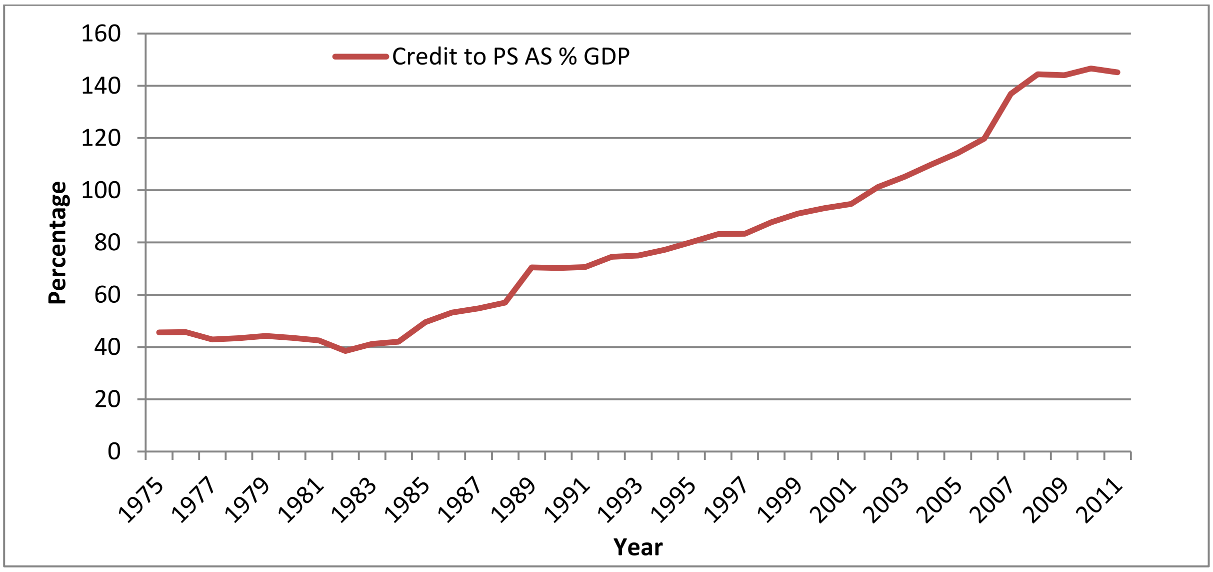
Historically, banking in Australia has been tightly regulated. Until as recently as the 1980s, it was virtually impossible for a foreign bank to establish branches in Australia; consequently, Australia had very few banks when compared with other economies like the United States or Hong Kong. As with many other countries, the great depression brought a string of bank failures. The boom and bust of the 1980s was another turbulent time for banks, with some establishing leading market positions, and others being absorbed by the larger banks (Neal, 2004). The 1990s saw the privatisation of the Commonwealth Bank, and increased competition from non-bank lenders, such as providers of securitised home loans.

Following a string of bank failures, consolidation ensued, as a number of banks were merged, including the takeover of at least one other bank by each of the major banks through the 1990s – by entrenching the already high degree of concentration in Australian banking. According to Neal (2004, p.175), in the latter half of the 1990s, there was pressure from the major banks for further consolidation, with the major banks pressing for the abolition of the 'four pillars' policy – the government ban on a merger between any two of the four major banks. Neal (2004) further lamented that this was partly driven by globalisation and the perceived need for a 'national champion' – a bank that was large enough to compete with other transnational banks on a global scale.

To date, the Australian banking sector has been dominated by four big banks. Competitors of the 'big four' banks include smaller and often regional banks, as well as building societies and mutual credit unions. The number of building societies in Australia is, however, dwindling, as is also the number of credit unions. The APRA put the number of building societies in June 2011 at 10, and the number of credit unions at 103. According to the Australian Bankers' Association (2013), a number of credit unions are adopting the term "bank", in order to overcome any adverse perceptions of smaller deposit-taking entities.

In March 2012, there were 65 banks in Australia (these included Australian-Owned Banks, Foreign Subsidiary Banks, and Branches of Foreign Banks), nine Building Societies and 93 Credit Unions – showing a further reduction in the number of building societies and credit unions from the 2011 figures (Australian Bankers' Association, 2013). The growth of the Australian banking sector is also evidenced by the growth of the private sector credit. In 1975, the credit provided by financial institutions to the private sector was 45.6% of GDP. It, however, remained between 38% and 44% from 1977 to 1984, before increasing to 49.5% in 1985. Thereafter, the Australian private sector credit increased gradually over the years, reaching a peak of 146.6% in 2010 – despite a slight decrease in 2009 in the aftermath of the global financial crisis. In 2011, credit extension to the private sector in Australia was 145.1% of GDP (World Bank, 2012). Figure 1 shows the trends in banking sector growth in Australia during the period 1975 to 2011.

Figure 1. Trends in Banking Sector Growth in Australia (1975-2011)



Source: World Bank Development Indicators (2012)

The non-performing loans in the Australian banking sector, though generally low, have been on the increase since 2006: from 0.2% of total gross loans in 2005 to 0.6% in 2006 and 2007, increasing to 1.3% in 2008, and further increasing to 2% in 2009, and to 2.2% in 2010 and 2011. Australian banks' conservative lending practices, together with robust supervision by the APRA, and the Australian economy's strong performance since the global crisis, have contributed to the low non-performing loan ratio compared with other advanced countries (Jang and Sheridan, 2012). Credit information is relatively easily available to both consumers and banking institutions. Both consumers and institutions have strong legal rights. Table 1 shows some of the banking indicators depicting the development of the Australian banking sector.

Table 1. Growth of Banking Sector in Australia (2000 – 2011)

	Bank Non-performing Loans to Total Gross Loans (%)	Credit Depth of Information Index (0=low to 6=high)	Strength of legal rights index (0=weak to 10=strong)
2000	0.5	-	-
2001	0.6	-	-
2002	0.4	-	-
2003	0.3	-	-
2004	0.2	5	9
2005	0.2	5	9
2006	0.6	5	9
2007	0.6	5	9
2008	1.3	5	9
2009	2.0	5	9
2010	2.2	5	9
2011	2.2	5	9

Source: World Bank Development Indicators (2012)

The growth of the Australian banking sector can also be portrayed by the increasing number of Automated Teller Machines (ATMs). Technological innovations have transformed the Australian financial sector landscape in the past decade, by helping to extend financial services to millions of people. The ATM reforms undertaken by the Australian banking sector during the late 2000s also contributed

significantly to the improved ATM landscape in the country. According to the Australian Payments Clearing Association (2013), there were 30,154 ATMs across Australia in June 2011, an increase of 4.8% or 1,390 ATMs over the previous year. Over the past two years, ATMs have grown by 3,046 or 11%. Only 10 years ago (June 2001), there were 13,289 ATMs. There are now 2.3 times more ATMs than there were 10 years ago (Australian Payments Clearing Association, 2013; Australian Bankers' Association, 2013).

The number of bank branches has also increased for the tenth consecutive year, based on data from the Australian Prudential Regulation Authority (2013). Over the past ten years to 30 June 2011, banks have increased their branch network by 799, or 16.7% to 5,588 branches. The net increase in bank branch numbers has averaged 88 branches per year over the past five years, and 80 per year since the survey began in 2001. The data over the past decade show that the four-year period from 2006 to 2009 saw the number of bank branches increase strongly by 544, an average of 136 branches per year (Australian Bankers' Association, 2013).

5 Challenges Facing Bank-Based Financial Development in Australia

According to IMF (2012a), the Australian banking system was resilient during the global financial crisis. This can be attributed, in part, to intensive supervision and sound regulation; and currently, the banking sector is profitable – with capital being above the regulatory minimums. Despite the IMF's view, the Australian banking sector still faces some challenges. These include bank concentration and exposure.

According to Jang and Sheridan (2012, p.3), banks' main vulnerabilities are their exposure to highly indebted households through residential mortgage lending, together with their sizeable short-term offshore borrowing. Household debt is high, at about 150% of disposable income; but this debt is held mainly by higher income households. Moreover, exposure to high-risk mortgages is small. The potential risks associated with household lending are mitigated by a number of factors – including banks' prudent lending practices and the Australian Prudential Regulation Authority's conservative approach in implementing the Basel II framework, as well as banks' reduction of their use of short-term offshore wholesale funding by increasing deposits and lengthening the tenor of their funding. Nevertheless, short-term external debt remains sizable (Jang and Sheridan, 2012, p.3).

The IMF (2012a) views the concentration and interconnectedness in the Australian banking sector as a challenge. Concentration and interconnectedness mean that idiosyncratic risks could well have a systemic impact. Australia's four major banks hold 80% of the banking assets and 88% of the residential mortgages. The major banks are highly interconnected, as they are among each other's largest counterparties; and their expected default frequencies, from Moody's KMV, are highly correlated (IMF, 2012a). They have grown faster than the banking sector as a whole since the global financial crisis. This is partly due to the acquisition of smaller banks and deleveraging by some foreign-owned banks (Jang and Sheridan, 2012).

According to IMF (2012b), the big four banks share many similarities that could be a cause of risk spreading from one bank to another in the event of a crisis. They are systemically important, which means that difficulties in any one of them would have severe repercussions for the financial system and the economy as a whole (IMF, 2012b). Given their systemic importance, special risk-mitigation arrangements – including more intensive supervision, higher loss absorbency, and robust recovery and resolution plans – would help prevent the failure of major banks. Should such a failure occur, such plans would limit the impact and fiscal costs (IMF, 2012a).

Offshore foreign currency funding is still large, according to IMF (2012b). Australian banks rely on funding from outside the country; and with the crisis in Europe and the global economy suffering, these funding sources are volatile (IMF, 2012b). The turmoil in international financial markets has prompted Australian banks to borrow more domestically. The share of bank bonds issued offshore fell from 78% of the total in 2007 to 60% in 2011. The maturity of offshore bonds has also lengthened, with those maturing in less than a year falling from 80% in 2007 to 56% in 2011.

However, banks' net foreign liabilities, denominated mostly in foreign currency, are still sizeable at 24% of GDP. While almost all foreign currency positions are hedged, in the extreme event that counterparties would fail to deliver, banks might have to obtain foreign currency in the spot market, possibly at unfavourable exchange rates, until they could find a replacement hedge (IMF, 2012a). In addition, the banks could be exposed to rollover risk during such times of stress (IMF, 2012a).

Difficult conditions in the global financial environment may affect banks' overseas asset performance as well, a challenge realised by IMF (2012a). The total foreign claims of the banking system amount to 22% of consolidated assets, of which 6% are cross-border claims. About 40% of these claims are on New Zealand, and a combined 26% are on the UK and Europe, a part of the world that is under financial pressures. According to IMF (2012a), a growth slowdown in New Zealand, which is also a net importer of capital, or an escalation of the sovereign debt crisis in Europe, could impair the quality of banks' overseas assets.

Another challenge is that banks may not see the same level of profitability as that to which they have

become accustomed. Based on the IMF (2012a) assessment, Australian households are saving more, putting an end to two decades of rapid retail credit expansion. In the view of the IMF (2012a), pressure on the net interest margin, which accounts for almost two-thirds of operating income, has the potential to encourage more risk-taking by banks, in order to preserve their profitability.

6 Conclusion

This paper has given an overview of the Australian banking sector; it has highlighted its reforms since the 1980s; it has tracked the growth of the banking sector in response to the reforms implemented over the past five decades; and it has highlighted the challenges currently facing the Australian banking sector. Since the onset of the deregulation era, the Australian Government has implemented a number of reforms, in order to safeguard and improve the banking sector in Australia. These reforms have focused on an improved regulatory structure and surveillance framework, increased risk-management procedures and enhanced corporate governance – in order to strengthen and reposition the banking industry – and to enable it to contribute effectively to the development of the real sector through its intermediation process. In addition, these reforms have also involved a process of substantially improving the financial infrastructure. Although the banking sector has responded positively to some of these reforms, it still faces a number of challenges. These challenges include high bank concentration and exposure to household debt and the Eurozone crisis.

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THE CORPORATE GOVERNANCE DRIVERS: WHAT RELATIONS WITH PERFORMANCE AND RISK? EMPIRICAL EVIDENCE FROM ITALIAN CONTEXT

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Abstract

Considering a sample of Italian firms and defining a good Governance index (gGI), we investigated if there is a relation between the gGI, the performance and the default risk and which governance determinants are most responsible of these effects. To deepen the analysis, the aforementioned relations are also observed by comparing family and non-family firms and the companies more or less active in M&A. We found that the Corporate Governance quality presents some correlations with performance and risk. The non-family companies are better structured, showing a positive correlation between some Corporate Governance drivers and performance and Z-score. Furthermore, the "well-advised" firms in external strategies are able to obtain a better correlation with performance and also a good relation with Z-score****.

Keywords: Corporate Governance; Good Governance Index; Performances; Bankruptcy Prediction; Family Business; Acquisitions

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1 Introduction

The issue of corporate governance has always been interesting for business economics. Several reasons have led scholars to address the above issue. In particular, in the context of management studies, corporate governance may prove to be an important determinant of various aspects of business dynamics. Such aspects can reconnect, for example, to the performance, to the default risk and, nevertheless, to the probability of the future survival of the company. Riskier financial conditions can be determined, in fact, both by inefficient internal dynamics and by general hostile economic conditions (Whitaker, 1999). In this context, the current economic and financial crisis has made companies more vulnerable and more exposed to situations of insolvency. The interest towards the relationship between corporate governance issues, performance and conditions of financial distress is emphasized also by recent cases of corporate governance failure, such as the scandal of Parmalat (Melis, 2005). In particular, this study focused on the mentioned issue researching some possible relationships between the main determinants of the corporate governance of the sampled companies, some performance and default risk indicators.

For this purpose, we proposed a synthetic indicator (good Governance Index-gGI) capable of providing a measure of the quality of corporate governance for companies listed on the Italian Stock Exchange (MTA segment) in 2005-2011, excluding pure financial companies and real estate services companies (Giovannini, 2010; Sraer and Tesmar, 2006; Favero et al., 2006). A more accurate analysis of the impact of governance systems, on one side, and performance and risk, on the other, has been conducted looking at the relationships between some of the parameters used to build the synthetic indicator and some performance and risk measures. The analysis reveals that some key factors of the governance profile – such as the existence of shareholders' agreements, of a Code of Ethics and the presence of non-executive directors – can positively bind with certain performance and business value measures. In particular, the performances were observed focusing on their accounting profile (ROI), on their market trends (CAR) and on the evaluation of the company's ability to create value (Tobin-Q). The financial risk, however, was measured looking at the level of indebtedness (Leverage), and at the Z-Score indicator, developed to classify the sampled firms into financially distressed and non-distressed groups (Altman, 1968).

In these years, the discussion is lively on what may be the best strategies to create value and to "react" to the crisis (Wan and Yiu, 2009; Cartwright and Schoenberg, 2006). Entrepreneurs and policy makers are debating on the real contribution that merger and acquisitions can play on the value creation process (Bigelli and Mengoli, 1999) and on the different factors of attractiveness that a market in recession can present, including the opportunity to deal underestimated targets (Granata and Chirico, 2010). Analyses that involve the observation of the economic system in general, but particularly in Italy, also cannot leave aside the study of family business that represents an essential component of the Italian economic structure. The family business is an "evergreen" research field concerning for example the definition of the "familiness", the relationships between the "familiness" and the performances, the implemented strategies and some other issues. One of the topic moving the debate among scholars regards its possible dynamics of growth of family firms. In this sense, our analysis is based on the evidence stemming from a sample of the Milan Stock Exchange listed companies which made acquisitions in the considered period.

In order to deepen the investigation and to better understand if the particular nature of the companies, or their capacity to pursue external growth strategies, could affect the above mentioned relationships, we analyzed the sampled companies distinguishing them on the basis of their "familiness" (Rutherford et al., 2008) and of their propensity towards the realization of active acquisitions. In this regard, we tried to verify the difference of effects of Corporate Governance variables on performance and risk for family businesses and for companies involved in active M&A deals.

Our major finding is that companies could improve their Corporate Governance quality, especially in the subsample of family business: they detected a lower value of the good governance index, although the index value could be influenced by some specific drivers connected to the "familiness" (i.e. Executive Independent, CEO). Moreover, we should point out that the non-family companies are better structured, demonstrating a greater protection of minorities and opening to the outside.

We can highlight a positive correlation of gGI values with Tobin Q in static analysis. For this reason, we can observe that the Tobin Q is the only parameter that manages to capture a relationship. The "well-advised" firms in external strategies are able to obtain a better correlation with performance and a less probability of default (Z-score).

Observing the aforementioned relationships for the identified subsamples, we can find that a greater acquisition activity[1] is correlated with a lower probability of failure (Z-score) and with a positive sign of CAR. Among the other results, which will be discussed later, we mention that the non-family firms, that present a better gGI, show a lower probability of default.

The paper is structured as follows. After a definition of a theoretical framework, we illustrate our research hypotheses. Then, we describe the data collection process, the variables used in the empirical analysis and the statistical methodology. In the last parts, we discuss our findings and the limitations of our study. Again, we highlight that this work is a first step in the overall research, a work in progress: the study, in fact, is proceeding with an expansion of the sample, introducing a benchmark with the companies of other countries.

2 Literature and research hypotheses

The quality of Corporate Governance models, imposed by a legal system or Auto Disciplinary Code, may be important for the proper functioning of the economic system (Roe, 2004). Some studies confirm that improvements in corporate governance practices and rules, as the awareness and active involvement of all components of the business community (Brown and Caylor, 2006), can increase the economic efficiency (World Bank, 2001). In the context of the different Corporate Governance definition, we mention the interpretation elaborated by Baghat et al. (2010: p. 1806) that put the rules of good governance first as an investment and therefore the importance of the measurement of its effects: *"Corporate governance is the set of processes that provides an assurance to outside investors of a fair return of their investment"*.

Performance, accountability and supervision are interdependent dimensions: managers and Boards of Directors – being "measured" continuously for the results obtained by the company under their guidance – should improve their performance, helping the business to grow. There has been renewed interest in the Corporate Governance practices of modern corporations, particularly in relation to accountability, since the high-profile collapse of a number of large corporations during 2001-2002, most of which involved accounting fraud. In fact, many corporate crises were caused by deficiencies, or even the absence, of controls: the importance given to Corporate Governance issues by the owners and the managers, as well as by the market and the legislator, have grown considerably (Baghat and Bolton, 2008; Barontini and Caprio, 2006). In recent years the Corporate Governance issues are focusing on interest of scholars and practitioners, stimulating a cross-culture discussion, investing finance scholars, economists and jurists. A search for "Corporate Governance" found a lot of titles, that analyzed the different matters, but one of the most important issue is the need to "measure" the quality of firm's Corporate Governance and the effects that a good practice may have on performance and on the level of risk, especially on the default risk. In literature, there have been innumerable studies examining the Corporate Governance best practices (Black, 1999; Lipman and Lipman, 2006; Tarantino, 2008; Zaffron and Logan, 2009) and the impact on performance, using several parameters. The issue of measurement

[1] It is important to underline that the more active in corporate acquisition companies feel the need to draw up a Code of Ethics.

of Corporate Governance is still very delicate and discussed (Romano, 1996; Bhagat and Black, 2002). In fact, it is a matter of great importance for academics and for investors. There is still not today a unique universally adopted methodology and a unique meaning of Corporate Governance (Bhagat et al., 2008; Colarossi et al., 2008). The studies of Gompers et al. (2003) have opened a new thread pointing to the creation of firm level Corporate governance indexes (G-Index), that can concentrate the contribution of different drivers of the Corporate Governance quality. The use of an index, as an aggregated measure of Corporate Governance quality, allows scholars and professionals to enjoy a significant advantage, because they can relate the Corporate Governance with companies' performance indicators. After these studies there have been other contributions that have banked some simplification (Cremers and Viany, 2005; Bebchuk et al., 2009; Brown and Caylor, 2006) or to consider the country policy regulation (Bubbico et al., 2012) (Tab. 1).

Table 1. Most important Corporate Governance Indexes in literature

CORPORATE GOVERNANCE INDEXES	AUTHORS	NUMBER OF DRIVERS
Governance Index (G)	Gompers, Ishii and Metrick, 2003	24
Alternative Takeover Protection Index (ATI)	Cremers and Vinay, 2005	3
Gov-Score Index and Gov 7	Brown and Caylor, 2006	51 and 7
Entrenchment index (E) and Other Provision Index	Bebchuk, Cohen and Ferrel, 2009	6 and 18
Corporate Governance Index (CGI)	Bubbico, Giorgino and Monda, 2012	76

These indexes are similar but different at the same time, both in terms of number and of kind of included drivers. It is obvious that considering a wide range of factors a more indicative index and a more accurate firm's Governance measurement can be produced. On the other hand, it is also true, however, that adopting a more limited number of provisions makes the index far more practical, easier and faster to find all the information necessary for its construction. It will focus more attention on those few, but more reliable and relevant.

For this reason, in this work a Corporate Governance index (good Governance Index-gGI) was built and tested, adjusted to Italian enterprises, considering the peculiarities of the national context. The main cognitive goal is to evaluate the minority protection, as well as the level of openness towards investors, especially private equity funds, that have become an important partner for financial support to enterprises' strategies. Private equity funds can produce significant advantages for businesses, including credibility, improvement of rating, higher visibility and increasing corporate communications, better access to community and international contributions: in essence, they stimulate a well-structured governance (AIFI, 2013).

Another factor of interest is the study of the relation between the level of good governance with the performance and the financial risk. In academic empirical studies of the relationship between Corporate Governance and performance we can identify two research fields. In the first case, the analysis is centered in the study of Governance effects, such as unitary complex of choices of Government, for the creation of business value. The second group of studies, on the other hand, focused on the drivers of Corporate Governance (specifically the Ownership structure, the Size, Composition and Turnover of the Board of Directors and the Control System) and the performance (Romano, 1996; Baghat and Black, 2002). Despite widespread belief in the importance of governance mechanisms for resolving agency problems (Jensen, 1988), the empirical literature, investigating the effect on corporate performance, has not been able to identify a unique effect. Although Gompers et al. (2010), Brown and Caylor (2006) and Bebchuk et al. (2009) found a positive associations between their indexes' rankings of governance quality and firm performance, correlations are obviously not causation. Subsequent works have even questioned whether a positive association truly exists (Cremers and Nair, 2006; Lehn et al., 2006; Core et al., 2006).

In addition to these studies, we considered further research that has occupied the theme of the relationship between good Governance practices and corporate performance.

A first example was a survey (McKinsey, 2000 and 2002) highlighting that about 80% of investors would be willing to pay a premium for well governed companies, with a majority of external, independent advisors. The amount of the premium, according to the survey, should be a minimum of 11% for Canadian companies, to a maximum of 40% for those companies operating in countries with a less strong State regulation.

Other studies have also found a link between the quality perception of the company and the stock returns. For example, in research on consolidated profit in five years, led by the American Magazine Fortune, it was shown that in "much admired" companies presented a consolidated profit of shares in five years equal to 125%, compared to the 80% of those "less experience".

In an economic situation in which there is a "struggle for existence" (Lee and Yeh, 2004; Hui and Jing-Jing, 2008) a strong debate began about the relationship between Corporate Governance and default risk. Among the many reasons that led a company to a crisis, a large literature highlighted the ineffective and inefficient management and control systems: the problems related to Corporate

Governance as a bad "governum" (Mumford, 2003; Wright et al., 2002). The seriousness of the causes of decline is expressed by poor economic performance and often resulting in loss of value for the companies. The outlook of the company is not favorable and the degree of risk is ever increasing (Mariani and Panaro, 2012). More attention has been given to the study of systems and instruments that can be adopted in the prevention, diagnosis of corporate crisis (Lappalainen and Niskanen, 2009). In literature on corporate finance there are numerous works on problem analysis and forecasting crisis (Altman, 1977, 2000, 2002; Altman and Hotchkiss, 2006; Beaver, 1966 and 1968; D'Annunzio and Falavigna, 2004; Friedman, 1977; Hui and Jing-Jing, 2008; Lee and Yeh, 2004; Mumford, 2003).

In this framework, we considered relevant to verify the existence of a relationship between the quality of corporate governance system – defining a Corporate Governance Index – and the corporate performances e the default risk (Altman, 2000; Platt and Platt, 2002). For this purpose has been formulated and tested the following research hypothesis:

H1: There is a relationship between the quality of Corporate Governance and performance and default risk.

A more in-depth analysis of the relationship above hypothesized, requires the identification of the different Corporate Governance drivers influence on performance and risk. In accordance with Agency Theory, we can highlight that a widespread share ownership could determine a reduction of involvement or even the difficulty for the owner to exercise effective control over the management (Jensen and Meckling, 1976). Studies in this area have shown, albeit with obvious simplifications and limits, a positive trend in support of the theory of the agency costs, highlighting how the presence of an active shareholder reduces the tendency of managers to pursue private interests and to promote value creation. Yet, Bhagat and Bolton (2008) found a significant positive relationship between performance and ownership. The decisive balance of studies found none between Directors independence and performance, shown by accounting parameters or stock return measures (Romano, 1996; Bhagat et al., 1999). In this sense, therefore, it would seem useful in terms of Good Governance to take an ownership structure that requires a principal owner and not an overly fragmented one (La Porta et al., 2000).

The relationship between voting rights and performance has not been as extensively studied as that of board composition. Not surprisingly, some studies showed that voting rights are economically quite valuable (Gompers et al., 2010; Zingales, 1994). Other researches (Forbes and Milliken, 1999) investigated the correlation between the size of the Board and the corporate performance, and not all had the same empirical results. In fact, there are studies claiming that the increasing of the numbers of members can determine new strategic opportunities, with advantages in terms of performance. Other studies showed that the benefits emerging from an increasing size of the Board produces lower costs due to major decision-making and organizational complexity of Corporate Governance (Lipton and Lorsh, 1992).

Further studies, concerning the relationship between the components of the Board of Directors turnover and business performance, went on to analyze the optimum composition of it in relation to the number and the impact of the independent Directors in terms of value creation (Li and Harrison, 2008; Bhagat and Black, 2002; Mork, 1988).

Ample space is also occupied by studies and research relating to the issue of internal controls. The presence of an effective control system facilitates the convergence of different interests within the company. According to these studies, there is a positive correlation between higher level of independence and technical expertise of internal control bodies and value creation (Chan and Li, 2008). The studies of Bennedsen et al. (2009) provide direct evidence that CEO actions can have a meaningful impact on performance. In order to deepen the cited debate, we can define the second research hypothesis:

H2: There is a relation between the Corporate Governance quality drivers and performance and default risk.

Although in several countries, the most common large shareholder are families (Anderson and Reeb, 2003; Villalonga and Amit, 2006), it should be noted that in Italy the presence of family businesses has spread in a more marked way than in other countries (Corbetta and Salvato, 2004; Gnan and Songini, 2003; Gnan and Montemerlo, 2008). In recent years, the studies on this topic have multiplied, more often supported by empirical analysis, to deepen the "definition dilemma" (Rutherford et al., 2008; European Commission, 2009; Toma and Montanari, 2010) and the impact that the family role could express on performance and on corporate governance quality (Litz, 1997; Miller et al., 2007; Chrisman et al., 2010; Sharma, 2011; Pearson and Lumpkin, 2011). The first crucial question is what a family business is. The "definition dilemma" is somewhat debated and still able to produce controversy. As it is well known, it is not possible to find an unambiguous and generally shared definition of family business. Being a family firm depends on different aspects. Some studies define a firm as a family business considering the sole extent of interest owned by the family (Donckels and Frohlich, 1991). In a progressive evolution scholars have additionally considered the presence of family members also in management (Astrachan and Shanker, 2003; Babicky, 1987; Chrisma et al., 2004; Churchill and Hatten, 1987; Davis, 2007; Dreux, 1990; Donnelley 1964; Handler 1990; Holland and Boulton 1984; Holland and Oliver 1992; Lyman, 1991; Litz, 1995; Pratt and Davis, 1986). The development of a synthetic indicator capable of representing the degree of family involvement in the firm is a possible solution to understand the different aspects (Astrachan et al., 2002, Klein et al., 2005). The importance of family business has sparked a growing body of studies that focuses on the governance of these companies. Aside from defining problems, we must emphasis that family firms are unique because the corporate

governance is largely determined by family control. In fact, in terms of governance, ownership concentration may alleviate the agency problems from dispersed shareholdings (Miller et al., 2010). The challenge is that families may steer firms towards decisions that favor them at the expense of minority shareholders (Becht et al., 2003). The family organization can play a crucial role in decision making. At the most general level, family governance determines the type of interactions between the family and the firms (such as Ownership, Board of Directors, and Management). Bennedsen et al. (2007) provide stark evidence that the characteristics of the family behind the firm can affect succession decisions and performance. The existing literature provides few clues into the specific ways in which family firms use their characteristics or structure to affect value (Caprio et al., 2011). Direct tests on the effect of governance in family firms are rare in literature and it can be an attractive area of research for the future. In this discussion we can analyze the third research hypothesis.

H3: The relation between Corporate Governance quality drivers and performance and default risk is different for family and non-family firms.

As previously noted, the corporate governance quality can influence the company strategies and M&A activity is a fundamental strategy for growth, for value creation and sometimes for the enterprise survival (Bigelli and Mengoli, 1999; DePamphilis, 2012; Healy et al., 1992; Heron and Lie, 2002; Teece et al., 1997;). In fact, many multinational companies today are the result of M&A between two or more companies (Arnold, 2013). The high incidence and volume of mergers and acquisitions highlights their importance to the economic context of the firms operating in different countries. The literature on M&A is extensive. Several studies argue also that corporate acquisition is one of the mechanisms by which companies gain access to new resources through redeployment, increase revenues, efficiency and cost reduction. The realization of M&As, as known, promotes the achievement of market, operating and financial synergies (Sirower, 1997; Sirower and Sahni, 2006) by combining the resources of the two merging companies. Another kind of synergy discussed in the academic literature results from the improvement of the target firms' corporate governance. A hostile acquisition can be considered an important corporate mechanism to correct opportunistic managerial behavior. However, a "good governum" can influence the success of these operations. In fact, M&A activity is sometimes mentioned as the outgrowth of corporate governance failure. This is because numerous empirical studies showed that a substantial proportion of M&As destroy corporate value. The failure of an acquisition (Kalpic, 2008; Marafioti, 2005) is, in most cases, attributable to the managerial inability and lack of a strategic management. Murphy, Shleifer and Vishny (1991) cited agency problems between management and shareholders as the main driver of such value destroying acquisitions. Self-interested managers may engage in M&A activity to achieve their personal objectives, such as "building an empire", at the expense of shareholders value (Jensen, 2005). So the fourth research hypothesis:

H4: The relation between Corporate Governance quality drivers and performance and default risk may be different for companies with a higher or a lower propensity to M&A activity.

Since some transactions may result in value destruction if there is a conflict of interest between management and shareholders of the bidders, we can argue that the Corporate Governance quality is a crucial issue for institutional shareholders that are determined to finance M&As and to complete restructuring operations. Institutional shareholders generally agree on the core principles of corporate governance and what might be deemed to be good governance. The level of balance between the rights of shareholders and managers and the opening degree of management and control structures are important for institutional investors, who would be willing to recognize a premium for well governed companies (Mc Kinsey, 2002): in essence "*the need of openness*" (Gubitta and Gianecchini, 2011).

3 Methodology

3.1 Data collection

The analysis is based on the evidence stemming from a sample of the Milan Stock Exchange listed companies. The sample includes all the companies which were listed in each year from 2005 to 2011 and which realized at least one acquisition in the period, excluding pure financial companies and real estate services (Giovannini, 2010; Sraer and Tesmar, 2006; Favero et al., 2006). The sample dimension is of 98 units.

It was necessary to merge several data sources in order to build an exhaustive database to analysed different aspects:

1) to provide measures on the number of mergers and acquisitions operations;
2) to calculate performance indicators;
3) to identify family businesses;
4) to measure the market value of the company;
5) to assess the financial risk of the company.

Accounting data was drawn from the Financial Statements of the companies, the DataStreem and AIDA databases and from the companies' web-sites. Information about corporate acquisition activity was taken from the Zephyr files. The Borsa Italiana and YahooFinance website provided data on the companies' share prices and Corporate Governance Relations. Gathering data on "familiness" was particularly demanding. Most of information was drawn from the companies' corporate governance reports and from the Consob files. In some cases, it was necessary to consult the company's web-site and/or journalistic data sources.

3.2 Variables description

We describe, below, the other variables used for the empirical analysis.

3.2.1 Familiness

In this paper, we distinguished the family firms from other companies, using variables well-suited to expose the characteristics of the Italian economic context and unambiguous in their definition (Astrachan et al., 2002). First, we introduced a criterion regarding ownership and management at the same time, i.e. a dichotomous variable "familiness" (equal to 1 in the case of family businesses, 0 otherwise). According to this interpretation, the following were considered family businesses (see table 2):

- Companies where family members own a majority interest equal to at least 50% + 1 of the equity capital (family presence in the property).
- Companies where at least one member of the family (major owner) holds a business interest not smaller than 20% (Klasa, 2007: p. 346) and at least one member of the family is part of the Board of Directors (family presence in ownership and in administration).

The criterion "family presence in the property" includes in the group of family businesses all companies in which control is permanently held by the family (regardless of the fact that there are family members in the Board of Directors), for which there is no possibility of involuntary loss of control rights as a result of passive takeovers. The choice of a high threshold (absolute control) of the share capital is based on the characteristics of Italian companies. The Italian context, is characterized by companies with more concentrated ownership with respect to the Anglo-Saxon benchmark, especially in the case of family businesses (Favero et al., 2006; Granata and Chirico, 2010).

The second condition (family presence in ownership and in administration) is designed to include, in the sample of family companies, firms that are not completely controlled by the family capital. So we considered the presence of family members both as shareholders and as directors. In other words, if the family does not have absolute control, the family presence is required on the Board of Directors too. The aforementioned condition is also in line with Corbetta and Tommaselli (1996) and with Klein (2000). These authors stress that family participation in business can be inferred from the family control of the capital or, if the controlling stake is not held by the family, from the degree of influence of family members on the management.

Table 2. Family business identification criteria

		Ownership		
		family member = 0	family member = 1	family member > 1
Management	family member = 0	Non family	Non family	Family**
	family member = 1	Non family	Family*	Family*
	family member > 1	Non family	Family*	Family*

* if family stake is > 20%, ** if family stake is > 50%

3.2.2 Corporate governance index

The purpose of Good Governance Index (gGI) is to identify the level of openness to new shareholders and to measure the degree of protection to minority shareholders. We introduced the different elements of Governance that could contribute to this aim (tab. 3).

Each of these Corporate Governance variables, except those relating to the existence of shareholders' agreements and Auto Disciplinary Code, serves as a dummy variable — we can assign to it a value of 0 or 1. Since the purpose of the indicator of "good governance", as anticipated (to measure the degree of protection of minority shareholders and the company's opening level at the entrance of new members), assigning values to these variables follows this simple and logical policy: we will assign the value 1 to the variable object of analysis if it reflects a greater degree of openness to new members or input of greater protection of minorities. While, we assign the value 0 in the opposite case. With regard to shareholders, it was decided to assign the values 0 or 1, -1, while for the adhesion to the Auto Disciplinary Code has opted for assigning values 0, 1 or 2.

3.2.3 Performance

In order to assess the relationship between the quality of the corporate governance system and the performance, we considered two different performance indicators referred to the economic and financial status of the companies and to their market prices, as described below:

- ROI (Return On Investment) as accounting performance variables;
- CAR (Cumulative Abnormal Returns) used as market performance indicator (Masulis et al., 2007), obtained, on an annual basis, as the sum of monthly returns of stock prices compared with the FTSE-All Share Italy:
-

$$CAR = \sum_{t=1}^{12} \left[\frac{p_t - p_{(t-1)}}{p_{(t-1)}} - \frac{Ftse_t - Ftse_{(t-1)}}{Ftse_{(t-1)}} \right]$$

- Tobin-Q is the ratio of the market value to book value and it is calculated as follows: (total assets – equity book value + equity market value)/total assets. Where equity market value is represented by market cap.

Table 3. The Good Governance Index (gGI)

Corporate Governance Variables	**SCORE**
Administration Model	
Traditional	1
one-tier system	0
two-tier system	0
Auto Disciplinary Code	0 if not present 1 if partially present 2 if present
Code of ethics	1 if present; 0 if not present
Non-executive directors	1 independent; 0 dependent
Executive directors	1 no family member; 0 family member
Board of directors	1 if present; 0 if not present
Board audit committees	1 if present; 0 if not present
Compensation committees	1 if present; 0 if not present
Nomination Committee	1 if present; 0 if not present
Stockholders' agreement	0 if not present; 1 if for minority protection; -1 if for majority favor
Minority expressed Directors	1 if present; 0 if not present
Corporate Agreement or veto of Private Equity	1 if present; 0 if not present
Private Equity Directors	1 if present; 0 if not present
Nonvoting Stock	0 if present; 1 if not present
Chief Executive Officer (CEO)	1 external; 0 family member

3.2.4 Financial risk

We focused also on the company's risk profile. In this analysis, were considered indicators of financial risk represented below:

- Leverage (Debt/Equity) as financial risk indicator;
- Z-Score as default risk indicator. The Z-Score model consists in a linear analysis in that five measures are objectively weighted and summed up to define an overall score that represents the basis for measuring the risk of bankruptcy (Altman, 1968). We decided to use a revised version of Z-Score to represent the characteristics of Italian companies better (Bottani et al., 2004): Z-Score = (1,981*Working Capital/Assets) + (9,841*Retained Earnings/Assets) + (1,951*ROI) + (3,206*Equity/Assets) + (4,037*Return On Sales). The operating nature of the components described above, make the Z-Score more capable than other indicators to explain the risk linked to the operational aspect of the business.
- M&A: number of active operations concluded.

3.3 Statistical analyses and results

The aim of our analysis is to understand if and how corporate governance features can influence the performance and the risk of Italian listed companies. To do so, we collected a sample of 98 companies listed on the Italian Stock Exchange Market since 2005 to 2011, that had an active role in corporate acquisitions. For each of them we collected information about corporate governance features, performance, risk and other data that we used to cluster the sample. Being aware of limitations due to this choice, we used a simple least square approach, in order to preserve easy and immediate understanding of results. First of all, we tried to build a synthetic index able to reflect corporate governance quality for each company. We listed 15 corporate governance features and built a matrix A_{mxn} (m = 98 is the number of companies and n = 15 is the number of corporate governance features considered). Each element of A, that is A_{ij}, is equal to 1, if company i has corporate governance feature j, otherwise if not present 0. The synthetic index of corporate governance is simply given by the row-wise sum of the matrix A. In the following Fig. 1 we displayed the distribution of gGI, that, as we can easily check, seems to be Gaussian. gGi index has a mean of 9.16 and a standard deviation of 1.72; the mode is 10 whereas the median is 9.

In order to discover if different corporate governance frameworks are responsible for different company performance and risk, we regressed companies performance indexes (ROI, CAR and Tobin Q) and companies risk indexes (Z-Score and leverage) versus our synthetic index gGI. We carried out two types of analysis: statical and dynamical. In the first one, we regressed the value of performance and risk indexes concerning the 2011 versus the gGI. In the latter, we analysed the correlation of the trend of performance and risk indexes of the last 6 years versus gGI. The static analysis highlighted a lower correlation (tabb. 4-5).

Figure 1. Distribution of Good Governance Index (gGI)

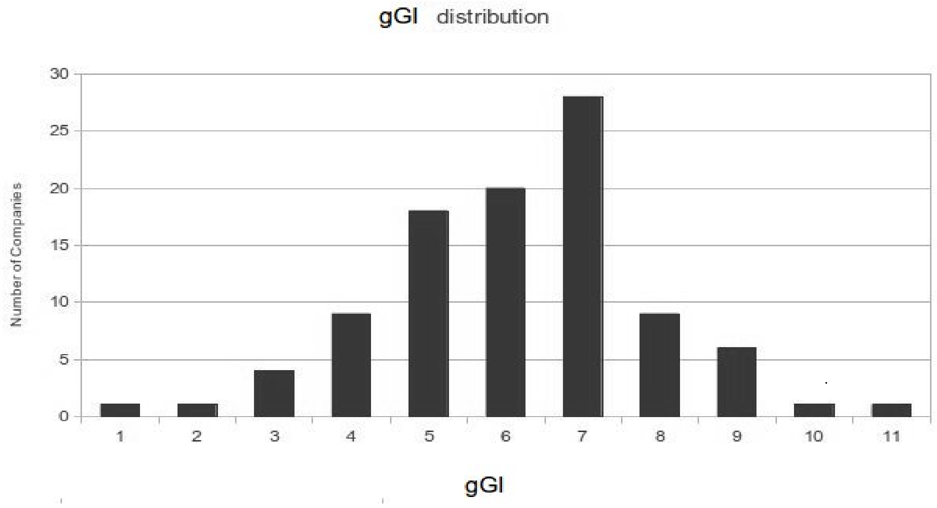


Table 4. Relation between Corporate Governance Index (cGI) and Performance. Static regression results

ROI vs. gGI	Beta	Standard Error	P-value
Const.	0,0254417	0,0460528	0,5823
gGI	−0,00423439	0,00494937	0,3950
Tobin Q vs. gGI	**Beta**	**Standard Error**	**P-value**
Const.	0,258493	0,143490	0,0758 *
gGI	0,0313410	0,0154371	0,0460 **

Table 5. Relation between Corporate Governance Index (cGI) and Risk. Static regression results

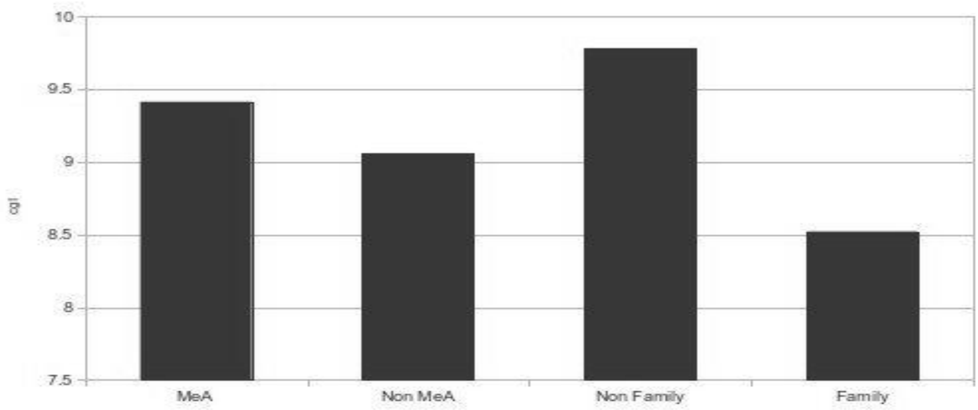
Leverage vs. gGI	Beta	Standard Error	P-value
Const.	1,21931	0,877316	0,1688
gGI	0,00937297	0,0943842	0,9212
CAR vs. gGI	**Beta**	**Standard Error**	**P-value**
Const.	-6,30081	7,24143	0,3864
gGI	0,541032	0,776819	0,4878

As we can see, only in the regression versus Tobin Q, gGI Beta is significantly different from 0 and shows a positive correlation between Tobin Q and gGI. Dynamical analysis shows insignificant correlations between performance/Risk indexes and gGI. We omit the results for brevity. The poor explaining power of our model can be due to the strong heterogeneity of the sample. To avoid this problem we clustered the sample using some a priori knowledge. More precisely, we separate companies whose number of merging and acquisition activities is under the mean from companies very active in M&As and family from non-family business (Fig. 2).

Considering the number of M&A procedures, companies who are above the mean are 29, with an average gGI of 9.41 and gGI standard deviation of 1.59. Companies who did a number of M&A procedures smaller that the mean are 69 and have an average gGI of 9.05 and a standard deviation of 1.77.

Non-family business sub sample is composed of 50 companies with an average gGI of 9.78 and gGI standard deviation of 1.89; 48 companies composing of family business sub sample have an average gGI of 8.34 and gGI standard deviation of 1.72.

Figure 2. Value of gGI for different subsamples



In the following we show only significant results for the four subsamples.

Table 6. Relation between Corporate Governance Index (cGI) and Performance in companies more active in M&A

CAR vs. gGI	Beta	Standard Error	P-value
Const.	0,373989	0,222303	0,1040
gGI	−0,0435213	0,0232948	0,0726 *

Table 7. Relation between Corporate Governance Index (cGI) and Performance in companies less active in M&A

Tobin Q vs. gGI	Beta	Standard Error	P-value
Const.	0,201879	0,182826	0,2747
gGI	0,0371954	0,0197842	0,0658 *

As we can see, correlation between gGI and Tobin Q seems confirmed for companies who made fewer M&As, whereas, for the more active companies this correlation disappears, it is replaced by a small negative correlation between CAR and gGI.

Family/Non-family subs samples do not show significant results.

To understand better which Corporate Governance component influences performances and risk, we regressed each single component of gGI versus both static and dynamical performance and risk indexes. We carried out the analysis for the whole sample and for four sub samples as before: high M&A/low M&A and Family/Non-family business.

We summarized significant results in table 8.

Table 8. Relation between different drivers of Corporate Governance Index (cGI) and Performance in the whole sample (Delta before index name indicates the trend of the index in last six years)

Parameters	Corporate Governance drivers	Beta	Standard Error	P-Value
Tobin Q	Shareholders' agreements	0,120926	0,0558514	0,0336**
Z Score	Executive directors	18,0959	9,69341	0,0659*
CAR	Board audit committees	8,14818	3,53234	0,0232**
Delta Tobin Q	Non-executive directors	−6,86202	3,55479	0,0565*
Delta Z Score	Shareholders' agreements	3,85124	1,87267	0,0425**
Delta CAR	Code of ethics	−0,281618	0,0969400	0,0046***

Results for the whole sample show that six corporate governance drivers seem to affect performance\risk indexes, two of which with a negative beta (Non-executive directors, Code of ethics). It is interesting to highlight that same dependent variables are affected by different corporate governance drivers if we consider static or dynamic variables.

Table 9. Relation between different drivers of Corporate Governance Index and Performance in family business (Delta before index name indicates the trend of the index in last six years)

Parameters	Corporate Governance driver	Beta	Standard Error	P-Value
ROI	Executive directors	−0,0559147	0,0250111	0,0310**
Tobin Q	Auto Disciplinary Code	0,115830	0,0598827	0,0602*
Tobin Q	Non-executive directors	0,133420	0,0713513	0,0688*
Z Score	Board audit committees	−9,22987	2,38871	0,0004***
Z Score	Non-executive directors	5,26496	2,35149	0,0308**
Delta CAR	Code of ethics	−0,196581	0,116047	0,0970*
Delta CAR	Traditional System	−0,957447	0,294817	0,0022***

Subsample composed by family business companies shows seven significant correlations, four of which with negative beta. Differently from the whole sample ROI seems to be affected, negatively, by the presence of executive directors (tab. 9).

Table 10. Relation between different drivers of Corporate Governance Index and Performance in non-family business (Delta before index name indicates the trend of the index in last six years)

Parameters	Corporate Governance driver	Beta	Standard Error	P-Value
Tobin Q	Board audit committees	0,546132	0,295181	0,0738*
Tobin Q	Non-executive directors	−0,197454	0,103201	0,0650*
Leverage	Nonvoting Stock	1,22048	0,680538	0,0827*
CAR	Board audit committees	10,9823	5,94454	0,0708*
Delta CAR	Code of ethics	0,0251763	0,0104901	0,0203**
Delta Z Score	Shareholders' agreements	2,92516	1,05114	0,0077***

Non-family business companies sub sample shows six significant correlations, one of which with negative beta. Considering this sub sample, ROI seems not to be affected by a corporate governance driver (tab. 10).

Table 11. Relation between different drivers of Corporate Governance Index and Performance in more active in M&A companies (Delta before index name indicates the trend of the index in last six years)

Parameters	Corporate Governance driver	Beta	Standard Error	P-Value
ROI	Auto Disciplinary Code	0,0754722	0,0354757	0,0460**
Tobin Q	Nonvoting Stock	0,135082	0,0703351	0,0692*
Tobin Q	Non-executive directors	−0,173214	0,0709145	0,0240**
Z Score	Auto Disciplinary Code	9,31618	3,85258	0,0253**
Z Score	Code of ethics	7,82869	4,01466	0,0653*
Leverage	Minority espressed Directors	1,08297	0,563582	0,0690*
Leverage	Nonvoting Stock	1,09867	0,526613	0,0500**
CAR	Board audit committees	−0,179935	0,0794669	0,0318**
Delta ROI	Shareholders' agreements	3,43056	1,48887	0,0291**
Delta ROI	Nonvoting Stock	−3,34444	1,66399	0,0545*
Delta ROI	Board audit committees	4,44928	1,84898	0,0232**
Delta Tobin Q	Code of ethics	3,75000	2,07814	0,0823*
Delta Tobin Q	Board audit committees	4,07246	1,89579	0,0408**
Delta Tobin Q	Non-executive directors	−3,25325	1,83822	0,0881*

Table 11. Relation between different drivers of Corporate Governance Index and Performance in more active in M&A companies (Delta before index name indicates the trend of the index in last six years) - continued

Parameters	Corporate Governance driver	Beta	Standard Error	P-Value
Delta Tobin Q	Nonvoting Stock	−3,39444	1,67320	0,0525*
Delta Z Score	Code of ethics	3,25000	1,88386	0,0959*
Delta Leverage	Executive directors	−1,76842	0,885866	0,0561*
Delta CAR	Shareholders' agreements	0,0233113	0,0132149	0,0890*
Delta CAR	Code of ethics	0,0402820	0,0170433	0,0256**

Sub samples composed of active companies in merging and acquisition activity seems to be the most affected by corporate governance drivers showing nineteen significant correlations, six of which with a negative beta. It is interesting to highlight as same corporate governance drivers (e.g. presence of Auto Disciplinary Code) have effects on different performance\risk indexes (tab. 11).

Table 12. Relation between different drivers of Corporate Governance Index and Performance in less active in M&A companies (Delta before index name indicates the trend of the index in last six years)

Parameters	Corporate Governance driver	Beta	Standard Error	P-Value
Tobin Q	Shareholders' agreements	0,151405	0,0718986	0,0402**
Tobin Q	Code of ethics	0,162469	0,0868637	0,0672*
Z Score	Non-executive directors	25,0033	13,8506	0,0769*
Leverage	Non-executive directors	0,857166	0,458856	0,0675 *
CAR	Board audit committees	16,4651	5,57805	0,0044***
Delta Tobin Q	Code of ethics	−6,43421	3,82473	0,0972*
Delta Z Score	Shareholders' agreements	2,72052	1,33850	0,0461**
Delta CAR	Traditional System	−0,470149	0,184731	0,0132**
Delta CAR	Code of ethics	−0,149123	0,0836652	0,0792*
Delta CAR	Board audit committees	−0,303030	0,154782	0,0544*

The Last sub sample considered, is composed of companies who did few merging and acquisition procedures, showing ten significant correlations, four of which with a negative beta. The parameter that seems to be more affected by corporate governance drivers is delta CAR that is negatively correlated to three different corporate governance drivers Traditional System, Code of ethics, Board audit committees).

4 Discussion and conclusion

This paper is a first step in our work in progress. In fact, we aim to introduce a deeper analysis to test the gGI on other samples and in companies of other countries. In this direction, we can refine the Corporate Governance Index and test on other situations, such as Polish listed companies, that we are studying.

Our first results, however, could enlighten some interesting constructs.

Regarding the gGI we can observe that it can assume value between 4-13 and it presents an average value of 9.1 for the whole sample. Our companies could improve their Corporate Governance quality, especially in the sub sample of family businesses that detect a lower value (8.5), although in the index there are drivers that specifically regard family firms (Executive Independent, CEO).

Moreover, we should point out that the non-family companies are better structured (9.8), demonstrating a greater minority protection and good opening to the outside.

The Corporate Governance quality presents some correlation with performance and risk parameters (Switzer and Wang, 2013). We can highlight a positive correlation of gGI values with Tobin Q (tab. 4), observed in a static analysis. For this reason we can observe that the Tobin Q is the only parameter able to capture a relationship, confirming its usefulness to detect market performance, as shown in literature (Gompers et al., 2003).

Looking at the sub-samples, only the companies less active in M&A present a positive correlation between a “good governum” and Tobin Q; while the more active firms have a negative relation with the performance, expressed by CAR. We can observe that the “well-advised” firms in external strategies are able to obtain a better correlation with performance.

Concerning the different contribution of Corporate Governance drivers, we can observe that Shareholders’ Agreements and Board Audit Committee have an important correlation on performance. Shareholders’ Agreements present a

positive relation on market performance (Tobin Q and CAR) for the whole sample (tab. 8) and for less active companies (Tobin Q-tab 12). Also on risk parameters Shareholders' Agreements show a correlation for the whole sample, for the companies less active in M&A and for non-family firms (tab. 10). We can observe that for these companies a better Corporate Governance is correlated with a lower probability of default. We can highlight that Shareholders' Agreements may represent an important minority instrument. The results show that the aforementioned agreements are more present especially in non-family companies, according to the part of literature that outlined that in more concentrated ownership the minority protection is lower (La Porta et al., 2000).

The variable "Non Executive Directors" presents a negative sign for the whole sample and for the non-family companies; it shows a good relation with Tobin Q for family firms in which Independent non executive directors are more present, demonstrating a particular attention to this important driver of Corporate Governance quality. Also on risk parameters the family businesses (tab. 9 present a positive relation with cGI level and Z-score, while less active in M&A companies show a positive relation with Z-score and leverage (tab. 12).

The companies, in which the Non Executive Directors are more present, demonstrate a greater openness to external subjects, with important management activities (Overhue and Cotter, 2010).

On the whole sample it is the Executive Directors presence that produces a very positive correlation with Z-score (tab. 8). Another important aspect is the role of the Code of Ethics, that explains the attention of the companies to stakeholders interests (in the broadest sense).

We can find that the more active companies in corporate acquisitions feel the need to draw up a Code of Ethics. The presence of the aforementioned Code is correlated with a lower probability of failure (Z-score) and with a positive sign for CAR. We can observe that a Code of Ethics can produce an improving in reputation, especially if we consider the investors and the other stakeholders (i.e.: Unions, employers), more important for the success of M&A operations. In fact, the Code of Ethics has become a tool for ensuring fair and efficient management of transactions and human relations, supporting the reputation of the enterprise, in order to create confidence. Creating a Code of Ethics can prove the good faith of the company, in cases of dispute, reducing the sanctions (Jensen, 2002).

According to Jensen and Meckling (1976), our analysis highlights that the non-family firms present a better gGI, showing a lower probability of default.

The classification adopted in this work for the identification of family businesses shows the presence of CEO "familiar" and family members on the board. In this connection, we can see that the presence of external managers, a future of non families sub sample, may guarantee a higher professionalization (Stewart and Hitt, 2012; Sciascia and Mazzola, 2008), with positive effects on performance and less risk of critical situations, especially in financial stability and working capital management.

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CRITICAL INGREDIENTS FOR CALL CENTRE AGENTS' EFFECTIVENESS

Devina Oodith*, Sanjana Brijball Parumasur**

Abstract

This study assessed the critical ingredients for call centre agents' effectiveness (skills/knowledge/ability/attitude, interpersonal skills, training and development, remuneration/motivation, teamwork) in managing customers and their needs. The study was undertaken in Durban, South Africa, and was conducted within a Public Sector service environment which comprised of four major call centres employing a total of 239 call centre agents. A sample of 151 call centre agents was drawn using the cluster sampling technique and a 63% response rate was achieved. These call centre agents were responsible for inbound calls only. Data was collected using a self developed, precoded questionnaire whose validity and reliability were statistically determined using Factor Analysis and Cronbach's Coefficient Alpha respectively. Data was analysed using descriptive and inferential statistics. The results indicate that remuneration/motivation, followed by teamwork, negligibly followed by training and development, interpersonal and other skills/knowledge/ability/attitudes are crucial ingredients for effectively managing customers and their needs. Based on the results of the study a model is designed and presents recommendations that, when implemented in call centre environments, have the potential to enhance agents' effectiveness in managing customers and their needs***.

Keywords: Skills/Knowledge/Ability/Attitude, Interpersonal Skills, Training and Development, Remuneration/Motivation, Teamwork

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1 Introduction

Recent trends have displayed an increasing interest in the areas of services and services marketing (Hoffman & Bateson, 2006). Developing customer loyalty and building strong relationships is the central theme in managing customer markets (Donaldson & O' Toole, 2002). One of the key underlying principles in marketing is that every business should strive to retain and maintain a good relationship with existing customers as embarking on strategies to continually attract new customers to a business is often extremely expensive and very time consuming. Central to customer retention is understanding customers and their needs and managing them spontaneously and effectively. The need for such customer interaction triggered a mushrooming of call centres in many large business organisations, which serve as a means of communication between the firm and its customers. Whilst the intentions were customer centeredness and the expectations were promising, the question on everyone's lips is whether the call centre is in fact an effective means of interacting with customers. Several factors (technology, infrastructure/sick building syndrome, customers themselves) may influence the effectiveness of call centres but a critical aspect to call centre success is their personnel. Human resources in general and skills/knowledge/ability/attitude, interpersonal skills, training and development, remuneration/motivation and teamwork in particular are instrumental in securing call centre effectiveness.

1.1 Skills/knowledge/ability/attitude

There are critical skills that customer service employees should possess. These characteristics may include regular attendance at work, punctuality, taking pride in work, displaying confidence (Theron, Bothma & Du Toit, 2003), being affable and knowledgeable and willing to teach customers new things (Brown, 2007; Cavitt, 2010, Snow, 2007), showing friendly interest and willingness to help by carefully listening to problems (Carlaw, 2012; Obarski, 2010), being thoughtful and reassuring and following up with customers to enquire if they are satisfied with the outcome. Call centre customer service employees need to also have specific skills. These employees need to have professional telephone skills in order to make the first impression. Obviously a warm, friendly, sincere, courteous and tactful voice will make the customer's experience a positive one (Obarski, 2010) and being polite and calm is particularly imperative when dealing with frustrated consumers (Timm, 2008). The three part greeting which includes the agent providing his/her name, the department he/she works in and an effective greeting (Bailey & Leland, 2008; Obarski, 2010) is just as important as speaking clearly, naturally and distinctly (Ward, 2010), taking responsibility for the problem and having a facts database (Timm, 2008). Due to the high volumes of calls managed, such agents must be comfortable with using a pre-prepared telephone script, able to handle pressure, and have physical and mental strength to continuously ensure the delivery of quality service.

In call centres, when a customer calls the company's care line or help desk the call is automatically logged on a computer as is the conversation. The operator records the customers' name, contact details and problem onto special software. According to Theron *et al*. (2003), the agent may be able to help the customer immediately or may refer the customer. When customers dial into a call centre their calls can also be answered by an automated service called an Interactive Voice Response facility (known as IVR), welcoming them to the company's call centre. This IVR will inform the customer that their call is important and to please be patient in waiting for the next available agent. In the meantime, the customer has the option to listen to promotional deals or other offerings made by the firm (IBM, 2007). Many consumers find the waiting tedious and frustrating and options that are offered do not cater for their specific needs. Another common frustration is that there is a lack of consistency when calling a call centre as you do not know which agent will receive your call and if the agent is efficient. Certain operators are trained to handle certain types of queries; this is the main purpose behind the menu options in an IVR system so that the customer is channeled to the right agents. Interestingly, Theron *et al*. (2003) have noted a marked increase in call centres in South Africa but emphasizes that the country is falling short in terms of the people skills needed to implement and run such centres and the database technologies necessary to offer customer personalisation. Some reported weaknesses by customers regarding call centre agents include not being able to hear these employees/agents nor understand them, being cut off whilst being transferred, agents speaking down to customers, using jargon, putting customers on indefinite hold, passing the buck to another person or department to solve the problem, providing misleading or erroneous information and even being rude (Theron *et al.*, 2003; Ward, 2010), thereby leaving the consumer irate.

Hoffman & Bateson (2006) identified seven categories of unsavoury behaviour from front line staff, namely, apathy, brush-off, coldness, condescension, robotism, rulebook and the run-around approach. In many instances the wrong people are placed in the 'firing line' when they do not want to be there and are really not interested in customers, leaving the customer very disgruntled. These behaviours emphasize the importance of finding the right person for the job based on the right knowledge, skills and abilities (KSA's) (Armistead & Clarke, 1992). Since much of the job of call centre agents involves liaising with customers via the telephone it is critical to understand what skills are needed to facilitate this form of communication in a way that focuses on relationships rather than transaction-oriented approaches (Fulcher, 2013). Furthermore, previously, inbound call centre agents were responsible for logging calls, referring customers and escalating complaints but today they are seen as the 'face of the company' and are responsible for solving customers' problems, thereby requiring them to have broader business knowledge, critical thinking and problem solving capabilities (Payle, 2012). Even contact centre managers must have specific skills in order to be effective. They need to be proactive, begin with the end in mind, put first things first, think win-win, seek to understand more than to be understood, create synergy and practice self-renewal (Captijn, 2013). Therefore, considerable care must be taken in ensuring a strict selection process in which candidates with the appropriate qualities, interpersonal skills and competencies are selected. In terms of selection and recruitment, the main aim is for the firm to hire people whose culture matches that of the organisation and these staff will ultimately deliver to the customers (Townsend, 2002). Candidates should also be assessed on how they would handle a difficult customer. In this regard, Overland (2005) and Twentyman (2008) encourage the use of open ended interview questions that enable the candidates to talk about how they have coped with incidents in the past in order to obtain an indication of how they are inclined to handle future situations. In addition, in order to cope with negative employees, management must offer to assist the employee through training.

1.2 Training and development

With call centres being a growing sector, agents can no longer have basic skills but are required to adapt to a dynamic, fast paced business environment characterized by technological advancements and demanding clients (Payle, 2012). Training should be done on an on-going basis, on various aspects of customer service and dealing with customers, for example, how to be more attentive (Vikesland, 2002). Fundamental to training is the need to monitor the progress of employees. This can be done by obtaining feedback from consumers about the level of service provided by a particular member of staff and sometimes calls are recorded for the purpose of providing feedback to the employee on how the query was managed. Shelton (2003) undertook an audit of the service delivery levels at SABMiller and found that the CEO's mission was to win the customer's favour and loyalty especially since Miller's marked share was declining. The CEO's turnaround strategy involved firing poorly performing executives and implementing a personnel rating system to ensure that all service staff worked to the best of their abilities, leaving no room for poor performance. SABMiller spent close to R154 million (7.15% of company payroll) on training interventions to improve the level of service delivery (Shelton, 2003). Employees can also be observed by management on how they behaved in resolving a consumer query or complaint (Grote, 2005). Management needs to also include staff in the assessment by regularly asking them if they are coping and comfortable with their roles. In the event of weaknesses, these can be resolved through training or other forms of support (Brown, 2007; Cavitt, 2010; Snow, 2007).

Training is important in ensuring that agents work better rather than faster and answers "How can we do it right the first time", thereby reducing cost and enhancing worker pride, customer loyalty and quality. Whilst saving time reduces cost, doing things right the first time creates the positive feelings of confidence and success that come from mastering a job. It also ensures repeat business and attracting new customers (Blem, 1995; Brown, 2007; Cavitt, 2010).

Townsend (2002) studied an important paradox within the call centre environment. He undertook and assessment of why firms engage in extensive recruitment and training when the call centre industry records high staff turnover and burnout rates. Townsend (2002) found that especially when dealing with inbound calls, there has to be a perfect job-fit as the environment can be highly stressful. In some instances the job cycle times can be very short, leaving agents to deal with a high volume of calls; but in other instances the call cycle times are longer, more complicated and emotionally very draining. Hence, there is a strong need for training to develop skills (Armistead & Clarke, 1992). Townsend (2002) also agrees that although a large amount of resources are spent to conduct recruitment and training, which can be utilized elsewhere in the firm, the technical skills of agents has to be harnessed in order to develop their emotional labour abilities fully.

Most training manuals and employee handbooks are devoted to explaining the technical skills needed to perform the jobs. Unavoidable communication difficulties with customers require contact staff with training and interpersonal skills to prevent a bad situation from becoming worse. Programmes can be developed to train staff to use prescribed responses in given situations. This approach helps staff to anticipate exchanges and how to respond accordingly (Fitzsimmons & Fitzsimmons, 2006). A popular English editorial entitled Callcentrehelper.com (2010) concluded that the most common skills needed in a call centre setting include good PC skills, excellent keyboard skills, good telephone manners, excellent communication skills and the ability to work well within a team.

1.3 Remuneration/motivation

All individuals have needs and, motivation is the drive that compels individuals to take action to satisfy their needs but different individuals are motivated by different things. According to Theron *et al.* (2003), some people may be easily motivated by financial gain and others by more time off, recognition, being given flexibility, authority and decision making and opportunities for improvement.

There are three commonly used theories about motivation known as needs theory, incentives theory and expectancy theory (Armistead & Clarke, 1992). ***Needs theory*** states that the behaviour of individuals is driven by their needs. Maslow separated the needs into five types, commonly known as Maslow's Hierarchy of Needs. Maslow's needs are in ascending order and the needs at one level must be satisfied before those of the next level can be addressed (Armistead & Clarke, 1992; Cronje, du Toit, Motlatla & Marais, 2006; Lamb, Hair, McDaniel, Boshoff & Terblanche, 2004). McClelland extended Maslow's theory and said that needs are more influenced by social context and will vary from one culture to another. He suggests that needs which must be satisfied are:

- The need for achievement to meet targets.
- The need for affiliation to belong to the work group.
- The need for power to control and influence others.

McClelland also suggests that the balance of a person's needs does not change over time. If this is true then it has implications for recruitment, selection and career development. It indicates that there may be problems caused by the changing role of the service and support personnel in ways that may not match their individual needs (Cronje *et al*., 2006; Lamb *et al*., 2004). With regards to **incentives theory**, the

philosophy is that the external factors influence motivation. Hertzberg highlighted two factors that are important (Armistead & Clarke, 1992; George & Jones, 2009):

- ✓ Hygiene factors which include aspects of the job which a person expects to find in the job, for example, working conditions, wages and salary.
- ✓ Motivation factors which include achievement, recognition, responsibility and money.

Hertzberg implies that the hygiene factors in themselves will not motivate but if they are lacking then a person will be de-motivated. Money is complex and can be seen as both a hygiene and a motivating factor. The ***expectancy theory*** concentrates on how people make choices in the way in which they behave. It suggests that based on valence (attractiveness of the specific outcome), instrumentality and expectancy, individuals will assess what they are required to do and make a rational assessment of what rewards will be gained from it (Cronje *et al*., 2006). For example, people will perform well if they feel that they will be highly rewarded for their efforts (Armistead & Clarke, 1992).

In addition to understanding the importance that motivation exerts on the level of performance of individuals, management has to remember that unlike goods, services are produced and consumed simultaneously (Schiffman & Kanuk, 2004). Also, motivation should be driven from the top down, but in the field of customer service, the individual service provider has to motivate him/herself in order to excel at the task of providing good service levels at all times. The success of firms often varies according to the overall spirit that exists among employees. Management naturally wants to achieve a high standard of service amongst staff and aim to create a motivating environment where staff can be fully committed to the customer (Blem, 1995). Theron *et al*. (2003:161) suggest that staff should try these 5 steps to start motivating themselves:

- ❖ Put up quotations that you find motivating around your workstation so that they are visible throughout the day.
- ❖ Develop a strong self concept, because if you feel good about yourself this will impact on your performance.
- ❖ Set goals and do your best to achieve them.
- ❖ Read motivational books and messages that will make an impression on you.
- ❖ Have fun. The more fun you have, the more motivated you will be.

In addition, management needs to acknowledge and appreciate the extra efforts of staff. Public commendation and praise can motivate one to keep performing better each time.

1.4 Teamwork

Service teams are important as it gives individuals the chance to learn from others to work towards achieving common goals. Teams also allow members to improve the value of their own KSA's in order to stimulate the flexibility of the team (Armistead & Clarke, 1992). It also gives managers the opportunity to act as coach to their teams. The achievements of the service team are to attain customer satisfaction and effectiveness in resource productivity. These will be measures of the effectiveness of the team, but the attainment of these achievements depends on:

- The clarity of what they are trying to achieve and who is involved in the process.
- The motivation of the individual team members and the system and process which allows the tasks to be done.
- The actions of the team leader.

According to Armistead and Clarke (1992), the composition of the service teams should include front line people and back room people, so that there is no danger of both groups becoming isolated. Teams do not simply come together and perform well. They go through four stages in their development to becoming an effective team. These four stages as outlined by Armistead & Clarke (1992) are:

- Forming whereby the team is simply a group of individuals without clear purpose of their tasks and duties.
- Storming arises as the team is often in conflict about the direction of goals and nature of leadership, and the role of individuals within the team (Adler, 2003).
- Norming occurs when the team becomes clear on tasks and goals and individuals start to become strongly committed to other members of the team (Fugaro, 2008). There is strong peer group pressure for individuals to conform to the values of the team.
- Performing, the final stage, where the real work is done with the team members sharing and supporting one another (Adler, 2003; Fugaro, 2008).

It would seem that the clearer the nature of the tasks, the greater the degree of shared values of the service team members and the more likely it is that a service team will perform well; each member must understand their role within a team (Fugaro, 2008). Adler (2003) supports the view of team building and stresses that innovative ways of doing business to improve productivity should also be a goal.

Rushmer (1997) uncovered several emergent themes in her research into team building which included the freedom to speak and get to know each other, accepting leaders within a group, pooling together efforts for the benefit of the team, team spirit, having fun and motivation and a sense of achievement in terms of the tasks and outcomes of the team. The role of the service manager as a team builder depends on their ability to act as coach to the team. A good coach adopts five roles, namely, teaching, supporting, leading, counselling and confronting (Tom Peters cited in Armistead & Clarke, 1992).

Kaye and Kleiner (1996) cited the work of John Wooden's pyramid for use as a teaching tool in their research. The cornerstone of Wooden's pyramid, according to Kaye & Kleiner (1996), was industriousness and enthusiasm because it is impossible to excel at something if you are not truly devoted to it. In addition, the characteristics of friendship, cooperation, and loyalty are also critical. The 'anchor blocks' of the pyramid are self control and integrity. Completing the second tier of the pyramid are alertness and initiative characteristics. The third tier which is the heart and soul of the pyramid entails conditioning, skill and team spirit. And finally, the two tiers completing the pyramid comprise of poise, confidence and competitive greatness. Kaye and Kleiner (1996) list ambition, adaptability, resourcefulness, faith, fight, patience, reliability, integrity, honesty and sincerity as the threads holding the blocks together. They liken coaching to face-to-face leadership that pulls people from diverse backgrounds together and treats them like equal partners. Wooden's coaching style respects individual uniqueness and abilities. A business coach must create an atmosphere that promotes individual growth and talent (Kaye & Kleiner, 1996).

Having undertaken an assessment of the attributes needed by front line staff in assisting them to execute their duties and responsibilities properly, it is obvious that this human resource component is one of the most critical aspects of customer service delivery. Another aspect which is also important is the customers themselves. A thorough understanding of how customers base their choice in terms of services provided, the levels of service delivery expected and building customer loyalty is imperative.

1.5 Aim of the study

This study assesses the critical ingredients for call centre agents' effectiveness (skills/knowledge/ability/attitude, interpersonal skills, training and development, remuneration/motivation, teamwork) in managing customers and their needs.

2 Research design

2.1 Respondents

The population comprised of 239 call centre agents employed by this Public Service organisation within its four call centre's in the Durban area. Using Sekaran's (2003) population-to-sample size table, a corresponding minimum sample of 148 was needed, thereby confirming the adequacy of the sample of 151 call centre agents. The probability sampling technique of cluster sampling was used. According to Sekaran (2003), in cluster sampling, groups or chunks of elements that have heterogeneity among members within each group are chosen for study. The adequacy of the sample was determined using the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (0.880) and the Barlet's Test of Spherecity (1765.538, p = 0.000) for factors impacting on Human Resource, which respectively indicated suitability and significance. The results indicate that the normality and homoscedasticity preconditions are satisfied.

In terms of the composition of the sample, there were more females (57%) than males (43%). The majority of the sample were between 20-29 years (67.5%), followed by 30-39 years (20.5%) and then 40-49 years (10.6%), thereby indicating that the sample is predominantly young, which is typical of employment in a call centre environment. Black agents constituted the majority (55.6%), followed by Indian (25.2%), Coloured (15.9%) and then White (3.3%) employees. The majority of the agents were in service for 1-3 years (51.7%) with more or less an equal distribution of years of service in the other categories (1-11 months, 4-6 years and 7 years and over). The majority of the agents have a high school qualification (56.3%) followed by those with a diploma (36.4%), whilst only 7.3% has a degree. More agents are employed on a full-time (66.2%) as opposed to a part-time basis (33.8%).

In terms of call variables, the majority of agents take an average of 100-109 calls a day (21.2%), followed by 70-79 calls a day (19.9%), have a waiting time (length of time a customer waits on the line before his/her call is answered by an agent) of 0-5 minutes (55.6%), have an abandonment rate (number of callers that eventually disconnect) of 0-5% (86.1%), secure a talk time (duration of call) of 0-5 minutes (84.2%), a wrap-up time of 0-5 minutes (98.7%) and report a queue time of 0-5 minutes (96.7%).

2.2 Measuring Instrument

Data was collected using a self-developed, pre-coded, self administered questionnaire consisting of two sections. Section A dealt purely with the biographical (gender, age, race, tenure, education and employment status) and operational data of call centre agents. Section B related to the sub-dimension of Human Resource and tapped agent's perceptions of the critical ingredients for call centre agents' effectiveness (skills/knowledge/ability/attitude, interpersonal skills, training and development, remuneration/motivation, teamwork) in managing customers and their needs. Whilst Section A was nominally scaled with precoded option categories, Section B required respondents to rate each item using the Likert Scale ranging from strongly disagree (1) to strongly agree (5). The questionnaire was formulated on the basis of identifying recurring themes that surfaced while conducting the literature review. These ensured face and content validity. Furthermore, in-house pretesting was adopted to assess the suitability of the instrument. Pilot testing was also carried out on twenty call centre agents to

test the appropriateness of questions and their understanding thereof. No inadequacies were reported and the final questionnaire was considered appropriate in terms of relevance and construction.

2.3 Research procedure

The research was only conducted after ethical clearance was obtained for the study and upon completion of the pilot study.

2.4 Measures/statistical analysis of the questionnaire

The validity of the questionnaire was assessed using Factor Analysis. A principal component analysis was used to extract initial factors and an iterated principle factor analysis was performed using SPSS with an Orthogonal Varimax Rotation. In terms of the validity, 5 critical ingredients for call centre agents' effectiveness in managing customers and their needs were identified (3.960, 3.950, 3.456, 3.443, and 3.079). The items were also reflected as having a very high level of internal consistency and reliability, with the overall Cronbach's Coefficeint Alpha being 0.925 with item reliabilities ranging from 0.920 to 0.926.

2.5 Administration of the measuring instrument

The survey was confined to the call centre agents employed within the four call centre's in Durban, South Africa. The online survey was administered to a sample of call centre agents in Durban, South Africa using QuestionPro. The agents were required to completely answer Sections A and B of the questionnaire and then submit their responses via QuestionPro return mail. Informed consent was obtained by an authorization letter that accompanied the questionnaire. All participation was voluntary.

2.6 Statistical analysis of the data

Descriptive statistics (mean, variance, standard deviation) and inferential statistics (correlation, t-test, ANOVA and multiple regression) were used to evaluate the objectives and hypotheses.

3 Results

3.1 Descriptive Statistics

Agent's perception of the critical ingredients needed for managing customers and their needs effectively were evaluated using a 1-5 point Likert scale. The higher the mean score value, the more satisfied agents are with the specific sub-dimension or ingredient (Table 1).

Table 1. Descriptive statistics - Sub-dimensions of Human Resources

Sub-dimension	Mean	Std Deviation	Minimum	Maximum
Skills, knowledge, ability, attitude	3.91	0.6143	1.56	5.00
Interpersonal skills	3.90	0.6246	1.57	5.00
Training and development	3.69	0.6930	1.33	5.00
Remuneration/motivation	2.96	0.8757	1.00	5.00
Teamwork	3.65	0.7509	1.80	5.00
Overall score	**3.62**	**0.5928**	**1.87**	**5.00**

Table 1 indicates agents' perceptions of the extent to which the critical ingredients, needed for managing customers and their needs effectively, are met, which in decreasing level (based on Mean score values) are:-

- Skills, knowledge, ability, attitude (Mean = 3.91)
- Interpersonal skills (Mean = 3.90)
- Training and development (Mean = 3.69)
- Teamwork (Mean = 3.65)
- Remuneration/motivation (Mean = 2.96)

Whilst agents do believe that they have the skills, knowledge, ability, attitude, receive training and development and engage in teamwork, remuneration/motivation presents gaps and there is room for improvement in terms of all of the sub-dimensions of Human Resources.

In order to assess the areas for improvement, frequency analyses were conducted on each of the sub-dimensions. In terms of skills, knowledge, ability and attitude, 14.6% of the agents disagreed and a further 7.3% of the agents strongly disagreed that they have complete authority to make decisions to satisfy customer complaints. Furthermore, 7.9% of the agents disagreed and a further 6.6% of the agents strongly disagreed that they experience mental exhaustion and physical strain and that it does not hinder their communication with customers', implying that mental exhaustion does hinder communication between agents and customers. On a positive note, however, in terms of skills, knowledge, ability and attitude, 37.7% of the agents agreed and a further 49% strongly agreed that they fully understood the responsibilities associated with their job. Furthermore, 44.4% of the agents agreed and a further 42.4% strongly agreed that they focused on delivering quality service rather than quantity.

In terms of interpersonal skills, 9.3% of the agents disagreed and a further 7.3% of the agents strongly disagreed that they felt comfortable enough to inform the supervisor when they felt they were not coping with work pressure. Furthermore, 12.6% of the agents disagreed and 11.3% of the agents strongly disagreed that they felt comfortable with using a pre-prepared telephone script when taking a call. On a more positive note, in terms of interpersonal skills, 36.4% of the agents agreed and a further 51.7% of the agents strongly agreed that they give off their best with every call that they handle. A further 43.7% of the agents agreed and 43% strongly agreed that they were always courteous to all customers.

In terms of training and development, 17.9% of the agents disagreed and another 13.9% strongly disagreed that they found their jobs fulfilling in terms of opportunities for growth and advancement. A further 8.6% of the agents disagreed and 5.3% of the agents strongly disagreed that they have been provided with comprehensive manuals containing sufficient information to be able to handle complaints or queries efficiently.

In terms of remuneration/motivation which scored the lowest (Mean = 2.96), 21.2% of the agents disagreed and 25.8% of the agents strongly disagreed that they were pleased with the rewards and recognition that they receive when they have performed well. Furthermore, 24.5% of the agents disagreed and 28.5% of the agents strongly disagreed that management always gives its staff good incentives to motivate them to work harder. Finally, 23.2% of the agents disagreed and a further 17.2% strongly disagreed that they believe that their salary was market related.

In terms of teamwork, 12.6% of the agents disagreed and 5.3% of the agents strongly disagreed that their team leader/manager uses effective techniques to encourage high achievement. Furthermore, 15.9% of the agents disagreed and 9.3% of the agents strongly disagreed that they were provided with continuous feedback to help improve their job performance.

3.2 Inferential statistics

3.2.1 Hypothesis 1:

There exists significant intercorrelations amongst the critical ingredients (skills/knowledge/ability/attitude, interpersonal skills, training and development, remuneration/motivation and teamwork) needed by call centre agents for effectively managing customers and their needs.

Table 2. Pearson Correlation (r): Intercorrelations of the critical ingredients of Human Resources (N = 151)

Critical ingredient	r/p	skills/knowledge/ ability/attitude	interpersonal skills	training and development	remuneration/ motivation	Team-work
Skills/knowledge/ ability/attitude	r	1				
Interpersonal skills	r	0.637	1			
	p	**0.000****				
Training and development	r	0.689	0.696	1		
	p	**0.000****	**0.000****			
Remuneration/ Motivation	r	0.524	0.442	0.648	1	
	p	**0.000****	**0.000****	**0.000****		
Teamwork	r	0.635	0.583	0.742	0.600	1
	p	**0.000****	**0.000****	**0.000****	**0.000****	

**** p < 0.01**

Table 2 indicates that the critical ingredients needs for effectively managing customers and their needs significantly intercorrelate with each other at the 1% level of significance. Therefore, hypothesis 1 may be accepted. Table 2 also reflects that strong relationships were noted between training and development and teamwork (r = 0.742) and interpersonal relations (r = 0.696) respectively.

3.2 Influence of Biographical data

The influence of the biographical variables (age, race, tenure, gender and employment status) on agents' perceptions of the critical ingredients needed for managing customers and their needs effectively was assessed using ANOVA and t-tests (Table 3 - Table 4).

3.2.1 Hypothesis 2:

Agents varying in biographical profiles (age, race, tenure, educational qualifications, gender, employment status) significantly differ in their perceptions of the critical ingredients needed for effectively managing customers and their needs.

Table 3. Biographical variables and the critical ingredients needed for managing customers and their needs effectively

ANOVA								
Critical ingredient for managing customers and their needs	**Biographical Variable**							
	Age		**Race**		**Tenure**		**Educational Qualification**	
	f	**p**	**F**	**p**	**f**	**p**	**f**	**p**
Skills, knowledge, ability, attitude	0.760	0.470	2.186	0.092	1.635	0.184	1.421	0.245
Interpersonal skills	0.217	0.805	1.864	0.138	2.993	0.033*	0.526	0.592
Training and development	0.079	0.924	1.735	0.162	2.857	0.039*	2.118	0.124
Remuneration/motivation	0.709	0.494	2.299	0.080	1.268	0.288	0.135	0.874
Teamwork	0.318	0.728	0.694	0.557	1.452	0.230	2.070	0.130

t-TEST				
Critical ingredient for managing customers and their needs	**Biographical Variable**			
	Gender		**Employment status**	
	t	**p**	**t**	**p**
Skills, knowledge, ability, attitude	-1.360	0.176	1.568	0.119
Interpersonal skills	0.296	0.767	0.887	0.377
Training and development	-0.210	0.834	0.609	0.544
Remuneration/motivation	0.104	0.917	0.556	0.579
Teamwork	-0.396	0.693	0.083	0.934

Tables 3 indicates that agents varying in biographical profiles (age, race, tenure, educational qualifications, gender, employment status) do not differ significantly in their perceptions of the critical ingredients needed for effectively managing customers and their needs, except for the influence of tenure on perceptions of interpersonal relations and training and development respectively. Hypothesis 2 may therefore, be partially accepted. In order to assess where these significant differences lie with regards to tenure, mean differences were analysed (Table 4).

Table 4. Tenure – Mean differences

Critical Ingredient	**Tenure Categories**	**N**	**Mean**	**Std. Dev.**
Interpersonal skills	1 month - 11 months	23	3.9068	0.55430
	1 - 3 years	78	3.9487	0.57971
	4-6 years	25	3.5886	0.83025
	7 years and over	25	4.0743	0.49850
	Total	**151**	**3.9035**	**0.62457**
Training and development	1 month - 11 months	23	3.8116	0.59523
	1 - 3 years	78	3.7201	0.68032
	4-6 years	25	3.3333	0.82916
	7 years and over	25	3.8133	0.58198
	Total	**151**	**3.6854**	**0.69297**

Table 4 indicates that agents who are working for 7 years and over in the call centre believe strongly that interpersonal skills and training and development received are imperative for effectively managing customers and their needs followed by similar views of new agents (1 month to 3 years). Agents who are 4 to 6 years in the call centre are not convinced that agents have the right interpersonal skills and the appropriate level and amount on training needed for effectively managing customers and their needs.

3.2.2 Hypothesis 3

The combined critical ingredients (skills/knowledge/ability/attitude, interpersonal skills, training and development, remuneration/motivation and teamwork) significantly account for the variance in effectively managing customers and their needs (Table 5).

Table 5. Multiple Regression: Critical ingredients for managing customers and their needs

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.903[a]	0.815	0.814	0.25588
2	0.946[b]	0.895	0.894	0.19320
3	0.975[c]	0.950	0.949	0.13435
4	0.990[d]	0.979	0.979	0.08622
5	1.000[e]	1.000	1.000	0.00000

Model	Dimension	Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	0.774	0.113		6.850	0.000
	Training and development	0.772	0.030	0.903	25.613	0.000
2	(Constant)	0.790	0.085		9.249	0.000
	Training and development	0.566	0.030	0.662	18.934	0.000
	Remuneration/motivation	0.252	0.024	0.372	10.647	0.000
3	(Constant)	0.268	0.072		3.698	0.000
	Training and development	0.398	0.025	0.465	16.129	0.000
	Remuneration/motivation	0.222	0.017	0.329	13.393	0.000
	Skills, knowledge, ability, attitude	0.314	0.025	0.325	12.612	0.000
4	(Constant)	0.210	0.047		4.512	0.000
	Training and development	0.286	0.018	0.334	16.238	0.000
	Remuneration/motivation	0.190	0.011	0.280	17.420	0.000
	Skills, knowledge, ability, attitude	0.259	0.016	0.268	15.758	0.000
	Team work	0.215	0.015	0.272	14.522	0.000
5	(Constant)	-2.325E-15	0.000		0.000	1.000
	Training and development	0.200	0.000	0.234	1.531E8	0.000
	Remuneration/motivation	0.200	0.000	0.295	2.662E8	0.000
	Skills, knowledge, ability, attitude	0.200	0.000	0.207	1.698E8	0.000
	Team work	0.200	0.000	0.253	1.963E8	0.000
	Interpersonal skills	0.200	0.000	0.211	1.758E8	0.000

Table 5 indicates that the combined critical ingredients account for 100% (Adjusted R^2 = 1.000) of the variance in effectively managing customers and their needs. Table 5 also indicates that these dimensions impact on effectively managing customers and their needs in varying degrees as indicated in the Beta values which are as follows:-

- Remuneration/motivation (Beta = 0.295)
- Teamwork (Beta = 0.253)
- Training and development (Beta = 0.234)
- Interpersonal skills (Beta = 0.211)
- Skills, knowledge, ability, attitude (Beta = 0.207).

The results indicate that remuneration/motivation (Beta = 0.295) followed by teamwork (Beta = 0.253), negligibly followed by training and development (Beta = 0.234), interpersonal skills (Beta = 0.211) and skills, knowledge, ability and attitude (Beta = 0.207) are crucial ingredients for effectively managing customers and their needs.

4 Discussion of results

In terms of the sub-dimension of skills, knowledge, ability and attitude of call centre agents, the study found that agents did not agree that they had complete authority to make decisions to satisfy customer complaints. Agents also reported that mental exhaustion and physical strain hindered their communication with customers. The finding was supported by research conducted by Armistead, Kiely, Hole & Prescott (2002) who reported that agents understand the strong need by management to monitor time pressures and the tightly controlled nature of the work undertaken. However, the workload was found to be tiring and uneven and caused their energy to wane as the shift proceeded. Heathfield (2012) concluded that employee empowerment is a great tool and strategy for accomplishing work, customer service and employee motivation.

In terms of the critical ingredient of interpersonal skills of call centre agents, the study found that agents were not comfortable enough informing supervisors when they felt they were not coping with the work pressures. Research by

Grandey, Dickter & Sin (2004) found that customer service providers are typically subordinate to their consumers and their interactions with members of the public tend to be routine and scripted, thereby constraining opportunities for personal expression. SAB Miller has instituted an Internal Management Process (IMP) which allows call centre agents to meet managers on a monthly basis to discuss performance and annual performance reviews (Best Employers: SA, 2008). Employees should always feel comfortable to let management know if they are not coping (Best Employers: SA, 2008; Brown, 2007; Cavitt, 2010; Snow, 2007). Furthermore, it was noted that agents reported that they were uncomfortable using pre-prepared telephone scripts when taking a call. Research found that it is essential for all call centre agents to work out a telephone script which they can use to answer the phone, welcome a caller, enquire what the problem is or direct the call to a specific person (Deery, Iverson & Walsh, 2002; Theron *et al.*, 2003). However, Kahn (1990) found that people can disengage themselves by performing tasks at some distance from their preferred selves. Performing their roles as scripts causes agents to become physically uninvolved, cognitively unvigilant and emotionally disconnected. Furthermore, Reference for Business (2012) cautions that although telemarketing is cost effective and easier to execute because the entire dialogue is scripted, the human element in customer relationships is critical in making the effort successful, suggesting that scripts are not always successful in resolving customer queries.

In terms of the critical ingredient of training and development of call centre agents, the study reported that agents found that their jobs were not fulfilling in terms of opportunities for growth and advancement and that they further disagreed that they were provided with comprehensive training manuals and information to be able to assist them in handling complaints and queries efficiently. Similarly, Frenkel, Tam, Korczynski & Shire (1998) found that training for job proficiency and meeting standards of customer service takes precedence over training for career development. Thompson, Callaghan & Van den Brock (2004) also concur that work in the call centre is stressful due to high performance standards demanded and there are fewer training and development opportunities and if training is undertaken, it is usually used as a form of control. Call centre work is characterized as being monotonous as therefore lacks career opportunities (Garavan *et al*., 2008). However, contrary to these views, McLuhan (1998) found that a combination of human resource strategies embracing motivation, reward systems, training and development and career progression has helped in the transformation of the call centres into environments which have no difficulty in attracting and retaining staff. In the current study it was also found that a strong relationship exists between training and development and teamwork and interpersonal skills respectively, thereby implying that training call centre agents can generate multiple benefits in terms of enhancing agent effectiveness.

In terms of the critical ingredient of remuneration and motivation of call centre agents, the study found that agents were displeased with the rewards and recognition that they received when they performed well. This finding is ironic as the findings of this study reflect that agents perceive remuneration/motivation to have the greatest impact on the effectiveness of agents in managing customers and their needs. Agents also believed that management did not always give its staff incentives to motivate them to work harder and many agents believed that the salaries that they earned were not market related. In this regard, Wallace, Eagleson & Waldersee (2000) discovered that recruitment of highly motivated employees meant that the organisation did not have to invest skill and time to develop their skills. When their motivation was depleted, they were encouraged to leave and were replaced with new, fresh and motivated agents. Furthermore, Mahesh & Kasturi (2006) emphasized that reward and recognition from external sources is critical to improving agent's performance. Armistead *et al.* (2002) found that salary was the best aspect of the agent's job followed by people contact.

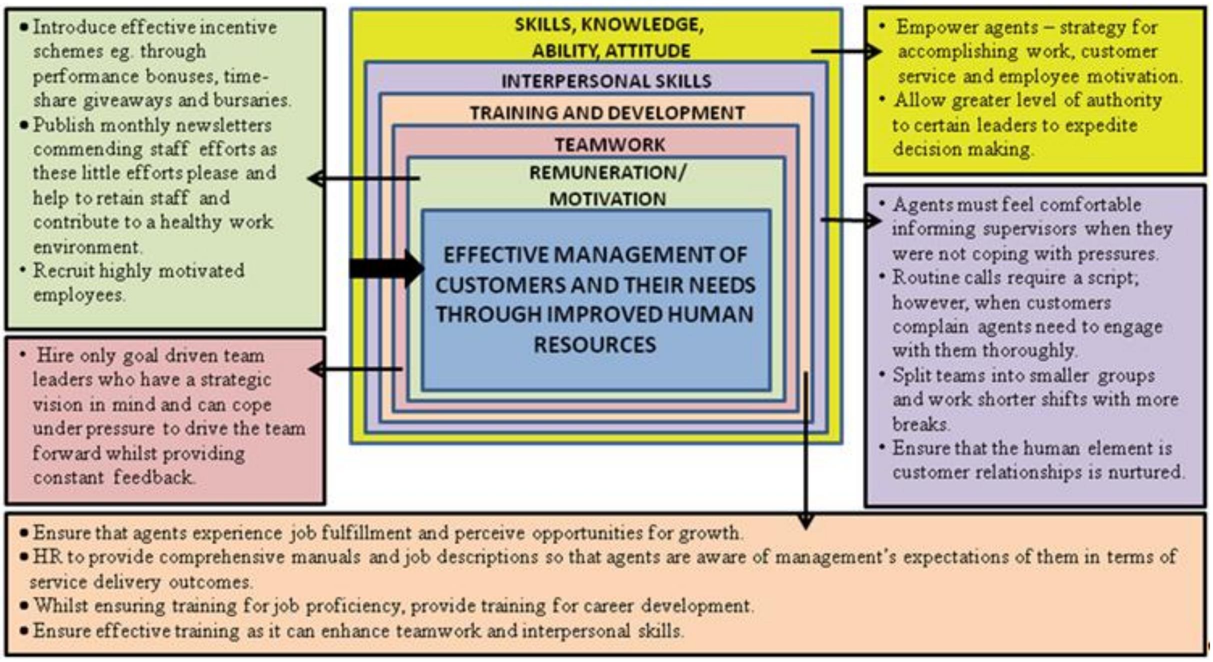
In terms of the critical ingredient of teamwork amongst the call centre agents, the study found that agents disagreed that the leader/manager used effective techniques to encourage high achievement. They also disagreed that they were provided with continuous feedback to help improve their job performance. Similar findings were obtained by Thompson & Wallace (1996) who noted that due to strict control measures enforced in the call centre (management strongly enforces decisions and channels information downwards) team members have little impact on team management or on organisation of work. This happens despite the finding that teamwork is important to agents and enabled improvements in work performance (Armistead *et al*., 2002). Furthermore, team leaders and supervisors play a vital role in managing the performance of agents.

5 Recommendations and conclusion

If managed correctly a customer call centre can contribute to customer satisfaction and retention in the long run, but many organisations fail to capitalize on their operations and reap the long term rewards. Call centre agents are critical in the service delivery process and their skills, knowledge, attitude, ability, motivation and training are imperative factors to be managed by the organisation. These agents serve as the face of the organisation or the point of first contact between the customer and the organisation and as such need the necessary support and training

from management to be able to empower them to perform their jobs proficiently. The research also indicates that the stringent control policies and monitoring within the call centre environment coupled with the high stress levels often leads to high turnover rates. There is no doubt that loftier thoughtfulness needs to be given to Human Resource issues within call centres in order to improve the overall effectiveness of its operations. Figure 1 depicts the impact of the critical ingredients (skills/knowledge/ability/attitude, interpersonal skills, training and development, remuneration/motivation and teamwork) on the management of customers and their needs based on the results of the multiple regression analyses, with remuneration/motivation being at the innermost part of the figure indicating its greatest impact yet the analyses of the descriptive statistics reflect that these call centre agents are least satisfied with remuneration/motivation in the organisation. Likewise, based on the results of the multiple regression, skills, knowledge, ability, attitude lies in the outmost segment as it is perceived to have the least impact on managing customers and their needs. Hence, as one moves from the outermost segment to the innermost segment, the impact of the ingredients on managing customers and their needs increases as indicated by the black, block arrow. The model presents recommendations for enhancing each of the critical ingredients so that each could have a positive and rippling effect on the other thereby, ultimately enhancing the management of customers and their needs (Figure 1). In addition to taking cognisance of the recommendations, it is imperative to note that the management style of the employees and the characteristics of employees themselves are central to confirming a healthy work environment that supports performance and effectiveness. Creating the right work environment to enhance call centre effectiveness is as much the employees' responsibility as it is management's.

Figure 1. Recommendations to improve the critical ingredients of Human Resources in order to effectively manage customers and their needs



6 Recommendations for future research

This study was undertaken within a public service call centre organisation and hence, the results of the study have internal validity in this institution. In order to enhance generalisability, it would be advantageous to undertake a similar study in other call centre environments in a variety of service environments in both the public and private sectors. This study also includes a call centre environment where only in-bound calls are made and hence, it would be useful to assess similar dimensions in an out-bound call setting as speaking to someone who has chosen to interact with you is completely different from speaking to someone who was not expecting your interaction. It will also be interesting to note if there are similarities with regards to the human resource gaps experienced by inbound and outbound agents within the public and private sector service organisations.

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ACCOUNTING CONSERVATISM, UNVIRONMENTAL UNCERTAINTY AND THE CAPITAL STRUCTURE

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Abstract

The purpose of this paper is to examine the effect of reporting conservatism on firm's capital structure decisions and the role of environmental uncertainty as a moderating variable. While the role of conservatism has been investigated in certain debt-contracting setting, evidence is sparse about the effect of conservatism on the degree of financial leverage. We examine this issue using a sample of Australian firms from 1992 to 2005. We find that accounting conservatism positively affect a firm's leverage structure. Further, we find that the relation between accounting conservatism and firm leverage is moderated by environmental uncertainty context; however this finding is not robust to all three proxies that we used to measure conservatism.

Keywords: Conservatism, Financial Leverage, Environmental Uncertainty, Australia

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1 Introduction

This study examines the effect of reporting conservatism on a firm's capital structure decisions and how that association is moderated by environmental uncertainty. In their seminal paper, Miller and Modigliani (1958) show that in a perfect capital market, firms should be indifferent to the choice between debt and equity. However, subsequent theoretical developments have provided alternative explanations for firm-level capital structure decisions. The proponents of trade-off theory argue that managers make capital structure decisions based on the trade-off between the benefits of debt (e.g., the tax deductibility of interest and a reduction in agency costs related to free cash flow) and the cost of debt (e.g., bankruptcy costs and shareholder/bondholder conflict of interests) (Miller and Modigliani, 1963; DeAngelo and Masulis, 1980). Pecking order theory demonstrates that capital market frictions (e.g., transaction costs, information asymmetry) make it costly for firms to raise funds externally, and, as a result, firms finance operations by relying first on internal funds, then on debt and finally on equity (Myers, 1984; Myers and Majluf, 1984).

A large volume of empirical literature investigates the relative superiority of one theory over another with respect to the determinants of capital structure choices. For example, a positive association between firm profitability and a high debt ratio is consistent with trade-off theory, whereby profitable firms can reduce their tax obligations because they have relatively lower bankruptcy costs (Warner, 1977). Pecking order theory, in contrast, suggests that profitable firms should rely more on internal sources of financing and less on debt financing. The empirical evidence is consistent with this proposition (Baskin, 1989; Hovakimian, Opler, Titman, 2001; Shyam-Sunder and Myers, 1999).

Accounting researchers have attempted to link capital structure decisions with accounting conservatism. Conservative accounting practices require a higher degree of verification for recognising gains than for recognising losses, which means that conservatism reflects the differential ability of accounting earnings to recognise economic losses relative to economic gains (Basu, 1997). This definition of conservatism is commonly referred to as news-dependent or conditional conservatism,[2] and has

[2] In contrast to news-dependent conservatism, news-independent or unconditional conservatism in accounting occurs through the application of accounting policies that consistently accelerate expenses or defer revenues, resulting in a lower profit figure than would otherwise be reported (Ruddock, Taylor, and Taylor, 2006). Our focus on 'news-dependent' conservatism is justified by the fact that the timely recognition of losses encouraged by this conservatism measure is an important determinant of earnings quality, where earnings are used for contracting purposes. To

been shown to affect different aspects of debt contracting. Watts (2003) argues that debt contracting has a strong impact on the demand for conservatism. Lenders participate less in firms' economic gains than shareholders, but are adversely affected by losses. Relative to shareholders, lenders prefer financial statement information that more efficiently incorporates economic losses to ensure that management does not favour shareholders over lenders. Empirical evidence lends support to this theory by showing that conservatism helps lenders through the timely signalling of default risk, as found in accelerated covenant violations (Zhang, 2008), and lenders reduce interest rates when borrowers are relatively more conservative (Ahmed, Billings, Morton, and Harris, 2002).

Although the role of conservatism has been investigated in certain debt-contracting settings, evidence is sparse about its effect on the degree of financial leverage or capital structure. We examine this issue using data from Australia where the 'tax imputation system'[3] adopted in 1987 reduced the tax incentive of using debt in Australia, thus allowing alternative theories to be tested (Qiu and La, 2010). Evidence on the determinants of capital structure in Australia is mixed. For instance, Allen (1991, 1993) and Cassar and Holmes (2003) find that more profitable firms choose to use less debt financing, which contradicts the pecking order theory, whereas Twite (2001) finds the opposite. Twite (2001) and Cassar and Holmes (2003) both report that growth firms use more debt, a finding that also contradicts the pecking order theory. Cassar and Holmes (2003) also report a negative relation between asset tangibility and debt financing, providing evidence to refute the bankruptcy cost theory.

We extend the research on the determinants of capital structure in Australia by incorporating 'accounting conservatism' as an additional explanatory variable. We then examine whether this association is moderated by environmental uncertainty defined as "the unpredictability of the actions of customers, suppliers, competitors and regulatory groups" (Govindarajan 1984). High environmental uncertainty increases the risk of accurately assessing future earnings and accentuates information asymmetry. Demand for accounting conservatism to reduce information asymmetry and benefit debt trading becomes more pronounced in this environment.

This study contributes to the literature in three ways. First, to the best of our knowledge this study is the first in Australia to examine the role of accounting conservatism in capital structure decisions. The Australian environment is unique because the 'tax imputation system' adopted in 1987 reduced the tax incentive of using debt, thus allowing alternative capital structure theories to be tested. Second, whereas previous studies test the beneficial effect of conservatism, such as whether accounting conservatism benefits firms by reducing the cost of debt, this study extends the extant literature by examining the role of accounting conservatism in capital structure decisions. Third, we include environmental uncertainty as a contextual variable to explain capital structure decisions. We believe that studying the association between reporting conservatism and capital structure decisions in particular contexts will provide more significant insights.

The remainder of the paper proceeds as follows. The next section provides a brief review of the literature and develops testable hypotheses. Section 3 explains the research design issues. Section 4 introduces the sample selection criteria and some descriptive statistics. Section 5 explains the main tests result. Section 6 concludes.

2 Literature review and hypotheses development

Since the introduction of the MM (1958) capital structure irrelevance theory, researchers have searched for explanations for capital structure and have generated important insights into the relevance of capital structure decisions in the presence of market friction. This stream of research incorporates the effects of taxes, bankruptcy costs, information asymmetry, agency issues and other types of friction on corporate leverage decisions. The trade-off theory and pecking order theory that resulted from this work have generated a number of testable propositions on the determinants of capital structure (Harris and Raviv, 1991).

Accounting conservatism has been linked with debt contracting benefits and has provided some interesting empirical results. The contracting explanation for conservatism begins with the premise that a firm is a nexus of contracts among rational agents (Jensen and Meckling, 1976). Accounting numbers are used to write, monitor and enforce these contracts. Such accounting-based contracting motivates managers to bias earnings upwards (e.g., to maximise their bonuses). Accounting conservatism is demanded to counteract this tendency, which requires early recognition of bad news and hence biases earnings downward. Ball, Robin and Sadka (2008)

provide a broader perspective on the effect of conservatism on firm's capital structure decisions, we use two other conservatism measures that are not tied to 'news-independent' measure.

[3]Following the adoption of the tax imputation system in 1987, Australian shareholders now receive full credits for tax paid at the corporate level when they receive dividends. The elimination of double taxation is in contrast to the US regulatory setting, where shareholders pay tax at the corporate level and individual level when they receive dividends (Qiu and La, 2010).

directly test the 'contracting' and 'value relevance' explanations to better understand the primary driver of the demand for accounting conservatism. The 'contracting hypothesis' suggests that accounting conservatism exists to facilitate efficient contracting, whereas the 'value relevance hypothesis' offers a symmetric relation between earnings and stock returns. Ball et al. (2008) use the size of the debt and equity markets as a crude proxy to differentiate the two hypotheses and report a significant positive relation between timely loss recognition measures and debt market size. The relationship between timely loss recognition measures and the equity market, however, is either negative or statistically insignificant.

There are several theoretical arguments and some empirical evidence to support the benefits of conservatism for lenders of capital. Conservatism enhances creditor value by facilitating debt covenants to prevent managers and shareholders from expropriating value. The inherent conflict of interest between shareholders and bondholders may result in managers taking opportunistic action (such as making liquidating dividends to shareholders), which exposes creditors to significant losses in the event of company liquidation (Watts, 2003; Ahmed et al., 2002). Ahmed et al. (2002) propose that conservatism mitigates bondholder-shareholder agency costs, as manifested in excessive dividend distributions, by reducing the amount of reported earnings available for distribution. This lowers opportunistic unwarranted payments to shareholders by managers.[4] Accounting conservatism also aids the timely transfer of decision rights from a firm's management to its creditors when the firm experiences adverse economic conditions (Nikolave, 2010). Empirically, Zhang (2008) finds support for this argument by revealing that more conservative firms are more likely to violate debt covenants then their less conservative counterparts, and transfer decision-making rights to creditors earlier. The specific findings are that (a) conservatism benefits lenders through the acceleration of covenant violations, which transfers decision-making rights from shareholders to debt holders, thereby reducing the default risk, and (b) as a result of the decrease in default risk, the debt holders of conservative firms are more willing to accept lower interest rates, thereby reducing the borrower's cost of debt, as proxied by interest rates.

Accounting conservatism also increases bondholder value, because accounting-based debt covenants limit self-serving managerial decisions such as investing in negative net present value projects or taking on additional debt. Because conditional conservatism requires the recognition of losses earlier than gains, debt covenants provide early warning signals to creditors of probable covenant violations. Moerman (2008) suggests that conservatism decreases information asymmetry by (i) enhancing the borrower's corporate governance and (ii) providing more and higher quality information to debt market participants. Accordingly, Moerman (2008) predicts and finds that a timely loss recognition strategy improves the quality of a borrower's financial reporting and decreases the bid-ask spread at which the borrower's loans are traded.

In contrast to the theoretical and empirical evidence on the beneficial role of accounting conservatism in debt contracting, there is a paucity of evidence on the association between conservatism and financial leverage. Feras and Putnam (2011) recently filled this void by documenting a positive association between accounting conservatism and the degree of financial leverage for US companies. Because the demand for leverage is a function of the cost of debt and conservatism lowers the cost of debt (Zhang, 2008), this documented positive association makes sense.[5] We first test whether this positive association also holds in Australia. There is some evidence of conditional conservative accounting practice among Australian firms (Ruddock et al., 2006; Balkrishna, Ruddock, and Taylor, 2007). Whether such conditional conservatism is associated with capital structure decisions, however, remains unexplored. We develop the following hypothesis (in alternative form):

H_1: There is a positive association between accounting conservatism and financial leverage.

2.1 Environmental uncertainty, capital structure and conditional conservatism

We consider environmental uncertainty as a contextual factor that may moderate the association between accounting conservatism and a firm's leverage decisions. Environmental uncertainty is defined as "the unpredictability of the actions of customers, suppliers, competitors and regulatory groups" (Govindarajan, 1984). Firms operating under high environmental uncertainty suffer from acute information asymmetry problems. For example,

[4] Ahmed et al. (2002) use the market value-based conservatism proxy following Beaver and Ryan (2000) the accruals-based conservatism proxy [(net income before extraordinary items + depreciation-operating cash flows*-1)/total assets].

[5] Feras and Putnam (2011), however, caution that such a finding needs to be evaluated in light of the association between conservatism and the cost of equity capital. If conservatism decreases the cost of equity capital to the same or a higher degree than it does the cost of debt capital, then the relationship between conservatism and financial leverage is insignificant (e.g., there is no relationship) or even negative (e.g., conservatism decreases financial leverage in the firm's capital structure). The extant empirical evidence, however, fails to find any effect of conservatism on the cost of equity capital (Francis, LaFond, Olsson, and Schipper, 2004).

Akerlof (1970) describes the combined impact of uncertainty and information asymmetry on the used car market. Based on a laboratory experiment, Umanath, Ray and Campbell (1996) provide evidence that, under conditions of asymmetric information, principals prefer contracts wherein the incentive portion of the total compensation increases with an increase in the agent's perceived environmental uncertainty. Research on trading on asset prices finds that the price is determined by both information asymmetry among investors about the future cash flow of assets and investor uncertainty about the preferences and endowments of other investors in the market (Saar, 2002).

In the debt-contracting process, lenders demand accounting conservatism because they bear a downside risk with no upside potential. We argue that such demand is intensified for firms operating in an environment of high uncertainty. Such firms suffer from severe information asymmetry problems, which cause an increase in their agency costs, and as the agency costs increase so too does the demand for accounting conservatism. For example, LaFond and Roychowdhury (2008) find that the demand for conservatism increases (decreases) as the severity of the agency problem increases (decreases). Hui, Morse and Matsunaga (2009) find that as the level of information asymmetry decreases due to the provision of more earnings forecasts by management, a firm's financial statements become less conservative. Francis and Martin (2010) study the relationship between accounting conservatism and acquisition profitability and find that although accounting conservatism is associated with more profitable acquisitions, this relationship is stronger for firms operating in volatile environments and experiencing high degrees of information asymmetry. Based on the results from the accounting conservatism literature, we suggest that the effect of conservatism on a firm's capital structure is more pronounced when the agency costs are high. This leads to the following proposition.

***H_2*:** The positive association between accounting conservatism and firm leverage is stronger for firms operating under high environmental uncertainty.

3 Research design issues

To examine the moderating role of environmental uncertainty on the association between accounting conservatism and firm capital structure, we first operationalise the three constructs.

3.1 Financial leverage/capital structure

We specify financial leverage in terms of book value and market value. Book value financial leverage is measured as total debt (short-term debt + long-term debt) / total assets. Market value financial leverage is measured as total debt / market value of assets, where the market value of assets = total assets- total shareholders' equity + the market value of the firm's common equity. Market value of equity is derived by multiplying the share price at the end of the fiscal year by the number of outstanding shares.

3.2 Accounting conservatism

Three measures of accounting conservatism proxies are used in this study. Our first conservatism measure is based on Basu (1997) and is referred to as the differential timeliness measure. The underlining assumption of the differential timeliness measure is that conservatism results in timely loss recognition but untimely gain recognition. Accordingly, conservatism should result in a stronger correlation between earnings and stock returns during bad news periods (when returns are negative) than between earnings and stock returns during good news periods (when returns are positive). *Con_diff* as the ratio of the relative timeliness of a firm's incorporation of bad news relative to good news in its earnings. This ratio, referred to by Givoly, Hayn and Natarajan (2007) as the differential timeliness ratio, is captured by $(\beta_1 + \beta_2)/\beta_1$ in the following regression.

$$E_{it}/P_{it-1} = \alpha_i + \alpha_{1i}DR_{it} + \beta_1 R_{it} + \beta_2 R_{it} * DR_{it} + \varepsilon_{it}, \qquad (1)$$

where E_{it} is the earnings per share for firm *i* in fiscal year *t*; P_{it-1} is the price per share for firm *i* at the beginning of the fiscal year *t*; R_{it} is firm's *i* 15-month return ending three months after the end of fiscal year *t;* and DR_{it} is a dummy variable that equals 1 during periods of bad news (e.g., $R_{it}< 0$) and 0 during periods of good news (e.g., $R_{it}>0$).

Our second measure of conservatism is the degree of accumulation of non-operating accruals. According to Givoly and Hayn (2000), the accumulation of negative non-operating accruals is a product of the recording of bad news, and is thus an indication of conservatism. We define *Con_nonopaccr* as the ratio of non-operating accruals to total assets. We first calculate total accruals as the difference between net income and operating cash flow. We then calculate operating accruals as the sum of Δaccounts receivable - Δinventories - Δprepaid expenses + Δaccounts payable + Δtaxes payable. Non-operating accruals is then the difference between total accruals and operating accruals. We deflate these values by total assets to control for heteroscedasticity. We determine the average of (non-operating accruals /total assets) using the current and the preceding four years' observations. We multiply the average asset deflated non-operating accruals by negative 1 so that higher values indicate greater conservatism.

Our third measure of conservatism is the ratio of the skewness in earnings divided by the skewness in cash flow and is denoted as C*on_nskew*. When the recognition of bad news in earnings is timelier than that of good news, then the earnings distribution will be negatively skewed (Givoly and Hayn, 2000;

Zhang, 2008). We measure skewness using the current and preceding four years' of earnings and cash flows observations. We multiply the average skewness by negative 1 so that higher values indicate greater conservatism.

Despite its popularity, differential timeliness measure is criticised in the literature. To begin with, Givoly and Hayn (2000) and Dietrich, Muller and Reidl (2007) are concerned that differential timeliness measure induces biases in the coefficient estimates and R^2 measures, thus leading researchers to mistakenly interpret reported results as evidence of conservatism.[6] Givoly and Hayn (2000) also explain that management disclosure policy on the timing of good news releases versus bad news releases affects the relationship between prices and returns, which may result in misleading conservative measures based on the reverse regression proposed by Basu (1997). Roychowdhury and Watts (2007) explain that Basu's (1997) measure of differential timeliness measure to gauge conservatism is based on single-period returns and earnings, and thus the generated estimates measure the average degree of conservatism for each single-period but do not assess the cumulative effect of conservatism from previous years.

On the other hand, although *Con_nonopaccr* and *Con_nskw* overcome the problem of relying on stock returns to proxy for periods of good/bad news, they are not without limitations. In particular, negative non-operating accruals or a negatively skewed earnings could be due to earnings manipulation rather than accounting conservatism.

3.3 Measurement of environmental uncertainty

A parsimonious proxy for the extent of environmental uncertainty is the coefficient of variation of sales, which is based on external market conditions and is thus more appropriate as a measure of environmental uncertainty (Bergh and Lawless 1998; Dess and Beard 1984; Ghosh and Olsen 2009; and Habib, Hossain, and Jiang, 2011).[7] The coefficient of variation of sales is calculated as follows.

$$CV(Z_i) = \frac{\sqrt{\frac{\sum_{k=1}^{5} (z_i - \bar{z})^2}{5}}}{\bar{z}} \quad (2)$$

where, CV is the coefficient of variation, z is the sales observations for each firm in each year and $\bar{Z}$ is the mean sales value. This firm-specific measure of environmental uncertainty is calculated using historical data over a four-year period that includes the current year, and is validated as an objective measure of environmental uncertainty by Synder and Glueck (1982). We label this environmental uncertainty measure $EU_{sales.}$

3.4 Regression specifications

We first estimate a baseline regression model to test the relationship between financial leverage and a vector of the firm characteristic variables. We include accounting conservatism as our primary variable of interest. The model is expressed as follows:

[6]Givoly et al. (2007, p. 69) identify three characteristics of the information environment that are unrelated to reporting conservatism but nevertheless affect the differential timeliness (Basu, 1997) measure. These characteristics are referred to as the 'aggregation' effect, the 'nature of the economic events' effect and the 'disclosure policy effect'.

[7]Early research on environmental uncertainty is based on managerial perceptions of external environmental volatility (Lawrence & Lorsch 1967; Duncan 1972). This research proposes a causal connection between environmental volatility and managerial perceptions of environmental uncertainty. Tosi, Aldag and Storey (1973) use market, technological and earnings volatility as three objective measures of environmental volatility but do not find a strong correlation with the Lawrence and Lorsch (1967) instrument.

$$FLEV_{it} = \alpha_1 + \beta_1 CON_{it} + \beta_2 PROFIT_{it} + \beta_3 DIV_{it} + \beta_4 SIZE_{it} + \beta_5 DEP_{it} + \beta_6 TAN_{it} + \beta_7 AZ_{it} + \beta_8 GROWTH_{it} + \beta_9 INDLEV_{it} + \varepsilon_{it} \quad (3)$$

where $FLEV_{it}$: denotes the book value leverage or market value leverage for firm i in year t as defined in section 3.1;

CON_{it} : denotes one of the three conservative measures as discussed in section 3.2;
PROFIT: firm profitability measured as operating income divided by total assets;
DIV: firm's payout ratio measured as common stock dividends divided by total assets;
SIZE: firm size measured as the natural logarithm of total assets;
DEP: depreciation expense measured as depreciation and amortisation deflated by total assets;
TAN: assets' tangibility measured as fixed assets divided by total assets;
AZ: Altman's (1968) Z-score, the ex ante probability of financial distress is measured using [3.3 EBIT + 1.0 sales + 1.4 retained earnings + 1.2 working capital/ total assets];
GROWTH: growth opportunities proxied by sales growth and is measured as [$sales_t$-$sales_{t-1}$/total $assets_t$];
INDLEV: industry leverage is the median industry leverage.

The pecking order theory expects a negative association between leverage and profitability (Myers, 1984), which suggests that firms prefer to finance assets with internally generated funds to avoid the costs associated with external financing. Trade-off theory, in contrast, argues that higher profitability decreases the expected costs of distress and lowers tax expense by utilising more debt, and thus predicts a positive relationship between the two variables. Jensen (1986) suggests that increased leverage acts as a monitoring mechanism to prevent managers from taking suboptimal decisions associated with the free cash flow agency problem. Accordingly, leverage and dividends may be inversely related. However, a high dividend payout ratio may also indicate that the firm is profitable, thereby increasing its ability to borrow (Doukas and Pantzalis, 2003). Accordingly, in this case the relationship between dividends and debt is positive. Firm size is expected to have a positive association with leverage, as larger firms have lower expected bankruptcy costs (Titman and Wessels, 1988; Graham, Lemmon and Schallheim, 1998; Barclay and Smith, 1995). DeAngelo and Masulis (1980) explain that depreciation is a type of non-debt-related corporate tax shield. Consequently, the higher the depreciation expense, the lower the tax benefits of debt financing. Accordingly, we expect a negative relationship between depreciation and a firm's degree of financial leverage. Firms with more tangible assets can use them as collateral for increased borrowing, and we thus expect a positive association between tangibility and leverage. However, the amount of fixed assets that a firm owns is positively related to the operating leverage. According to Mandelker and Rhee (1984), financial leverage and operating leverage are substitutes. Thus, based on this argument, the relationship between fixed assets and financial leverage may be negative. A higher Z score reflects greater financial soundness, and we thus expect a negative association between this distress score and financial leverage. We follow previous studies (e.g., Graham, et al. 1998; Barclay and Smith, 1995; Rajan and Zingales, 1995) and argue that growth firms tend to protect their investment opportunity set by lowering the amount of debt in their capital structure. We thus expect an inverse relationship between sales growth and degree of financial leverage. The association between industry leverage and leverage is hypothesized to be positive.

To test H_2, we first partition the sample observations into high and low environmental uncertainty categories and then run regression equation (3) for the two sub-samples. Firm-year observations pertaining to more (less) than the median environmental uncertainty measure are categorised as high (low) environmental uncertainty observations respectively.

4 Sample selection and descriptive statistics

Our sample spans the period from 1992 to 2005. We start with 1992 because direct method cash flow reporting became mandatory in that year. We need cash flow data to calculate the total accruals to derive non-operating accruals. To calculate our first conservatism measure, *con-diff*, we start with a sample of 10,227 firm-year observations from 1991 to 2005 for which there is available return and capital structure data. We lose 3,819 firm-year observations because of insufficient observations to run the firm-specific differential timeliness regression. This leaves us with a sample of 6,409 firm-year observations. We require companies to have at least seven years of consecutive data including the current year to derive meaningful regression coefficients. Our final sample for this conservatism measure is 2,545 firm-year observations. For our second and third conservatism measures, we begin with an initial sample of 15,773 firm-year observations. This initial sample size is larger than the first conservatism measure because we don't require stock return data. We then exclude 1,274 observations pertaining to the financial services industry. Financial institutions are excluded because of the differing regulatory nature of their capital structure choices. We then conduct a baseline regression analysis of the determinants of capital structure excluding the conservatism variable. The

purpose of running this regression is to benchmark this study with earlier Australian studies on the determinants of capital structure. None of the earlier empirical studies on capital structure in Australia used such a large sample size, and their findings are inconclusive, too. Our final sample size for the *con_nonopaccr* and *con_nskew* measures is 8,828 firm-year observations. The reduction is primarily due to the fact that we measure firm-level conservatism by using the current and preceding four years' observations.

Panels A and B of Table 1 provide some descriptive statistics on the test variables. The average of the *con_diff* and *con_nonopaccr* measures is 1.09 and 0.55, respectively, whereas that of *con_nskew* is -0.48. The *con_diff* value is comparable to that calculated by Ferris and Putnam (2011), who report an average of 1.11. The average and median of the other two conservatism measures differ markedly. We report descriptive statistics for the independent variables based on the much larger sample size for the *con_nonopaccr* and *con_nskewness* analysis. Unreported descriptive statistics based on the much smaller sample size of the *con_diff* analysis are generally similar to those derived with the larger sample. The average book and market leverage is 17% and 13% of total assets, respectively. Average profitability of the firm-year observations is -0.12. Sample firms exhibit very low dividend payout propensities and low growth opportunities. Their tangible assets represent about 38% of total assets. A negative average Z score suggests that our sample companies are not financially sound, although the median value is positive.

Before estimating our models, we compute pairwise correlations between the explanatory variables. As expected, the correlation between the two leverage measures is 0.81 ($p \leq 0.01$, two tailed). The correlation between both book and market-leverage and non-operating accruals-based conservatism measure is positive and statistically significant. But the correlation is insignificant for two other conservatism measures. Except for firm profitability and dividend, all the control variables are correlated with book leverage. Interestingly, the correlation between Con_nonopaccr and all the control variables but firm growth are significant, but none of the control variables is correlated with the third conservatism measure. Of the independent variables, the highest correlation is between profitability and distress risk at 0.75. The other high (and statistically significant, ($p \leq 0.01$, two tailed) correlations are between firm size and profitability (0.51) and firm size and distress risk (0.499). Further, firm profitability and industry leverage are significantly correlated ($p \leq 0.01$ two tailed) with most of the independent variables. The highest variance inflation factor is 2.48, which is less than 10, thus indicating that collinearity is unlikely to be a major concern in this study (Neter, Wasserman and Kunter, 1983).

5 Test results

5.1 Accounting conservatism and capital structure

Table 2 presents a multivariate analysis of the determinants of capital structure in Australia. The coefficient signs and significance are generally similar for both the book and market-based leverage measures. We first report a baseline model that does not include conservatism variable. The coefficient on profitability is positive, which supports the trade-off theory. Profitable firms are less likely to experience bankruptcy, and can thus utilise more debt to reduce their tax burden. The negative and highly significant coefficient on dividend suggests that debt acts as an alternative monitoring mechanism. The coefficient on depreciation is negative and significant (t-statistics of -7.30) for the book leverage measure, supporting the proposition of DeAngelo and Masulis (1980) that a higher level of depreciation expense lowers the tax benefit derived from debt in the capital structure. The coefficient on TAN is positive and statistically significant. More tangible assets can be used as collateral for increased borrowing, and this positive coefficient supports that view. The coefficients on AZ are negative and significant as expected (t-statistics of -9.42 and -6.24 for the book and market leverage measures, respectively). The coefficient on firm growth negative and significant (t-statistics of -2.84 and -3.29 for the book and market leverage measures, respectively), which is consistent with the proposition that high growth firms tend to lower debts on the balance sheet to protect their investment opportunity sets. Finally, as expected, the coefficient on industry leverage is positive and statistically highly significant at better than the 1% level. The adjusted R^2 of the models is 18% for the book leverage and 28% for the market leverage measure.

Table 1. Descriptive statistics and correlation analysis

Panel A: Descriptive statistics

Variables	Mean	Median	S.D.	25%	75%
BKLEV	0.18	0.11	0.22	0.00	0.28
MKTLEV	0.13	0.068	0.17	0.00	0.28
Con_diff	1.09	0.55	16.40	-1.09	1.73
Con_nonopaccr	0.022	0.0026	0.14	-0.03	0.04
Con_nskew	-0.48	-0.23	11.51	-1.18	0.81
PROFIT	-0.12	0.00	0.44	-0.14	0.08
DIV	0.017	0.00	0.03	0.00	0.03
SIZE	7.59	7.48	0.99	6.88	8.22
DEP	-0.04	-0.03	0.07	-0.06	-0.0026
TAN	0.38	0.28	0.37	0.04	0.63
AZ	-2.57	0.12	10.51	-2.07	1.43
GROWTH	0.0021	0.007	0.53	-0.03	0.14
INDLEV	0.10	0.09	0.09	0.018	0.20

Panel B: Correlation analysis

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
BOOKLEV (1)	1												
MKTLEV (2)	.806**	1											
Con_diff (3)	-0.002	0.02	1										
Con_nonopaccr (4)	.048**	.043**	-0.02	1									
Con_nskew (5)	-.003	-.005	-0.0094	.009	1								
PROFIT (6)	-.016	.161**	0.0064	-.377**	-.011	1							
DIV (7)	.018	-.025*	0.03	-.070**	.012	.302**	1						
SIZE (8)	.238**	.347**	-0.001	-.200**	.005	.505**	.379**	1					
DEP (9)	-.187**	-.085**	0.004	.050**	-.022	.223**	-.009	.011	1				
TAN (10)	.289**	.329**	-0.02	-.081**	.004	.153**	.185**	.359**	-.312**	1			
AZ (11)	-.058**	.143**	0.05	-.345**	-.016	.750**	.229**	.499**	.161**	.132**	1		
GROWTH (12)	-.053**	.019	0.0072	-.002	-.008	.203**	.096**	.158**	.049**	.037**	.240**	1	
INDLEV (13)	.221**	.320**	0.05	-.129**	-.015	.227**	.233**	.300**	-.008	.195**	.217**	.049**	1

Note: The descriptive statistics for the book and market leverage measures are based on 8,840 and 7,134 firm-year observations, respectively. The control variable statistics are based on the larger sample. *Con_diff* is based on 2,545 firm-year observations. The correlation analysis is based on a sample of 7,177 firm-year observations with non-missing observations for the variables listed in the table.
** and * denote significance level at the 1% and 5% levels, respectively (two-tailed test).

Variable definitions:
FLEV: denotes the book value leverage or market value leverage for firm i in year t as defined in section 3.1;
Con_nonopaccr: the ratio of non-operating accruals to total assets. Non-operating accruals is the difference between total accruals and operating accruals deflated by total assets. We determine the average of (non-operating accruals /total assets) using the current and the preceding four years' observations and multiply by negative 1 so that higher values indicate greater conservatism;
Con_nskew: the ratio of the skewness in earnings divided by the skewness in cash flow. We measure skewness using the current and preceding four years' of earnings and cash flows observations and multiply the average skewness by negative 1 so that higher values indicate greater conservatism;
PROFIT: firm profitability measured as operating income divided by total assets;
DIV: firm's payout ratio measured as common stock dividends divided by total assets;
SIZE: firm size measured as the natural logarithm of total assets;
DEP: depreciation expense measured as depreciation and amortisation deflated by total assets;
TAN: assets' tangibility measured as fixed assets divided by total assets;
AZ: Altman's (1968) Z-score, the ex ante probability of financial distress is measured using [3.3 EBIT + 1.0 sales + 1.4 retained earnings + 1.2 working capital/ total assets];
GROWTH: growth opportunities proxied by sales growth and is measured as [$sales_t$-$sales_{t-1}$/total $assets_t$];
INDLEV: industry leverage is the median industry leverage.

Table 2. Regression of firm leverage on accounting conservatism and other firm variables

$$FLEV_{it} = \alpha_1 + \beta_1 CON_{it} + \beta_2 PROFIT_{it} + \beta_3 DIV_{it} + \beta_4 SIZE_{it} + \beta_5 DEP_{it} + \beta_6 TAN_{it} + \beta_7 AZ_{it} + \beta_8 GROWTH_{it} + \beta_9 INDLEV_{it} + \varepsilon_{it} \quad \text{..................(3)}$$

Panel A: Book leverage

Variables	**Baseline model**		**Con_nonopaccr**		**Con_nskew**		**Con_diff**	
	Coefficient	*t-stat*	*Coefficient*	*t-stat*	*Coefficient*	*t-stat*	*Coefficient*	*t-stat*
Constant	-0.35***	-15.55	-0.43***	-13.11	-0.59***	-9.31	-0.42***	-13.60
Con_nonopaccr	-	-	0.11***	3.77	-	-	-	-
Con_nskew	-	-	-	-	0.00024	0.91	-	-
Con_diff	-	-	-	-	-	-	0.0000097	1.30
PROFIT	0.034***	2.88	0.01	0.52	0.0005	0.033	-0.0019	-0.06
DIV	-1.10***	-20.62	-1.05***	-15.52	-1.03***	-15.16	-0.85***	-6.06
SIZE	0.05***	23.26	0.06***	20.51	0.06***	20.39	0.08***	13.78
DEP	-0.36***	-7.30	-0.37***	-5.82	-0.34***	-5.50	-0.39***	-3.33
TAN	0.11***	15.55	0.10***	12.29	0.101***	12.29	0.05***	3.83
AZ	-0.005***	-9.42	-0.0040***	-5.84	-0.0041***	-6.05	0.00***	-3.53
GROWTH	-0.017***	-2.84	-0.02***	-2.66	-0.0191**	-2.44	-0.02	-1.26
INDLEV	0.55***	6.18	0.58***	4.53	0.71	4.61	-0.85***	-6.06
Year & industry dummies	Yes		Yes		Yes		Yes	
Adjusted R^2	0.18		0.18		0.17		0.19	
N	14,499		8,840		8,840		2,545	

Panel B: Market leverage

Variables	Baseline model		Con_nonopaccr		Con_nskew		Con_diff	
	Coefficient	*t-stat*	*Coefficient*	*t-stat*	*Coefficient*	*t-stat*	*Coefficient*	*t-stat*
Constant	-0.29***	-15.36	-0.44***	-12.74	-0.50***	-10.86	-0.35***	-14.85
Con_nonopaccr			0.069***	4.57	-	-	-	-
Con_nskew			-	-	0.000058	0.80	-	-
Con_diff			-	-	-	-	0.0000092*	1.45
PROFIT	0.03***	6.12	0.02***	3.48	-0.0037	-0.23	0.01	0.48
DIV	-1.27***	-26.39	-1.33**	-23.95	-0.87***	-10.83	-1.35***	-14.13
SIZE	0.05***	22.90	0.05***	21.31	0.065***	19.24	0.06***	15.27
DEP	-0.021	-0.800	-0.07	-2.12	-0.33***	-4.83	-0.15**	-2.18
TAN	0.12***	21.46	0.10***	14.90	0.11***	11.17	0.06***	5.73
AZ	-0.001***	-6.24	-0.0009***	-3.38	-0.004***	-5.92	0.00***	-2.70
GROWTH	-0.01***	-3.29	-0.007*	-1.75	-0.019**	-2.29	-0.01	-0.85
INDLEV	0.56***	6.63	0.061***	5.38	0.53***	4.11	0.99***	4.24
Year & industry dummies	Yes		Yes		Yes		Yes	
Adjusted R^2	0.28		0.26		0.19		0.27	
Observations	11,634		7,183		7,183		2,274	
Notes: The t-statistics associated with the independent variables are two-tailed, whereas those for the conservatism measures are one-tailed.								

Variable definitions:

FLEV: denotes the book value leverage or market value leverage for firm i in year t as defined in section 3.1;

Con_diff: is the ratio of the relative timeliness of a firm's incorporation of bad news relative to good news in its earnings, the differential timeliness ratio, is captured by $(\beta_1+\beta_2)/\beta_1$ from the regression $E_{it}/P_{it-1} = \alpha_i + \alpha_{1i}DR_{it} + \beta_1 R_{it} + \beta_2 R_{it}{*}DR_{it} + \varepsilon_{it}$, where E_{it} is the earnings per share for firm *i* in fiscal year *t*; P_{it-1} is the price per share for firm *i* at the beginning of the fiscal year *t*; R_{it} is firm's *i* 15-month return ending three months after the end of fiscal year *t;* and DR_{it} is a dummy variable that equals 1 during periods of bad news (e.g., $R_{it}< 0$) and 0 during periods of good news (e.g., $R_{it}>0$). We require companies to have at least seven years of consecutive data including the current year to derive meaningful regression coefficients;

Con_nonopaccr: the ratio of non-operating accruals to total assets. Non-operating accruals is the difference between total accruals and operating accruals deflated by total assets. We determine the average of (non-operating accruals /total assets) using the current and the preceding four years' observations and multiply by negative 1 so that higher values indicate greater conservatism;

Con_nskew: the ratio of the skewness in earnings divided by the skewness in cash flow. We measure skewness using the current and preceding four years' of earnings and cash flows observations and multiply the average skewness by negative 1 so that higher values indicate greater conservatism;

PROFIT: firm profitability measured as operating income divided by total assets;

DIV: firm's payout ratio measured as common stock dividends divided by total assets;

SIZE: firm size measured as the natural logarithm of total assets;

DEP: depreciation expense measured as depreciation and amortisation deflated by total assets;

TAN: assets' tangibility measured as fixed assets divided by total assets;

AZ: Altman's (1968) Z-score, the ex ante probability of financial distress is measured using [3.3 EBIT + 1.0 sales + 1.4 retained earnings + 1.2 working capital/ total assets];

GROWTH: growth opportunities proxied by sales growth and is measured as [$sales_t$-$sales_{t-1}$/total $assets_t$];

INDLEV: industry leverage is the median industry leverage.

Table 3. Environmental uncertainty, reporting conservatism and capital structure

$$FLEV_{it} = \alpha_1 + \beta_1 CON_{it} + \beta_2 PROFIT_{it} + \beta_3 DIV_{it} + \beta_4 SIZE_{it} + \beta_5 DEP_{it} + \beta_6 TAN_{it} + \beta_7 AZ_{it} + \beta_8 GROWTH_{it} + \beta_9 INDLEV_{it} + \varepsilon_{it} \ldots\ldots\ldots \quad \ldots\ldots\ldots(3)$$

Panel A: Book leverage

Variables	**High EU**						**Low EU**					
	(1)		**(2)**		**(3)**		**(4)**		**(5)**		**(6)**	
	Coeff	t-stat	Coeff	t-stat	Coeff	t-stat	Coeff	t-stat	Coeff	t-stat	Coeff	t-stat
Constant	-0.60***	-9.66	-0.32***	-6.00	-0.32***	-6.16	-0.68***	-6.28	-0.50***	-14.92	-0.49***	-14.92
Con_diff	0.00**	1.65	-	-	-	-	0.00	-0.02	-	-	-	-
Con_nonopaccr	-	-	0.13**	2.43	-	-	-	-	0.12*	3.86	-	-
Con_nskew	-	-	-	-	0.000013**	1.85	-	-	-	-	-0.0040***	-1.50
PROFIT	0.00	-0.13	-0.01	-0.50	-0.02	-0.88	0.00	0.02	0.03	1.63	0.02	0.90
DIV	-0.66***	-3.41	-1.02***	-11.10	-0.99***	-10.86	-0.97***	-5.12	-1.11***	-11.03	-1.09***	-10.88
SIZE	0.08***	12.53	0.05***	10.18	0.05***	10.29	0.07***	7.86	0.0***7	19.65	0.07***	19.70
DEP	-0.35	-1.62	-0.23***	-2.82	-0.21***	-2.59	-0.24*	-1.70	-0.26***	-2.65	-0.20**	-2.09
TAN	0.01	0.91	0.12***	8.24	0.12***	8.24	0.09***	3.67	0.08***	9.39	0.08***	9.47
AZ	0.00**	-2.51	0.00***	-3.83	0.00***	-4.11	-0.01***	-2.77	0.00***	-4.34	0.00***	-4.40
GROWTH	-0.02	-0.43	-0.02**	-2.22	-0.02**	-1.99	-0.01	-0.96	0.00	-0.10	-0.01	-0.21
INDLEV	0.78***	3.84	0.59**	2.41	0.60**	2.49	1.77***	3.13	0.62***	5.07	0.72***	5.63
Adjusted R^2	0.24		0.12		0.12		0.14		0.23		0.23	
N	1,273		4,418		4,414				4,422		4,414	

Panel B: Market leverage

Variables	High EU						Low EU					
	(1)		**(2)**		**(3)**		**(4)**		**(5)**		**(6)**	
	Coeff	t-stat	Coeff	t-stat	Coeff	t-stat	Coeff	t-stat	Coeff	t-stat	Coeff	t-stat
Constant	-0.35	-6.71	-0.28***	-6.97	-0.28***	-6.57	-0.41***	-10.83	-0.42***	-13.60	-0.38***	-13.63
Con_diff	0.00	1.15	-	-	-	-	0.000013	0.23	-	-	-	-
Con_nonopaccr	-	-	0.10***	3.90	-	-	-	-	0.04**	2.55	-	-
Con_nskew	-	-	-	-	0.00*	1.55	-	-	-	-	-0.00**	-2.48
PROFIT	0.00	0.10	0.02	1.63	0.01	0.85	0.01	0.56	0.03***	3.15	0.02***	3.29
DIV	-1.32***	-10.61	-1.34***	-20.09	-1.29***	-17.97	-1.43***	-9.30	-1.38***	-13.33	-1.42***	-15.54
SIZE	0.06***	8.69	0.04***	11.05	0.04***	10.80	0.06***	12.19	0.06***	18.85	0.05***	18.15
DEP	-0.04	-0.53	0.00	0.07	0.03	0.61	-0.14	-1.13	-0.06	-0.83	-0.10	-1.49
TAN	0.08***	4.70	0.09***	10.47	0.09***	9.57	0.04***	3.05	0.09***	9.91	0.09***	10.66
AZ	0.00	-1.21	0.00	-0.75	0.00	-1.48	0.00***	-2.74	0.00***	-4.05	0.00***	-3.41
GROWTH	0.00	-0.32	-0.01	-1.62	0.00	-1.15	-0.02	-0.67	0.00	-0.04	0.00	0.12
INDLEV	0.36	1.46	0.75***	3.14	0.65**	2.50	0.50***	3.89	0.58***	4.60	0.64***	5.21
Adjusted R^2	0.33		0.18		0.18		0.15		0.34		0.33	
N	1,137		3,591		3,587		1,137		3,591		3,587	
Notes: The t-statistics associated with the independent variables are two-ailed, whereas those for the conservatism measures are one-tailed.												

Variable definitions:

FLEV: denotes the book value leverage or market value leverage for firm i in year t as defined in section 3.1;

Con_diff: is the ratio of the relative timeliness of a firm's incorporation of bad news relative to good news in its earnings, the differential timeliness ratio, is captured by $(\beta_1 + \beta_2)/ \beta_1$ from the regression $E_{it}/P_{it-1} = \alpha_i + \alpha_{1i}DR_{it} + \beta_1 R_{it} + \beta_2 R_{it}*DR_{it} + \varepsilon_{it}$, where E_{it} is the earnings per share for firm *i* in fiscal year *t*; P_{it-1} is the price per share for firm *i* at the beginning of the fiscal year *t*; R_{it} is firm's *i* 15-month return ending three months after the end of fiscal year *t;* and DR_{it} is a dummy variable that equals 1 during periods of bad news (e.g., $R_{it} < 0$) and 0 during periods of good news (e.g., $R_{it} > 0$). We require companies to have at least seven years of consecutive data including the current year to derive meaningful regression coefficients;

Con_nonopaccr: the ratio of non-operating accruals to total assets. Non-operating accruals is the difference between total accruals and operating accruals deflated by total assets. We determine the average of (non-operating accruals /total assets) using the current and the preceding four years' observations and multiply by negative 1 so that higher values indicate greater conservatism;

Con_nskew: the ratio of the skewness in earnings divided by the skewness in cash flow. We measure skewness using the current and preceding four years' of earnings and cash flows observations and multiply the average skewness by negative 1 so that higher values indicate greater conservatism;

EU: environmental uncertainty proxied by the coefficient of variation of sales, calculated as follows:

$$CV(Z_i) = \frac{\sqrt{\sum_{k=1}^{5} \frac{(z_i - \bar{z})^2}{5}}}{\bar{z}} \tag{4}$$

where, CV is the coefficient of variation, z is the sales observations for each firm in each year and $\bar{Z}$ is the mean sales value. This firm-specific measure of environmental uncertainty is calculated using historical data over a four-year period that includes the current year, and is labelled as $EU_{sales.}$

PROFIT: firm profitability measured as operating income divided by total assets;

DIV: firm's payout ratio measured as common stock dividends divided by total assets;

SIZE: firm size measured as the natural logarithm of total assets;

DEP: depreciation expense measured as depreciation and amortisation deflated by total assets;

TAN: assets' tangibility measured as fixed assets divided by total assets;

AZ: Altman's (1968) Z-score, the ex ante probability of financial distress is measured using [3.3 EBIT + 1.0 sales + 1.4 retained earnings + 1.2 working capital/ total assets];

GROWTH: growth opportunities proxied by sales growth and is measured as [$sales_t$-$sales_{t-1}$/total $assets_t$];

INDLEV: industry leverage is the median industry leverage.

With respect to the effect of conservatism on firm leverage, H_1hypothesizes a positive association between the two, because conservatism enhances creditor value by helping debt covenants to prevent managers and shareholders from expropriating value. We use three measures of conservatism and two leverage measures. The coefficient on our first conservatism measure, *con-diff*, is positive for both the book and market leverage measures but statistically significant only for the market leverage measure (t-statistic of 1.45, significant at better than the 10% level, one-tailed test). Our second and third conservatism measures use financial statement information rather than the association between earnings and stock return as in the *con_diff* measure. The coefficient on the second conservatism measure, *con_nonopaccr*, is positive and statistically significant at better than the 1% level (t-statistic of 3.77 and 4.57 for the book and market leverage measures, respectively). Finally, the coefficient on *con_nskew*, although positive in both leverage regressions, is statistically insignificant. We thus conclude that although accounting conservatism appears to positively affect a firm's leverage structure, this benefit is not consistent across conservatism measures. All of the control variables except firm profitability have the expected signs and are statistically significant.

5.2 Accounting conservatism, environmental uncertainty and capital structure

We now present the results for the empirical test of H_2, which holds that the beneficial role of accounting conservatism is context dependent, one such context being a firm's exposure to environmental uncertainty. Firms operating in uncertain environments suffer from greater information asymmetry problems than firms that operate in relatively stable environments. One of the desirable properties of accounting conservatism is the reduction of information asymmetry through the timelier recognition of accounting losses. We thus expect the association between leverage structure and accounting conservatism to be more positive for firms operating in an environment of high uncertainty. To test this hypothesis, we separately run equation (3) for firm-year observations pertaining to high and low uncertain environments. Our parsimonious proxy for the extent of environmental uncertainty is the coefficient of variation of sales (CV of sales), which is based on external market conditions and is developed in equation (2). Panels A and B of Table 3 presents the regression results for the book and market leverage-based measures, respectively.

For the book leverage-based measure, the coefficient on *con_diff* is positive and statistically significant at better than the 5% level for the high environmental uncertainty firm-year observations (t-statistic, 1.65, one-tailed test). The corresponding coefficient for the low environmental uncertainty observations is statistically insignificant. This supports the hypothesis that a firm's leverage structure is influenced by accounting conservatism for firms with high information asymmetry as proxied by environmental uncertainty. The coefficient on our second conservatism measure, *con_nonopaccr*, however, is positive and statistically significant for both the high and low environmental uncertainty contexts (t-statistics of 2.43 and 3.86, respectively). Finally, the coefficient on our third conservatism proxy, *con_nskew*, is positive and significant at better than the 5% level for high environmental uncertainty observations, but negative and marginally significant for low environmental uncertainty observations. However, the regression results are weaker for the market-based leverage measure. The coefficients on *con_nonopaccr* and *con_skew* are positive and significant for the high environmental uncertainty observations, but the coefficient of *con_diff* is not. Similar to Panel A, the coefficient on *con_nonopaccr* is also positive and significant for low environmental uncertainty observations. We conclude that the effect of accounting conservatism on firm leverage is somewhat moderated by the level of environmental uncertainty.

In a test of the relationship between capital structure and accounting conservatism, it is critical to explore the potential impact of endogeneity on the empirical findings. In particular, while capital structure may be a function of accounting conservatism, there is also the possibility that accounting conservatism may be endogenously determined with respect to firm capital structure. Ordinary least squares provide a biased estimate of the effect of conservatism on capital structure in this case because accounting conservatism is correlated with the regression's disturbance term. To address endogeneity, we first use one-year-lagged CON measures instead of using contemporaneous CON values as an independent variable in equation (2). The ccoefficient on lagged NONOPACCR is positive and statistically significant at better than the 5% level (coefficient value 0.06, t-statistic 2.20). We also use one-year-lagged leverage measures as independent variables in a regression of NONOPACCR on lagged leverage measure and control variables. The coefficient on BKLEV is positive but not statistically significant at the conventional significance level.[8]

[8] It should be noted that standard econometric solution to endogeneity problem is to implement some type of instrumental variables estimation procedure. Instrumental variables should be correlated with endogenous regressors but uncorrelated with the error term in the structural equation. However, identifying precise instrumental variables is an extremely difficult task (Larcker, Richardson, and Tuna, 2007). Moreover, Rusticus and Larcker (2010) analytically show that OLS estimates provide better

6 Concluding remarks

The purpose of this study is to examine the effect of reporting conservatism on a firm's capital structure decisions and the role of environmental uncertainty as a moderating variable. Various accounting researchers have attempted to link accounting conservatism with capital structure decisions. However, although the role of conservatism has been investigated in certain debt-contracting settings, evidence of the effect of conservatism on the degree of financial leverage is sparse. We examine this issue using a sample of Australian firms for the period 1992 to 2005 and find that accounting conservatism positively affects a firm's leverage structure. We also find that the relation between accounting conservatism and firm leverage is moderated by the degree of environmental uncertainty, but this finding is not robust to all three proxies that we use to measure conservatism.

This study has several limitations. First, the selection criteria for the sample and missing data may limit the generalisability of the results. Second, the results should be interpreted with caution because we use only one proxy to measure a firm's environmental uncertainty (an important contextual variable). Nevertheless, despite of these caveats our work contributes to the literature on the association between capital structure and financial reporting quality.

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parameter estimates than two-stage least square approach if the chosen instrumental variables do not conform to standard definition of instrumental variables.

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